

Co-working Dwelling Block

Introduction Design Studio III, 2025 Fall Semester

Adaptive Reuse of Saint Joseph Hospital in
South Providence

Located in South Providence, this project proposes the adaptive reuse of an existing hospital complex into a mixed-use building with residential components. The design is informed by research into the city's post-industrial context, where many residents have experienced structural unemployment following the decline of local industries such as textiles, metalworking, and woodworking. The project frames this condition as an opportunity to reconfigure production and living systems: displaced workers are supported in transitioning their existing skills toward new forms of small-scale production. Rather than conventional employment structures, residents participate in flexible modes of work—collaborative, semi-collaborative, or independent—taking commissions and producing goods within a shared infrastructure that enables both economic activity and community support.

The building is organized as a mixed-use structure. The lower levels form an open urban interface for the public and incorporate the existing warehouse structure on the south side. The upper levels contain the working and residential spaces of the community. A central theme of the project is the permeability between work and domestic life. The introduction of an atrium addresses the daylight limitations of the existing deep floor plates while also functioning as a transitional zone linking the open workspaces at the front of the building with the more private residential areas at the rear. Positioned between work and dwelling, this space becomes a domain of everyday life—supporting social interaction, rest, and communal activities.

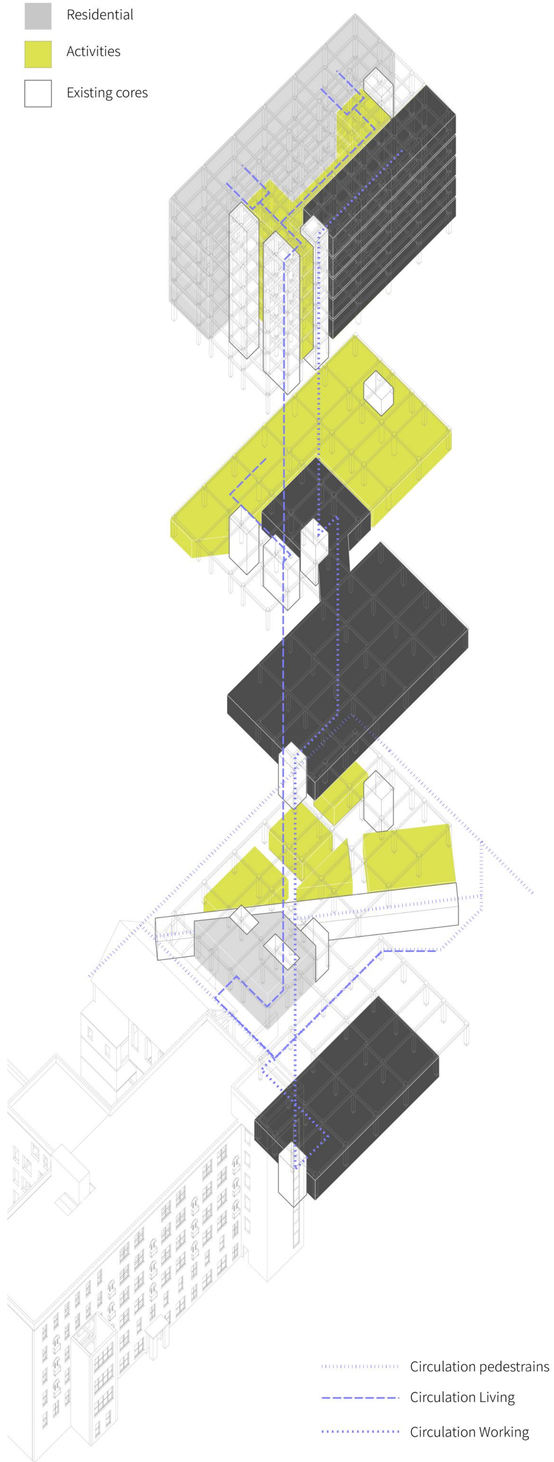






Stacking Model

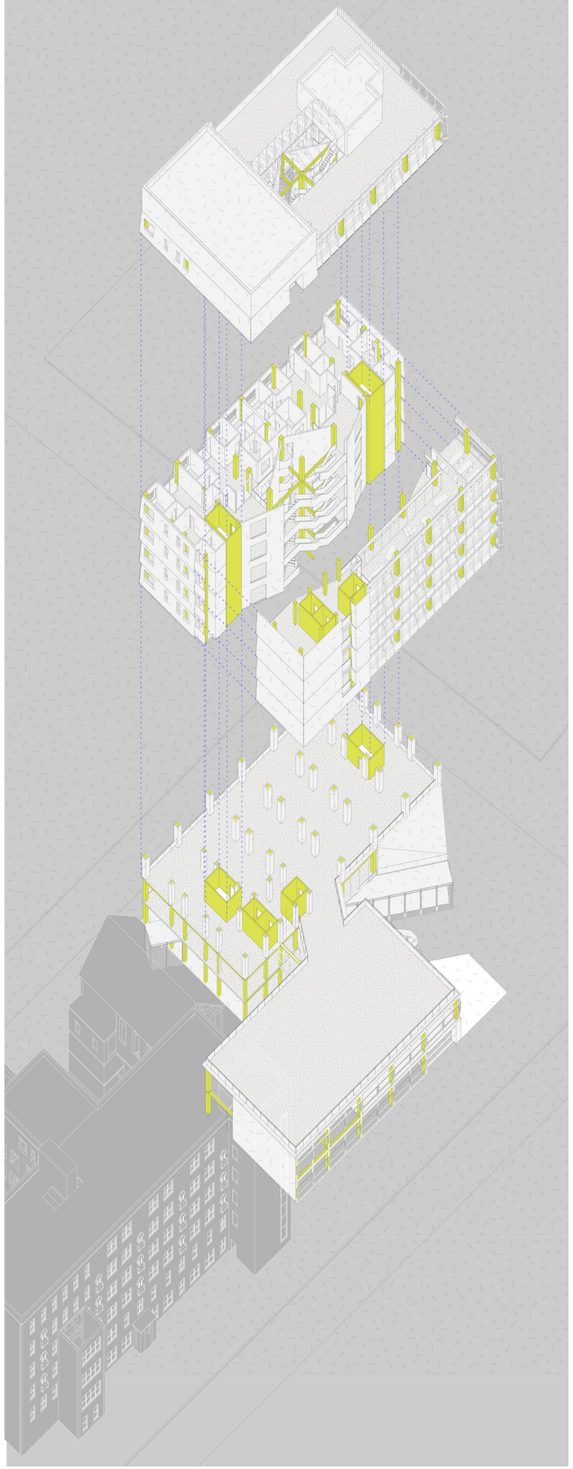
- Working
- Residential
- Activities
- Existing cores



- Circulation pedestrains
- Circulation Living
- Circulation Working

Axonometric Drawing

- Existing Structure demonstration



Ground Level

Through the intervention of opening and connecting the ground floor, the project transforms the previously enclosed building into a potential urban interface. A yellow canopy walkway system is introduced to guide public circulation through the ground level, allowing pedestrians to pass through the building while engaging with retail spaces and community activity areas, generating opportunities for interaction.

On the opposite side, a separate lobby entrance is introduced for residents at the rear of the building, ensuring a higher level of privacy while maintaining the building's openness to the city.

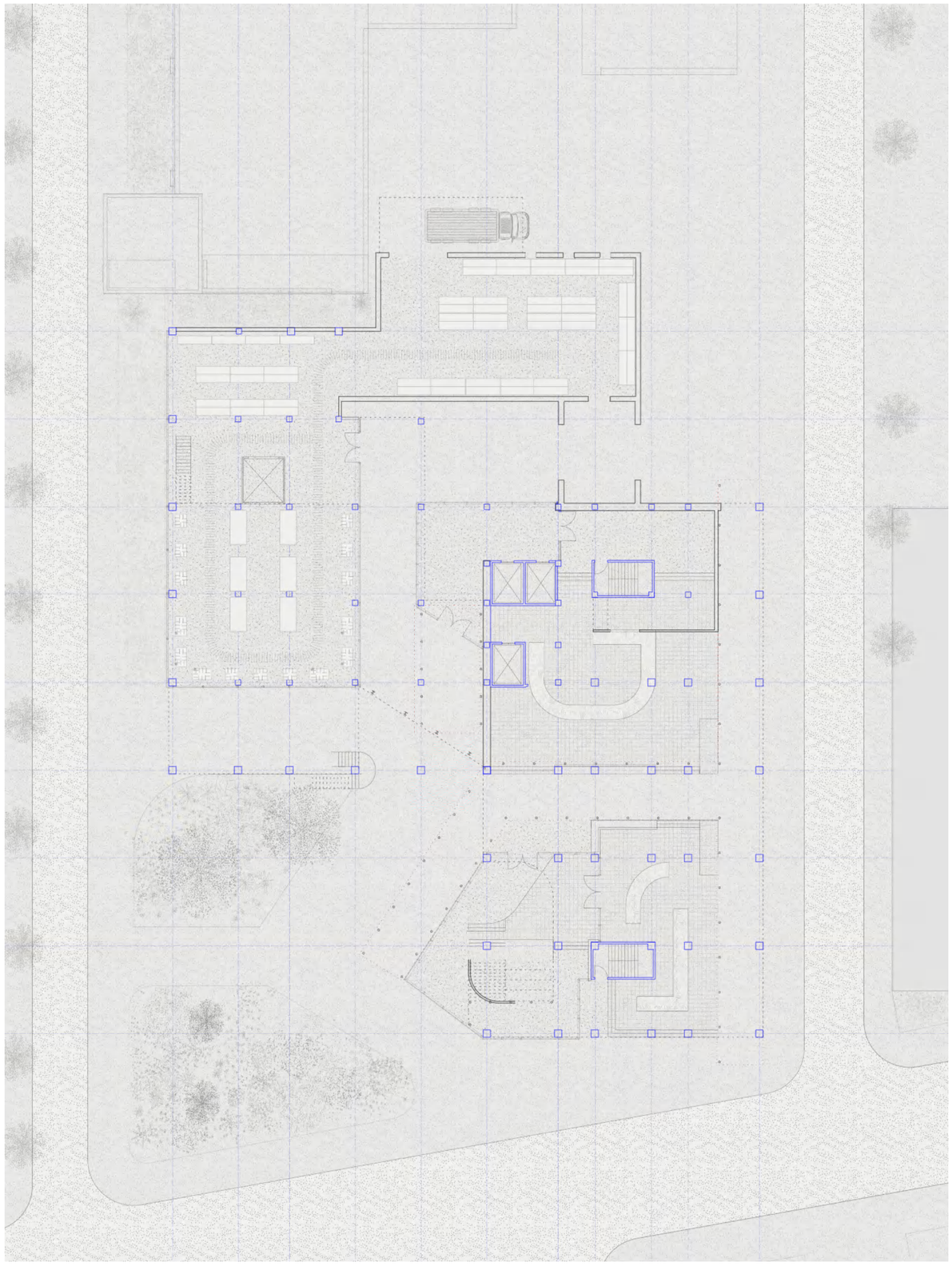


Residential Lobby Entrance

nother portion of the ground floor—comprising the former extension factory and chapel areas—is opened internally and repurposed as a warehouse and workshop system. This space supports material recovery, disassembly, and categorized storage, supplying reclaimed resources for use in the upper-level workspaces.



