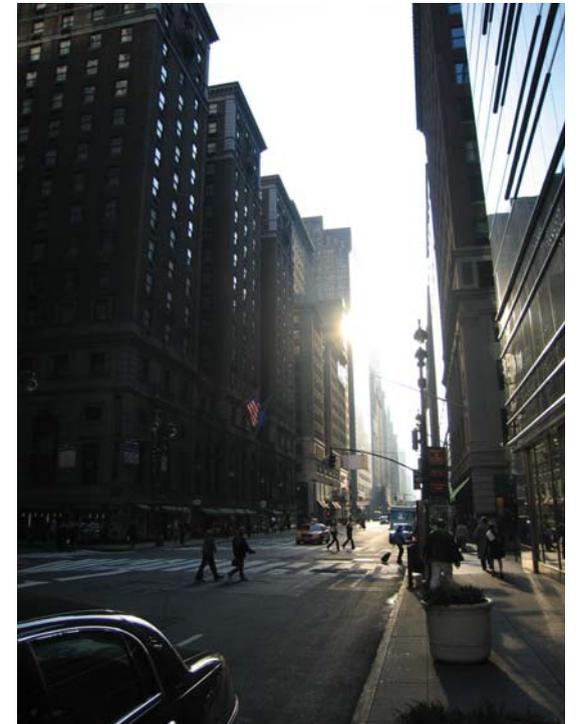
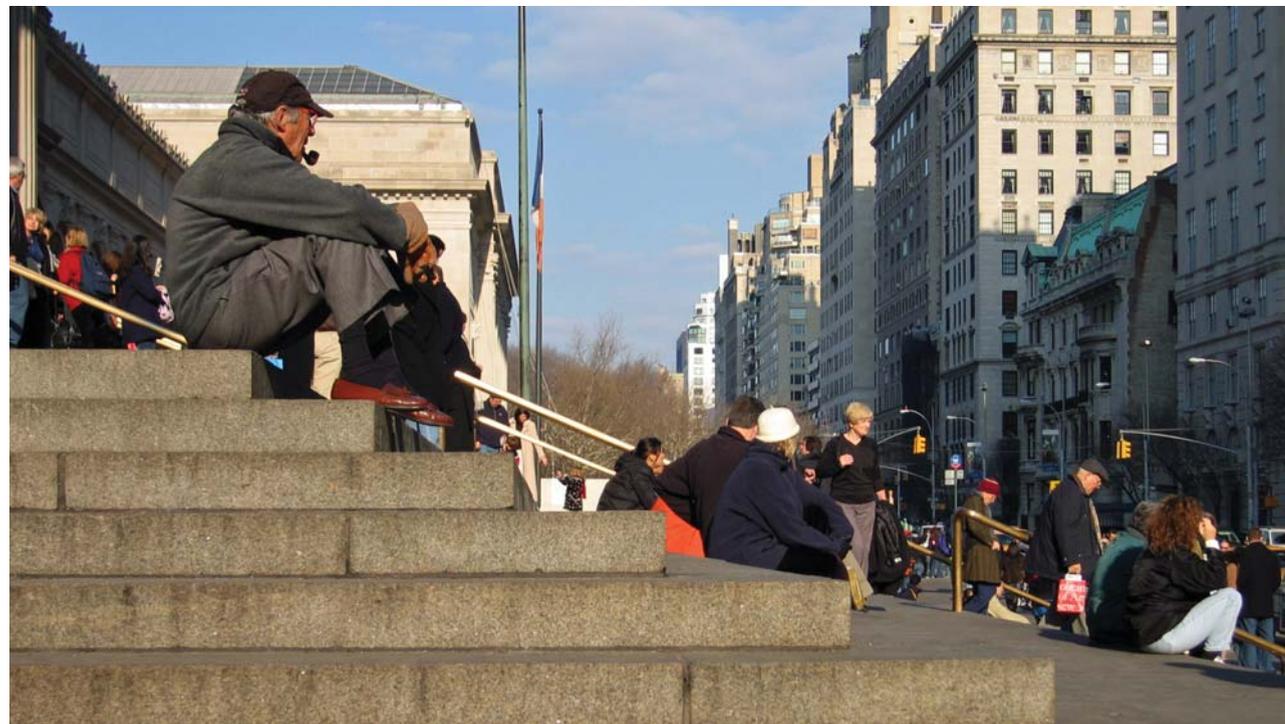
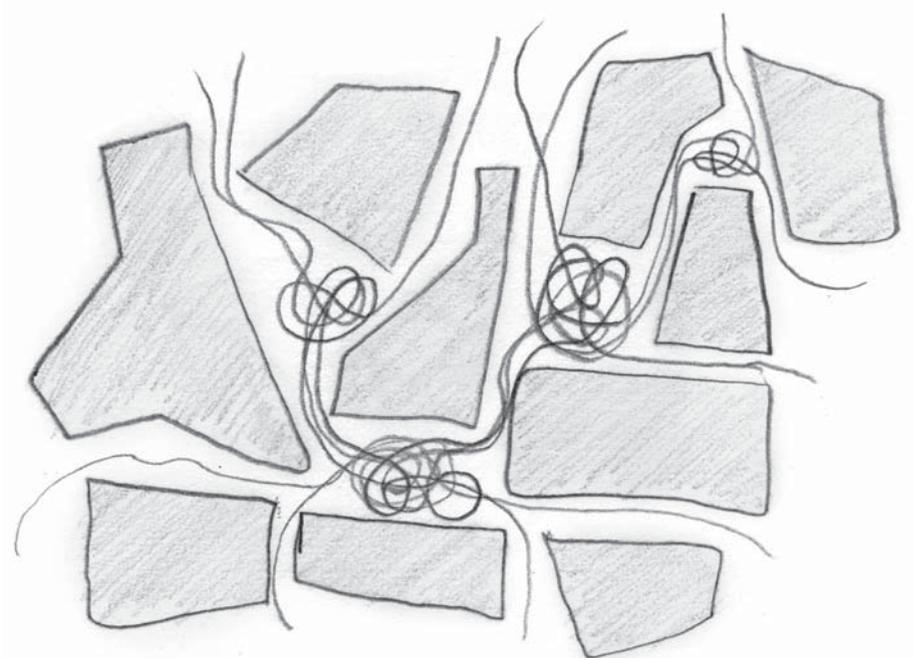


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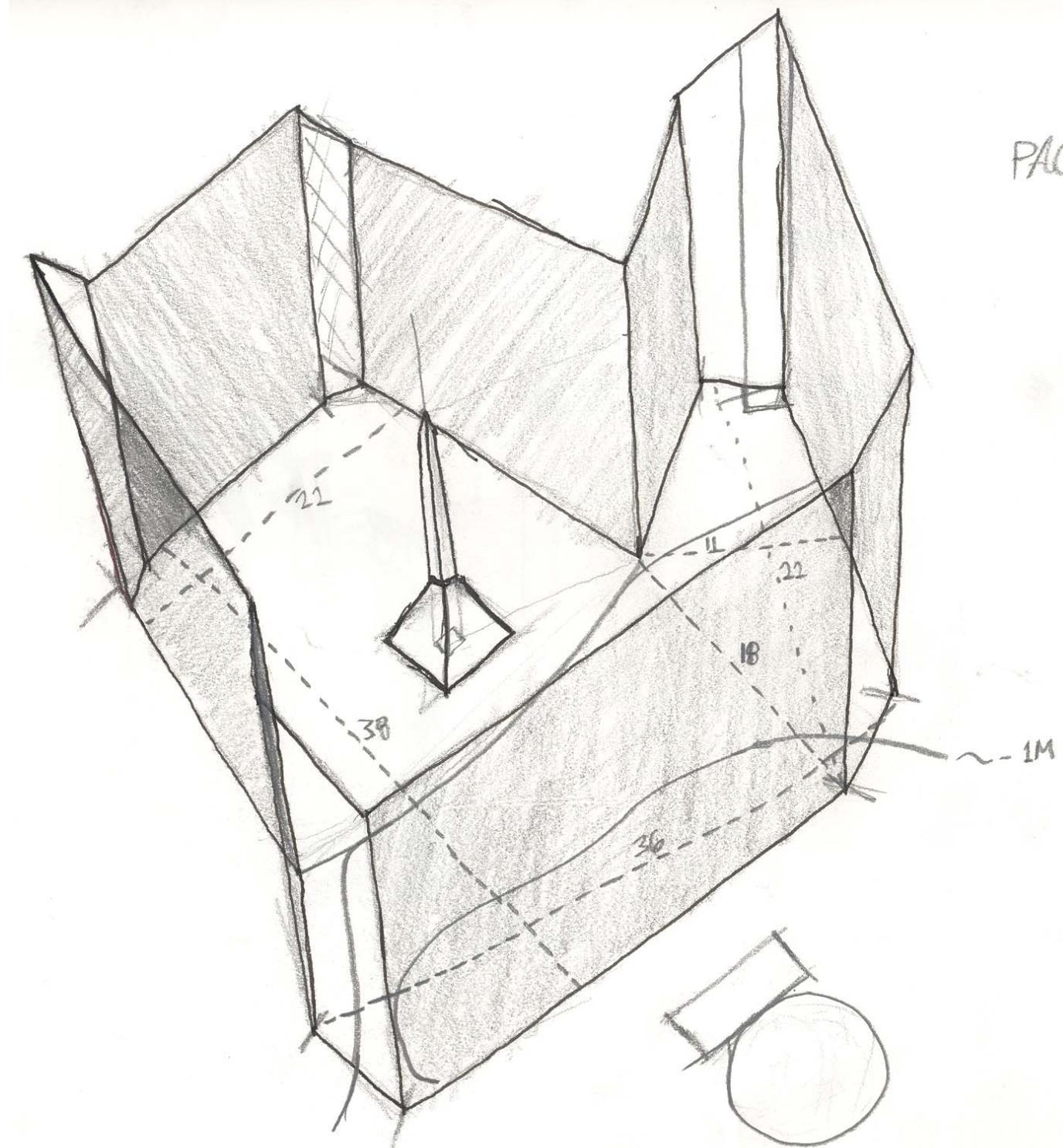
Abstract - 5
Within Each Building - 9
Clear Horizon - 11
The Site - 23
Construction - 27
The Floor - 28
Color - 29
Warped Planes - 31
Glass Surfaces - 38
Auditoriums in Section - 42
At Night... - 46
Findings - 49
References - 51
Vita - 53



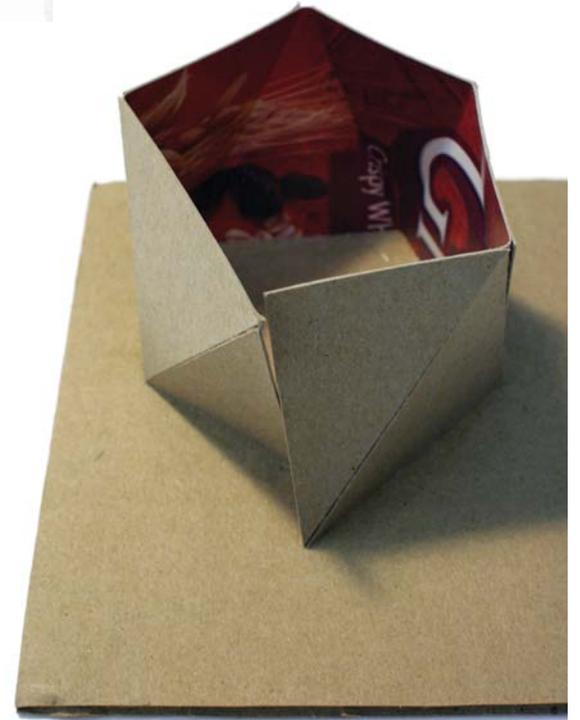
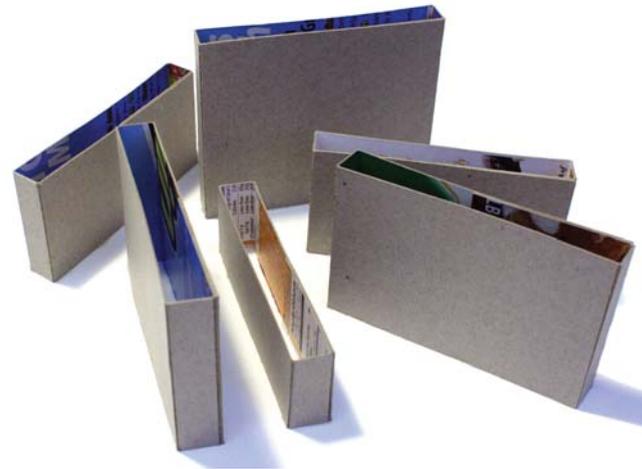
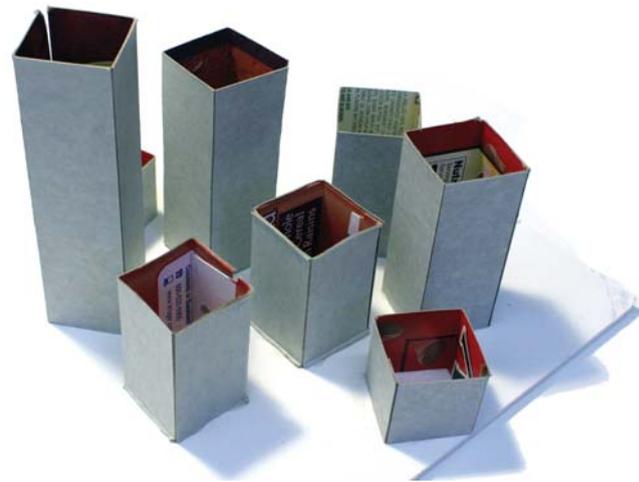
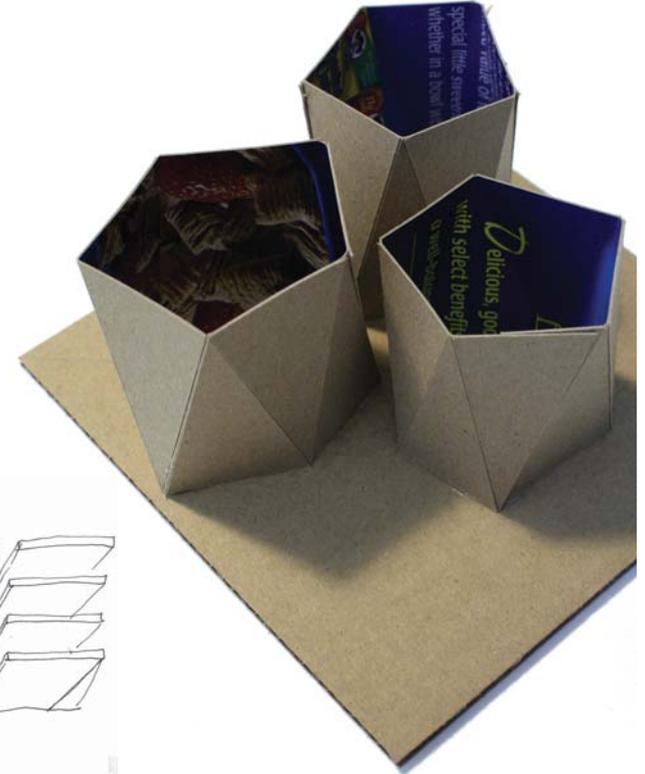
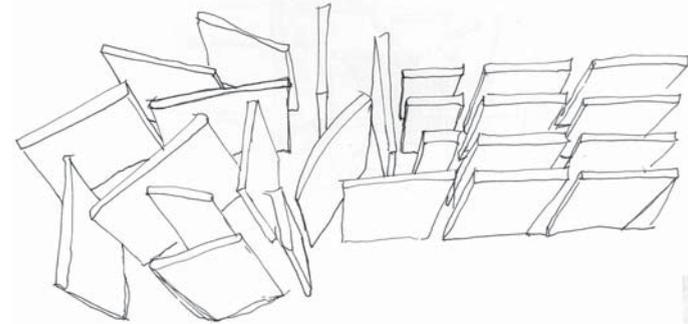
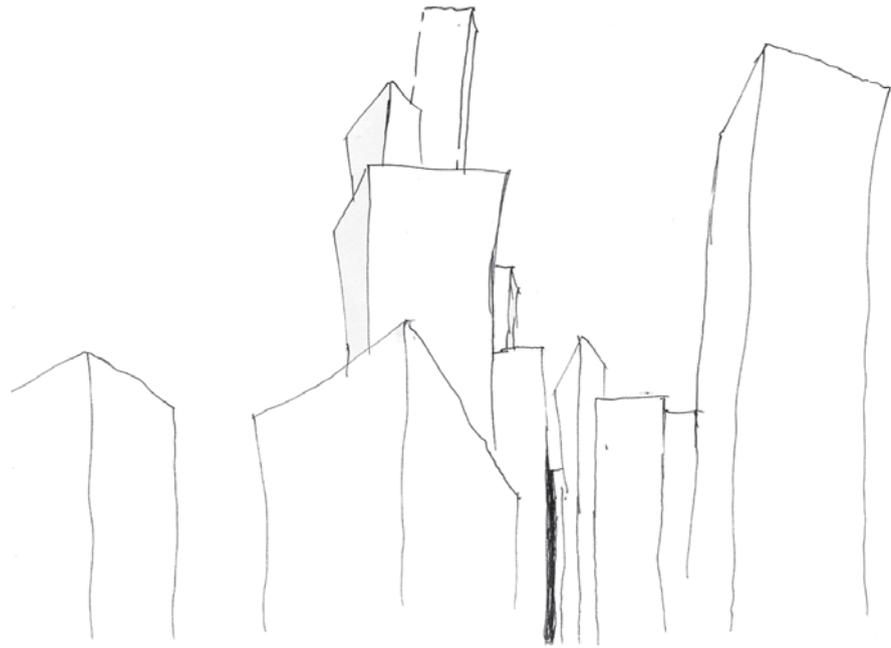
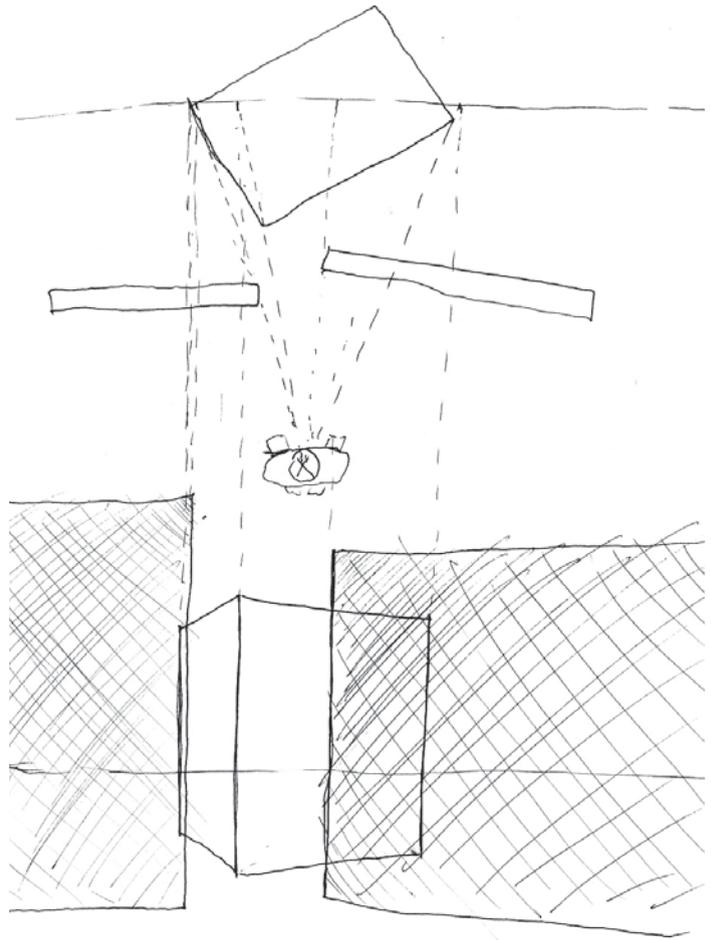


