

Thesis project by Maryana Tyupkina
Learning in Architecture

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in partial fulfillment of the requirements for the
degree of
Master of Architecture

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William Brown, Chairman

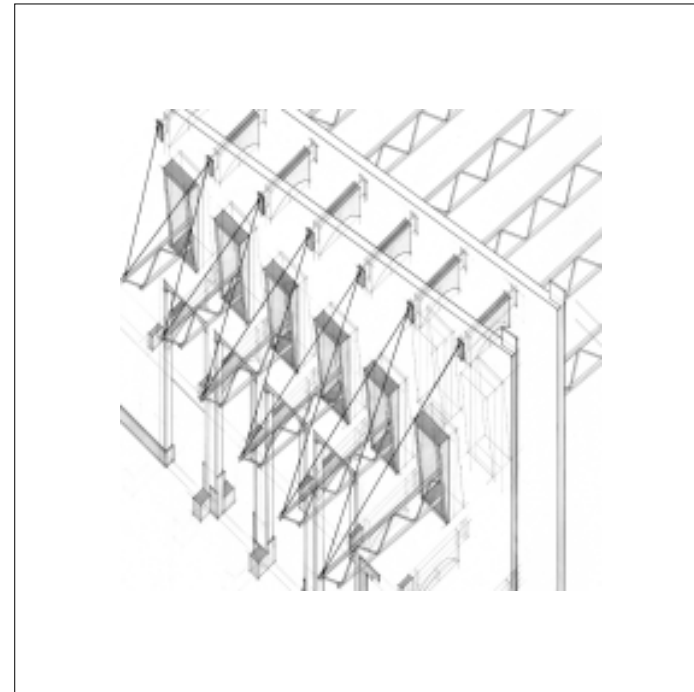
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Keywords: The meeting point, Intersection of Main Street and the Mall
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Virginia Polytechnic Institute and State University
Blacksburg, VA

Learning in Architecture



abstract ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■

Two entities, town and university, each playing different functional roles, different in scale and structure, come together at one point. The architecture of that point is a transitional condition. Each element has integrity on its own, and at the same time is a part of the system.

The primary requirement for the architecture of this place is to be elegant and thoughtful. This idea is addressed in five scales within the project : the axis, the street, the paths, the wall, and the room.

the axis



the street



the paths



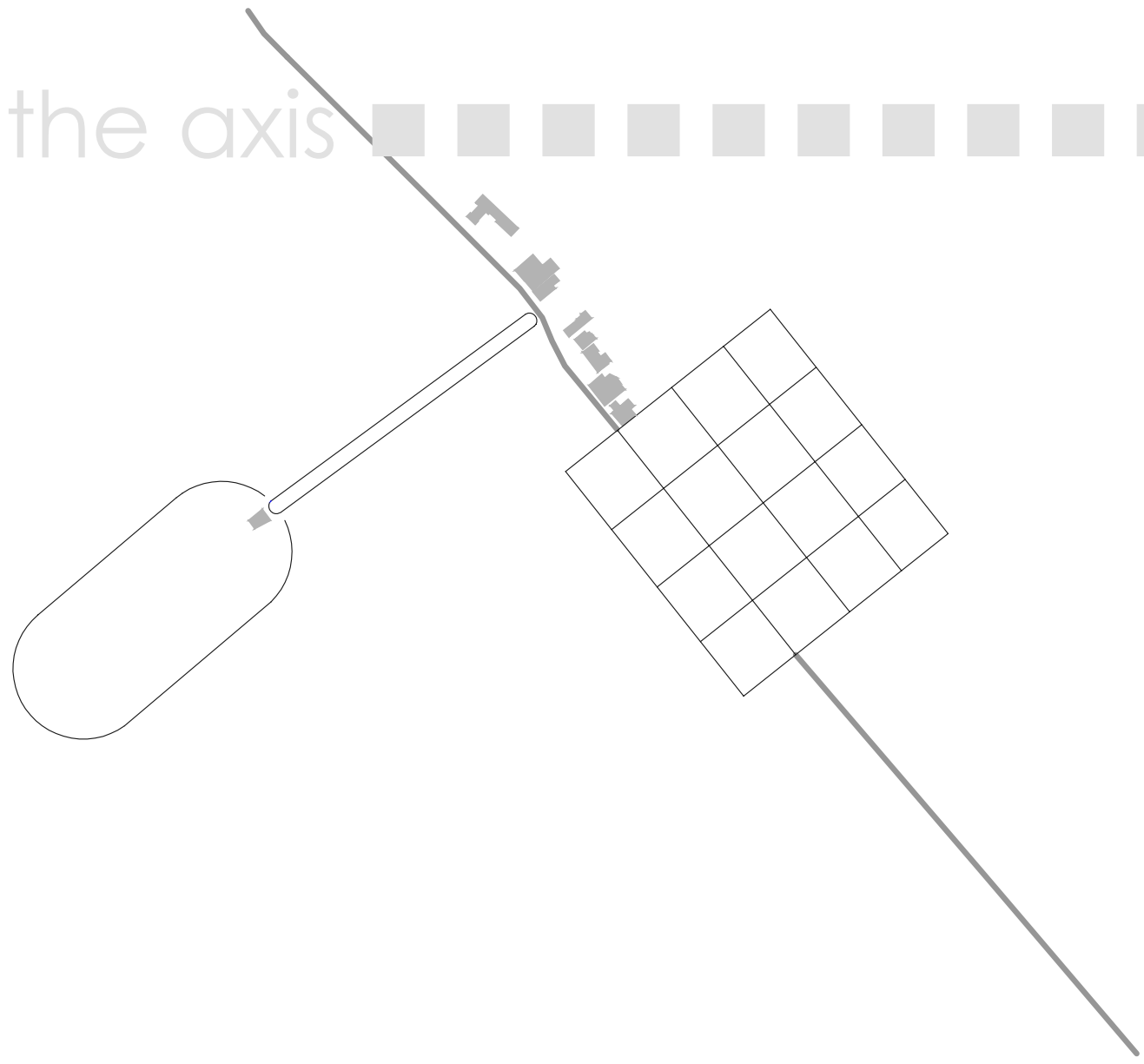
the wall

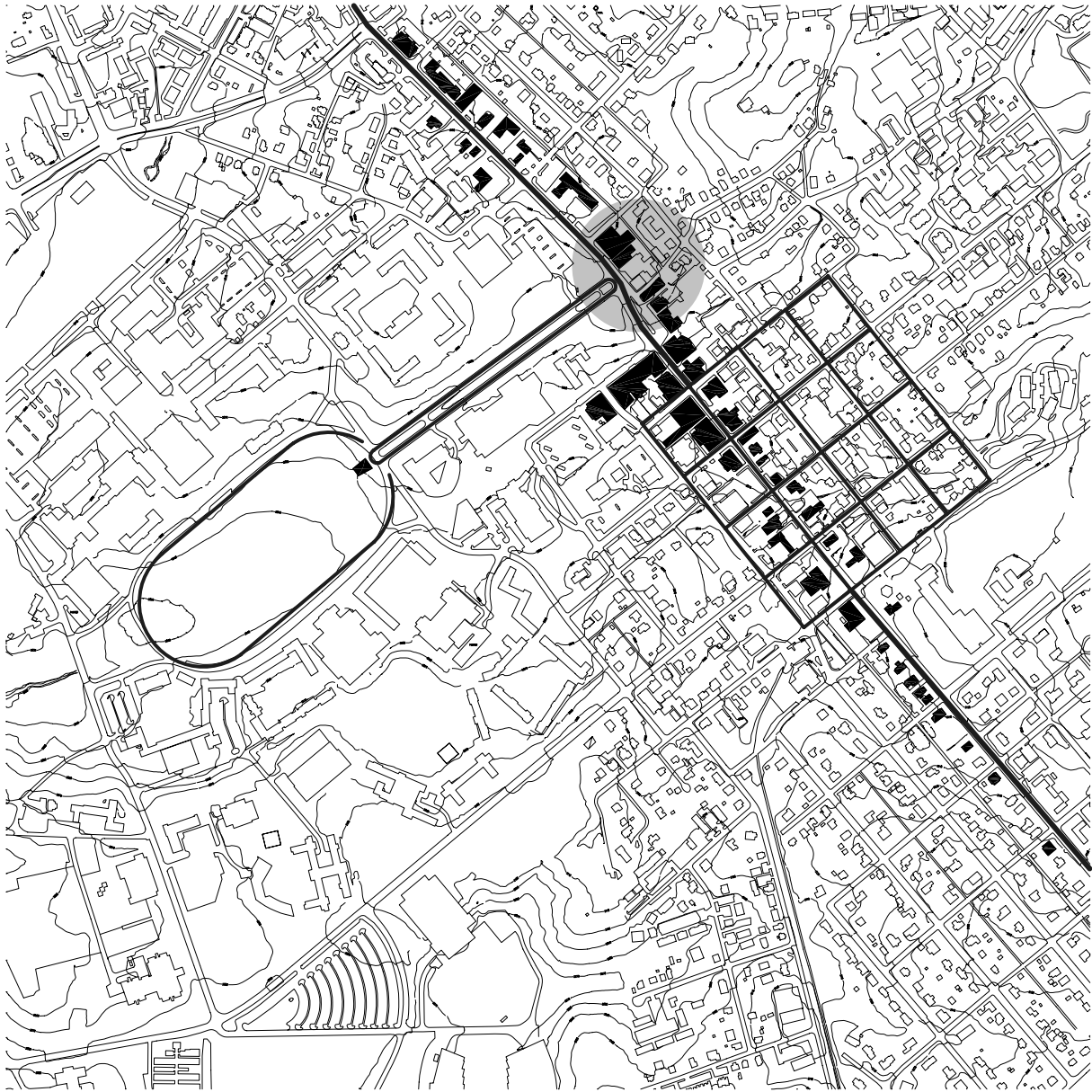


the room



the axis





Town of Blacksburg, Original sixteen squares and the oval Drill Field.

The original sixteen squares create the north/south axis of the town. The university Drill Field creates the east/west axis of the university and the town. Main Street passes through the grid and touches entrances to the campus: the Mall, which is a formal entrance, and College Avenue, mainly used by pedestrians. It is Main Street that visitors first experience.

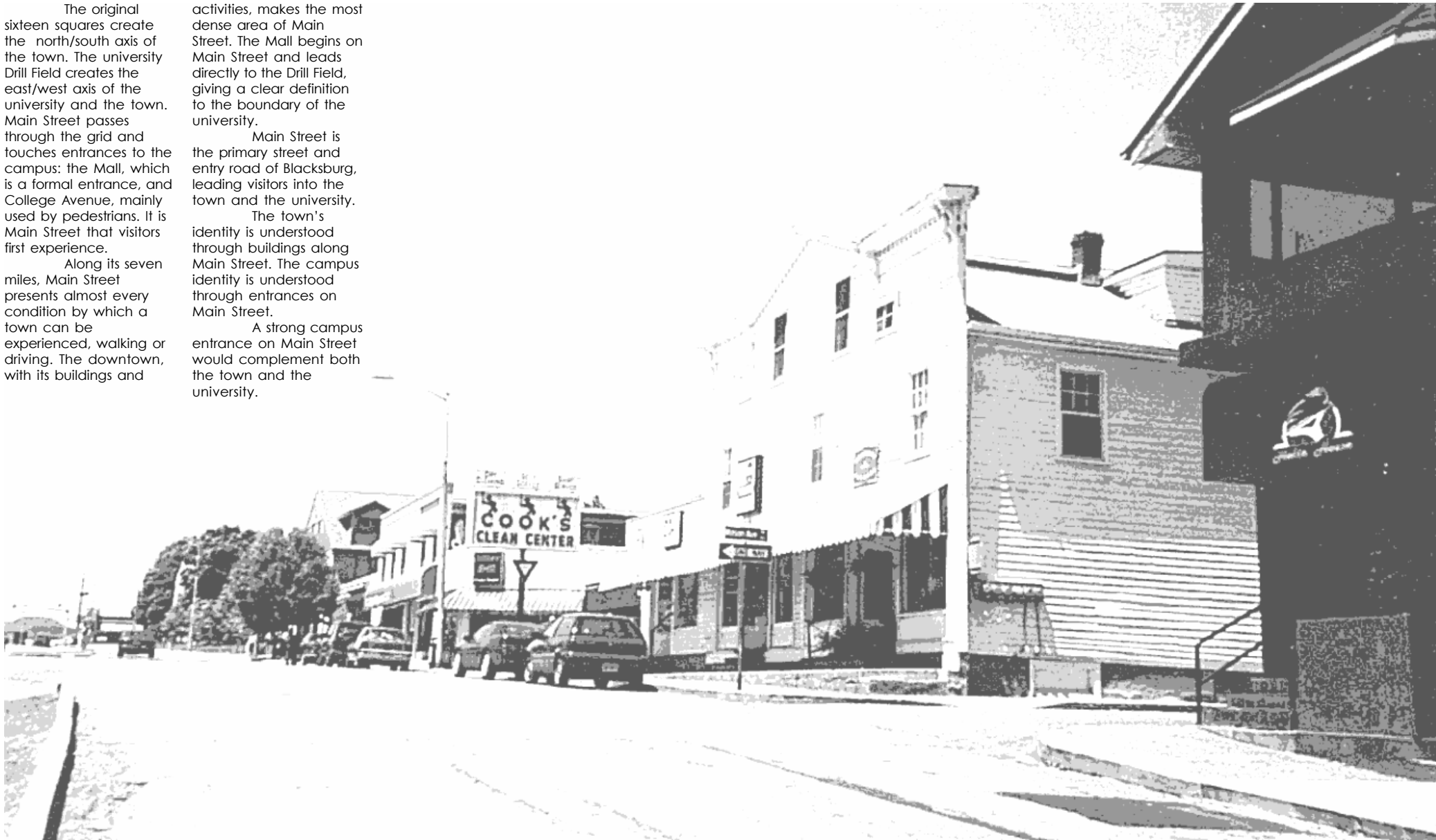
Along its seven miles, Main Street presents almost every condition by which a town can be experienced, walking or driving. The downtown, with its buildings and

activities, makes the most dense area of Main Street. The Mall begins on Main Street and leads directly to the Drill Field, giving a clear definition to the boundary of the university.

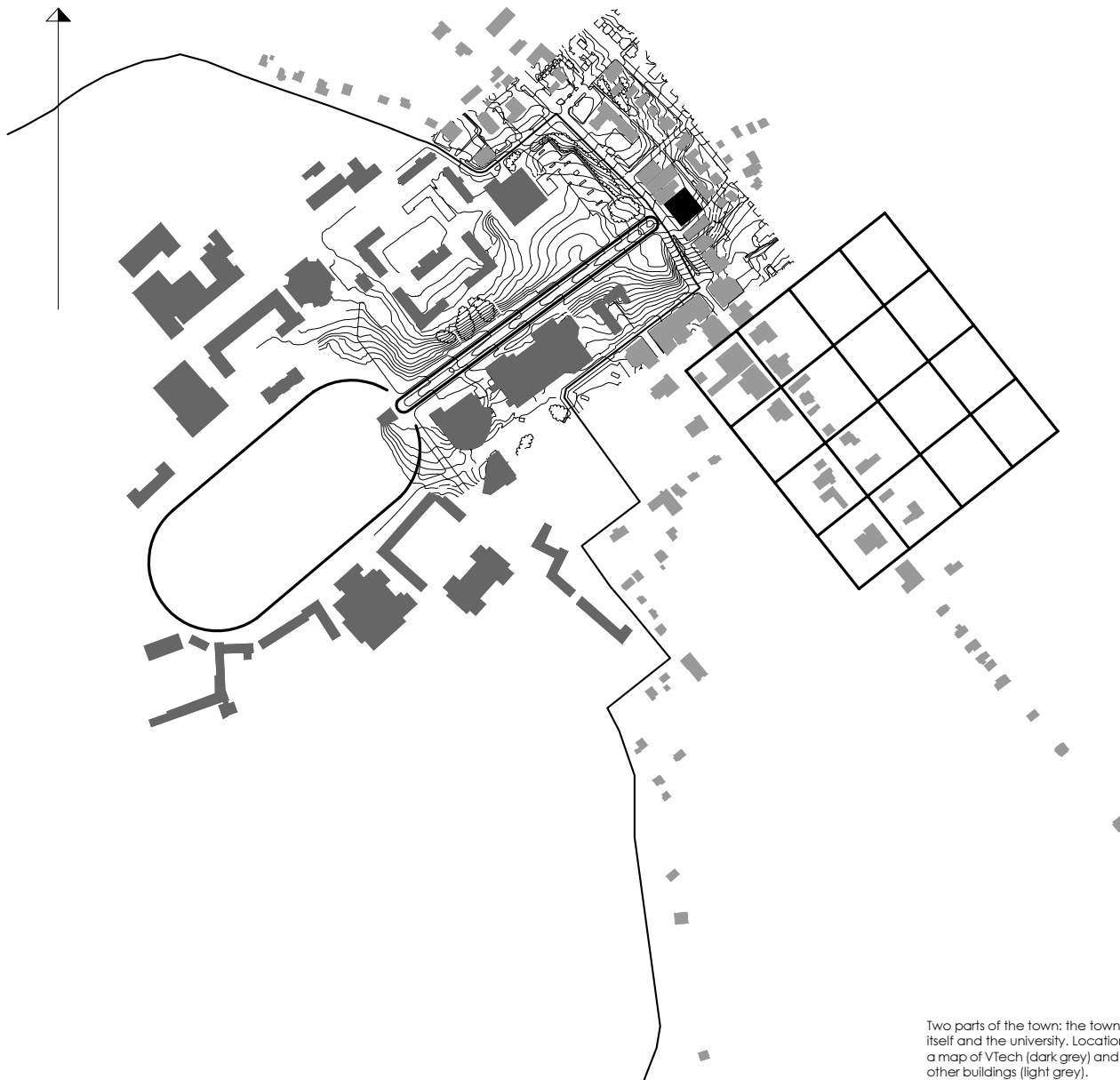
Main Street is the primary street and entry road of Blacksburg, leading visitors into the town and the university.

The town's identity is understood through buildings along Main Street. The campus identity is understood through entrances on Main Street.

A strong campus entrance on Main Street would complement both the town and the university.



View looking north/west along Main Street.



Blacksburg is composed of two distinct parts : the town and the university. A large university in a small town and a small town with a large university are situations with specific differences. The differences are recognized as valuable attributes. The university campus is structured around the Drill Field. The town is primarily a network of roads, drives, streets and a few avenues.

The difference in pattern gives an understanding of the importance of the point where two patterns touch. Within this area the town and the university share their large pedestrian networks, designating this place as the walking

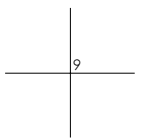
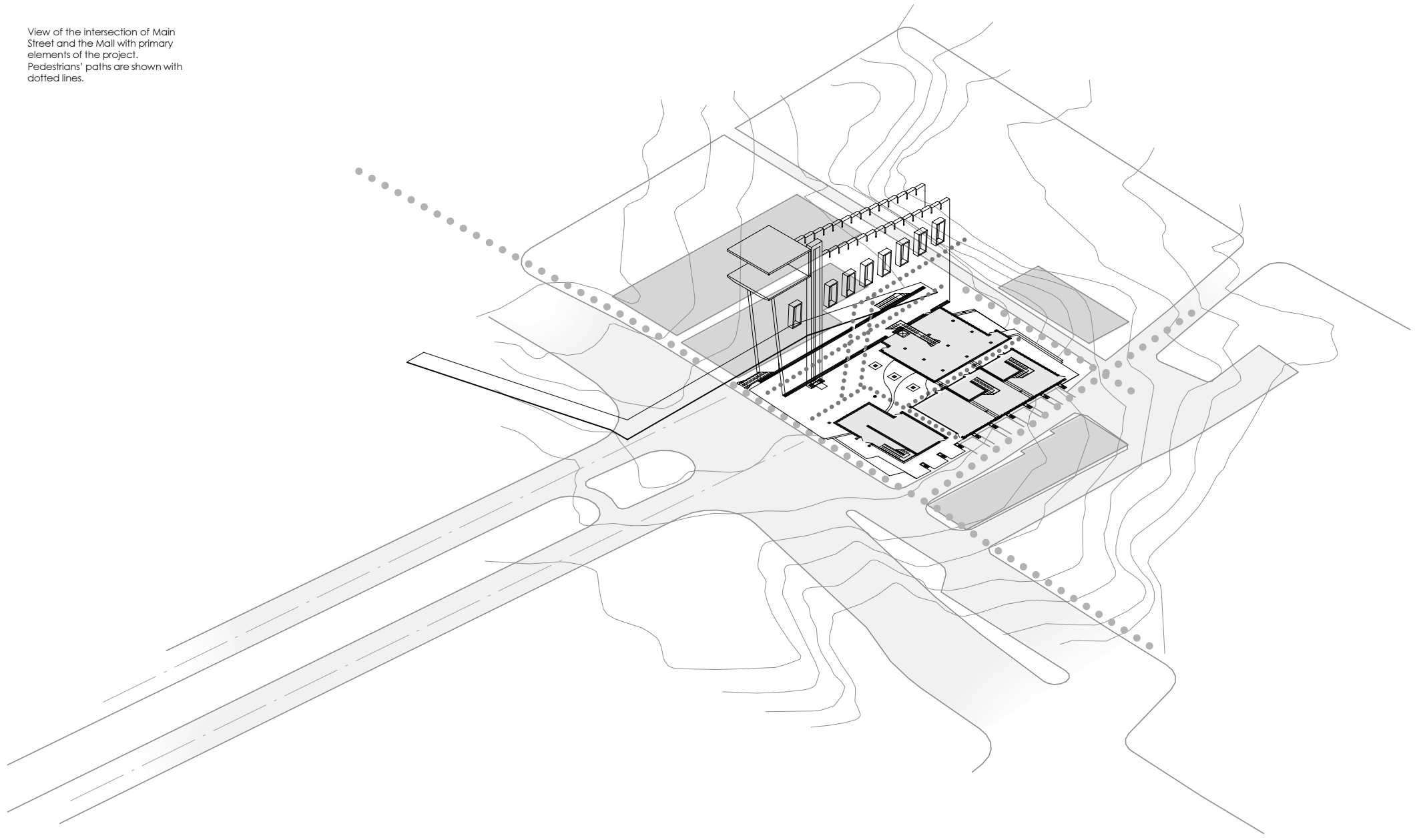
center of Blacksburg. There are two campus entrances from Main Street. The Mall which is the formal entrance for visitors, and College Avenue which is used by students and residents.