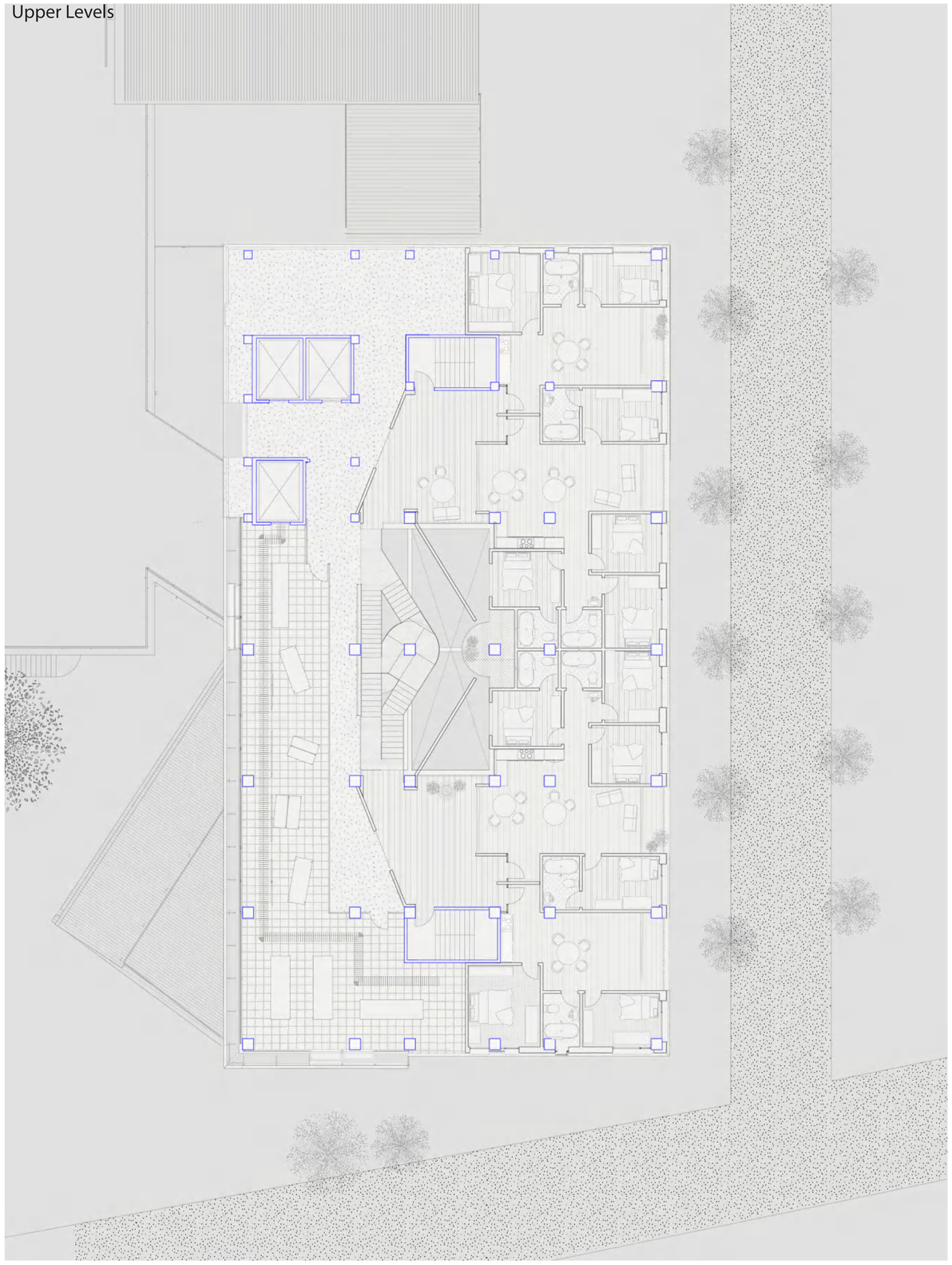
Community Center Entrance







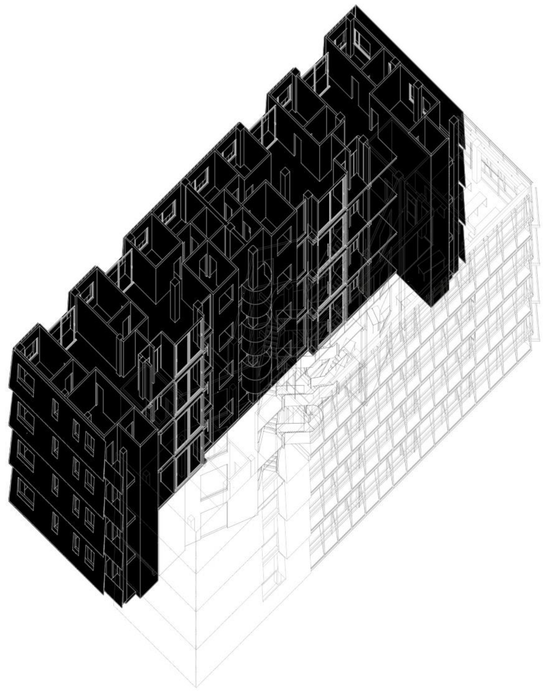
Upper Levels



Upper Levels

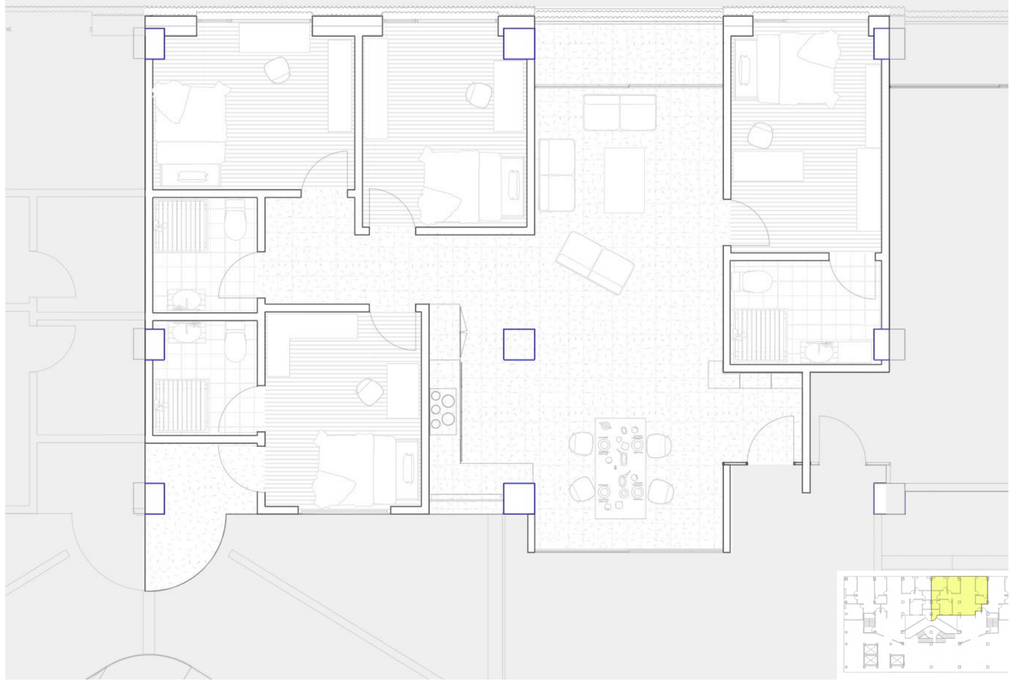
The residential zone forms the core of the project. Each floor contains four units, organized in pairs around a shared "courtyard" that functions as both an entry threshold and a space for everyday social interaction.

Two housing typologies are provided: a shared living unit, where multiple single or double rooms share common spaces, and a two-bedroom family unit designed for small households.