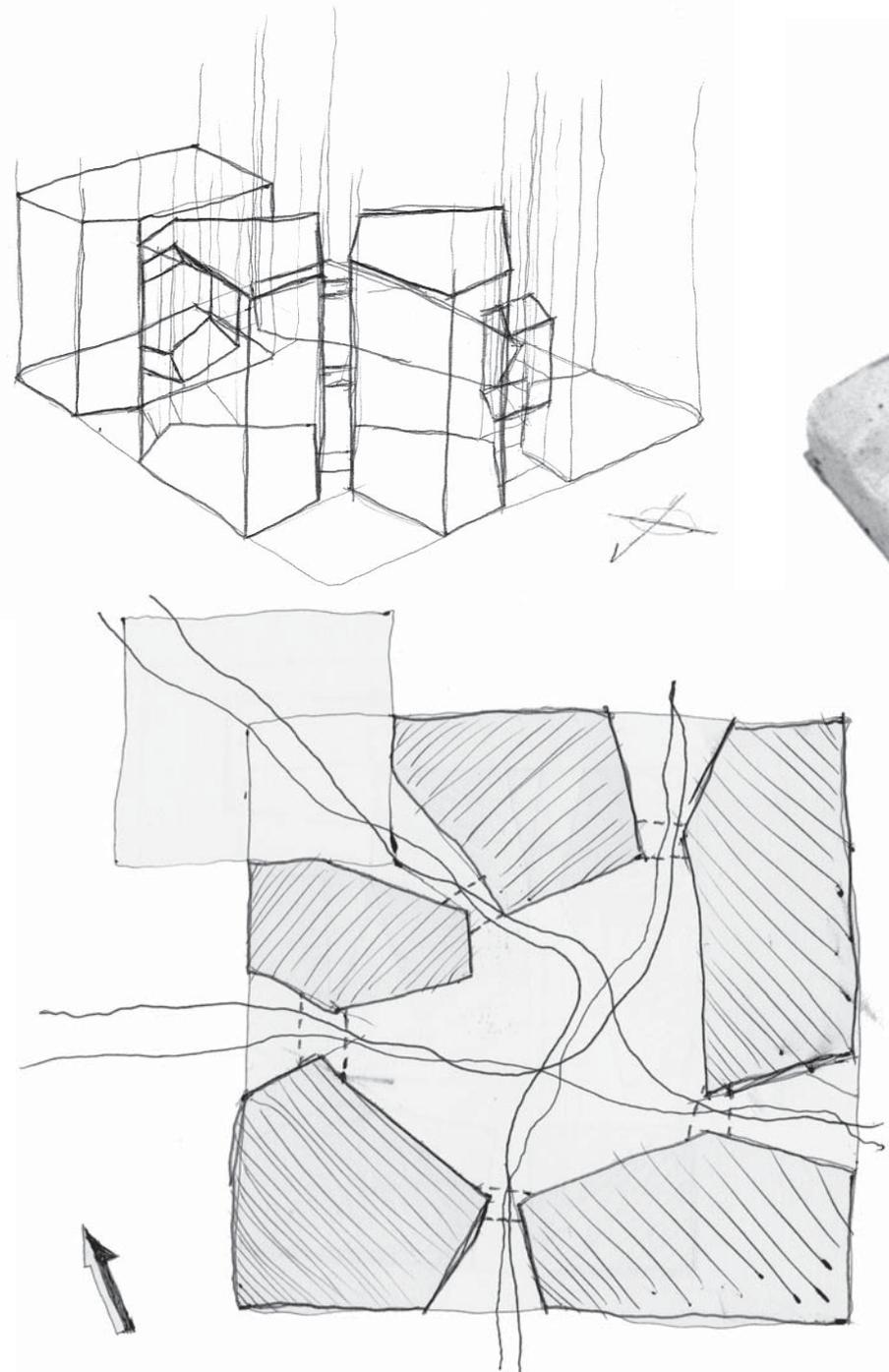
Plan-Diagram - an Impression of Rome

This project is an investigation of qualitative space, a space that is more subtly defined than by street number or rigidly specified edges. A qualitative space is one that engages the imagination in the act of understanding. An example of a qualitative space can be seen when comparing the medieval portion of Rome and Midtown Manhattan. When finding your way between one place and another in Rome, you must pay close attention to specific qualities of each place that you pass through so that the seemingly chaotic entanglement can be translated into a navigable order. In Manhattan, however, it is easy to go several blocks while looking at your shoes and still find the place you were looking for.

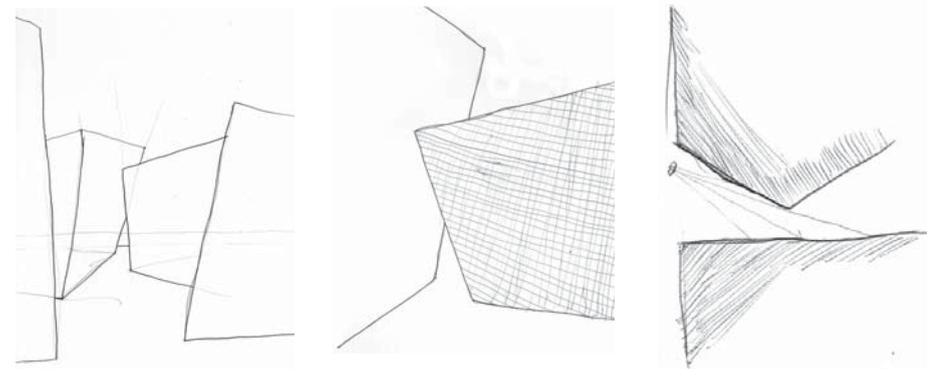
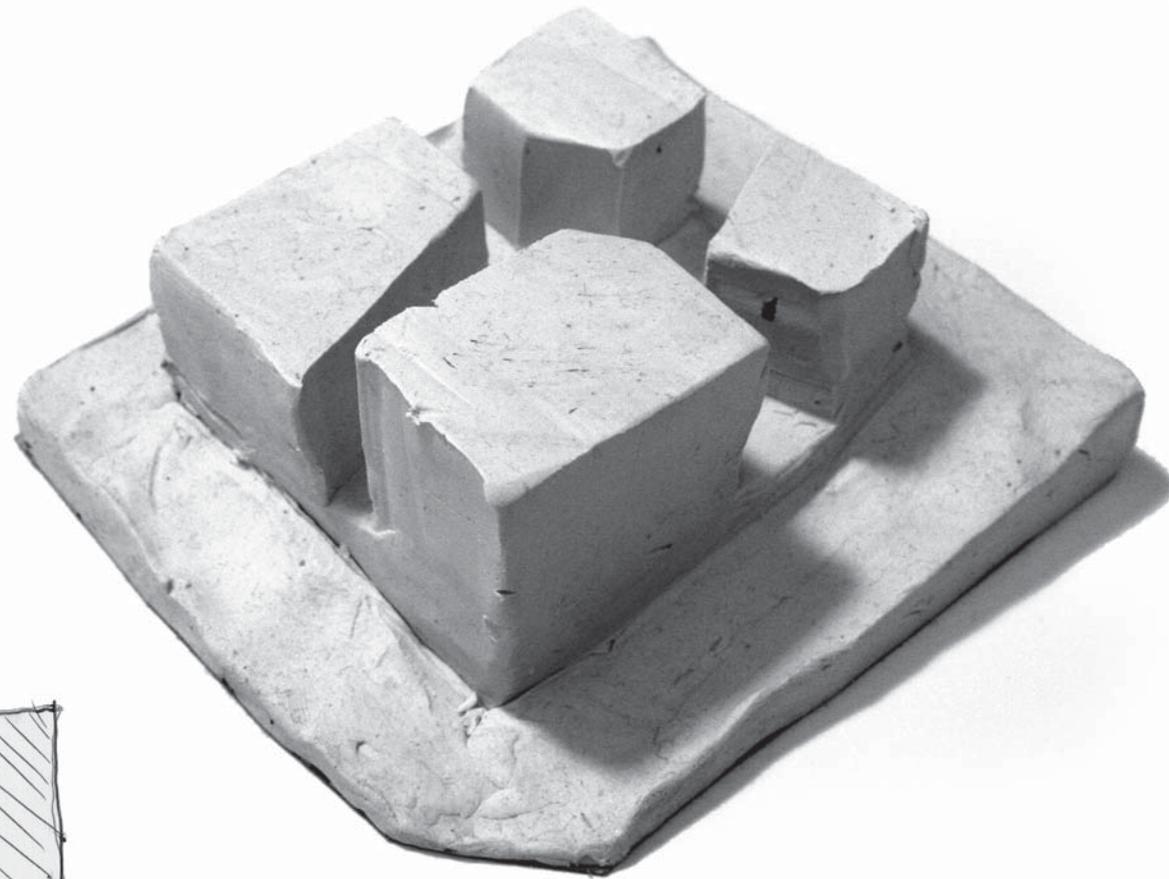


Piazza Della Rotunda, Rome



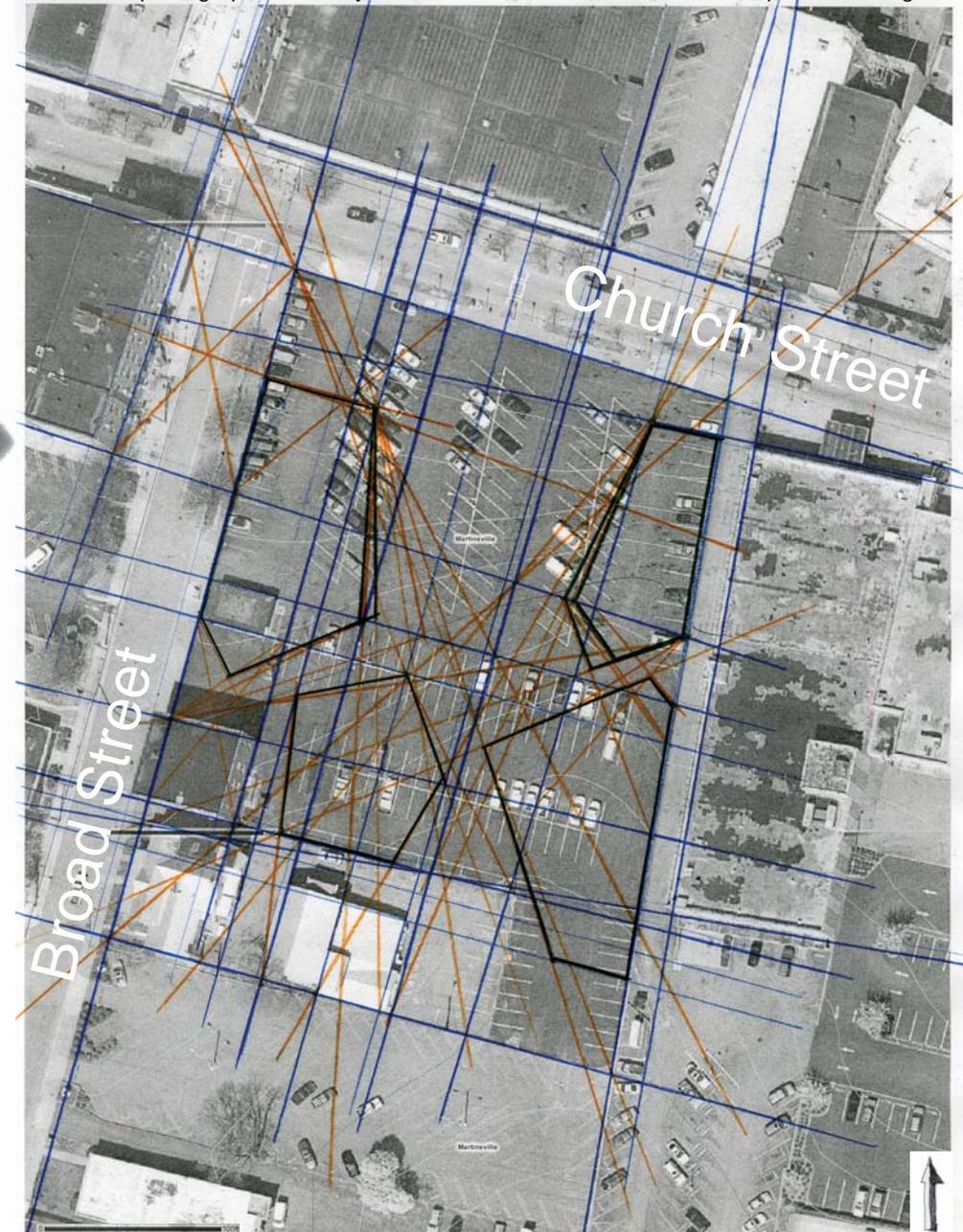


Massing of the project is informed by existing and anticipated footpaths and visual paths in the Broad Street Parking Lot. Of particular interest in this investigation is the stimulation of imagination through partial revelation of objects and spaces.



To bring the idea of qualitative space into the project, I set out to create a space that would be unique from every point of view, and organized around multiple centers. The footprint of each building is determined by primary and secondary regulating lines that are drawn directly from the immediate spatial qualities of the site, based on existing conditions.

Aerial photograph of the City of Martinsville from Web-GIS.net, with pencil drawing

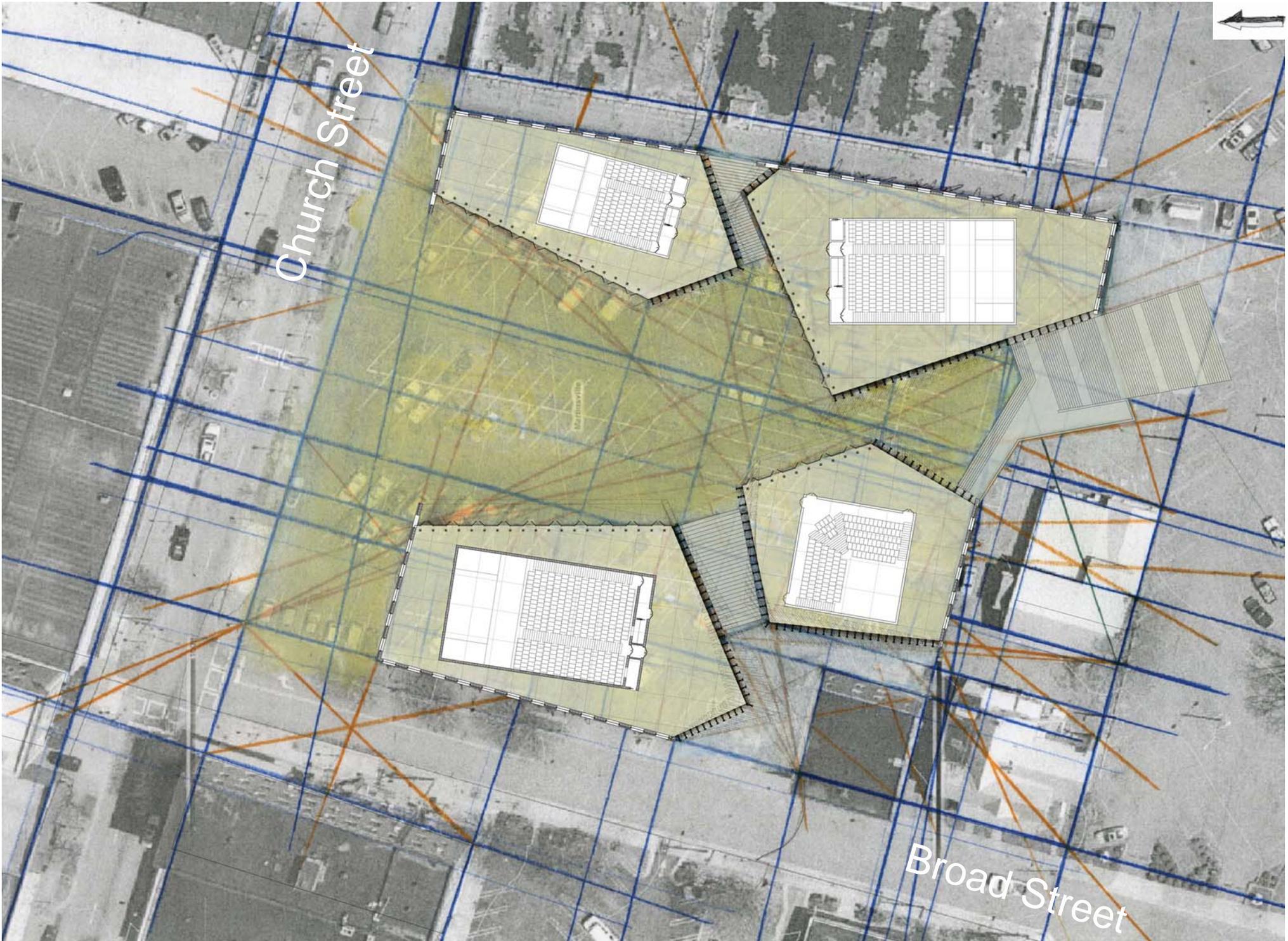




This urban room is an open, unrestricted space in the middle of the city, defined on 3 sides by a group of auditoriums. The space maintains and enhances the role of the site within the city, a place that can accommodate festivals and gatherings.

In order to maintain the role of the place as part of a larger event, and to make the space more inviting to the rest of the city, the plaza is open to Church Street.

Aerial photograph of the City of Martinsville from Web-GIS.net, with pencil, pen and pastel drawing



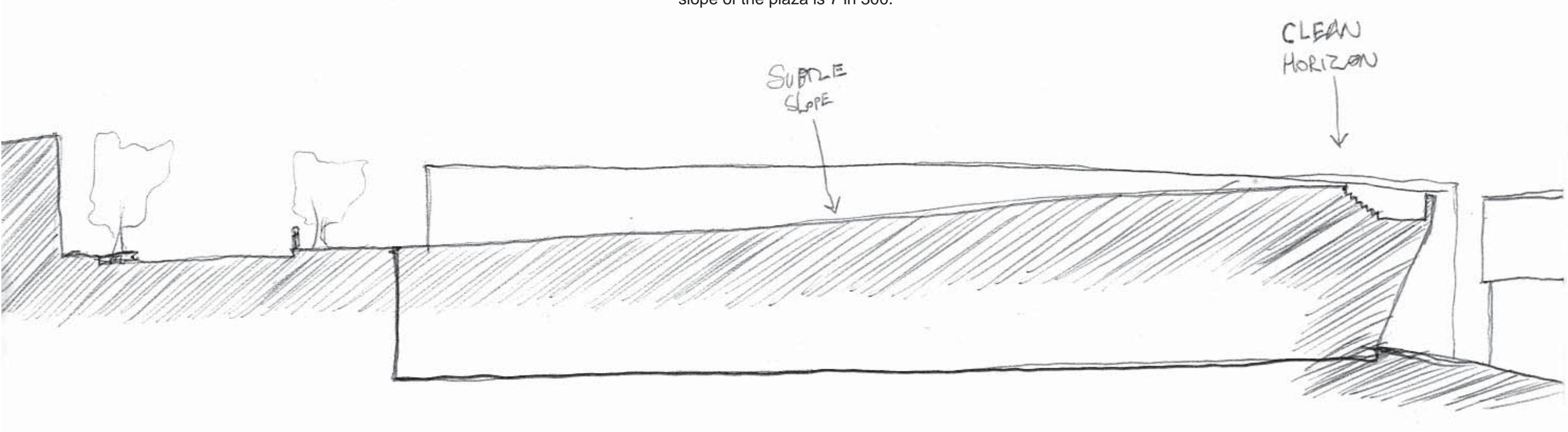
Within each building is contained an auditorium. For aural and atmospheric purposes, a buffer zone exists between the exterior shell of the building and the interior program spaces.

