

The final two years of studios have drastically changed the way that I work and think about architecture. Breaking away from the foundational and comprehensive studios which comprise the first six semesters, I aspired to use the remainder of my time in an academic setting to pursue the application of more abstract architectural thought and aesthetics rather than purely refining a knowledge of construction and formal iteration, which I intend to do again once I enter an office. Through this I believe I have been able to find my own agency in what I want to explore after leaving Carnegie Mellon, rather than simply conforming to any paths of least resistance - or rejecting the inherent structural benefits of the B.Arch program.

This work ranges from a traditional studio project in coastal Catalonia to a set of speculations in the American Midwest, but throughout persists an interest in existing physical structures and systems - things which architecture can touch and interact with directly, not just conceptually - from which I hope to derive a framework for future practice that speaks to the issues present where I am from, and search for meaning in a place often architecturally overlooked and underrepresented.

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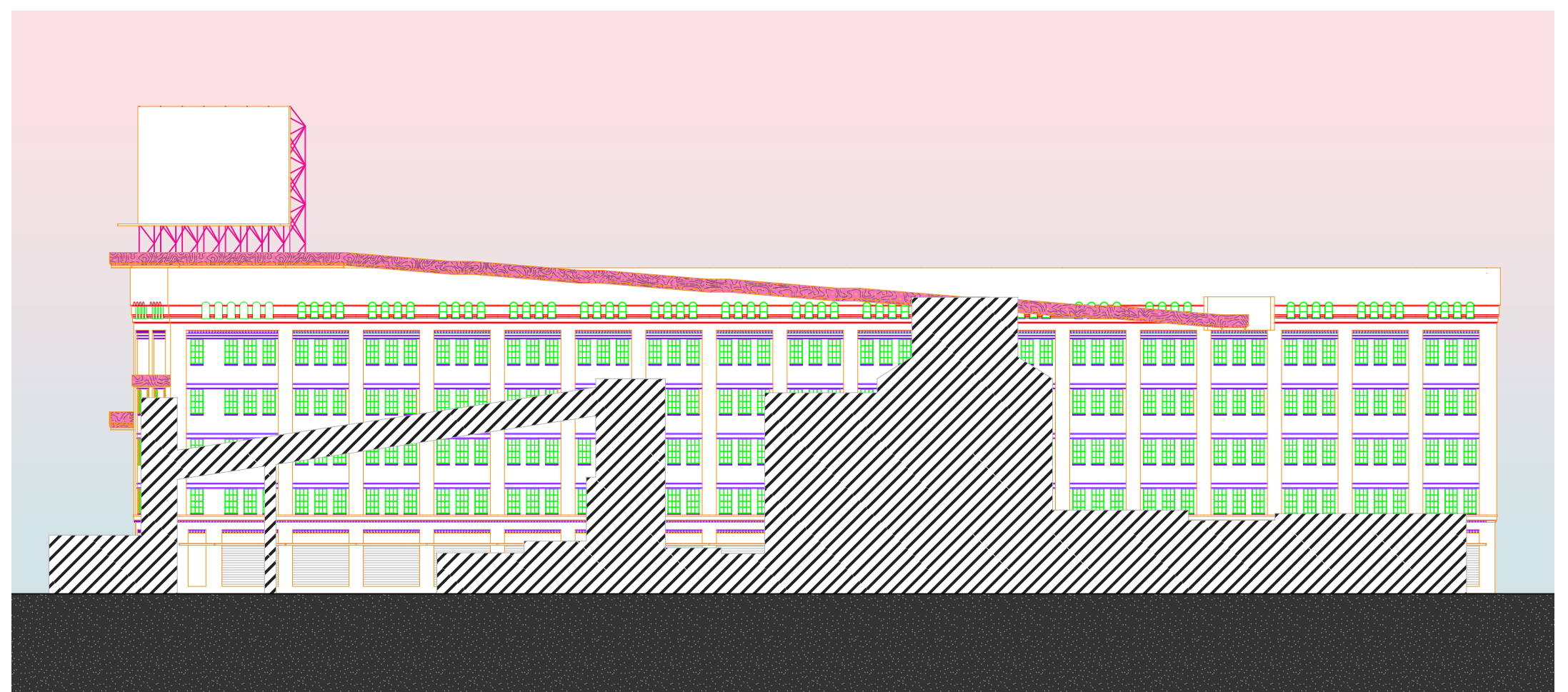
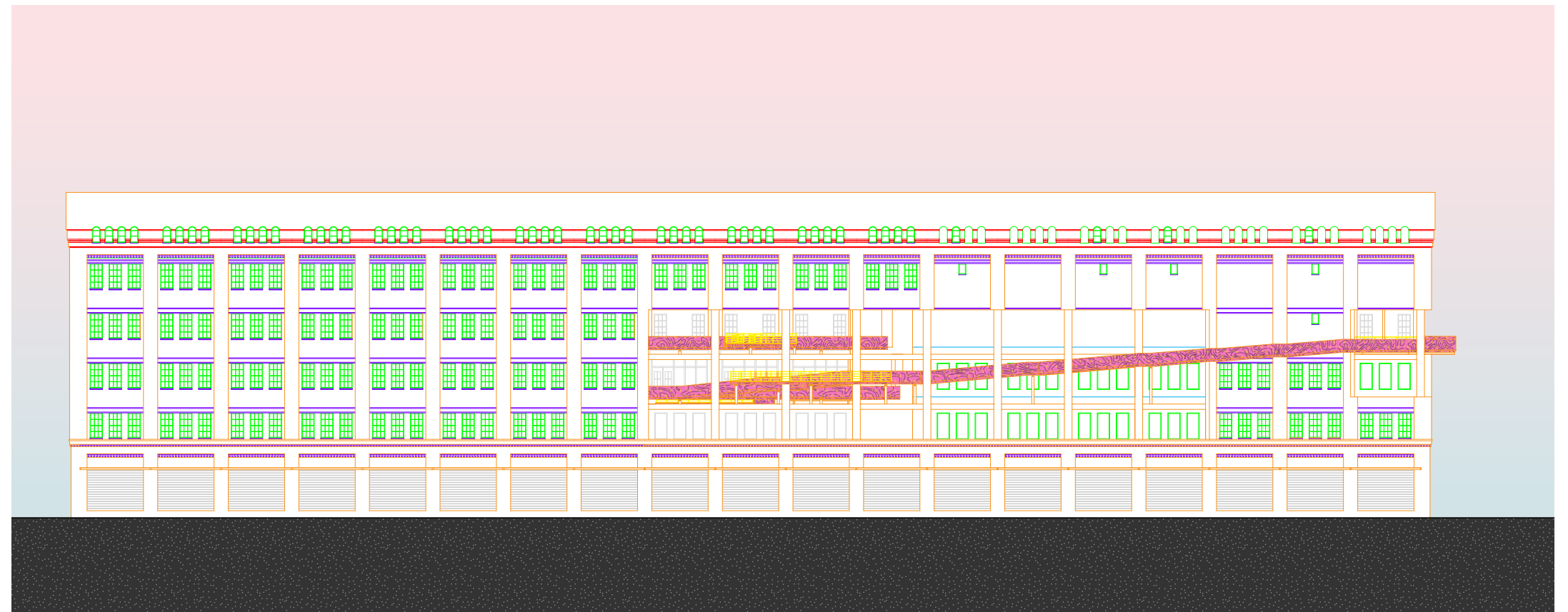
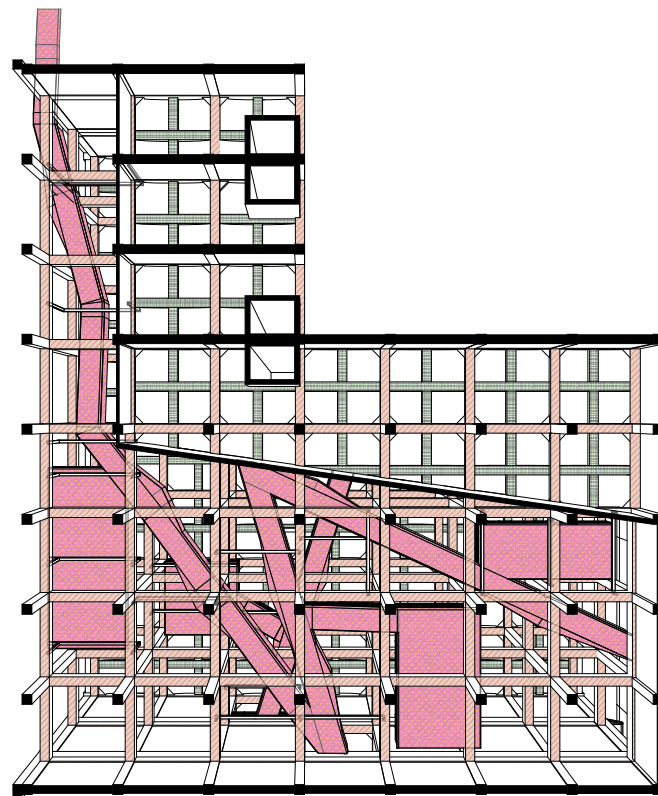
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Post - Occupied

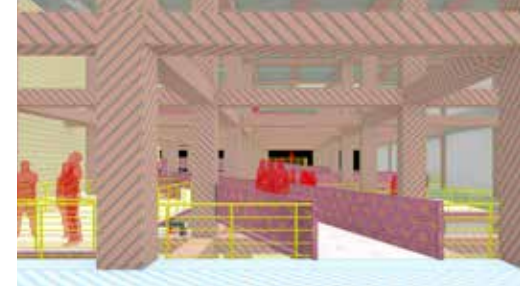
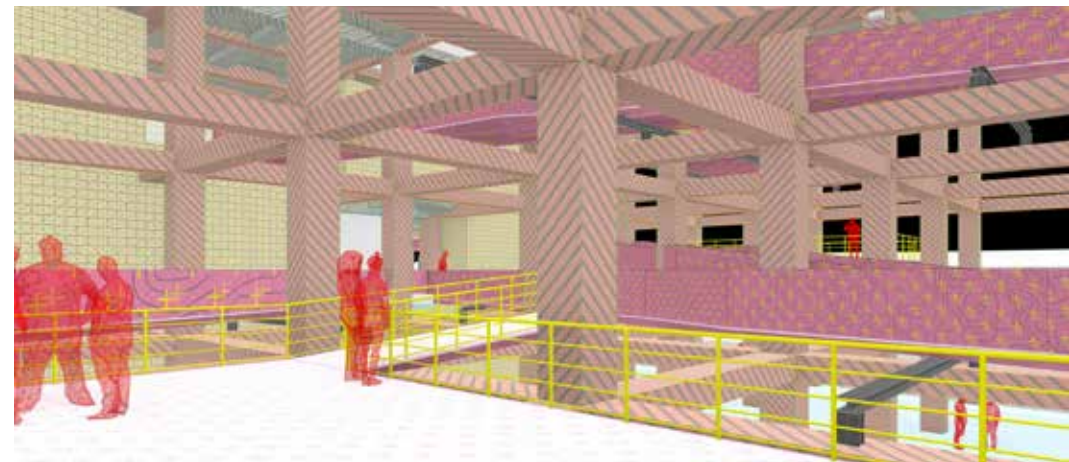
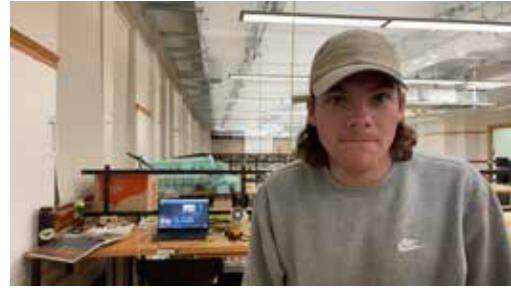
Advanced Option Studio / Instructor Gerard Damiani
Carnegie Mellon University / Fall 2021

Studio Post - Occupied was a semester long exploration into reoccupying industrial space in the city of Pittsburgh. The project acted as a miniature thesis, with the first half of the semester being dedicated to reading, writing, and vlogging, and the second to investigating a building in depth and proposing an intervention. My focus was centered on a historic warehouse building, currently undergoing renovation into luxury offices after decades of abandonment and ownership changes. As funding for these changes dried up, progress stagnated. This came largely as a result of prospective tenants feeling that the building was disconnected from the city, as well as a lack of communal indoor and outdoor space.

To assist in connecting the building and providing more community spaces, a series of ramps appended to the existing structure of the building have been introduced. Weaving their way between the sparse portions of the building which have already been renovated, the ramps create new stereotomic spaces in-between by removing the non-structural walls through which they pass.

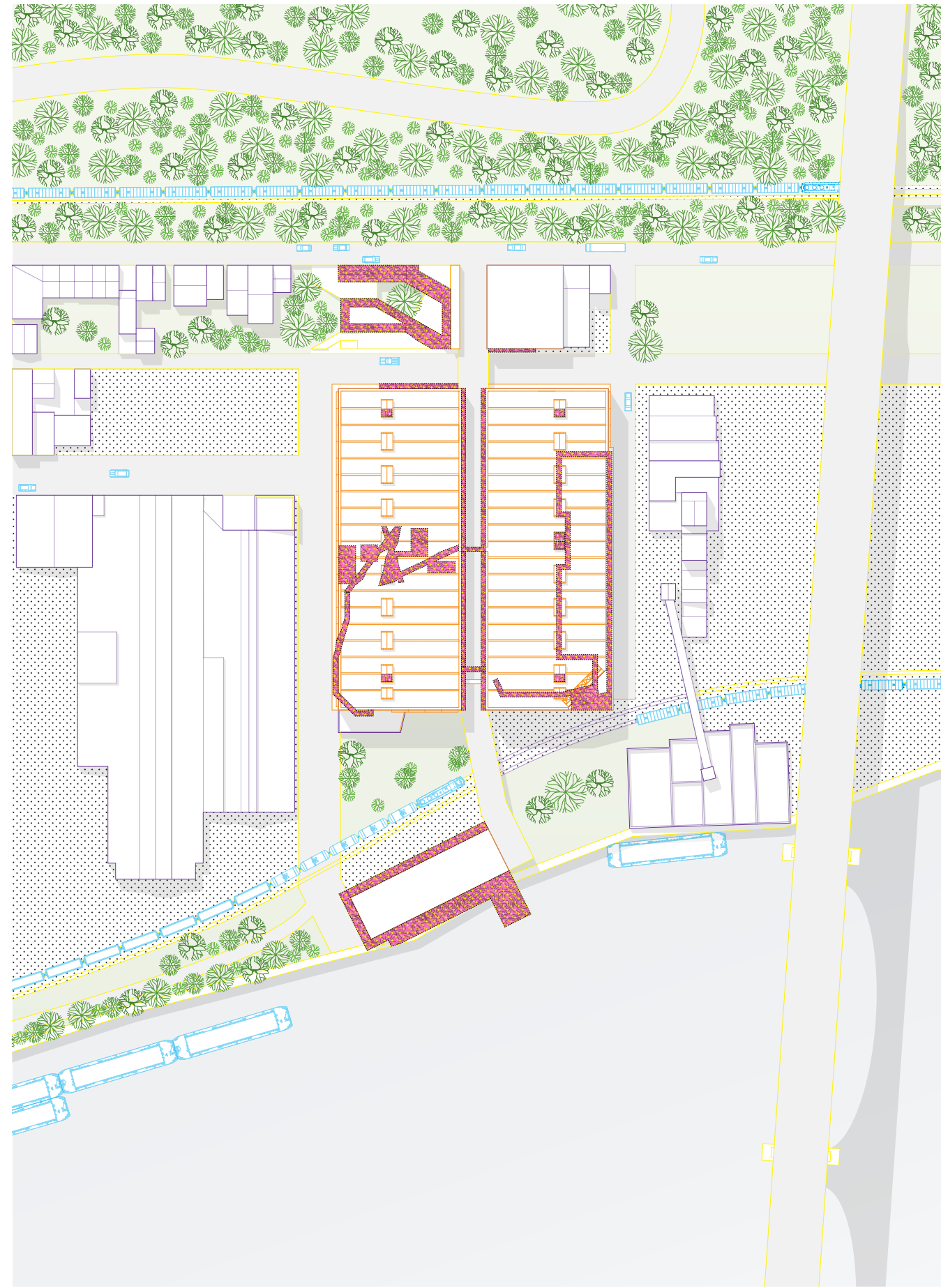


Left: Reverse perspective plan
Top Right: East elevation
Bottom Right: West elevation



Vlogging was used as a method for recording thoughts and connecting ideas - whether they happened while walking down the street in the rain, playing with frisbees in the park, or just sitting down at home. These reflections were layered with voiceover and editorial analysis, and then paired with historic and current images in a form resembling that of a documentary or video essay. Their existence serves not to record a final product, but as documentation of the development of ideas over time. Included are screenshots from four different vlogs.

