

ARCHITECTURE PORTFOLIO

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# TABLE OF CONTENTS

## I. RIVERBEND TRAIN STATION

Train Station in Pueblo, CO

## II. MONUMENTALLY DIMINISHING

NCMA Competition; Neue Galerie expansion

## III. FIREHOME

Firehouse extension for Undine Fire Company in Bellefonte, PA

## IV. CONNECTING THE ENVIRONMENT

Park Forest Middle School extension in State College, PA



**RIGHT:** A superimposed drawing of the section, perspective, and site plan for the Uffizi in Florence, Italy.



# RIVERBEND TRAIN STATION

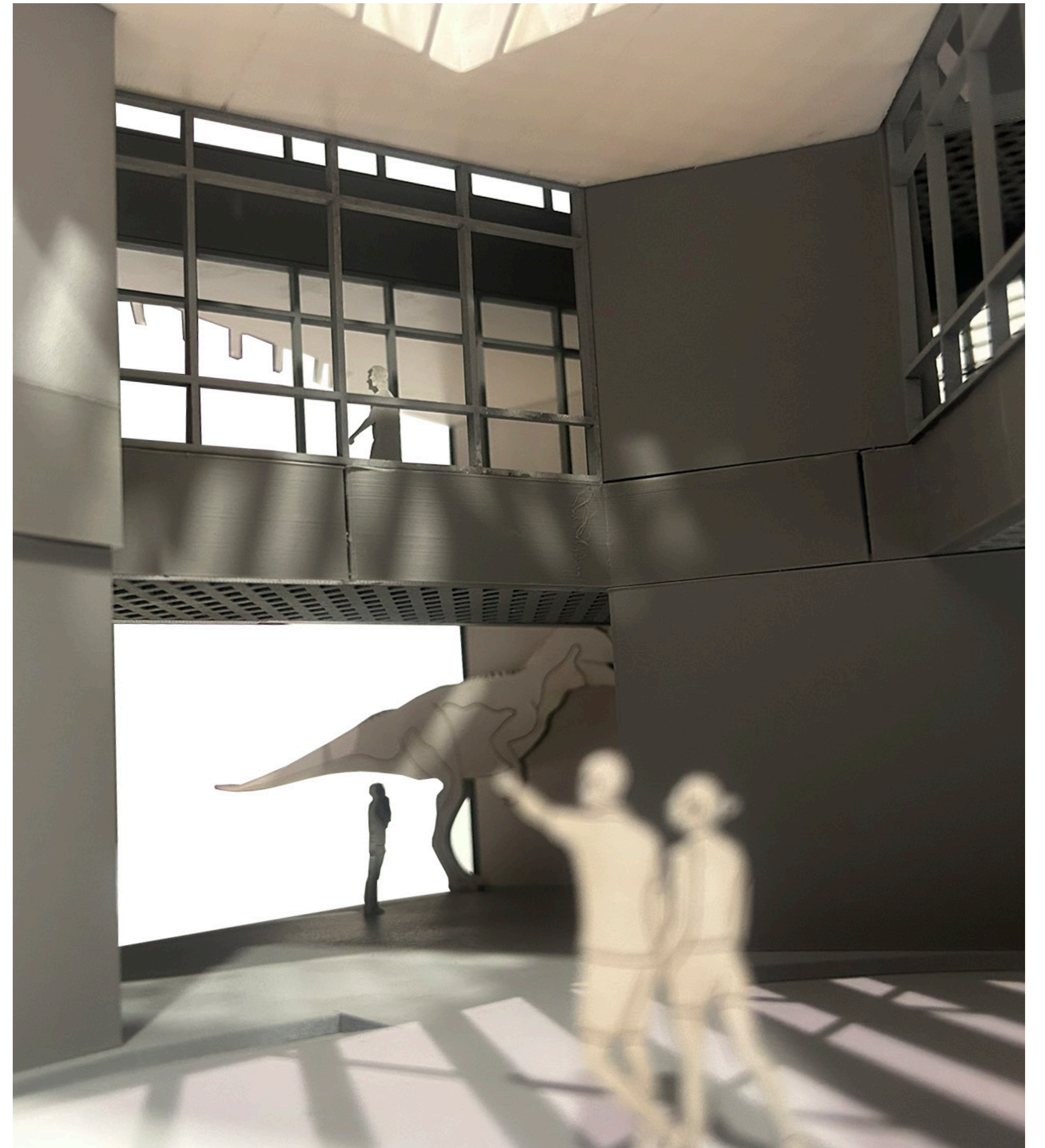
**TYPE:** Transportation Facility, Exhibition, Cafe Bar, Retail

**LOCATION:** Pueblo, Colorado

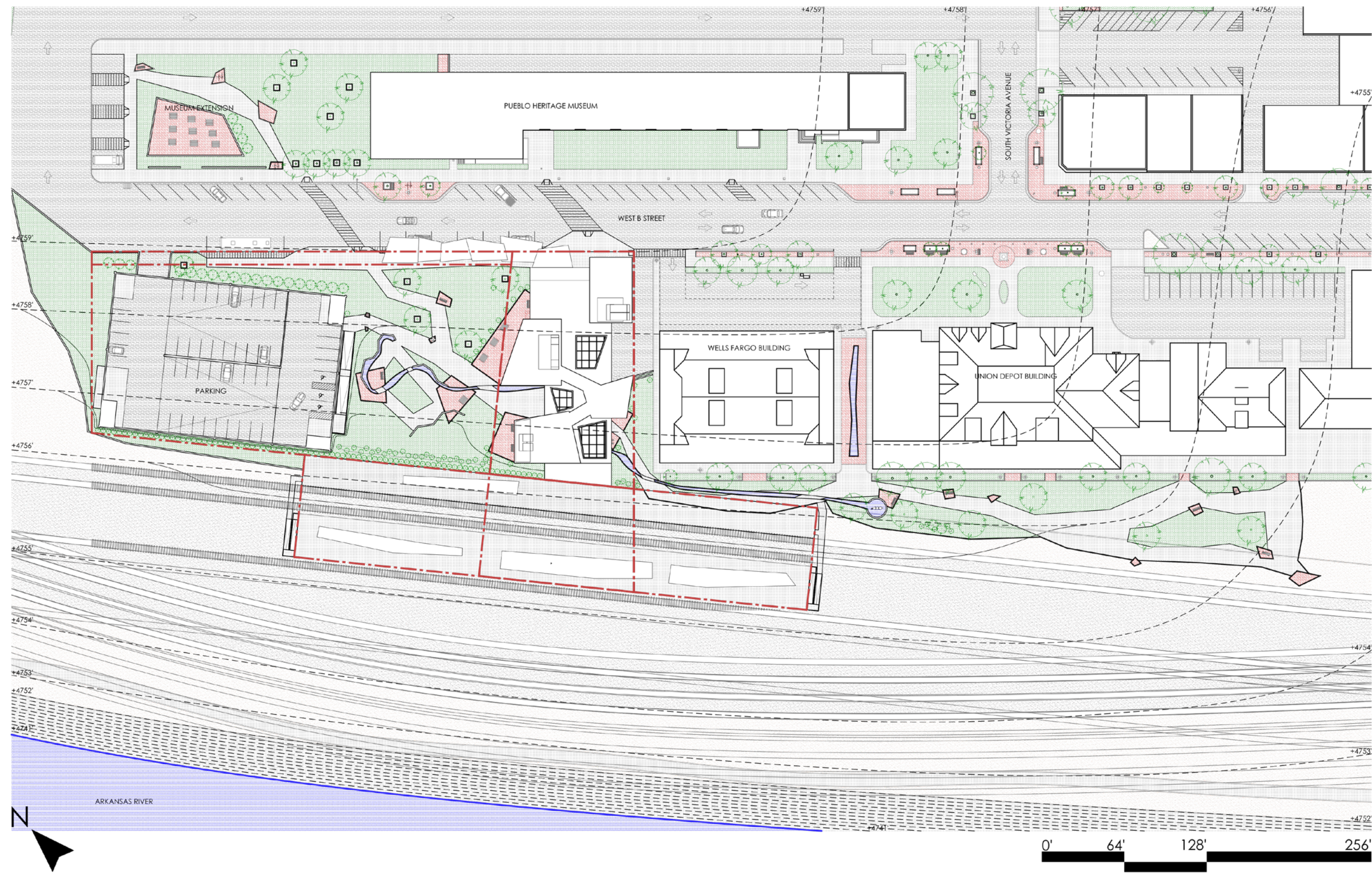
The Great Pueblo Flood of 1921 brought disaster upon the people of Pueblo, Colorado, where the economic effects can still be felt today. Inadequate water retention strategies failed to withhold the rising levels of the Arkansas River and Fountain Creek, which meet within the city limits. Riverbend Train Station serves as a memorial to the tragedy and a reminder of a river's power, just as capable of shaping its landscape as its landscape is of shaping it.

Riverbend Train Station embodies a river carving across and into its landscape. The river curves between four “rocks”, each of which holds its own spaces, positioned around the building, while terraced levels are reminiscent of a river carving into the landscape. Two rocks contain waiting spaces, one holds retail and “On the Rocks” Bar and Coffee, and one holds exhibition, storage/mechanical, and office space. A stream runs across the site and through the building, providing evaporative cooling and representing the Fountain Creek meeting with the Arkansas River. A gray brick veneer on the “rocks” of the building complements adjacent brick structures, while maintaining a unique appearance. A raised platform connects to the station via a basement, where mechanical and additional waiting is also located.

**RIGHT:** The model emphasizes the spatial and lighting characteristics of the entrance hall.







CONTEXT PLAN

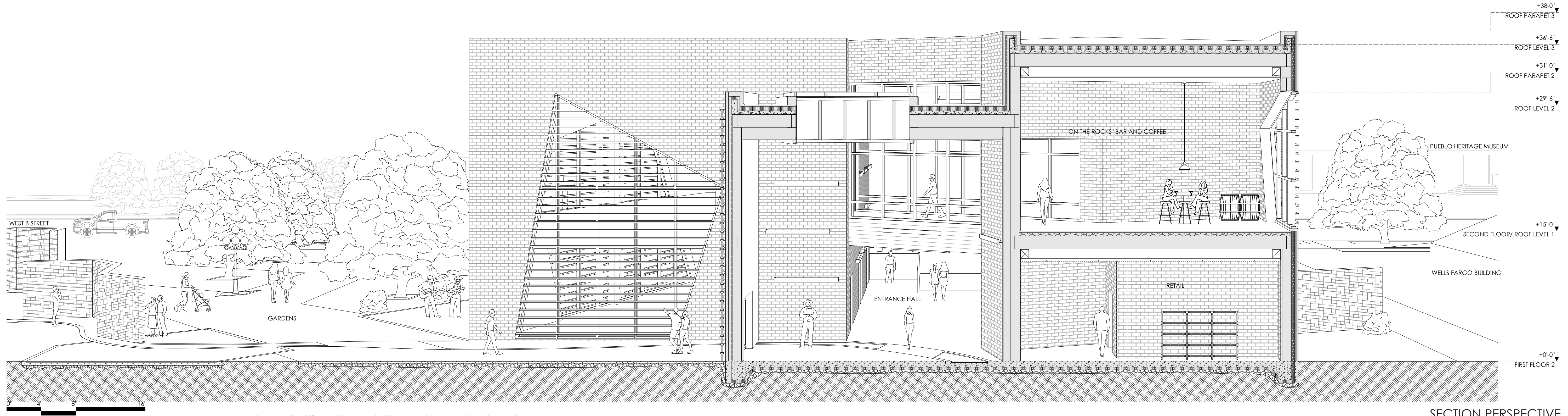
**ABOVE:** The building is shown in close proximity to the Arkansas River, one of its influences. The plan also extends far enough to see the beginning of the pathway as river towards the building and where the path and stream end on the other side of the building.



SITE PLAN

**ABOVE:** The connection of the building's river and the nearby site's stream is emphasized.





**ABOVE:** Cutting through the entrance hall and rock, all layers of the wall and roof buildup are shown. The perspective extends to show designed site, where rock walls shape the stream and site paths.

SECTION PERSPECTIVE

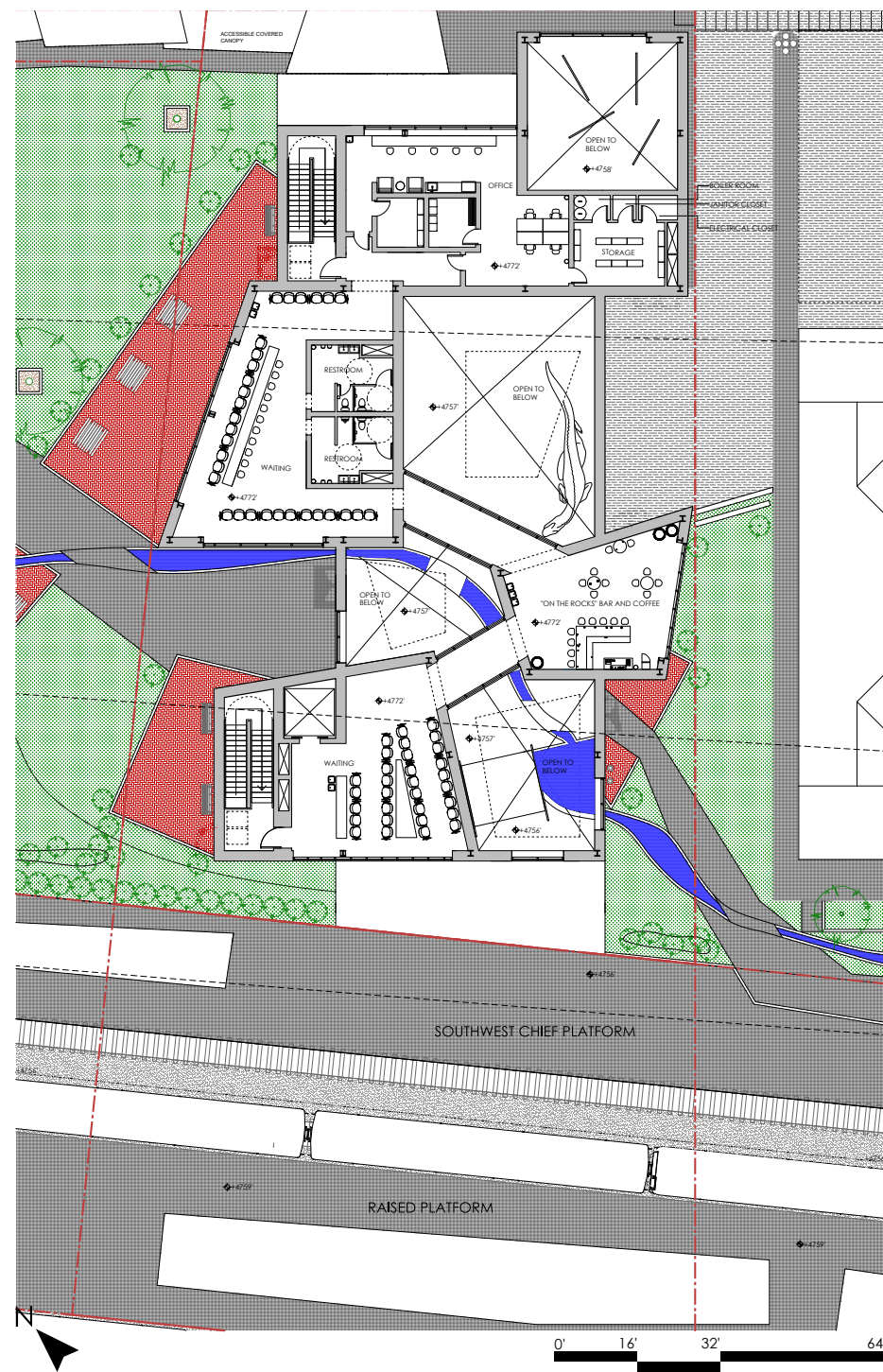






**RIGHT:** The second floor consists of a single pathway through the spaces. Each rock is connected via bridges with views to below.

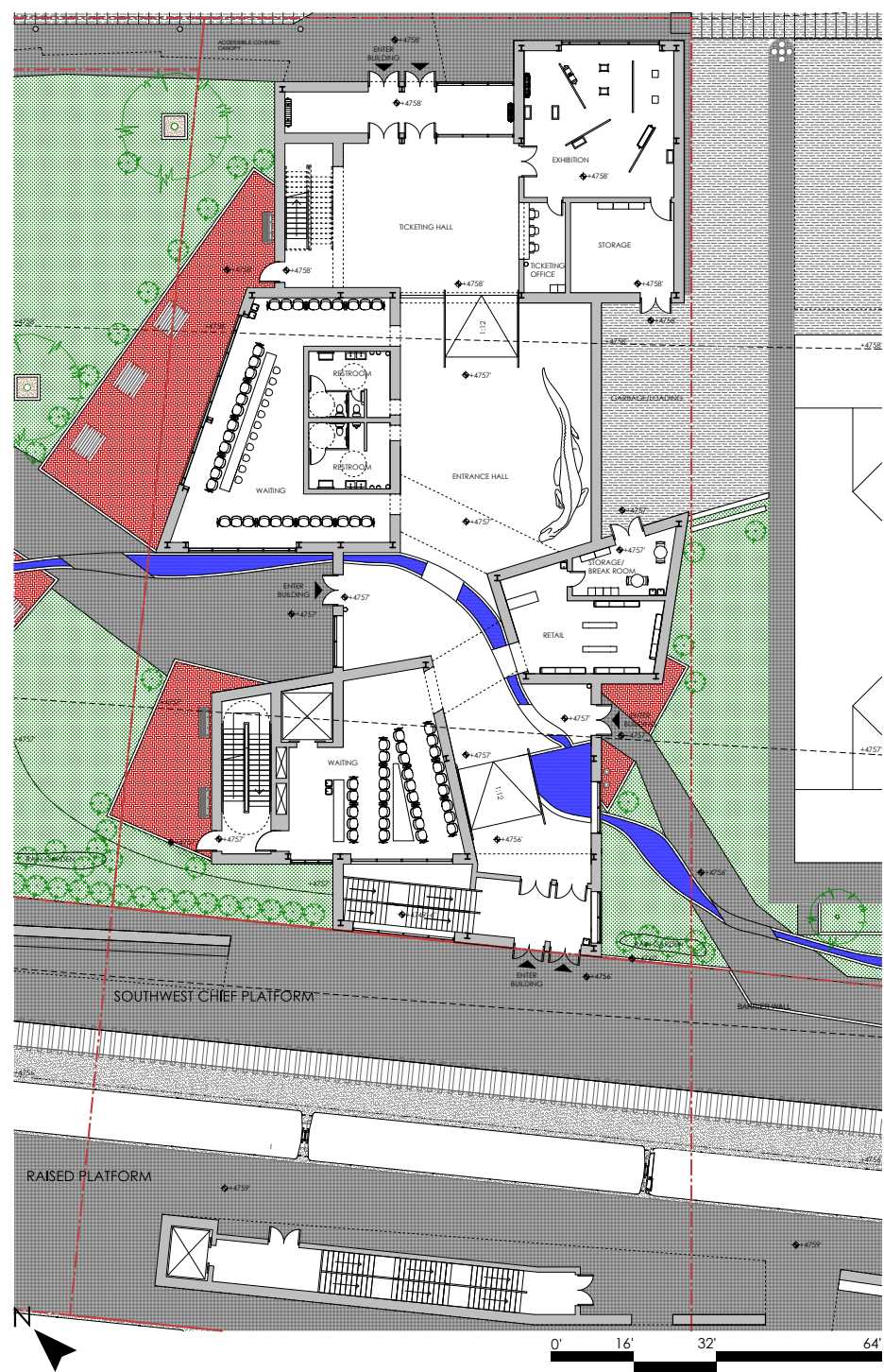
**BELOW:** A view during the morning hours at "On the Rocks" Bar and Coffee shows the lighting effects. The roof of the Wells Fargo Building can be seen..



INTERIOR VIEW



INTERIOR VIEW



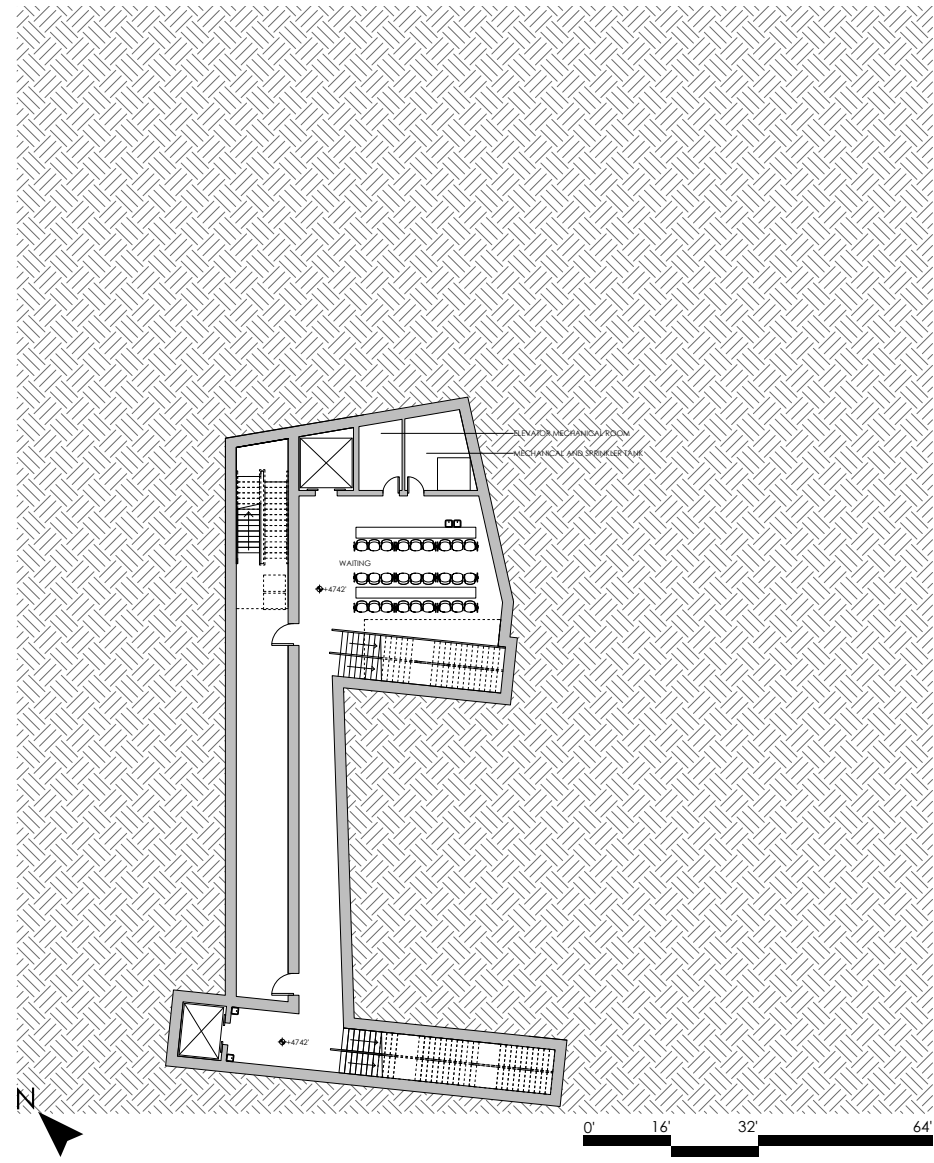
**ABOVE:** A view during the night hours within the entrance hall depicts the electric lighting. The wall-mounted linear light fixtures provide a texture to the rocks, further sculpting them.