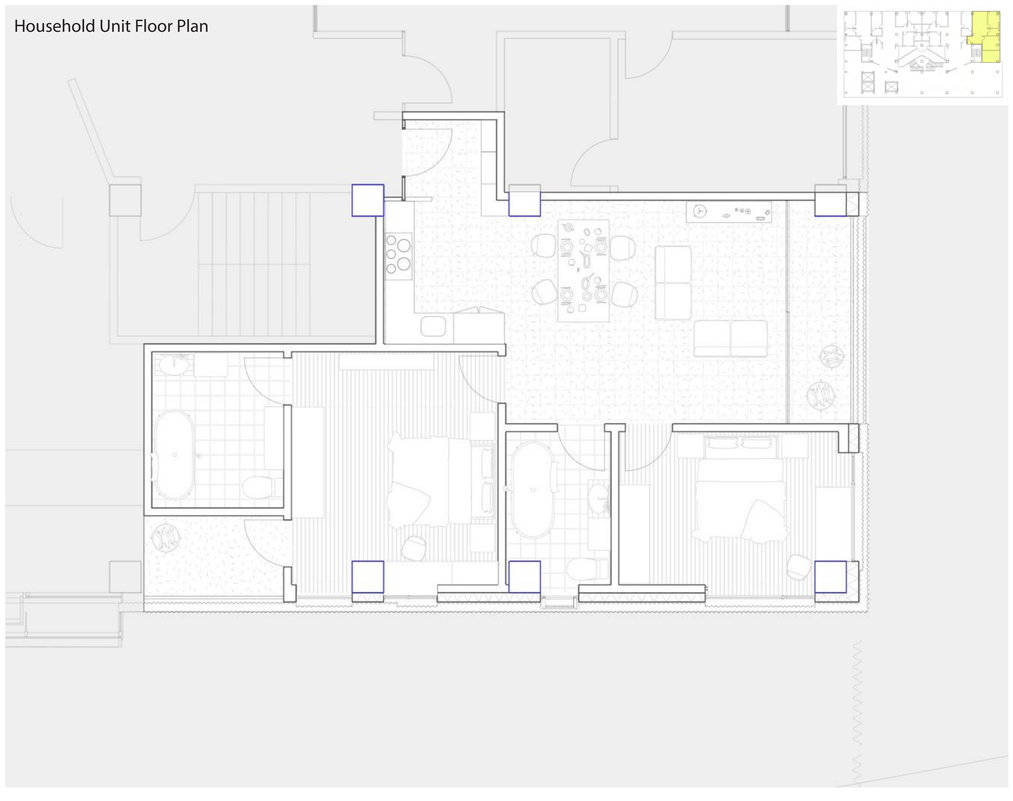




Co-Living Unit Floor Plan



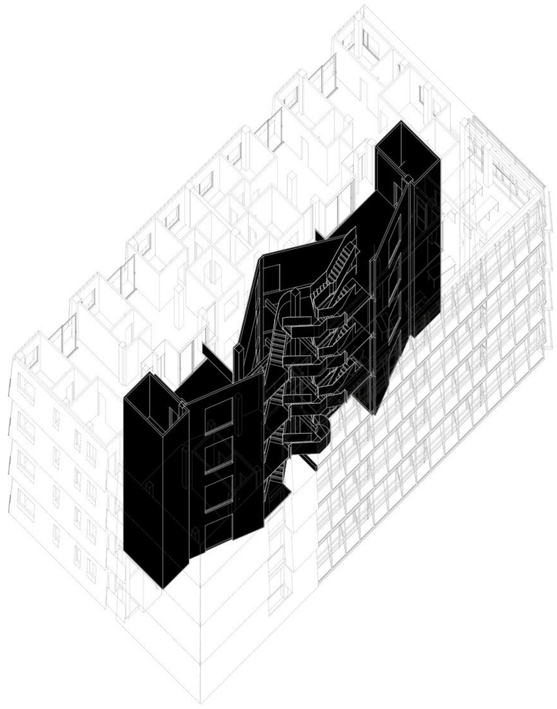
Household Unit Floor Plan



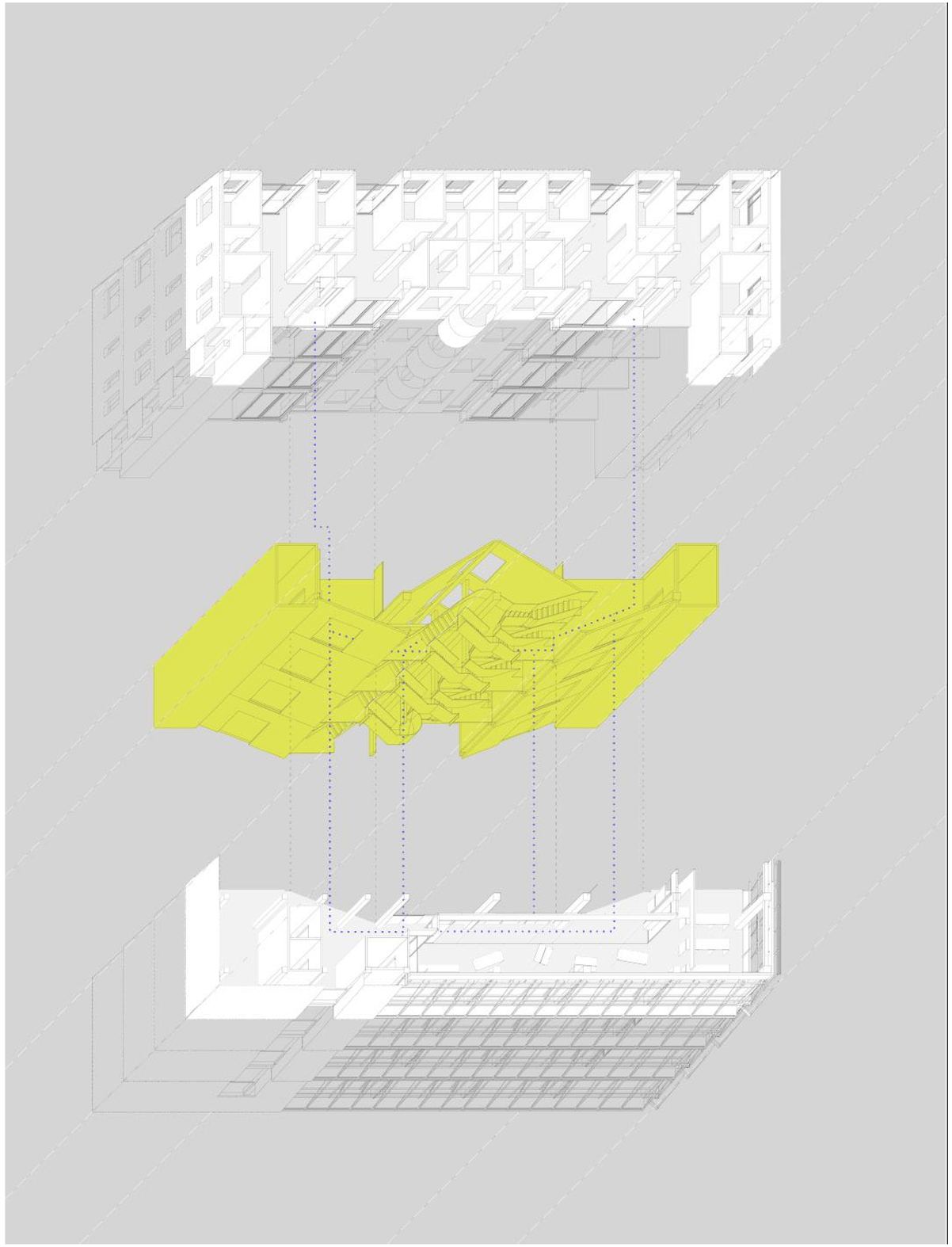
Transitional Zone

The deep central zone is brought to life through the introduction of light wells that provide natural daylight. This area accommodates everyday activities, vertical circulation for visits between floors, and emergency egress connected to the two core staircases.

Functioning as a transitional zone, it acts as a spatial buffer that negotiates the relationship between the residential and working areas through carefully positioned openings. By balancing degrees of enclosure and openness, this buffer maintains residential privacy and comfort while preserving the continuity of circulation across the building.