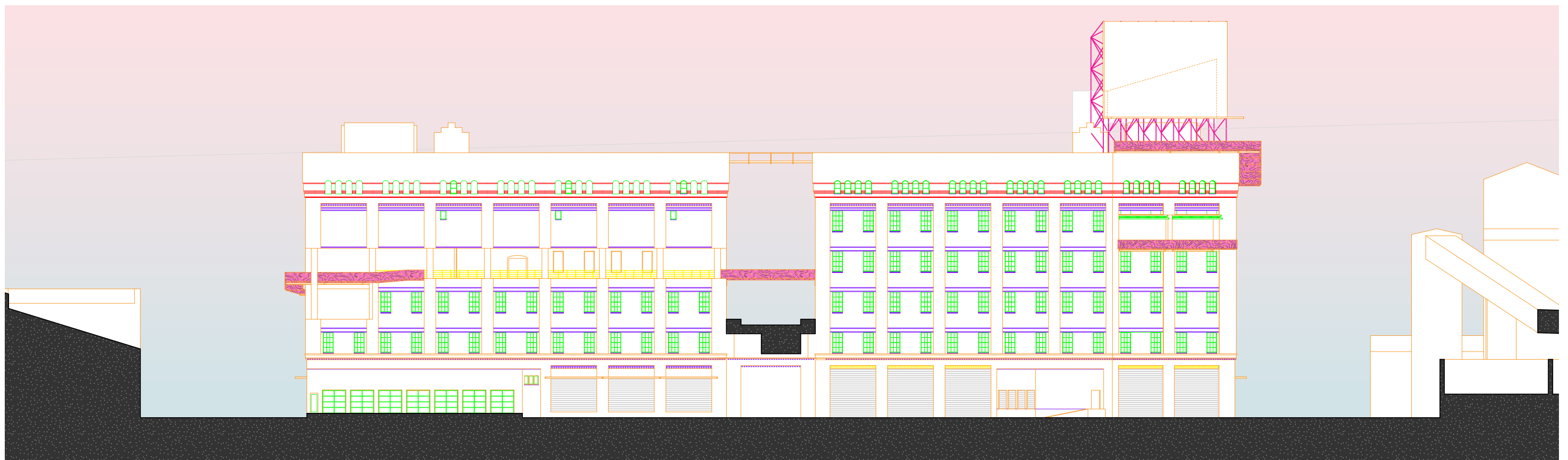
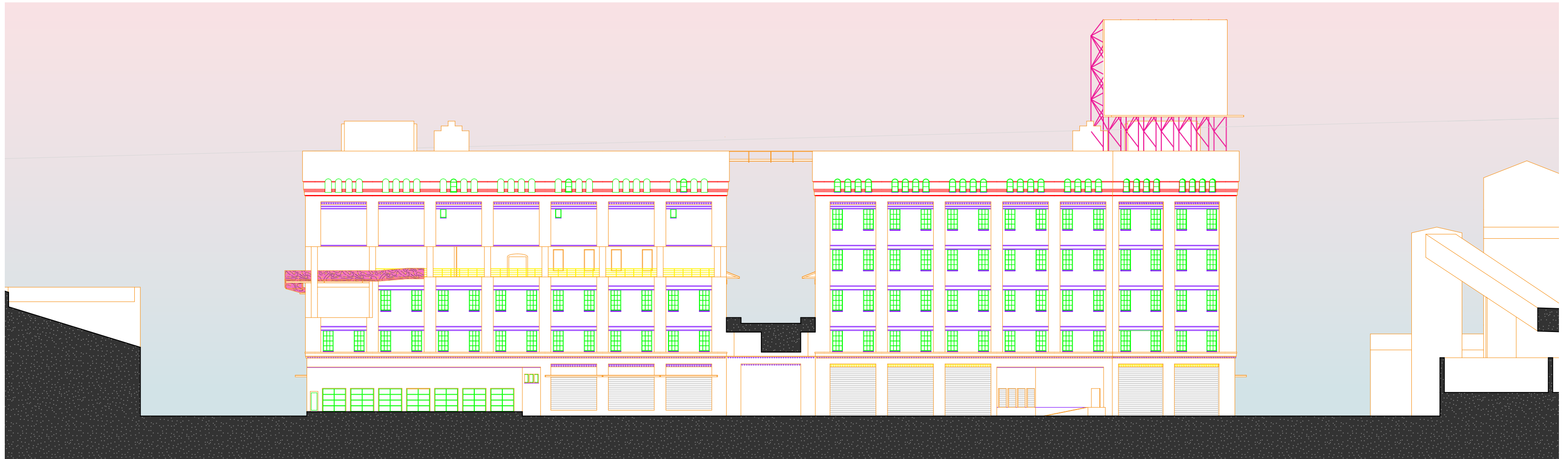
The process of modeling was used as an exercise in building an aesthetic throughout the course of the project, instead of applying a veneer of representation at the end of the semester. Through this, the act of doing something as simple as digitally modeling an existing condition or idea became a moment for critical thought.



Creating a web of paths between the frame of the existing building, ramps begin to mix with the structural grid in the same way that pre-industrial roads of Pittsburgh acted as important connections between the ruled blocks that formed as the city grew.

Weaving in and out of the building, they create programmable spaces while avoiding already renovated office space. Two secondary ramps also connect the building with the bike path and local road on the basement level. Together these elements do not attempt to re-program the entire building, but instead augment the existing conditions and plans for the site while creating new spaces for tenants and the public.

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 Top Left: First Floor plan
 Bottom Left: Second Floor plan
 Right: Site Plan



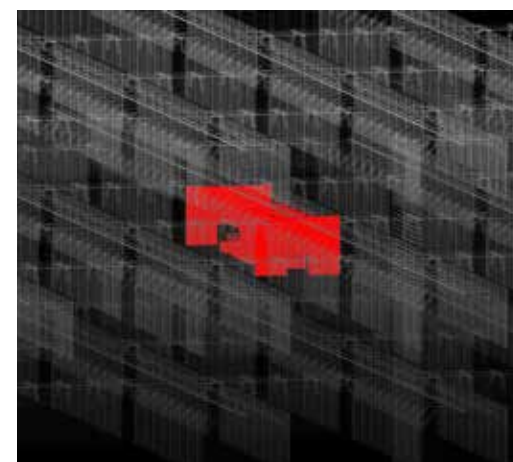
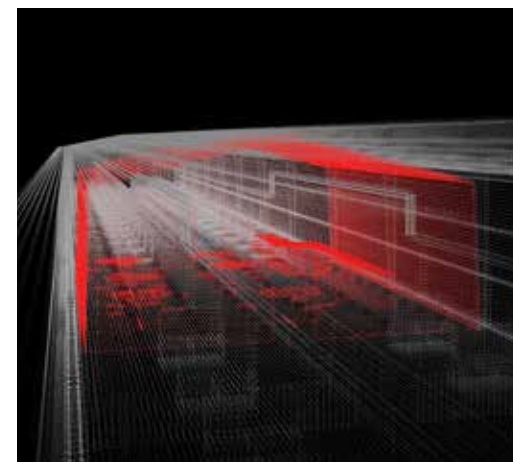
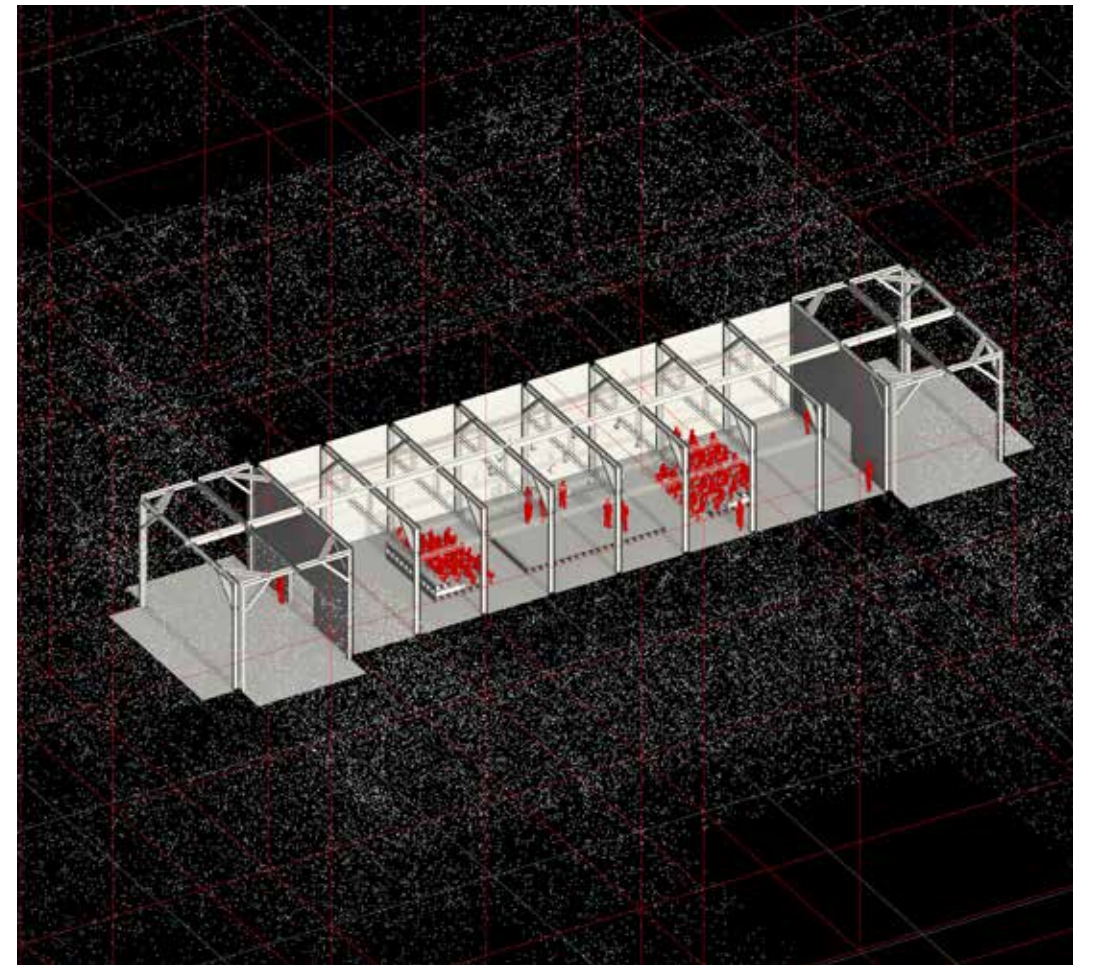
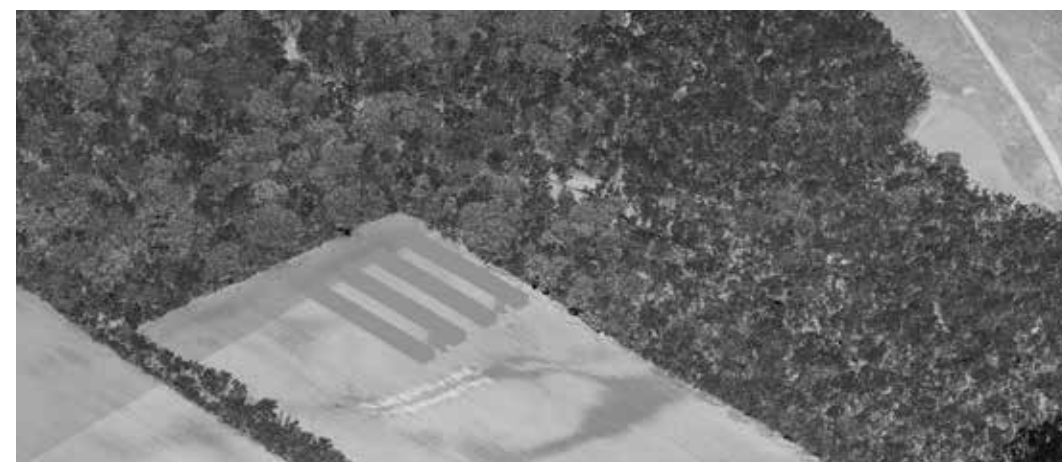
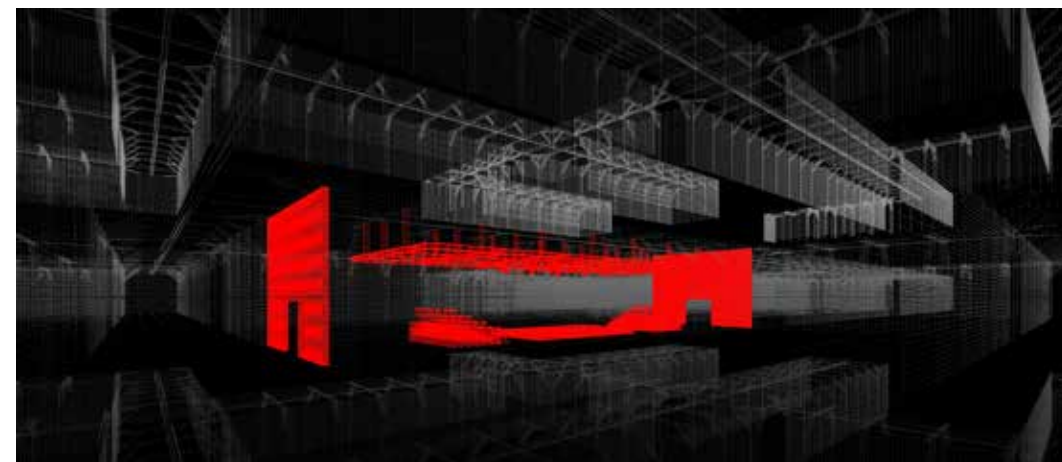
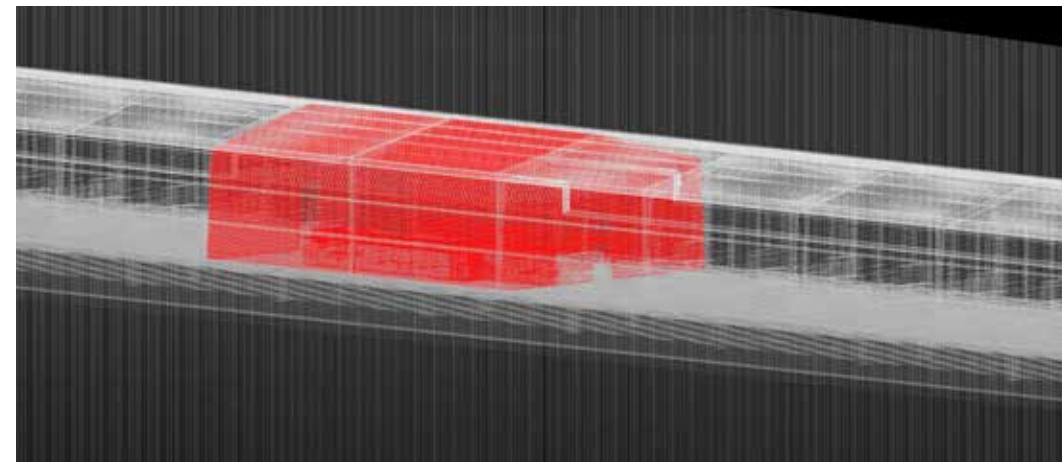
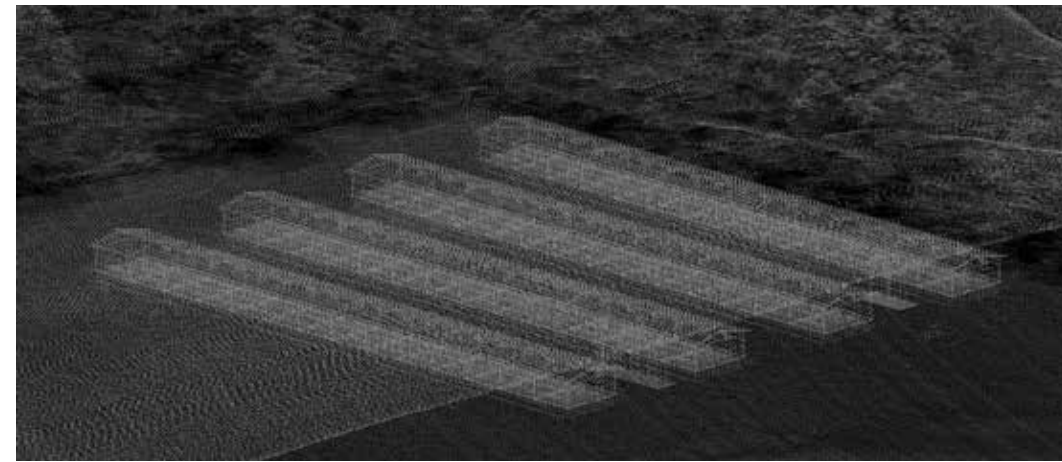
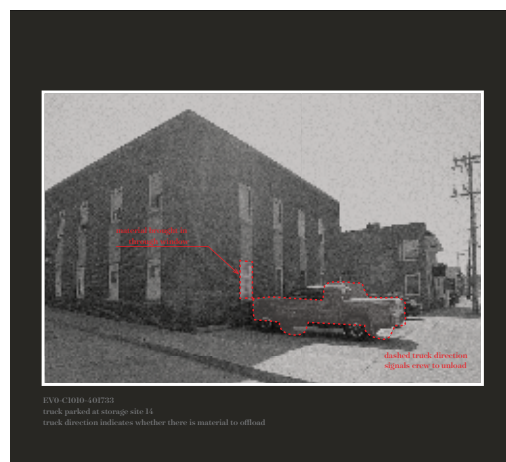
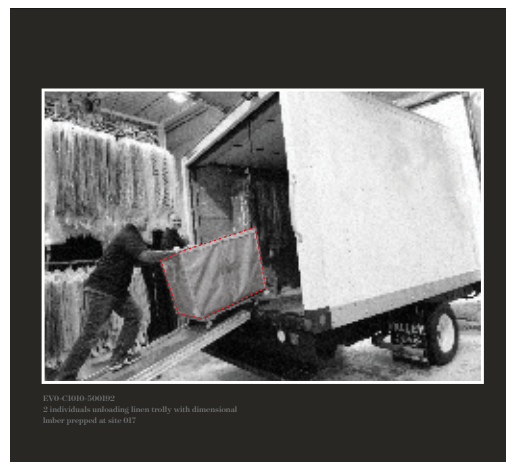
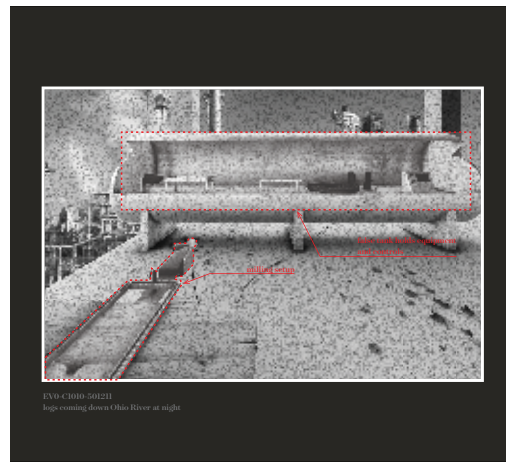
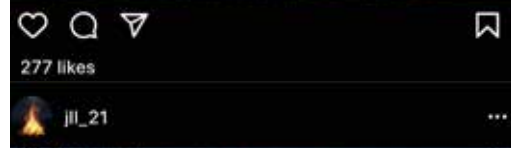
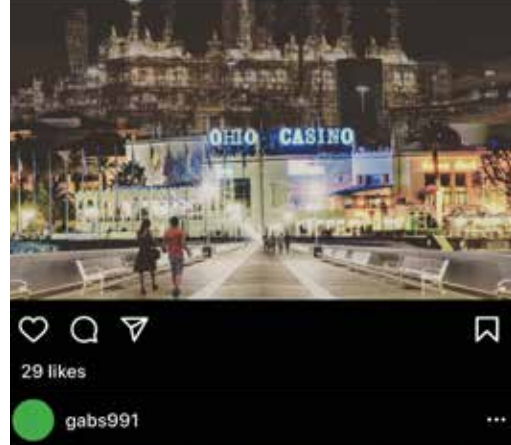
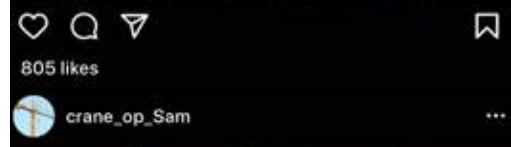
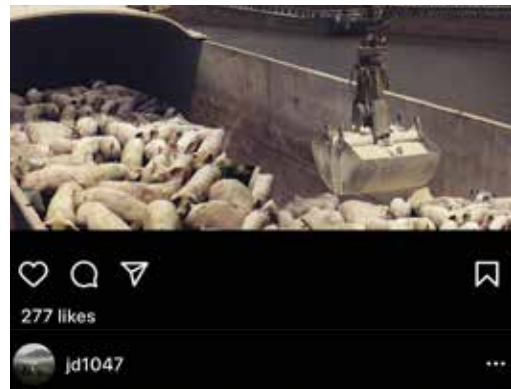
Past Futures: Ohio River Valley