**LEFT:** The first floor circulates between rocks of the building. Side entrances allow traffic to either side of the site.

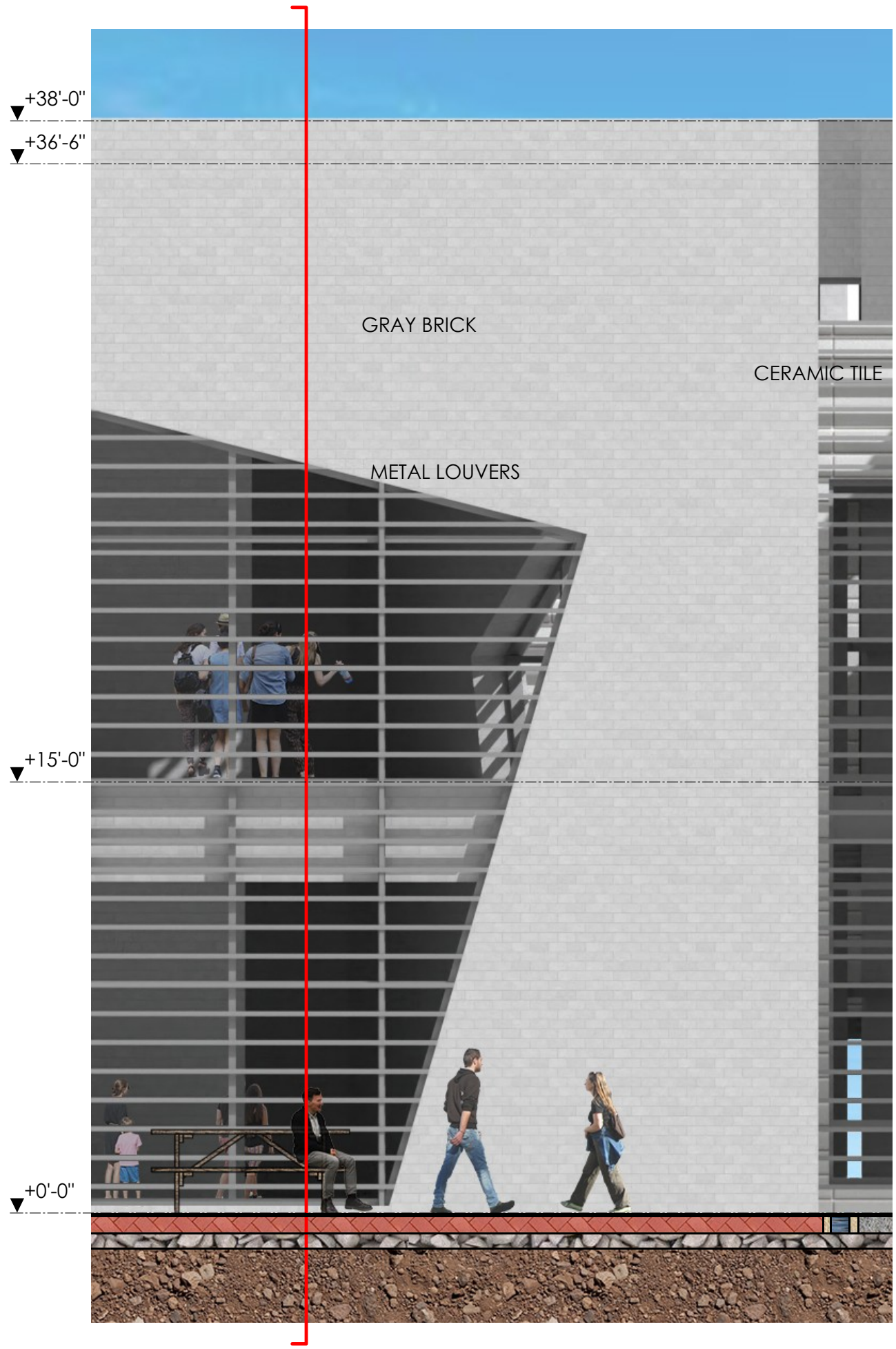


**RIGHT:** The basement plan has a waiting area. A hallway leads from the building to a raised platform to access railways.

**BELOW:** A view of the rock walls and stream cutting across the site. Visitors can enjoy the sculpted walls and public lawn.



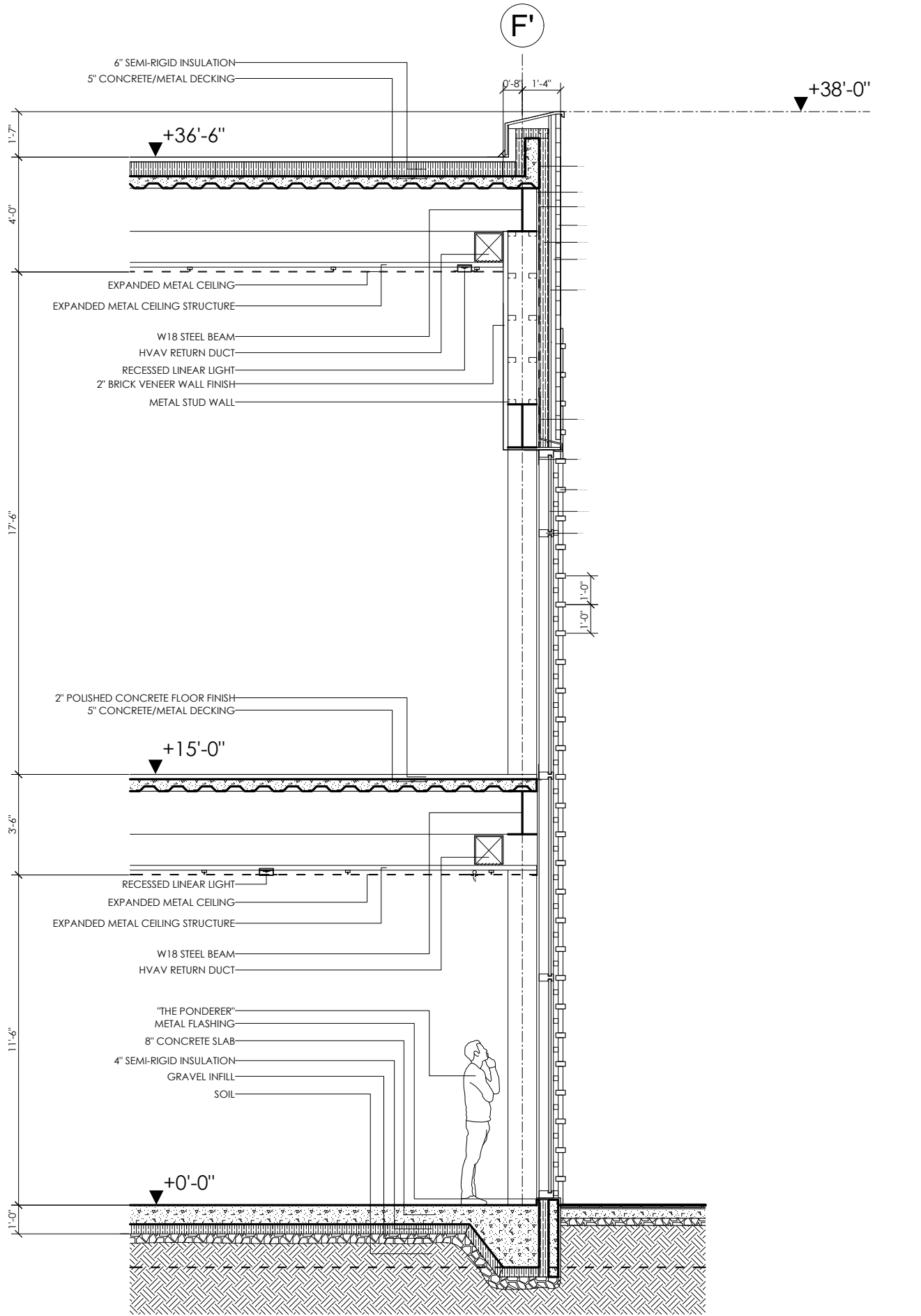
EXTERIOR VIEW



PARTIAL ELEVATION

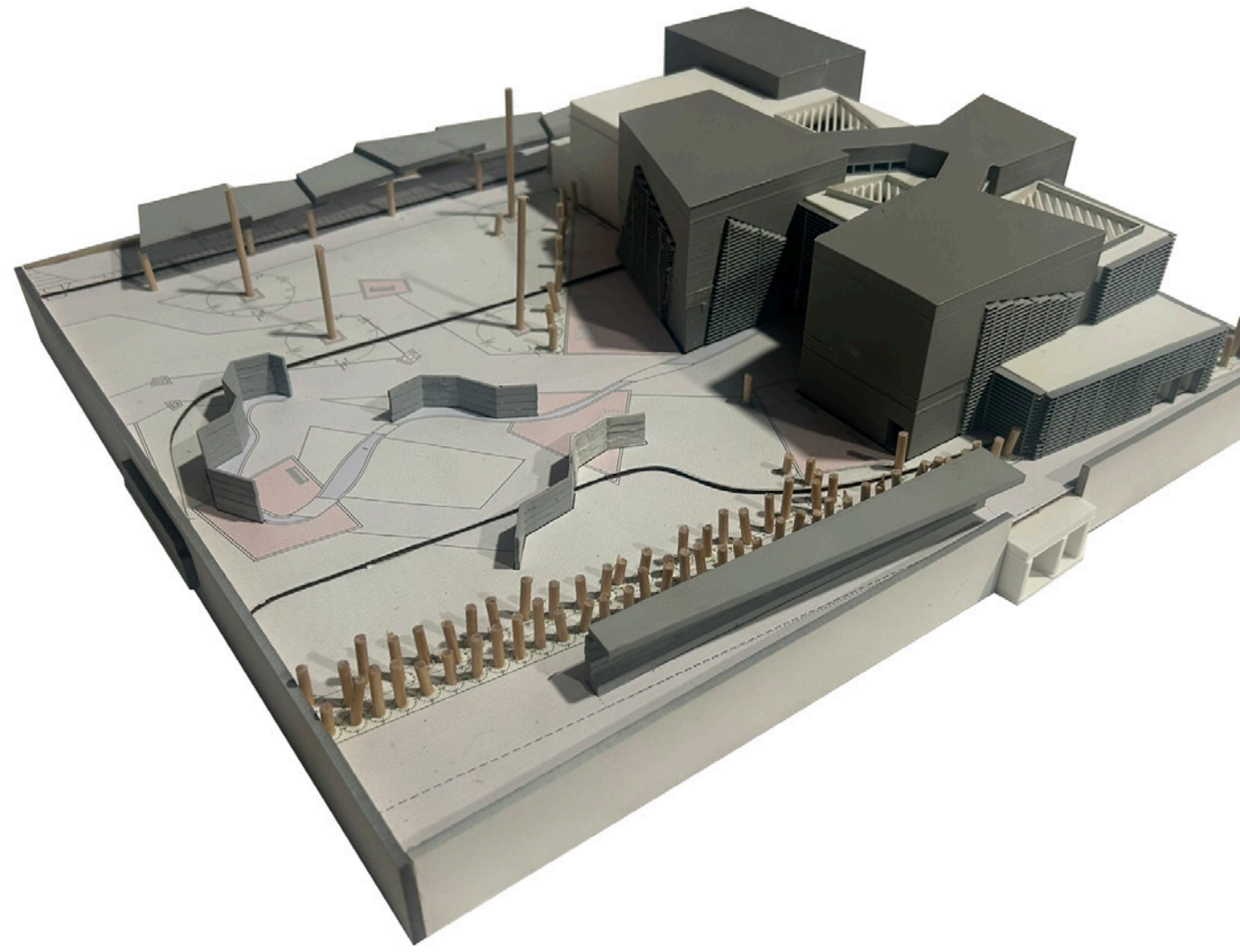
**RIGHT:** The detail depicts the buildup of the roof, walls, window, and each floor.

**LEFT:** The partial elevation is taken from the west side. The metal louvers prevent solar gain within the building. A gray brick veneer is used around rock spaces, while ceramic tile is used everywhere else.