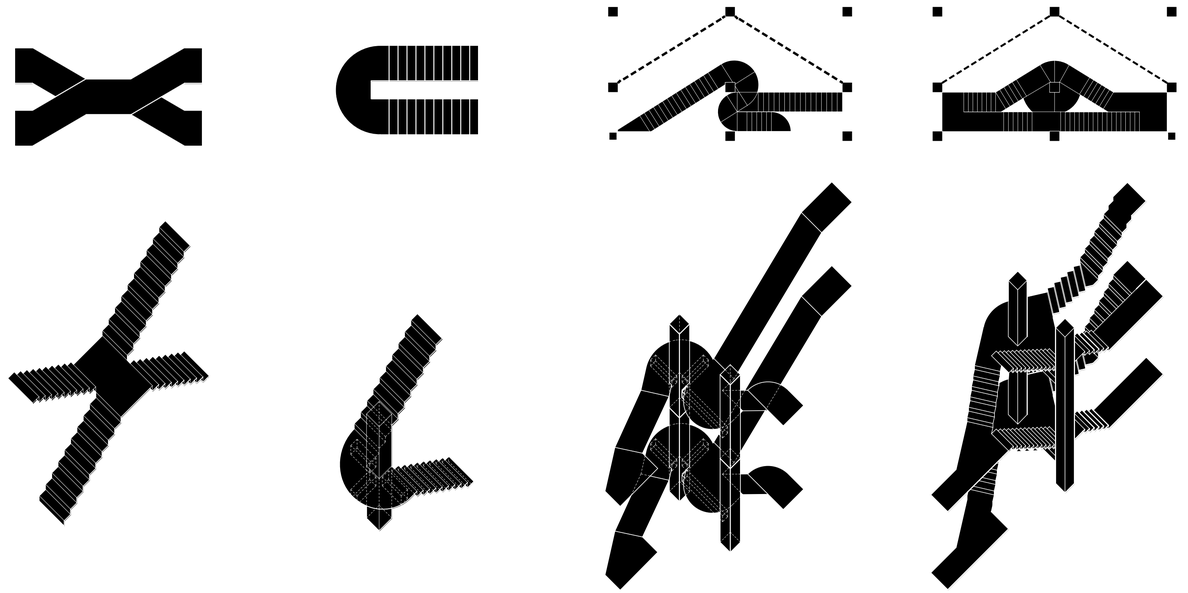




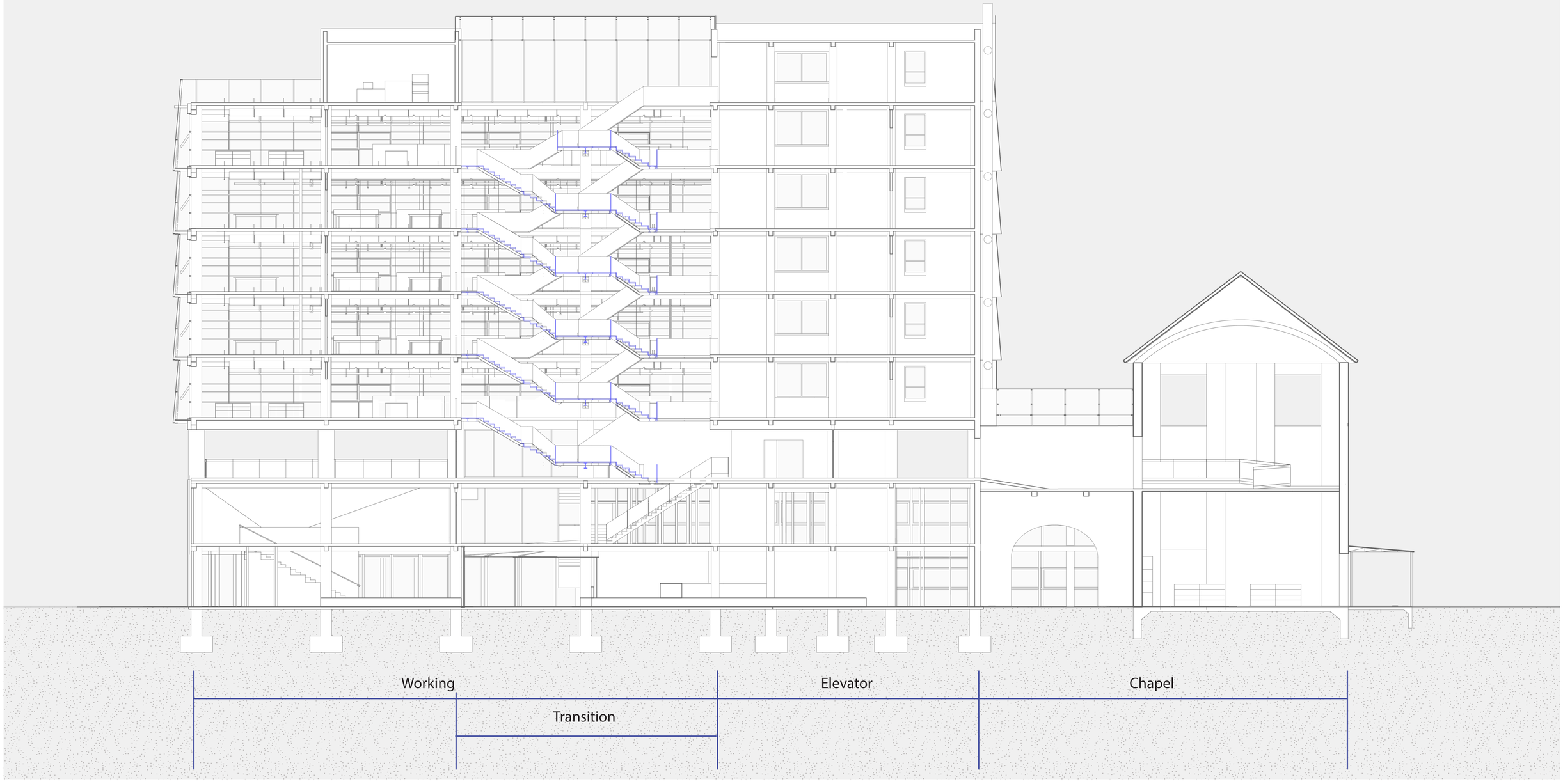


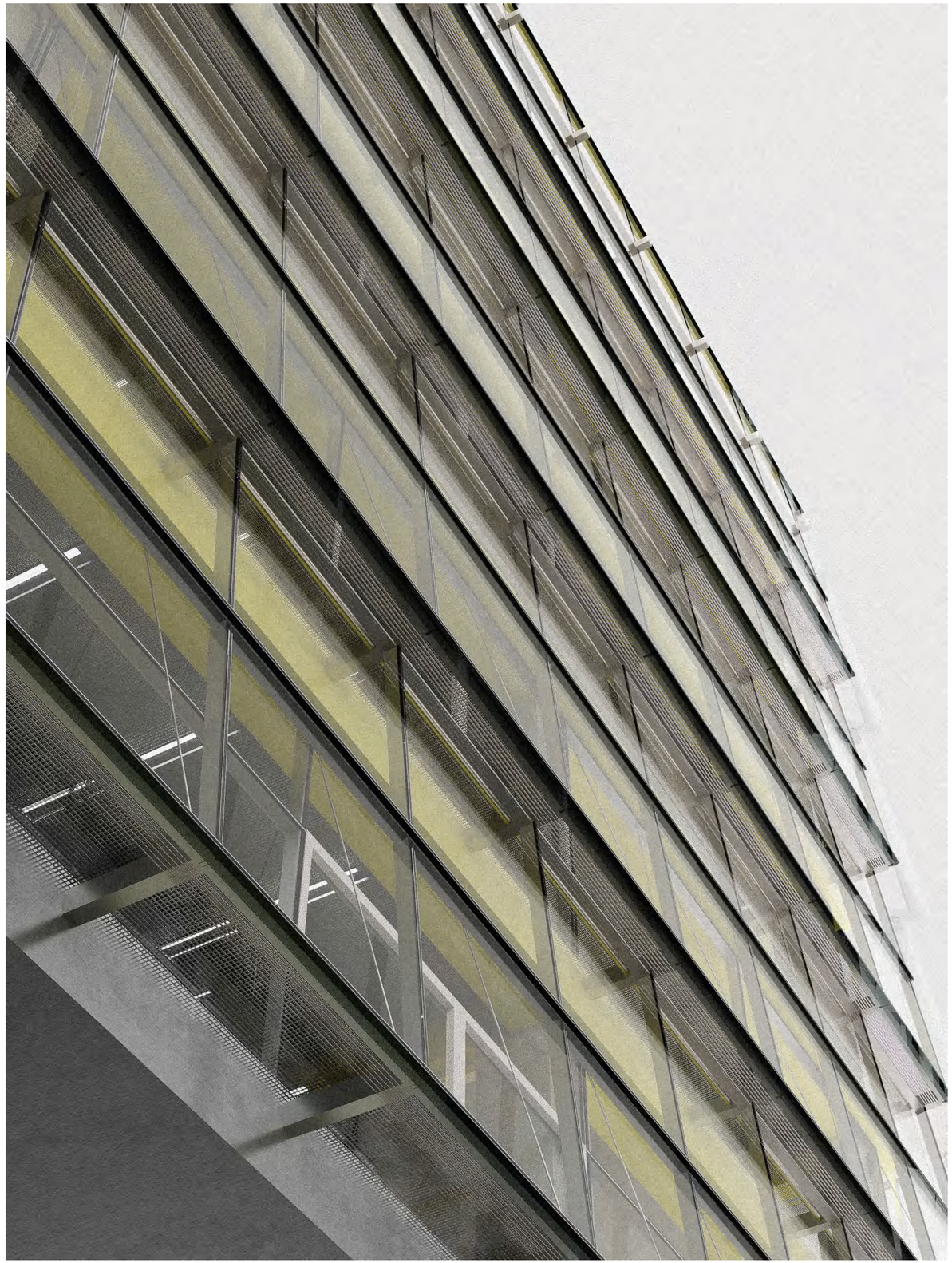
Beneath the light well, the stair expands outward from the position of the existing columns. Rather than functioning as a purely utilitarian element, it incorporates suspended platforms that create additional vertical activity spaces, encouraging interaction among residents across different floors.At the same time, through the calculated rotation of its geometry, the stair organizes four-directional circulation, enabling residents from the units on both sides of each level to share a common vertical route.

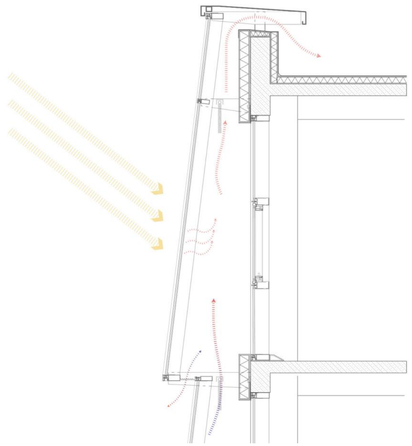


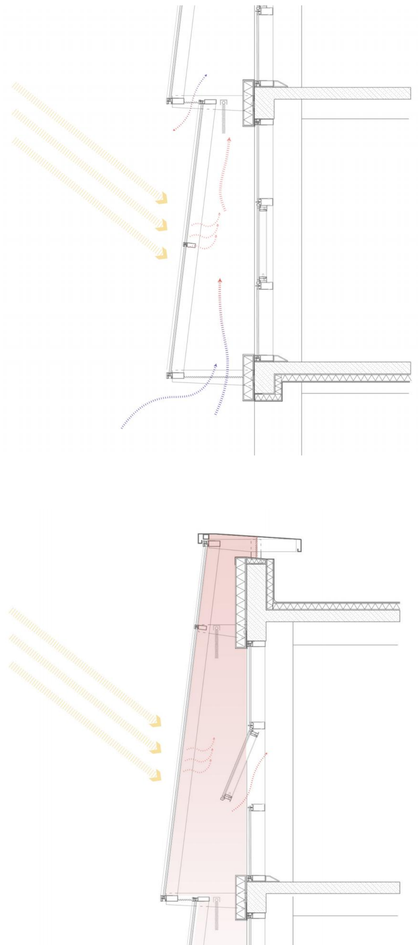


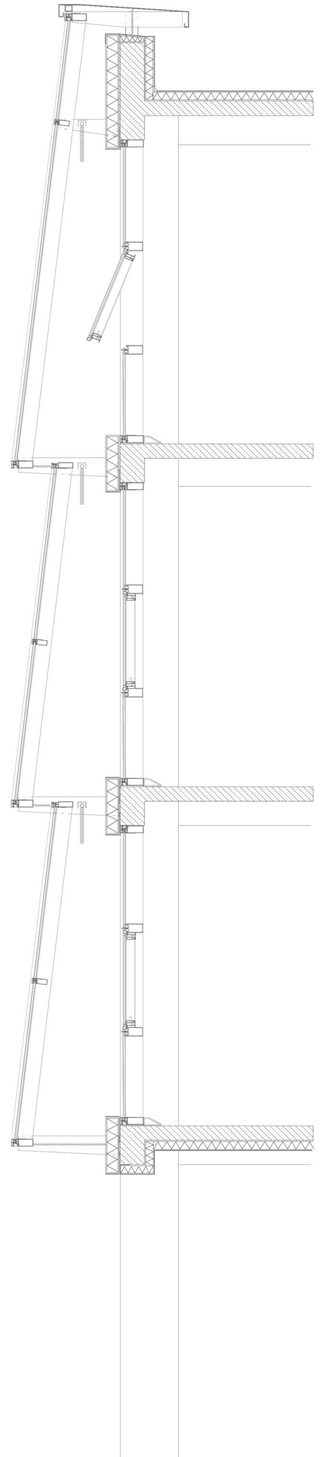



Working
Transition
Elevator
Chapel











Incline

Introduction Design Studio II, 2024 Spring Semester

This adaptive reuse project focuses on activating overlooked urban assets by transforming an underused structure into a street-facing gallery. Located in West Providence, the existing building was originally a single-story structure adapted to the sloped terrain, with a double-height interior and mezzanine levels.