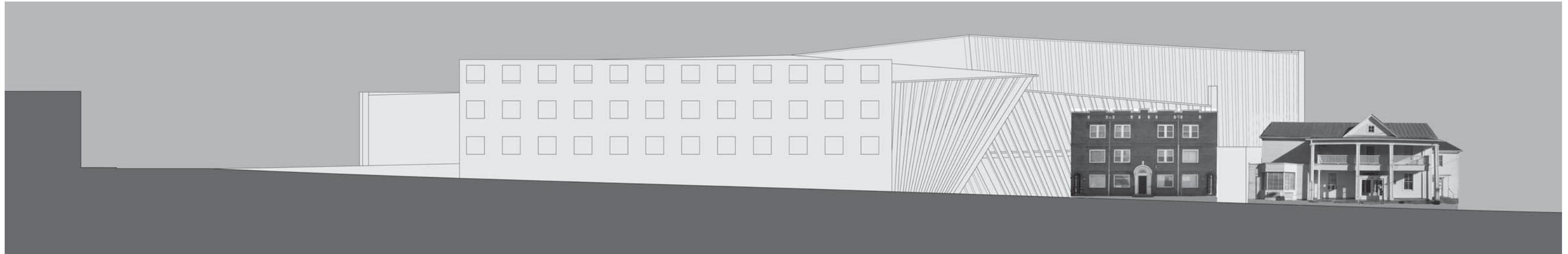
The floor of the plaza dissolves into the street, free of a curb but blocking unwanted vehicles with retractable bollards.

Aerial photograph of the City of Martinsville from Web-GIS.net, with pencil, pen, and pastel, plan drawing superimposed

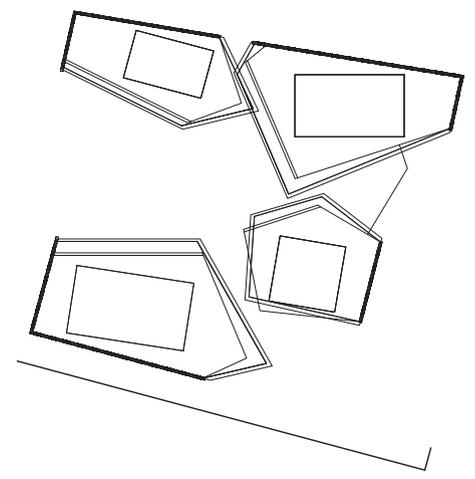


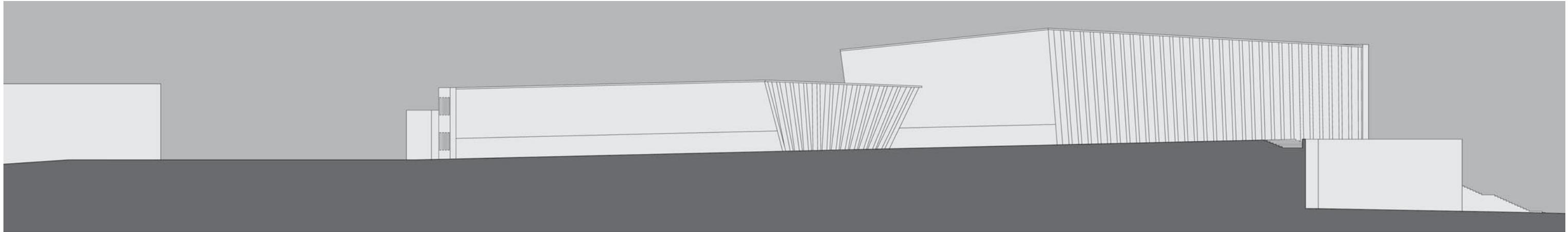
Because the site is at the top of a hill in the center of the city, there is the opportunity to create a clear horizon by giving the plaza a gradual slope upwards so that the floor at the end of the plaza is above eye level for someone standing on the street. The slope of the plaza is 7 in 300.



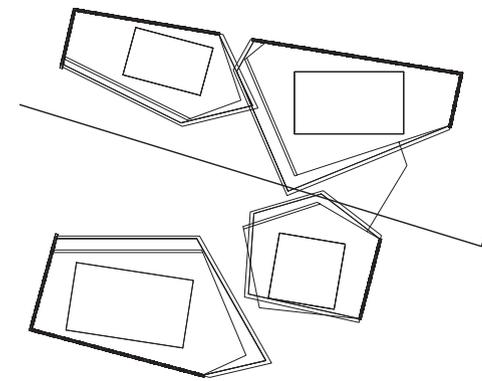


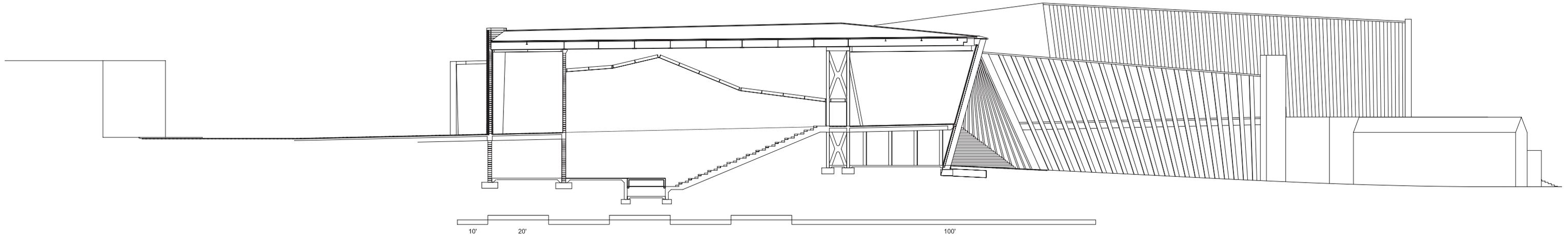
Section through Broad Street



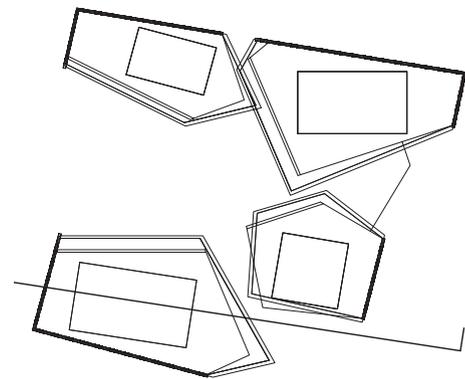


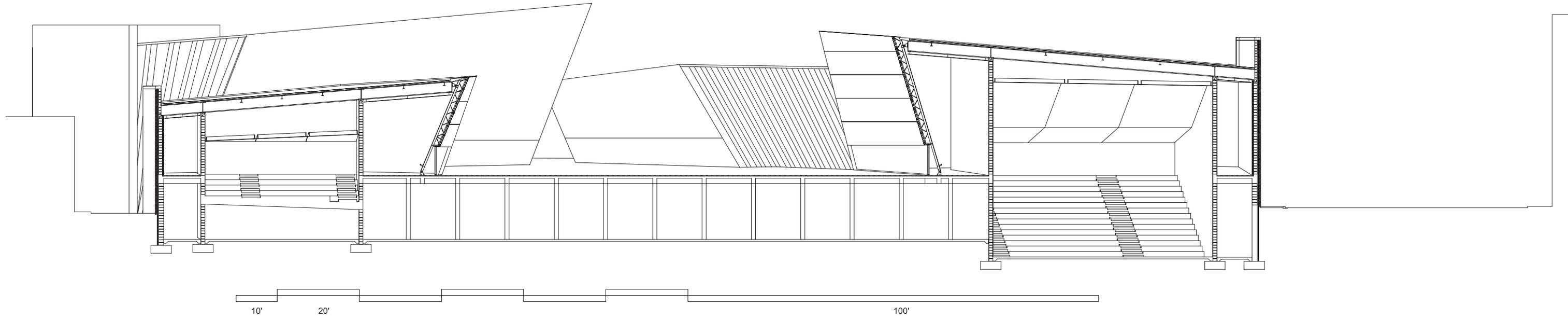
Section through the plaza, perpendicular to the contour of the floor



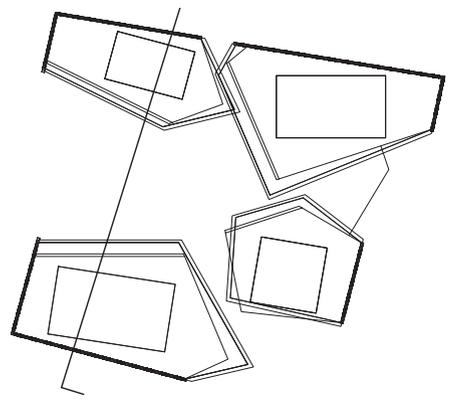


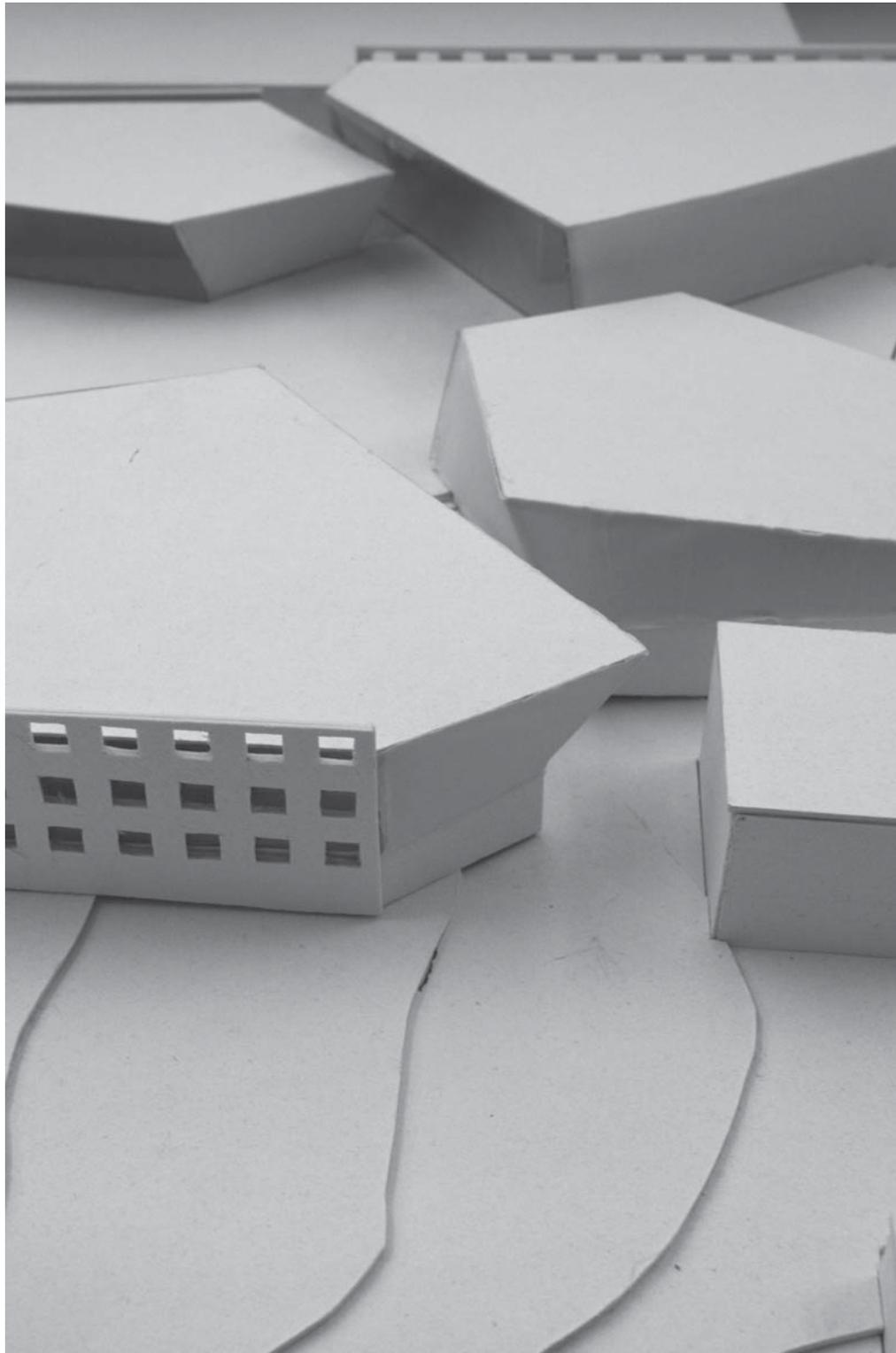
Section through large auditorium





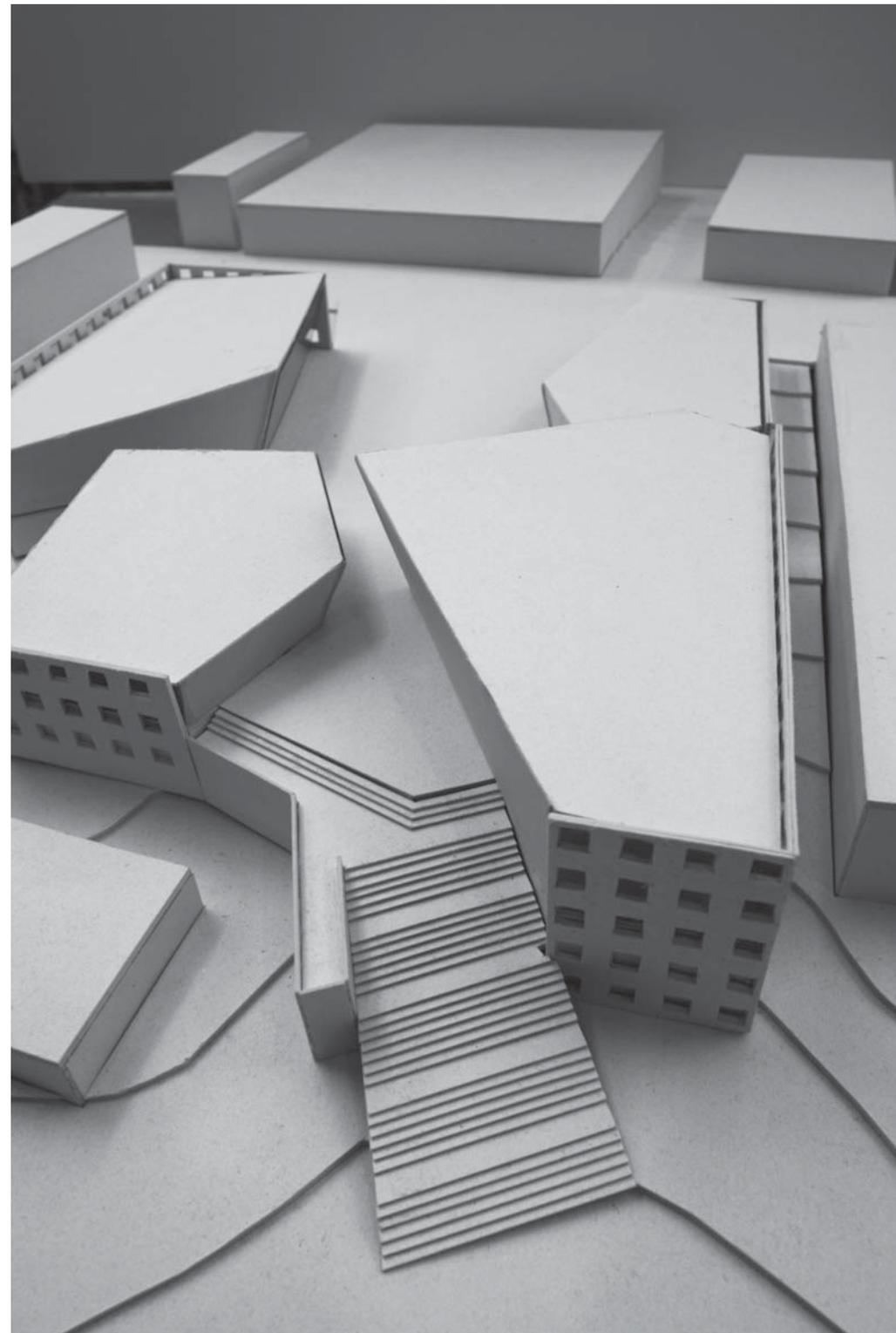
Section through the plaza, parallel to the contour of the floor

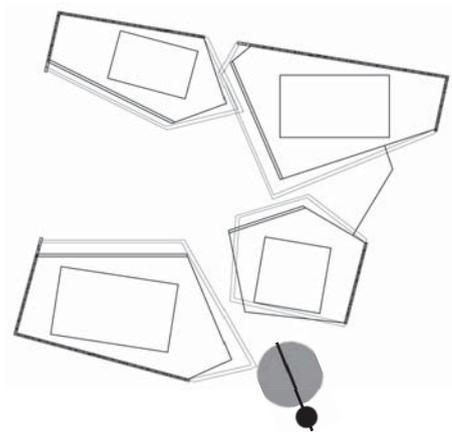
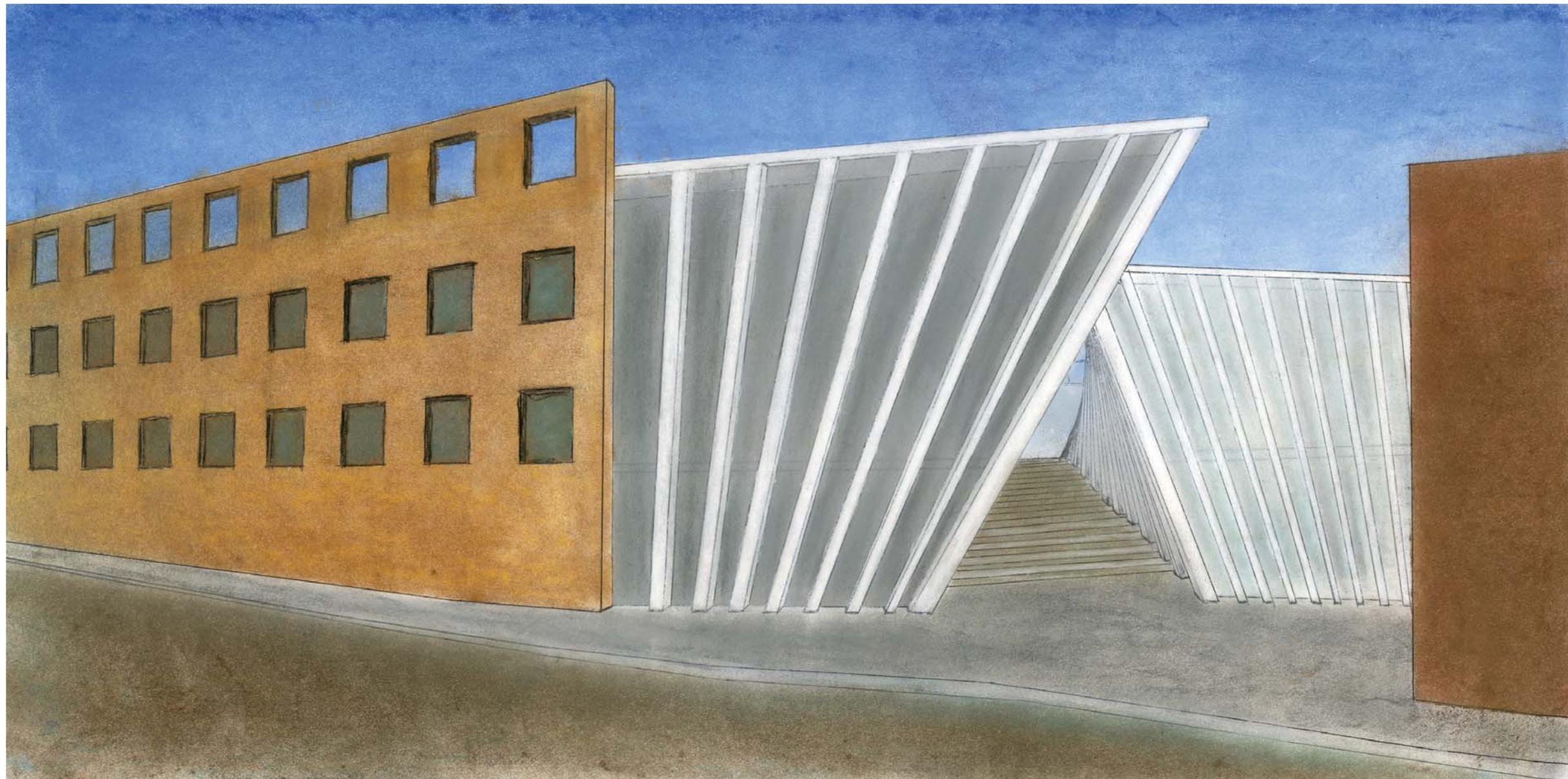