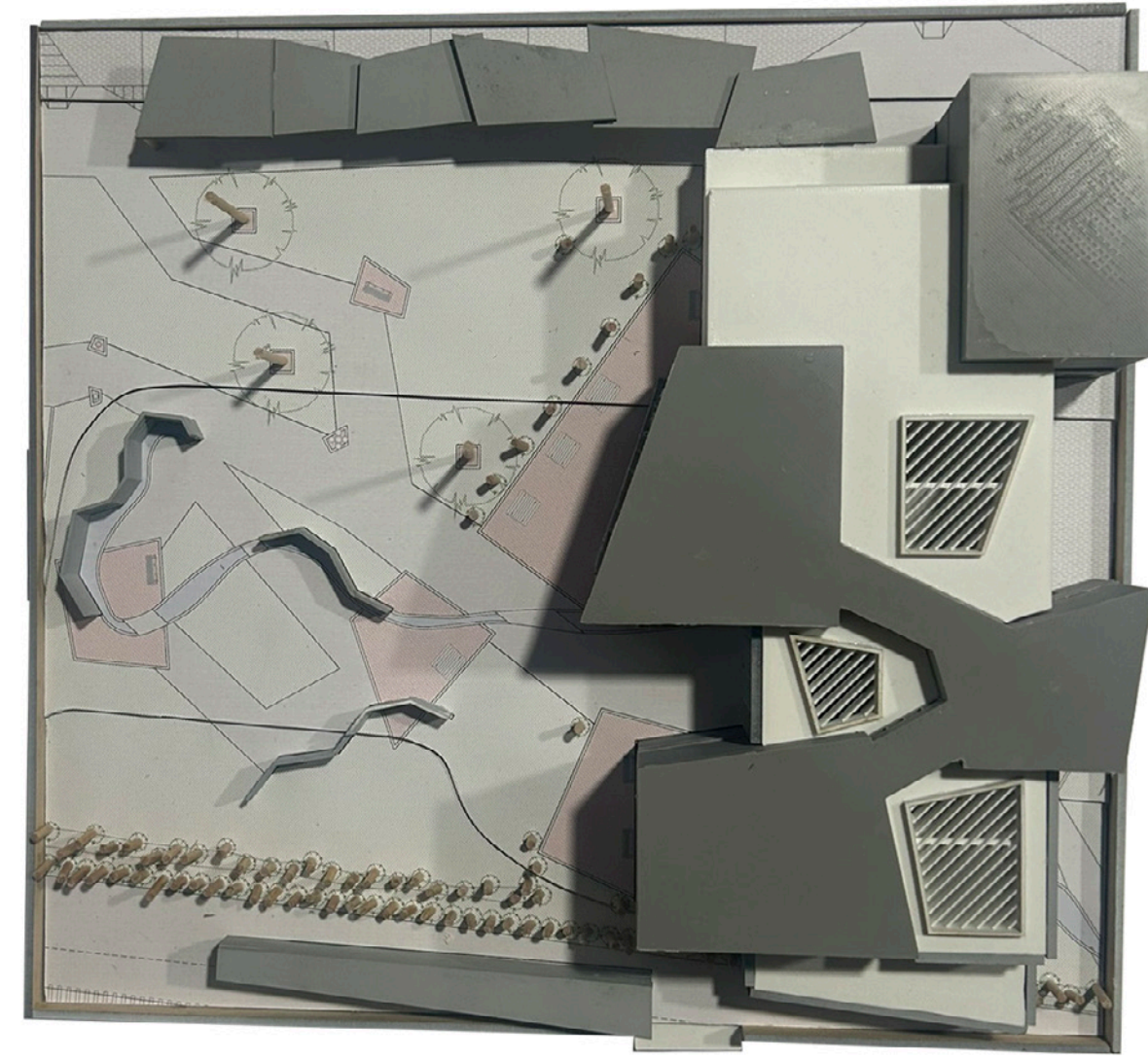


FACADE DETAIL

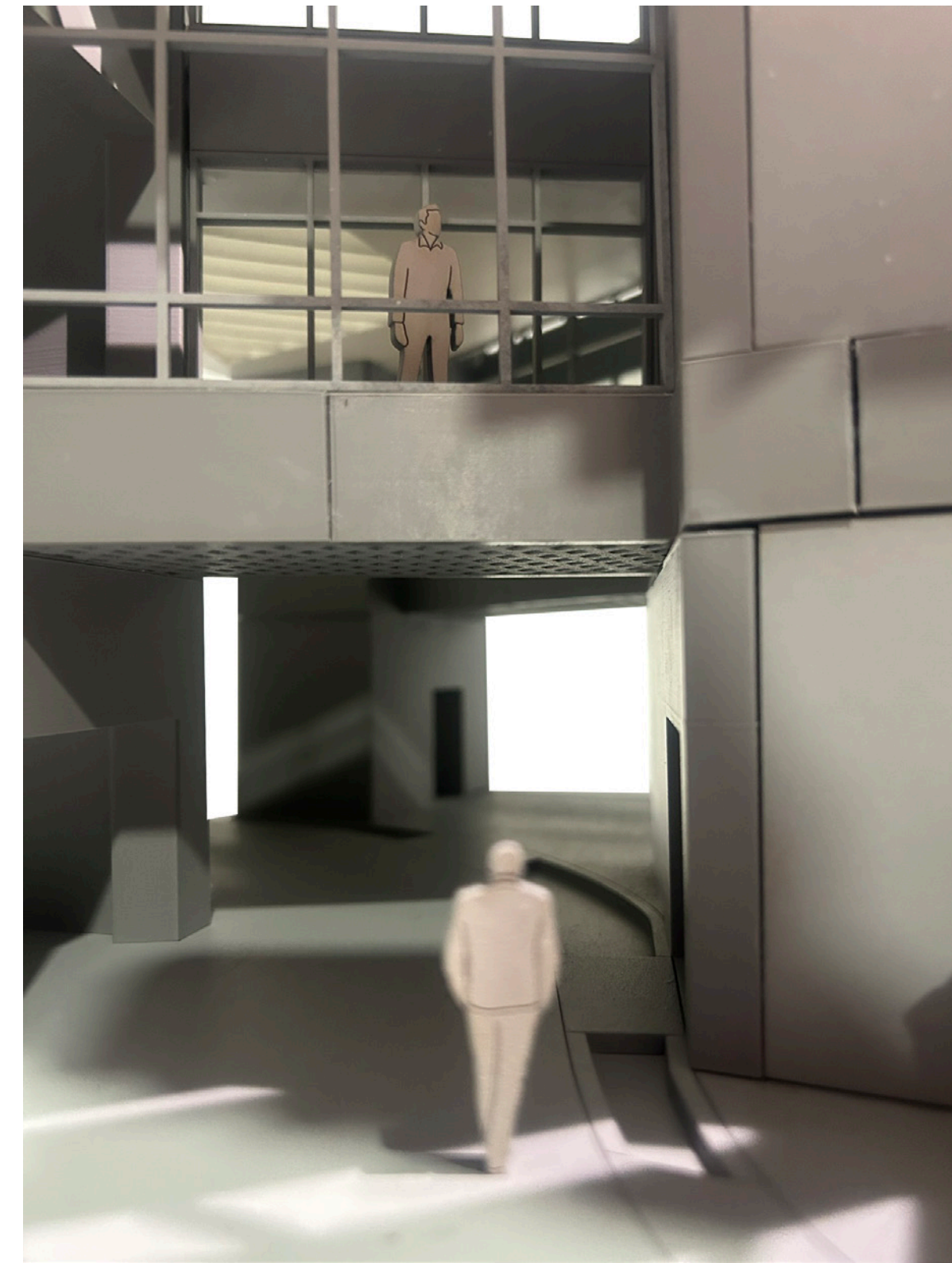




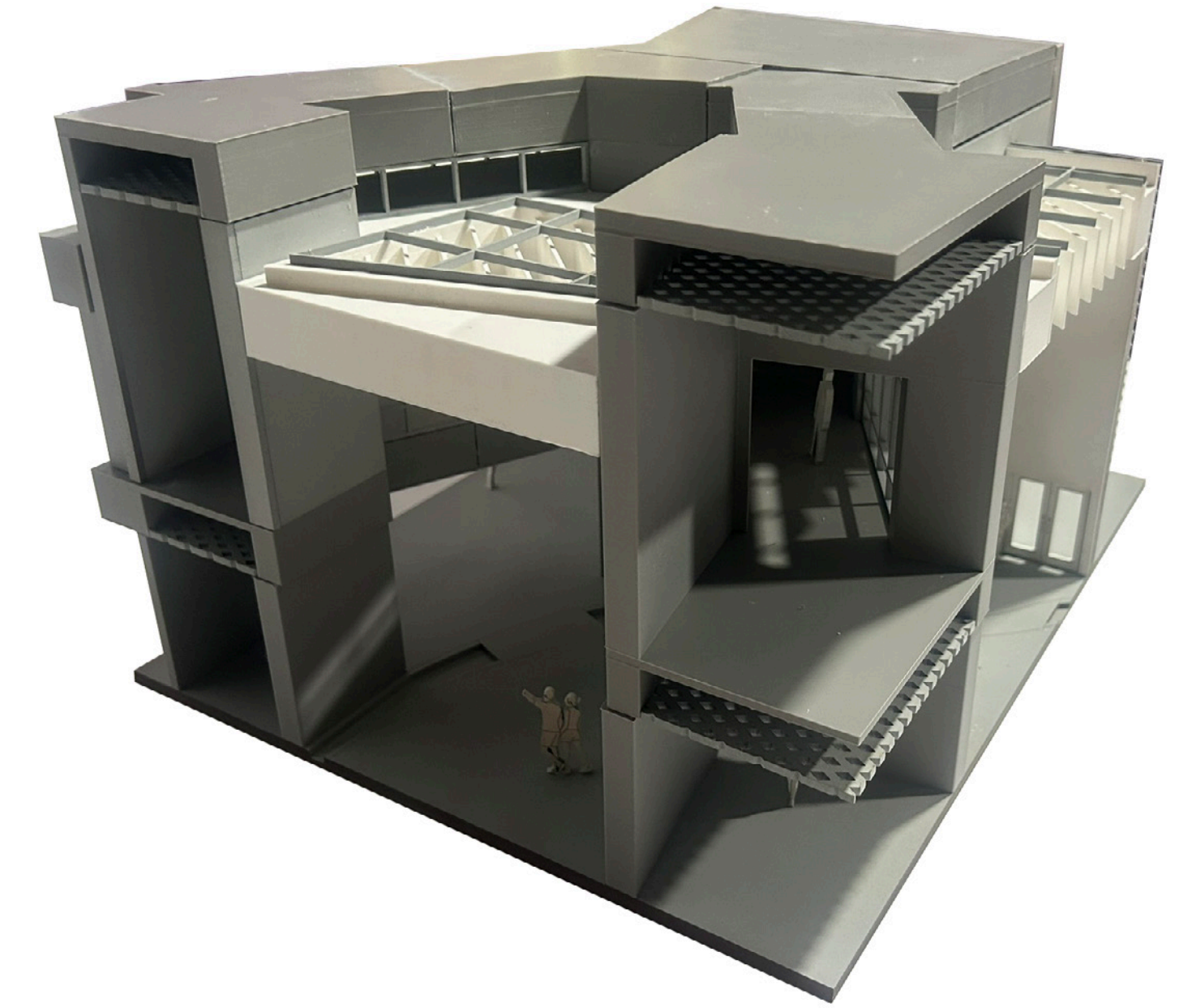
SITE MODEL - SOUTH AND WEST ELEVATIONS



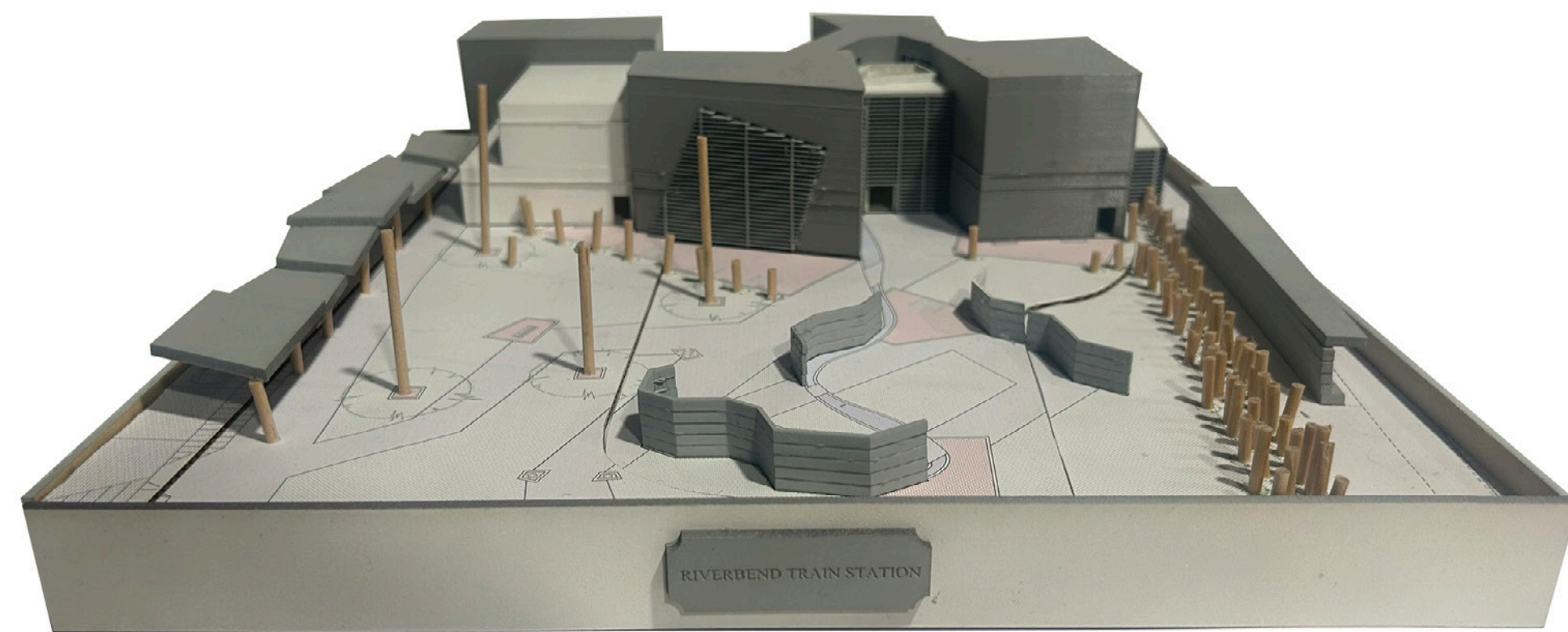
SITE MODEL - ABOVE



SECTION MODEL - LIGHTING EFFECTS



SECTION MODEL - CUT-THROUGH ROCKS



SITE MODEL - WEST ELEVATION

**ABOVE, LEFT :** The stream's connection to the building from the sculpted site is emphasized in this model.

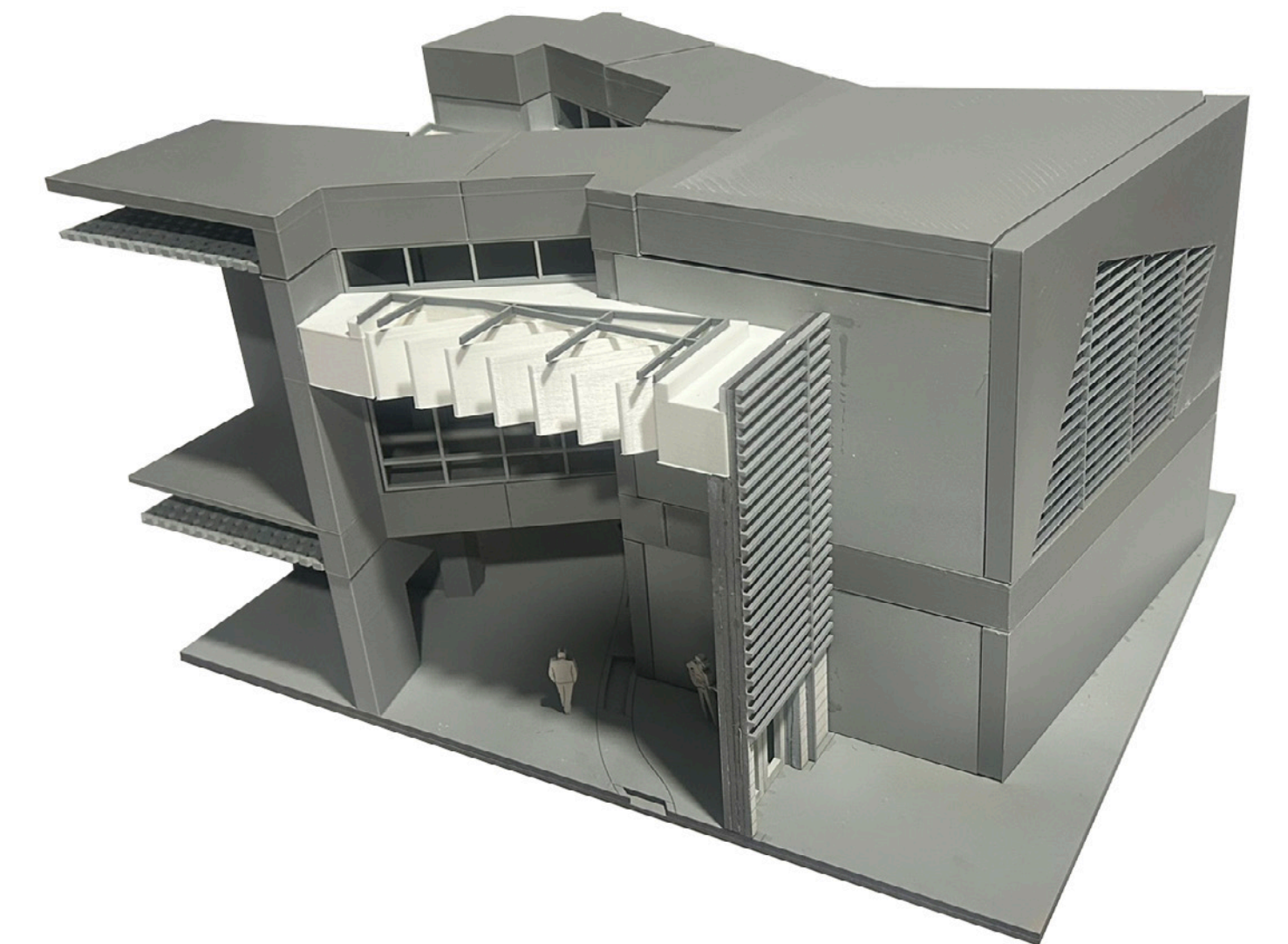
**ABOVE:** The overall roof plan of the building and site. The metal louvers of the skylight can be seen.

**BELOW, LEFT:** Gray parts of the model represent either metal louvers or gray brick veneer, while white walls represent ceramic tile.

**ABOVE:** A view walking through the entrance hall beneath bridges connecting the rocks.

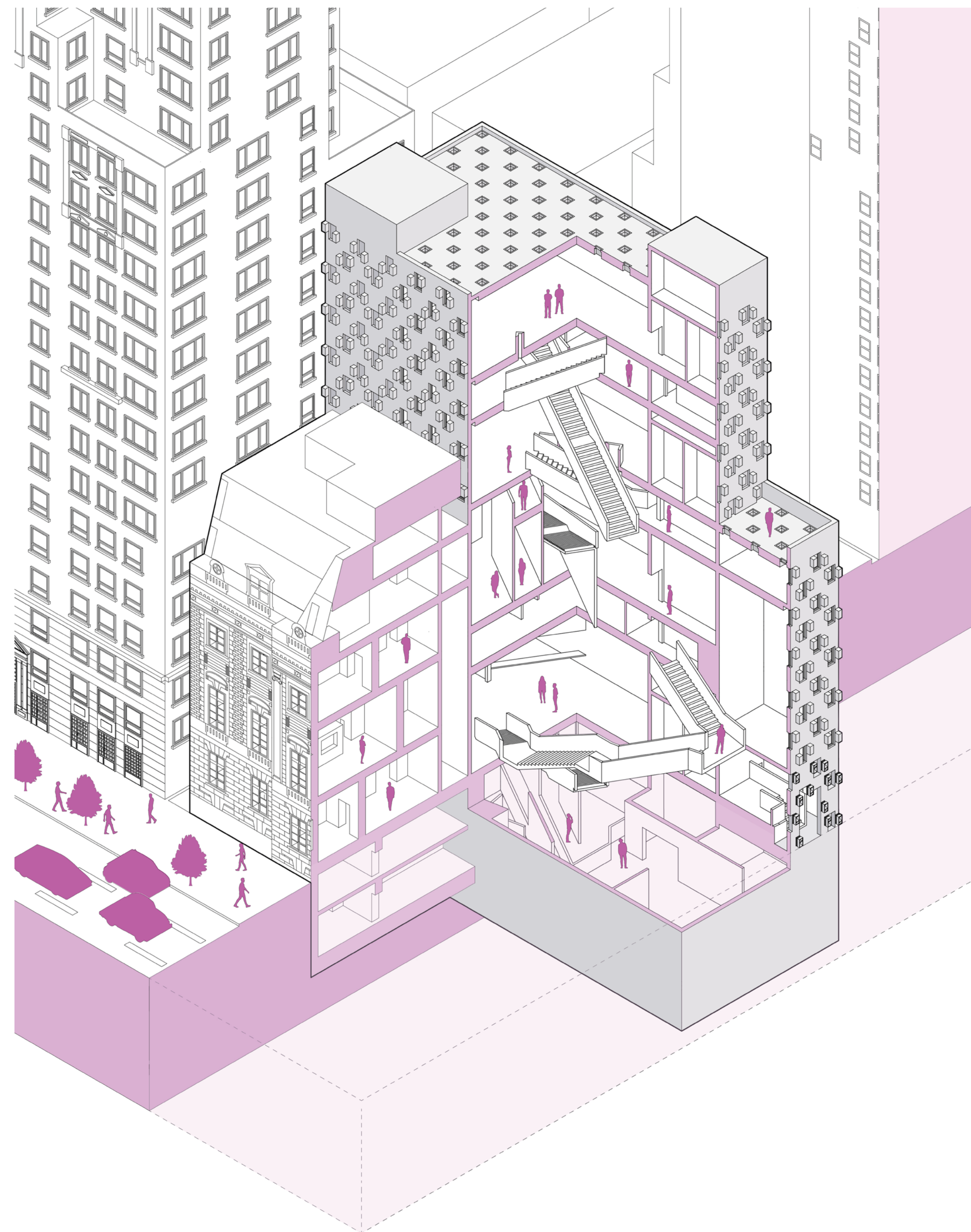
**ABOVE, RIGHT:** The model shows the expanded metal roof used throughout the building and some of the entrance hall space.

**BELOW, RIGHT:** Part of the east facade can be examined at a larger scale depicting gray brick veneer, ceramic tile, and metal louvers.



SECTION MODEL - FACADE AND CUT-THROUGH SKYLIGHT





# MONUMENTALLY DIMINISHING

**TYPE:** Exhibition, Dining, Assembly Hall

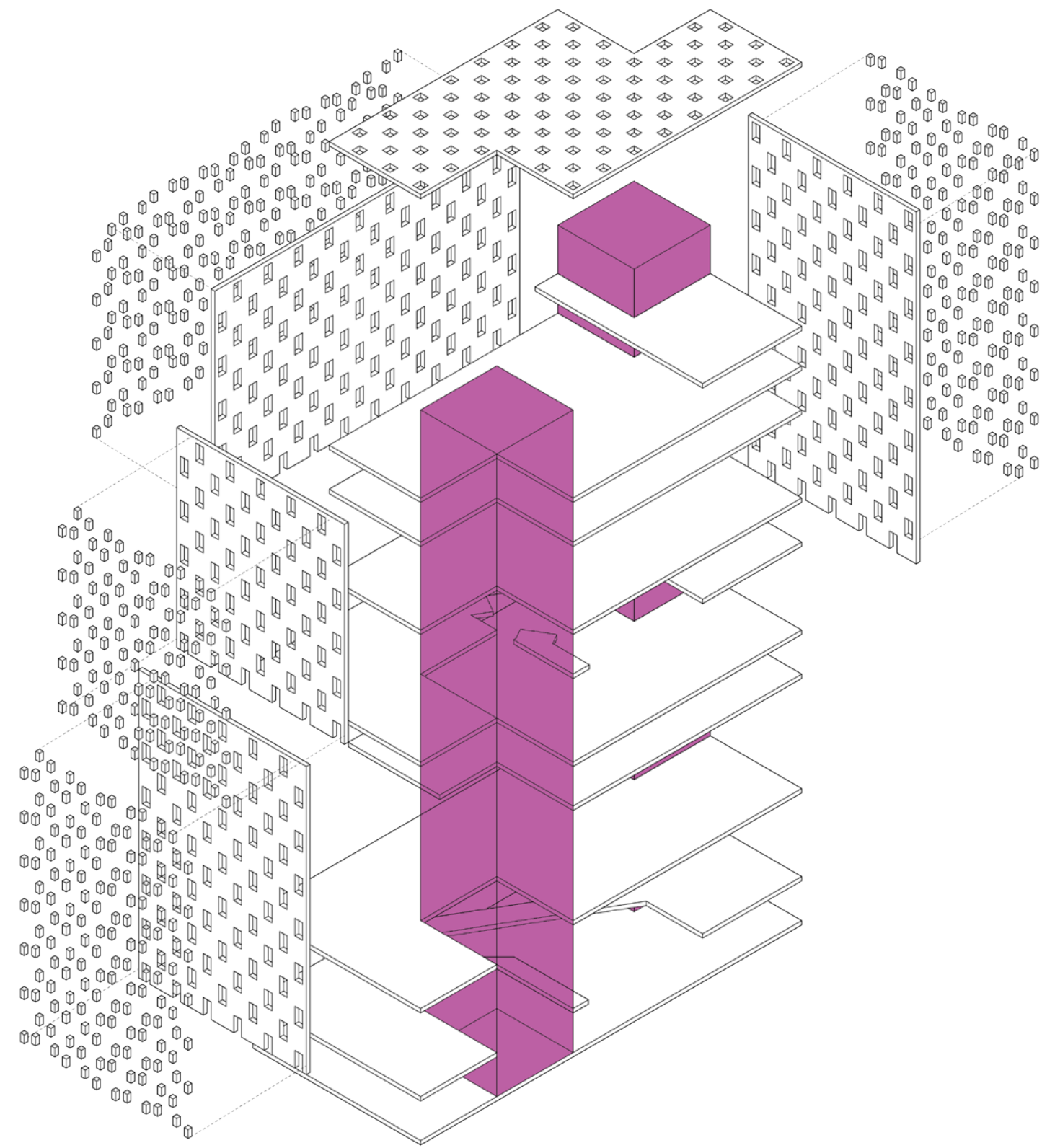
**LOCATION:** New York, New York

The program concentrated on designing an extension to the Neue Galerie in New York City. Featured spaces include galleries, indoor and outdoor event spaces, storage, and workshops.

This NCMA-honored design focused around two structural cores running through the entire building. Carved into the cores are gallery and circulation spaces. The facade screen takes inspiration from museum artifacts adapted to connect with the urban setting. The window placement allows the building to change the human scale and appear more monumental. Designed blocks extruded from the facade create shading effects from the sunlight. Feature staircases connect each floor, influencing floor circulation and paving patterns. A purple color scheme was influenced by artifacts and associates its history with this symbol of power and grandness.

**LEFT:** An exploded isometric of the Neue Galerie and designed extension. Entire staircases remain to emphasize their importance.

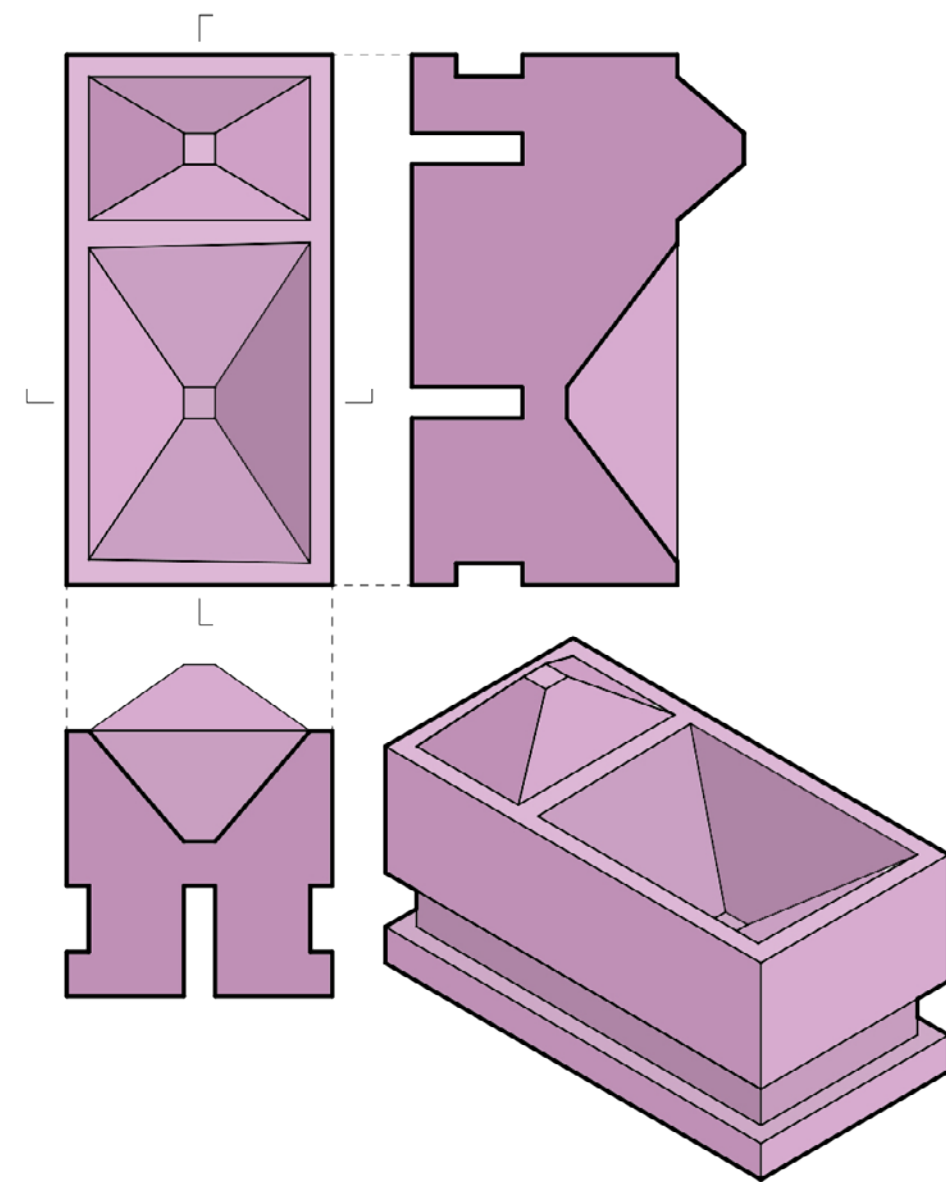




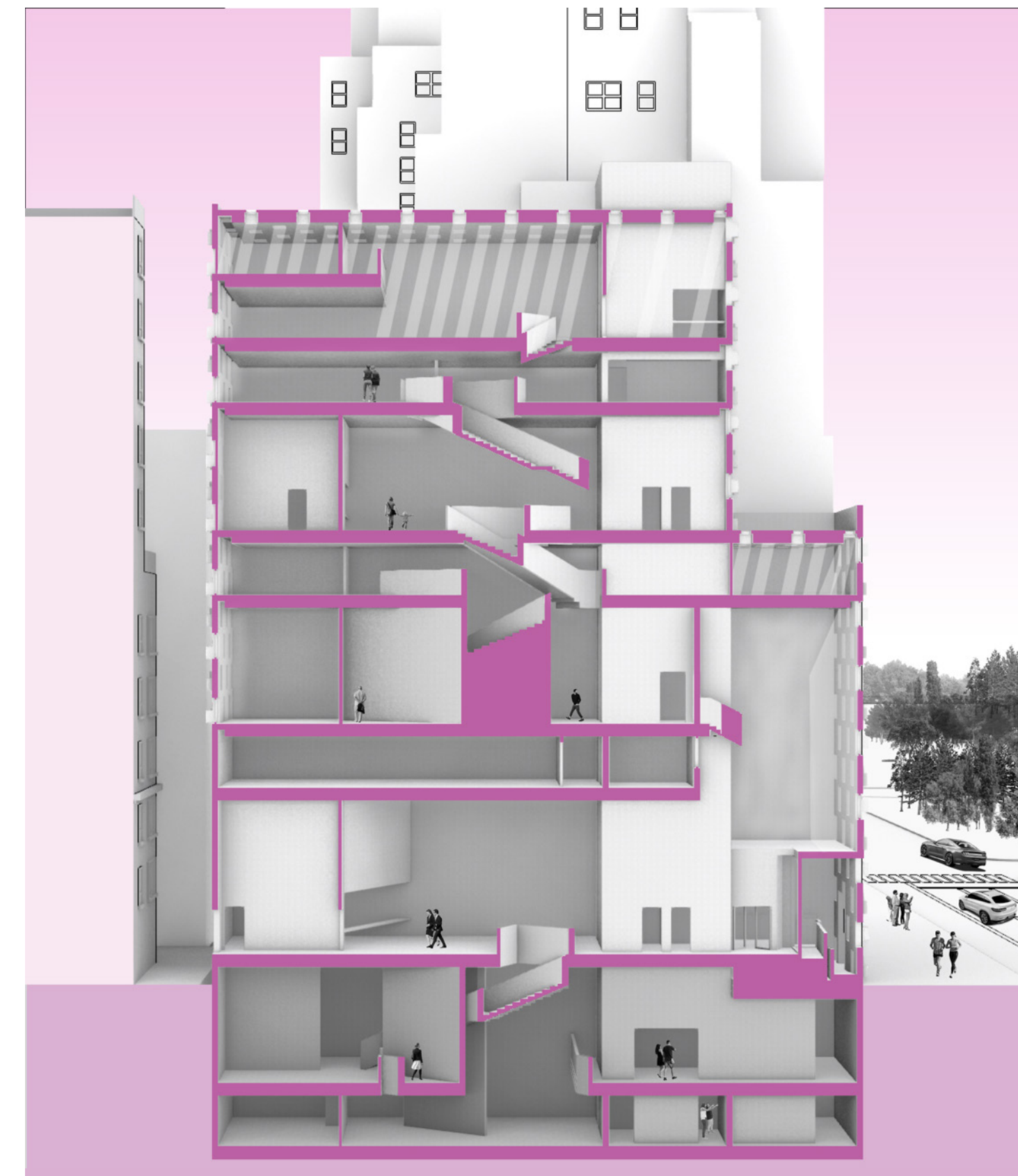
PARTI DIAGRAM

**LEFT:** The cores run through each floor, while the screen is pulled away from the interior. The extruded blocks, with a pattern based on artifacts and a sine/ cosine wave, are pulled off the screen.