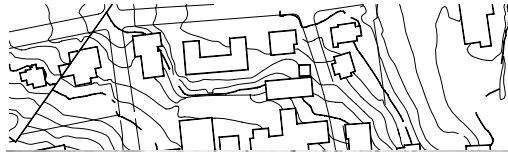
The downtown, with its buildings, has most of the basic things that bring life into a community: theater, post office, bank, etc. It is the mix and density of commercial and service functions which plays a social role that makes the downtown a meeting place.

People are already there. The goal is to bring pedestrians on the site to make a used entrance out of a formal one, to make a space for them to inhabit.

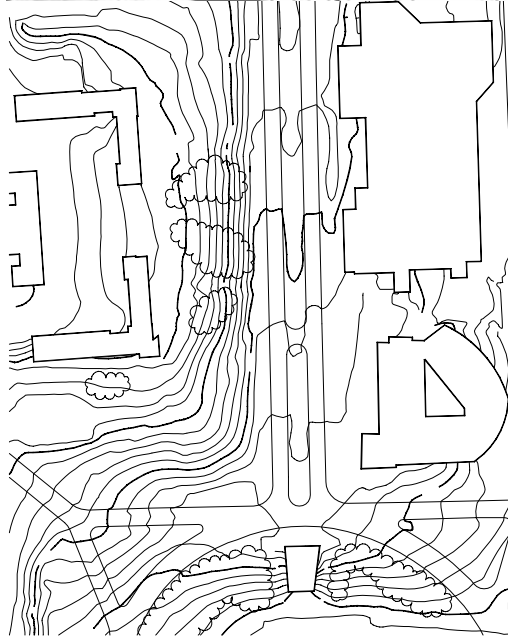
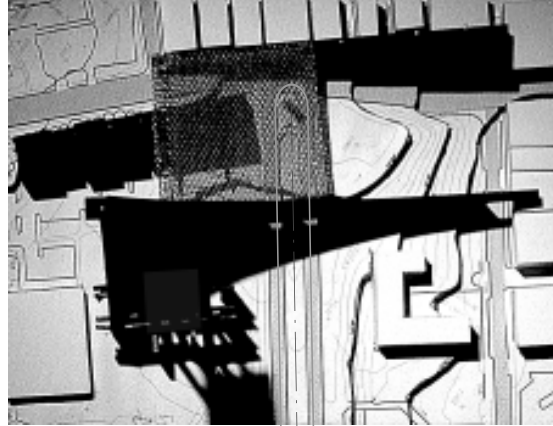
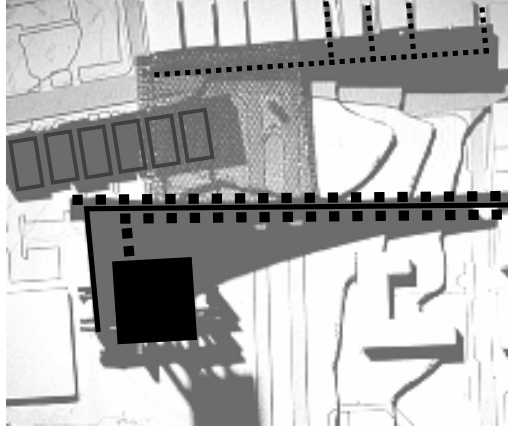
Two parts of the town: the town itself and the university. Location on a map of VTech (dark grey) and other buildings (light grey).

View of the intersection of Main Street and the Mall with primary elements of the project.
Pedestrians' paths are shown with dotted lines.









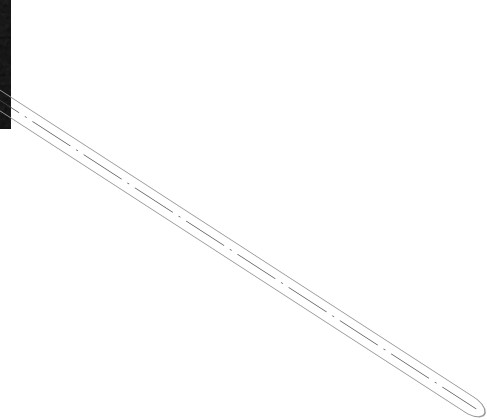
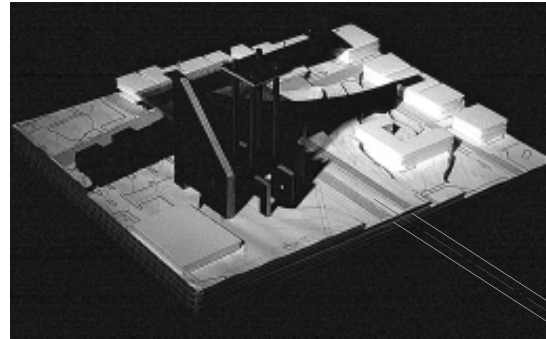


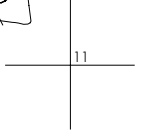
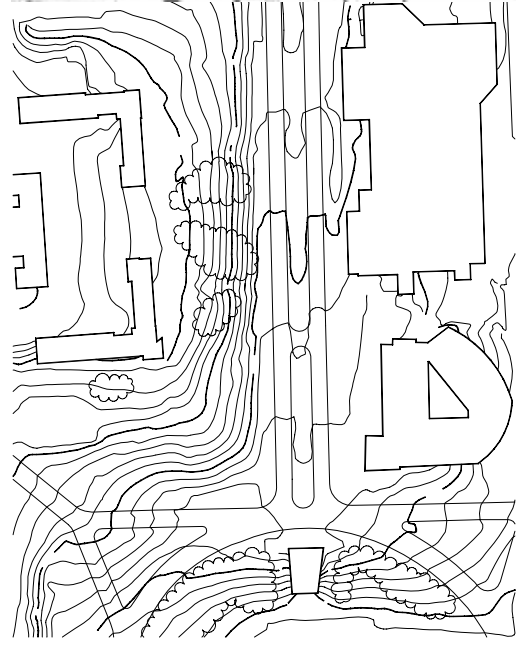
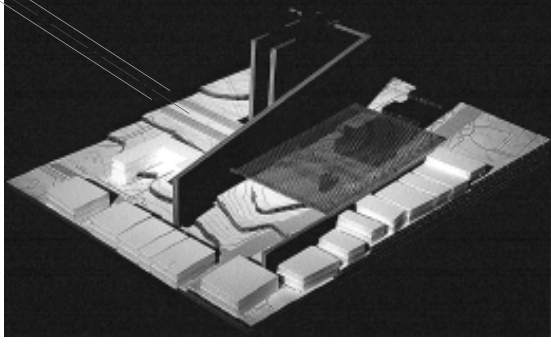
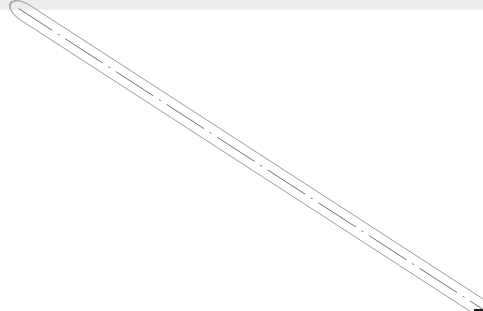
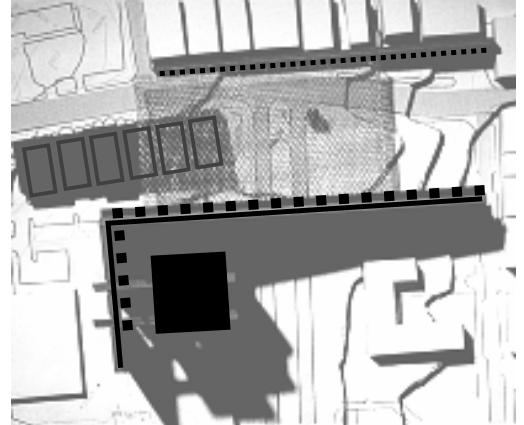
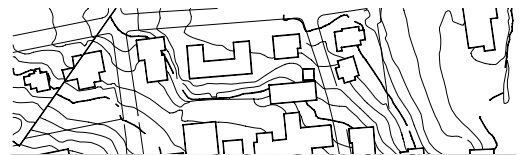
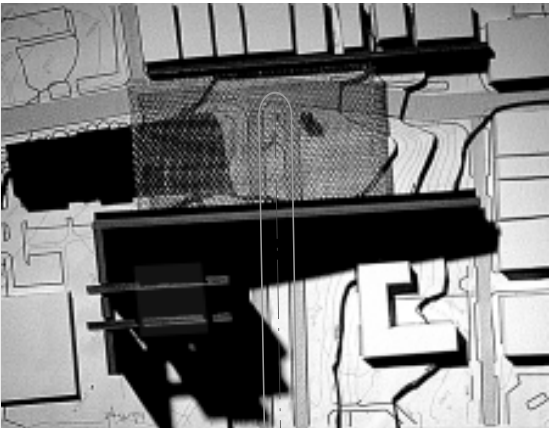
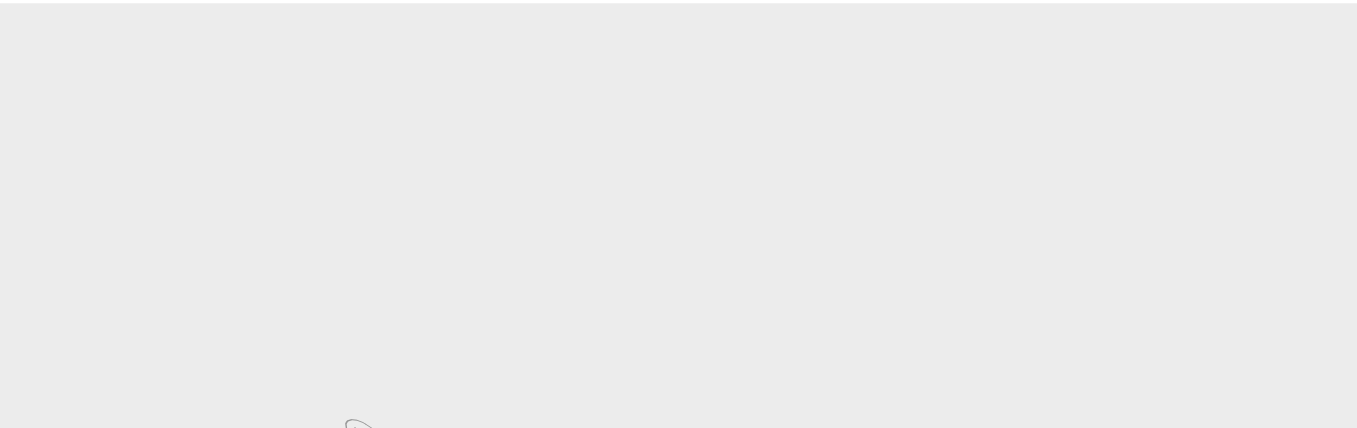
Preliminary study models of the site situation and design variations on the site.

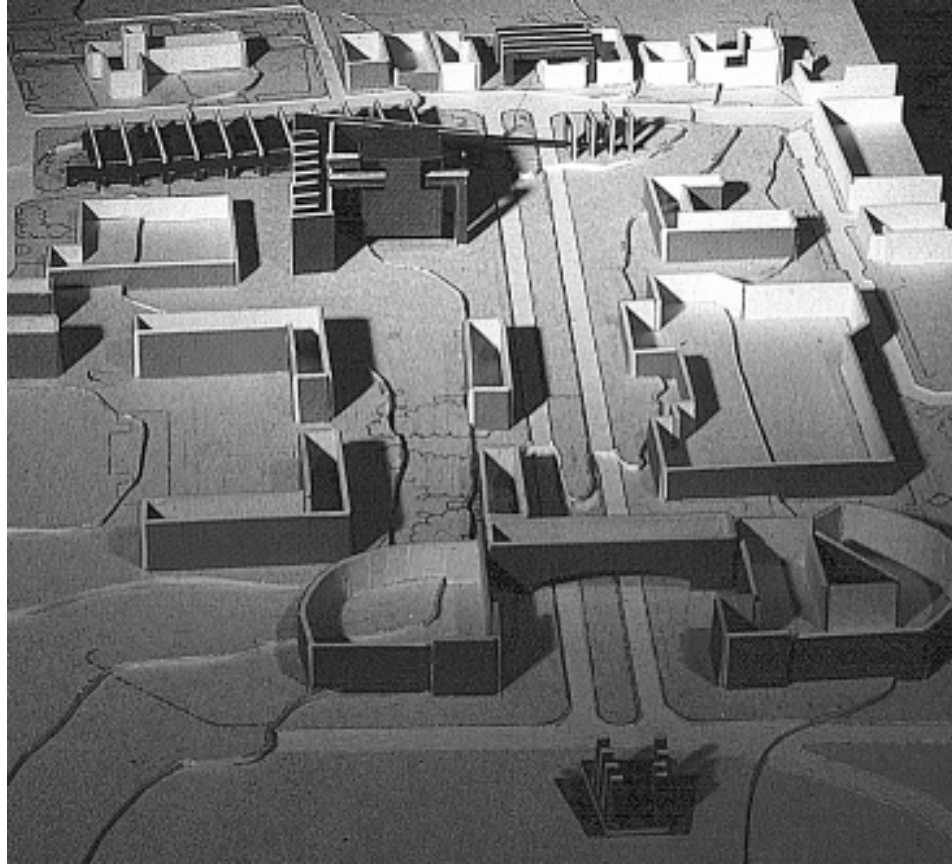


There are several primary elements in the project:







-  the wall
-  the landmark - tall element
-  the bridge
-  the "Big Room" structure
-  the small scale elements
-  the Main Street renovation

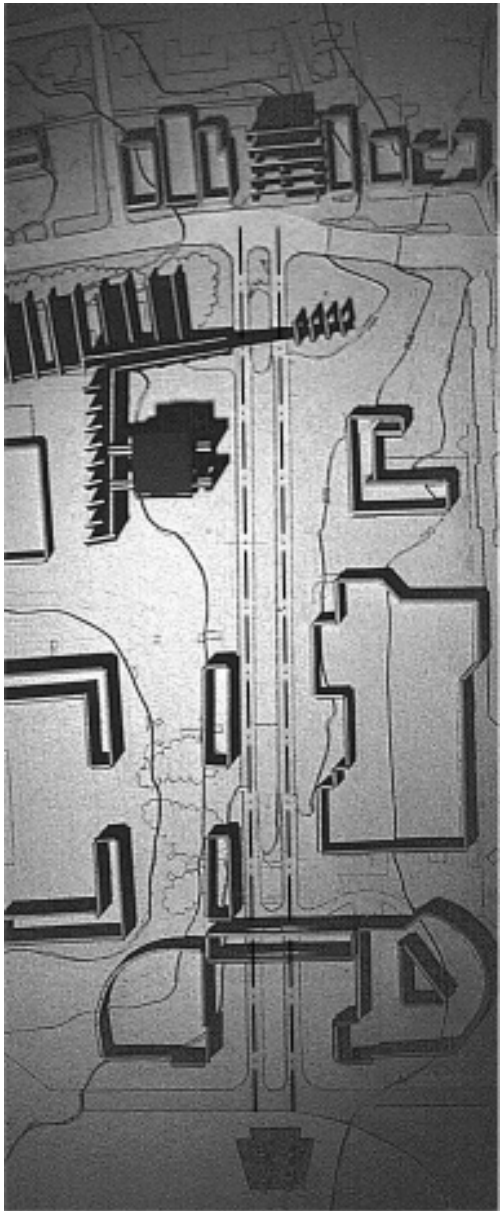
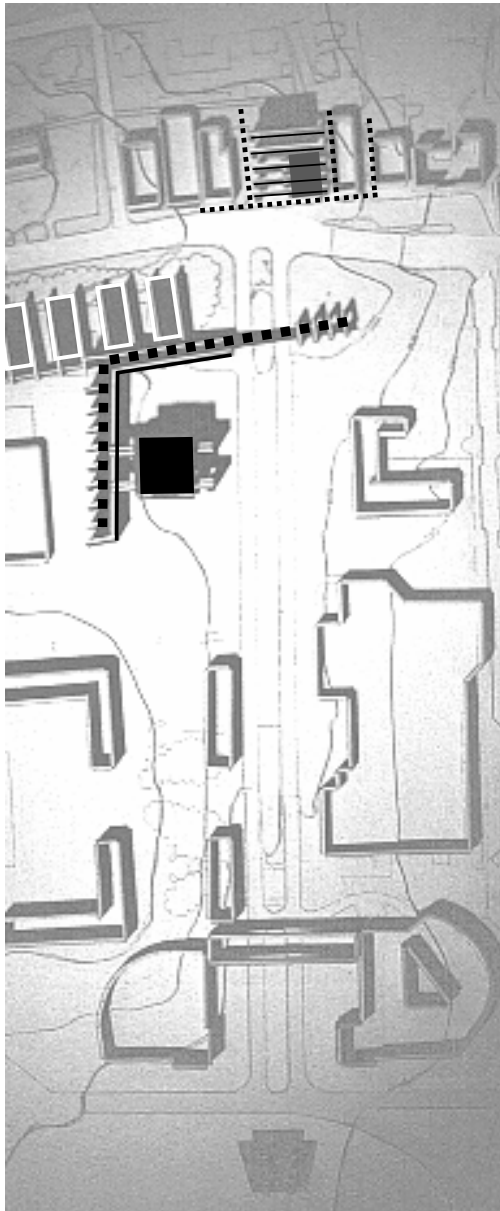
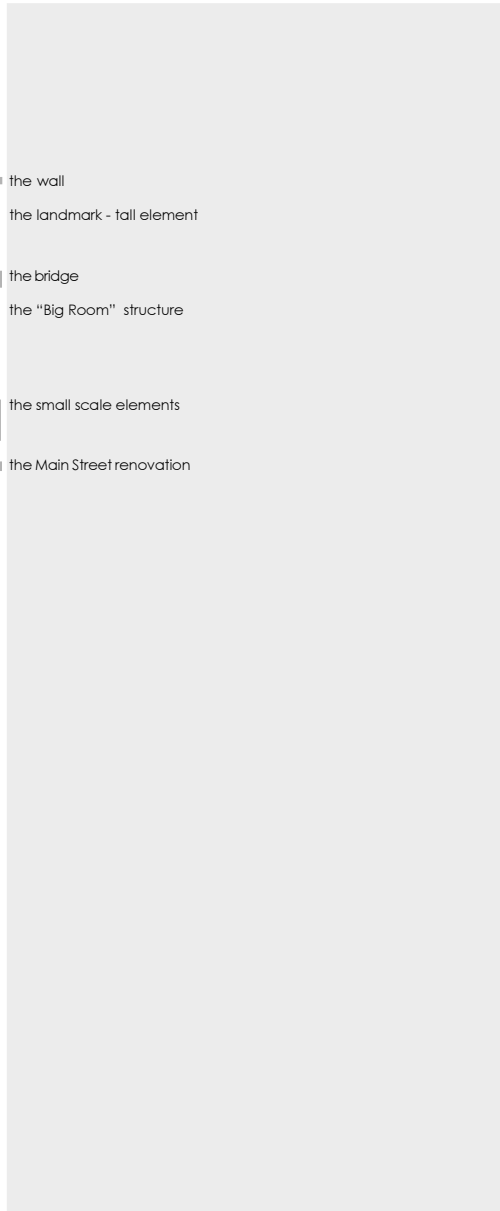


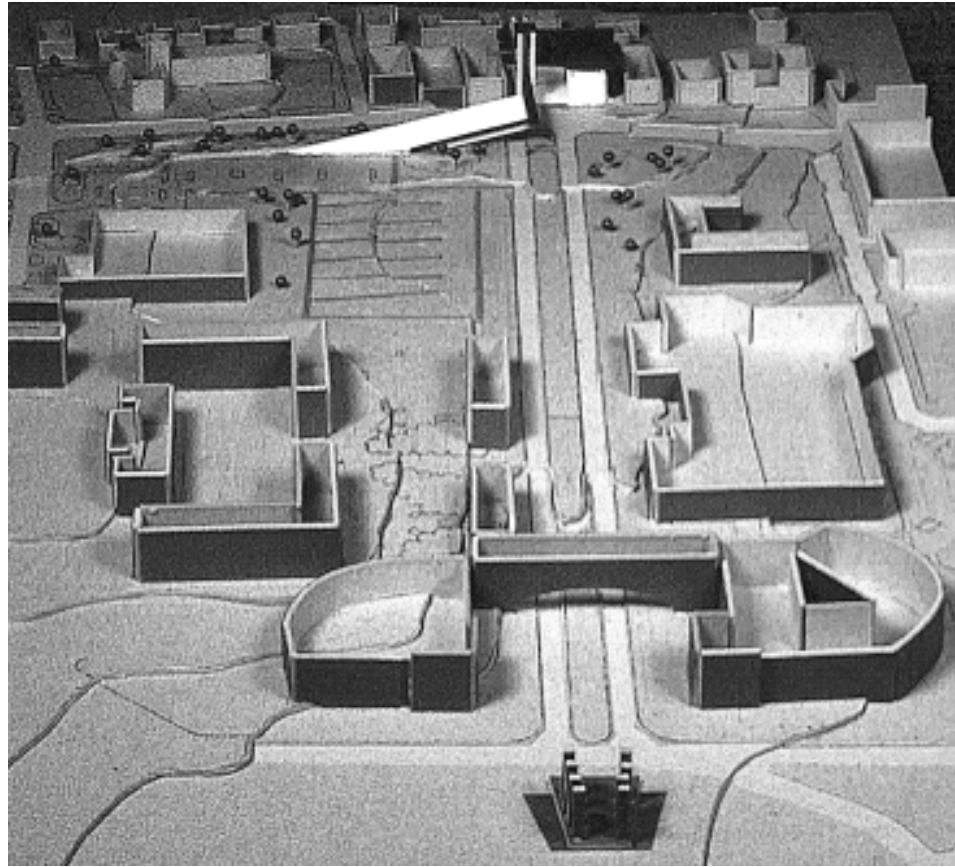




Study site model. Earlier version. View looking from the Drill Field toward Main Street with the Mall in the center.