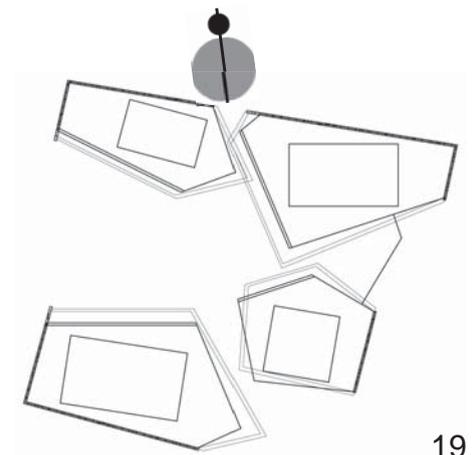
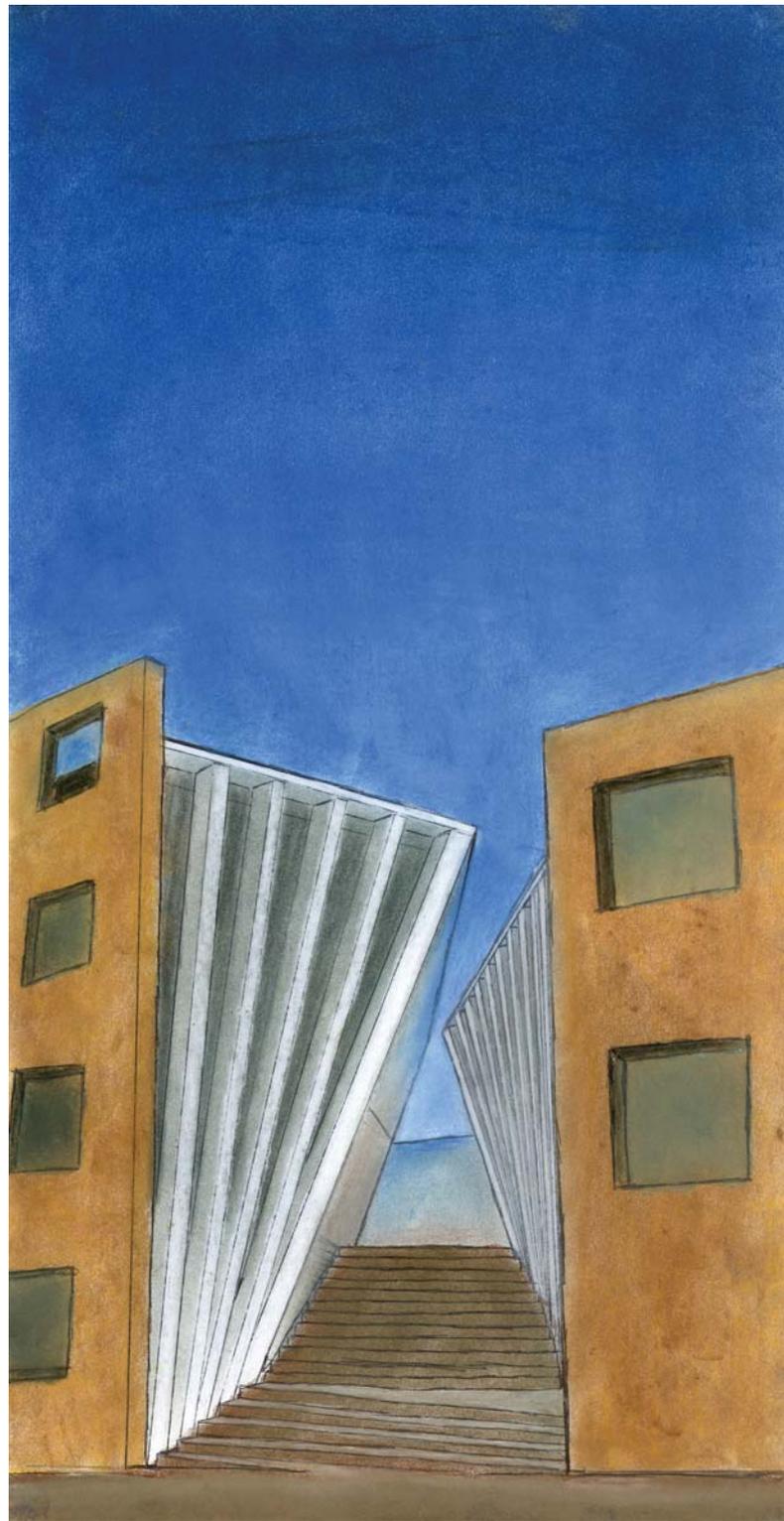


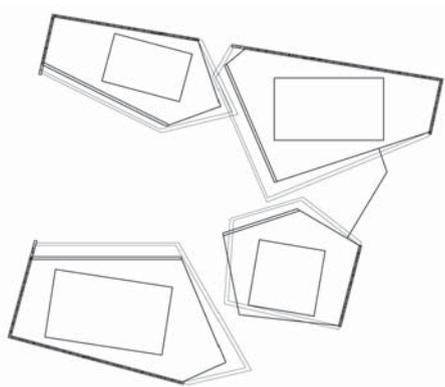
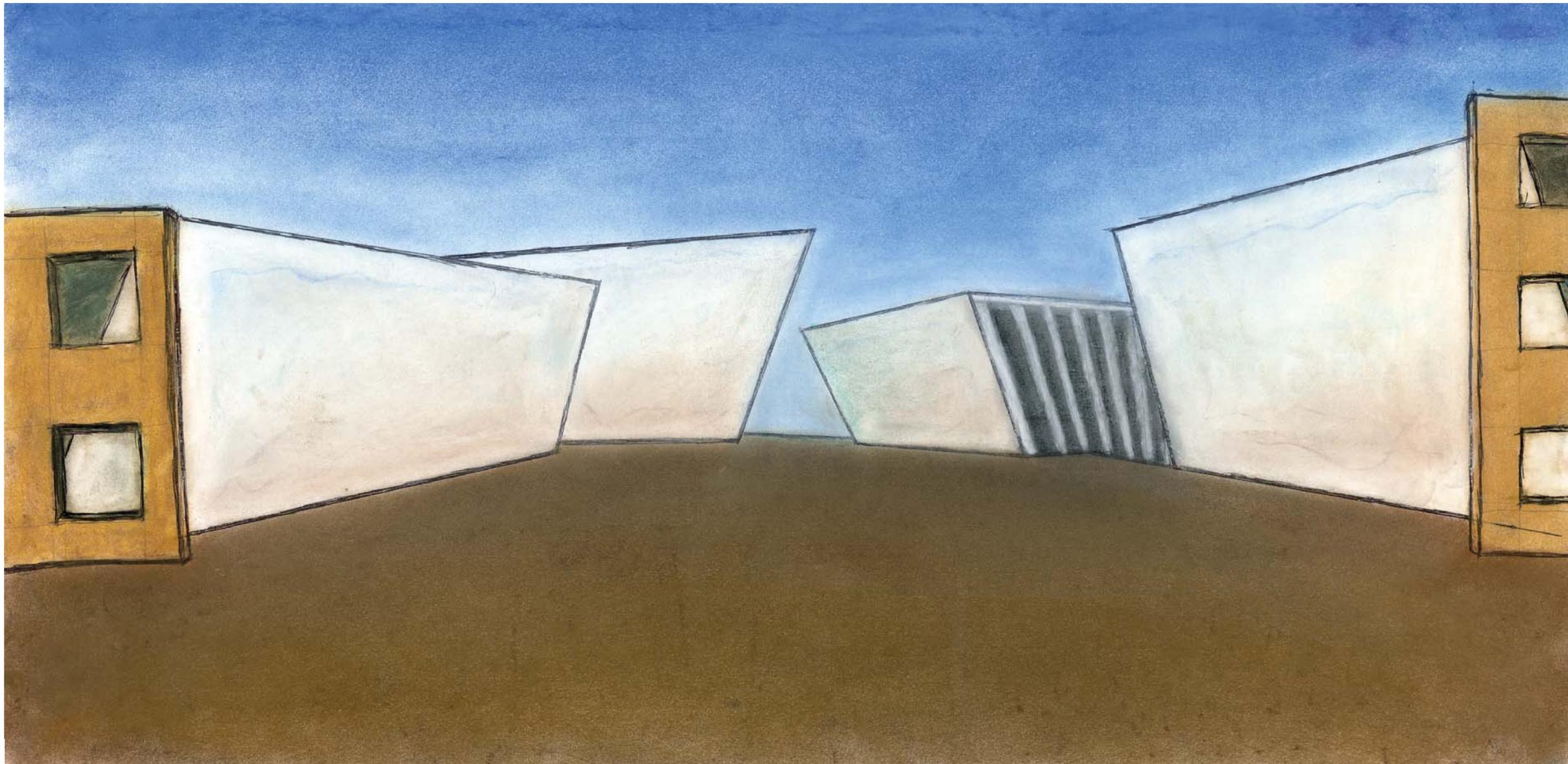
Overview of the Broad
Street side of the project

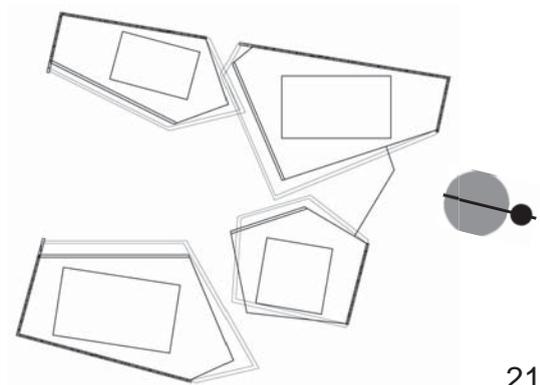
The southern face of the project features a grand, massive stair in anticipation and encouragement of development to the south.













Aerial photograph of the City of Martinsville from Web-GIS.net, project site highlighted



Though it is mainly used for parking, the openness of the Broad Street Parking Lot, and its adjacency to a main street (Church Street) facilitate the lot's use for festivals and other activities several times a year. The site features topography with a one-story change in elevation from the front corner to the back. Buildings adjacent to the site are 2, 3, and 4-stories.



Wall Street



The Broad Street Parking Lot



Main Street



Broad Street



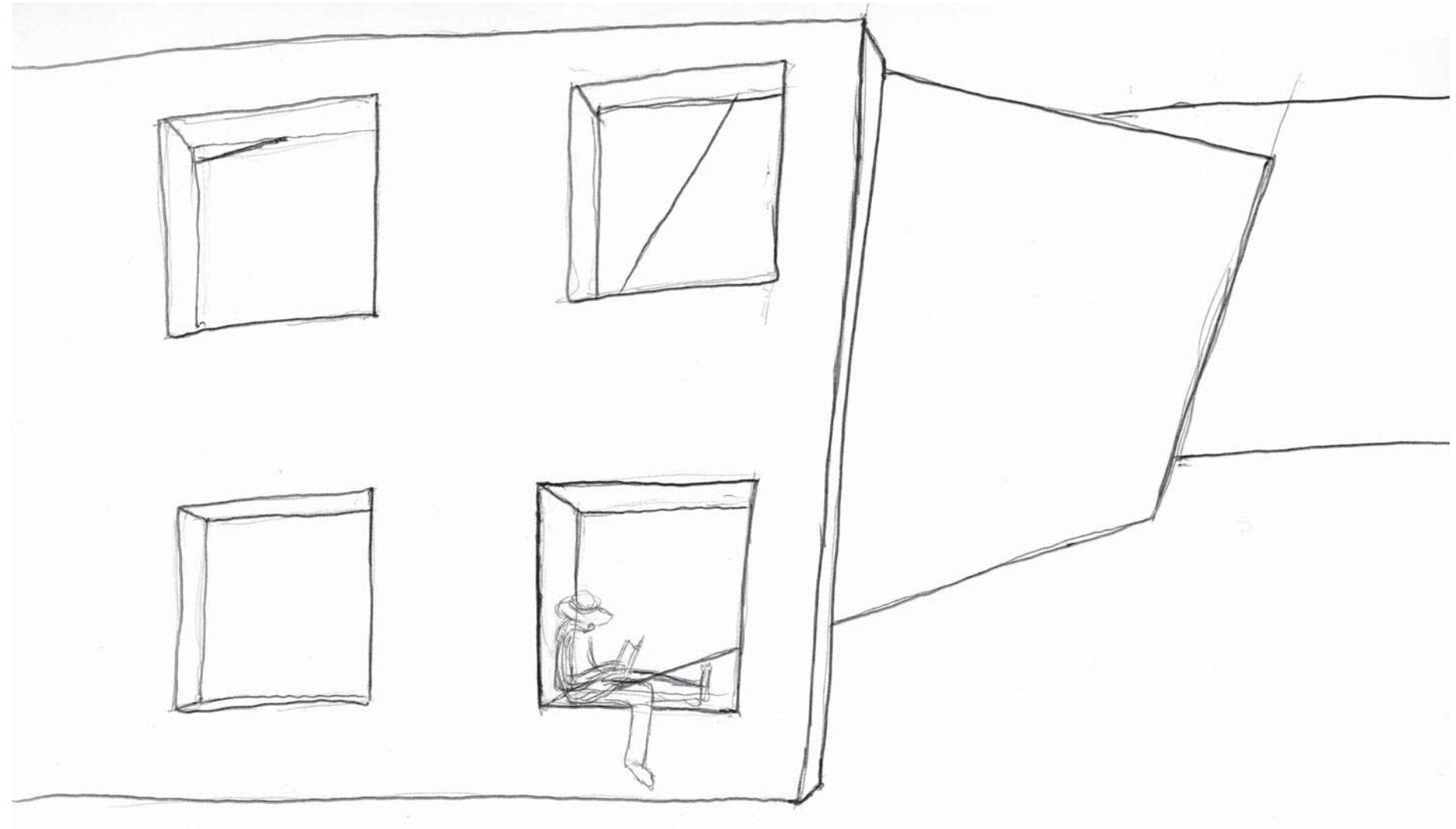
The corner of Broad Street and Church Street

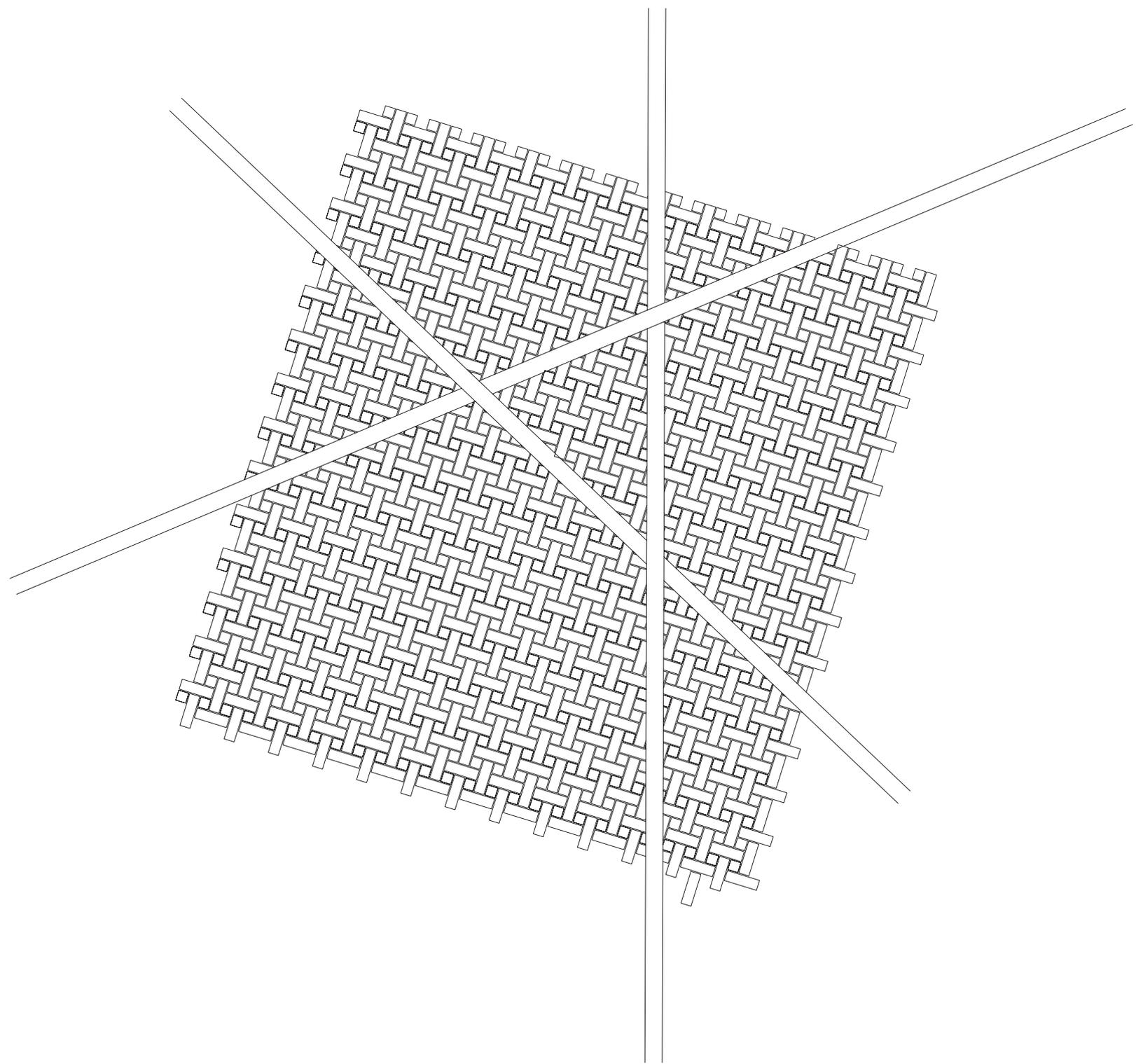


Broad Street

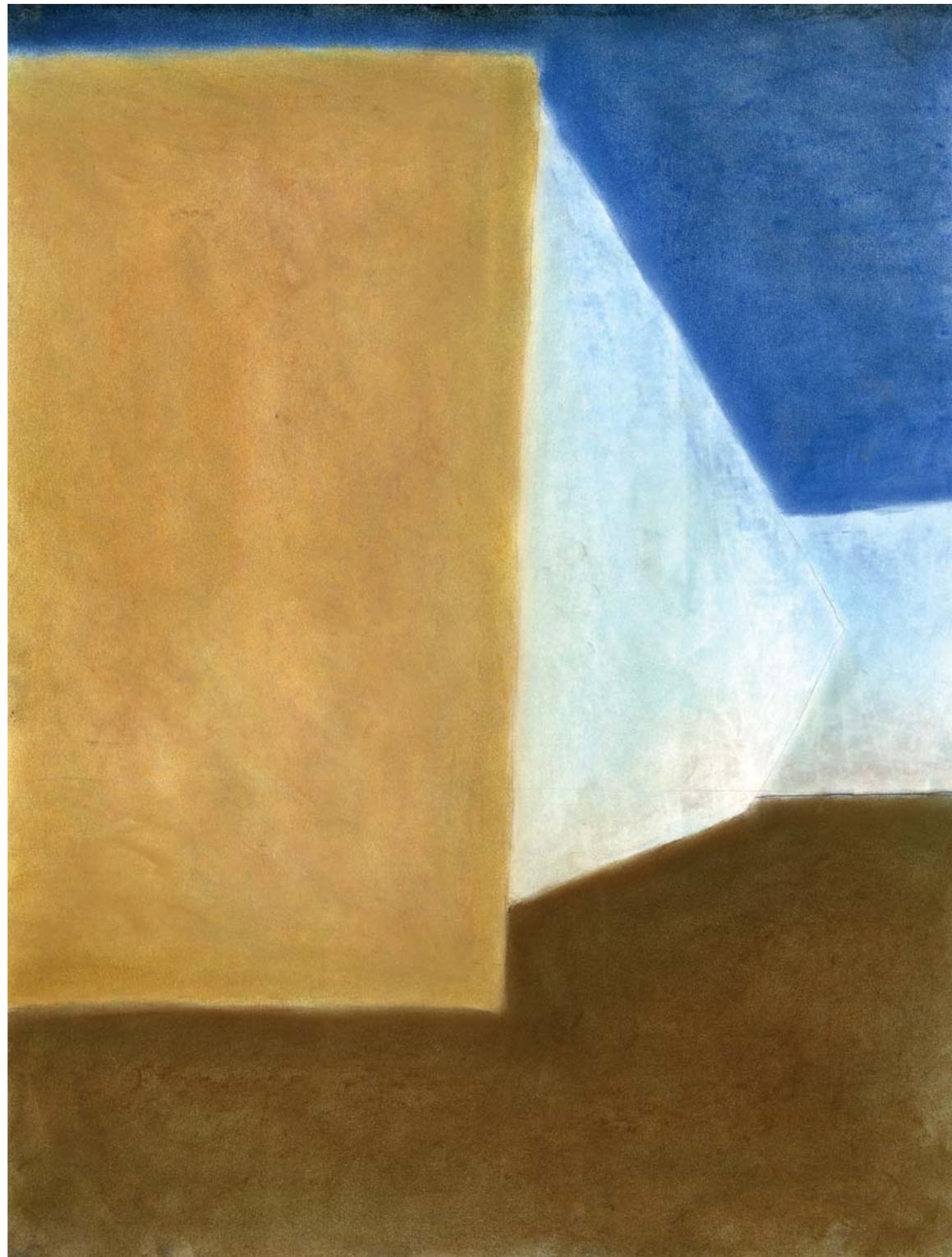


Construction of the buildings is organized into massive walls, non-vertical planar surfaces, and non-planar surfaces. Massive walls surround the boundaries of the project, in response to the existing structures which feature grids of windows on parapet walls. Non-vertical planar surfaces, rendered in suspended glass, reflect the activity within the plaza, bringing an image of the floor to the elevations of the buildings. The glass is oriented towards the plaza and away from the sun. Non-planar surfaces are broken down into parallel, vertical faceting, rendered in concrete and supporting glass to complete the enclosure.