**RIGHT:** Design block placed among the extruded blocks on the facade on the lower four rows, connecting unique brick patterning found on the lower areas of the adjacent buildings.

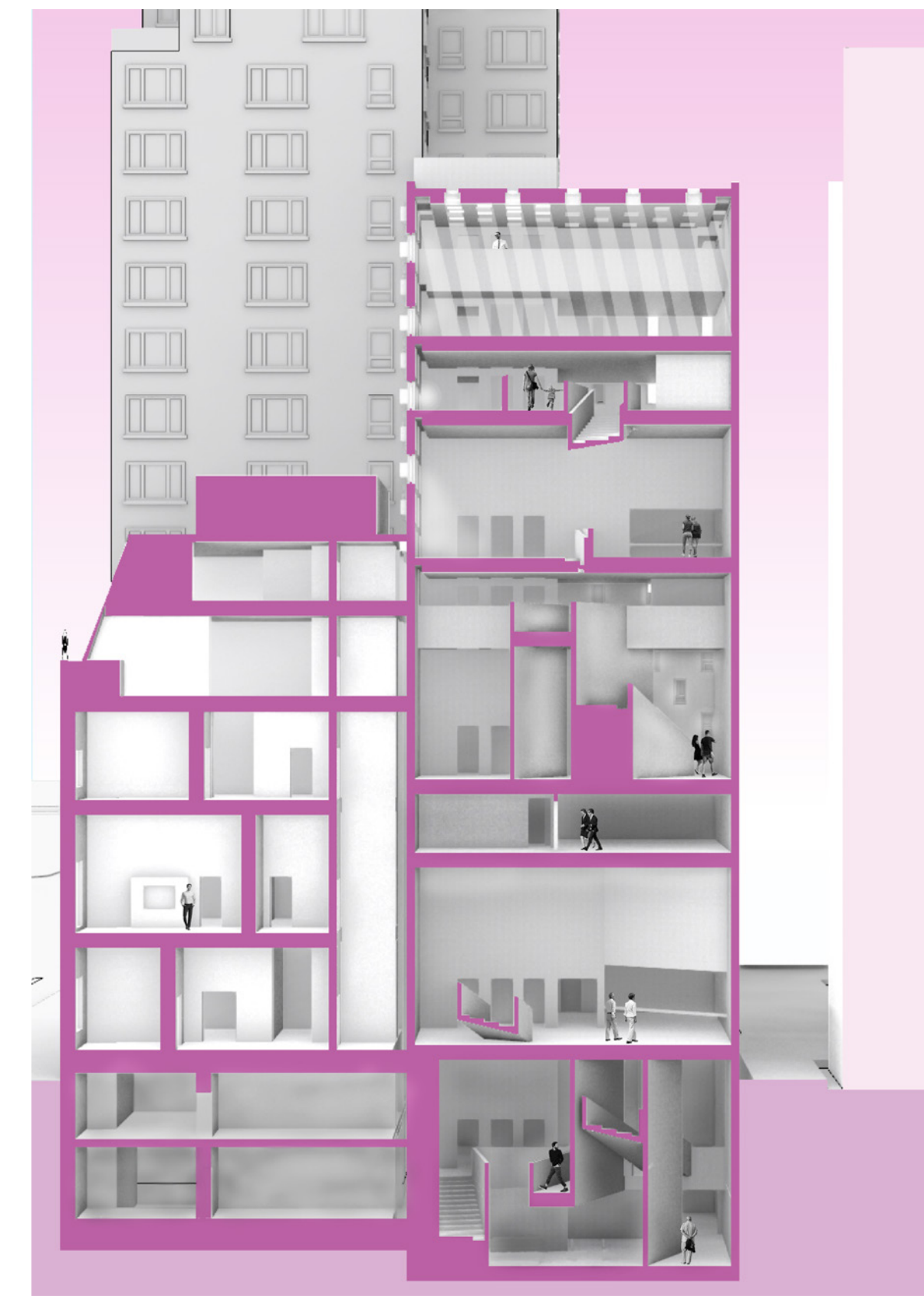


BLOCK DESIGN DIAGRAMS



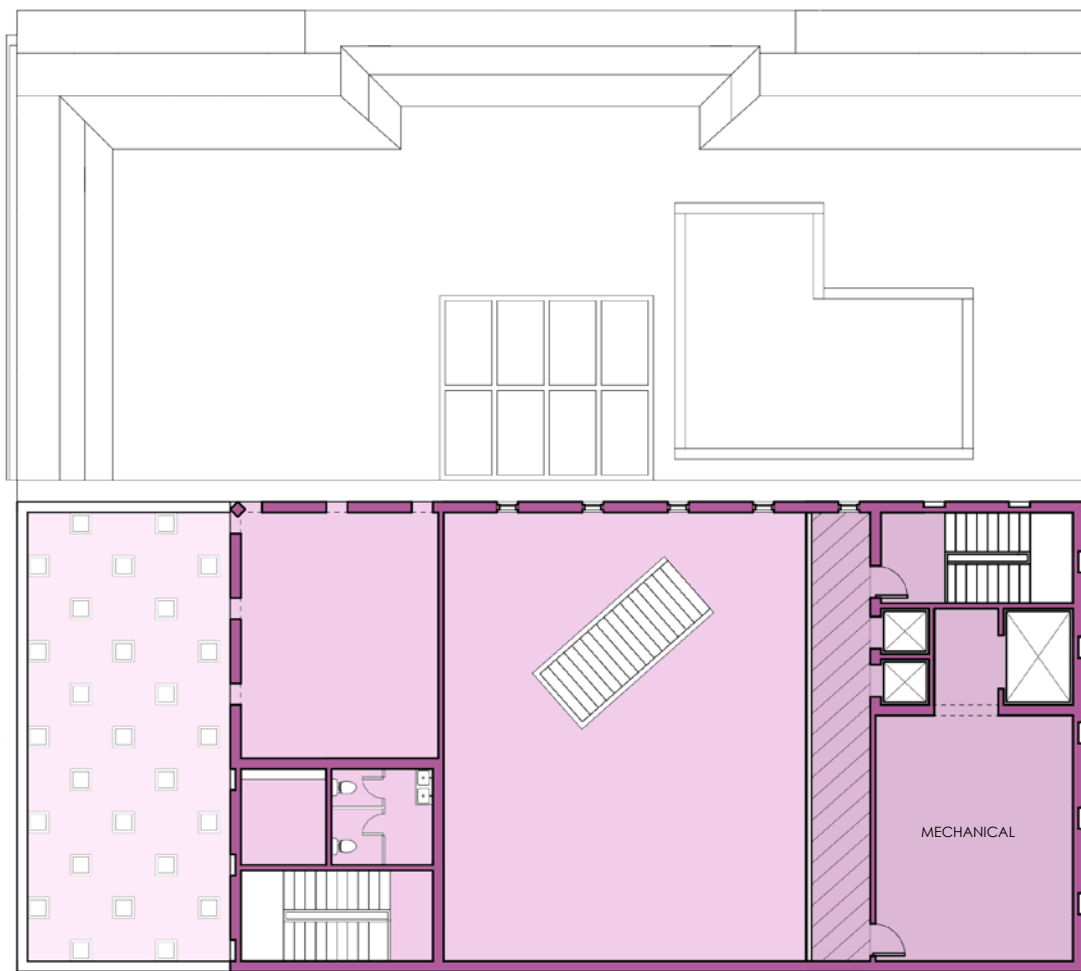
LONGITUDINAL SECTION

**RIGHT:** Section runs through the Neue Galerie and designed extension. Lighting effects from the windows are shown.

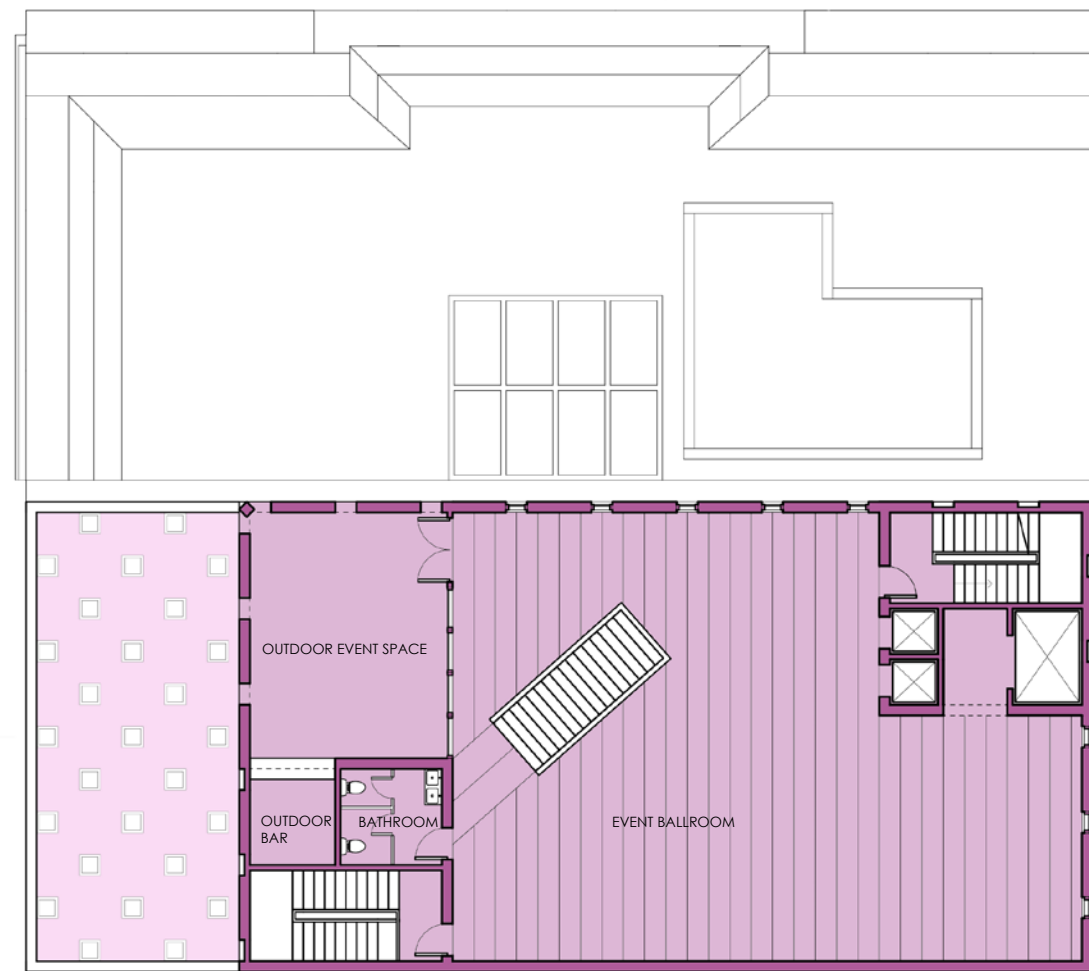


TRANSVERSE SECTION

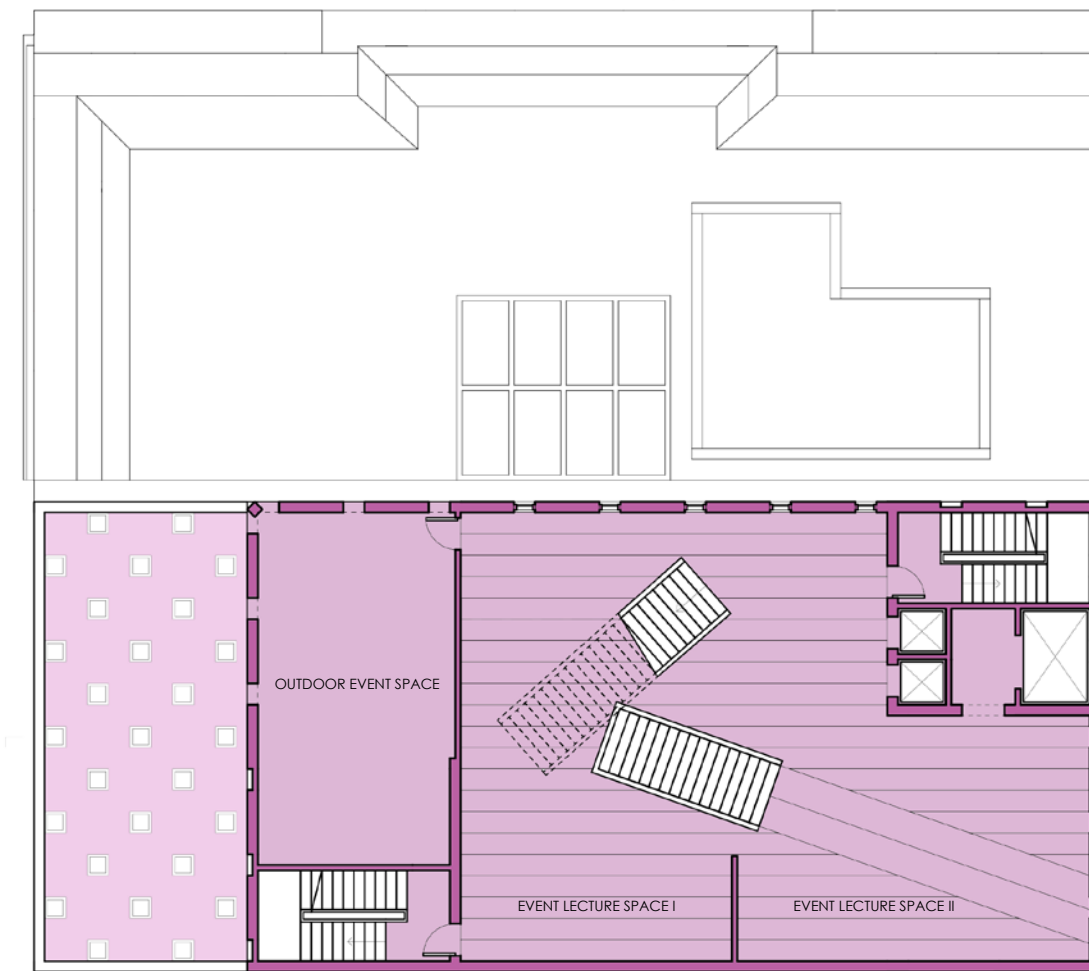




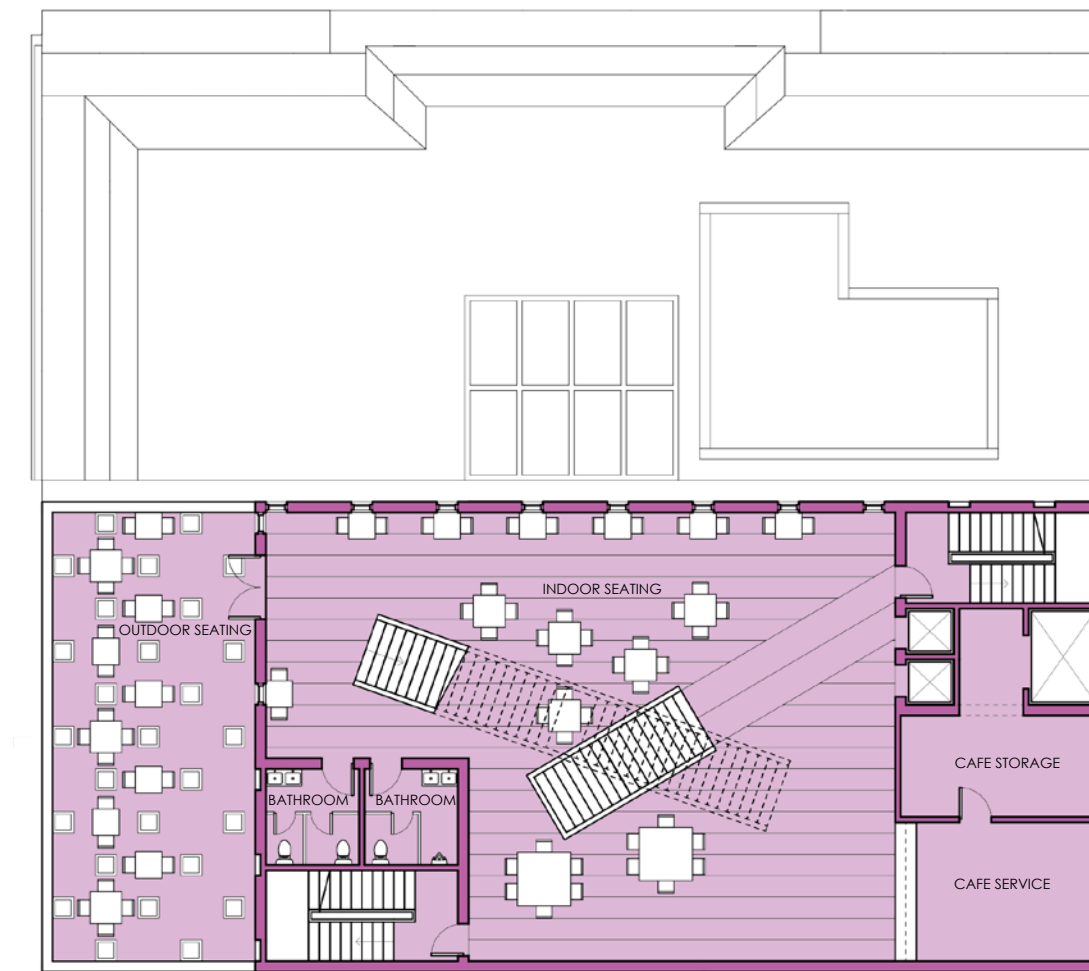
**ABOVE:** The tenth floor features a mezzanine over the ballroom space.



**ABOVE:** The ninth floor acts as an event space for large gatherings. An outdoor bar serves those enjoying the outdoor space.



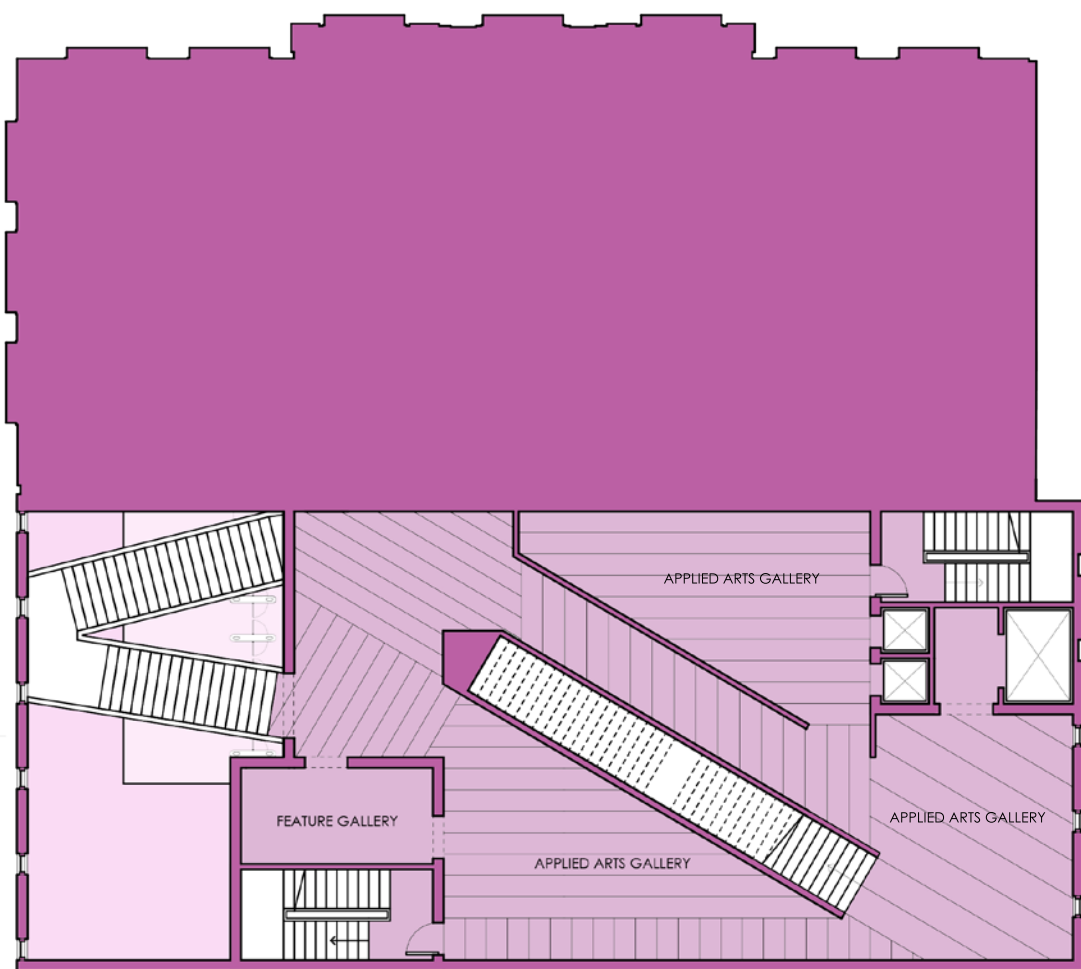
**ABOVE:** The eighth floor is split into separate spaces for events. An outdoor space can be used in warmer months.