Advanced Option Studio / Instructor Heather Bizon
Carnegie Mellon University / Spring 2022
Partner Nick Coppola

Past Futures projects an ambiguous future for the Ohio River Valley through an analysis of its past. Focusing on existing cultures, emerging technology, and long term political trends, partner Nick Coppola and I decided to explore a future defined by the same unfettered capitalism that created the region's current condition. Our story was told through architectural and investigative representation, but the new future lacked spaces which felt particularly 'designed'. In this story, interaction between a religious secret society, the Federal Government, new mega-corporations, and a private security company each play a role in weaving a dense and intimately connected web of conspiracy, politics, and society. Together these ideas became reinforced through forms of representation that impose both implicit and explicit authority, and begin to blur the line between reality, fiction, future, and past. Through these investigations we formed a world without any clear good or bad actors. Shown through exhibition at the end of the semester, reviewers and visitors alike were encouraged to come to their own conclusion through viewing the work and telling us what they believed should come next.

In standing back and letting non-architectural representation drive the narrative, we began to question the role of the architect in a time and place controlled by only governmental and mega-corporate interests. The characters acting against this system were just normal people, yet they find it much easier to make spaces of comfort than professional architects. The unanswered question for us and reviewers became: why?

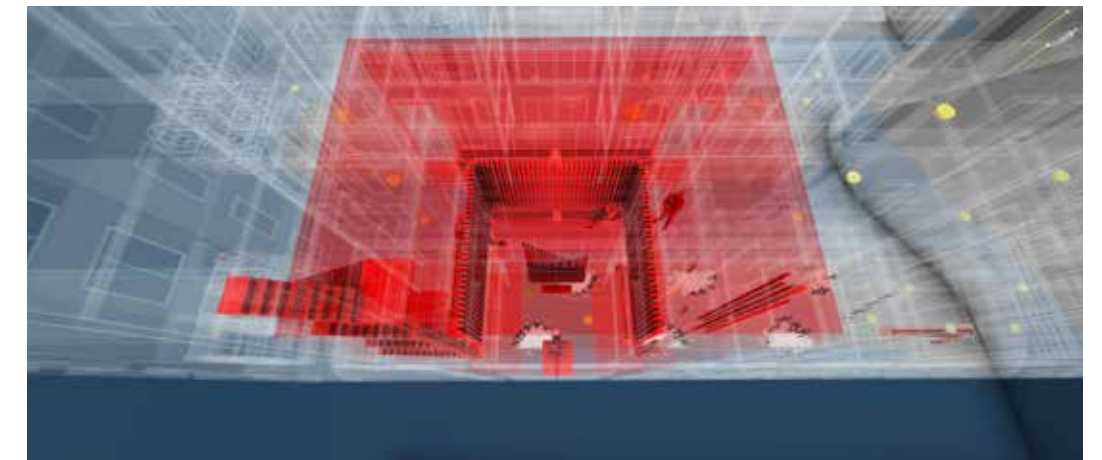
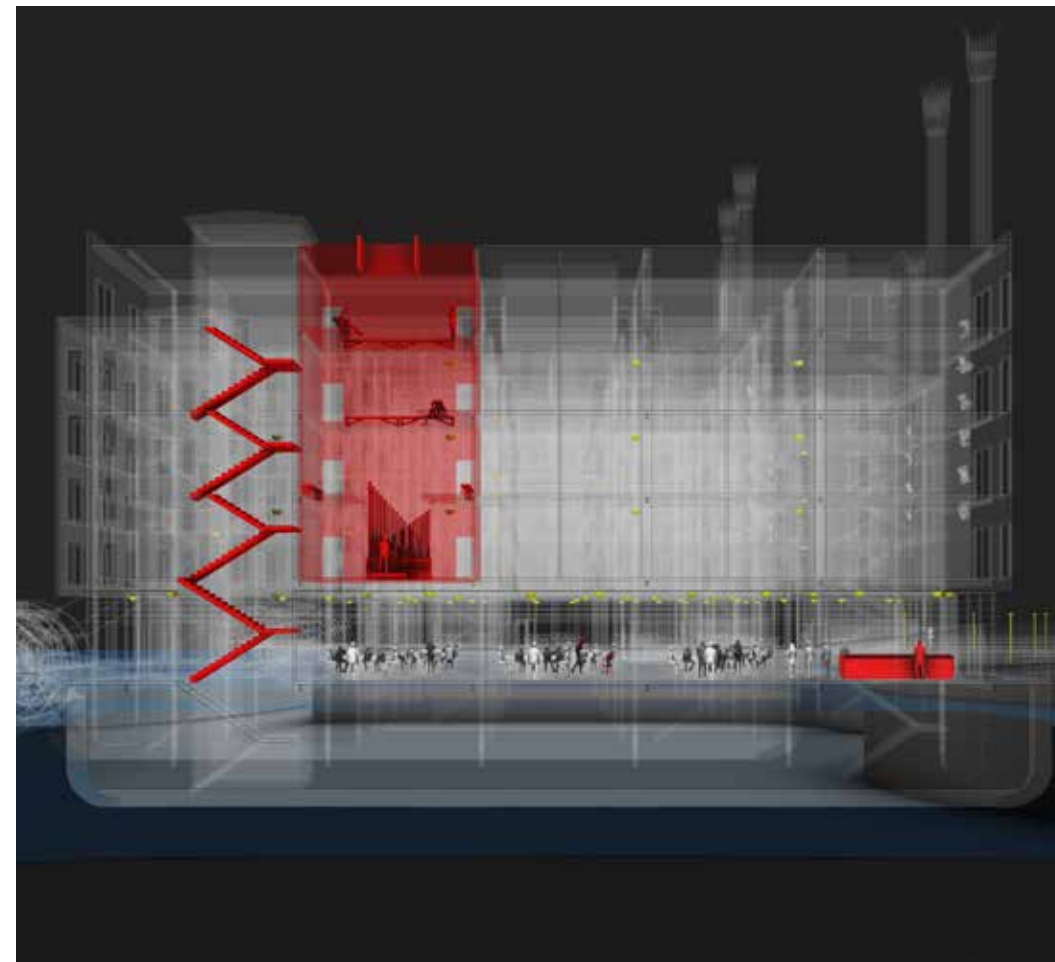
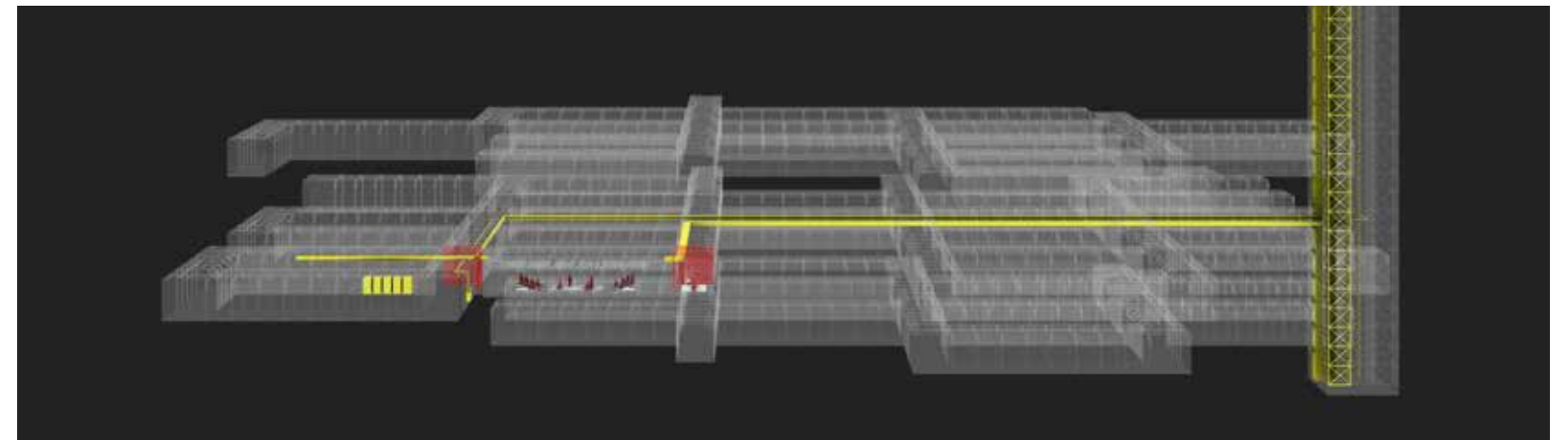
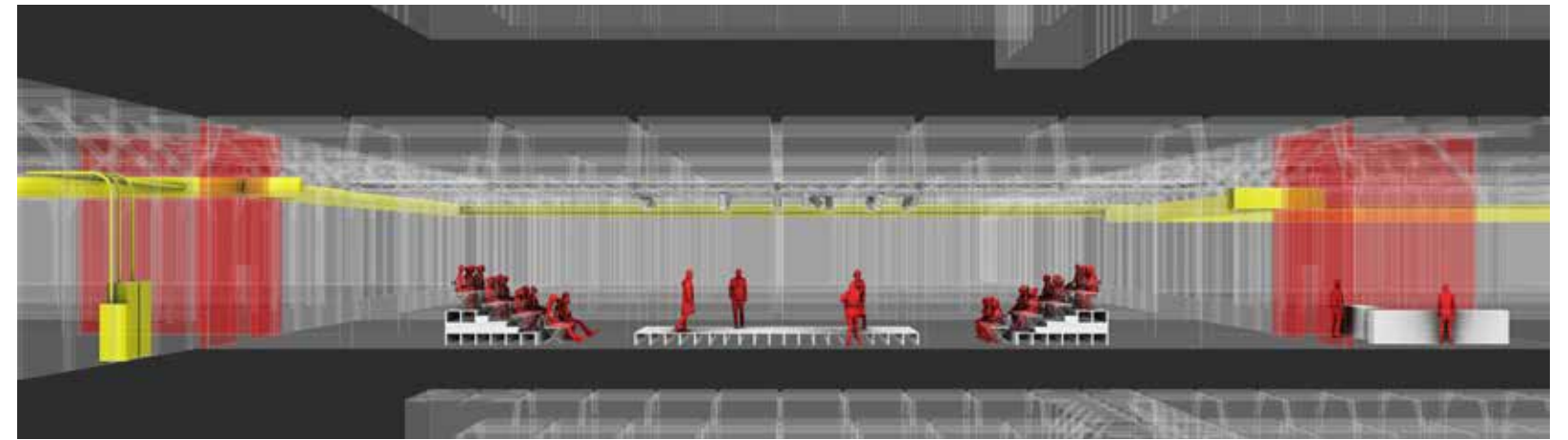
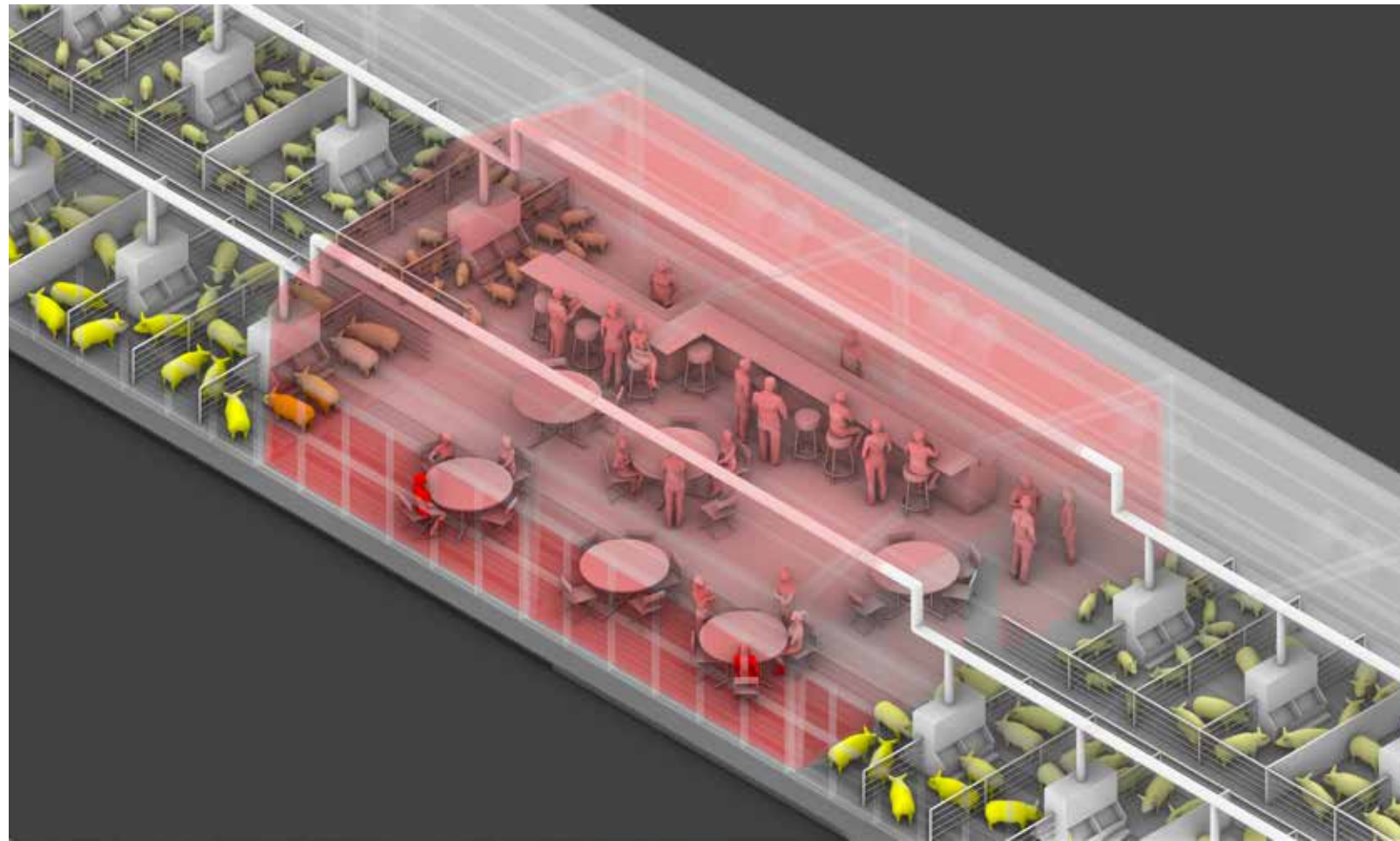