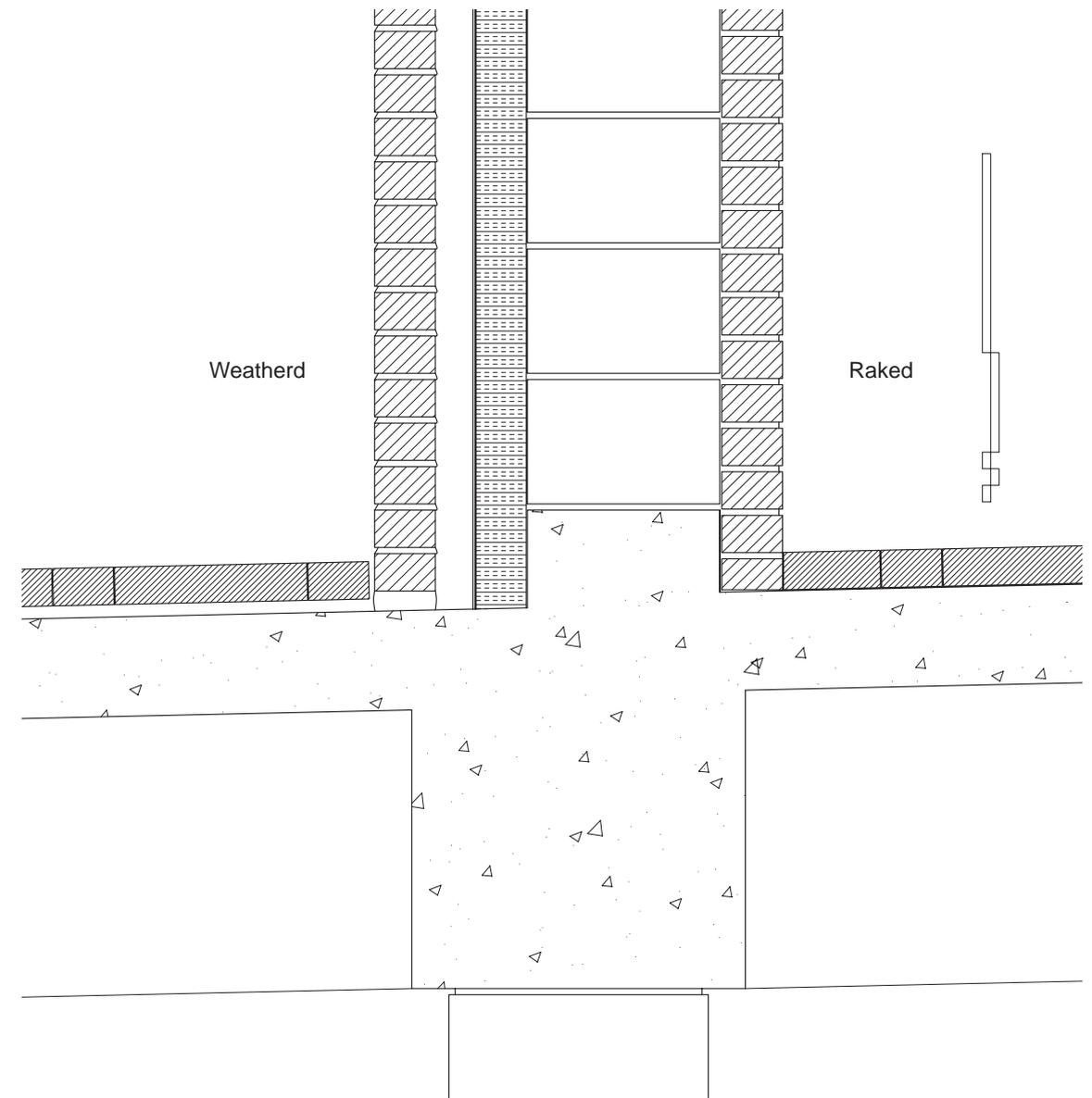




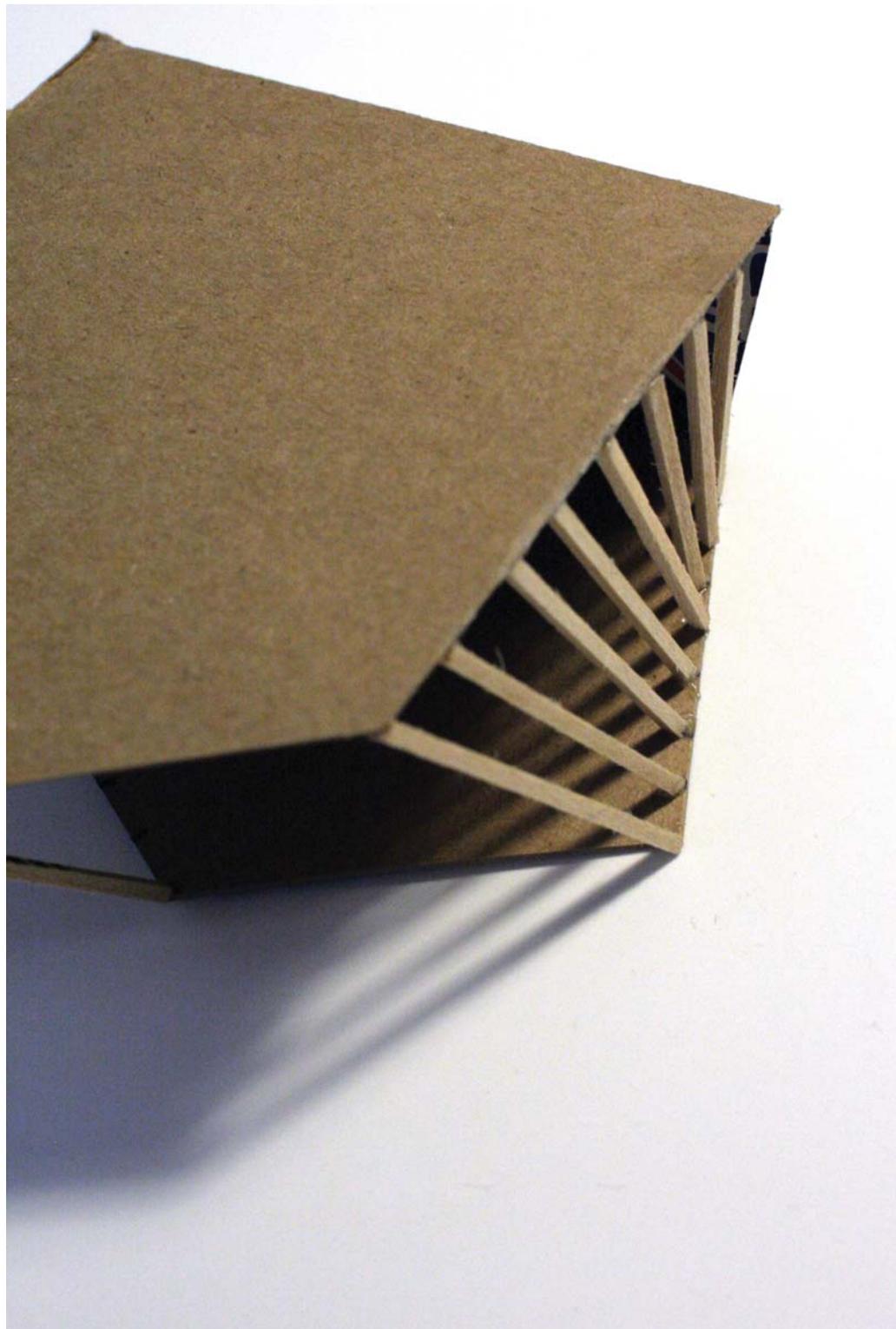
The floor of the plaza is surfaced with dark, neutral colored paving bricks, finished with a light glaze to give a soft reflection of the sunlight when viewing the plaza from church street. The pattern for the bricks implies an orthogonal grid parallel to the slope and contour of the plaza.



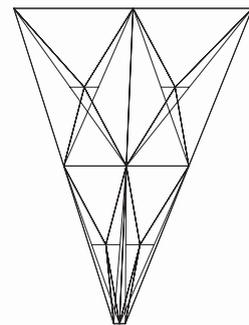
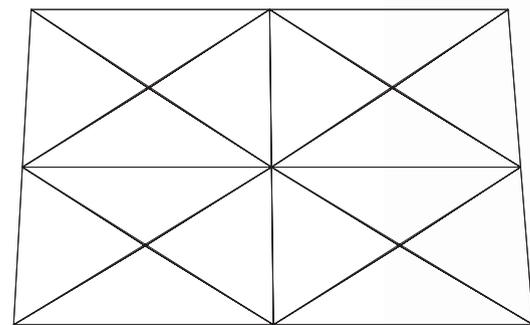
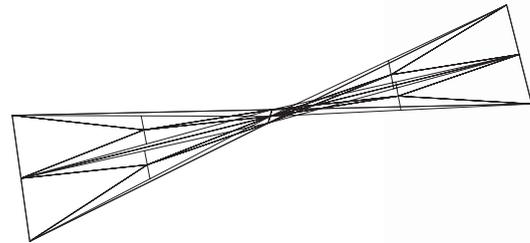
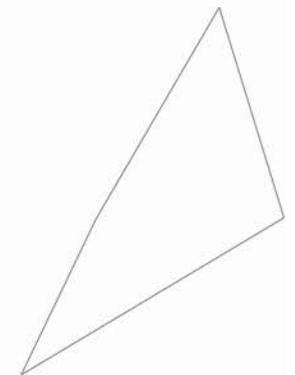
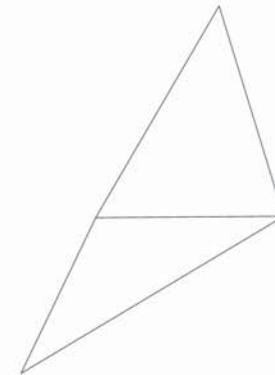
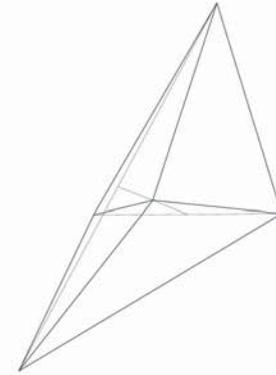
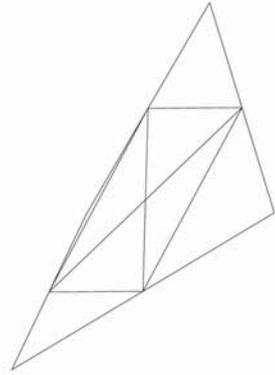
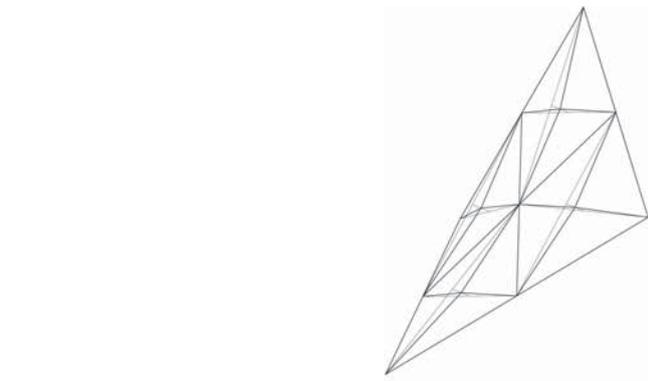
Massive walls are clad with a light, warm colored brick, strengthening their perpendicular relationship with the neutral ground.



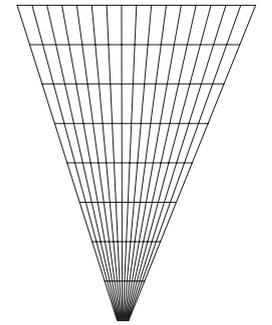
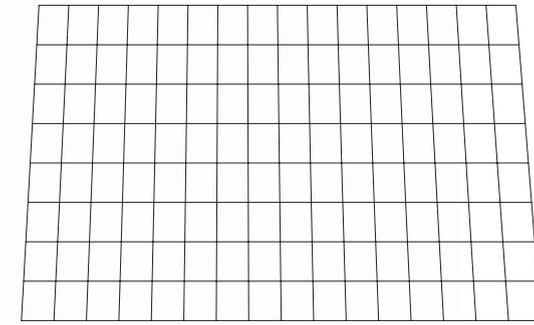
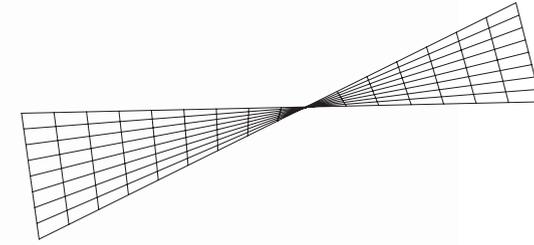
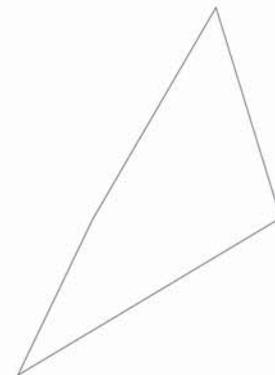
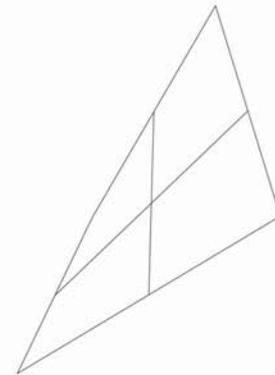
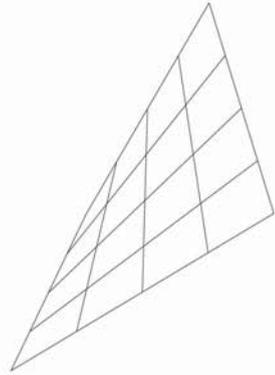
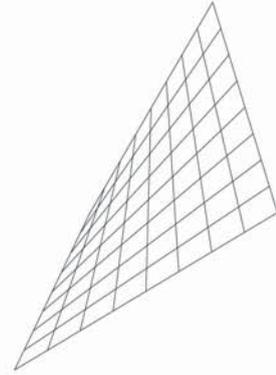
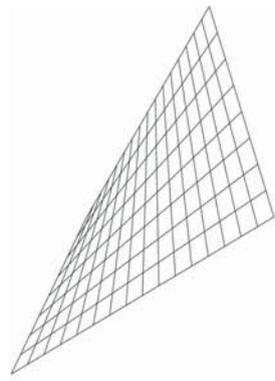




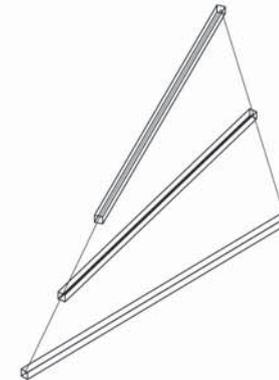
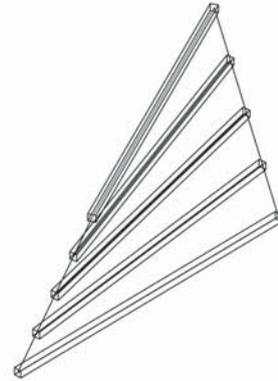
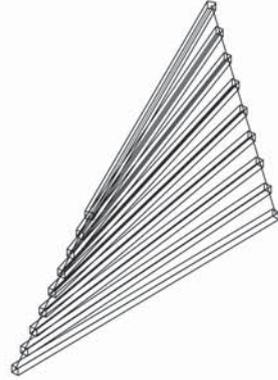
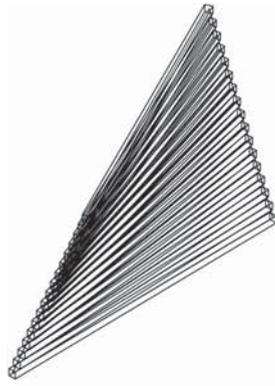
Warped Surfaces are an important part of the way that the buildings interact, spatially mediating the orthographic difference between the roof line and the footprint. They provide a transition between the massive, vertical walls and the non-vertical glass planes. These surfaces will be broken down into parallel, vertical faceting, constructed of concrete pillars that act as support for glass enclosure for the atrium spaces and a brise-soleil to prevent glare.