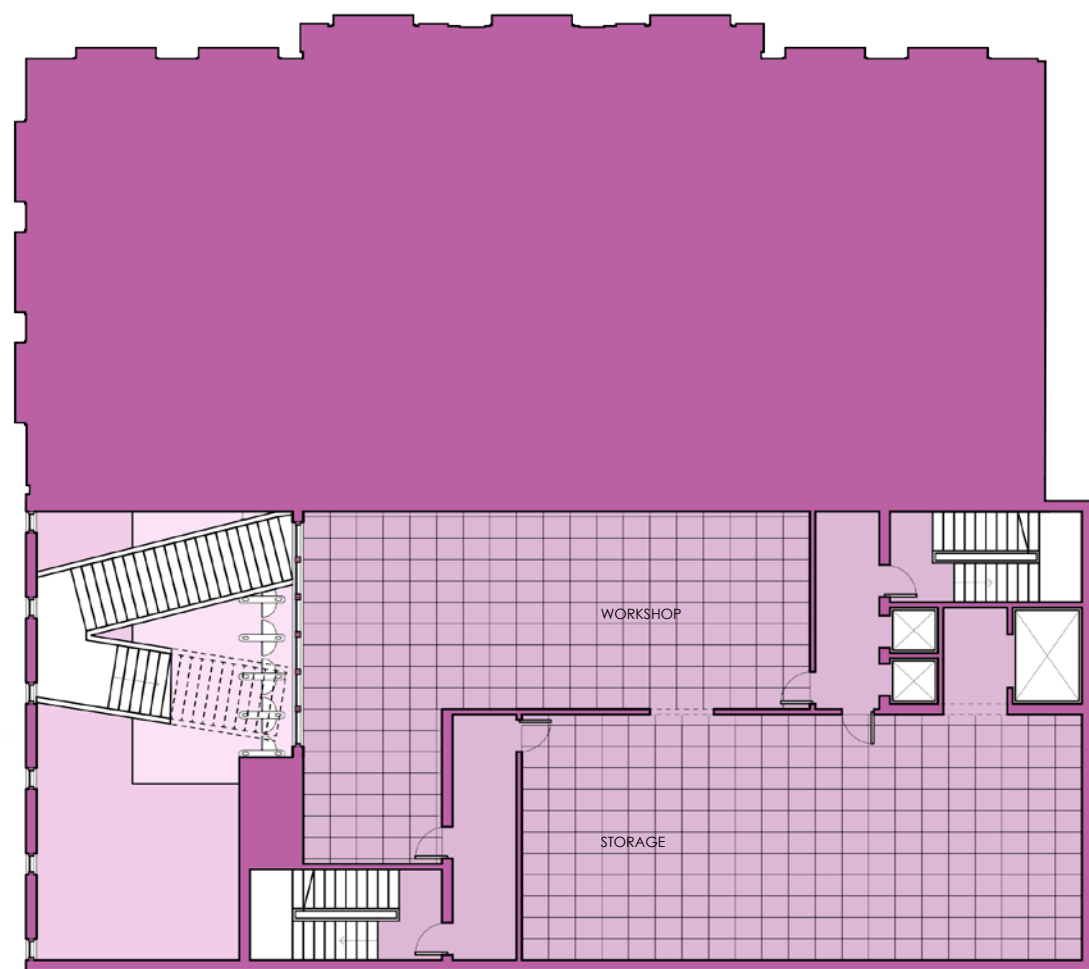
**ABOVE:** The seventh floor offers a cafe for museum patrons with indoor and outdoor seating.



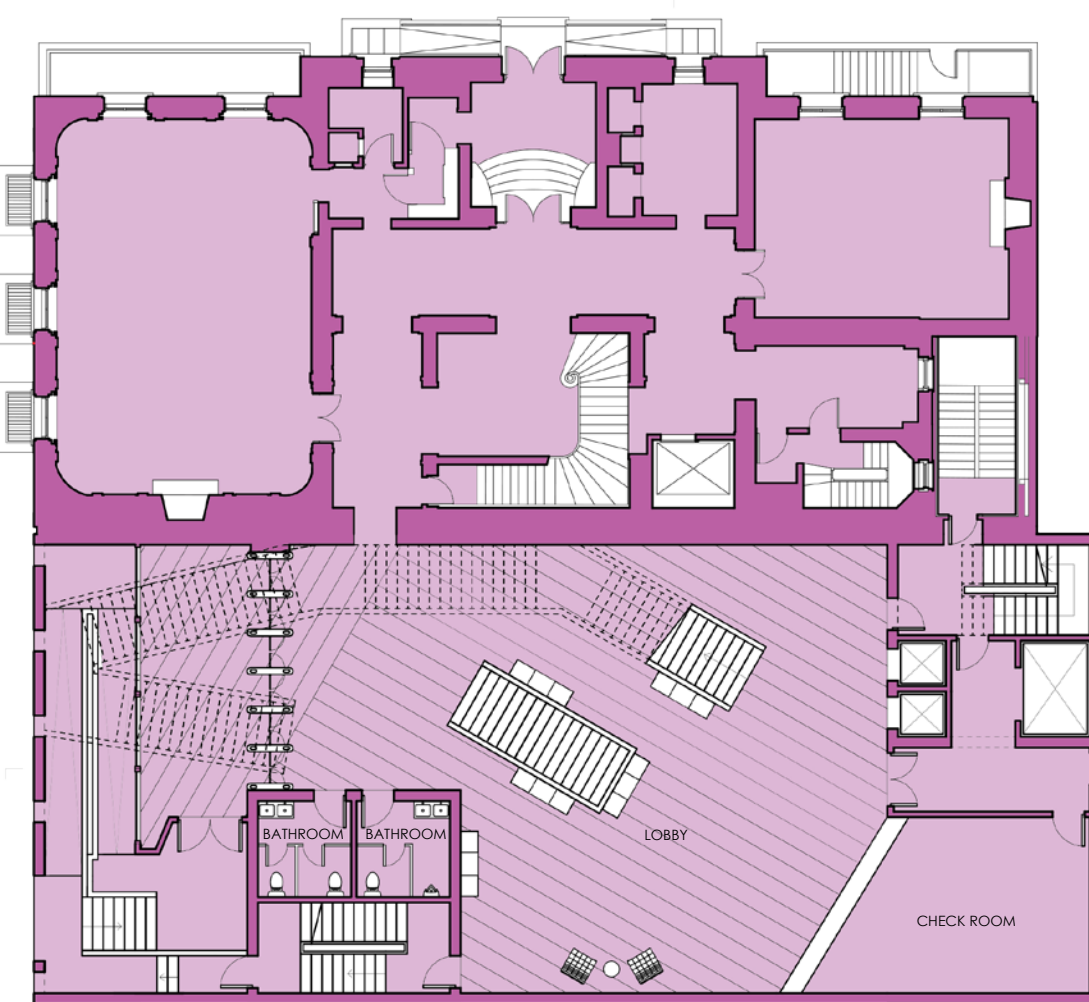
**ABOVE:** The sixth floor is the upper level of the applied arts gallery.



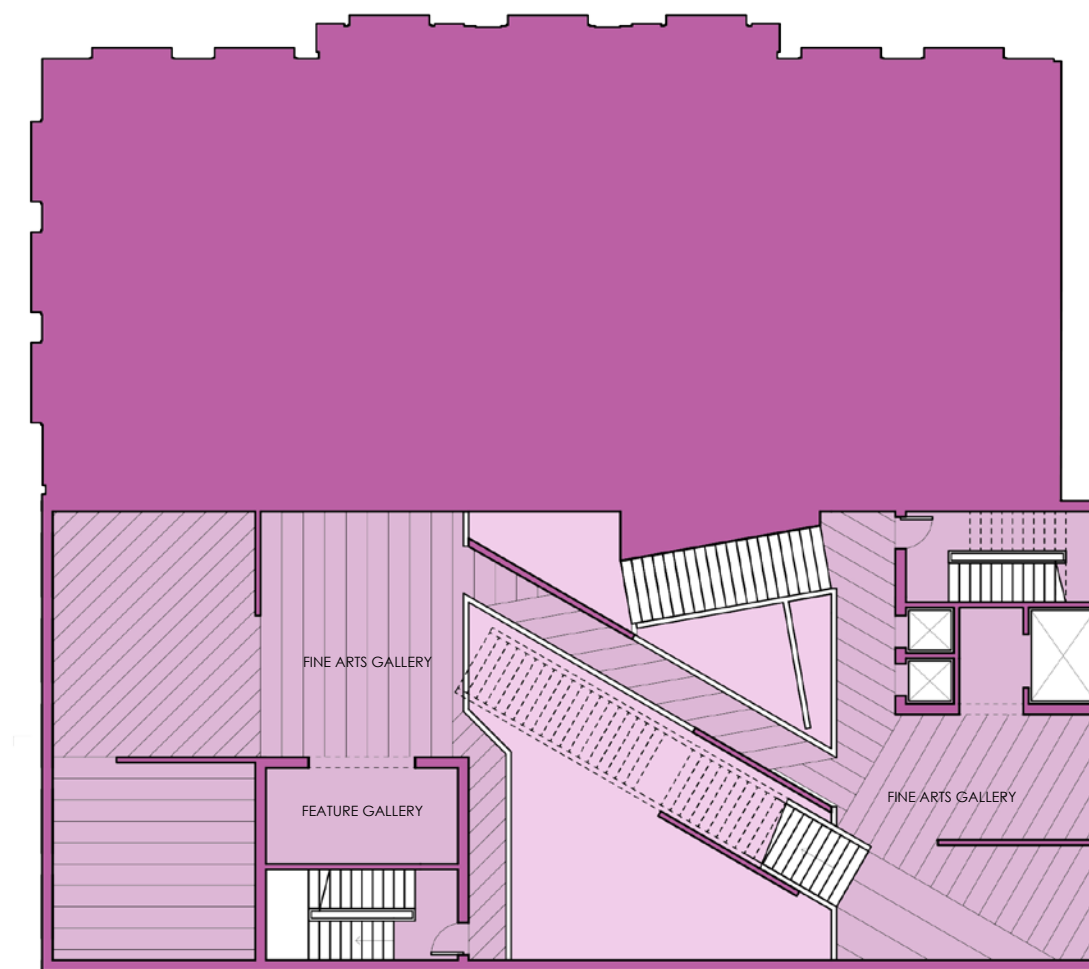
**ABOVE:** The fifth floor houses applied arts artifacts. A feature staircase connects to this floor from the lobby.



**ABOVE:** The fourth floor is workshop and storage space. An opening allows for easy artifact transportation between the spaces.



**ABOVE:** The third floor is at ground floor. Feature staircases connect to both galleries



**ABOVE:** The second floor features fine arts pieces from Germany.



**ABOVE:** The first floor features fine arts pieces from Austria. *Portrait of Adele Bloch-Bauer I* (1907) can be found in a featured space.





INTERIOR VIEW



EXTERIOR VIEW



EXTERIOR VIEW



INTERIOR VIEW

**ABOVE:** A rendering of the lobby. Lightly colored finishes and gold mullions relate to the *Portrait of Adele Bloch-Bauer I* (1907). Artifact advertisements entice visitors to see the real artifact for themselves.

**LEFT:** A rendering of the fine arts gallery space from the lower level.

**ABOVE:** A rendering of the exterior from Central Park.

**ABOVE, RIGHT:** A rendering of the exterior from a second location in Central Park.

**RIGHT:** A rendering of the exterior from the 5th Avenue sidewalk.



EXTERIOR VIEW





FULL SECTION MODEL IN SITE

**LEFT:** A view of the model from Central Park.



PARTIAL SECTION MODEL- LARGE SIDE



FULL SECTION MODEL IN SITE



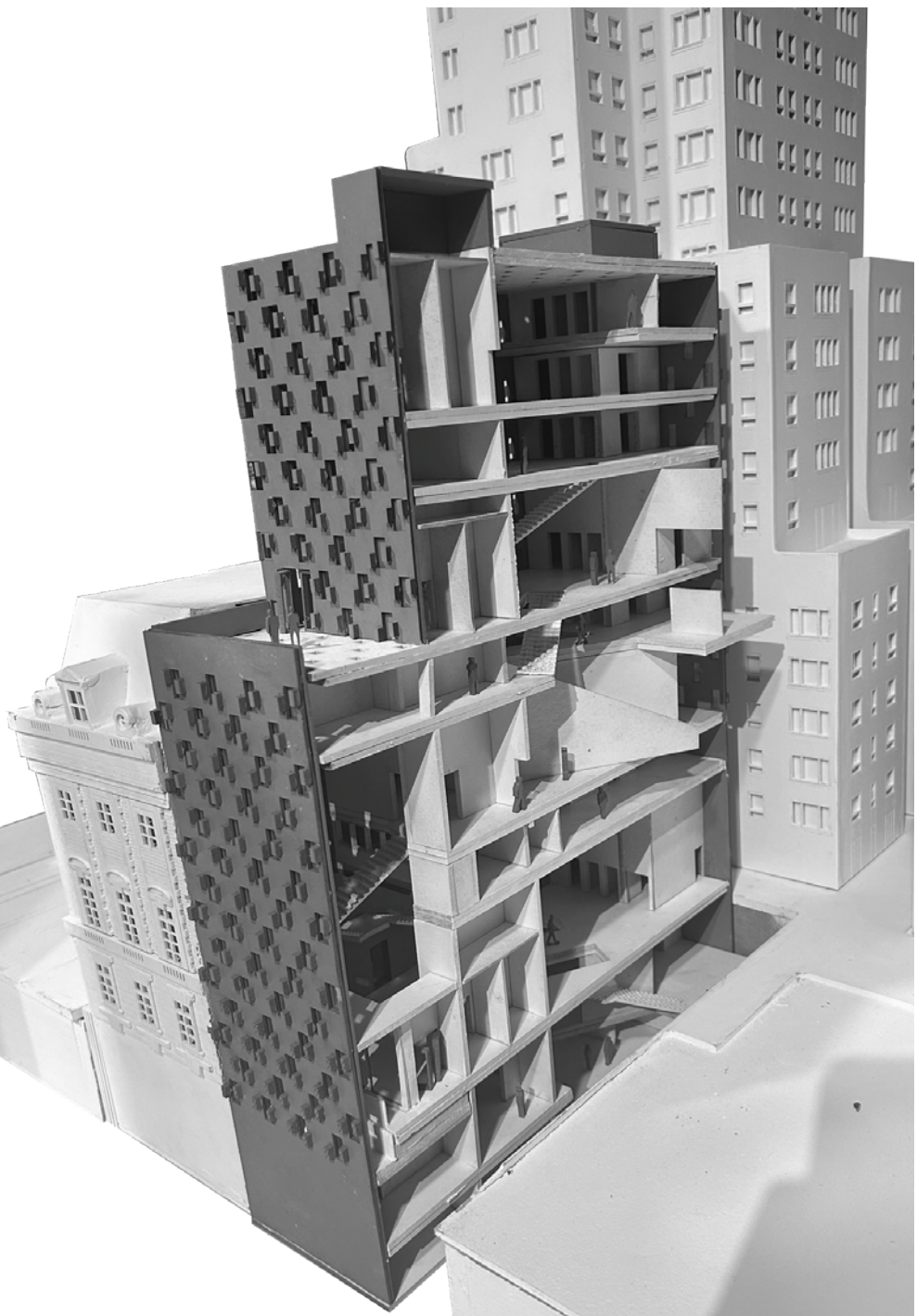
**RIGHT:** A view of the model from a point along the 5th Avenue sidewalk.

FULL SECTION MODEL IN SITE

**ABOVE:** The lighting conditions for a feature staircase are visible.

**ABOVE, RIGHT:** The model and its surrounding context from an aerial perspective.

**RIGHT:** Parts of both the design and site model are removed to show all floors of the model.



PARTIAL SECTION MODEL IN SITE - LARGE SIDE



# FIREHOME

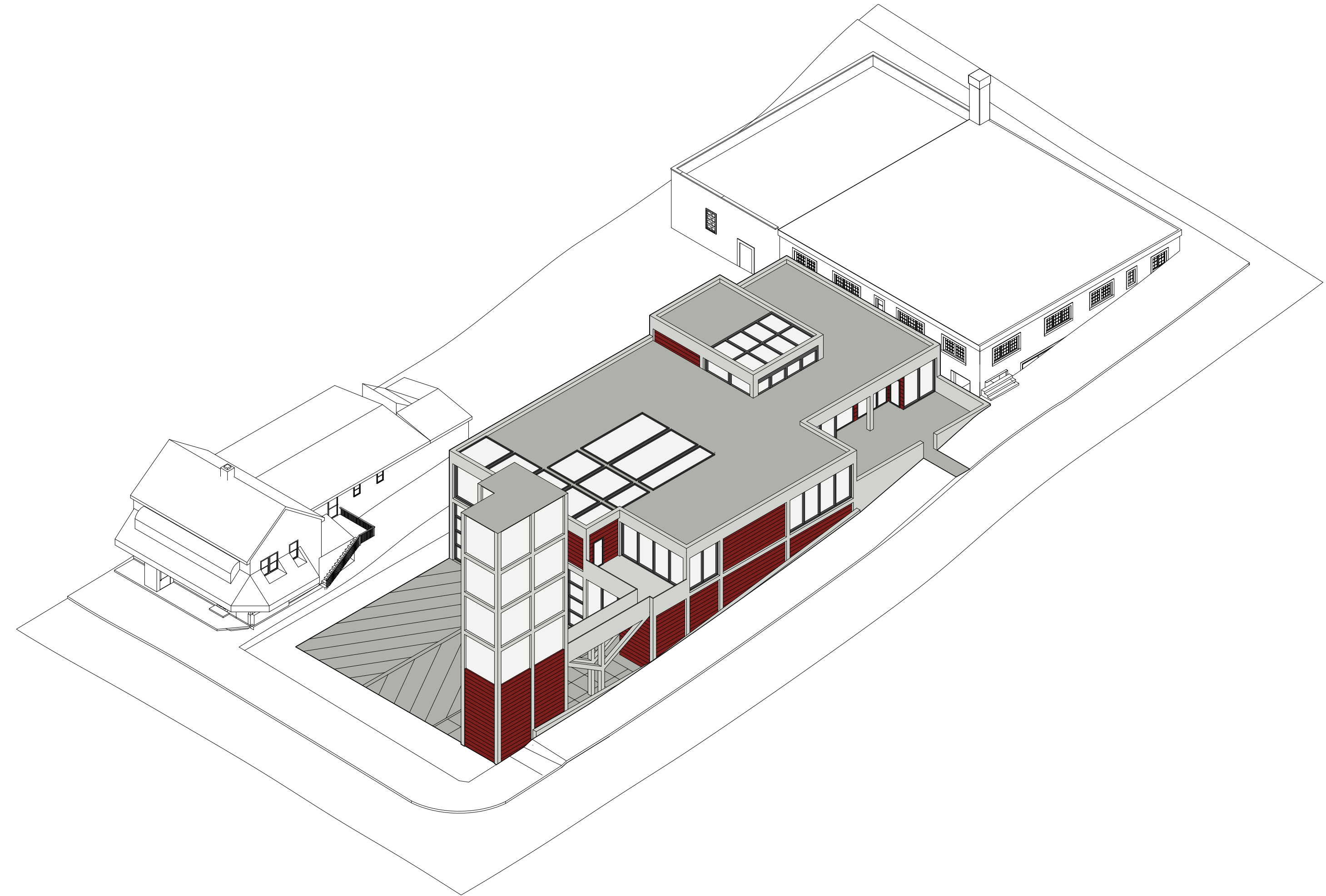
**TYPE:** Fire Station, Residential, Community Center

**LOCATION:** Bellefonte, Pennsylvania

This project is an extension firehouse for the Undine Fire Company in Bellefonte, PA. The firehouse uses a brick veneer as a prominent facade material. The program includes a public space (office, lobby, public bathroom), semi-public space (apparatus bay and supporting spaces), and a private space (firefighter's residence). The site includes an accessible hose/watch tower.

The main idea behind this firehouse is creating a grid that would define the spaces. This was achieved through an exposed concrete structure. A slide allows firefighters to efficiently descend into the apparatus bay from the residence level. The building is designed with a stepped look, flowing naturally with the surrounding hillside.

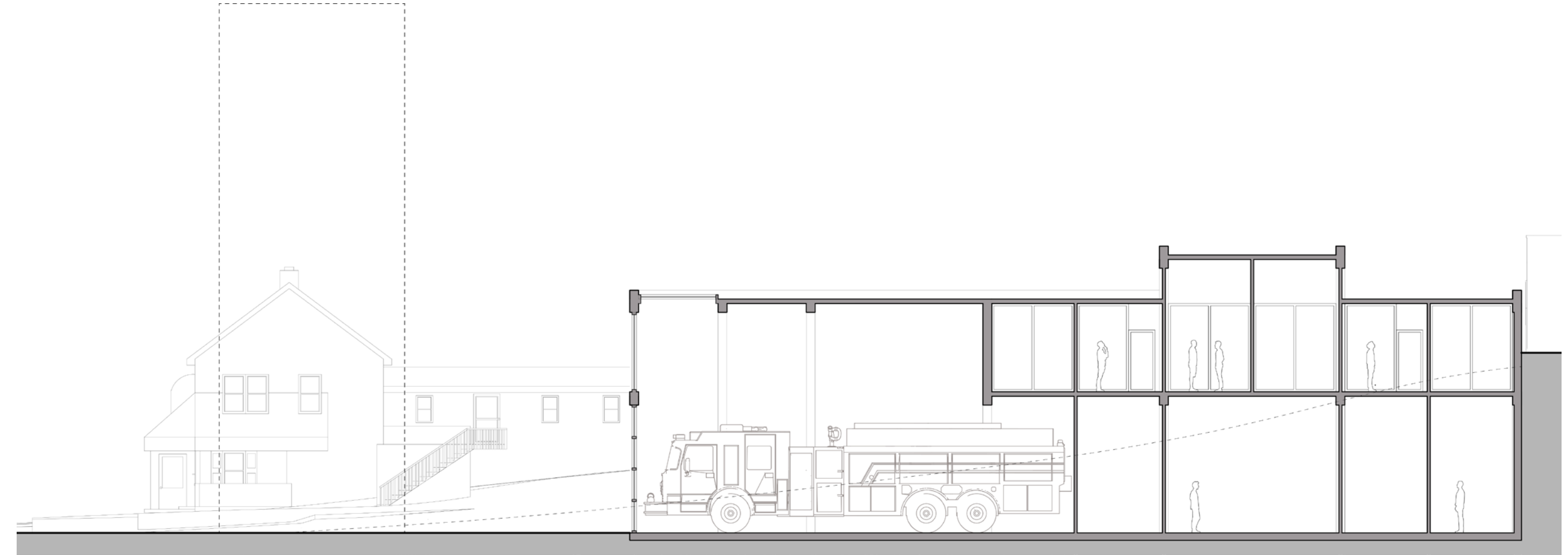
**RIGHT:** A building isometric of the firehouse and immediate site. A porch provides access to the building from the hillside.