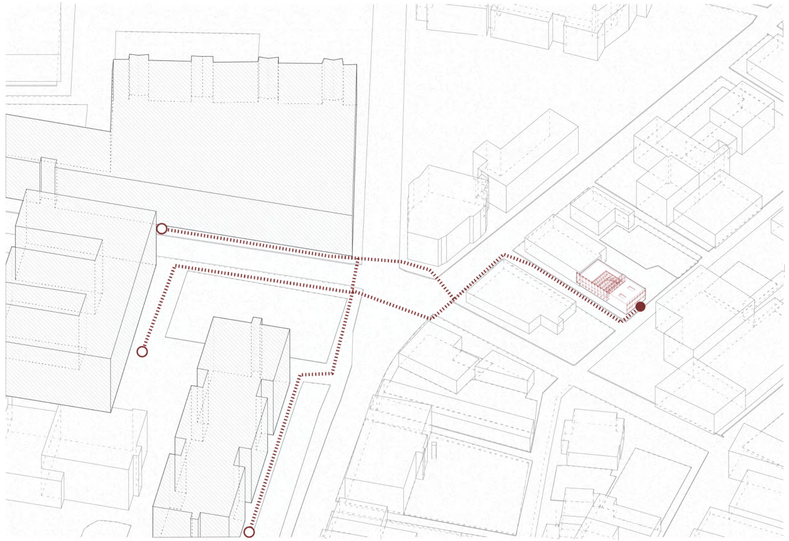
The project treats the slope as an opportunity rather than a constraint. An external gallery is introduced, extending from the original building and unfolding as a ramp that follows the terrain. While physically detached from the existing structure, the new intervention maintains visual continuity, creating a layered spatial relationship between the two.

The building is envisioned as an arts activity center for local high school students. Operated by students from nearby art institutions, the space provides workshops, mentorship, and guidance, forming an after-school environment for creative production while also functioning as a small public arts hub for the neighborhood.

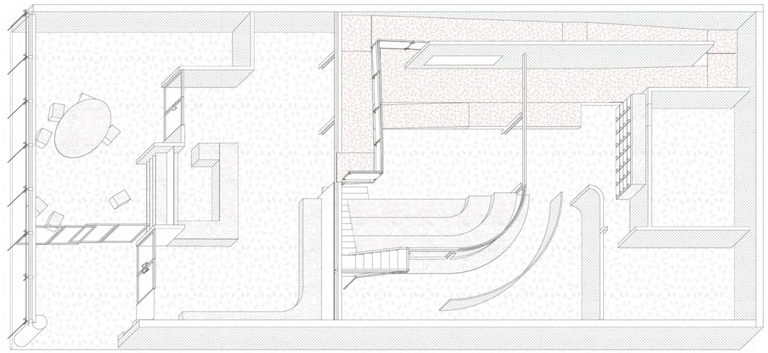




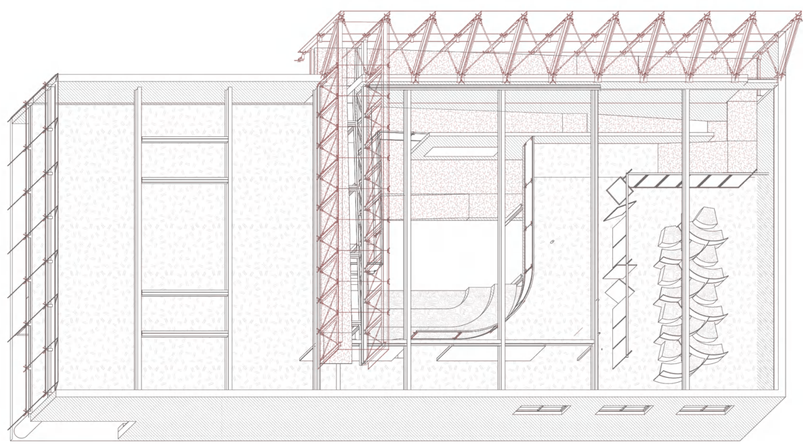


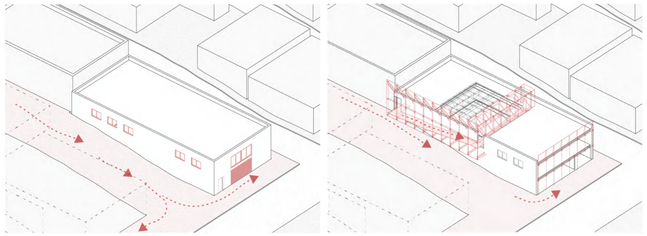


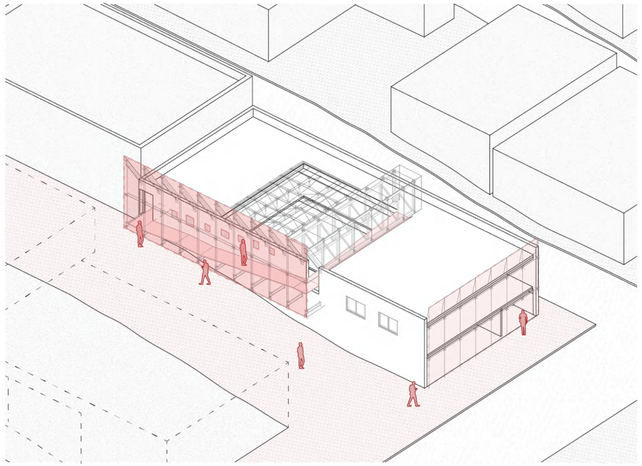
The project primarily serves two nearby high schools. The site map illustrates the building's urban context and its circulation relationship with these schools. Located adjacent to a major road, the site sits at the threshold between the school campus to the west and a residential neighborhood to the east, along a route frequently used by students during their daily commute.
Based on an analysis of both the geographic conditions and the surrounding social context, the building presents strong potential for reactivation. The project positions it as a "third space" that supports local students beyond the spheres of home and school, offering a place for creative activity and informal gathering.



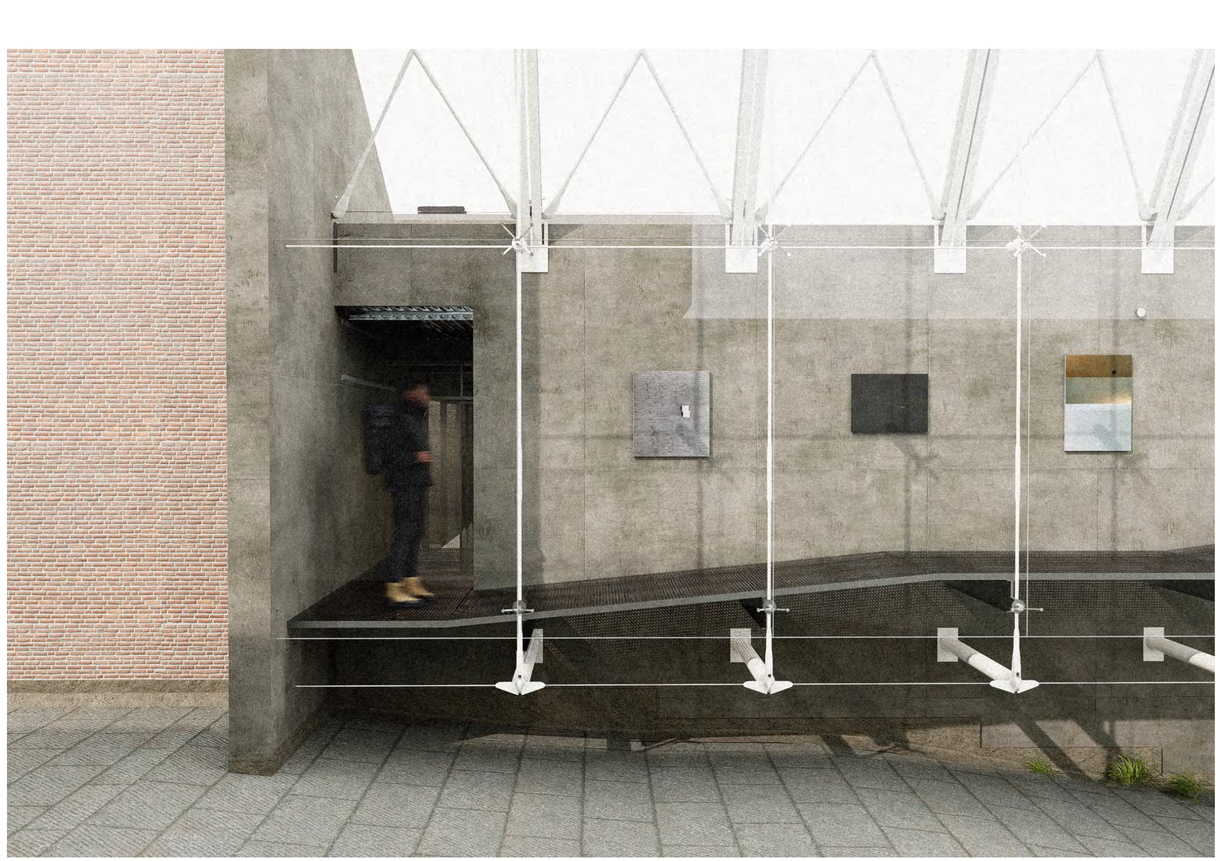
The walkway serves as the spatial thread that runs through the entire building, guiding gallery circulation while linking different programmatic zones. On the ground floor, the street-facing side contains a workshop and lounge/counter area, followed by a large stepped seating space that functions as a communal gathering area, and finally offices and restrooms located deeper inside the building.The ramp system begins at the exhibition entry on the first floor and continues upward to the second level. The mezzanine level is divided into two zones: a shared workspace facing the street and a more private set of workstations located toward the interior.