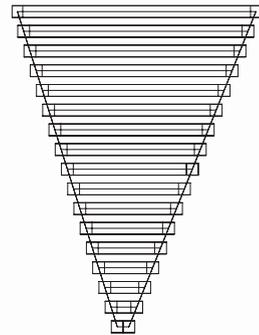
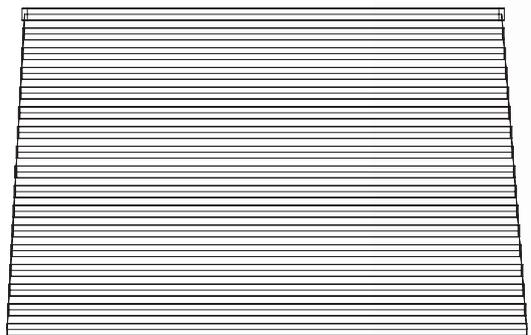
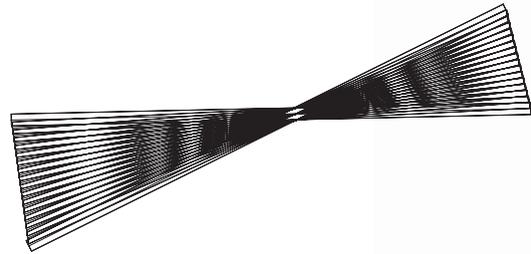
Triangular Faceting is a way of approximating a warped surface with panes of glass or another material that does not easily bend.

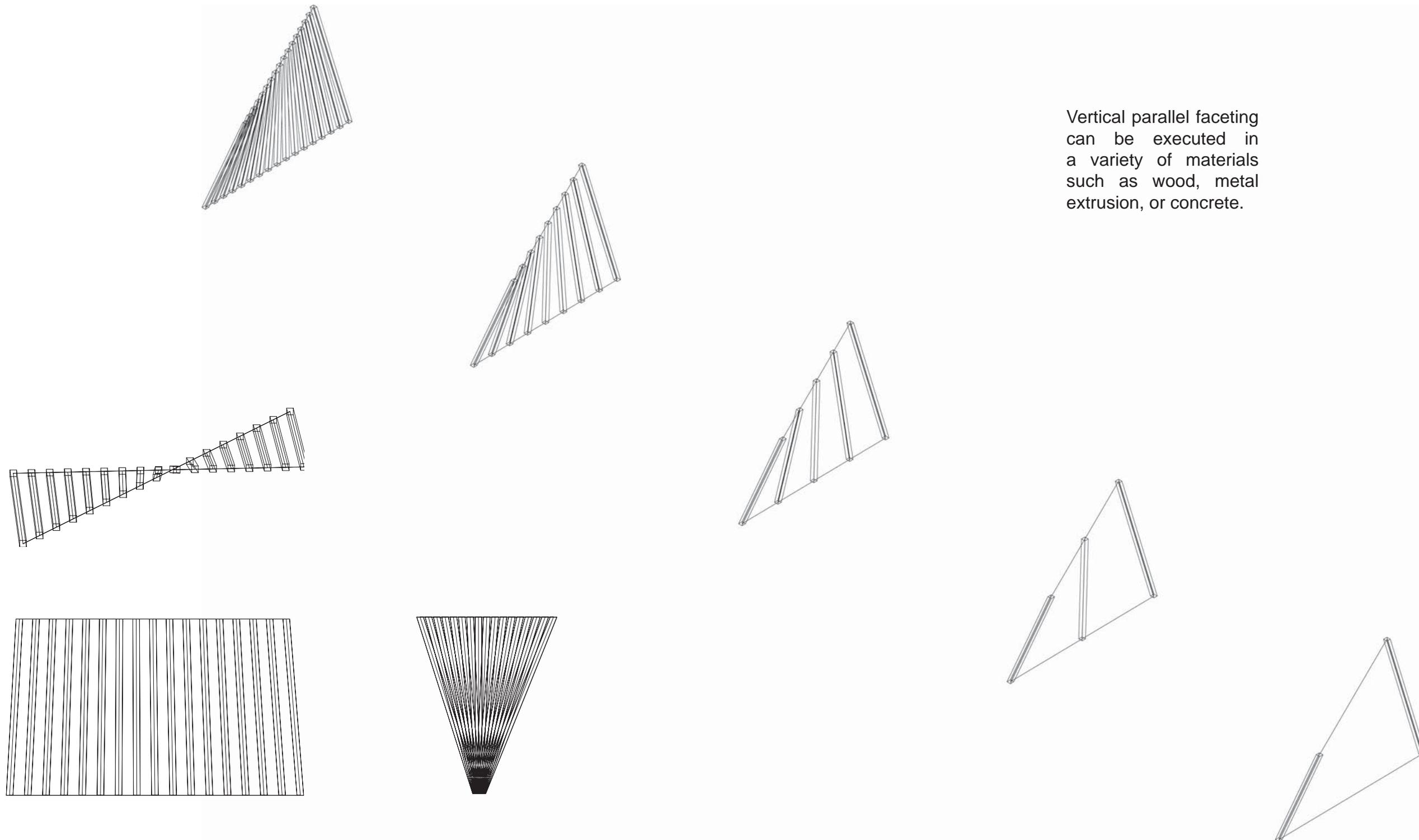


A mesh of material could be achieved with fabric that is designed to stretch in two directions.

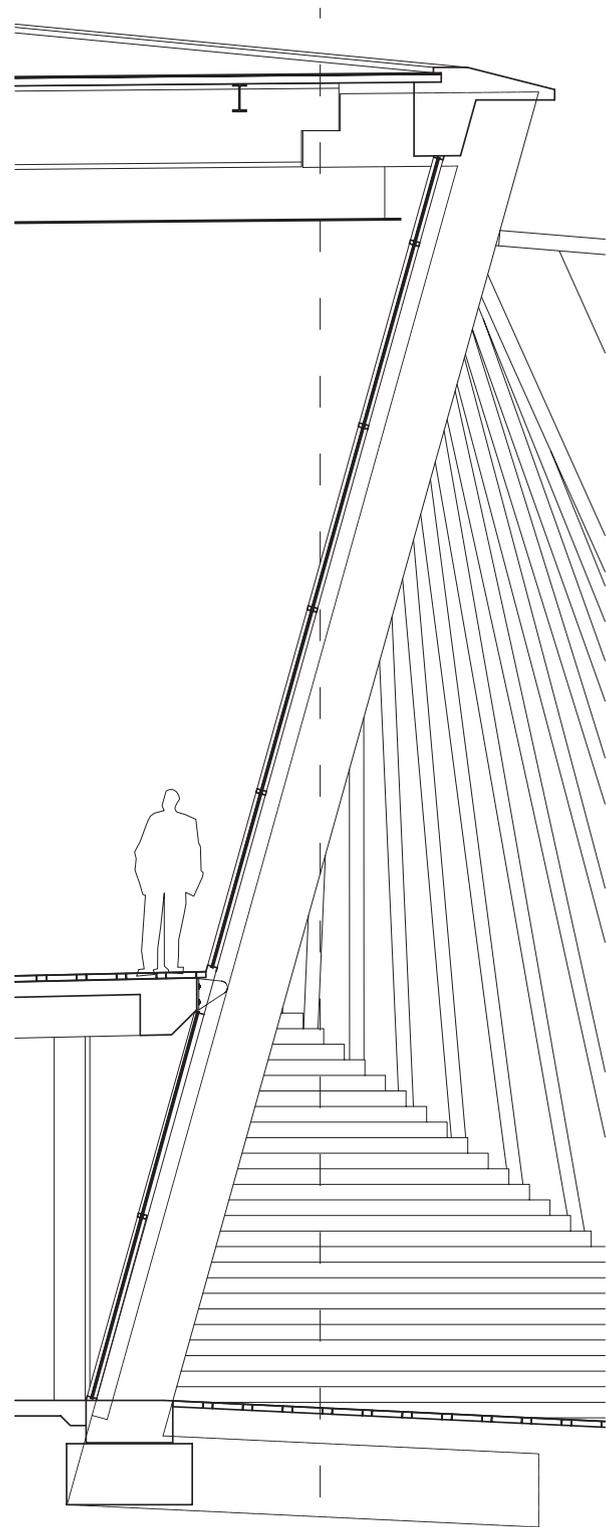


Horizontal parallel faceting could be executed in masonry.

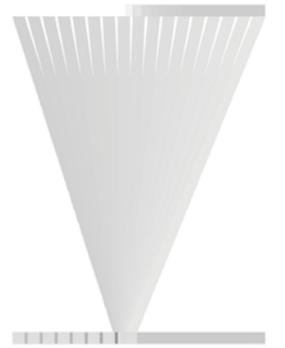
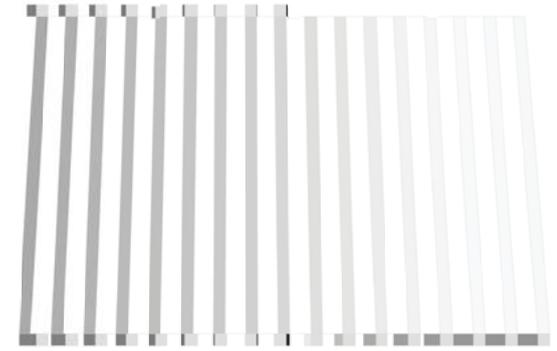
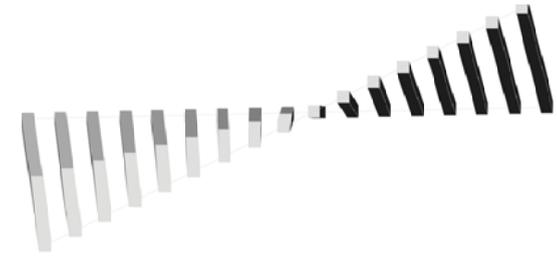


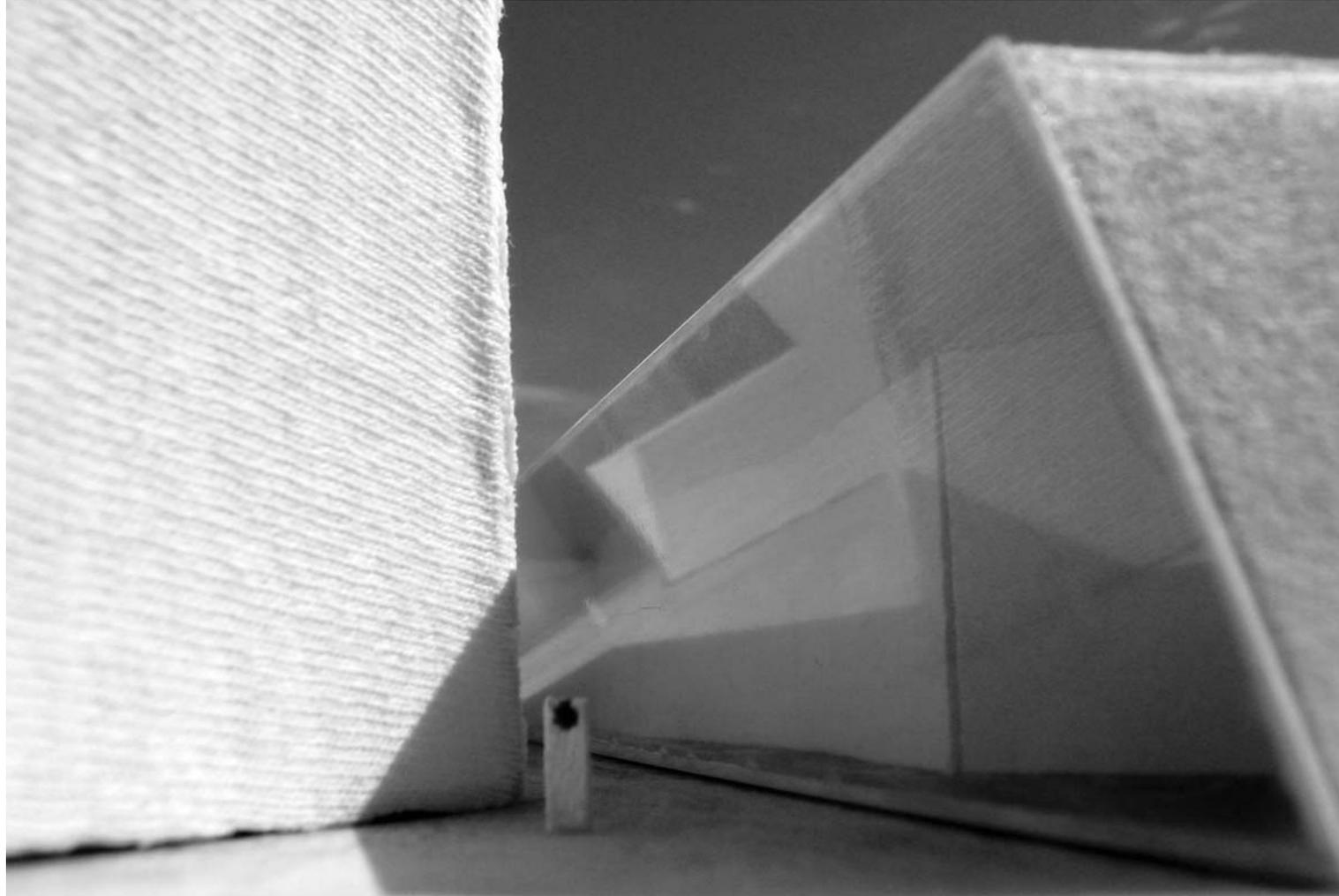


Vertical parallel faceting can be executed in a variety of materials such as wood, metal extrusion, or concrete.

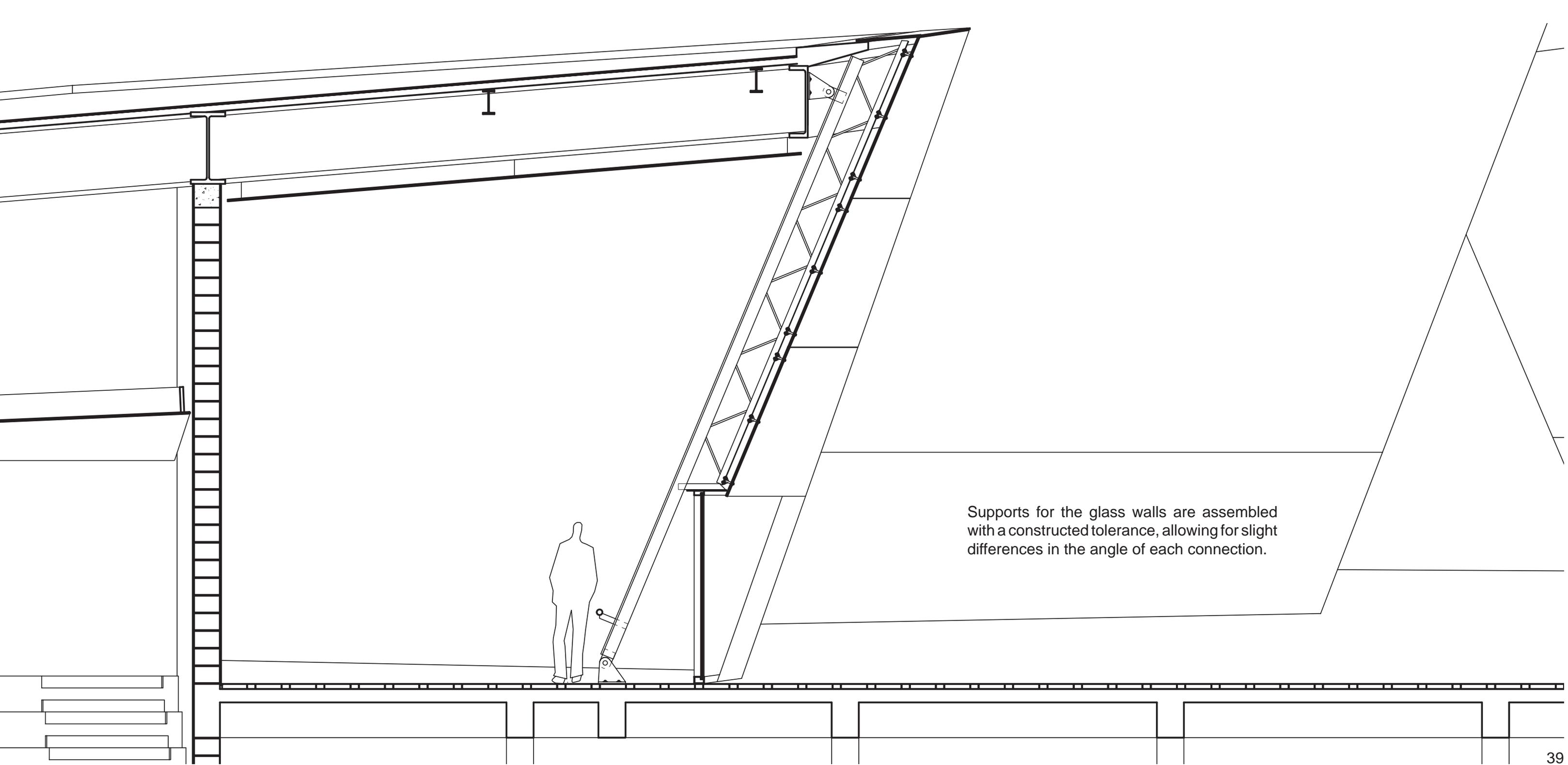


When required, parts of the concrete brise-soleil are modified to aid in support of the roof. As a result, the grid of the roof structure meets a cast in place concrete network based on the orientation of each column on the warped plane.





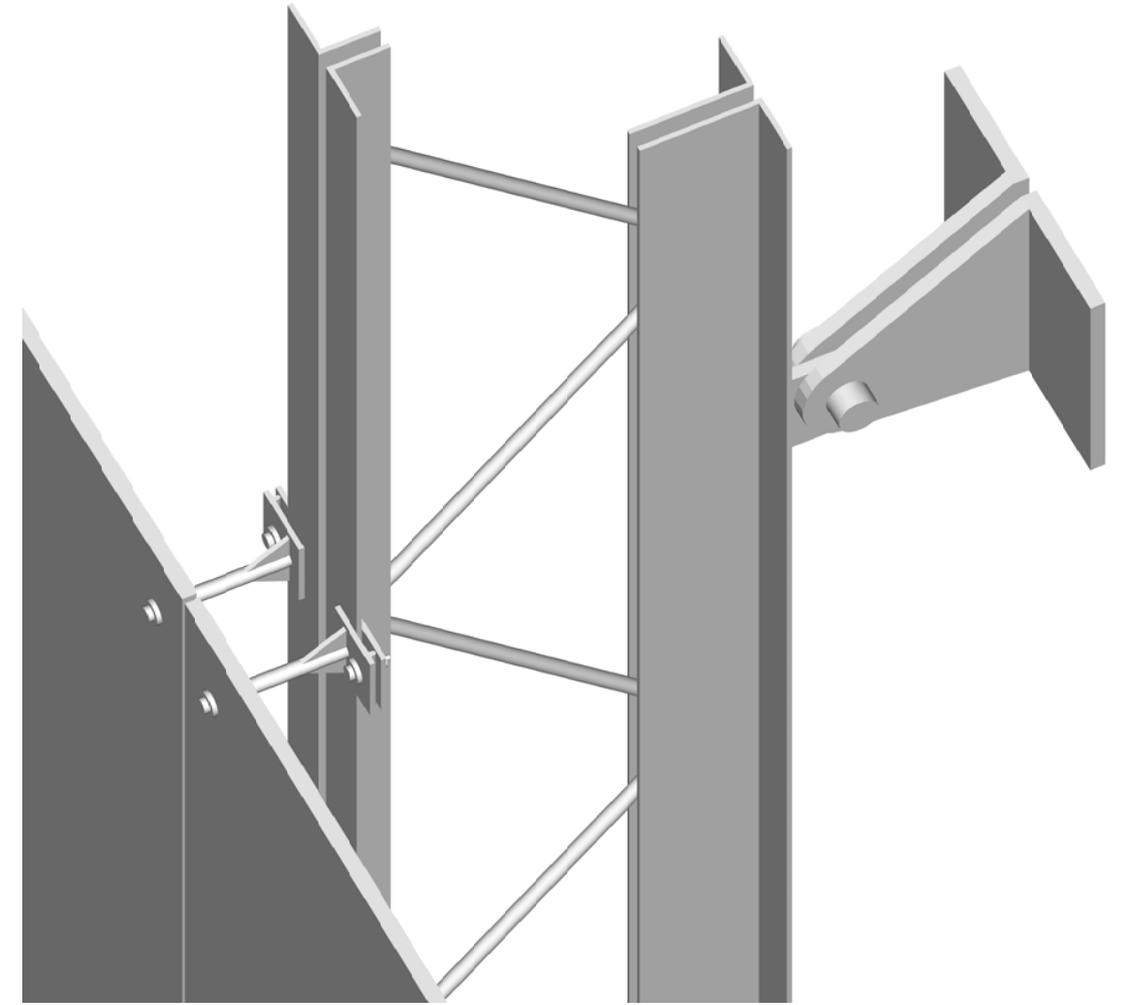
The glass surfaces are oriented towards the plaza and away from direct mid-day sunlight, angled downward to make a reflection of the activity in the plaza on the elevations of the buildings. These surfaces also act as an articulation of the primary entrances to the buildings. In order for these surfaces to read as planes, I kept as much of the hardware inside as possible, with the glass suspended from the supports and extending to the exterior edges of the buildings.