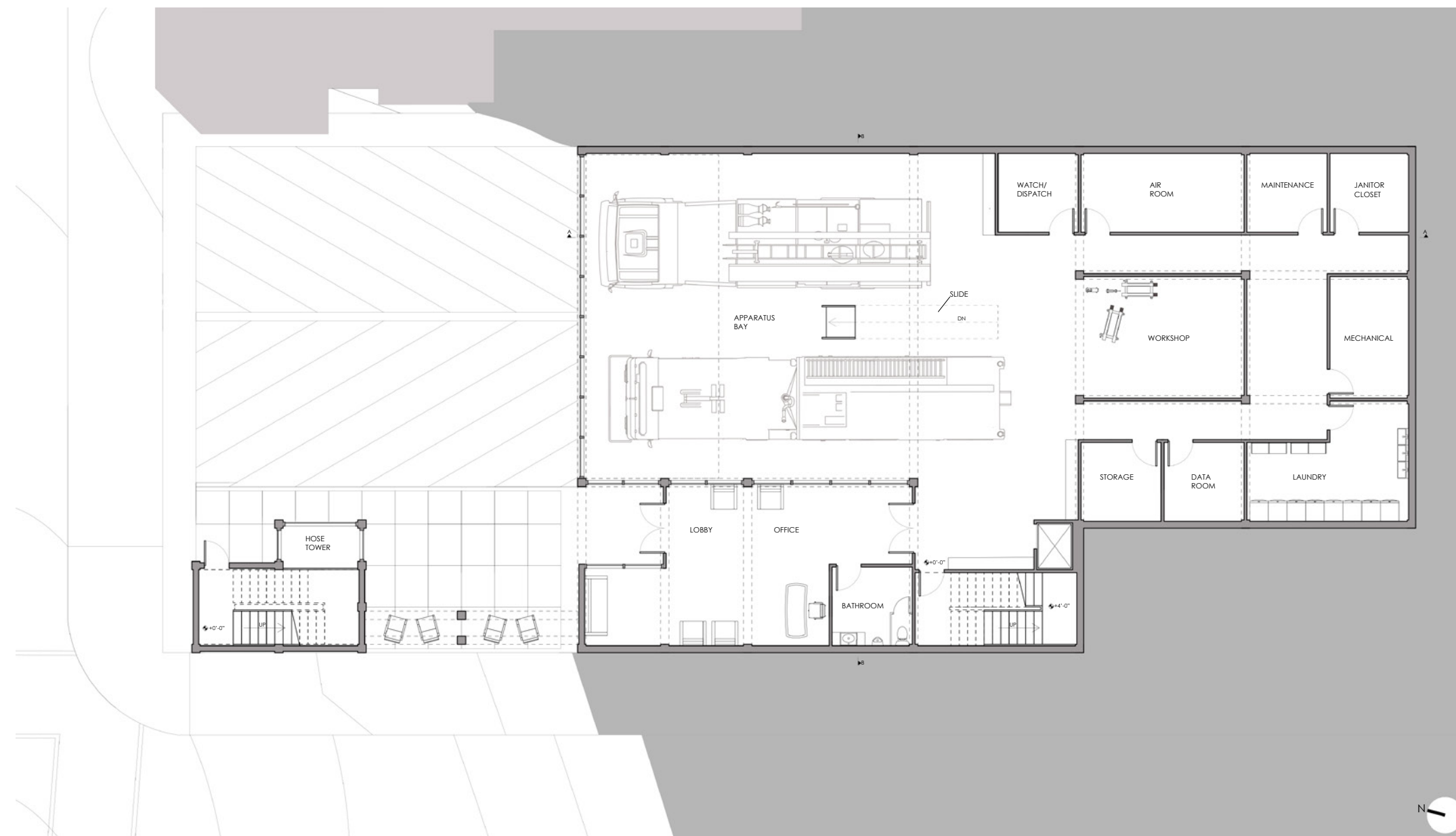
**LEFT:** The second floor contains the spaces of residence for firefighters. Each bedroom connects to a porch. The tower connects via bridge to this level.



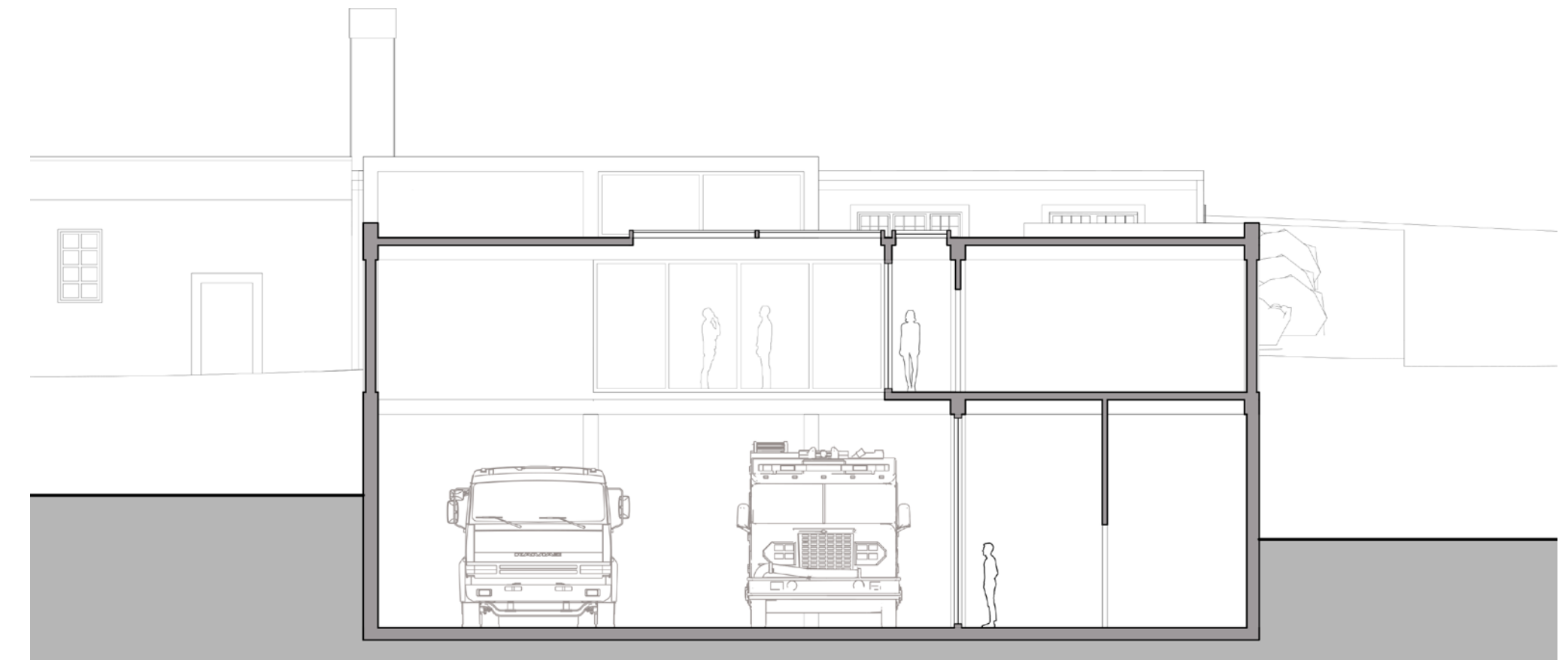
**ABOVE:** The section cuts through the apparatus bay and supporting spaces on the first floor and bedrooms for firefighters on the second floor.

LONGITUDINAL SECTION

**RIGHT:** The first floor plan contains the apparatus bay, supporting spaces, and community spaces.

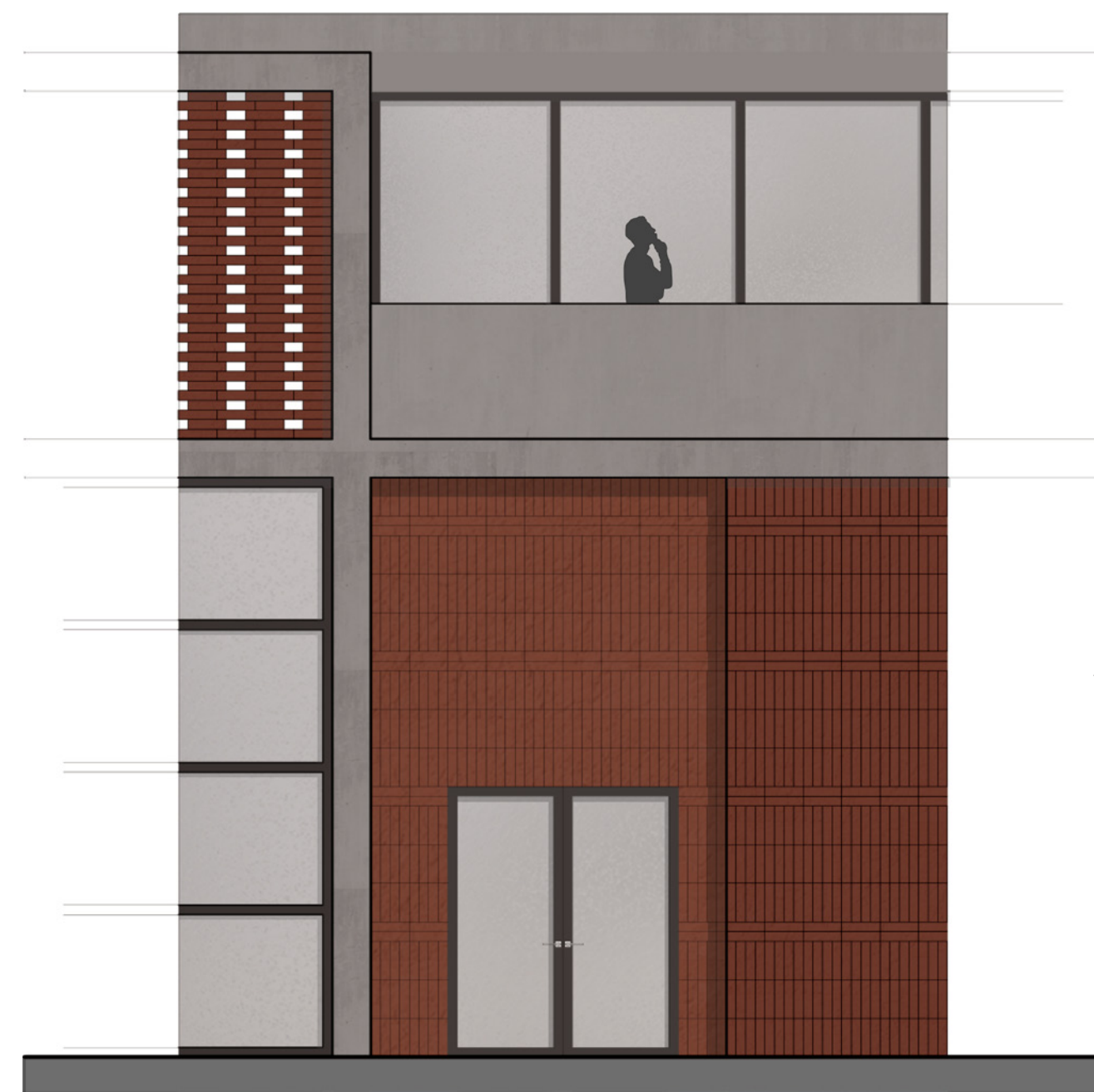


**RIGHT:** The sections cuts through the apparatus bay, office, and bathrooms.



TRANSVERSE SECTION





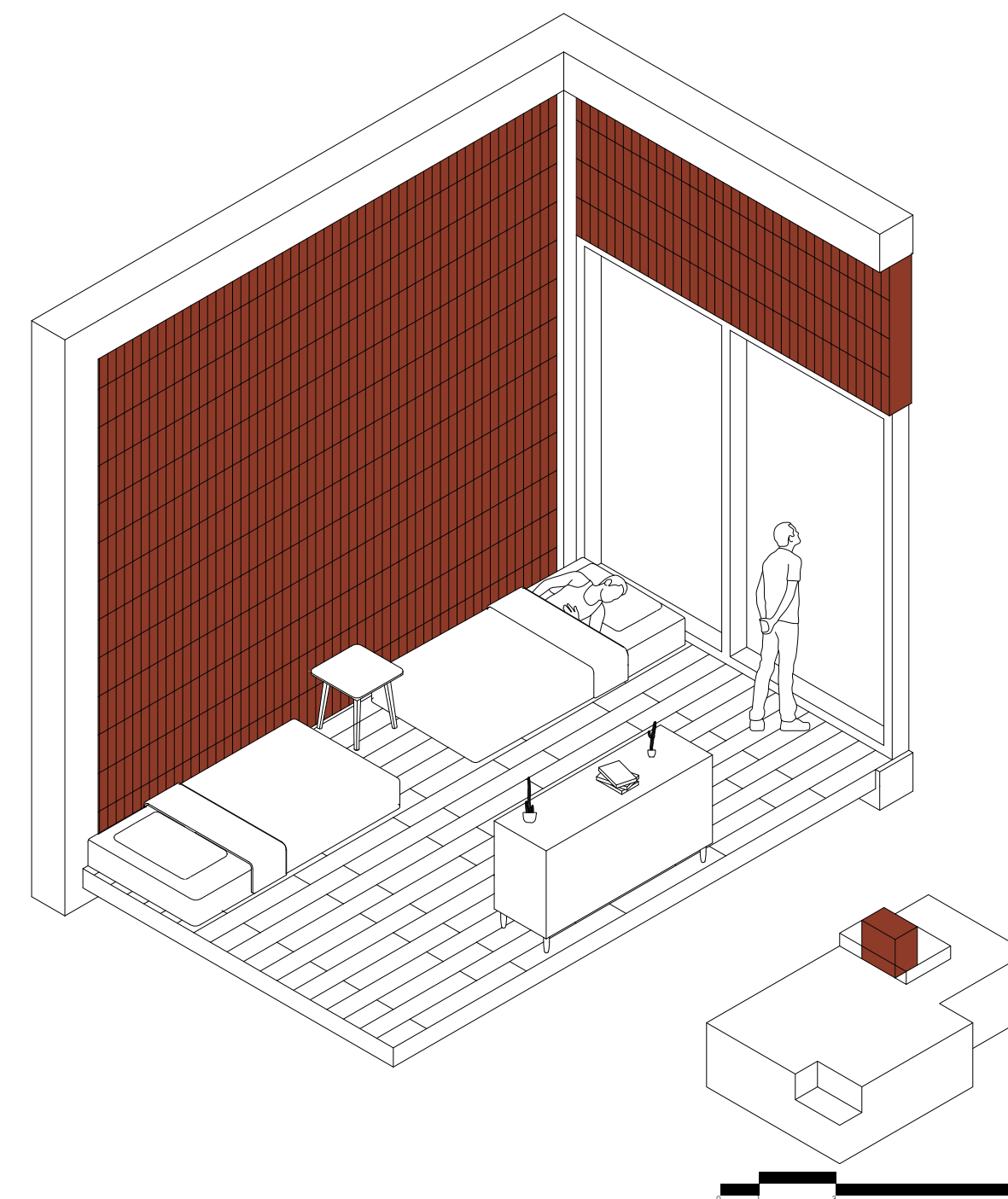
PARTIAL ELEVATION

**LEFT:** Partial elevation of the entrance to the building and surrounding context. The brick patterning is shown.



EXTERIOR VIEW

**ABOVE:** The firehouse from the opposite corner of the intersection.

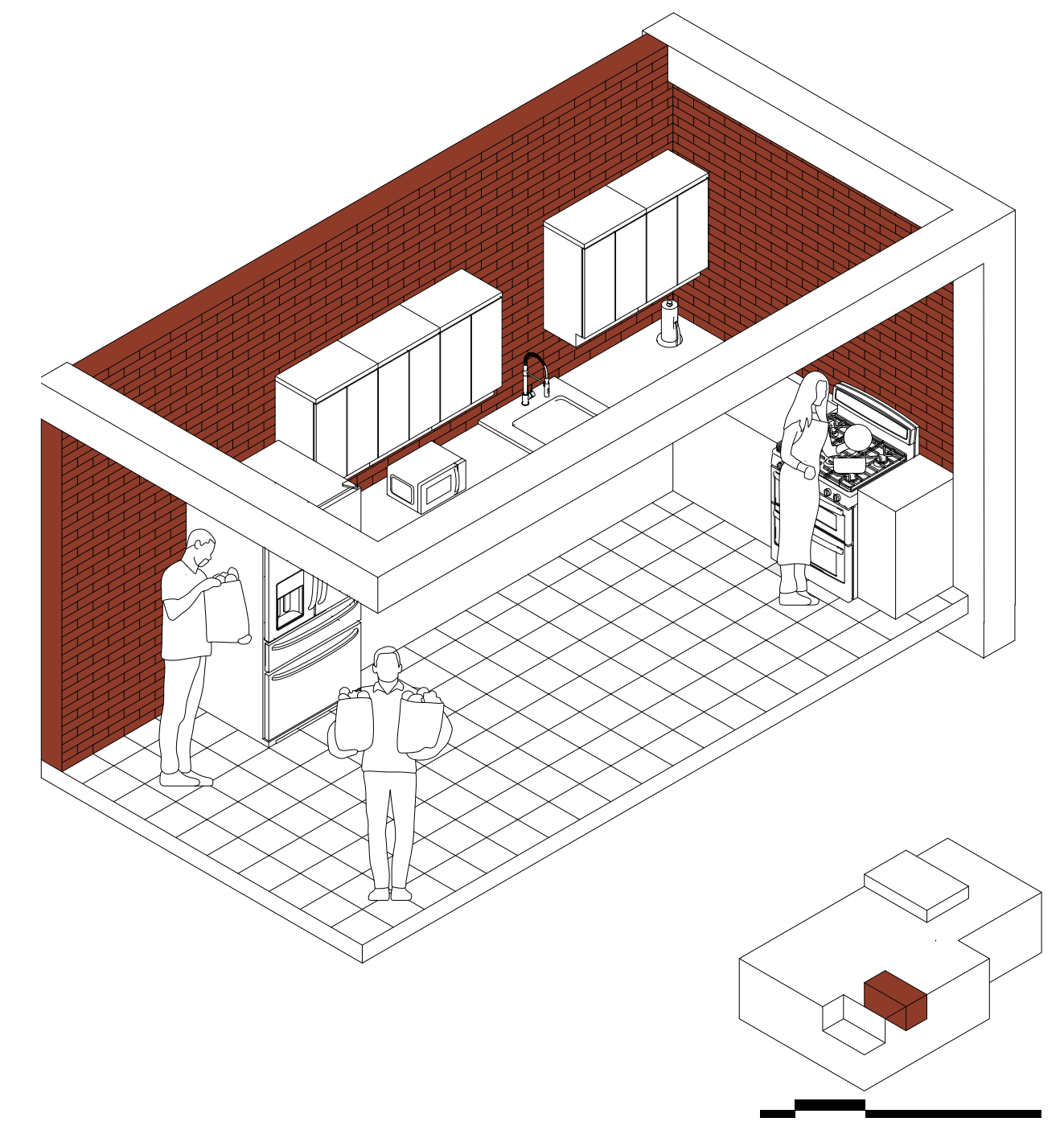


DOUBLE BEDROOM ISOMETRIC

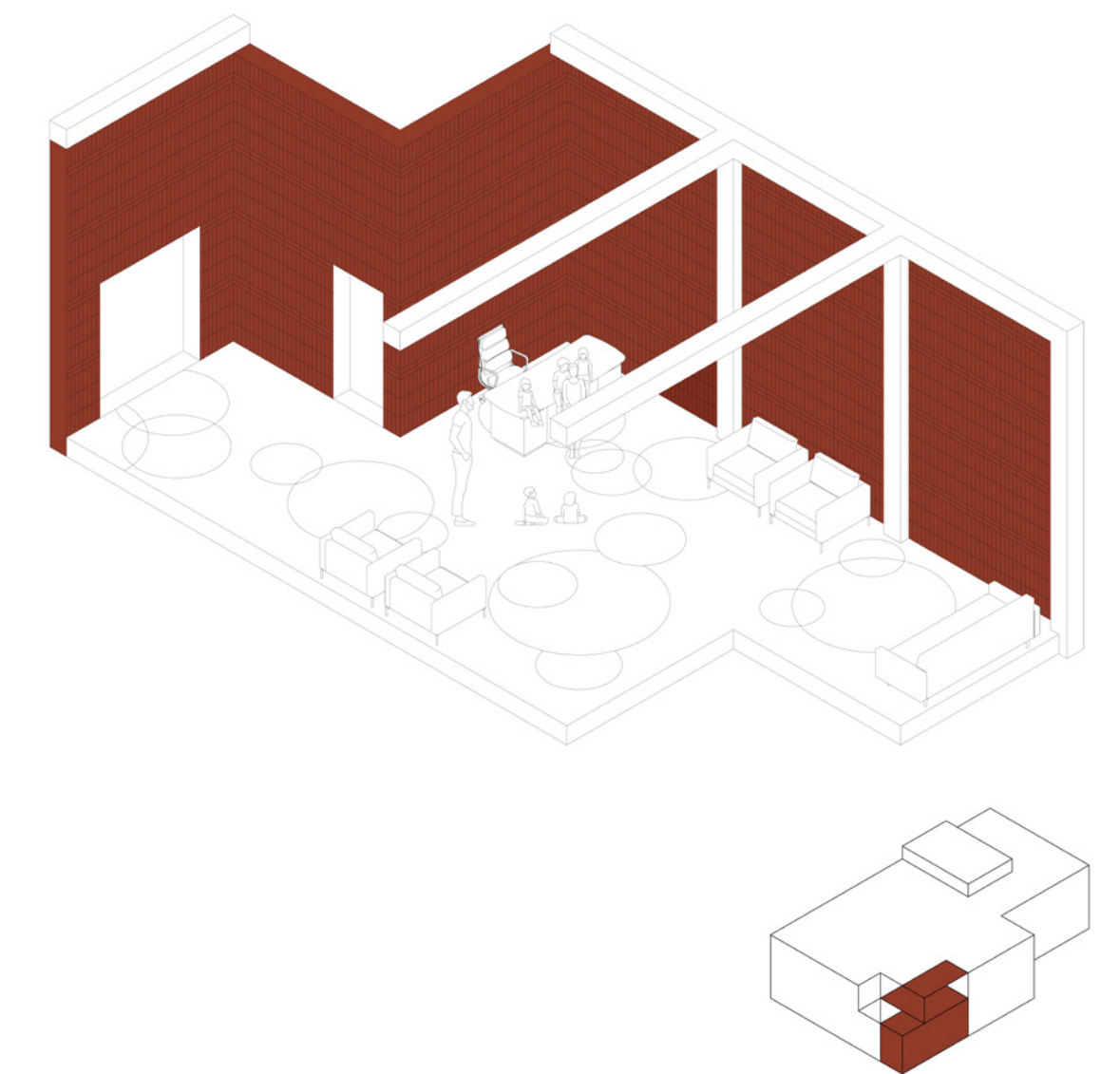
**ABOVE:** The brick veneer pattern of bedrooms emphasizes the verticality by directly stacking bricks on their short side.