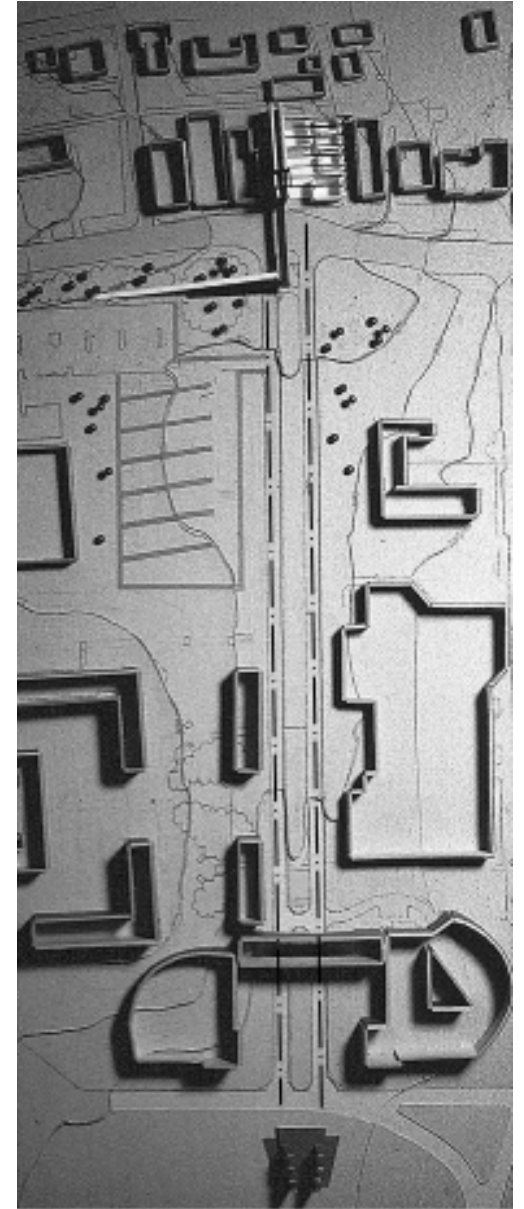
-  the wall
-  the landmark - tall element
-  the bridge
-  the "Big Room" structure
-  the small scale elements
-  the Main Street renovation



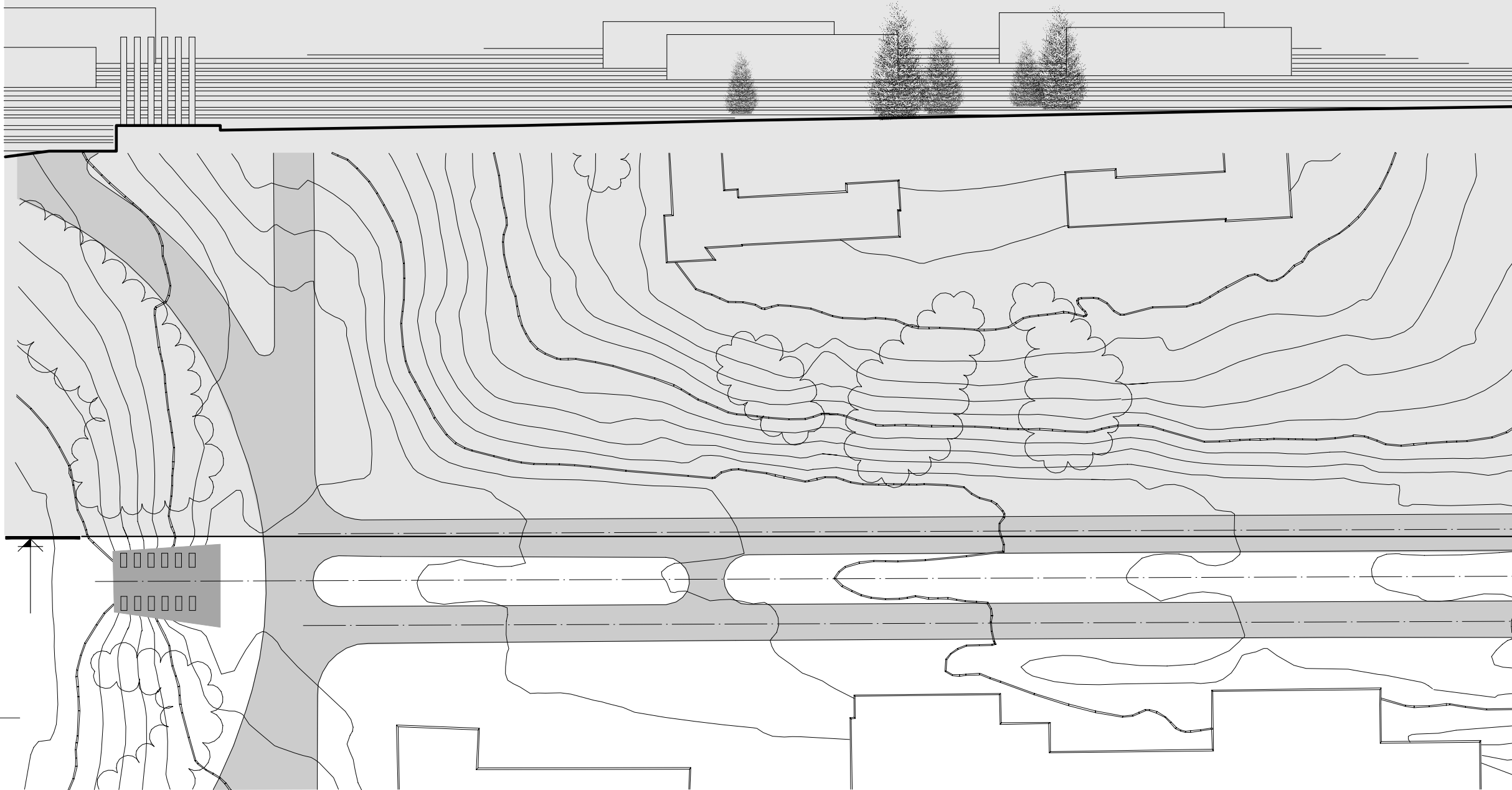


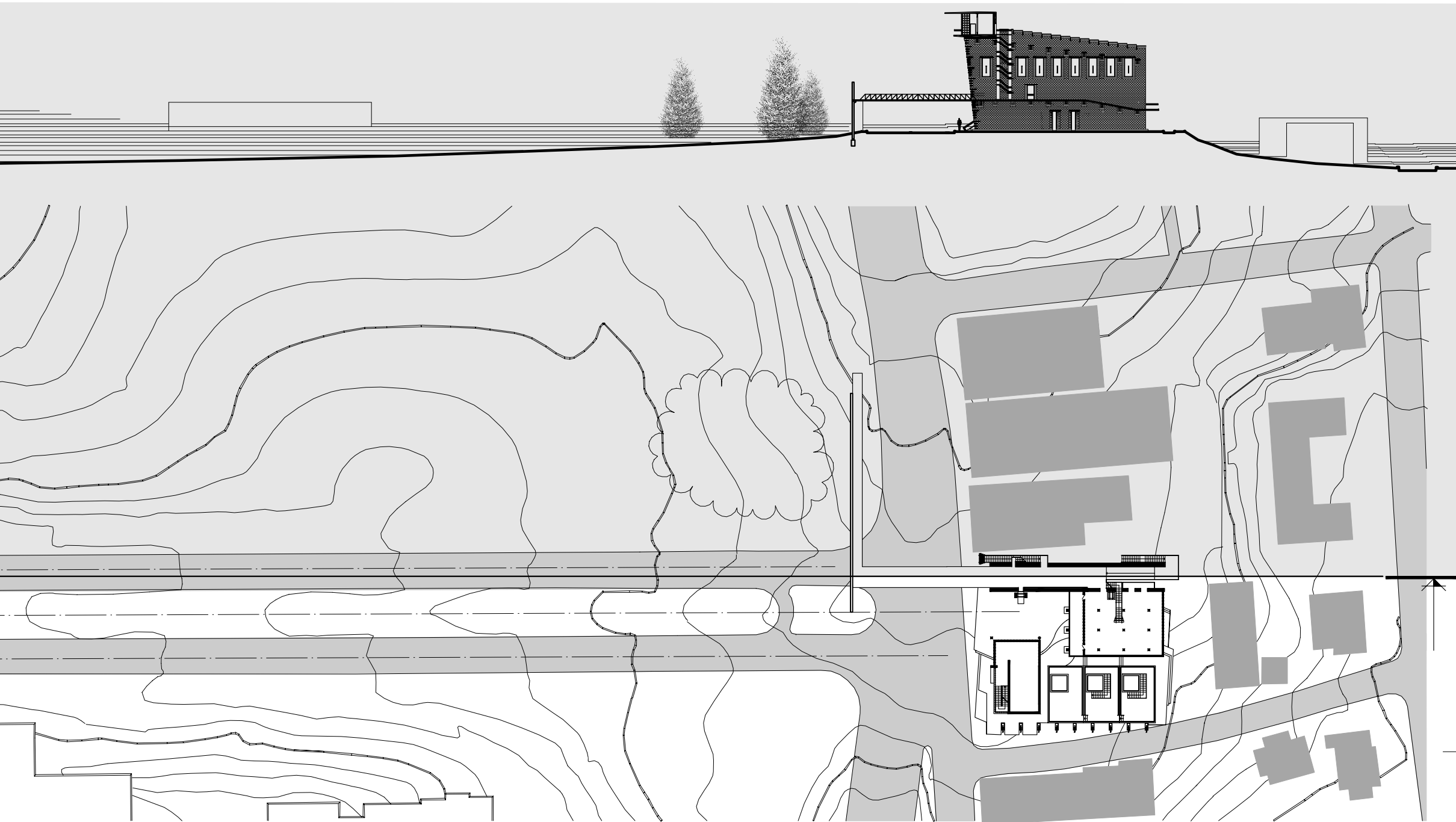
Site model. Final version. View of the intersection of Main Street and the Mall looking from the Drill Field to Main Street.

- the wall
- the landmark - tall element
- the bridge
- the "Big Room" structure
- the small scale elements
- the Main Street renovation



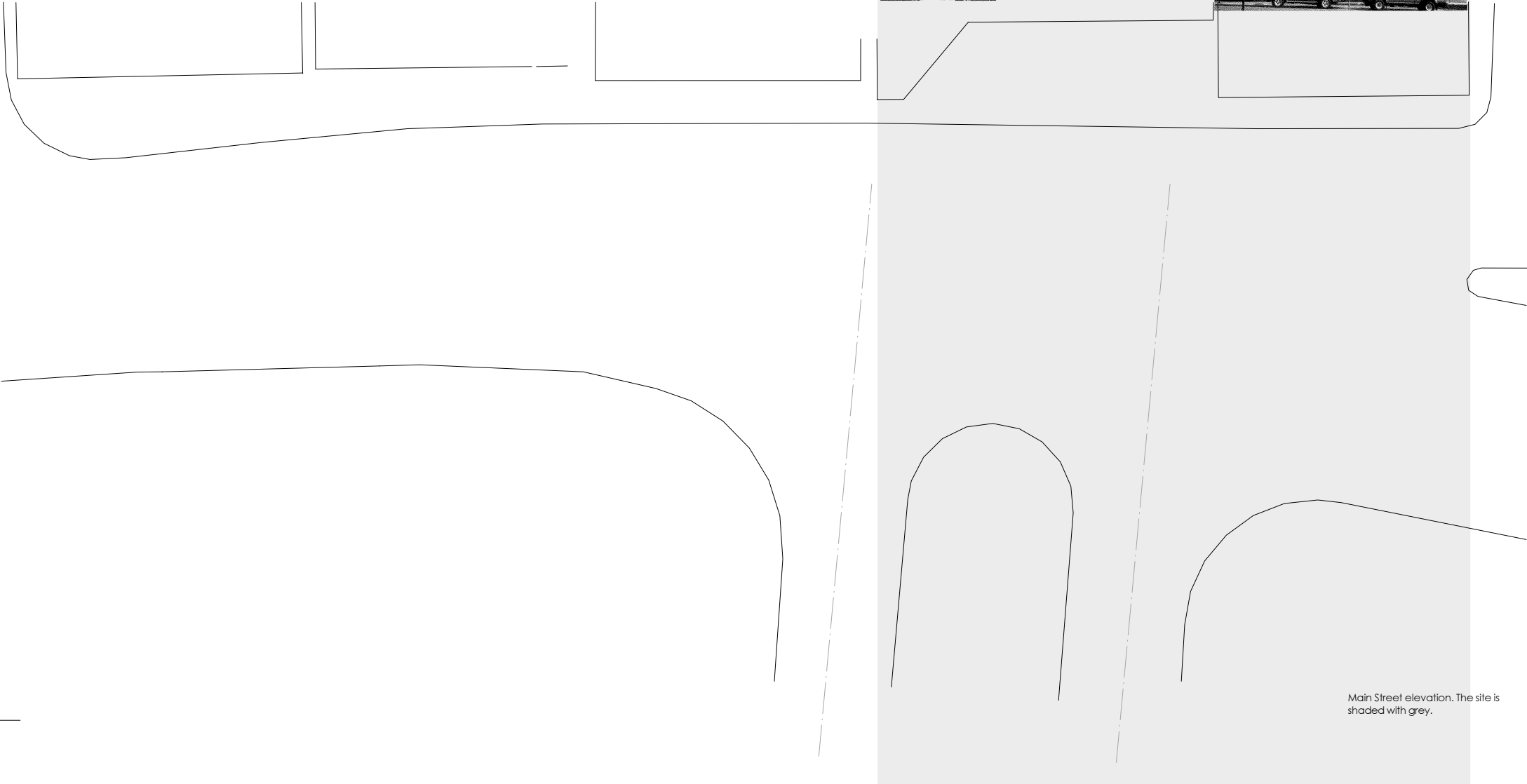
Section of the site through the wall along the Mall Axis.





the street





Main Street elevation. The site is shaded with grey.

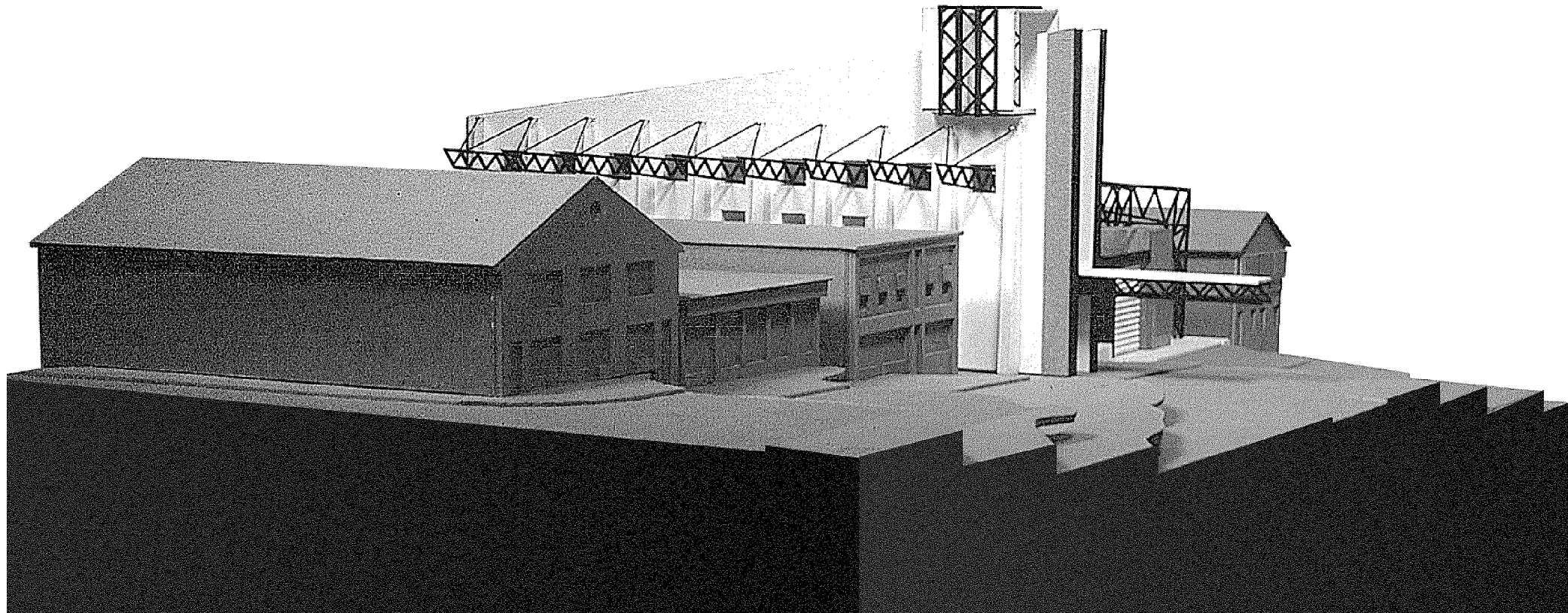


Brick is one of the original materials of the downtown and its buildings.