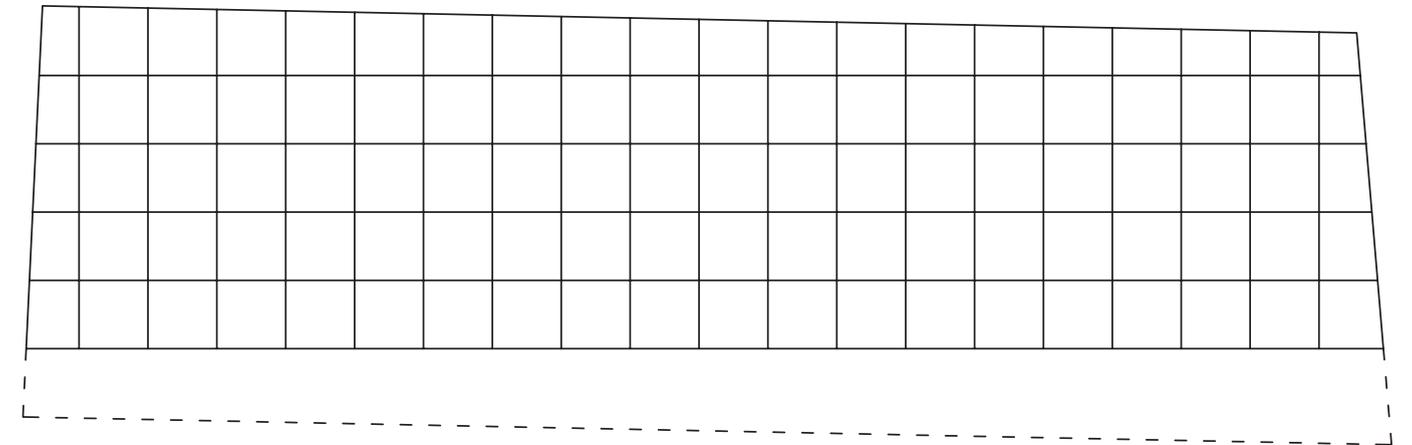
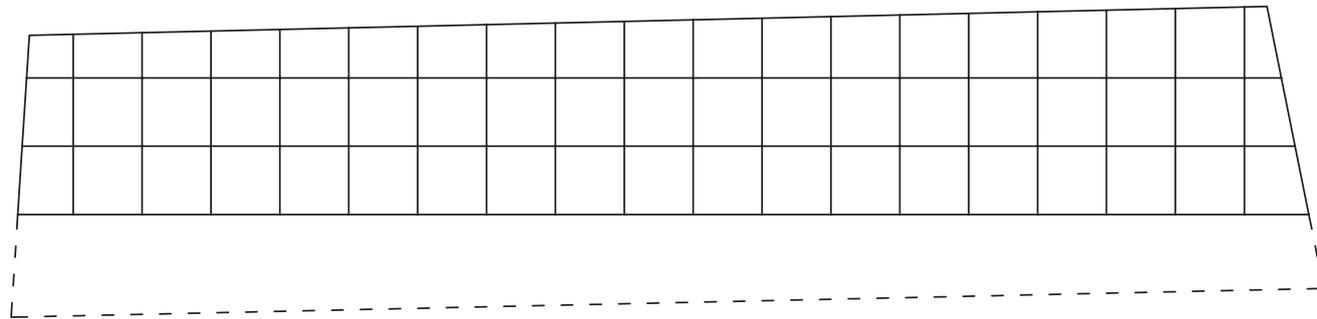
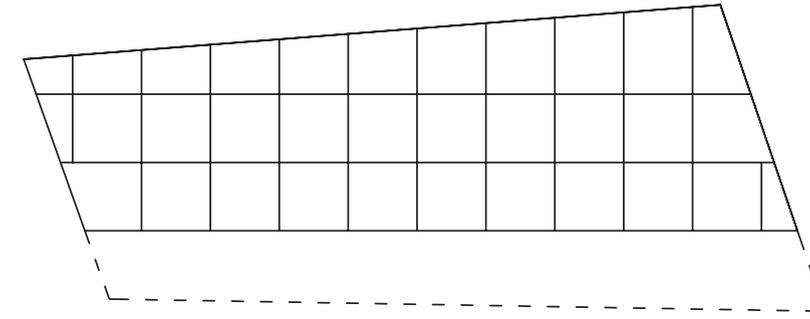
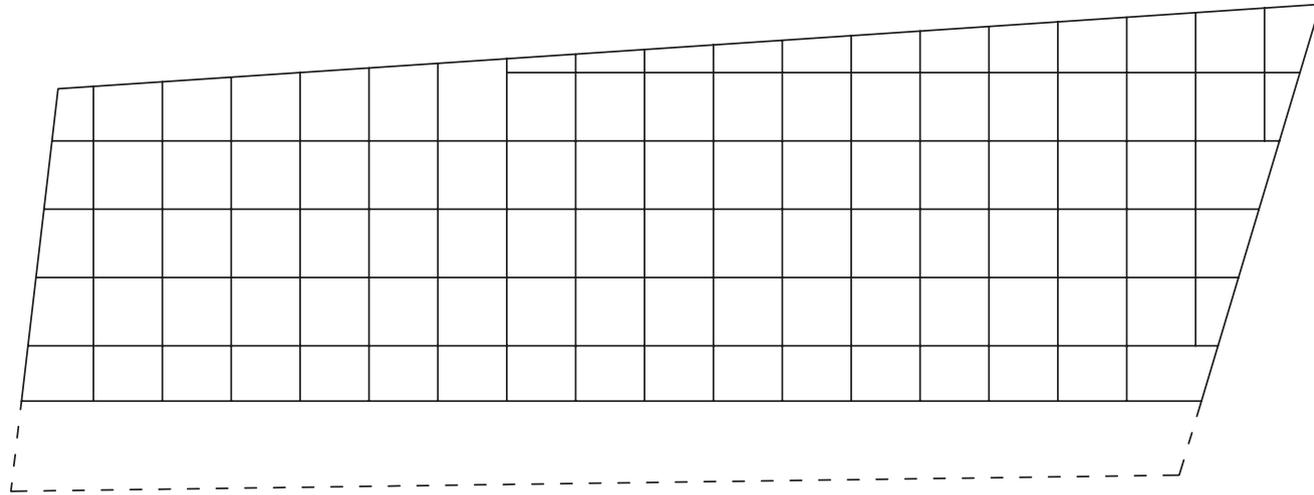


Supports for the glass walls are assembled with a constructed tolerance, allowing for slight differences in the angle of each connection.

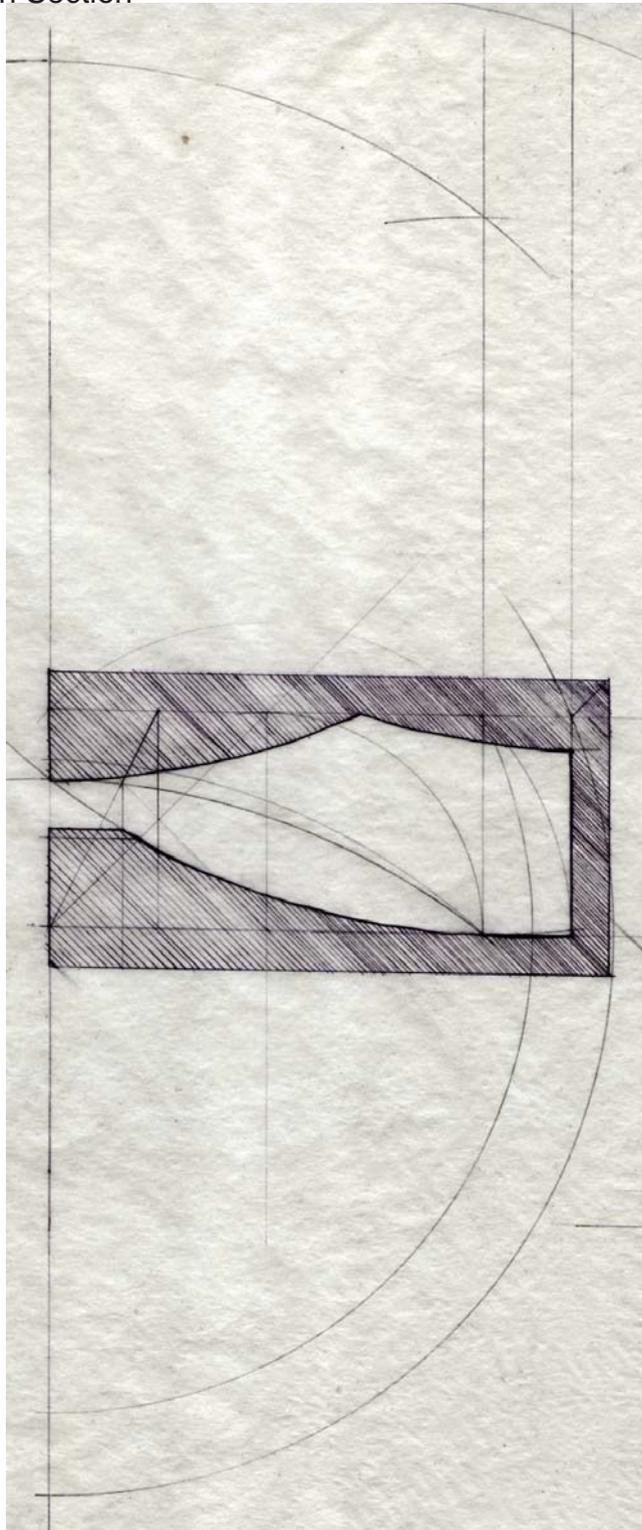


Section looking up at the main connection for glass supports to the roof structure

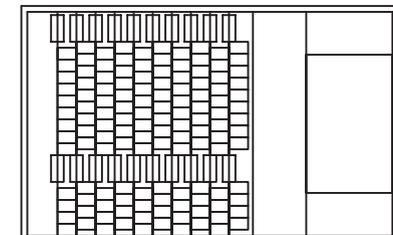
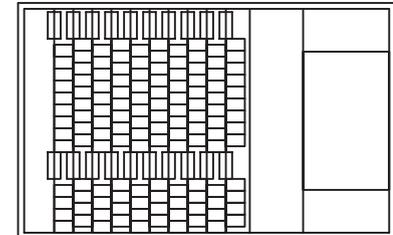
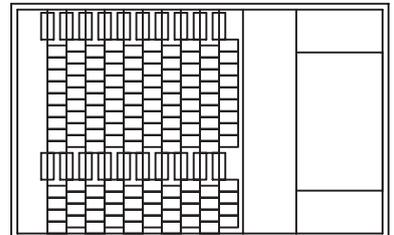
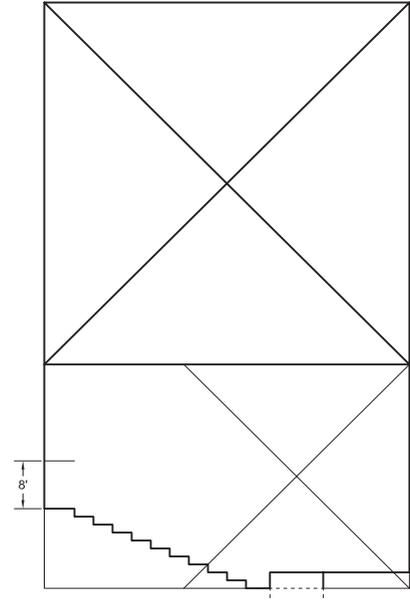
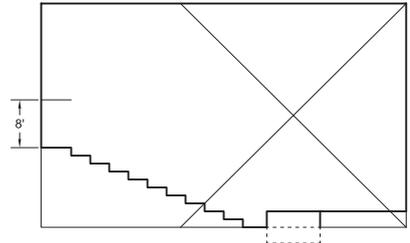
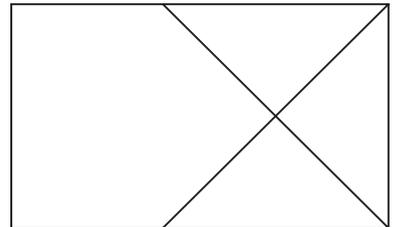


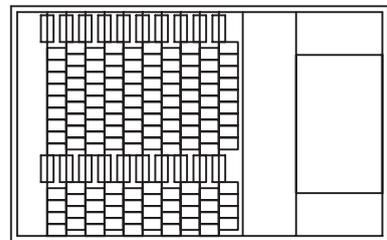
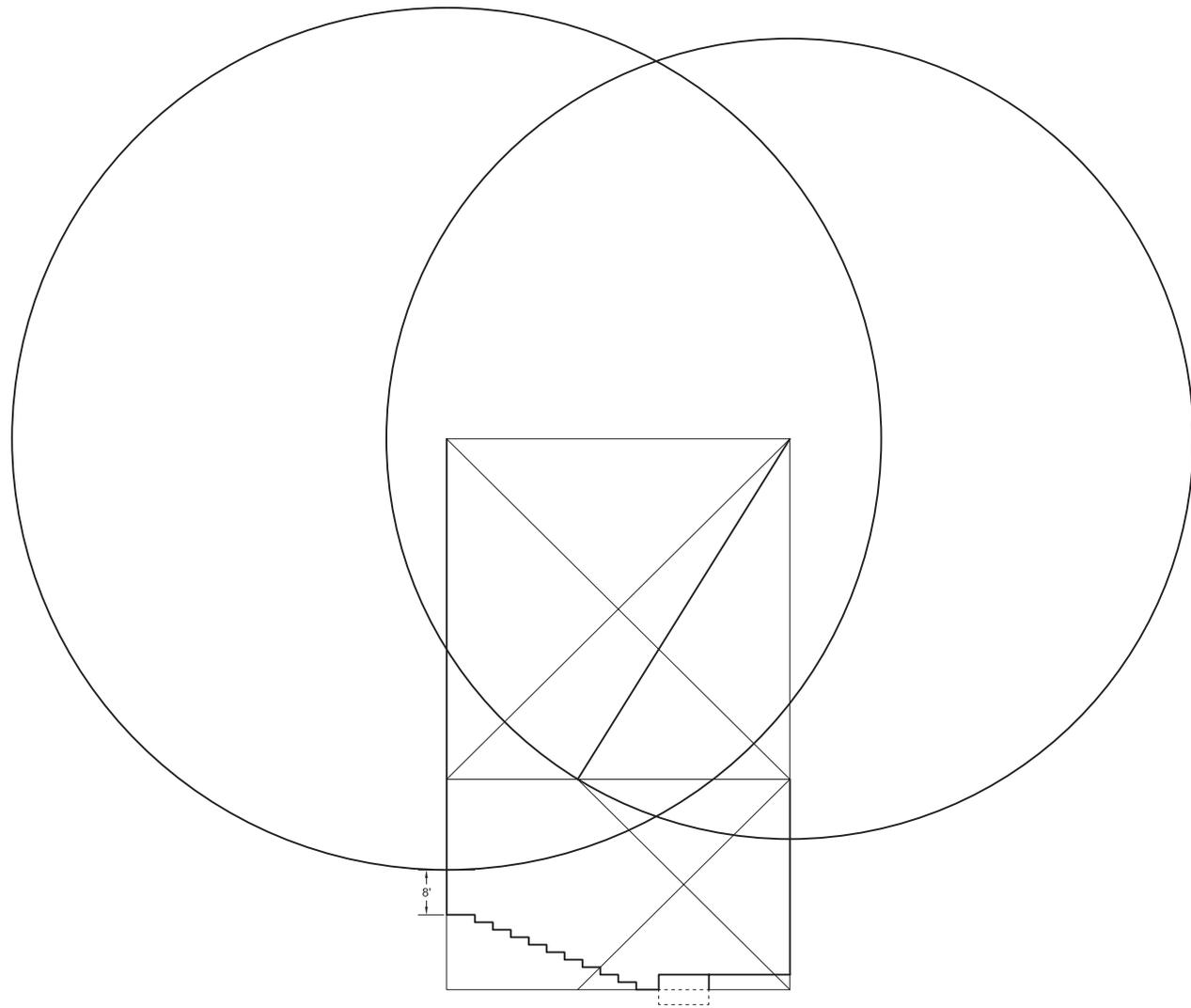


The glass panels are arranged on a 72 inch grid, all quadrangular, with sides measuring at least 12 inches.