**ABOVE, RIGHT:** The kitchen uses an English bond brick veneer pattern.

**RIGHT:** The office space uses a custom layered brick pattern for its wall veneer.



KITCHEN ISOMETRIC



OFFICE ISOMETRIC





FULL SECTION MODEL

**LEFT:** The entire firehouse, placed in sunlight to show how shadows might be cast within the building.

**BELOW, LEFT:** The first floor of the firehouse is exposed in the model.

**BELOW:** The second floor of the firehouse is exposed in the model.



SECTION MODEL - LIGHTING EFFECTS



FULL SECTION MODEL - IN SITE



PARTIAL SECTION MODEL - SECOND FLOOR



PARTIAL SECTION MODEL - FIRST FLOOR

**ABOVE:** The roof of the model is removed to show lighting effects of structure and window.

**ABOVE, RIGHT:** The building in relation to surrounding buildings and slope.

**RIGHT:** The roof and skylight pattern of the building can be seen within its overall context



SECTION MODEL FROM ABOVE



# CONNECTING THE ENVIRONMENT

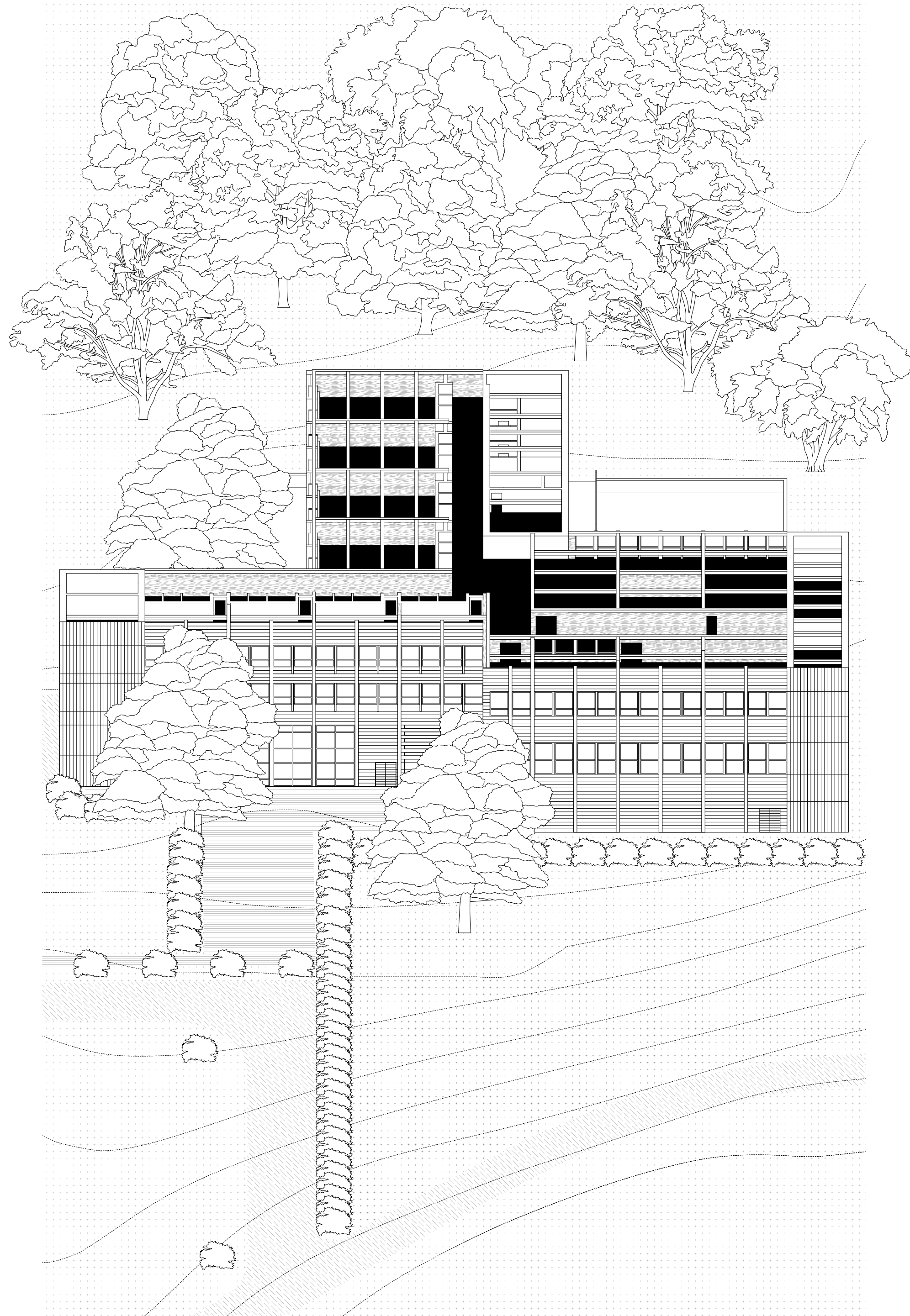
**TYPE:** Educational Facility, Gymnasium, Dining, Library

**LOCATION:** State College, Pennsylvania

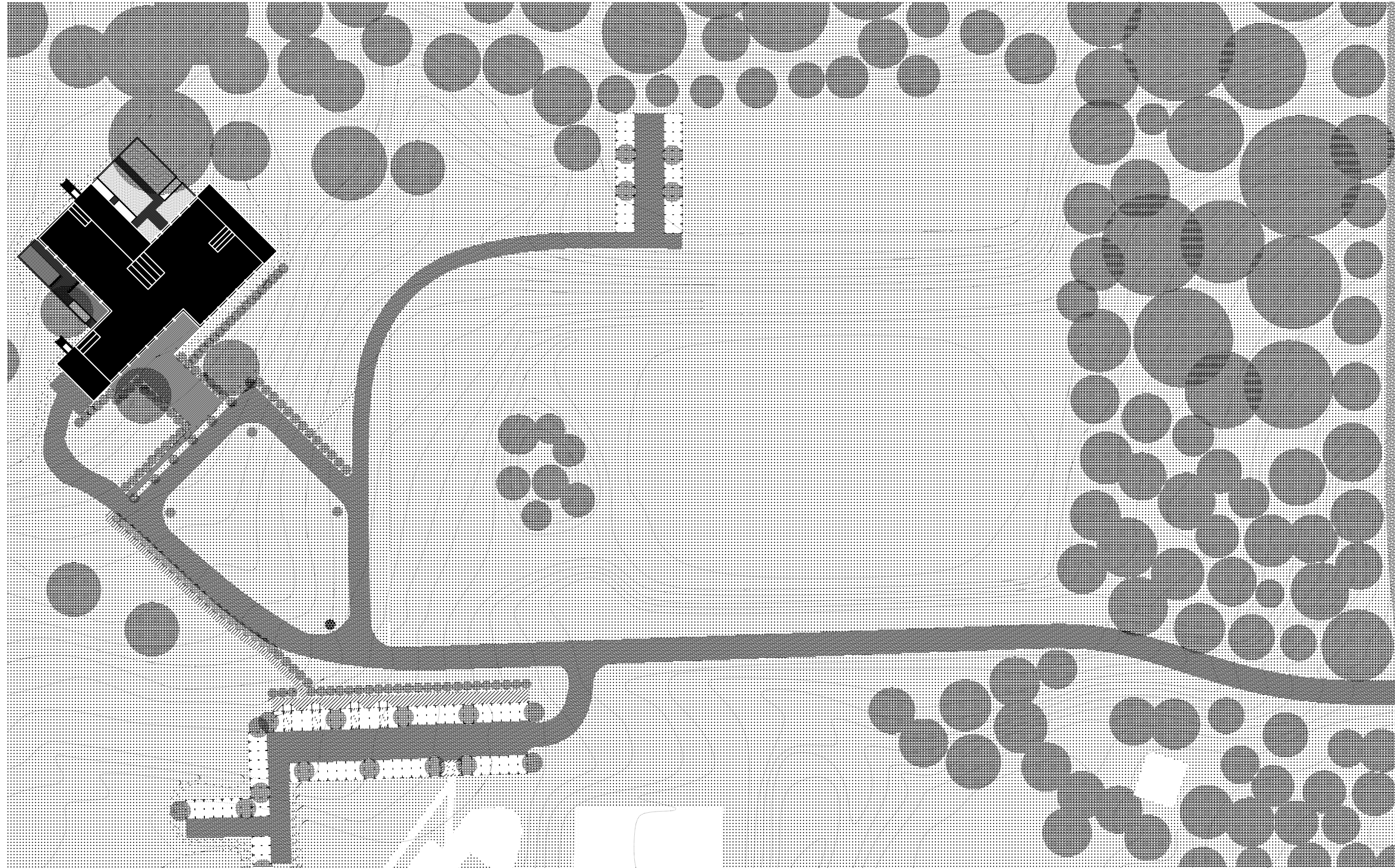
Designed as an extension for the nearby Park Forest Middle School, the site sits on a slope of a nearby park. Sixth, seventh, and eighth graders have designated classrooms with an additional flex space for each grade. The school also includes a library, cafeteria, and gym for large gatherings. Specialty classrooms, administrative offices, and locker rooms are situated around the building.

The design was focused around shaping the environment both socially and as a reflection of the surrounding site. South and east facing windows allow natural light into classrooms and assembly spaces and provide views down the slope. Concrete cores situated around the building add thermal mass and contain the private spaces. To optimize interaction spaces, each classroom has niches in the wall with seating and lockers. Due to a difference in social skills, the sixth graders are separated from the seventh and eighth graders by a floor. Each flex space is converted to special education classrooms. The 8th grade flex space extends to include a life skills space. Exterior terraces extend from the building, creating spaces for outside assembly. Vertical elements on the façade provide structure and mimic the surrounding trees.

**LEFT:** An exterior image of the building depicting the façade and combines an orthographic and isometric drawing.



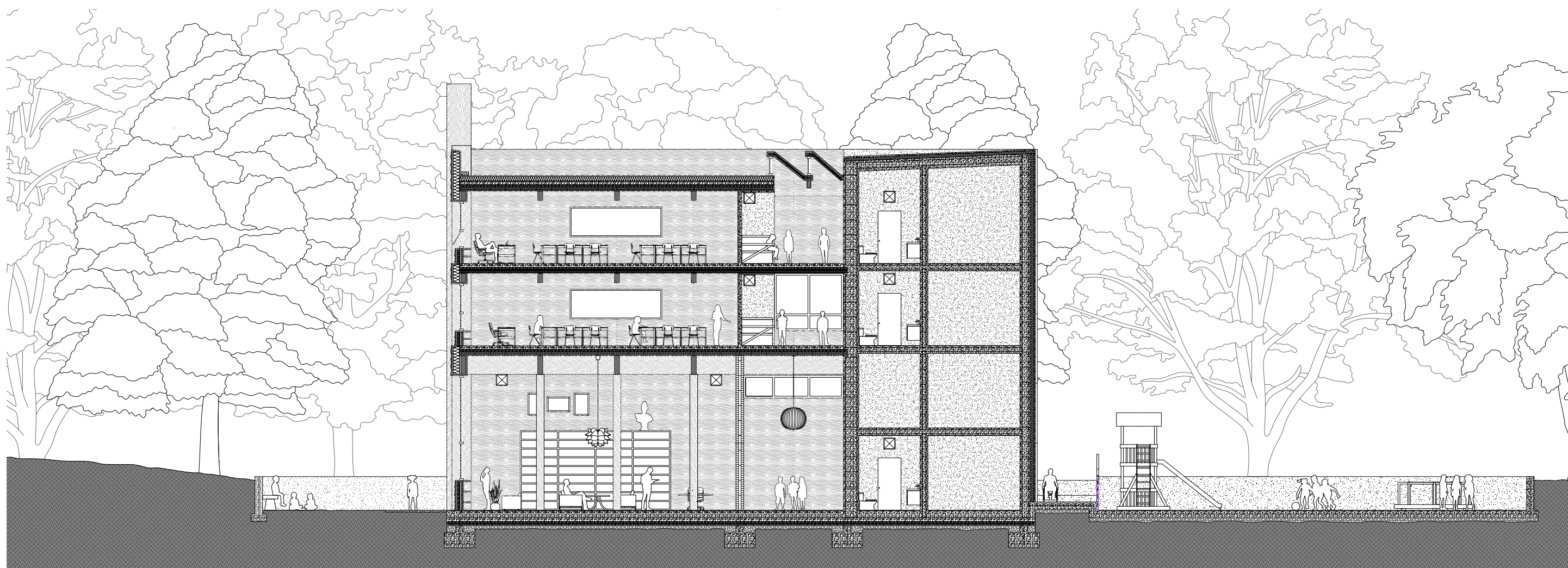




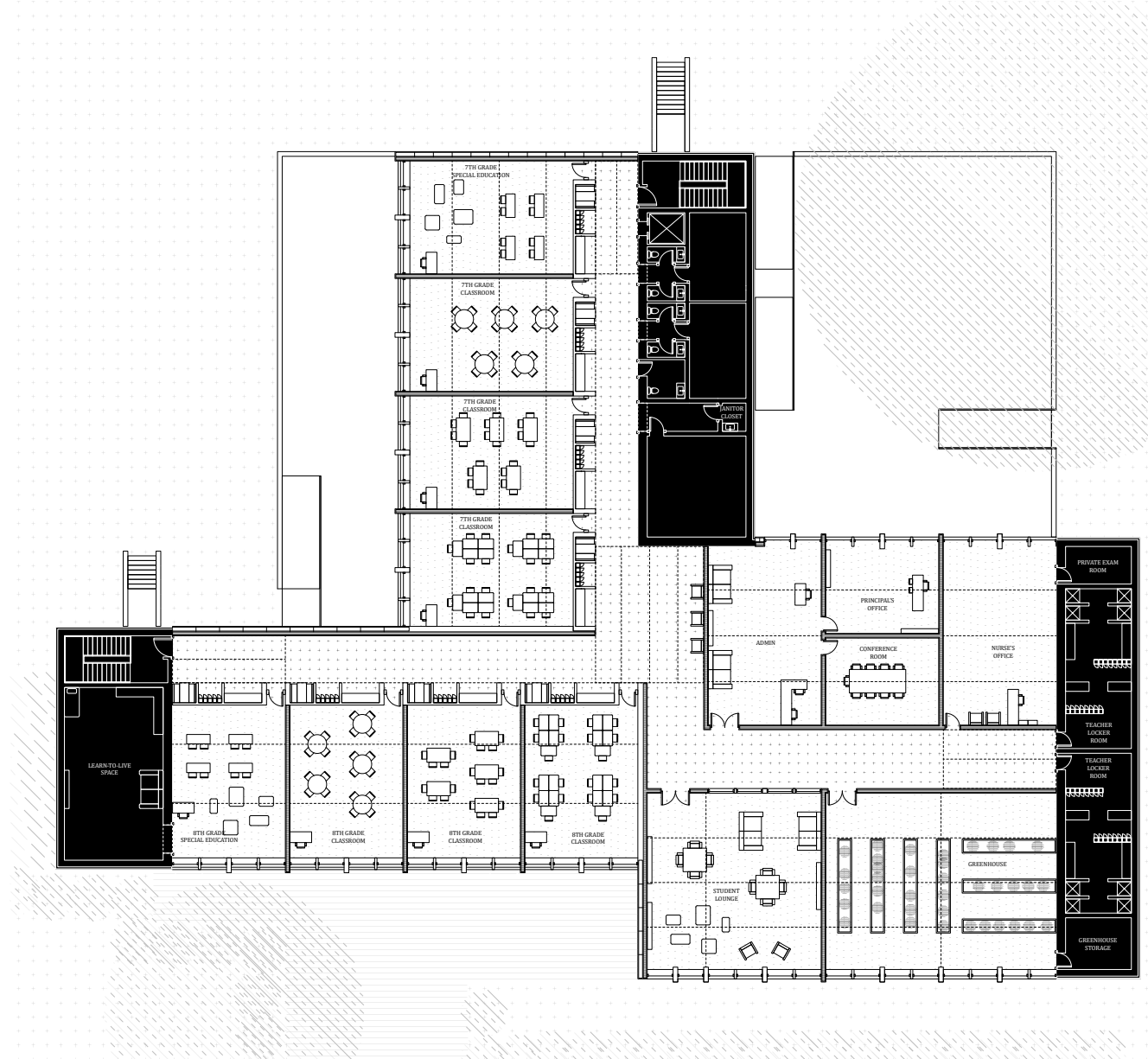
SITE PLAN

**LEFT:** The existing parking lot has been altered to reflect the circulation of the building.

**BOTTOM:** A section cutting through the library, classrooms, and a core.



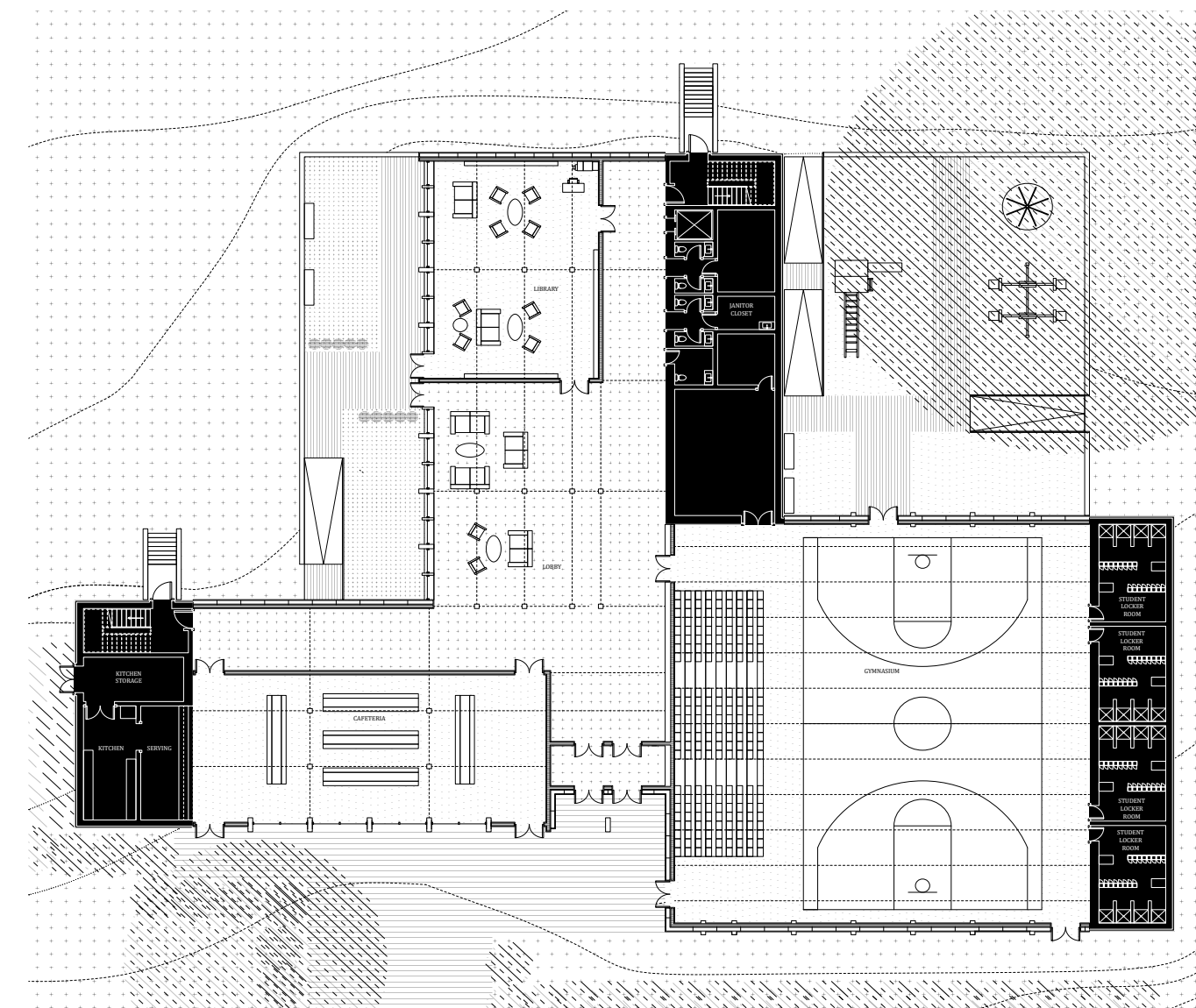
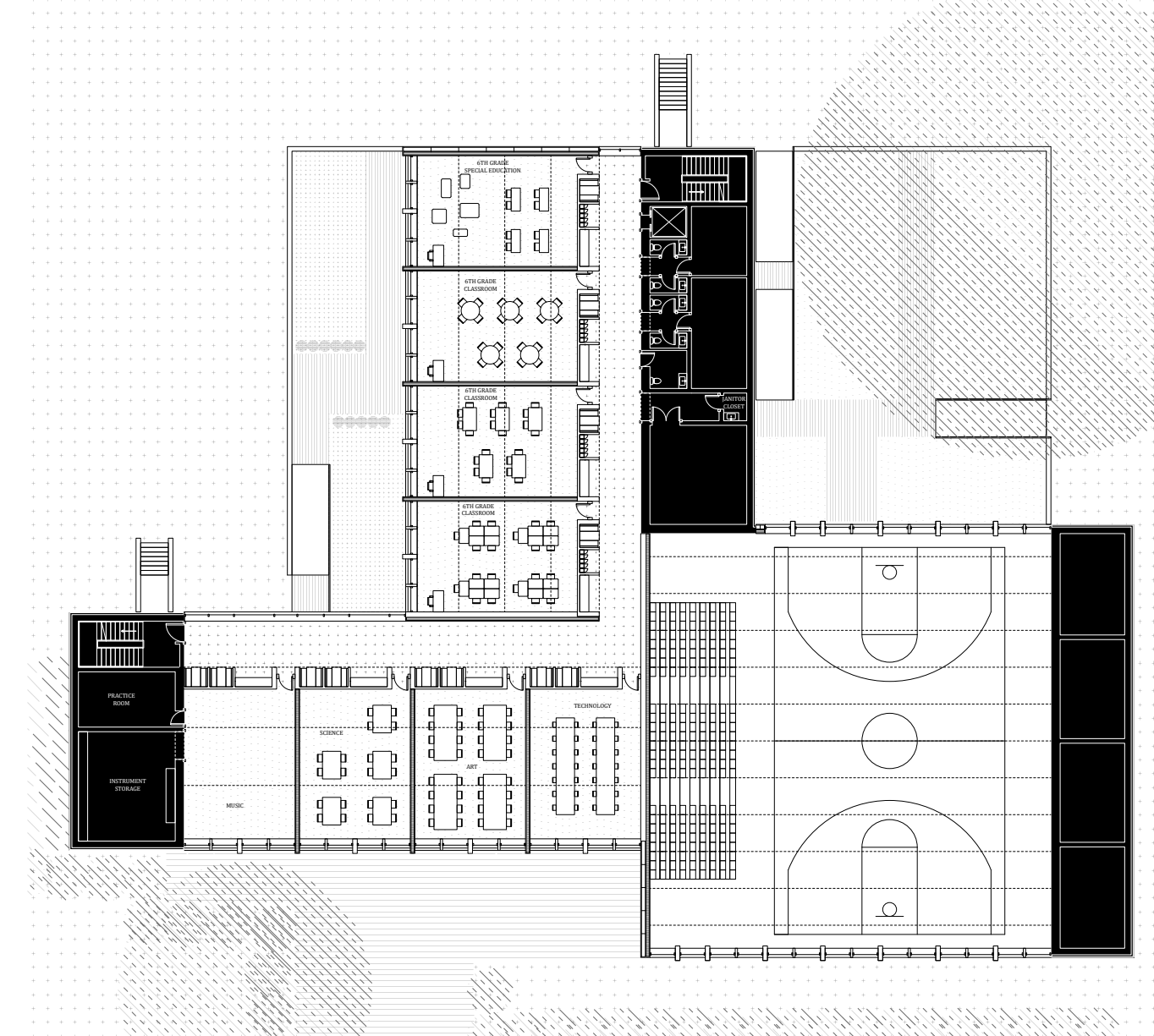
TRANSVERSE SECTION



**ABOVE:** The third floor of the building includes the seventh and eighth grade classrooms, student lounge, greenhouse, administrative spaces, and teacher locker rooms. Skylights are placed to draw students down hallways. There are also skylights above the intersection formed at the corridors' connecting point.