The first representational method came through production of a large number of smaller graphics, each with socially or politically authoritative methods of representation. Pieces including point clouds, investigative photography with annotation, satellite imagery, and social media messaging each played a role in enforcing the legitimacy of the change we were imposing upon the region.

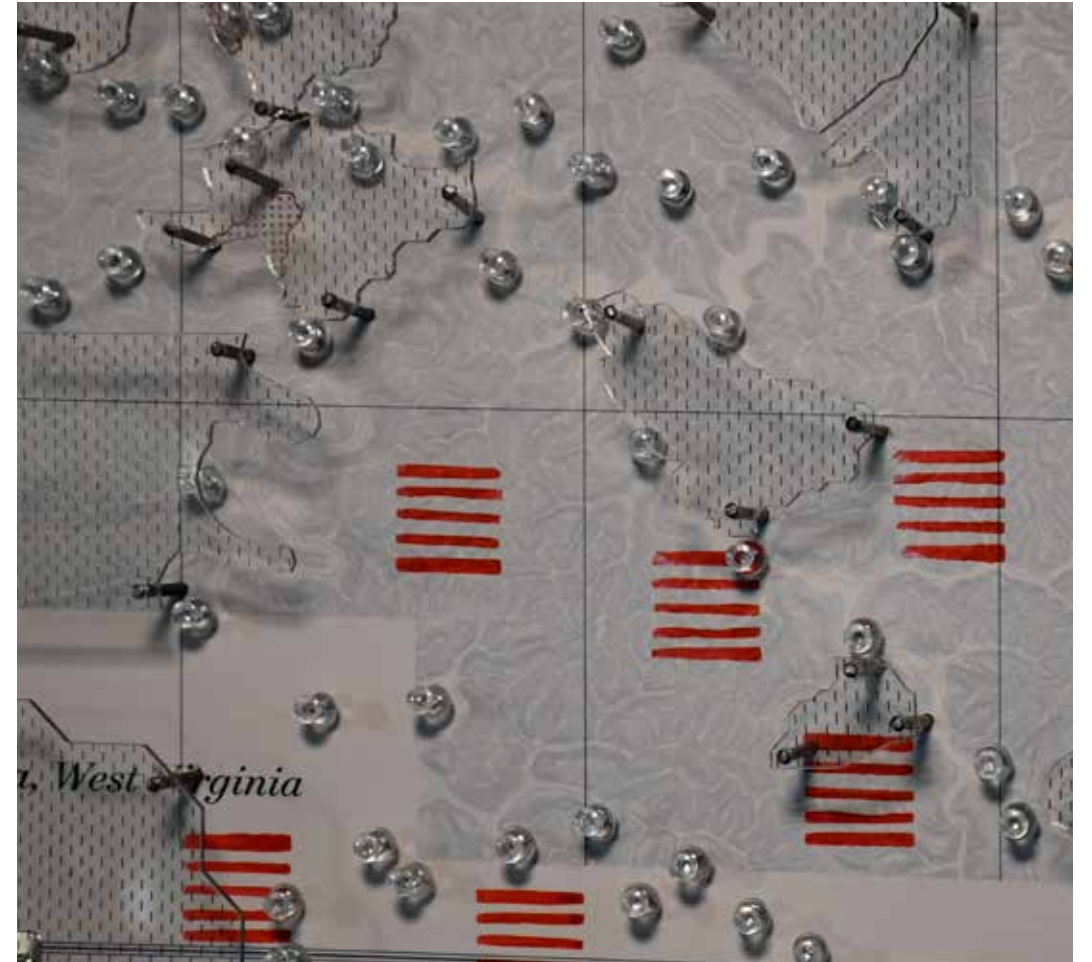
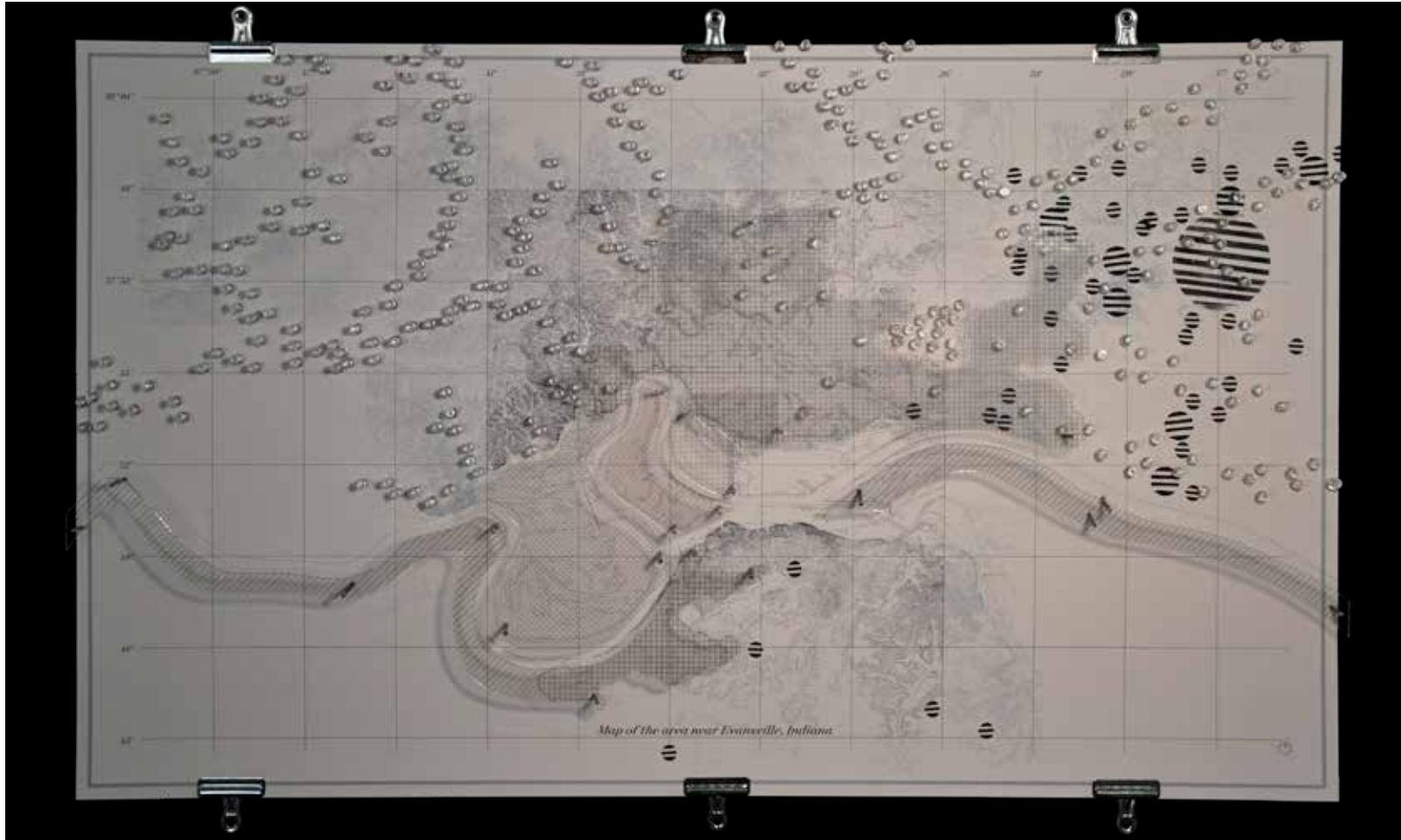
These images represented a story of resistance seen through the eyes of those in control. Acts as simple as material processing and construction became illegal, and thus hidden from view, while extraction and industrial expansion became an even larger part of daily life.

Far Left: Snapshots from the Ohio River Valley's new reality
 Middle Left: Tracking hidden movement of construction materials
 Right: LIDAR scans and visualizations of Hog Farm and Coal Mine



Next came sight identification and representation. Three main hybrid typologies emerged: a social club in a hog farm, a theatre in a mine, and a church inside a casino. These examples became an architectural manifestation of relationships and ideas within the story, but also forced an important question on the viewer, especially in an architectural setting: In some futures, do architects matter at all?

In asking, we want to question the way that architects see themselves as independent of systems of control. In our story, architectural changes are made by everyday people, whose fulfillment comes from turning what were once spaces of labor into communal spaces of leisure, something the job of an architect often cannot allow for.



The final method of representing these relationships came through production of a set of mappings. As drawings-turned-model, the maps begin to form their own spatial relationships. The set of six maps consists of three pairs of maps, each focused on an Ohio River community. First, a Sepia colored map is produced showing areas of corporate interest in the region. Next, a dark colored map of the same area and objects is used to track locations of illegal and informal production in these communities. Through use of this alternating method, each work makes a statement against another, while the overall narrative of the project is able to mediate between them.



Together, with technical drawings on vellum, an investigative video, and a series of reports, the project filled a space which allowed for immersion into our world. Each artifact included a card listing the object's fictitious creator and a small description. The cards and works themselves were the only medium in which we as students interacted with the reviewers and exhibition visitors, allowing them to engage with the work on their own terms. In this way each visitor would be able to view the work through their own architectural lenses, and facilitate a discussion centered less on the specifics of individual artifacts in favor of a broader discussion regarding the future of the region and its relationship to architecture both physical and digital.