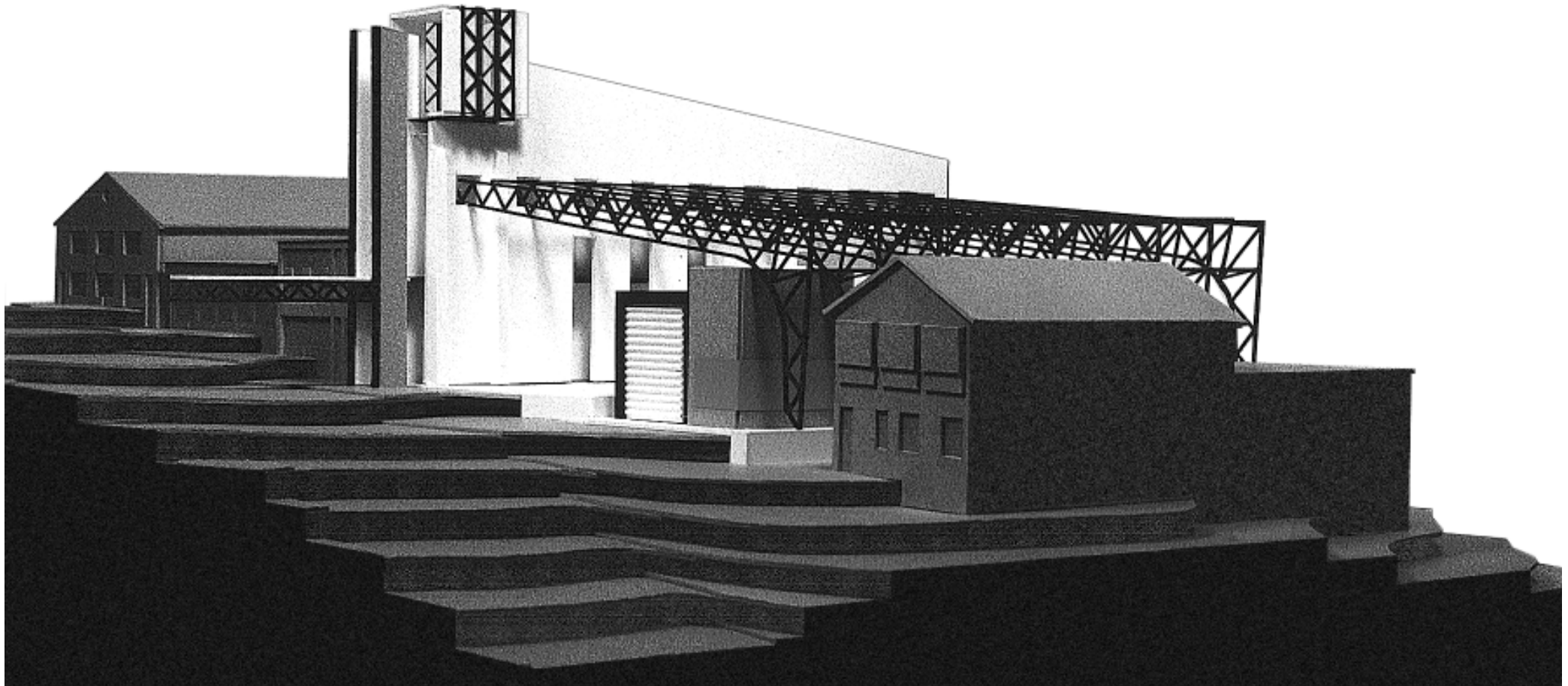
Human scale, natural colors and textures, and playful patterns bring life into the Main Street facade.

Another material, hokie stone, reflects the scale and order of the university, which is more unified and much bigger.

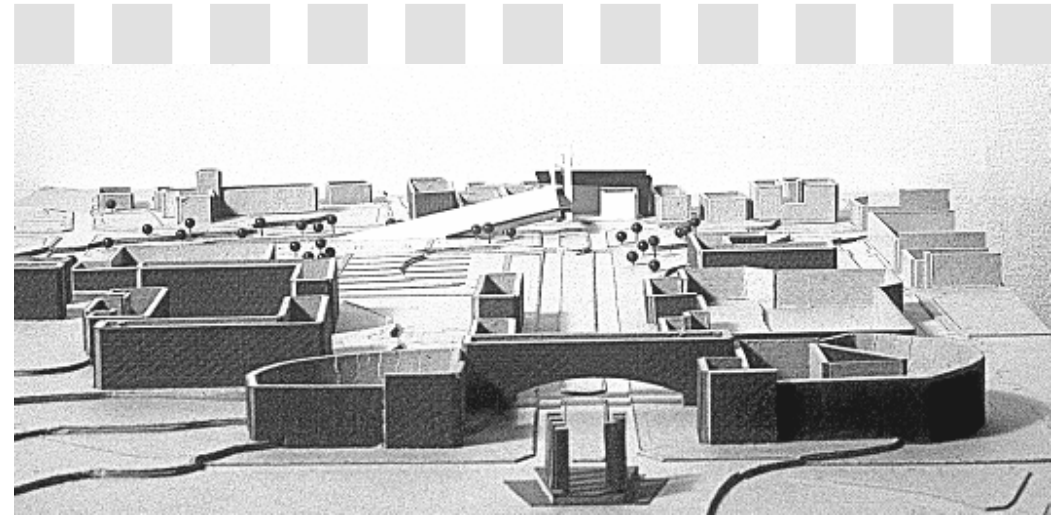
View looking down Main Street
(south) of the intersection of Main
Street and the Mall with the model
on the site.



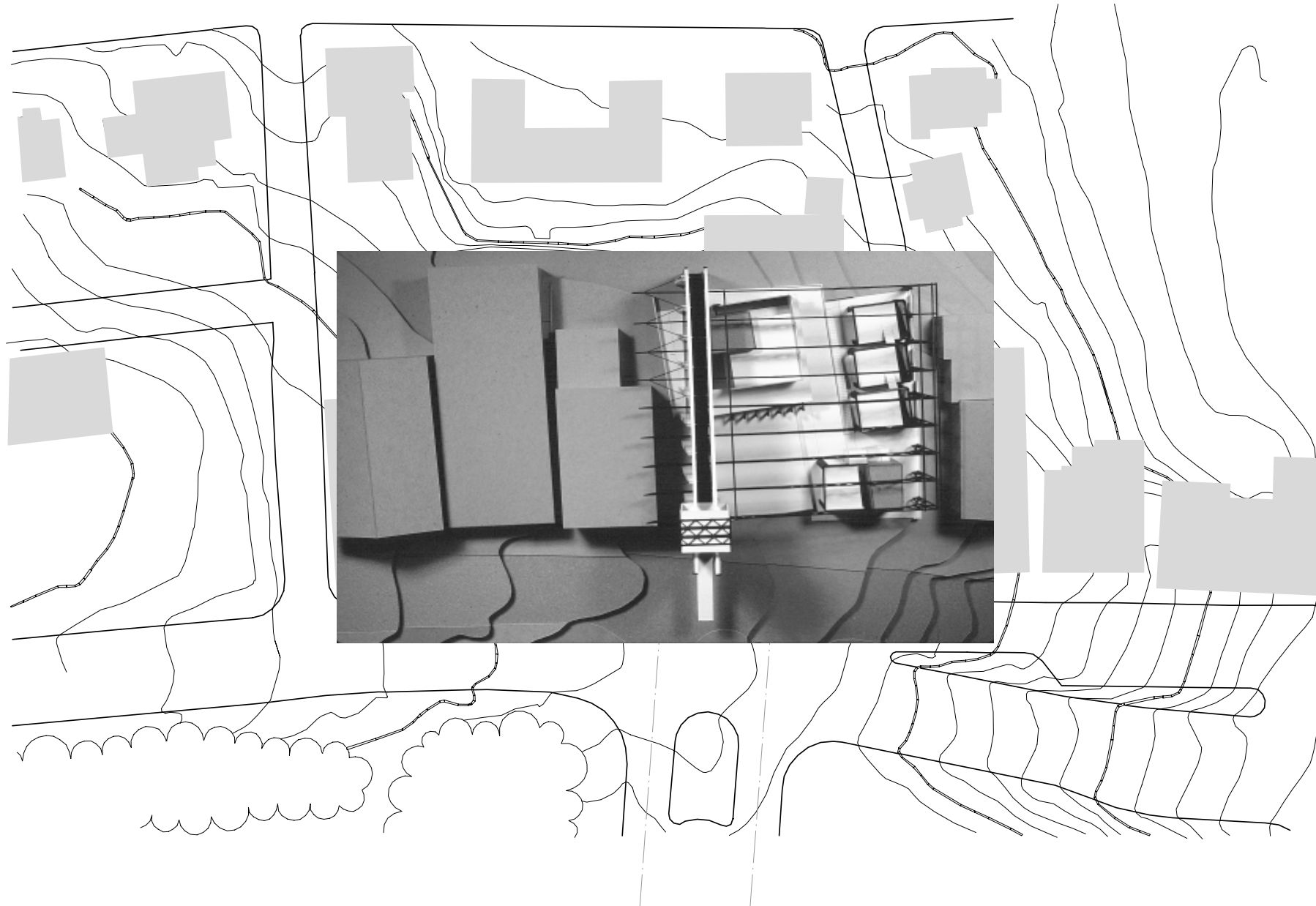
View looking up Main Street (north)
of the intersection of Main Street
and the Mall with the model on the
site.



the paths



Plan view of the intersection of Main Street and the Mall with the model of the project on the site.



The "Big Room" is an urban space made to unite a series of buildings. Every building has its own function and relative independence, but all of them together create a kind of plaza.

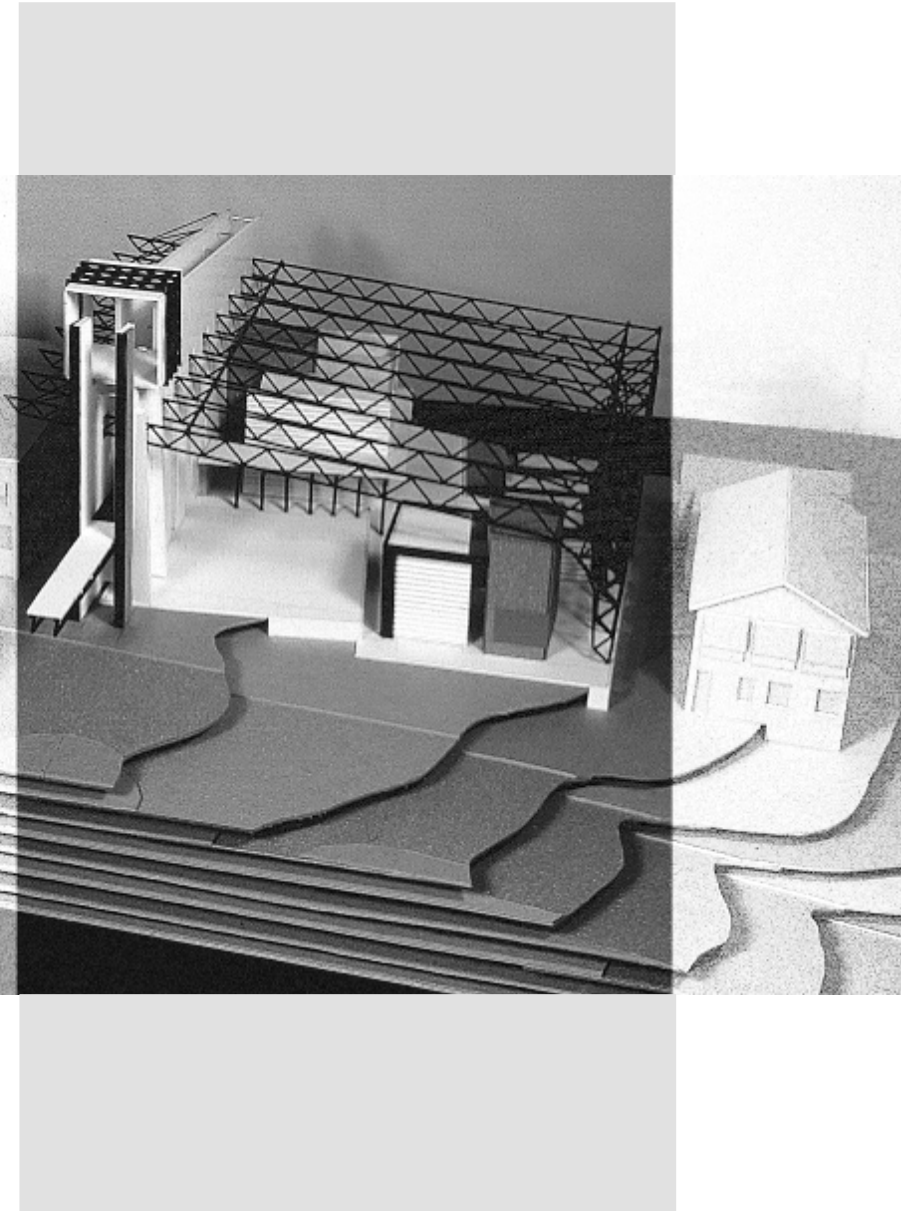
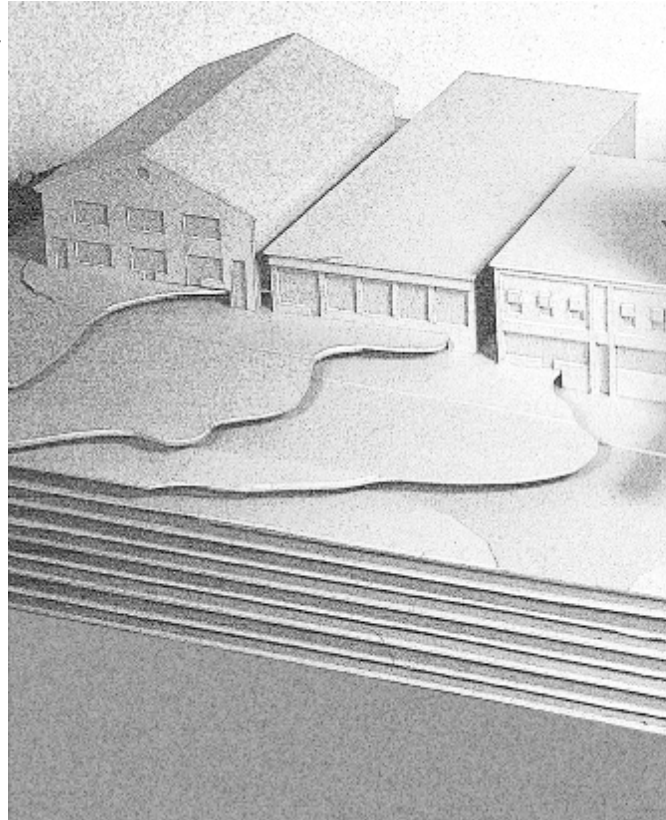
The plaza plays a role at the intersection of a pedestrians' path. In comparison to a regular intersection, this one has a room to stop, meet a friend, or have a cup of coffee outside.

Actually it is both an outside and inside condition. The

trusses carry a semitransparent roof to protect pedestrians from precipitation. It also casts shadows and reflects the sunlight.

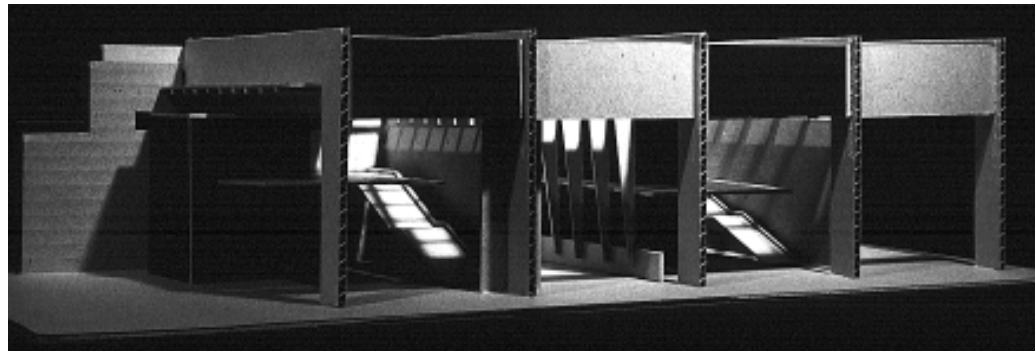
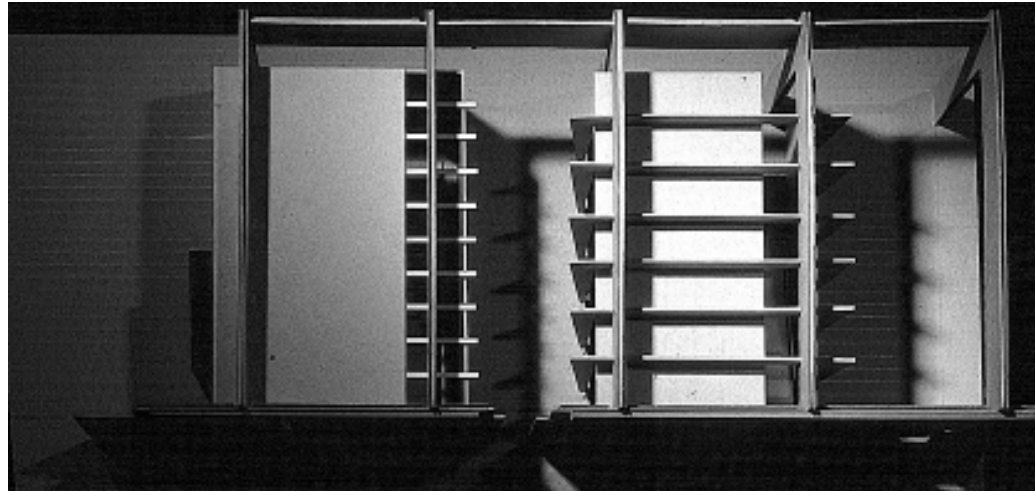
The buildings underneath the trusses have inhabited roofs. This gives an opportunity to almost touch the "Big Roof" structure.

The series of buildings offers typical downtown activities: entertainment, food, and shopping.



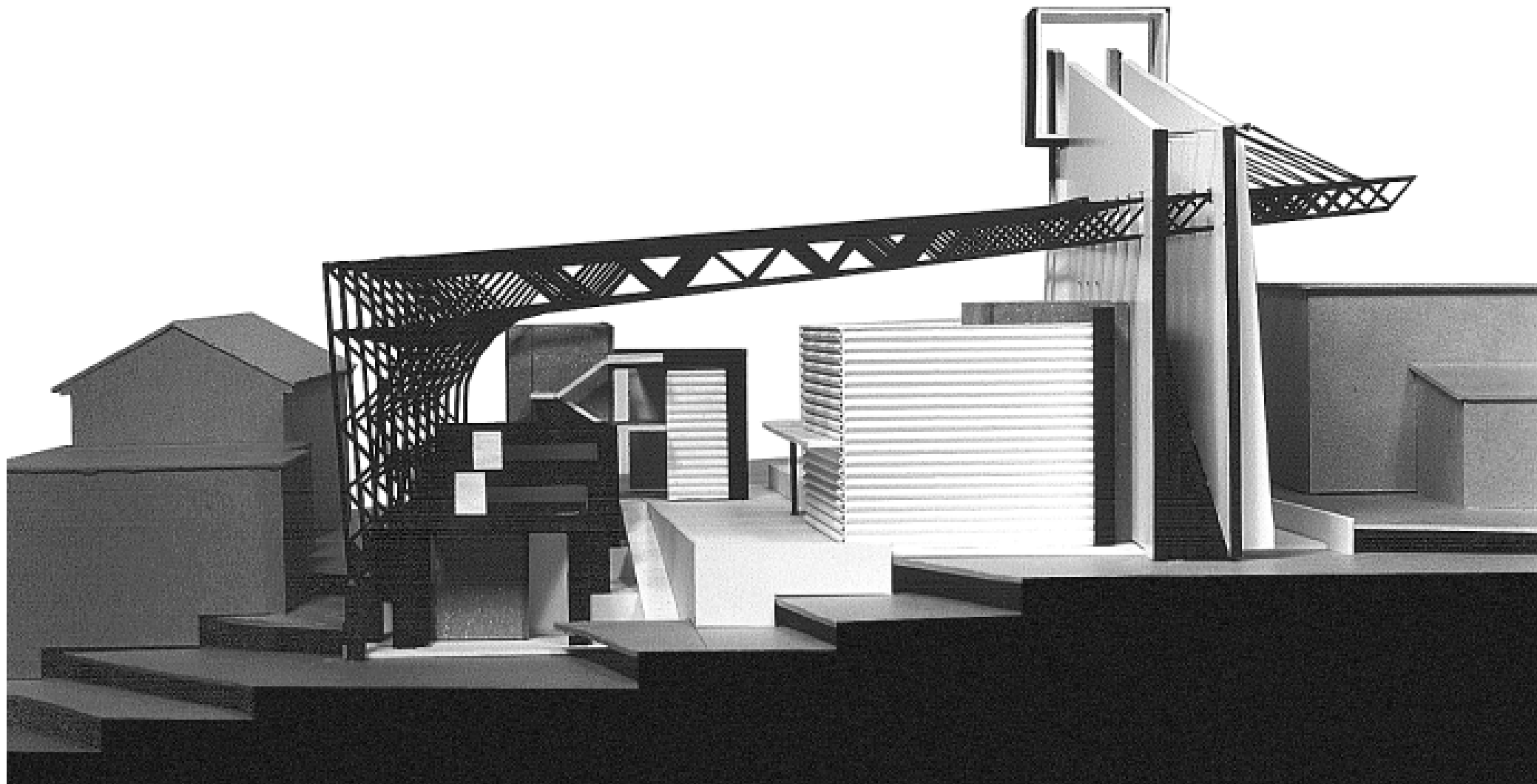
The "Big Room" idea came from the light studies of the small scale elements in the downtown.