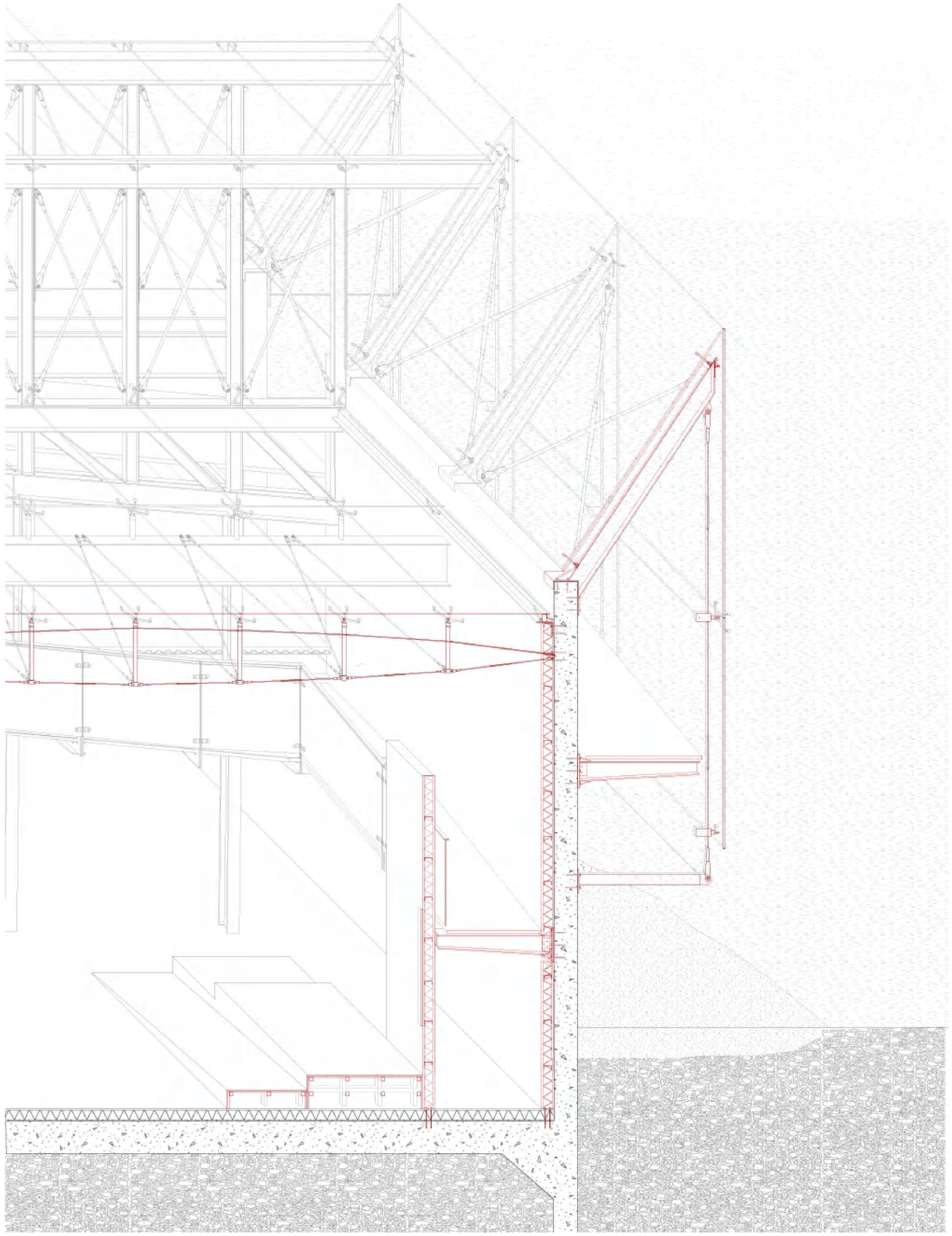






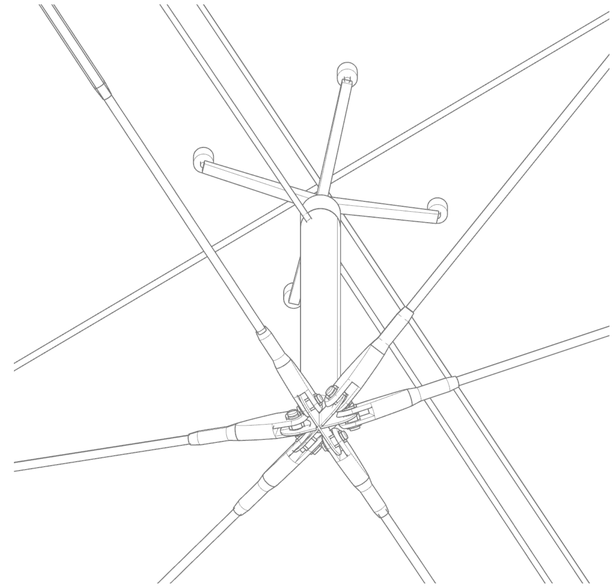
The most significant urban intervention of the project is the transformation of the building into a public-facing urban screen that engages the street and opens the building to the city. The existing structure was originally enclosed, with limited daylight and little visual permeability.
Through a light-touch strategy that preserves the original structural walls, an external walkway system is introduced as a lightweight addition. Internally, this element forms part of the gallery circulation and serves as a transition from the interior spaces to the outdoor rooftop terrace. Externally, it functions as an open urban interface, presenting the activities within the building to the public realm.

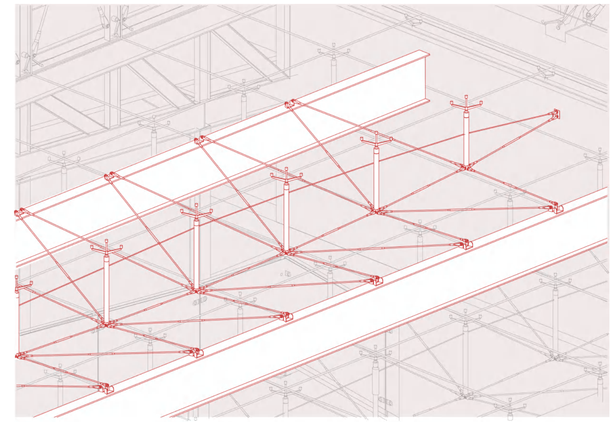




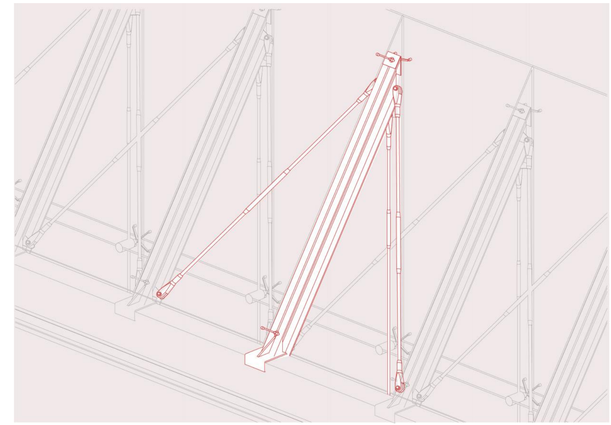
The structural systems of the glass canopy and the external glass walkway are carefully considered. Inside, the glass canopy is supported by a lightweight tension-cable system that lightly connects back to the existing heavy steel I-beams. **This intervention establishes a structural dialogue between the new and the old, contrasting contemporary lightweight construction with the robust industrial structure of the original building.**

The external walkway is suspended by a system of inclined cantilevered members and tension cables anchored from above. Additional horizontal and vertical cable bracing ensures structural stability while maintaining the visual lightness of the intervention.





This diagram illustrates the structural system of the glass canopy, showing the relationship between the prestressed tension-cable system and the existing steel beams.



This diagram illustrates the outward-extending cantilevered steel beams and their structural connection to the original concrete structure.



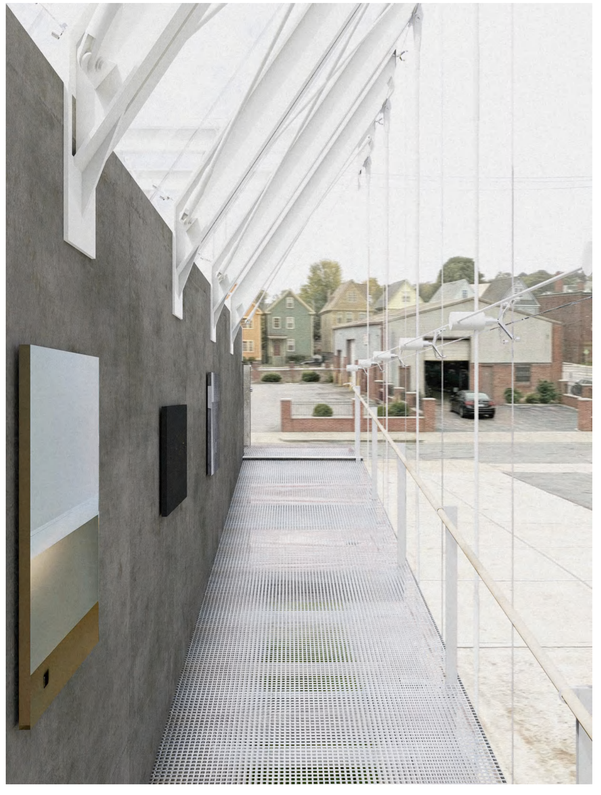
View from the mezzanine level showing the contrast between the existing steel beams and the tension-cable system. The external walkway leading to the rooftop is constructed with a white steel truss system, which shares the same structural logic as the internal walkway support system.



Ground-floor view showing the shared stepped seating area, the lounge space behind it, and the staircase leading up to the mezzanine level.

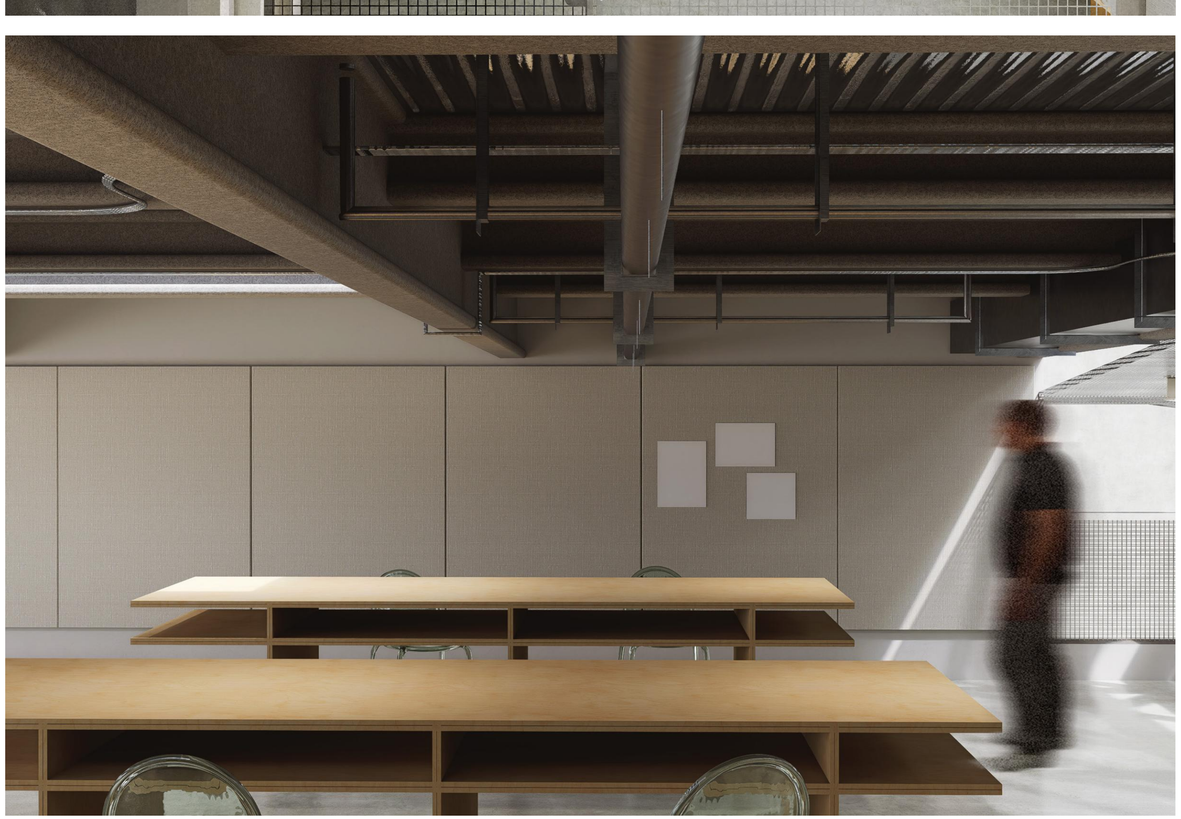
Walkway connecting the first and second floors, maintaining a sense of enclosure and spatial comfort. Preserved I-beam girders from the original structure and the newly introduced white steel truss system together support the mezzanine and the interior walkway network.