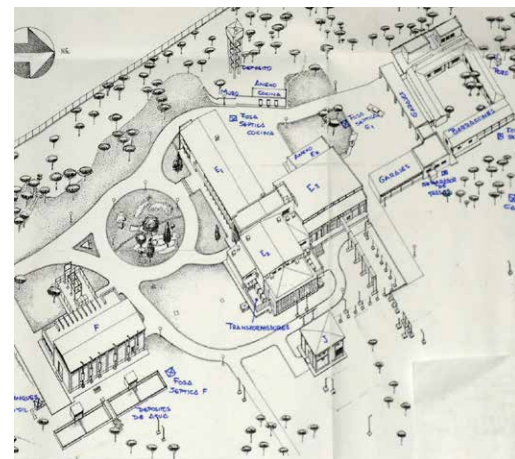
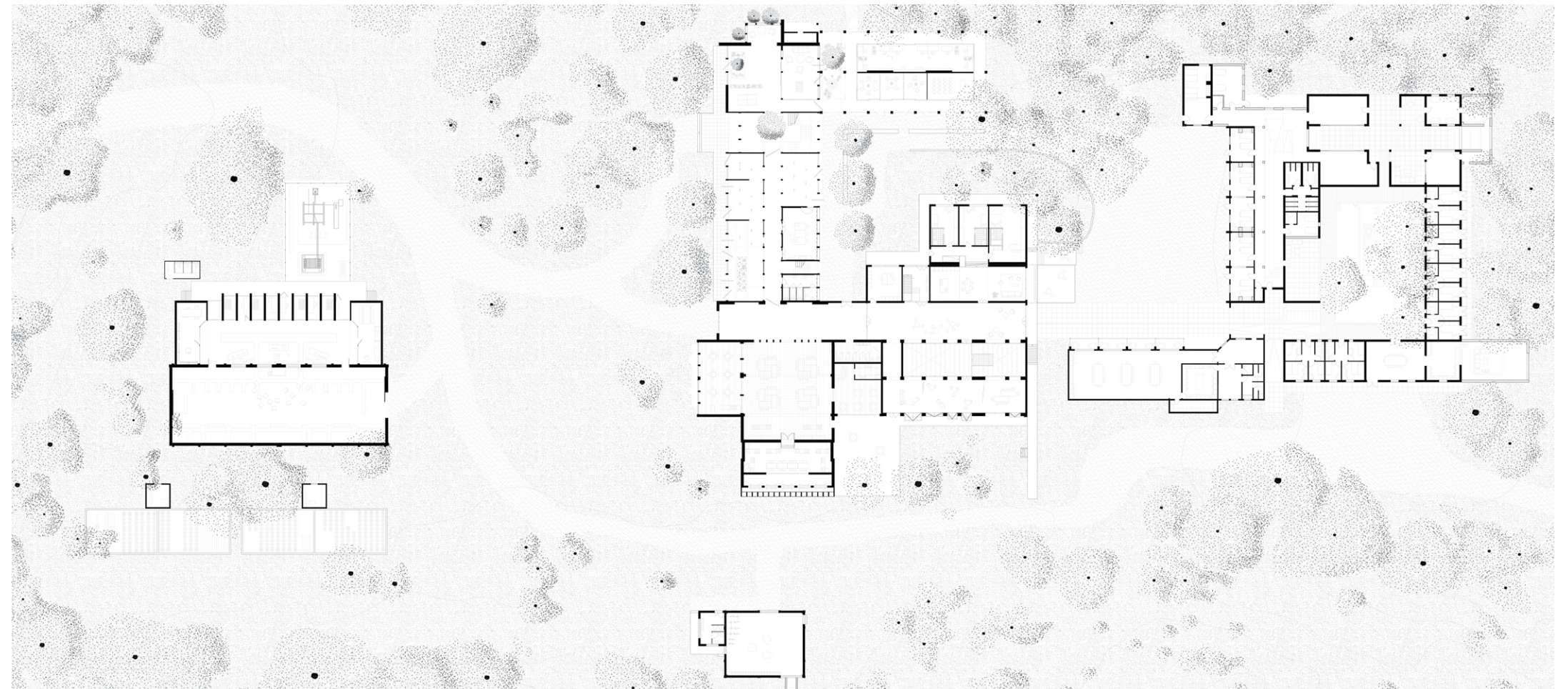
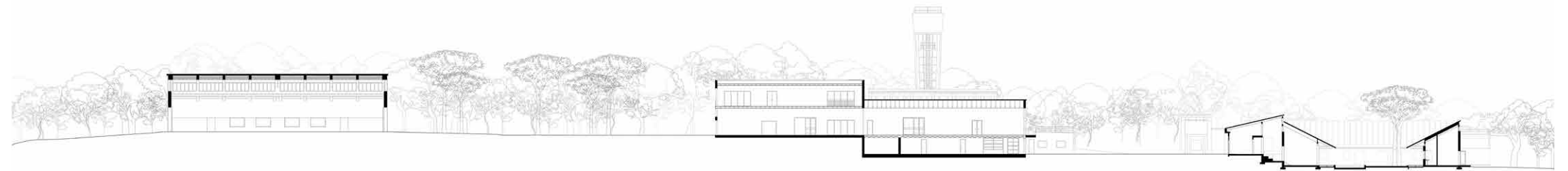
ex-Radio Liberty

MA1 Studio / Instructors Meritxell Vaquer & Daniel Bosshard
 EPFL / Fall 2022
 Partner João Saraiva Teixeira

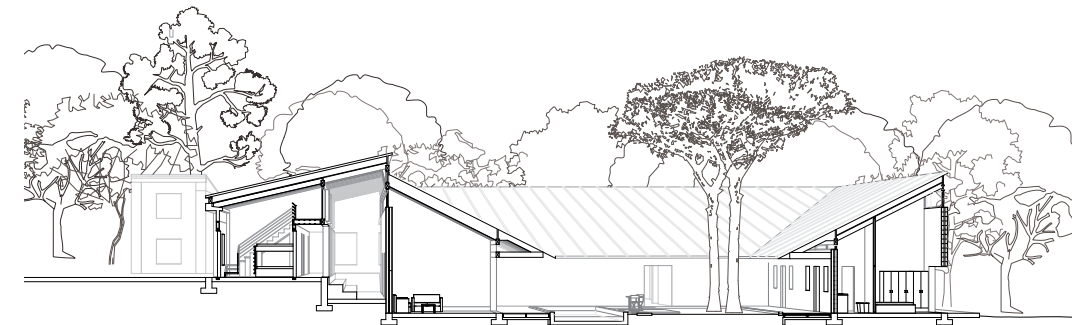
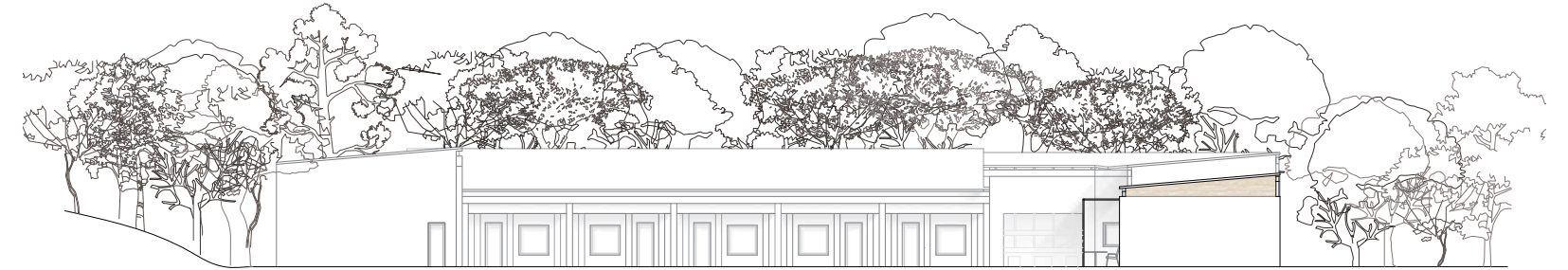
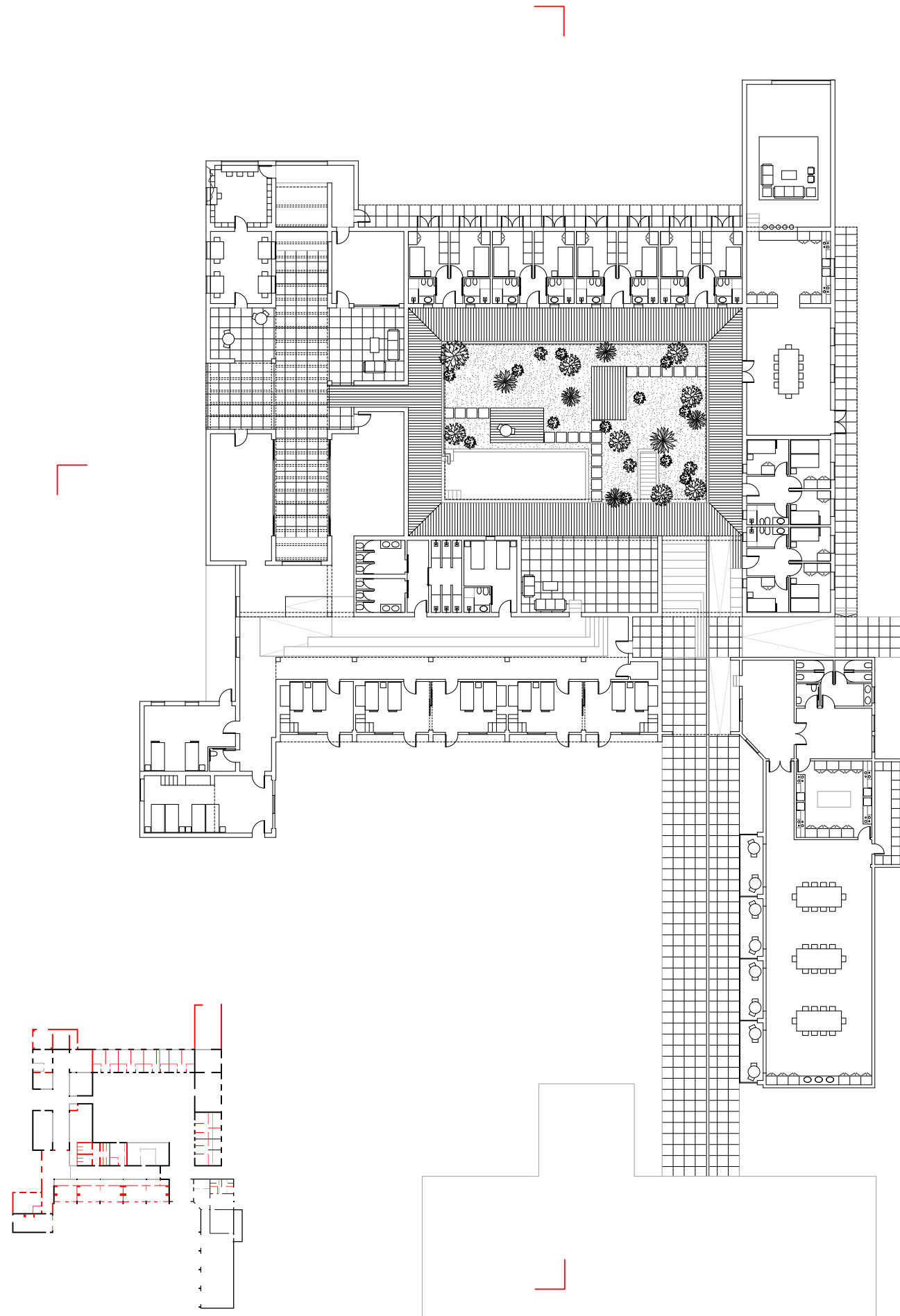
Run by two former employees of Peter Zumthor, this studio attempted to focus on understanding place and forming an architectural connection to a site's memory without glorifying its' past. Such a task was undertaken by locating a place with significant geographic potential and a complex history. Selected was a Cold War radio station on the coast of Catalonia, where the United States and Francisco Franco's Spain collaborated to build a shortwave radio station capable of bouncing signals off of the Mediterranean Ocean and behind the Iron Curtain.

The station's complex relationship continued long after Franco's rule and even the fall of the Berlin Wall, remaining in operation until 2005. After it's closure, the site was well-maintained until the larger push for Catalan Independence resulted in not only a withdrawal of funds from the Spanish Government, but a promotion of the site's vandalism. Today, the ownership of the site is contested by local and broader governmental organizations, but is still abandoned and continuously being vandalized. In spite of this situation, residents of nearby villages still see value in the robust construction and native pine trees on the site, and themselves imagine a future of re-habitation.

The project is thus an attempt at proposing a variety of functions within the existing campus, and attempting to imagine that future, so that it may benefit both the local residents and the site's well-preserved forest of pines.



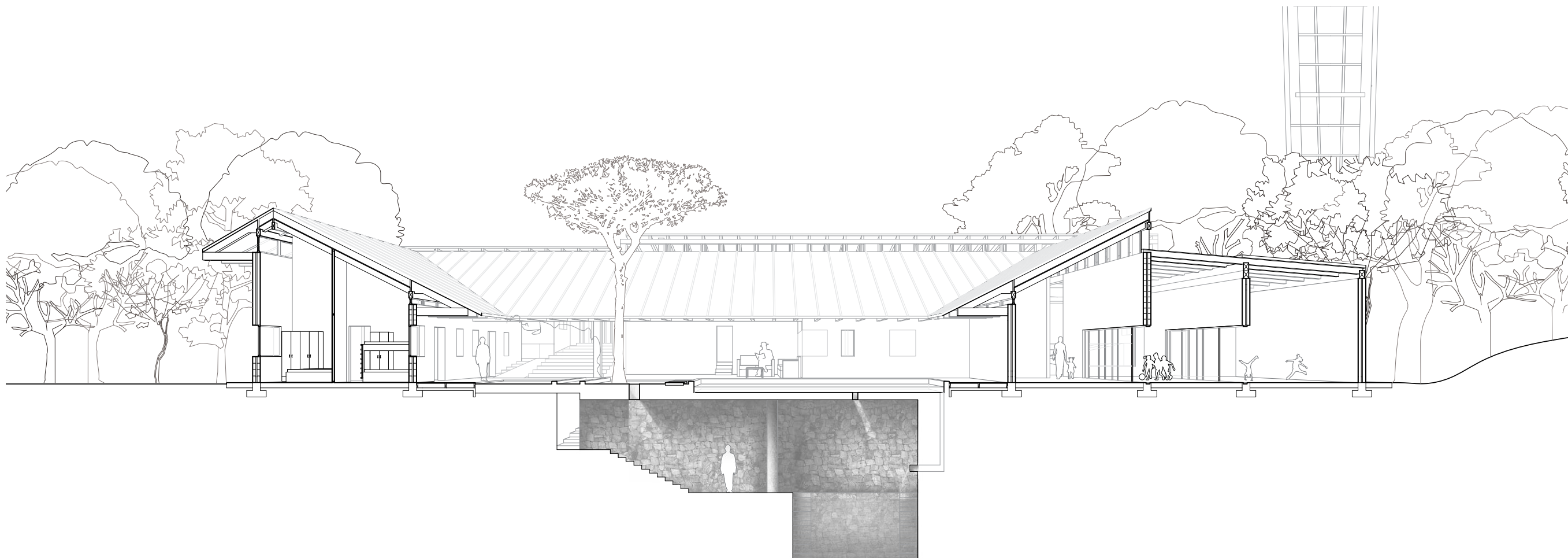
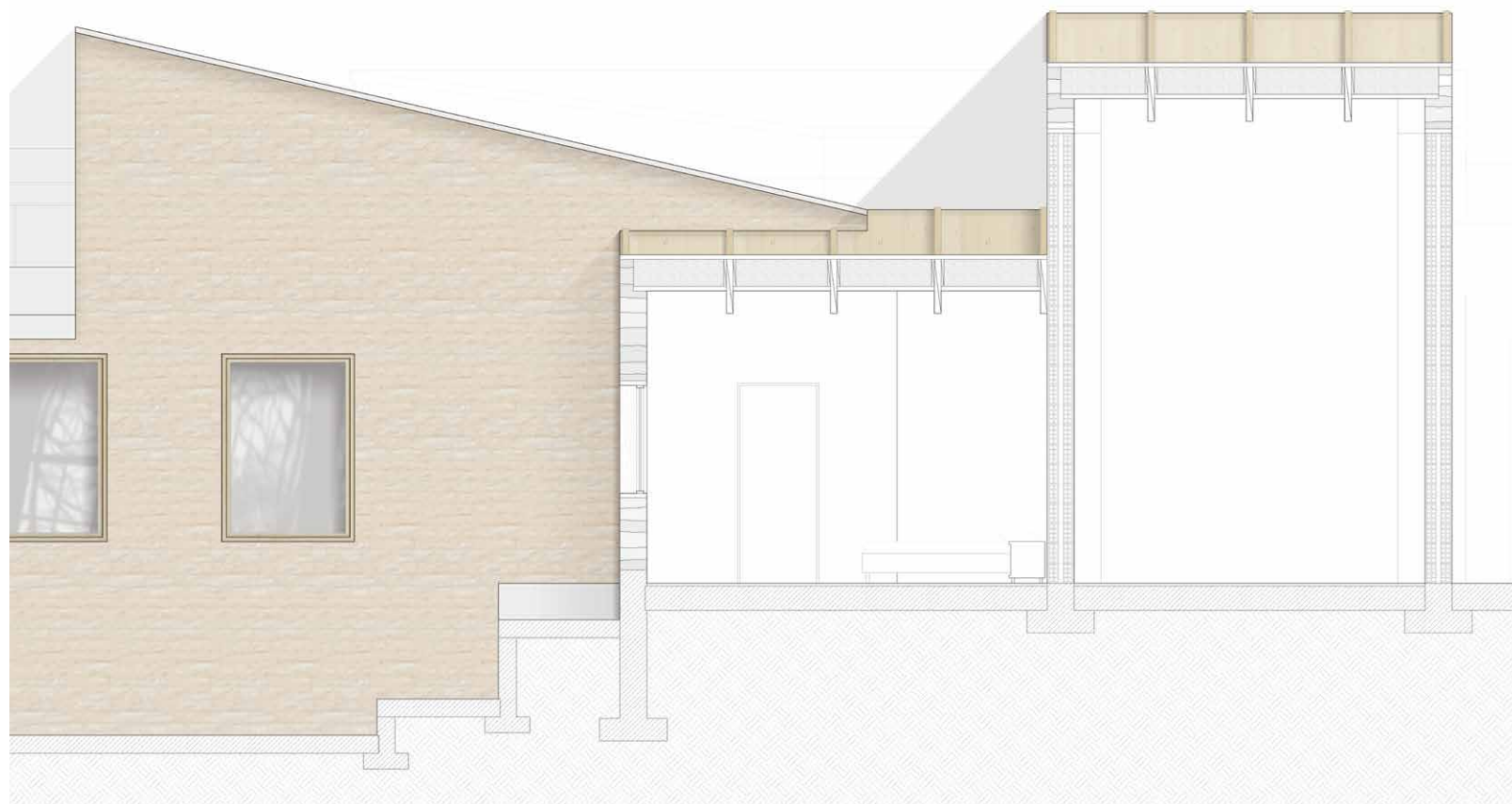
Top Right: Campus plan and section - seven person collaboration
 Bottom Right: Existing conditions on site
 Bottom Left: Previous conditions and drawings of campus



After analysis and a visit to the site, partner João Teixeira and I were assigned the old dormitories and garages on the North side of the campus, and were to make the complex capable of hosting a class of elementary school students each week, a team of researchers, and unaccompanied refugees for a month at a time.