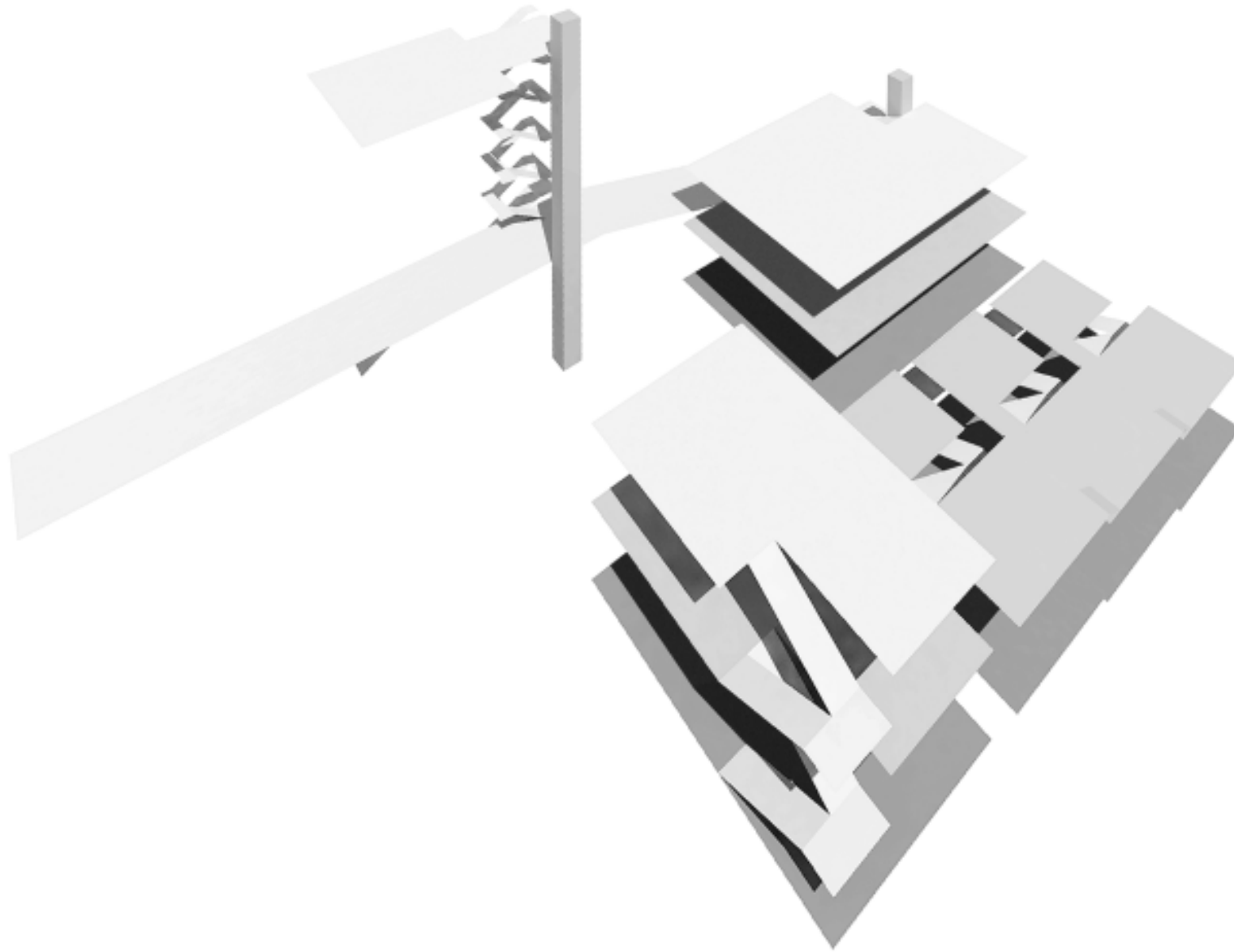
The study provided some variations in the roof suspended by the "Wall" and of the dialog between the roof and the exterior walls.



Earlier light studies of the small scale elements. A series of rooms is grouped along the wall. The wall is a loadbearing element. The roof structure variations create different light conditions inside a room.

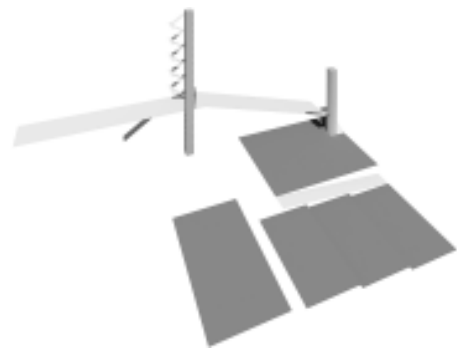
View looking west from the back of the project toward Main Street. Two scales, the scale of the town and the scale of the university together create a transitional condition on the site.



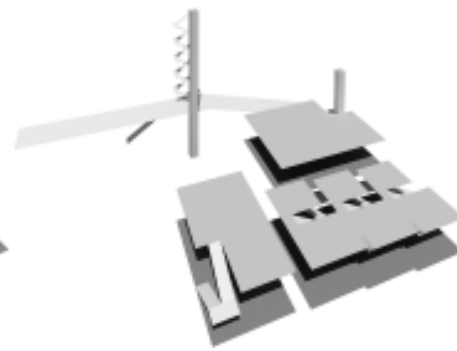


The vertical dimension is a very important part of the project. There are two primary directions the project takes visitors up and through. The View Room on the top is one of the primary elements. It is necessary to provide a safe and elegant way to get there.

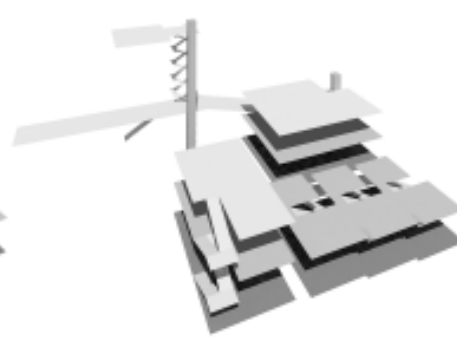
The stairs and an elevator take visitors from the ramp level to the View Room at the end of the wall, which touches Main Street. Other stairs and an elevator going to the ramp level on the other end of the wall, which touches the walkway in the back. There is also a stair from ground level on Main Street to the ramp.



Pedestrians' level

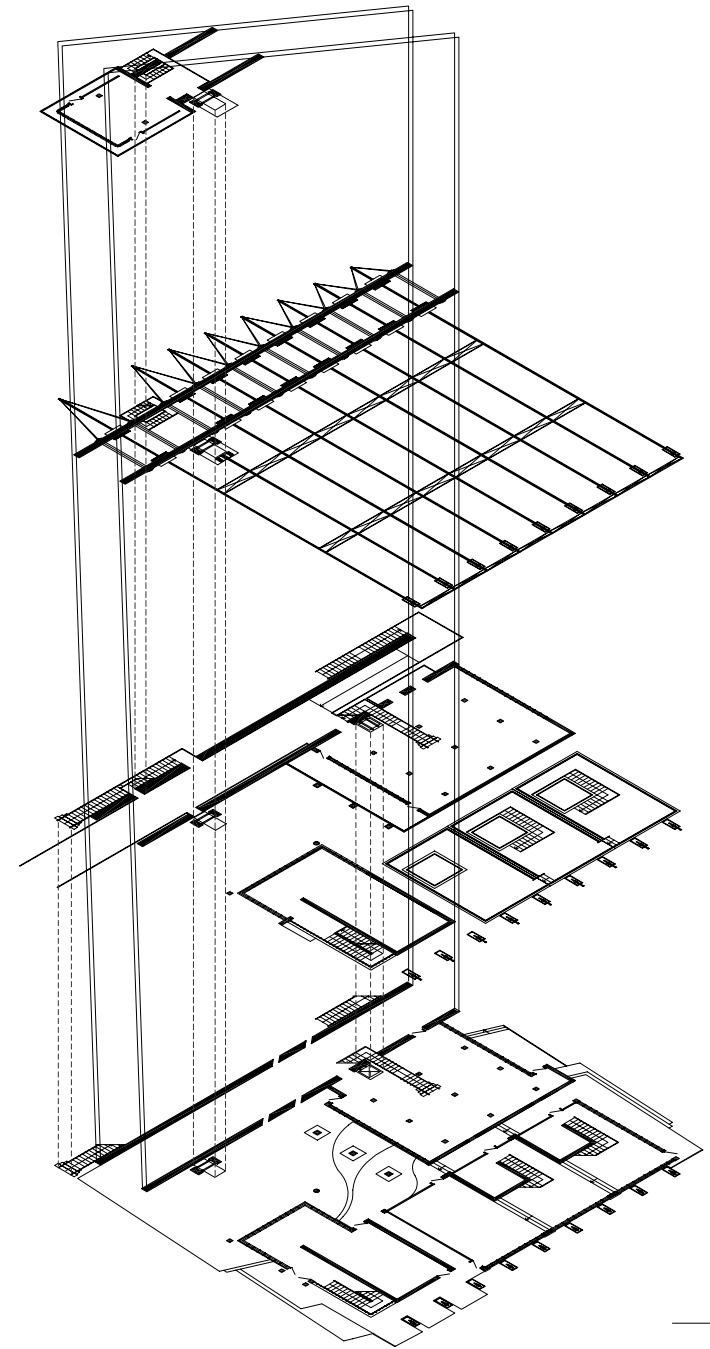


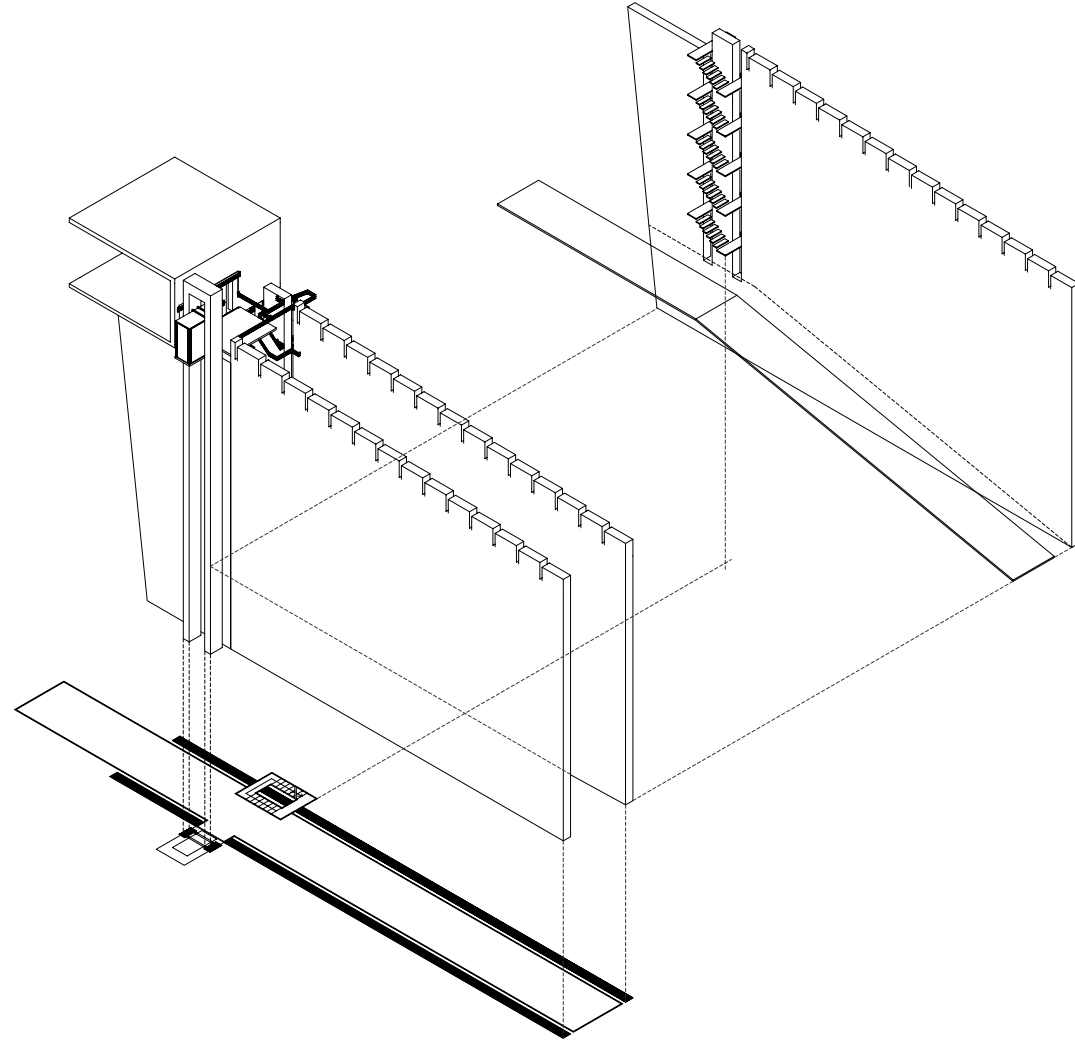
Shops' level.



Inhabited roofs' level.

Levels of the proposed buildings
with vertical communication
elements: elevators and stairs.

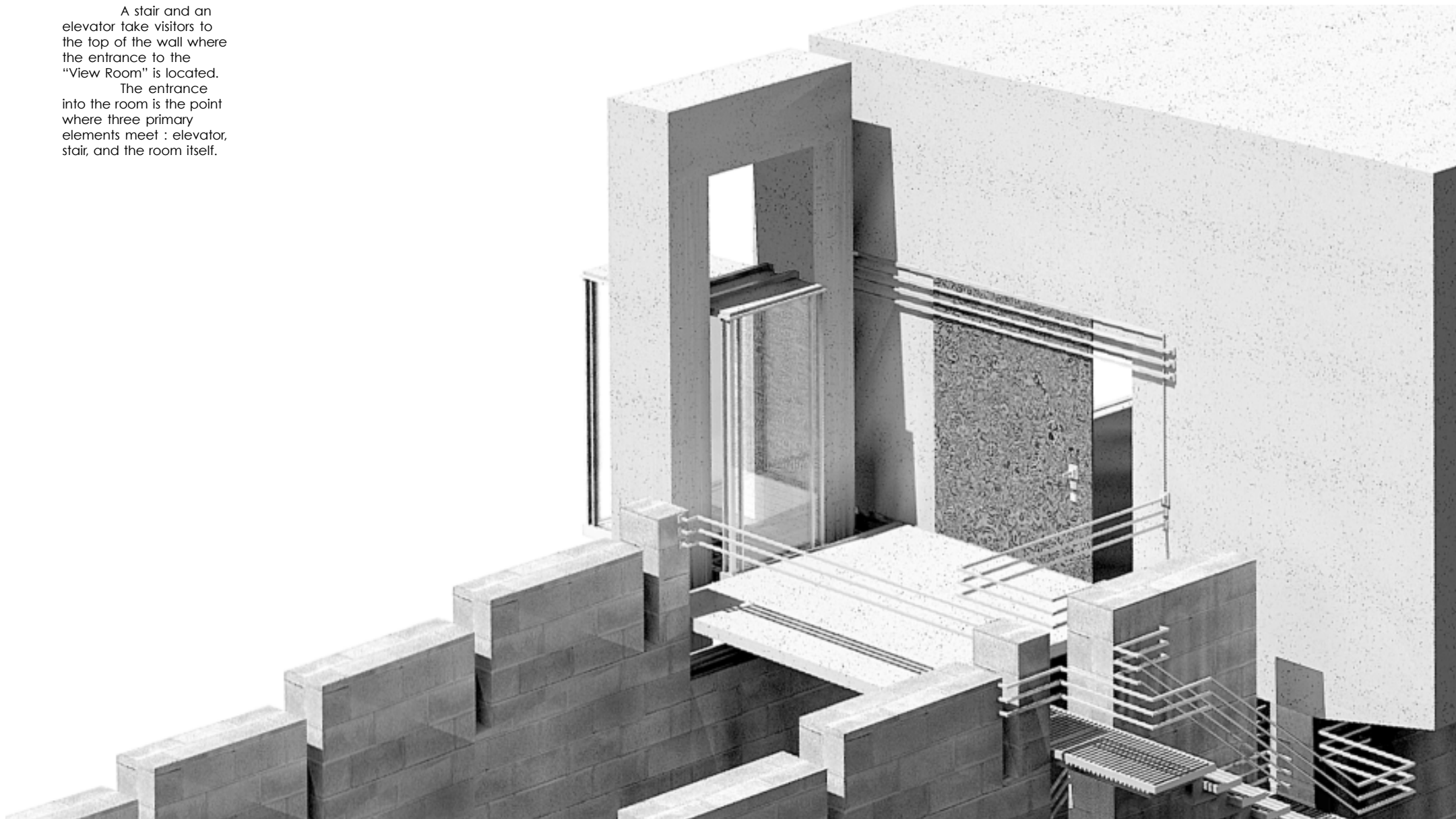




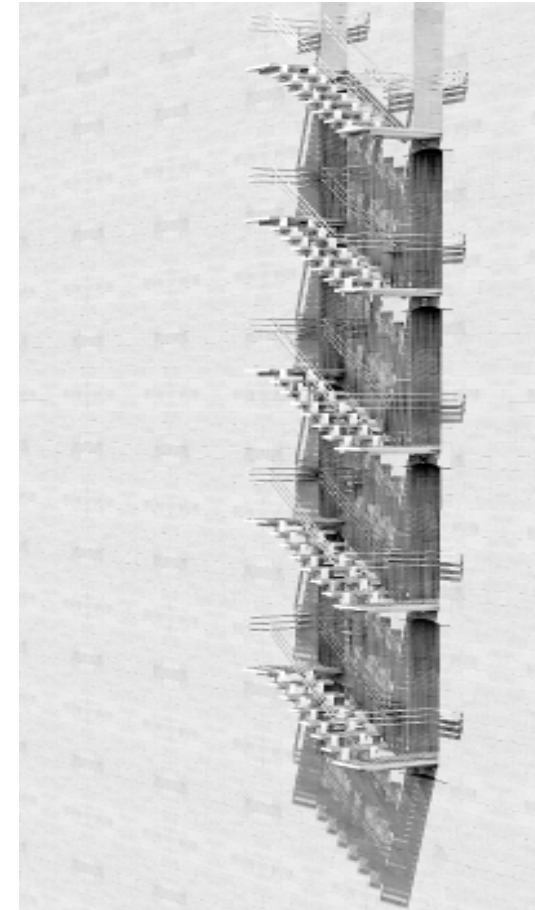
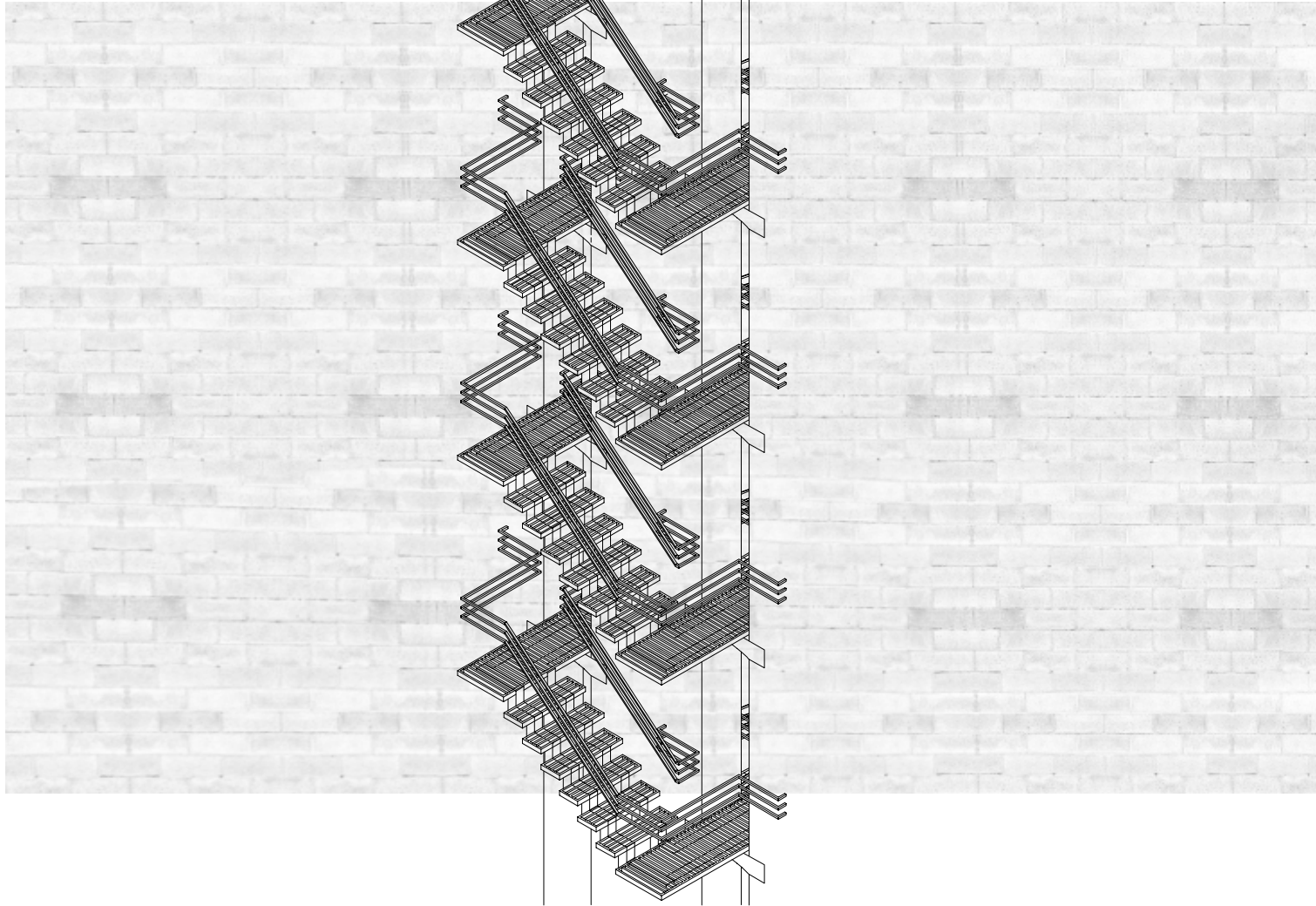
Integration of the wall, the stair, the elevator, the bridge, and the Top View Room in the project.