The Steel Intervention

Introduction Design Studio II, 2024 Spring Semester

Rennovation Project of WBRU Studio

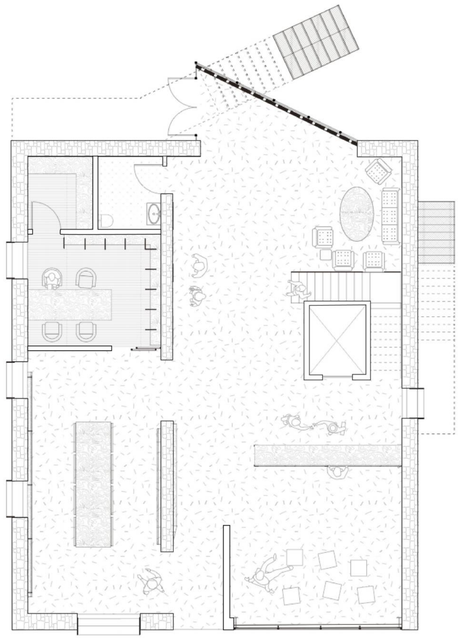
This project renovates a historic two-story brick-and-timber building in Providence that has long served as the broadcasting and recording space for WBRU, as well as a gathering place for a local music community. The design preserves the building's historic character while introducing new steel structural interventions to accommodate more open and public community activities.

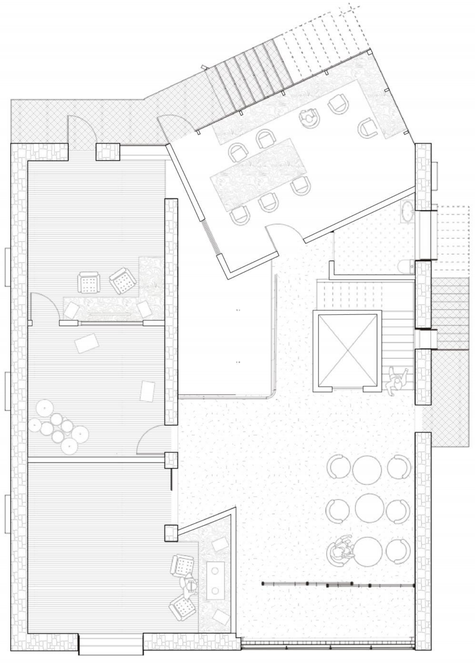
The building originally housed an archive of thousands of vinyl records. By introducing a music exhibition space on the ground floor, the project opens the building to the public while encouraging cultural exchange between the community and the city. The second floor contains a shared social area, acoustically separated music workspaces, and a newly inserted metal volume functioning as a staff training space, opening both to the outdoor courtyard and the interior atrium.

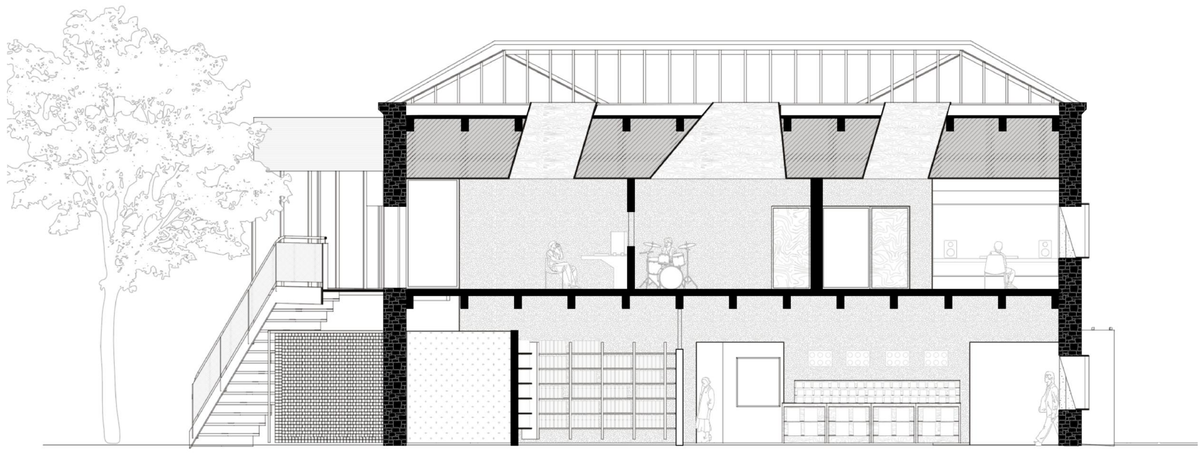




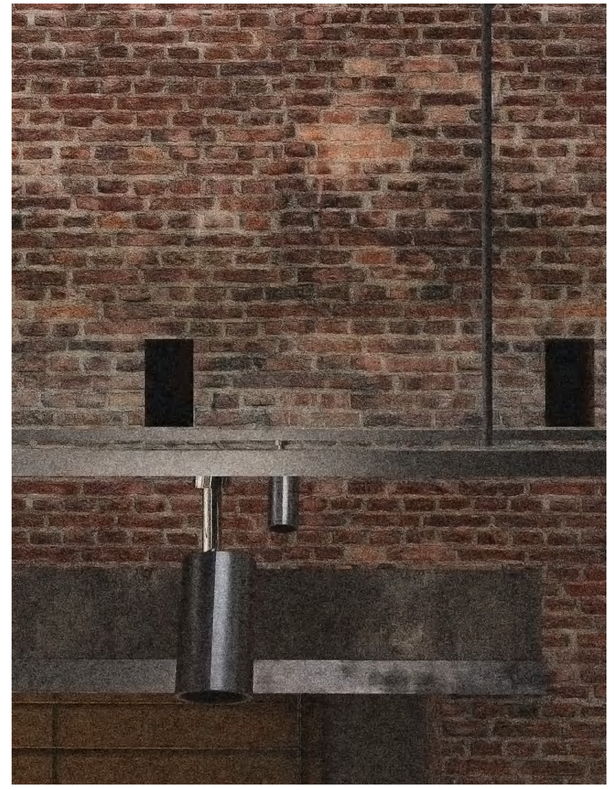




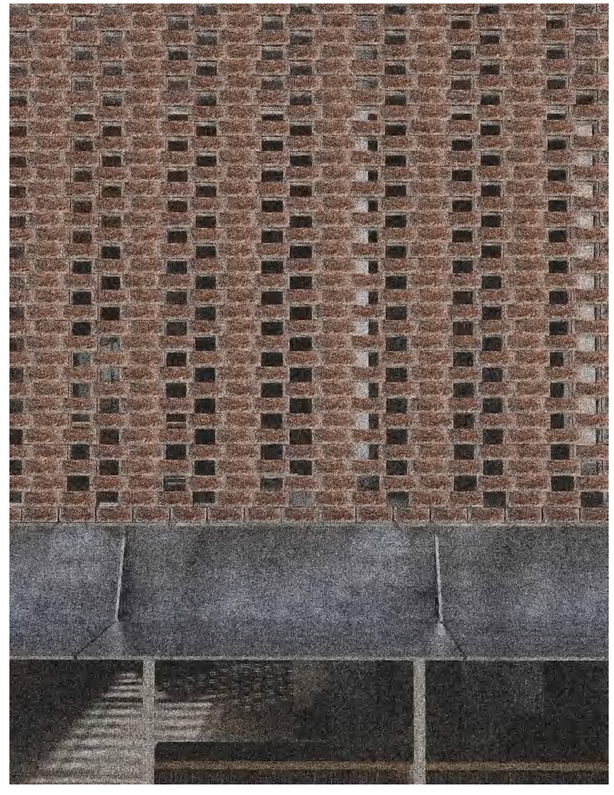




The project explores an adaptive reuse strategy that foregrounds the process of intervention while revealing the building's historical layers. In the central atrium, the original timber floor beams are removed while their beam pockets are intentionally preserved. New openings cut into the brick walls expose added lintels and angle-steel reinforcements, making the structural modifications visible as part of the architectural narrative.



Bricks salvaged from demolition are reused to form a breathable exterior wall, transforming what was previously interior space into a semi-exterior terrace. The bricks are arranged in a stable and regular pattern, leaving intentional voids that allow ventilation while also establishing a distinctive visual strategy for the façade.