To re-imagine these spaces, we focused on creating a series of courtyards both inside and around the existing structures which were able to provide unique functions to these different groups of residents. On the Southern and Western wings are hostel-style rooms for the students, to the North rooms for researchers, and to the East are dorms for the refugees. By curating access to various external spaces from these programs, each begins to form a character of its own.

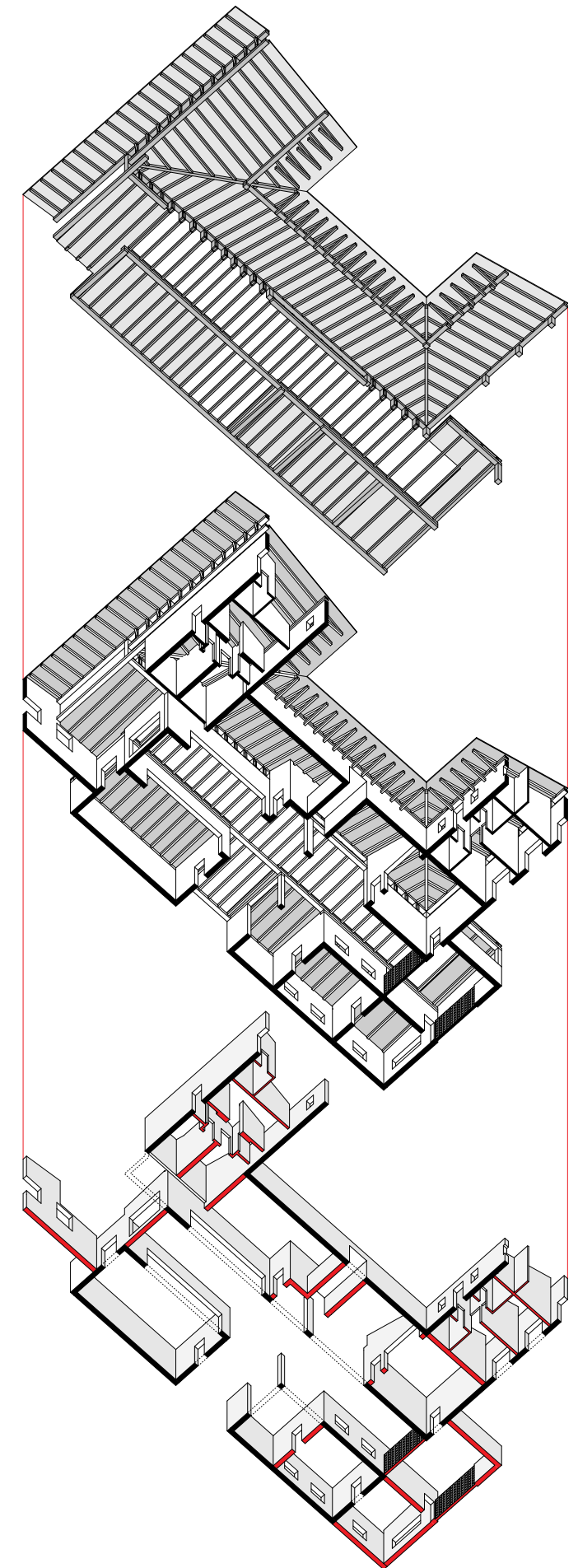
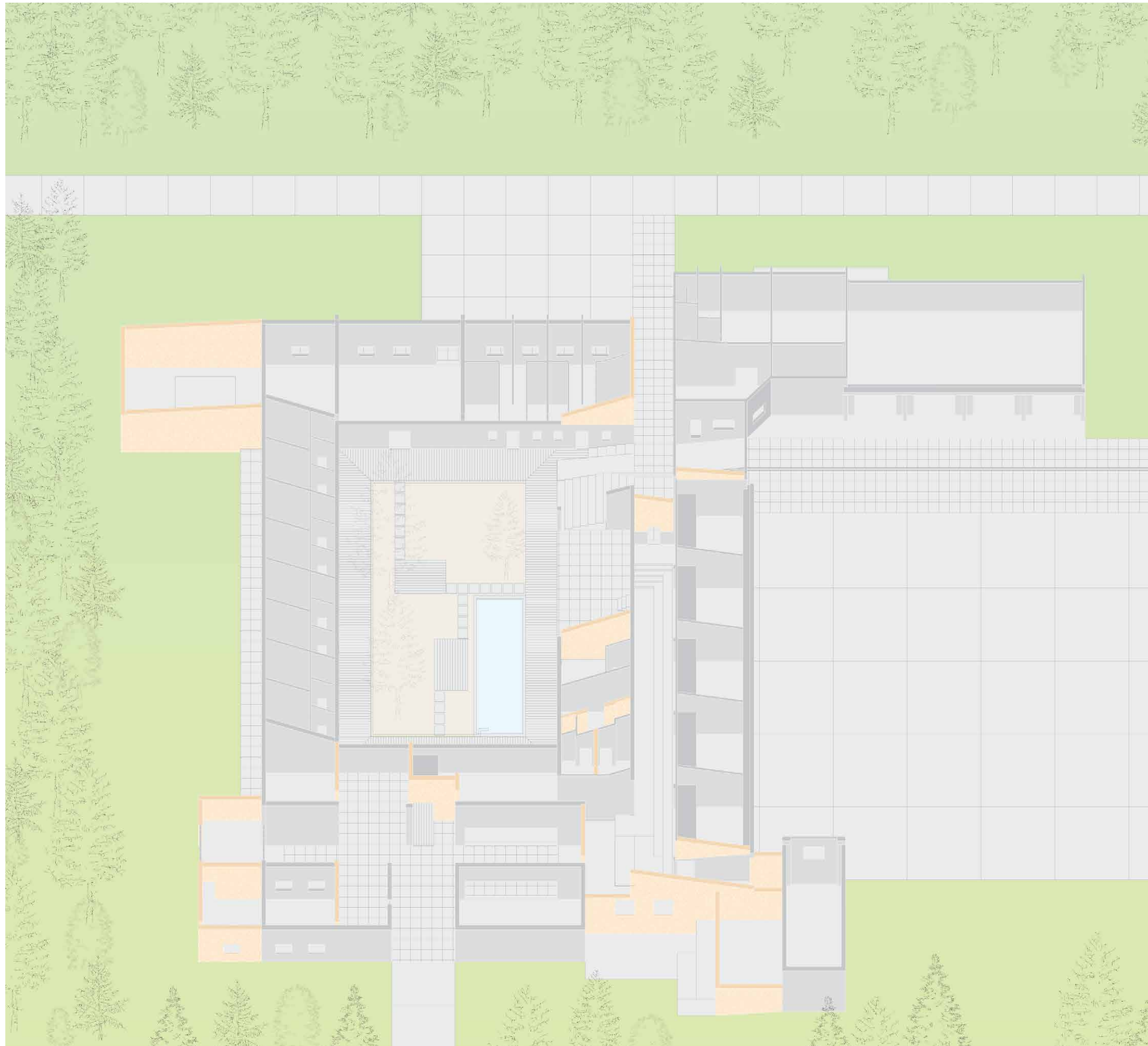
Left: Plan with key: grey - removed walls, black - remaining walls, red - added walls
 Right: North elevation, South elevation, section

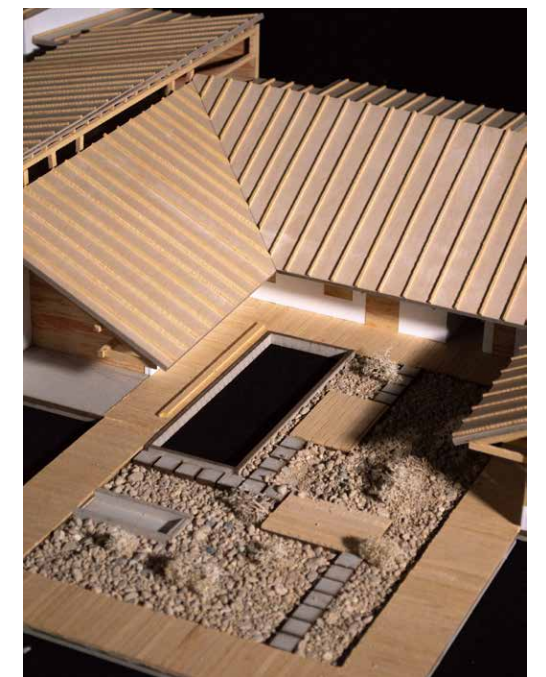


To re-program this site, we decided to retain the majority of the existing spaces, but to claim more interior space by removing the existing roof and adding a new roof, constructed of pine wood and insulated with over a foot of straw. The generous climate allows for these traditional construction methods to enhance even the most extractive and unsuited structures. The traditional construction of the roof is then stressed further by exposing the joists below, and signaling their locations above.

A cistern located below the main courtyard holds a store of water for the entire campus, and provides us with material for walls, and fills for old windows and doors. Each new external wall and old opening is constructed of rammed earth to give new life to this old ground.

14 **Top:** Sections through rammed earth wall and thatched roof
Bottom: Left to right in section - rooms for minors, main courtyard and cistern, children's play spaces and courtyard