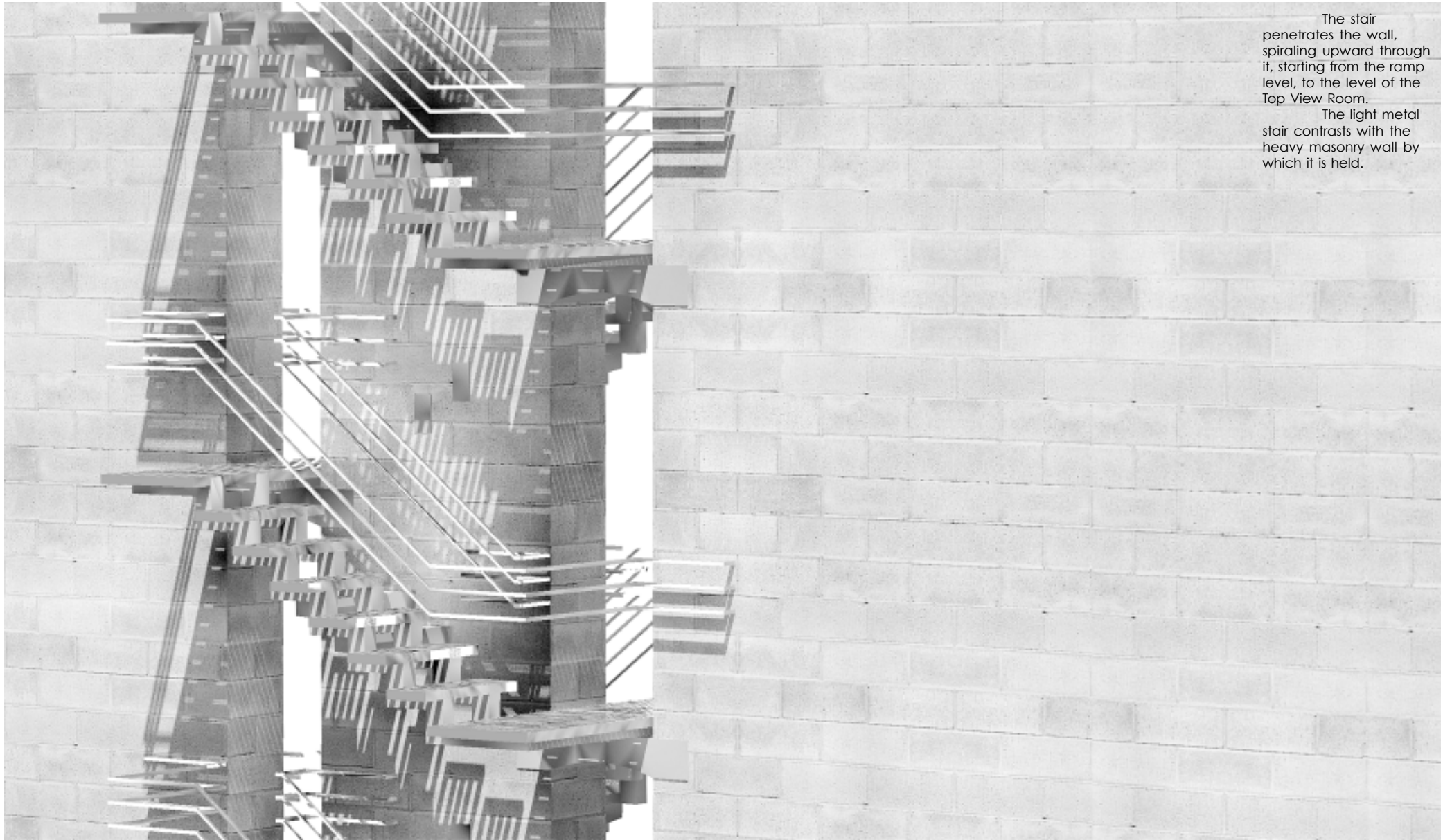
A stair and an elevator take visitors to the top of the wall where the entrance to the "View Room" is located.

The entrance into the room is the point where three primary elements meet : elevator, stair, and the room itself.



Contrast between light metal stair
and heavy masonry wall.

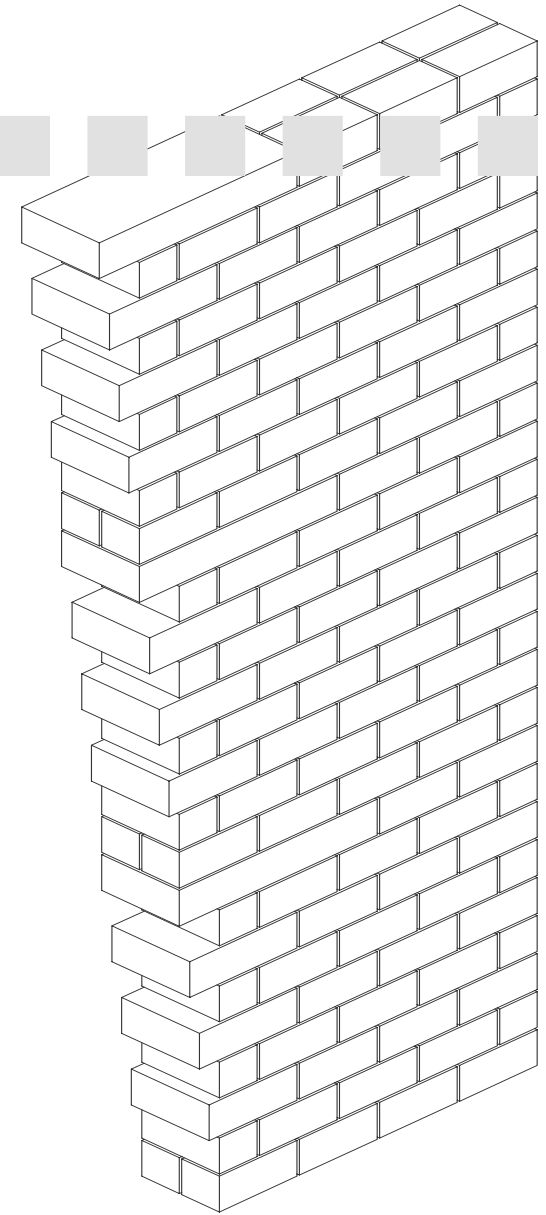


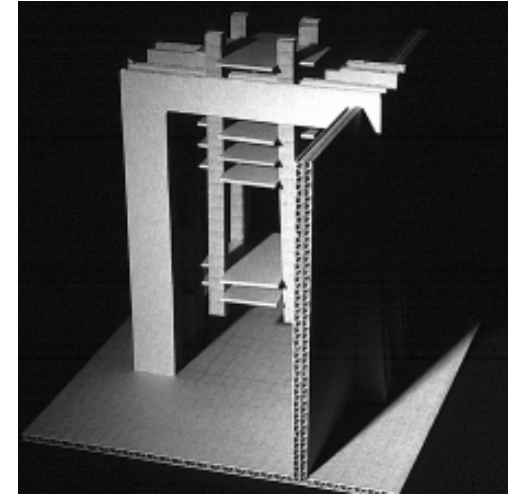
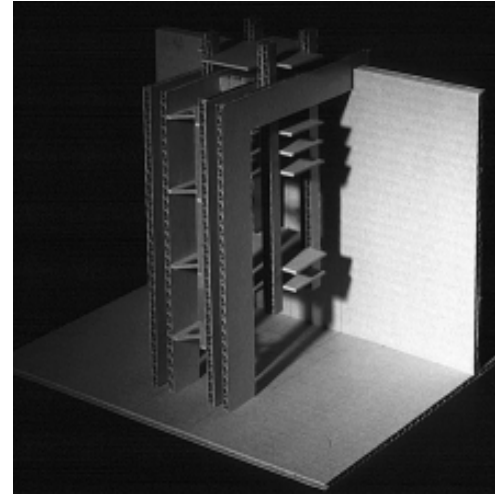
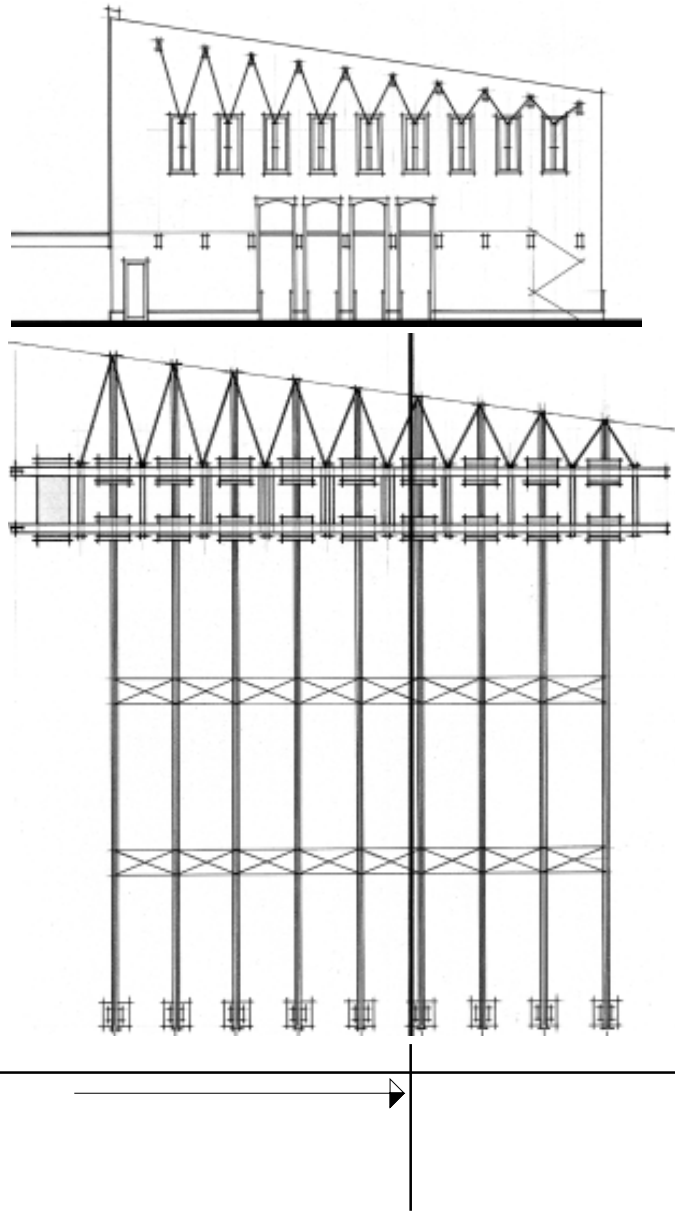


The stair penetrates the wall, spiraling upward through it, starting from the ramp level, to the level of the Top View Room.

The light metal stair contrasts with the heavy masonry wall by which it is held.

the wall



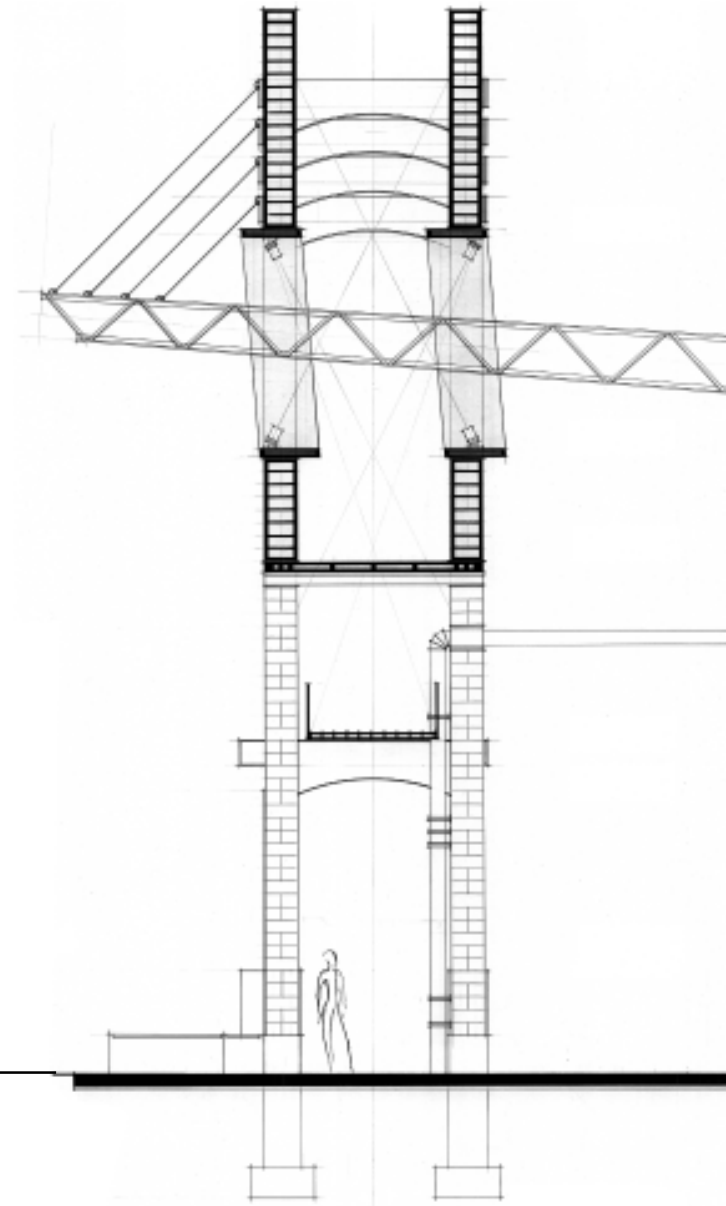


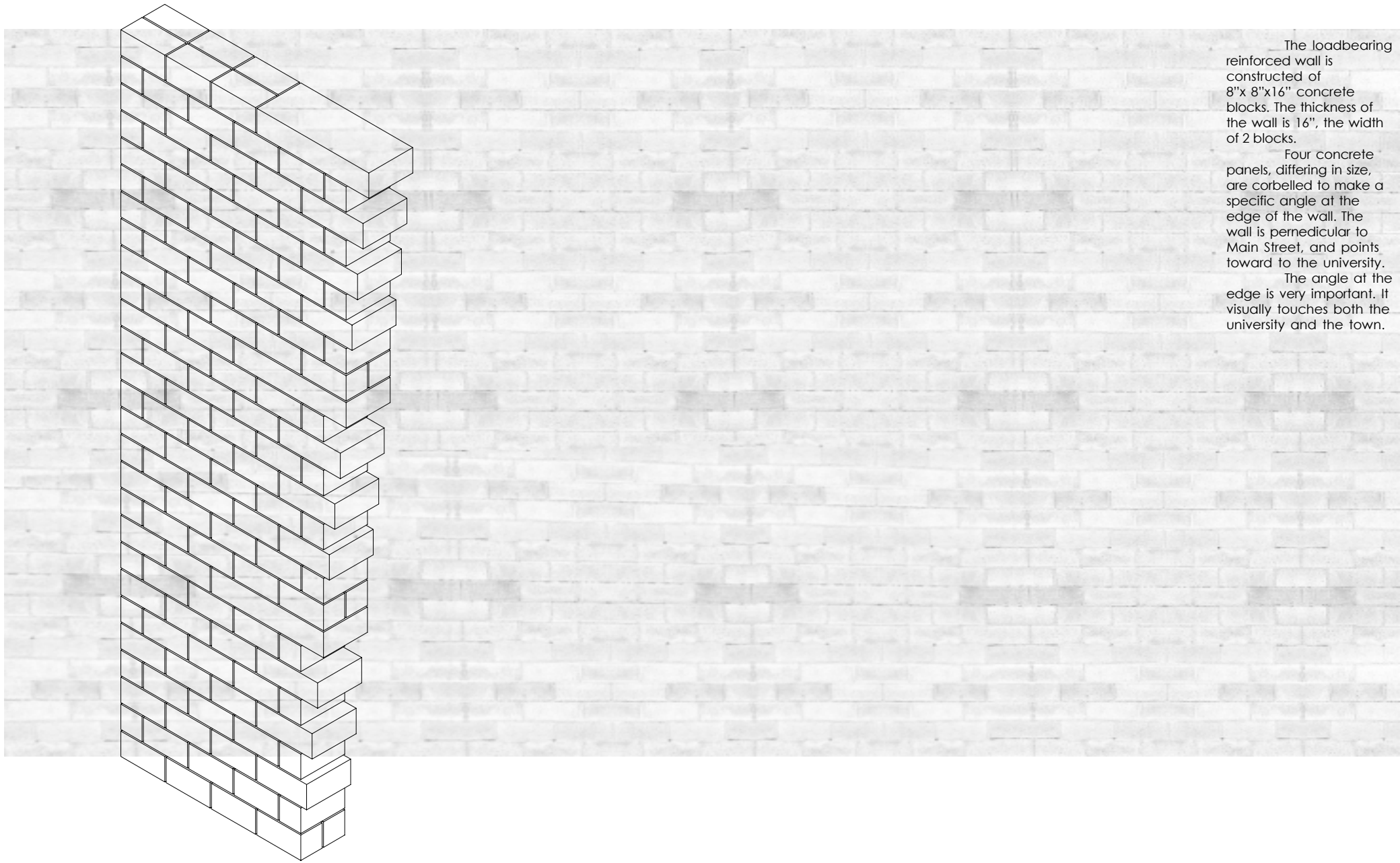
Study model of the integration of the wall and tall element. The tall building is suspended by the structural elements. Those elements are supported by independent feet on one end and supported by the wall on the other end.

The original idea of the structure of a tall element or landmark is base for further development of the interaction of the wall and the roof structure in the project.

The trusses of the roof structure are supported by independent feet on one side and are suspended by the wall on the other side.

The two walls are held together with stiffeners. This makes the wall a strong and stable loadbearing element.