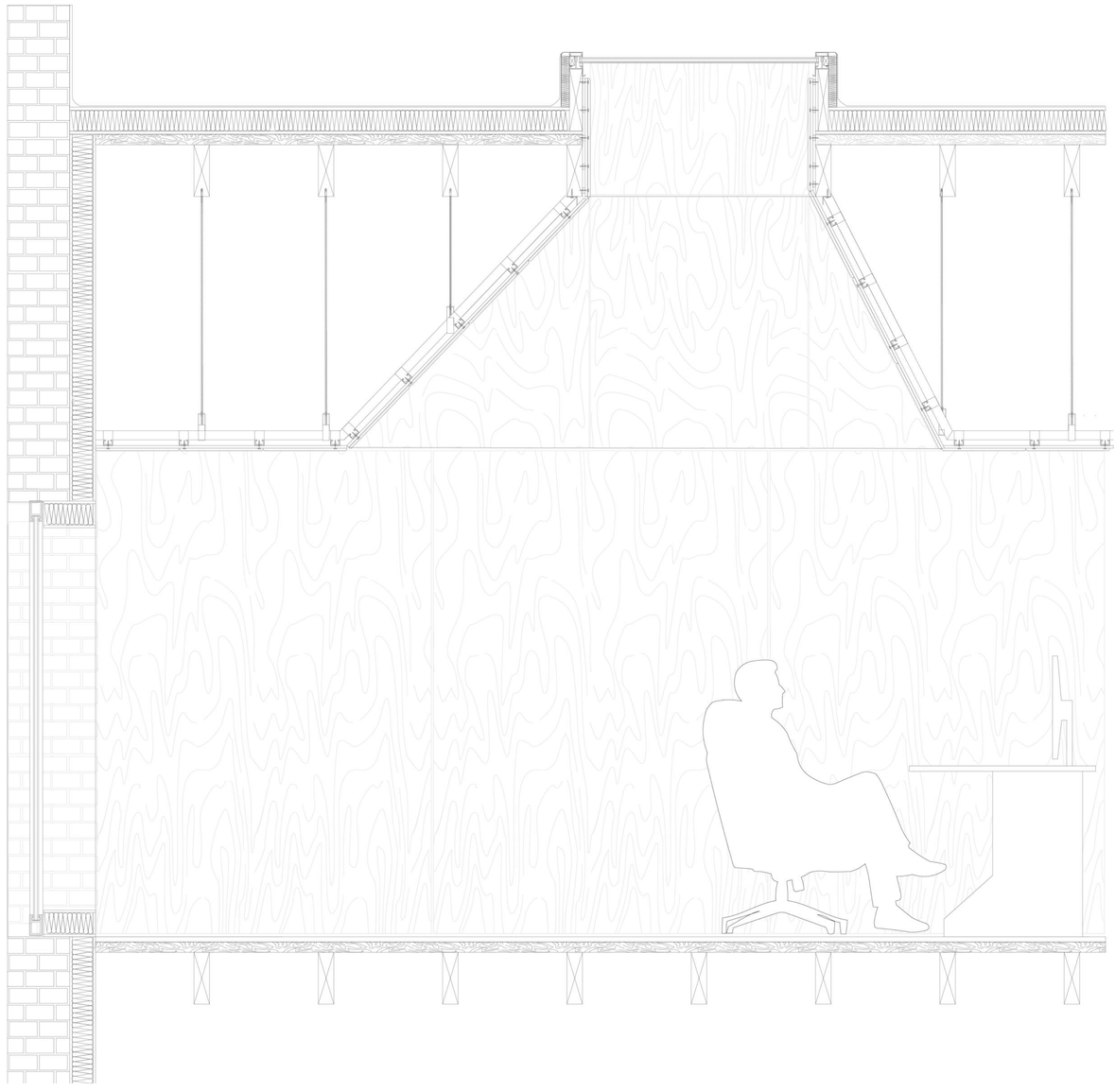






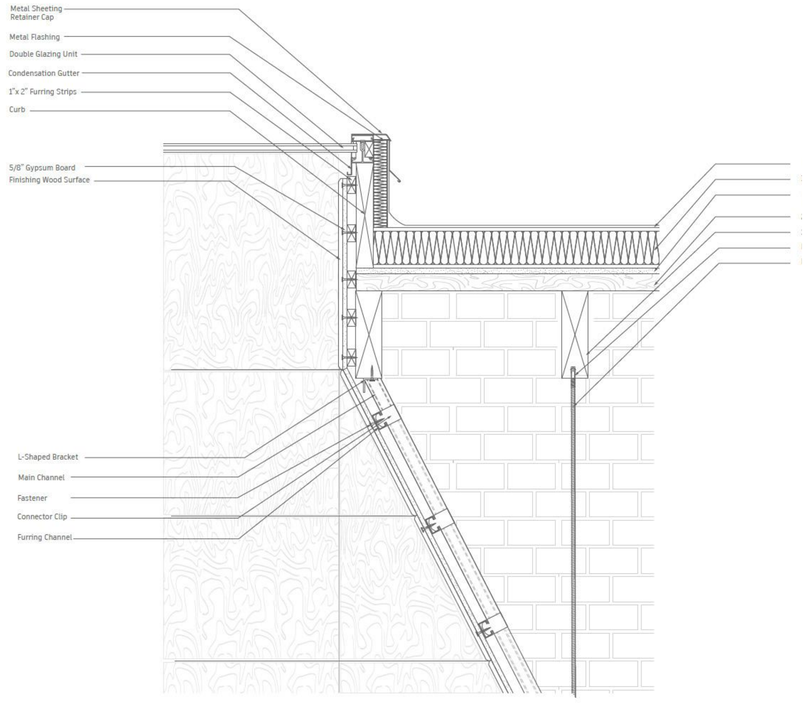
Rendering of the atrium space. The roof is partially opened to introduce controlled natural daylight, while sections of the original floor slab are removed to create a double-height communal space. A metal volume is inserted at a distinct angle within the existing structure, hovering above the original timber beams.

Together, these interventions establish a latent performance environment. During community events, the metal volume functions as a DJ booth and performance platform, while the flexible space below transforms into an open dance floor for gatherings and music events.








Metal Sheeting
Retainer Cap
Metal Flashing
Double Glazing Unit
Condensation Gutter
1"x 2" Furring Strips
Curb
5/8" Gypsum Board
Finishing Wood Surface
L-Shaped Bracket
Main Channel
Fastener
Connector Clip
Furring Channel





To Dwell

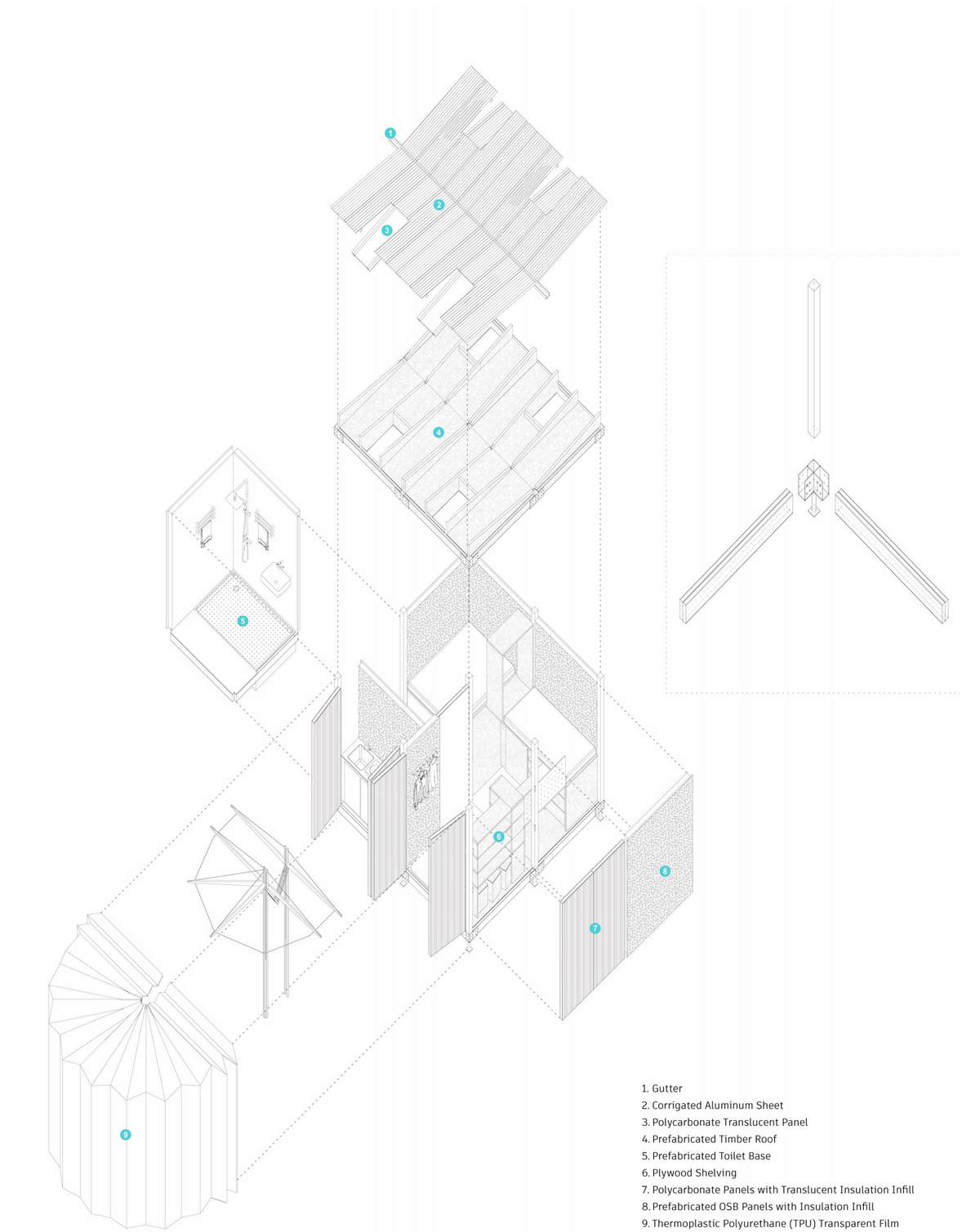
Introduction Design Studio III, 2025 Fall Semester

Temporary Housing for Displaced Population by Natural Disaster

This project proposes a temporary housing system designed for people who have lost their homes during the transitional period following disaster recovery. The project addresses two primary aspects. First is construction: in response to the urgency and economic constraints of post-disaster situations, the design explores a building system that is inexpensive, modular, and capable of rapid deployment. Second, the project reconsiders the fundamental principles of dwelling, using them as a basis for designing spaces that can still provide comfort and dignity in temporary living conditions.
In terms of construction, the housing units use custom-designed metal connectors as universal joints for a timber frame system. These connectors work in conjunction with prefabricated wall panels, doors, and corrugated roof panels for quick assembly. The structure is organized around an 8 × 8 ft modular frame, with each module typically accommodating a specific function. Different combinations of these modules generate various unit layouts and spatial configurations.

An umbrella-like structure is introduced as an external structural extension, providing supplementary circulation and expanded living space. This element accommodates flexible temporary uses such as sheltered outdoor circulation, clothes drying, and a foldable dining area with movable tables and chairs. Through these strategies, the project aims to create a hopeful post-disaster community. Partial permeability between units encourages social interaction and collective support, while enclosed walls and translucent materials ensure a basic level of privacy for residents.





1. Gutter
2. Corrigated Aluminum Sheet
3. Polycarbonate Translucent Panel
4. Prefabricated Timber Roof
5. Prefabricated Toilet Base
6. Plywood Shelving
7. Polycarbonate Panels with Translucent Insulation Infill
8. Prefabricated OSB Panels with Insulation Infill
9. Thermoplastic Polyurethane (TPU) Transparent Film