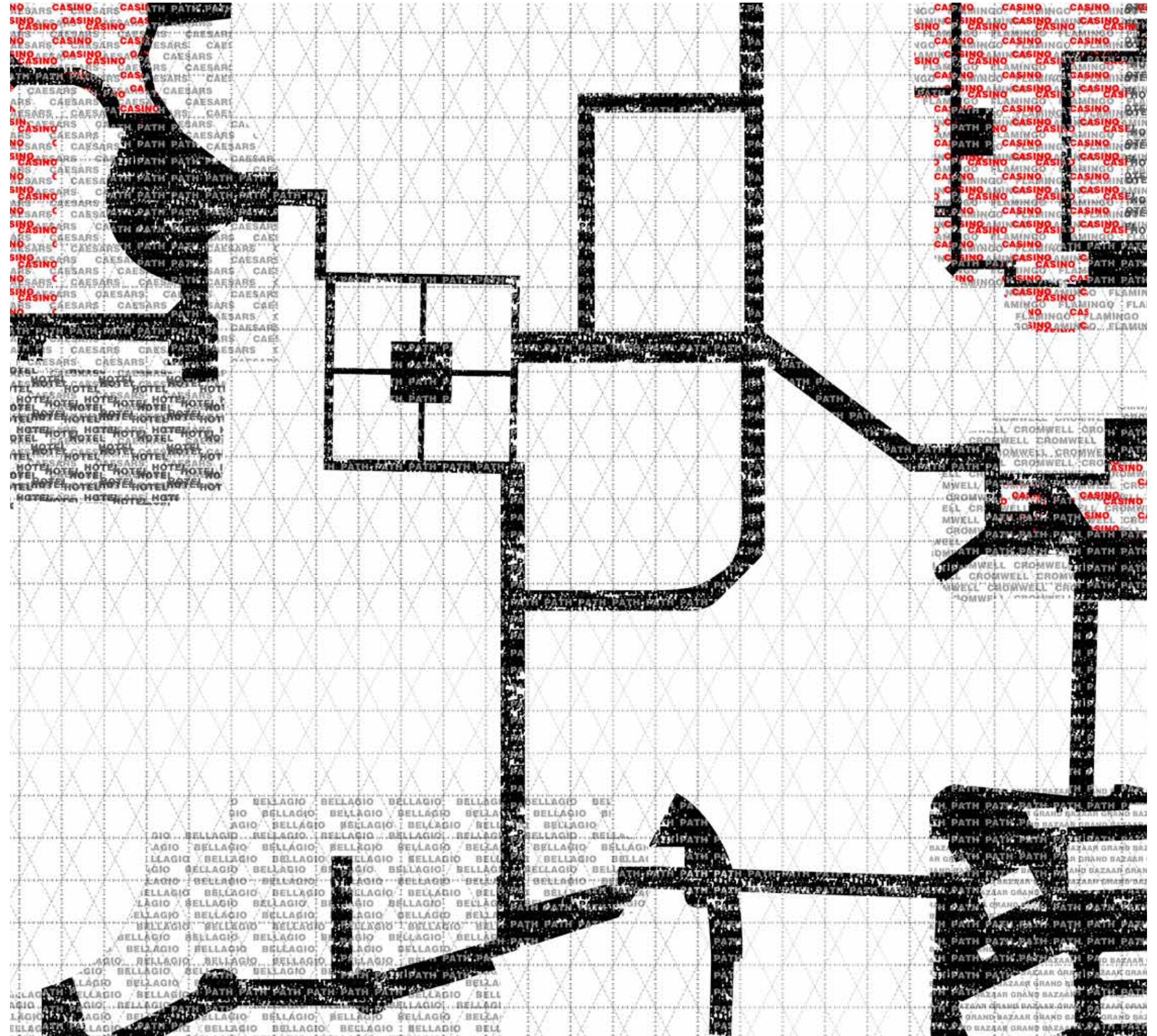


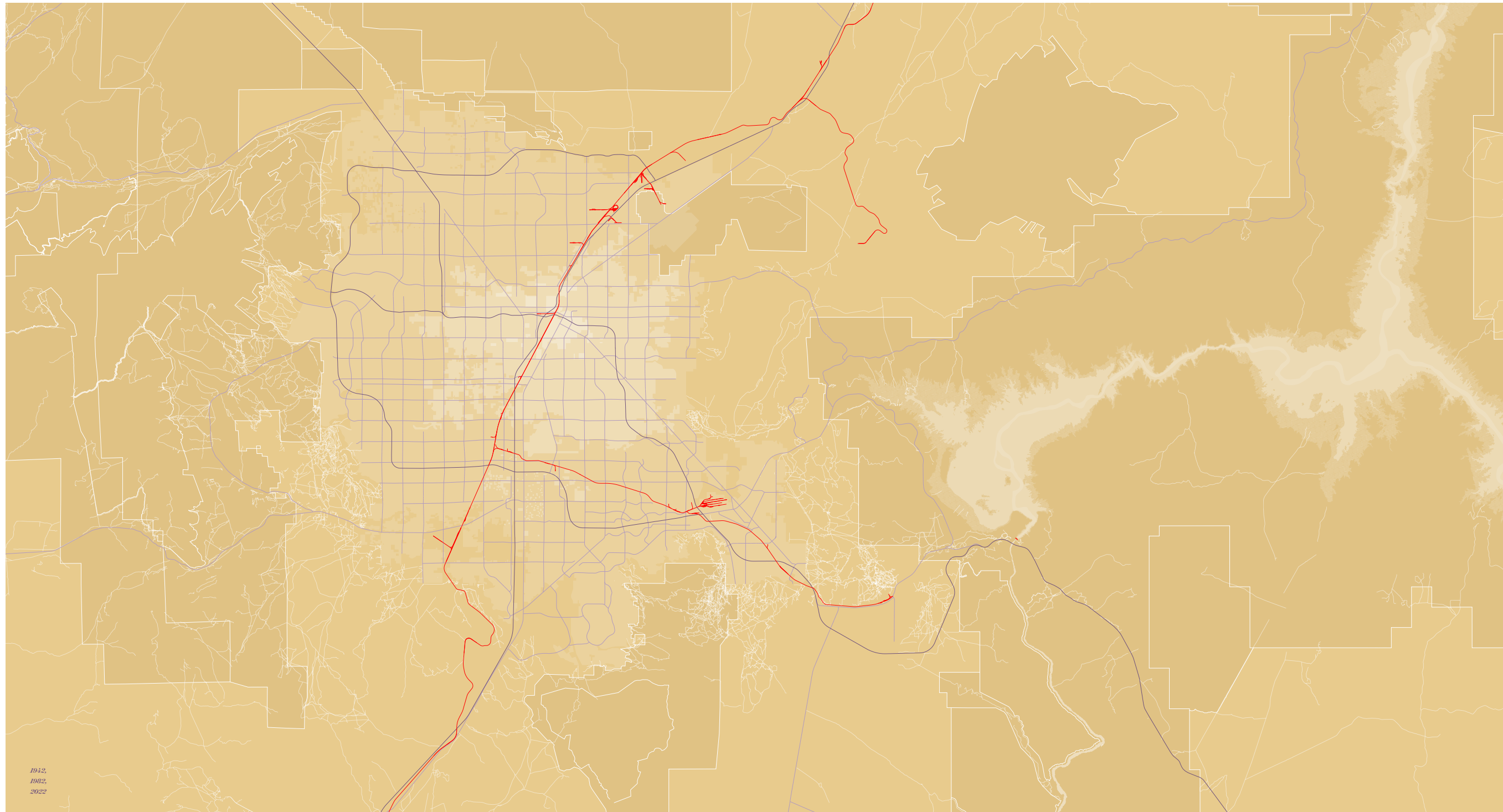
At 1:20 scale, the model emphasizes the contrast between the existing stucco, rammed earth, and new roof. Half of the complex is included as only silhouette and may be pulled apart to reveal interiors.

Mapping Las Vegas

Project Based Secondary Studio / Instructor Bárbara Mações Costa
EPFL / Fall 2022

Emerging from a course which implements traditional mapping techniques to explore a building's relationship with its territory, the two maps and model created each expand the relationship beyond a single building, and instead investigate the City of Las Vegas, its Strip District, and Lake Mead, as they head together towards an increasingly uncertain future.

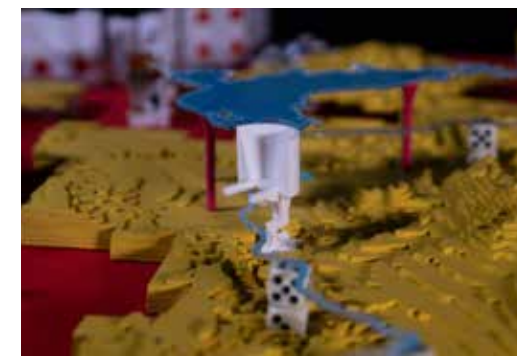




1912,
1982,
2022

Tracking the city of Las Vegas from its roots as a railroad town through today, this map shows the city's urban footprint and the Colorado River in three periods. The town's formal settlement immediately after the construction of the railroad, the conditions encountered by Venturi and Scott Brown, and today. Together the overlaid silhouettes show the city as it has grown from an oasis in the middle of the desert to a metropolis whose edges are quickly approaching the protected National and State recreation and wildlife areas on all sides. As the city has grown, the once mighty Lake Mead has begun to shrink as demands on local water resources increase.

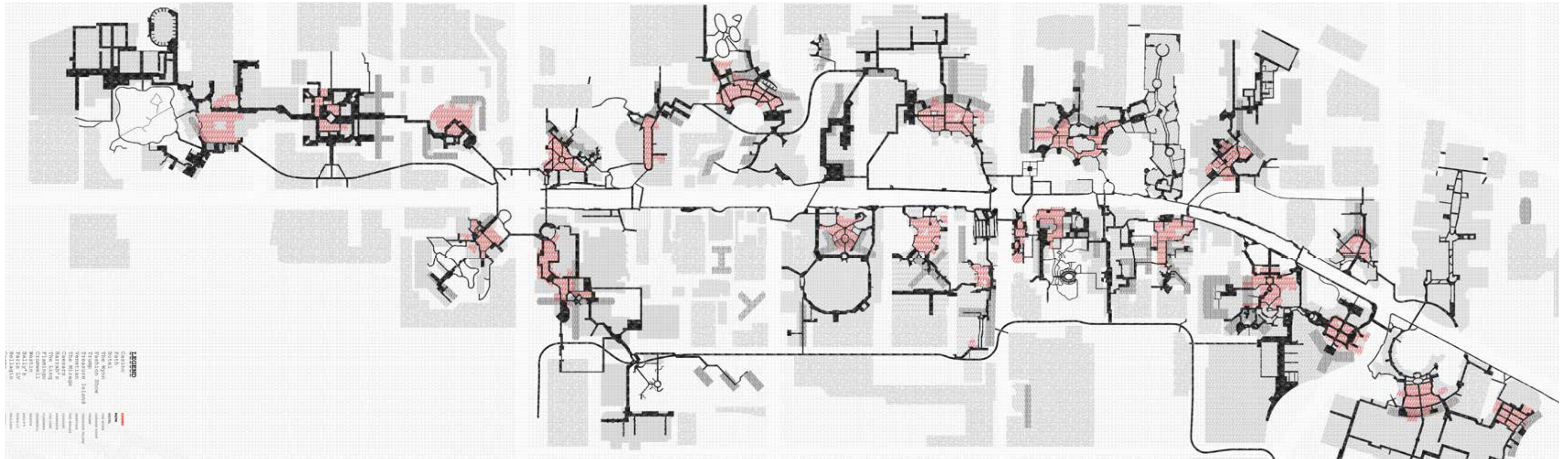




In this model, the aesthetics and symbols of modern Las Vegas have been re-appropriated as territorial objects out of scale, and have been mixed with elements possessing the precision of formal mapping techniques. Combined, they create an informal relationship between city and environment, and allow for a reading of the territory which is both literally and representationally oblique.

Here, the flat plane of the desert hosts the city, seen in its three phases as literally rising out of the shadow of a railroad of playing cards via columns of strip casinos. It is surrounded by the protected areas, shown in traditional contoured topography. Elevated above the largest set of contours is the Colorado River and Lake Mead, both interrupted by a statue of Atlas holding the Hoover Dam. The casino chips, golf tees, dice, felt, and more work to create a model which contains little traditional aesthetic beauty, but express what it means to represent modern Las Vegas.





The final mapping zooms in to analyze the corridors of the Strip in Paradise, Nevada. Building on representational methods in Learning from Las Vegas and plans from Archigram's No-Stop City, the map contains no lines or fills, and is instead represented as only a palimpsest of text outlining the building footprints, hotel towers, casinos, and pathways along the strip district. The roads and signs, which were once primary methods of travel have been replaced by pedestrian corridors and smartphone ads, and the series of discrete buildings analyzed by Venturi and Scott Brown have been replaced by an equally unique and terrifying pedestrian-oriented megastructure.

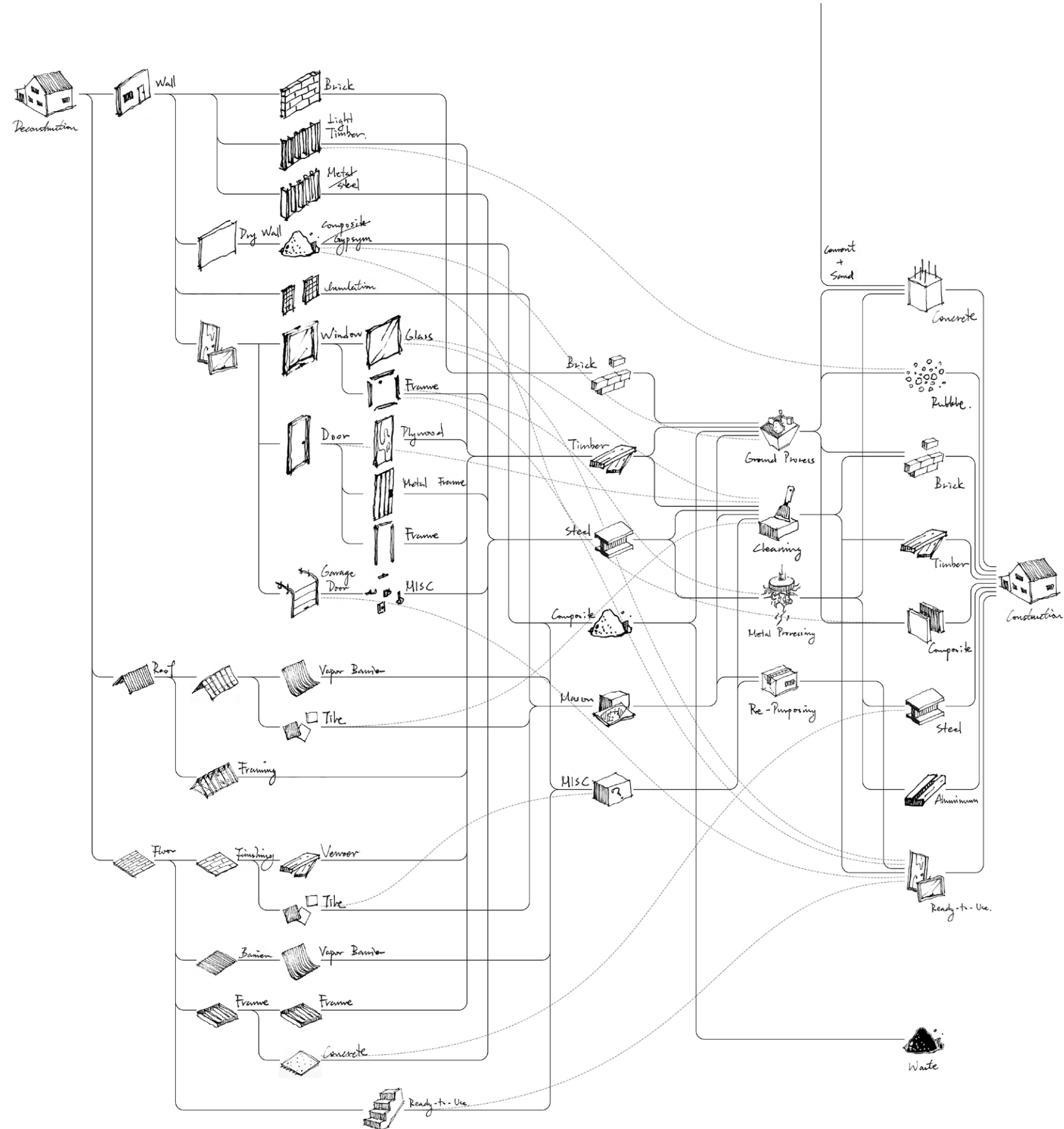
Top: Map of the Las Vegas strip
 Middle: Closeup of Las Vegas strip map
 Bottom: Satellite

Past Futures: Rust Belt

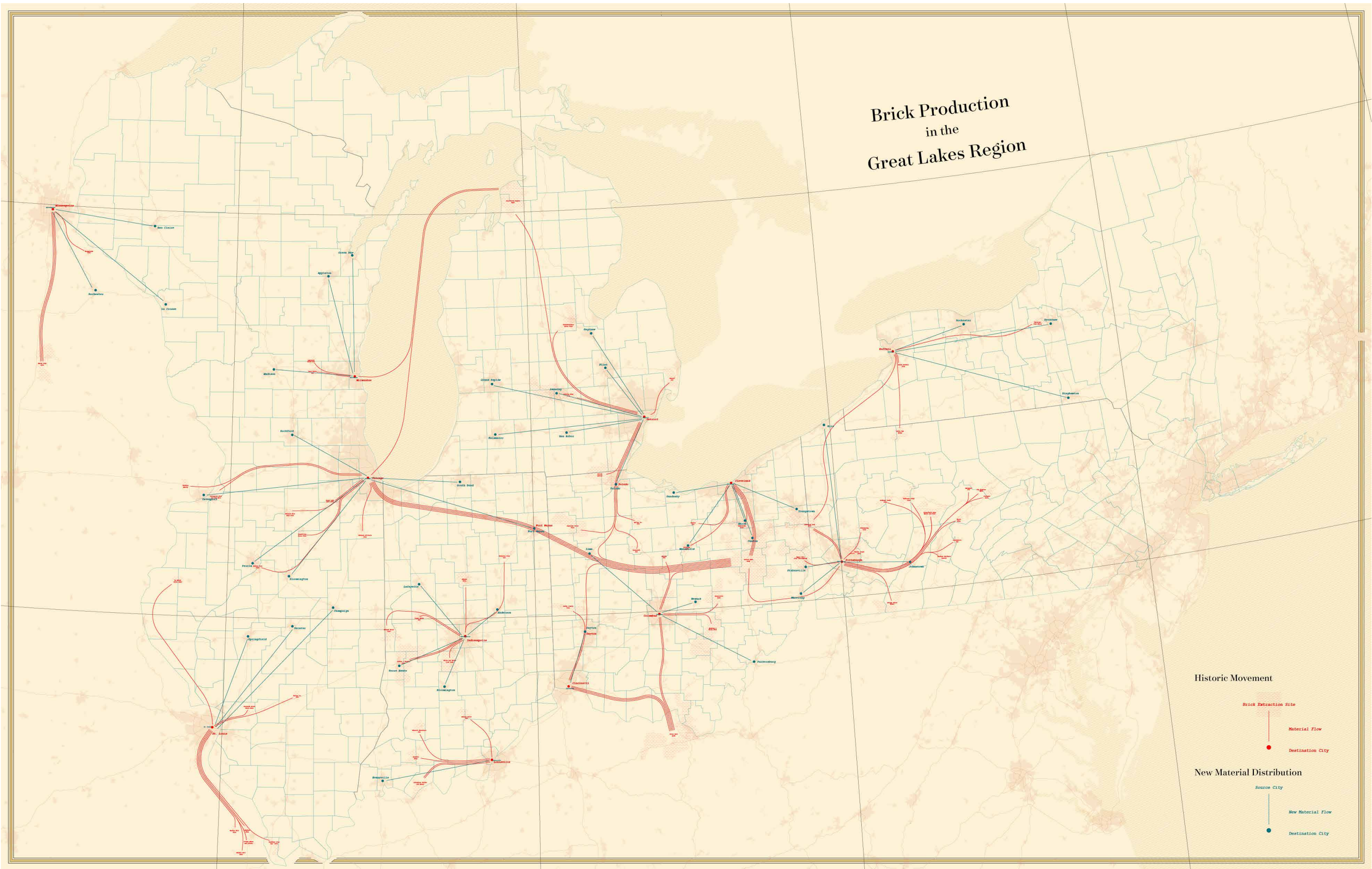
Advanced Option Studio / Instructor Heather Bizon
 Carnegie Mellon University / Spring 2023 - IN PROGRESS
 Partner Kit Tang