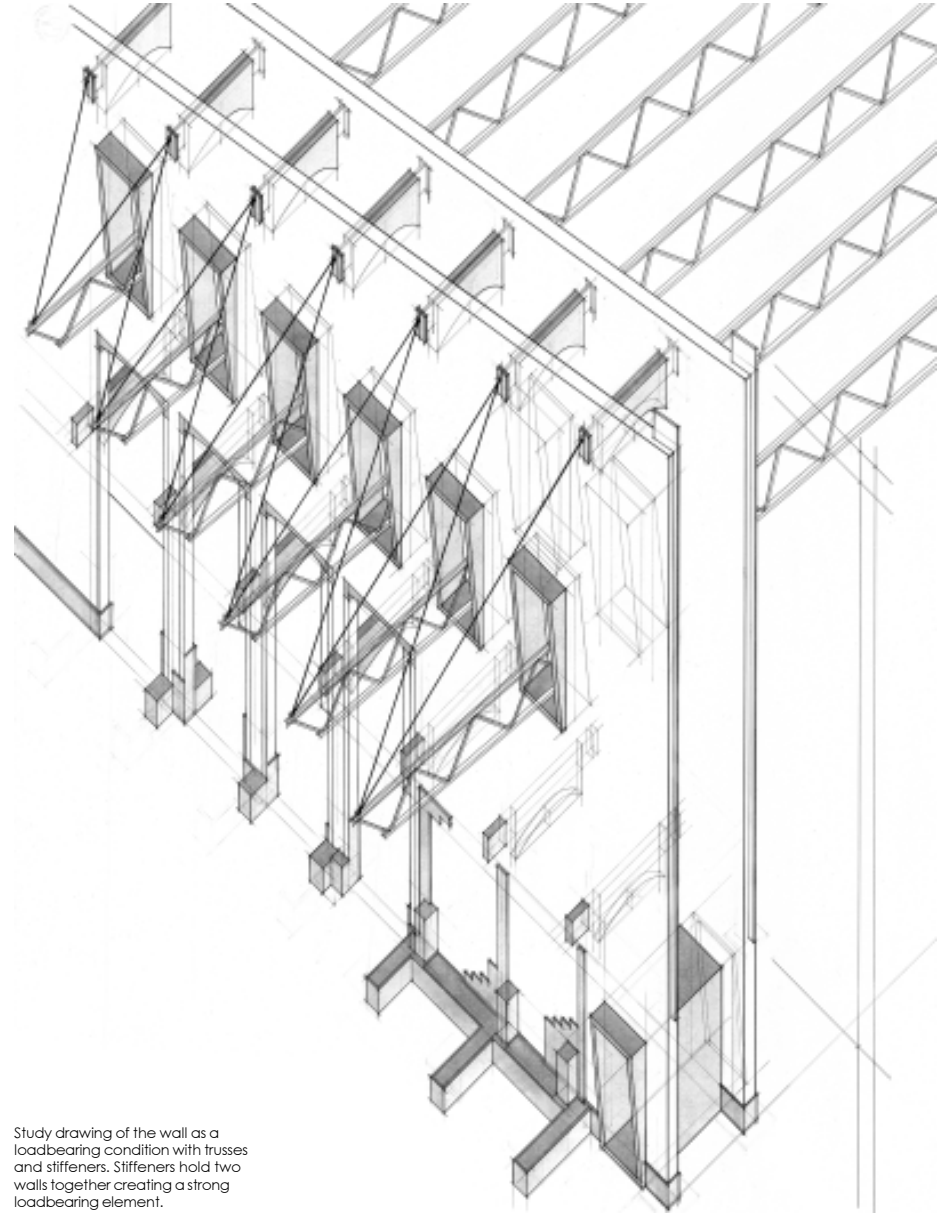




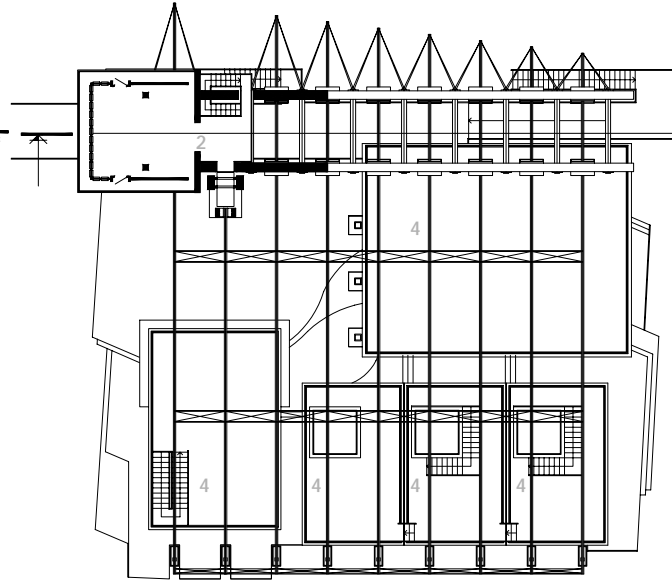
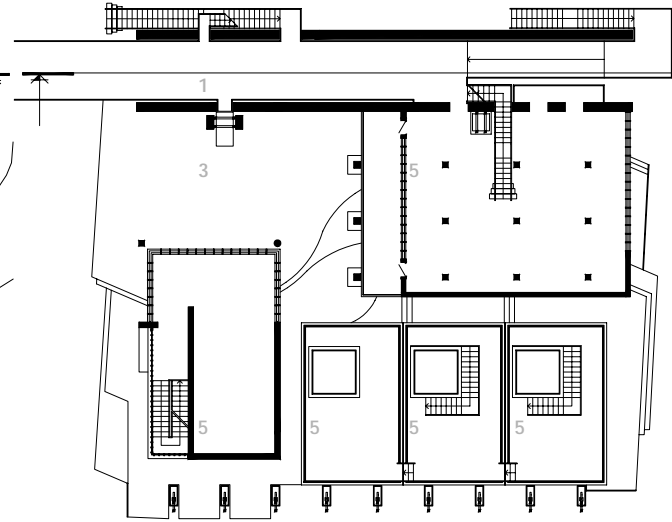
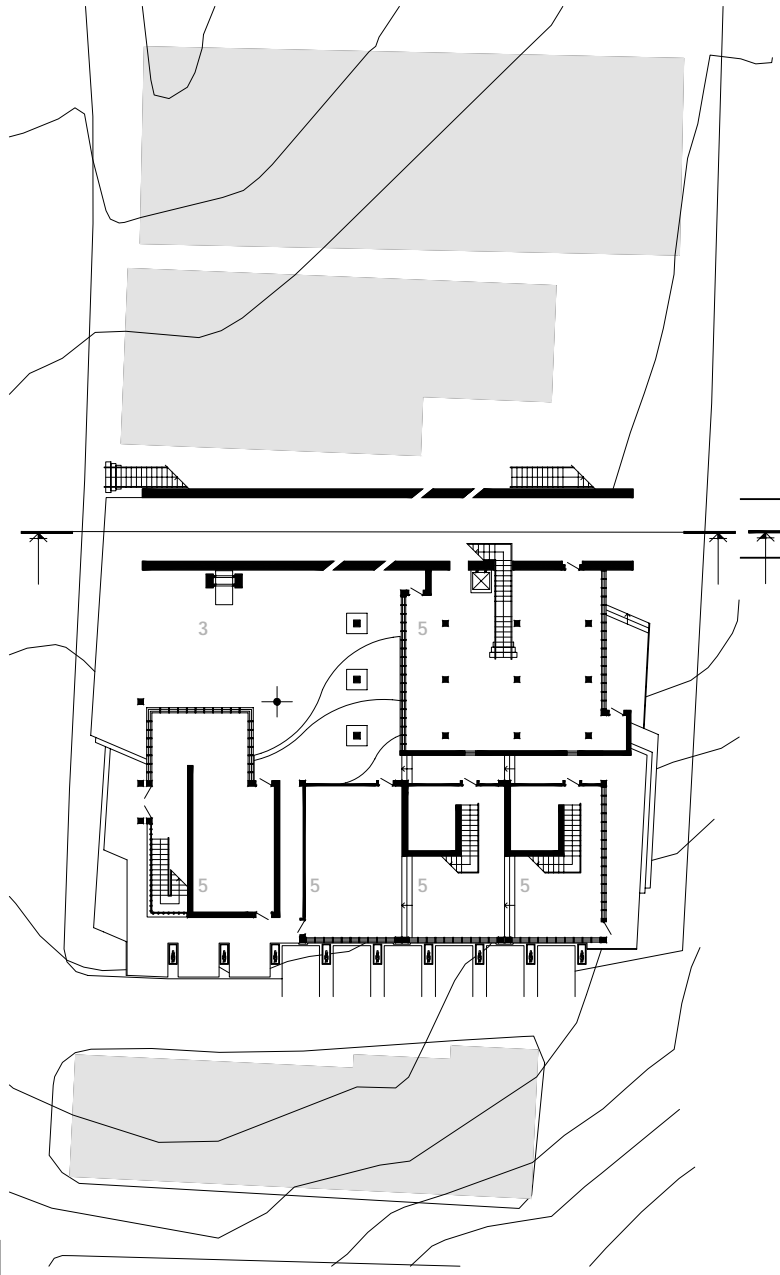
The loadbearing reinforced wall is constructed of 8"x 8"x16" concrete blocks. The thickness of the wall is 16", the width of 2 blocks.

Four concrete panels, differing in size, are corbelled to make a specific angle at the edge of the wall. The wall is perpendicular to Main Street, and points toward to the university.

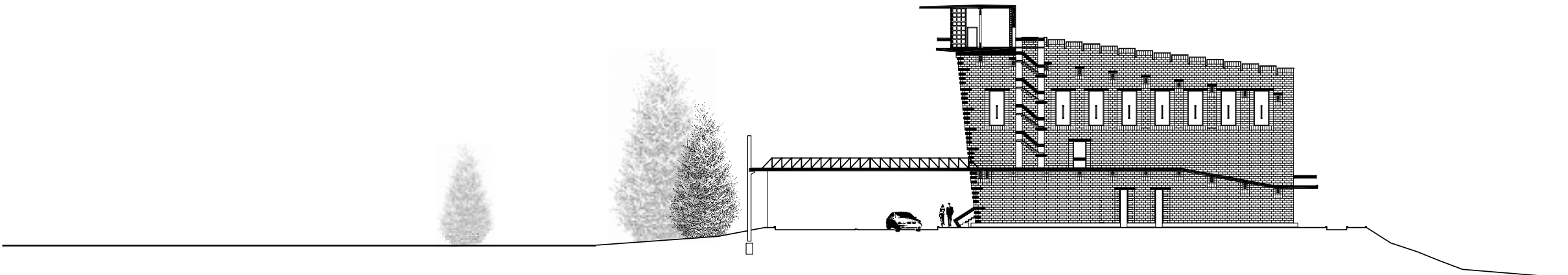
The angle at the edge is very important. It visually touches both the university and the town.



Study drawing of the wall as a loadbearing condition with trusses and stiffeners. Stiffeners hold two walls together creating a strong loadbearing element.



- Legend:
- 1. bridge
 - 2. top view room
 - 3. plaza
 - 4. inhabited roofs
 - 5. food/entertainment/services



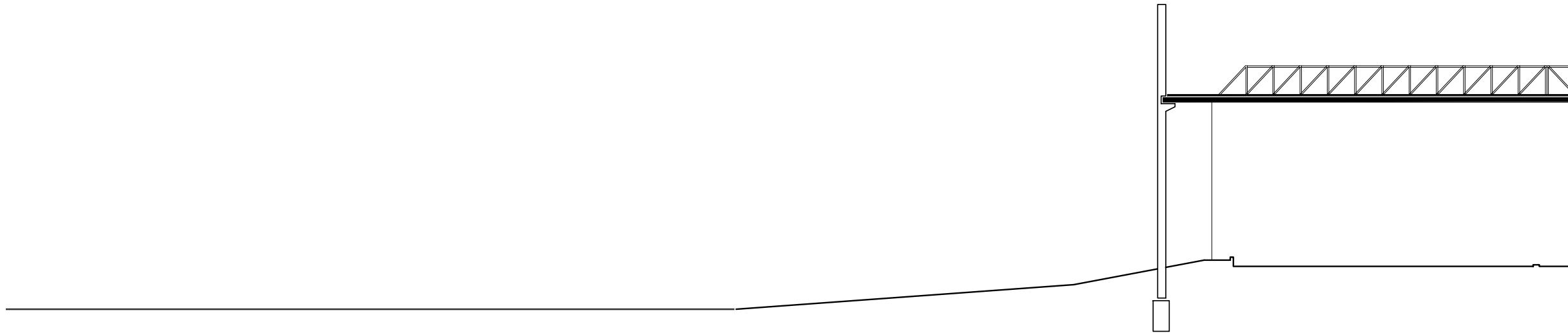
The bridge above Main Street crosses the street and takes pedestrians from ramp level to the ground level parking lot on the other side of Main Street. This bridge touches a ramp inside the wall and steps down, leading pedestrians to the ground level.

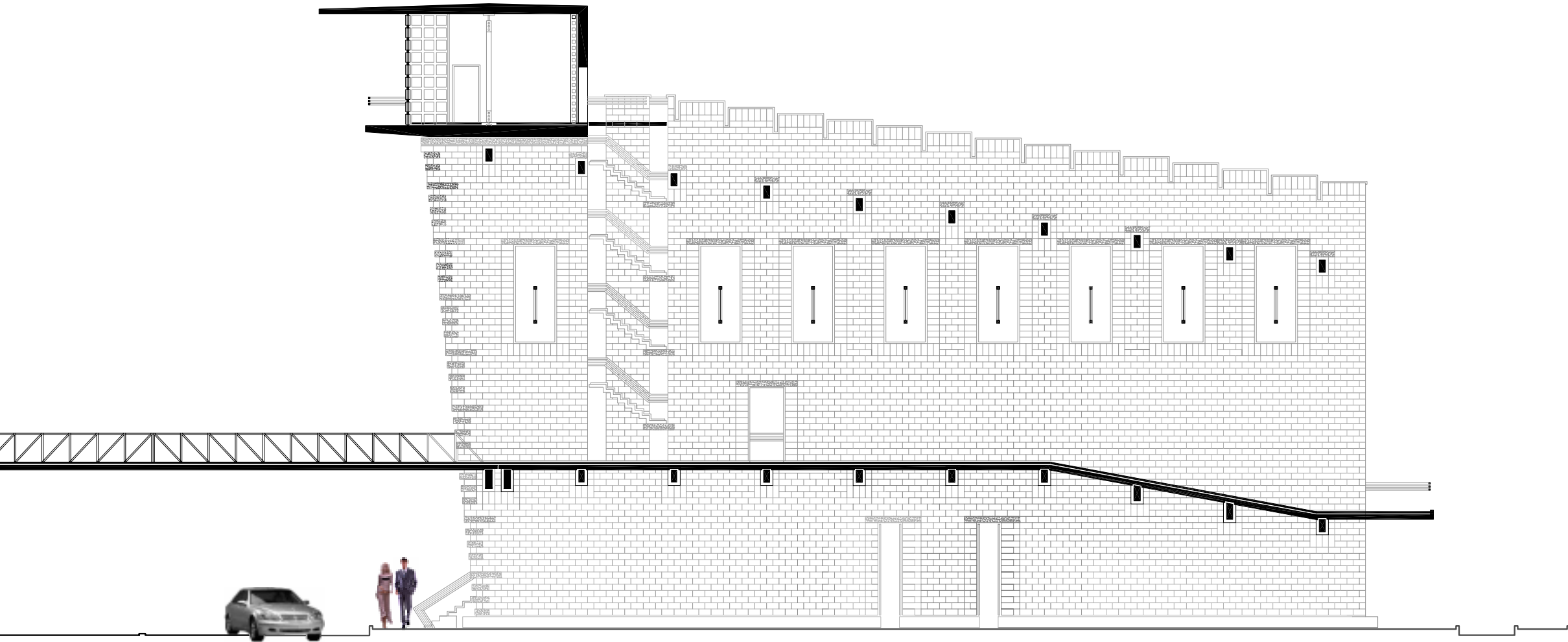
The lowest point of the bridge is 15 feet above the roadway, so car traffic can easily pass underneath and people

can safely cross the street.

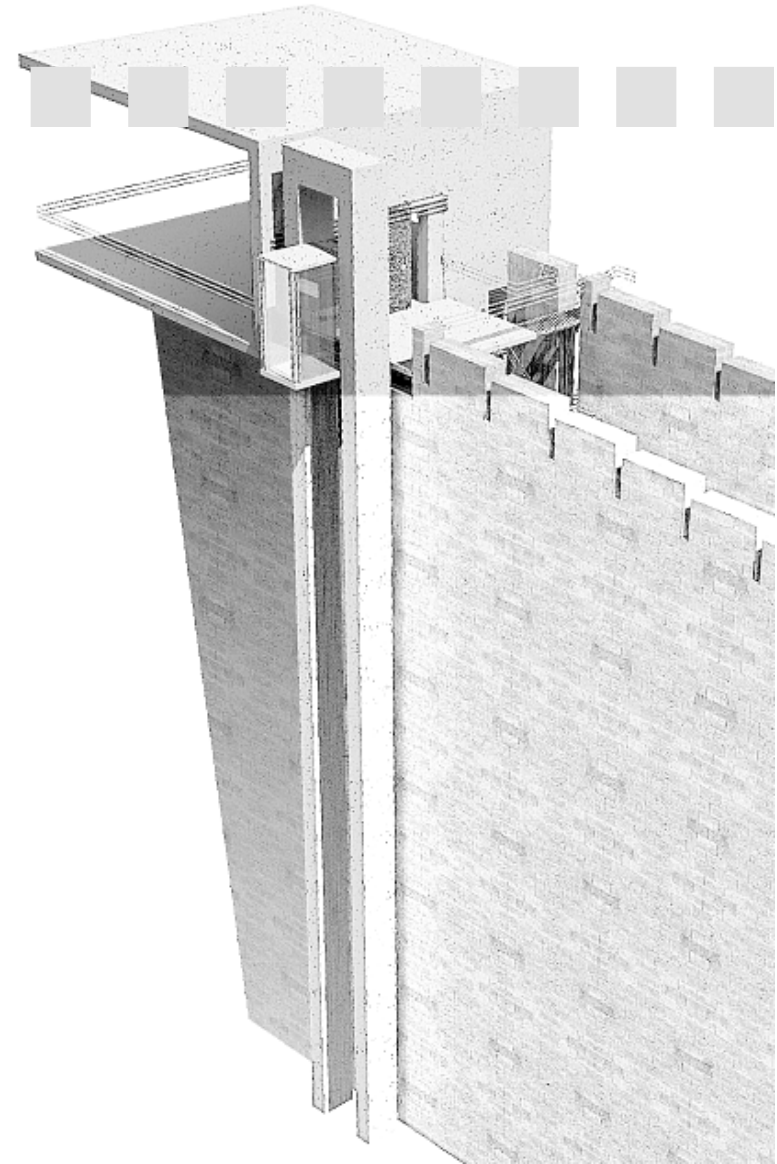
The ramp is at the same level as the second floor. There is an entrance to the adjacent retail building through the wall from the ramp.

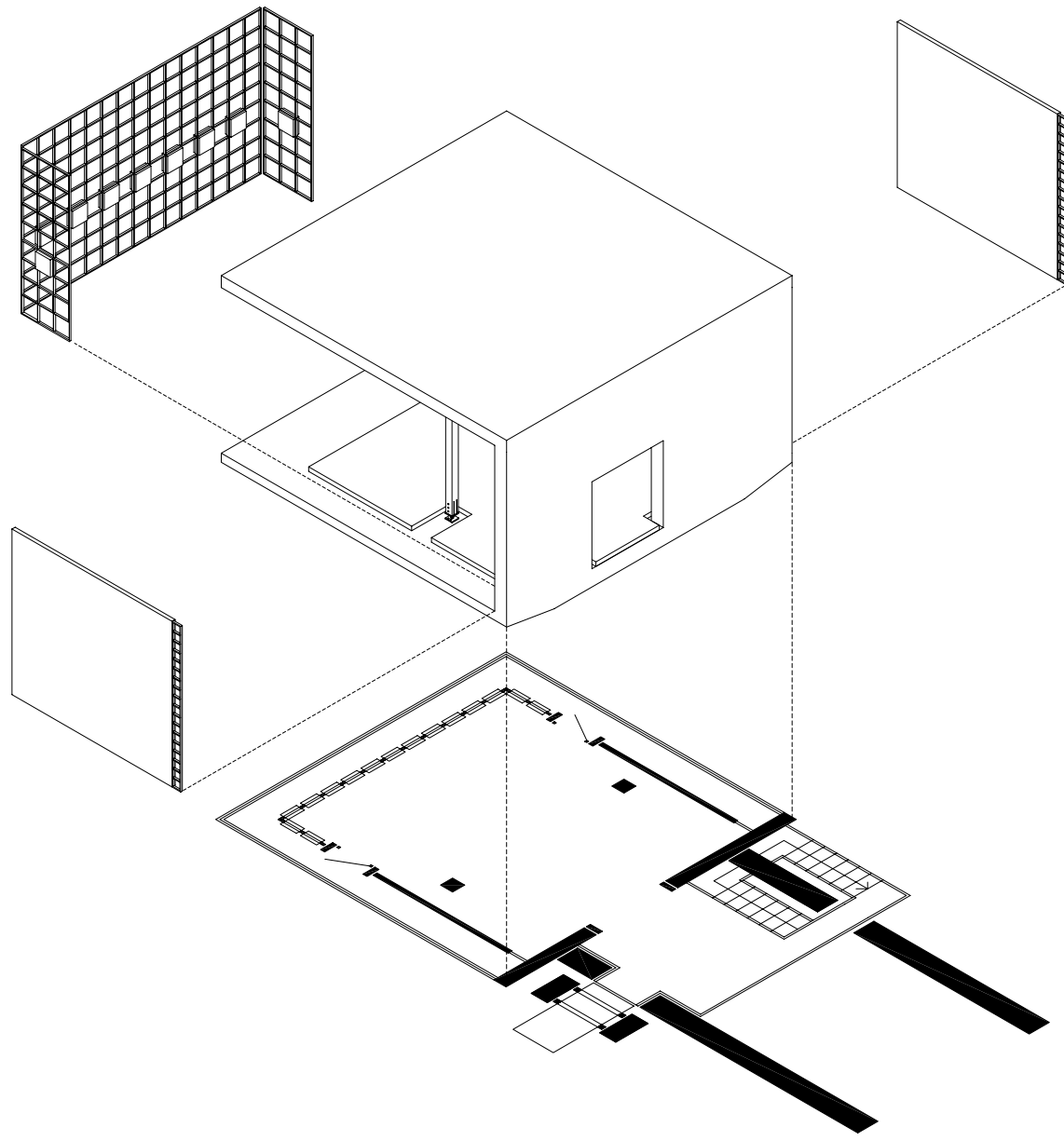
The section along the wall through the ramp shows the concrete block pattern. The pattern reflects brick buildings in the downtown. It also relates to the university scale.