**ABOVE, RIGHT:** The second floor consists of the sixth grade classrooms and the specialty classrooms. The music spcae includes a practice room and instrument storage.

**RIGHT:** The first floor contains the lobby, gym, library, and cafeteria. Terraces are accessible from this floor and ramps provide egress onto the surrounding slope.

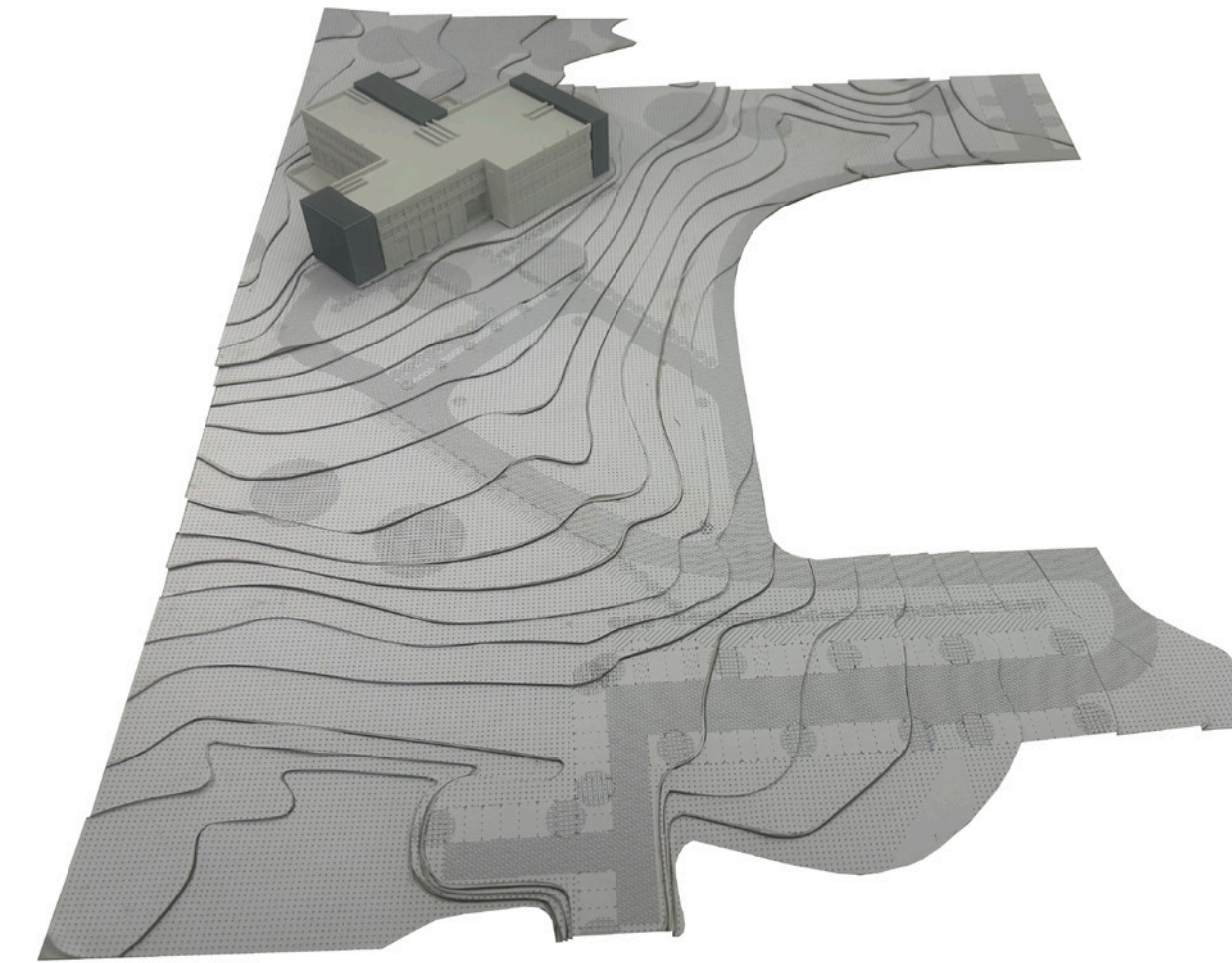






INTERIOR VIEW

**ABOVE:** A view from the central intersection on the third floor. The concrete walls are cast with a wood texture cast to transition from concrete floor to wood ceiling.



SITE MASSING MODEL

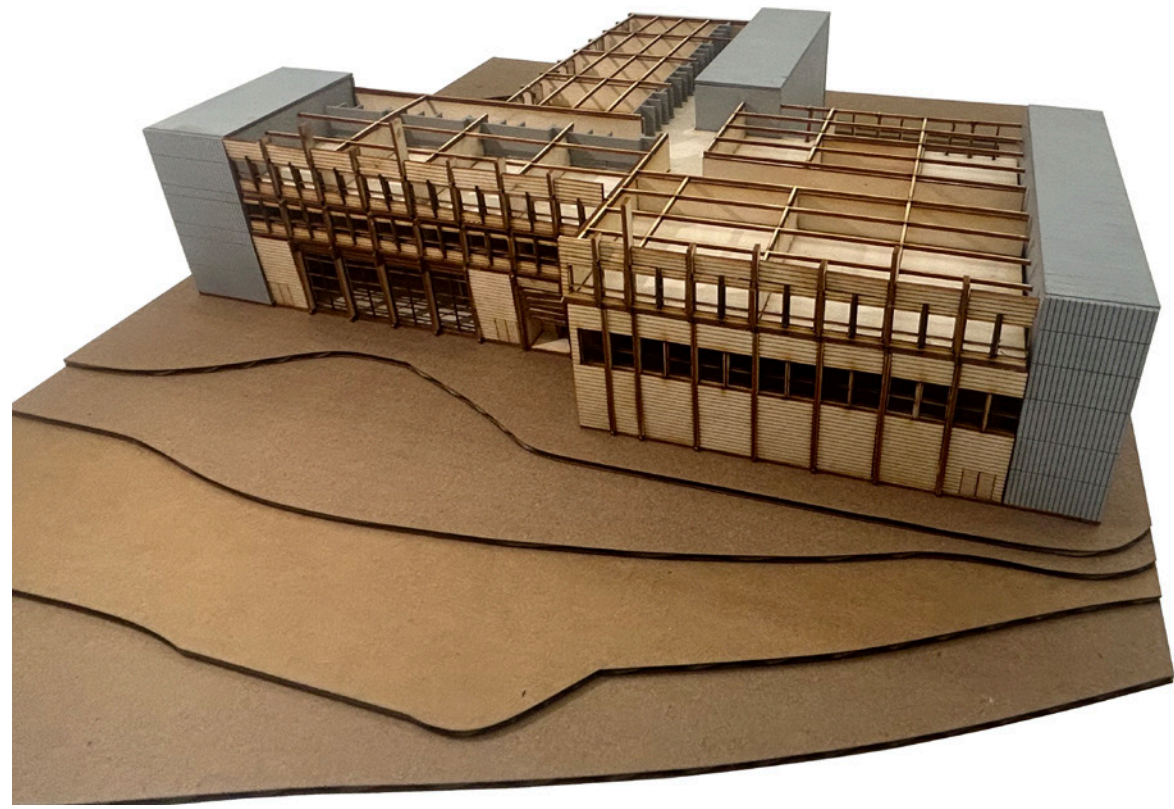
**LEFT:** The model depicts how trees, roads and slopes relate to the building and slope of the site.



**RIGHT:** The site and building as seen from above. Shadows are cast from the sun in the southern sky.

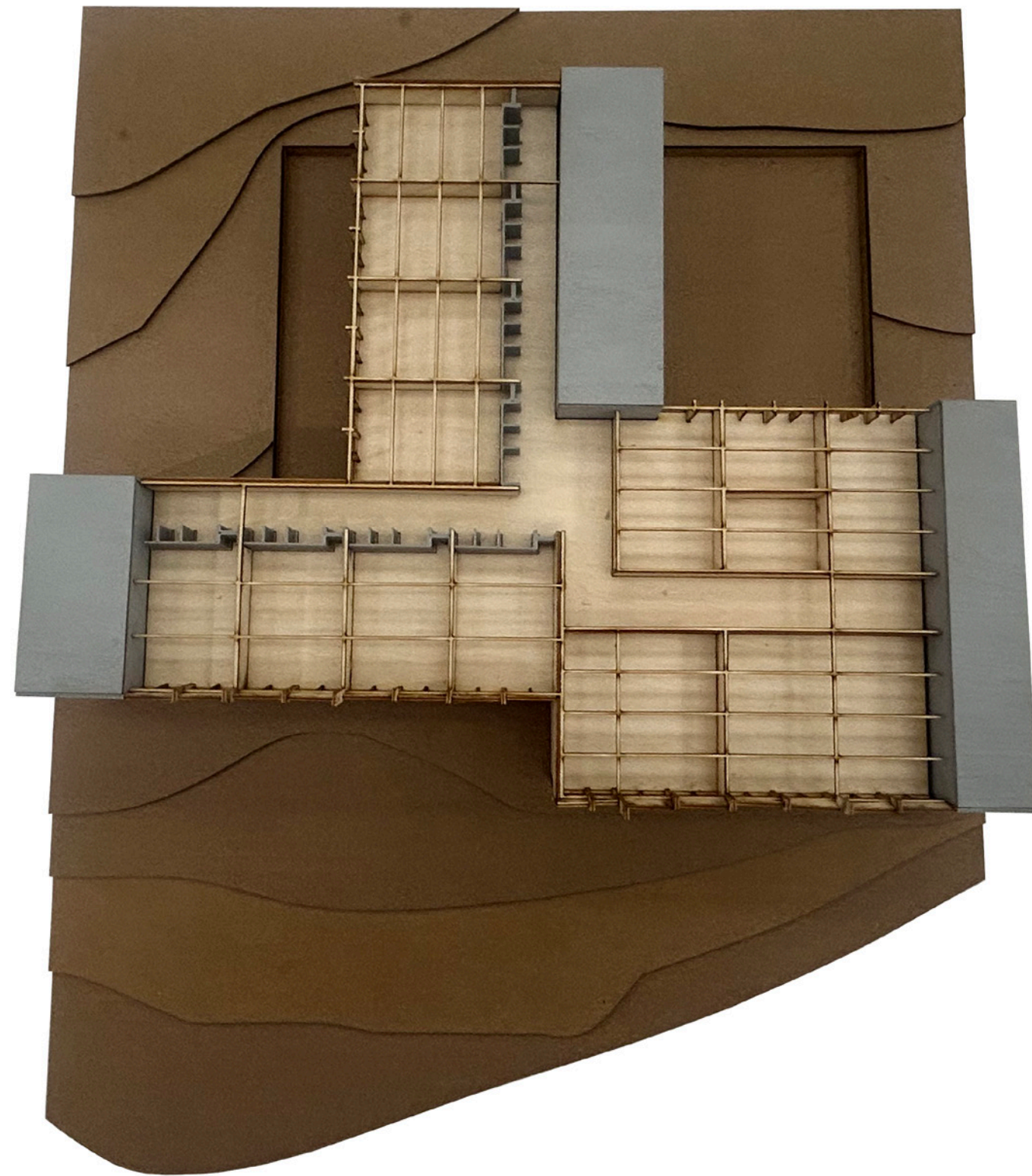
SITE MASSING MODEL





STRUCTURE/FACADE MODEL

**LEFT:** The eastern façade is shown. The concrete walls are spray painted gray to emphasize a different structural system.



STRUCTURE/FACADE MODEL

**RIGHT:** Concrete and wood load bearing walls are visible, supporting the glulam beams which support the CLT and rest of the roof.

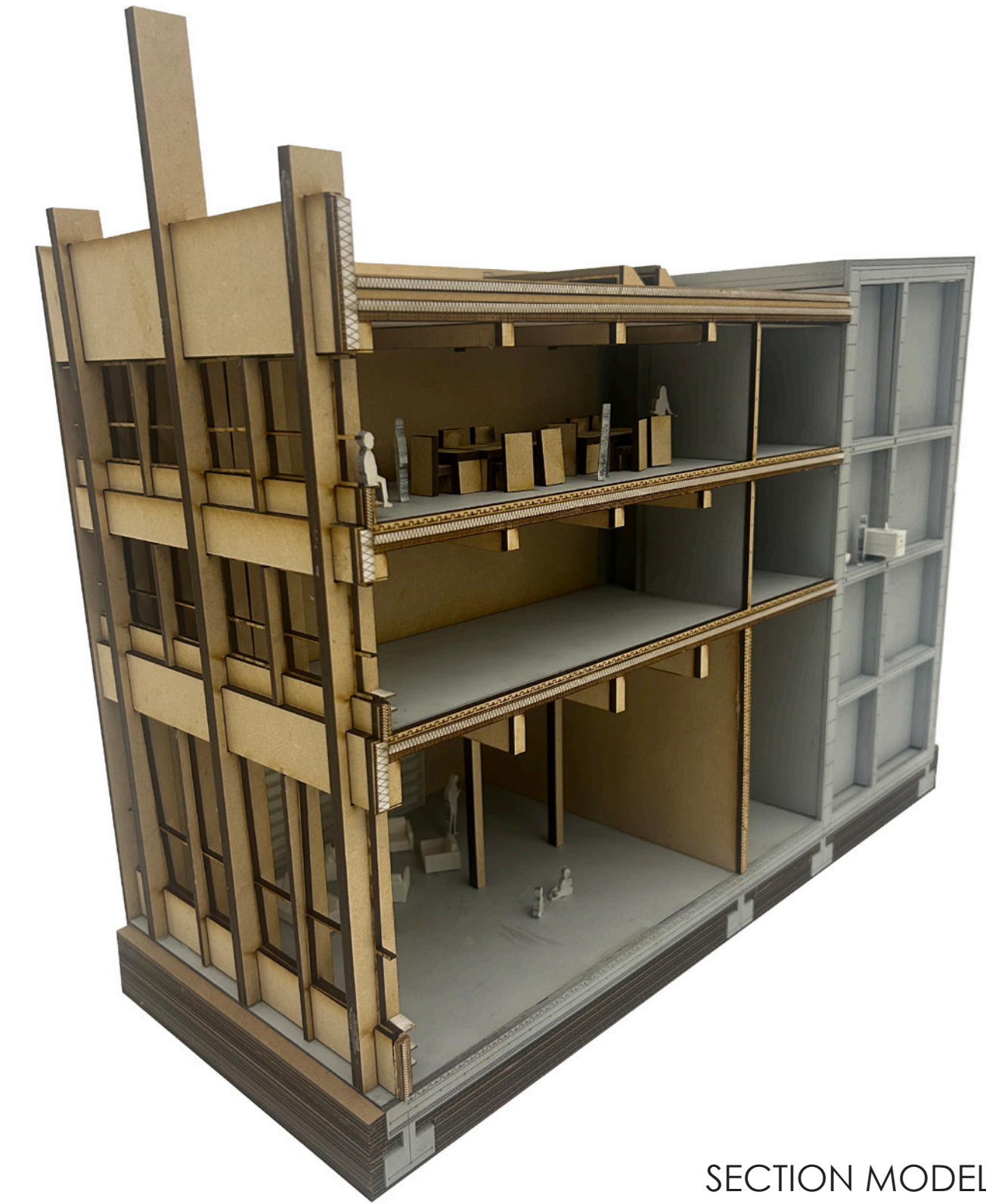


SECTION MODEL - LIGHTING EFFECTS

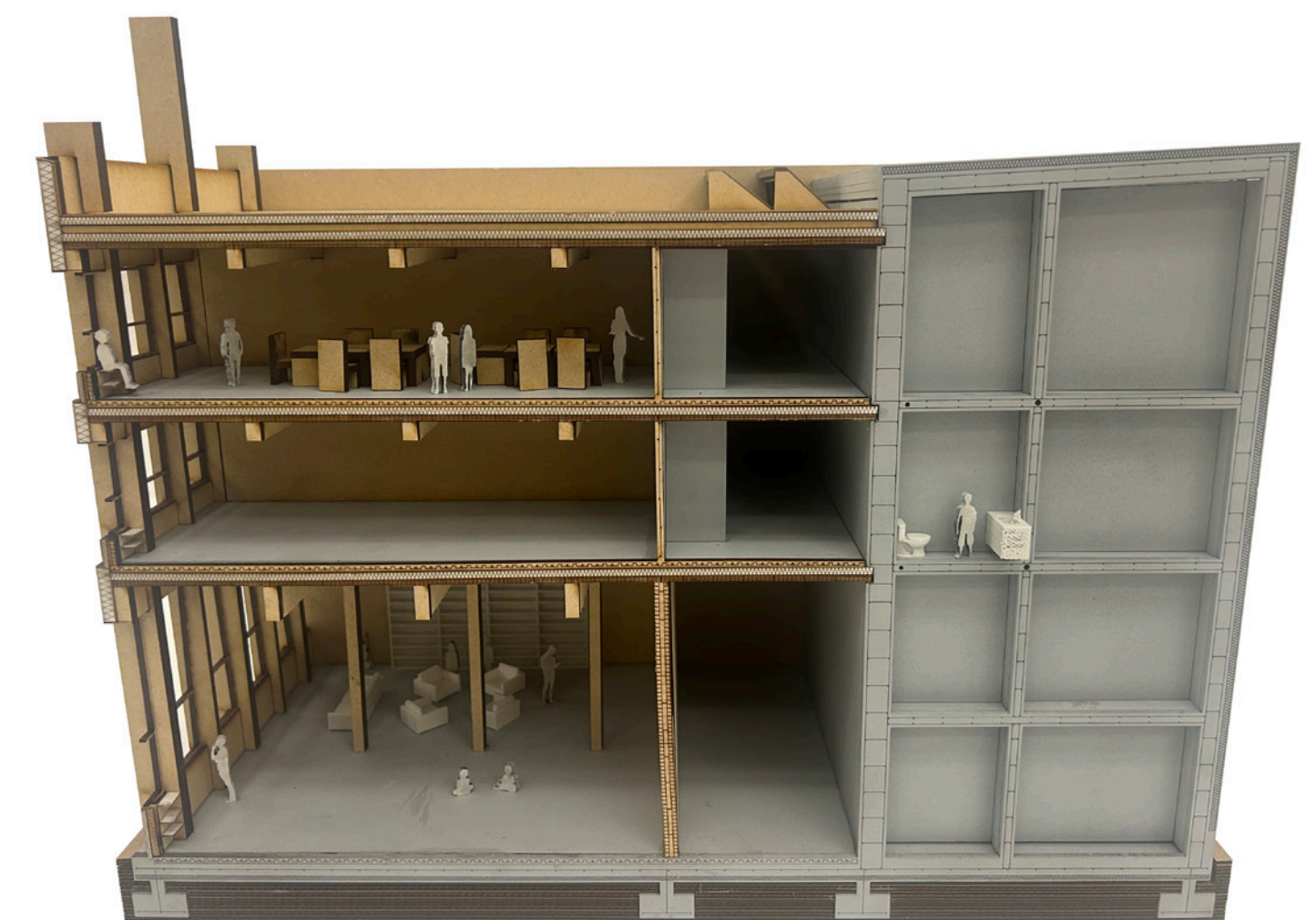
**ABOVE:** The skylights of the building filter natural light into the building at the ends of the third floor hallways. Concrete niches in the wall outside classrooms offer spaces for students to interact.

**ABOVE, RIGHT:** The section model shows both façade features and a section of the building. One of the classrooms, a bathroom, and the library space are furnished.

**RIGHT:** The section model is engraved with all layers of the structure onto the model. Glulam beams support CLT panels, with a non-structural layer of concrete containing radiant flooring above.



SECTION MODEL



SECTION MODEL