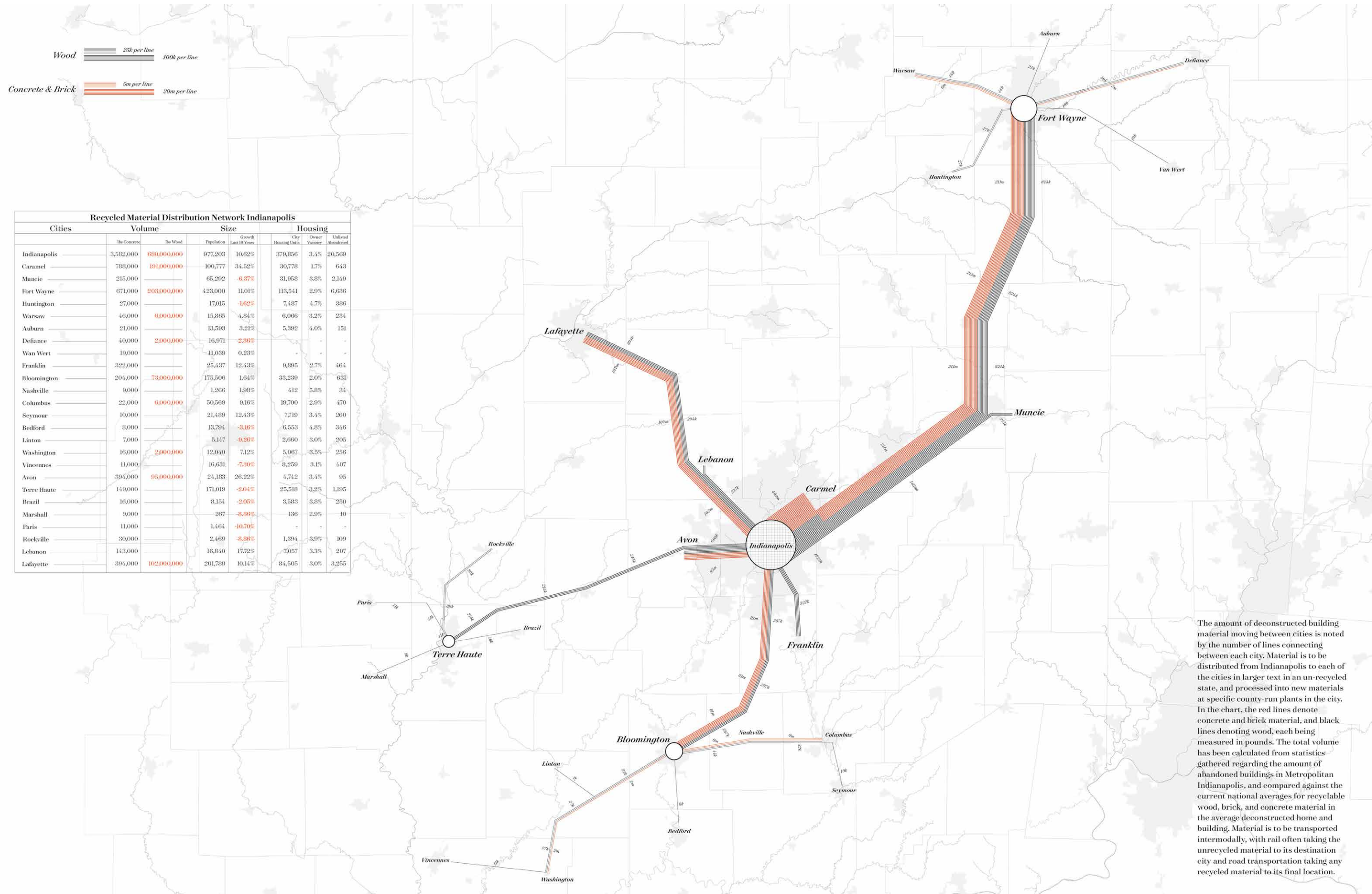
With the rare opportunity to make a second studio project under similar constraints, this project exists as neither successor nor opposition to the work from the Past Futures Ohio River Valley project - but rather in dialogue. By taking a closer look at the processes which lead to abandonment and blight in the rust belt, we have proposed a new system which attempts to change the way these buildings are treated. Inasmuch as they may one day be demolished, pushed in the basement, and covered with dirt; the materials that make up these buildings may also be recycled and re-integrated into the built environment.

Our challenge to this system attempts to leverage the vast amount of money already being used to demolish these structures and redirect it towards the development of material re-distribution and recycling centers, including the network between them. Together these elements can more effectively remove blighted houses, retain community control of properties, provide local jobs, and give a second life to already manufactured materials. So far our work has also tried to orient itself to non-architectural audiences, firstly towards those in control of these existing processes in the government, as well as towards the people of the areas in which the deconstruction of houses and construction of recycling centers would be taking place. Through this we hope that moving forward we can better question the existing systems of material control and property development, as well as push our beyond the traditional representation methods used in schools - whose audiences are often only ever peers, professors, and potential employers.



Brick Production in the Great Lakes Region



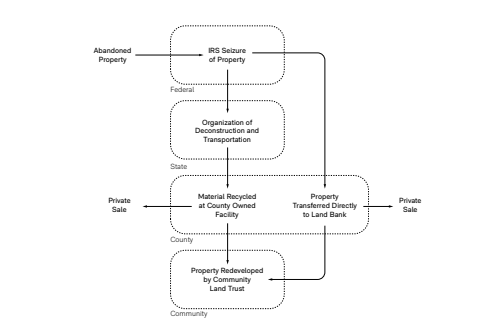
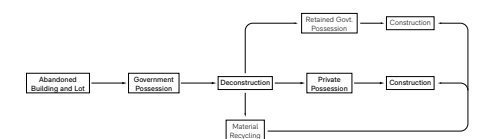
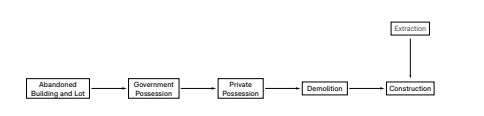
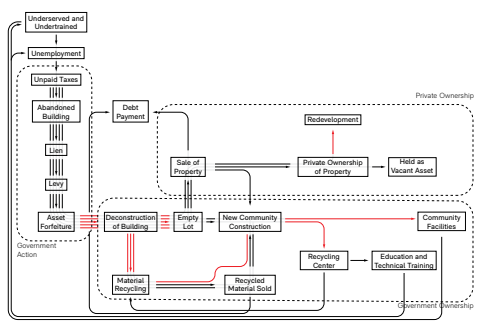
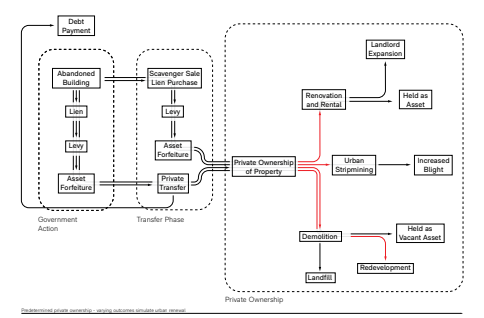
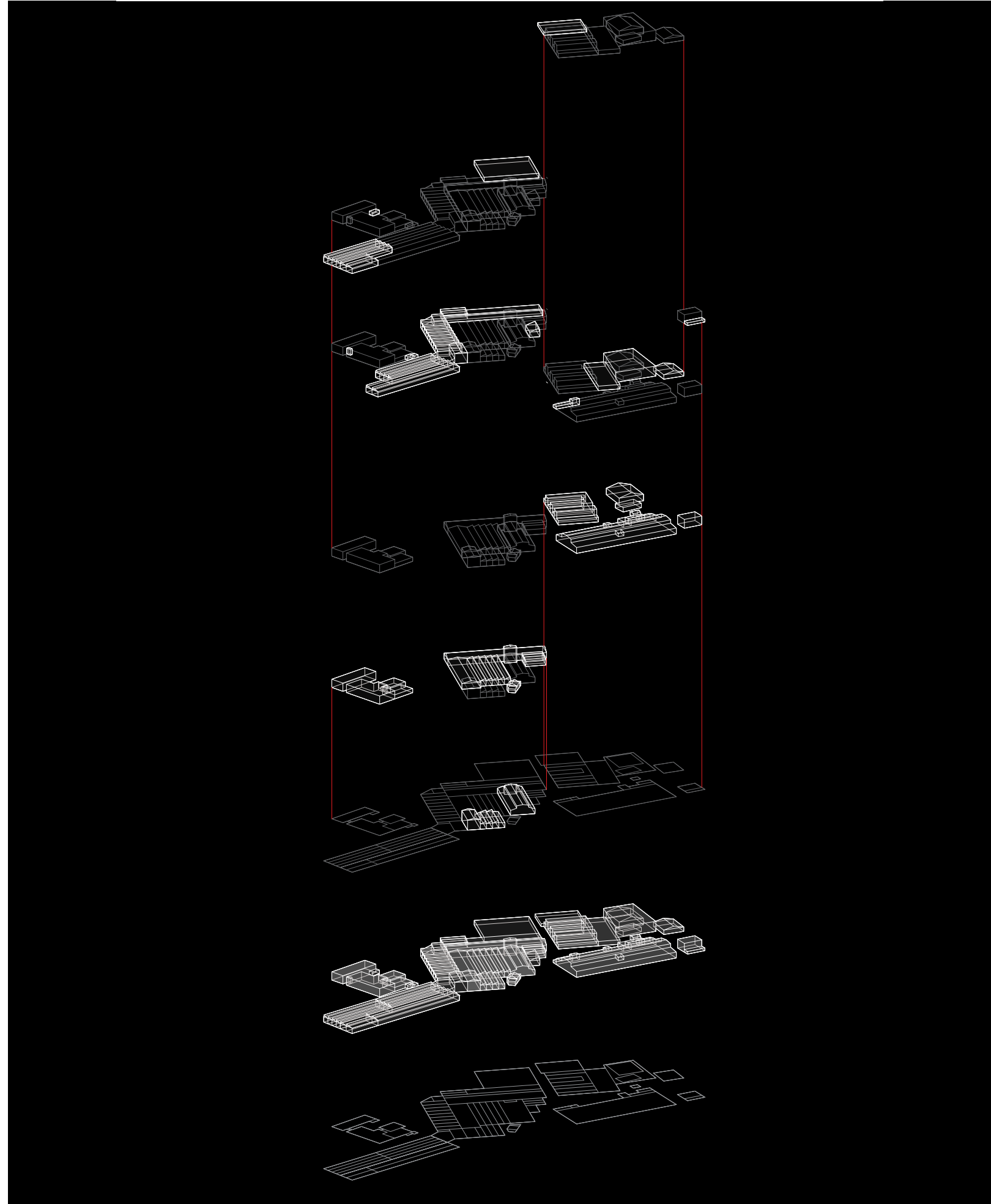
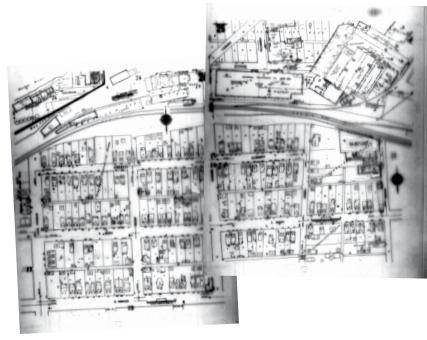
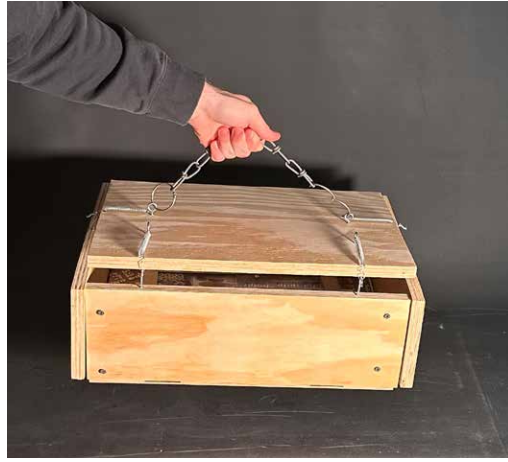


Wood
 25k per line
 100k per line

Concrete & Brick
 5m per line
 20m per line

Cities	Volume		Size		Housing		
	Ibs Concrete	Ibs Wood	Population	Growth Last 10 Years	City Housing Units	Owner Vacancy	Unland Abandoned
Indianapolis	3,582,000	690,000,000	977,203	10.62%	379,856	3.4%	20,569
Carmel	788,000	191,000,000	100,777	34.52%	30,778	1.7%	643
Muncie	215,000		65,292	-6.37%	31,958	3.8%	2,149
Fort Wayne	671,000	203,000,000	423,000	11.01%	113,541	2.9%	6,636
Huntington	27,000		17,015	-1.62%	7,487	4.7%	386
Warsaw	46,000	6,000,000	15,865	4.84%	6,066	3.2%	234
Auburn	21,000		13,583	3.21%	5,392	4.0%	151
Defiance	40,000	2,000,000	16,971	-2.36%			
Van Wert	19,000		11,039	0.23%			
Franklin	322,000		25,437	12.43%	9,895	2.7%	464
Bloomington	204,000	73,000,000	175,506	1.64%	33,239	2.0%	631
Nashville	9,000		1,266	1.98%	412	5.8%	34
Columbus	22,000	6,000,000	50,569	9.16%	19,700	2.9%	470
Seymour	10,000		21,489	12.43%	7,719	3.4%	260
Bedford	3,000		13,794	-3.16%	6,553	4.8%	346
Linton	7,000		5,147	-9.26%	2,660	3.0%	205
Washington	16,000	2,000,000	12,040	7.12%	5,067	3.5%	256
Vincennes	11,000		16,631	-7.30%	8,259	3.1%	407
Avon	394,000	95,000,000	24,183	26.22%	4,742	3.4%	95
Terre Haute	149,000		171,019	-2.04%	25,548	3.2%	1,195
Brazil	16,000		8,154	-2.05%	3,583	3.8%	250
Marshall	9,000		267	-3.99%	186	2.9%	10
Paris	11,000		1,464	-10.70%			
Rockville	39,000		2,469	-8.86%	1,394	3.9%	109
Lebanon	143,000		16,840	17.72%	7,057	3.3%	207
Lafayette	394,000	102,000,000	201,789	10.14%	84,505	3.0%	3,255

The amount of deconstructed building material moving between cities is noted by the number of lines connecting between each city. Material is to be distributed from Indianapolis to each of the cities in larger text in an un-recycled state, and processed into new materials at specific county-run plants in the city. In the chart, the red lines denote concrete and brick material, and black lines denoting wood, each being measured in pounds. The total volume has been calculated from statistics gathered regarding the amount of abandoned buildings in Metropolitan Indianapolis, and compared against the current national averages for recyclable wood, brick, and concrete material in the average deconstructed home and building. Material is to be transported intermodally, with rail often taking the unrecycled material to its destination city and road transportation taking any recycled material to its final location.



Top Left: Prototype models - unfoldable box with acrylic historic layers
 Bottom Left: Historic site zoning information
 Middle: Evolution of recycling center form over time
 Right: Diagrams of physical and economic systems of deconstruction and demolition

Shown are both a series of diagrams revealing the physical processes underpinning the changes in property ownership, as well as a group of information investigating a typical rust belt site - a now abandoned factory with an important local history, but no foreseeable future.