the room

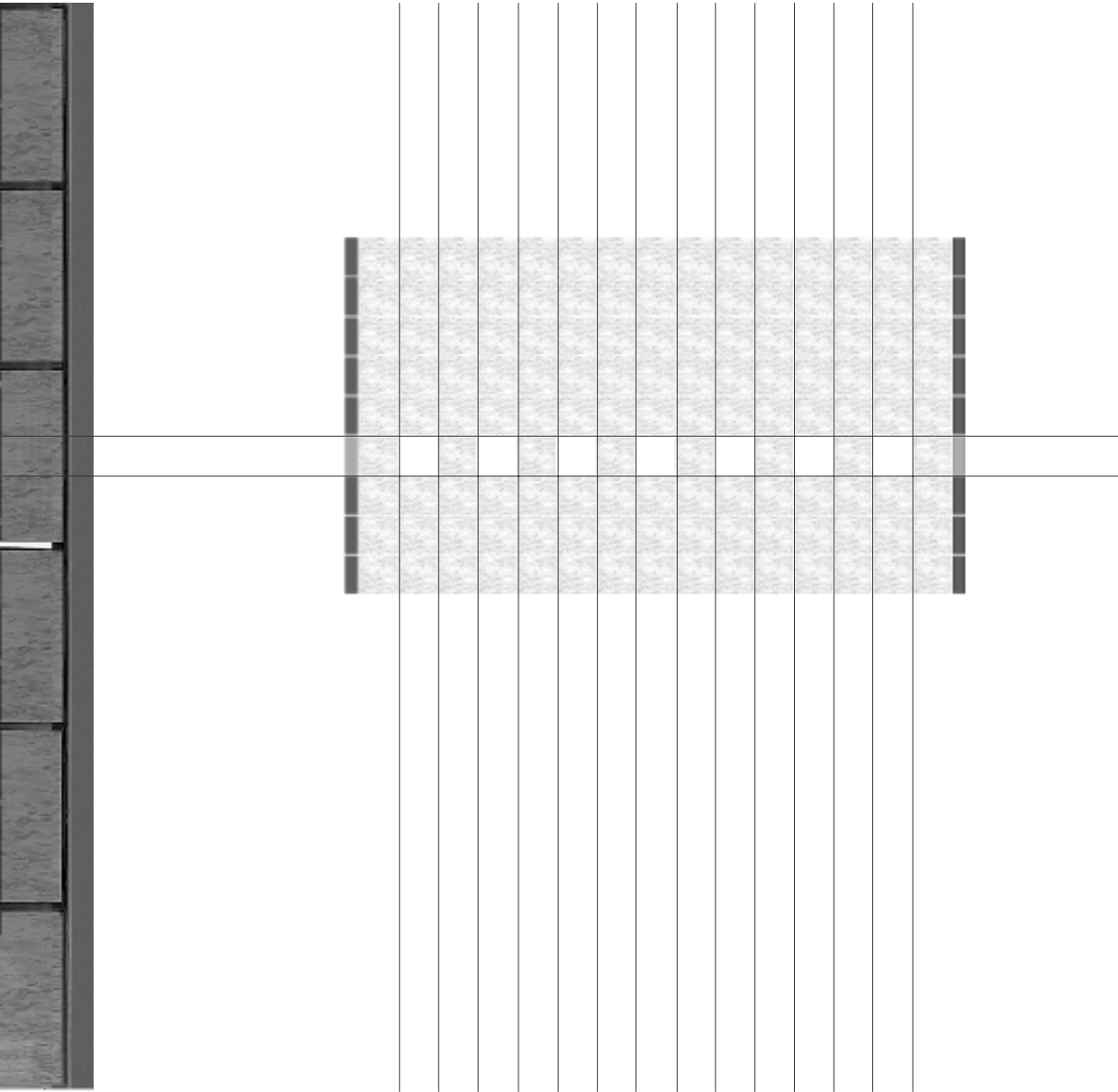




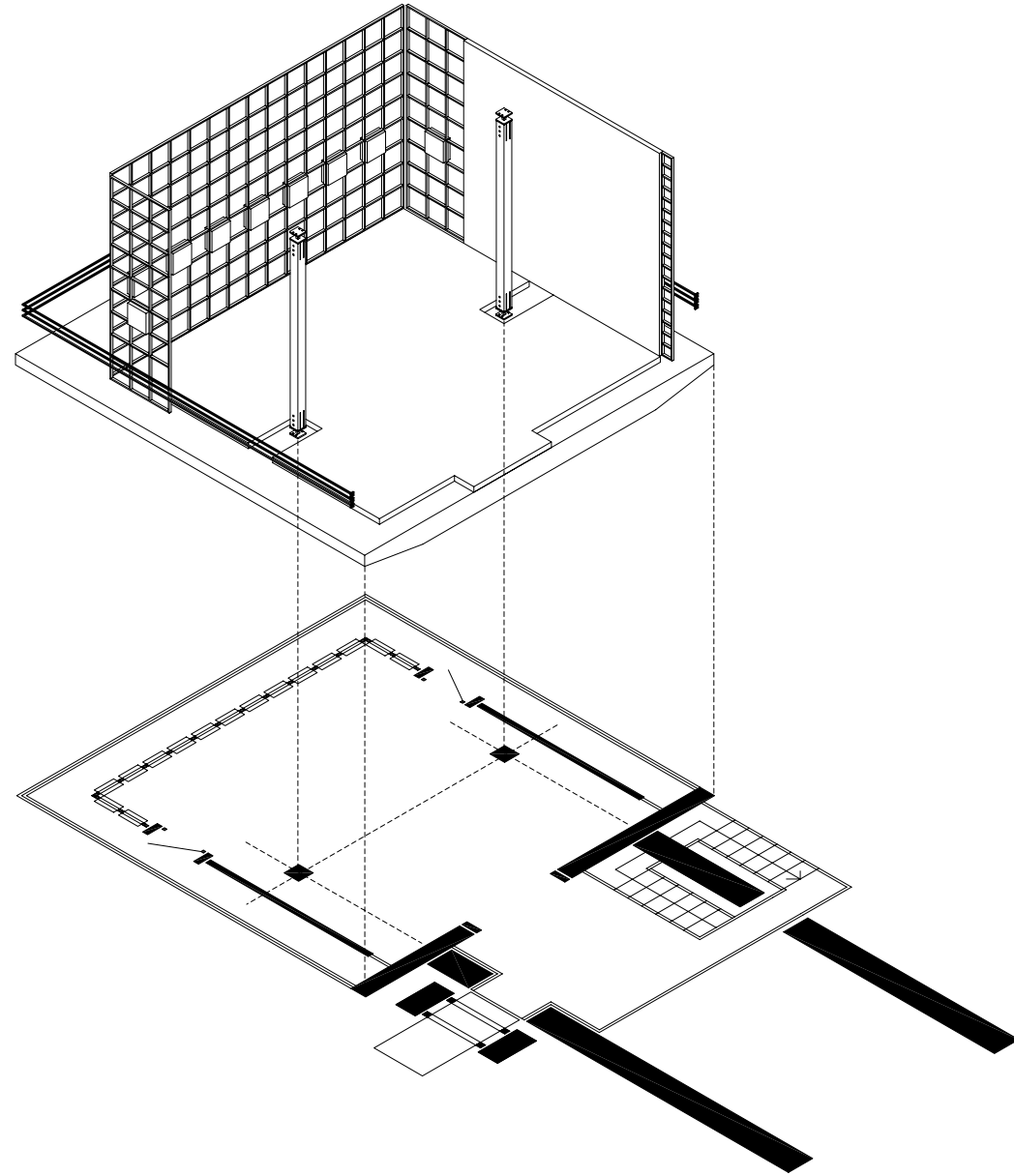
The west facing wall of the room is made of semitransparent glass blocks. Inserted in this wall is a band of clear glass at the approximate level of the human eye. The openings invite visitors to step out on the balcony.

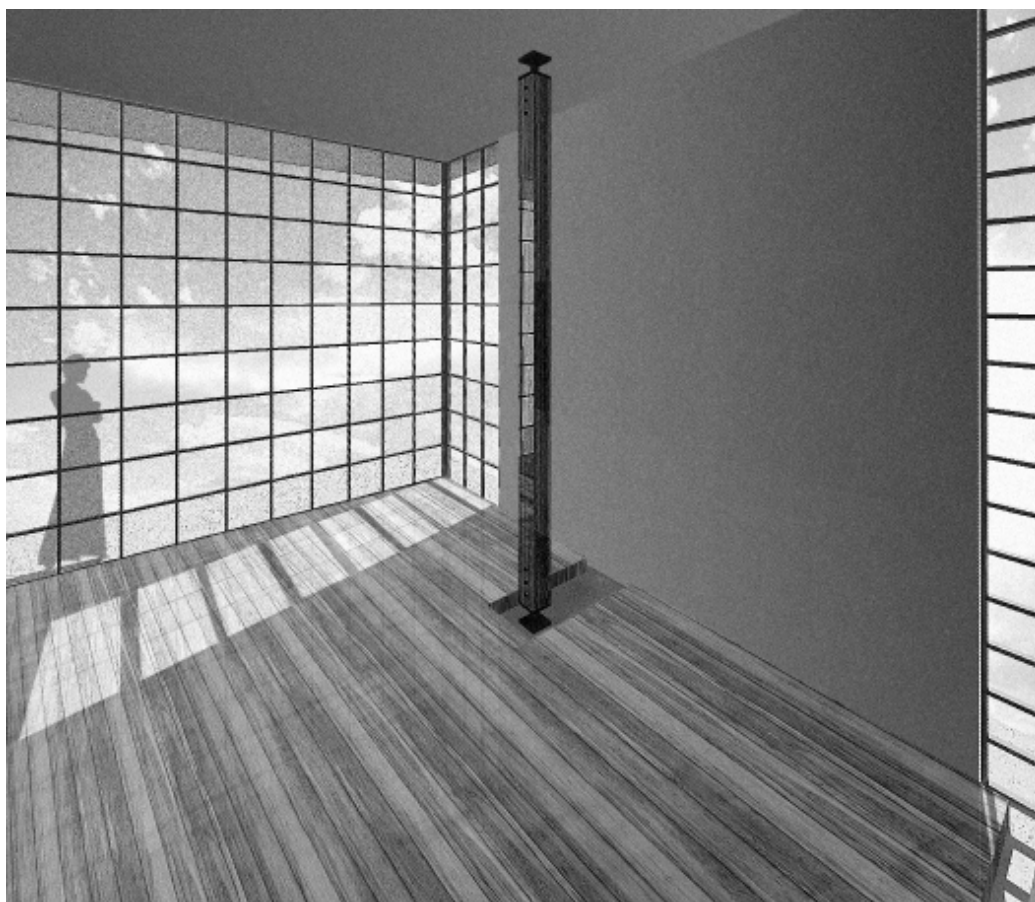


View looking inside the room from the balcony.

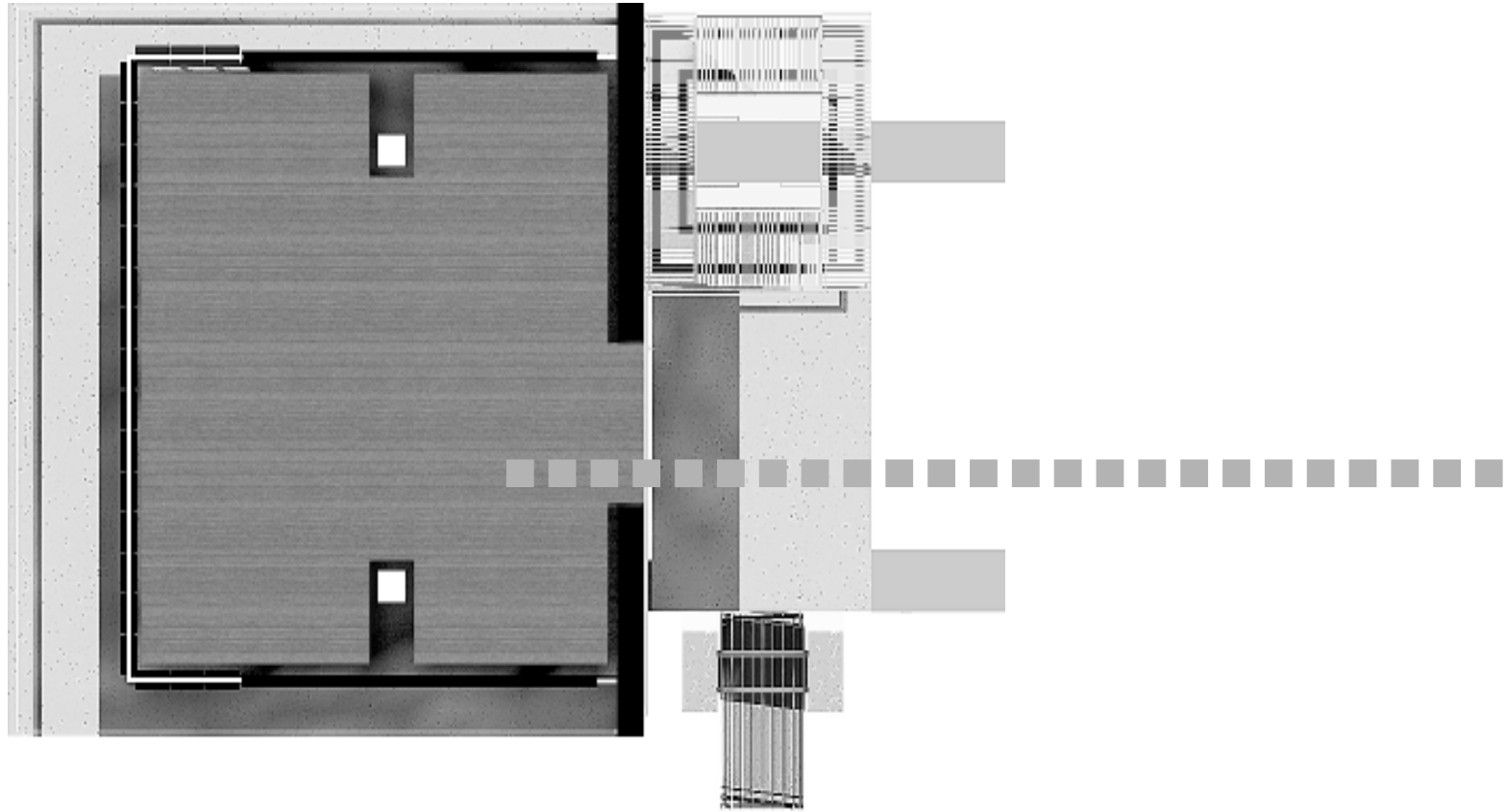


Composition of translucent and transparent glass panels.





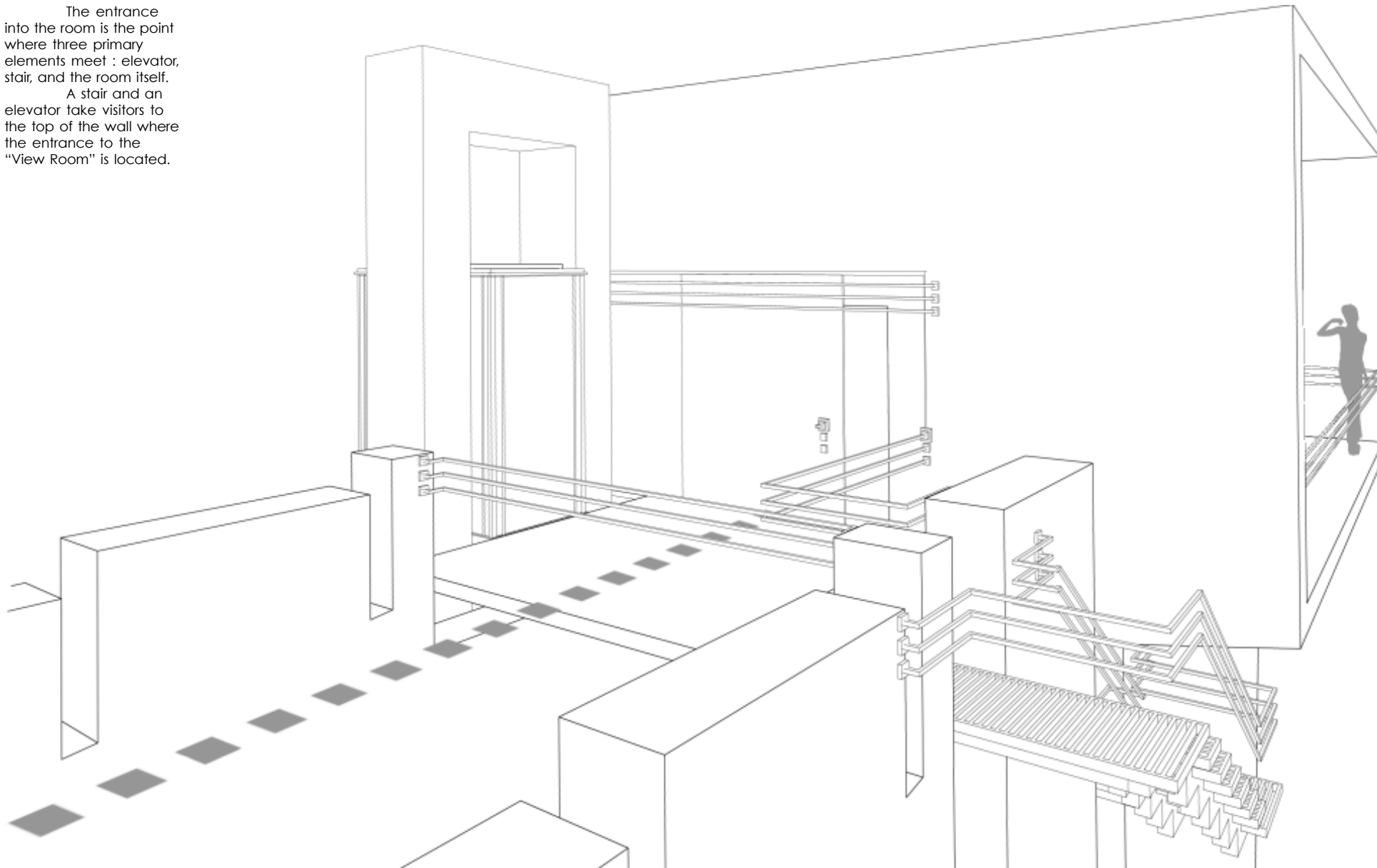
Interior view of the room.



Plan view of the room.

The entrance into the room is the point where three primary elements meet : elevator, stair, and the room itself.

A stair and an elevator take visitors to the top of the wall where the entrance to the "View Room" is located.



conclusion ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■



Pedestrians' traffic on the Drill Field during a weekday, Friday, 3pm.



Empty street condition. Picture of the site, Friday, 3pm.

Learning in Architecture

The goal of the project is to bring people on the very important point where the university and the town come together.

Actually, people are already there, but there is no place which allows them to become aware of this meeting point. The goal is to make a space for them to inhabit.

Another goal is to transform the formal entrance to the university into a place which is used by people. (A literal sign is not needed to recognize two different conditions of the town.)

So several primary questions are raised :

How to make the building become a gate?

How to make an architectural element (the wall) become an element which separates and connects at the

same time?

How to make the scale of the university and the scale of the town work together, shoulder by shoulder?

While I was trying to find answers to all those questions, some interesting discoveries occurred :

It is more useful and exciting to jump from one scale to another in the process of developing a project, to skip some steps and come back later when it is necessarily.

It is very important to recognize the presence of the materials at the beginning, because materiality is one of the primary elements of AN architecture.

The site is given, but it is up to an architect to choose which part to pay attention to on the site, so THAT part will acquire a greater presence.

The architecture of the project.

Two different scales are penetrating each other in the project. The scale of the town and the scale of the university meet at a point within the project and make a transition condition without losing their own individuality.

The "Big Room" structure collects smaller downtown oriented elements and organizes them into a kind of plaza.

The wall is one of the primary and most interesting elements. It connects two parts of the town on one hand and separates them on the other. The bridge and the ramp that this wall contains make the gate into the university and emphasize the differences between the university and the town at the same moment.

This project

was fun to work with and is a good lesson. The rest, time will show.

Notes / Credits

Unless otherwise noted, images are reproductions of original drawings, renderings, and photographs by the author.

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