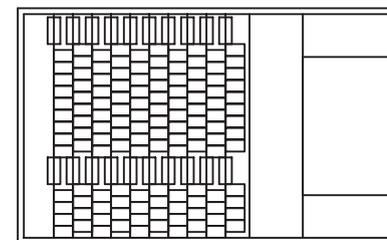
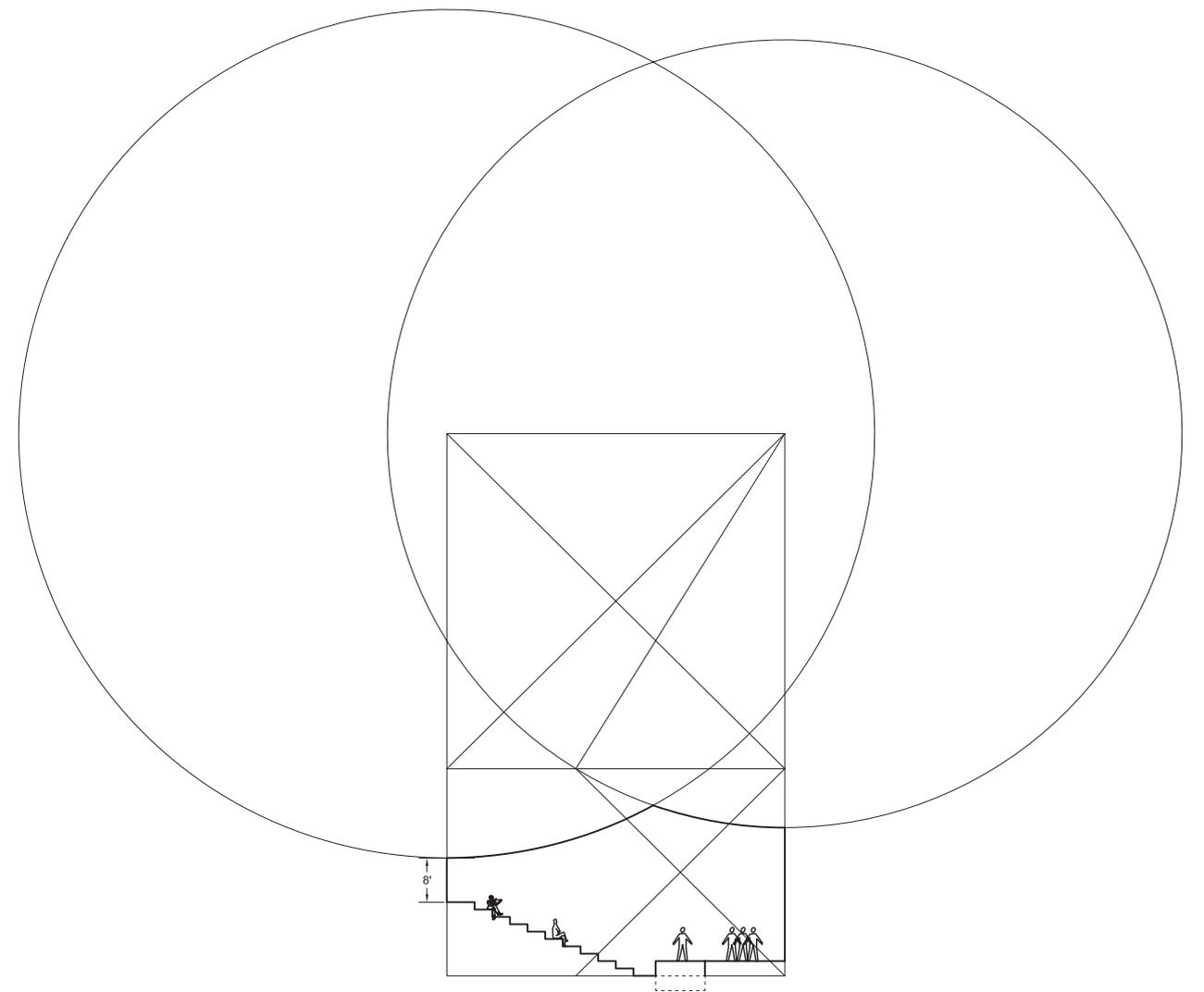


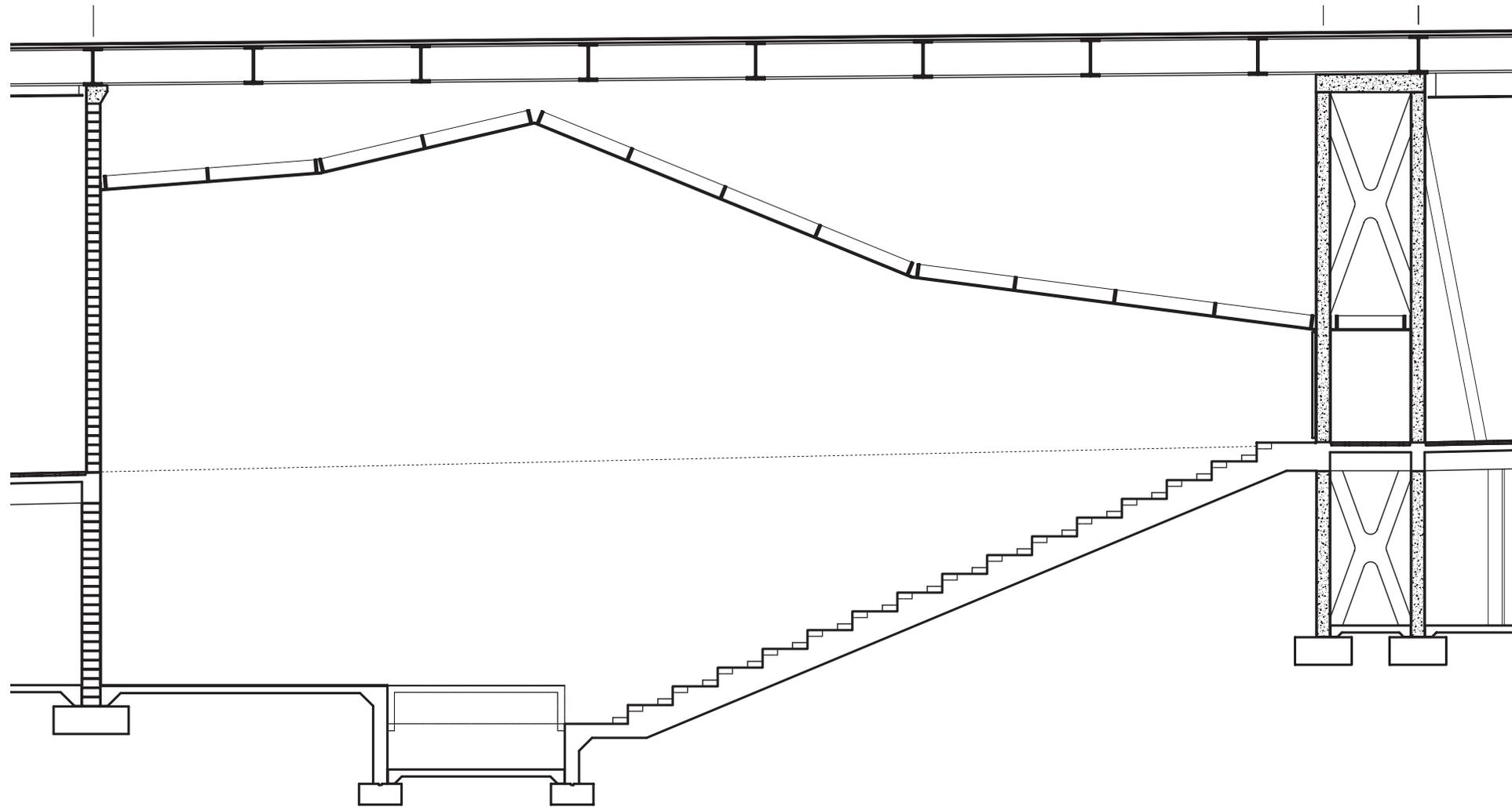
Three of the auditoriums are based on the golden rectangle in plan, then made in section based on the geometry of the plan. The rectangular auditoriums feature an adjustable stage to accommodate a variety of programs, with 3 sections that are capable of being at either stage height or floor height.



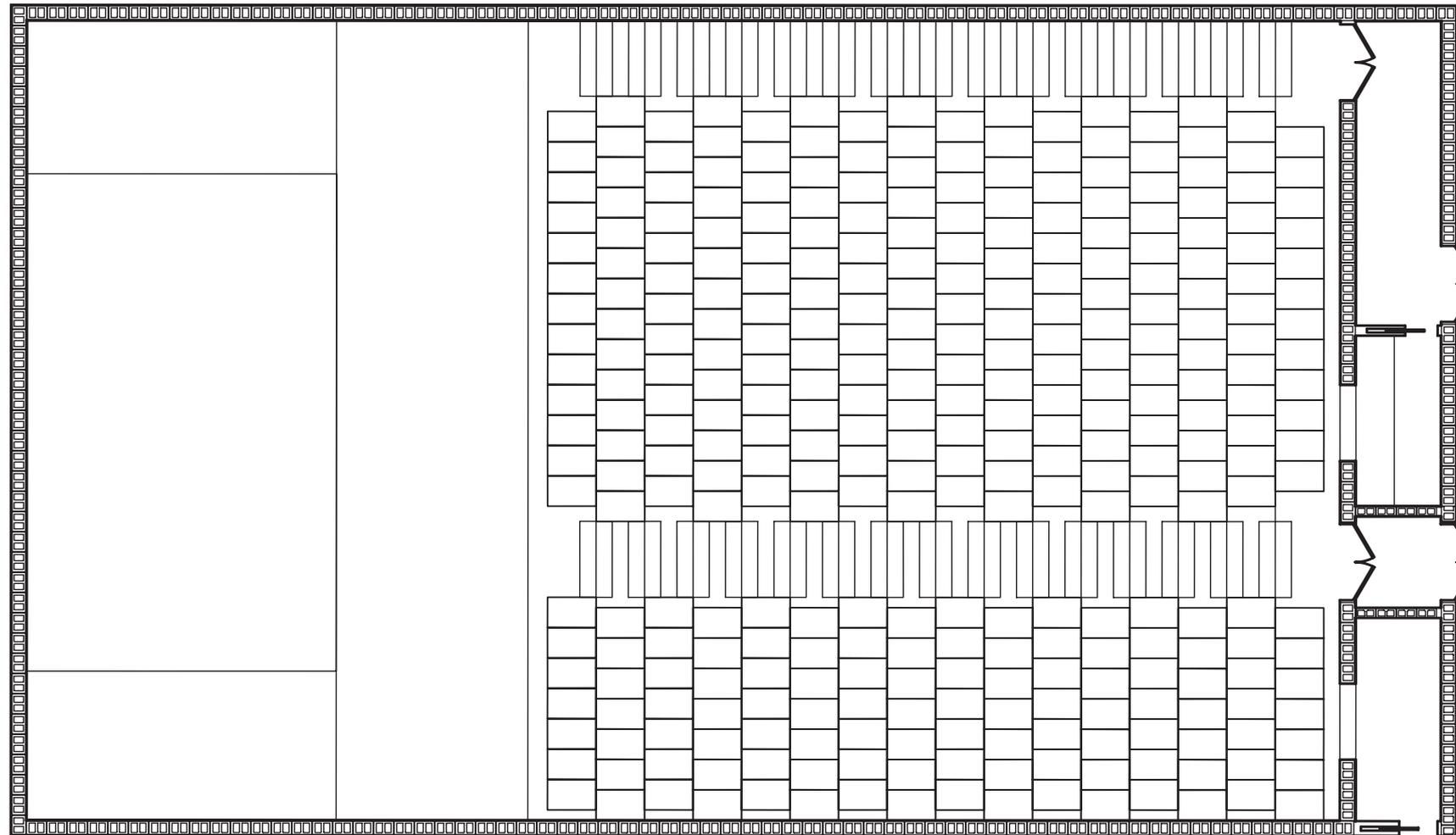
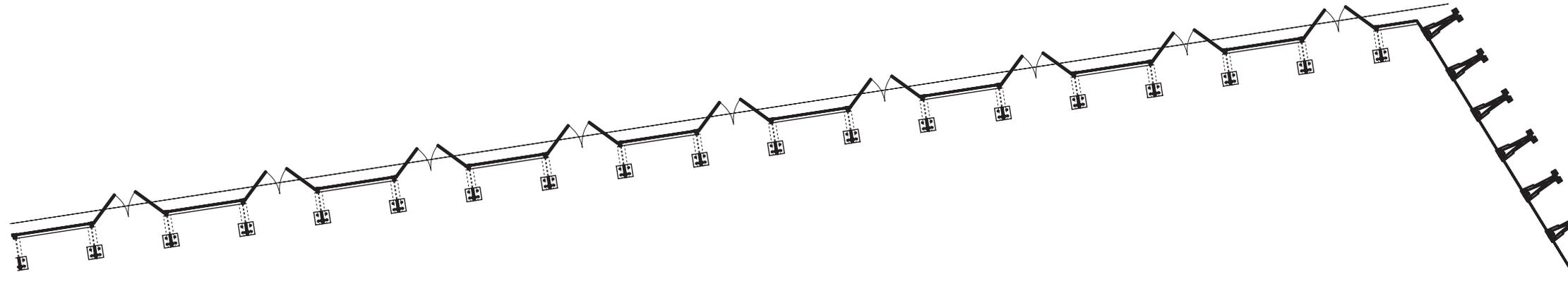


The Ceiling is based on curves which radiate from corners of a square on top of the golden rectangle.

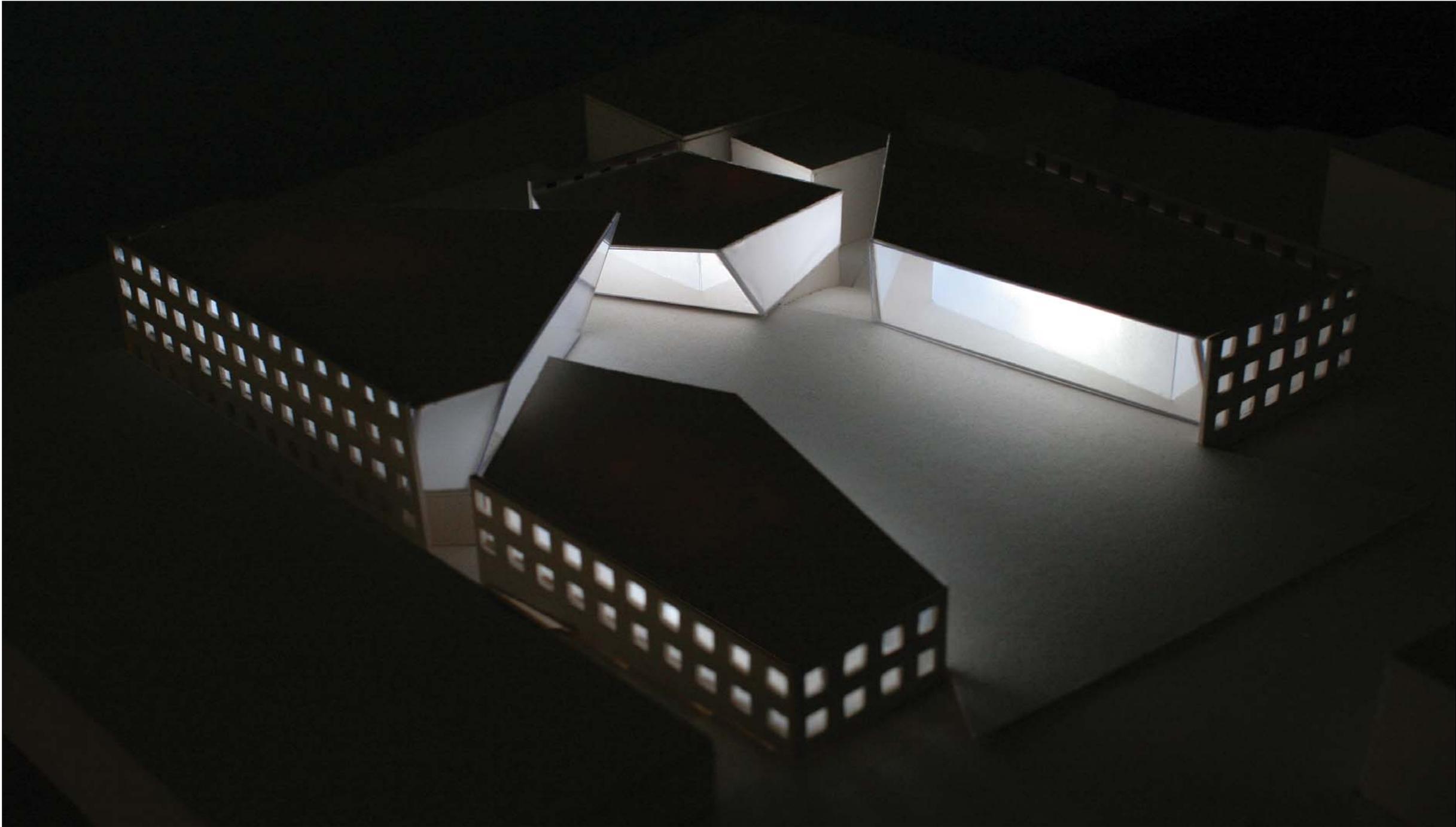


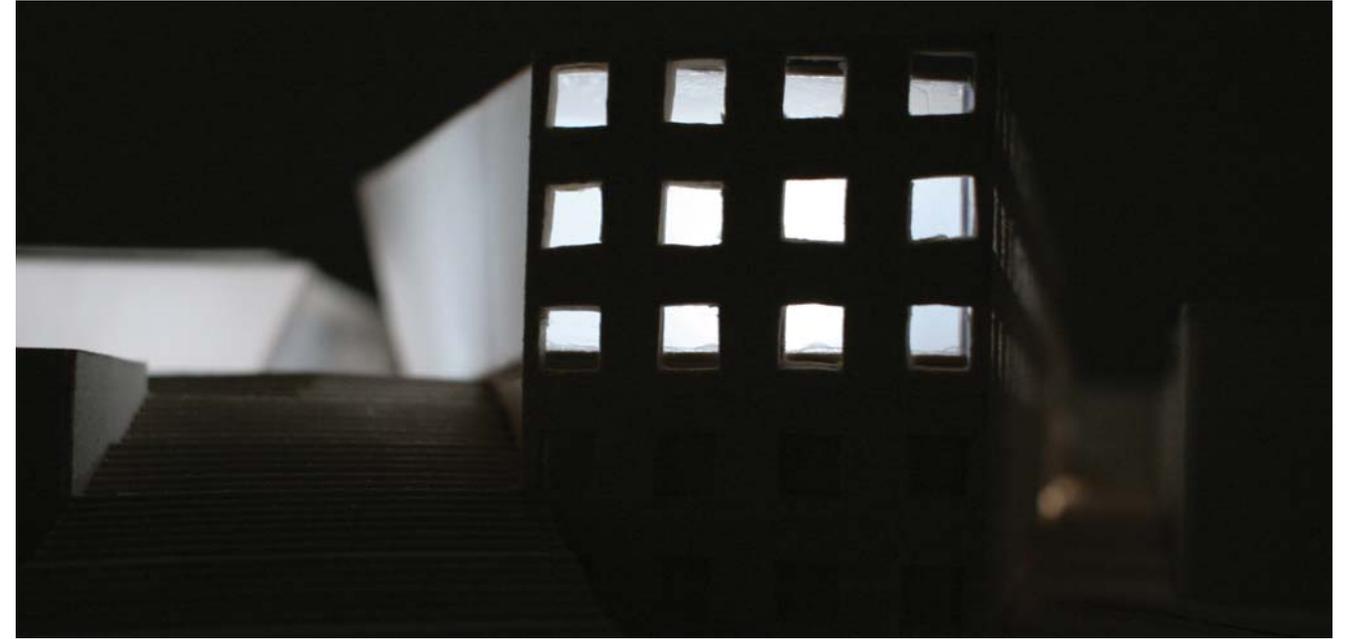
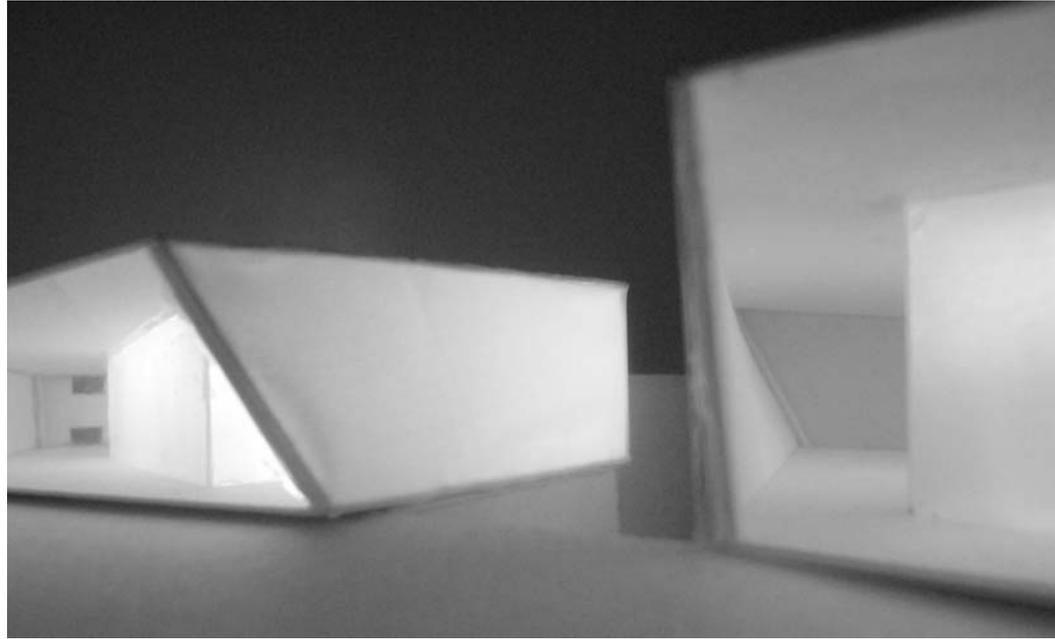


The auditorium ceiling is suspended from the main roof structure, providing space for lighting and sound equipment.



The vestibule space between the auditorium and the lobby accommodates an a/v control room and an alternate camera room or space for accessing catwalks above the ceiling. The aisles between the seats are asymmetrical, giving easier access to the seats in the middle of the space.

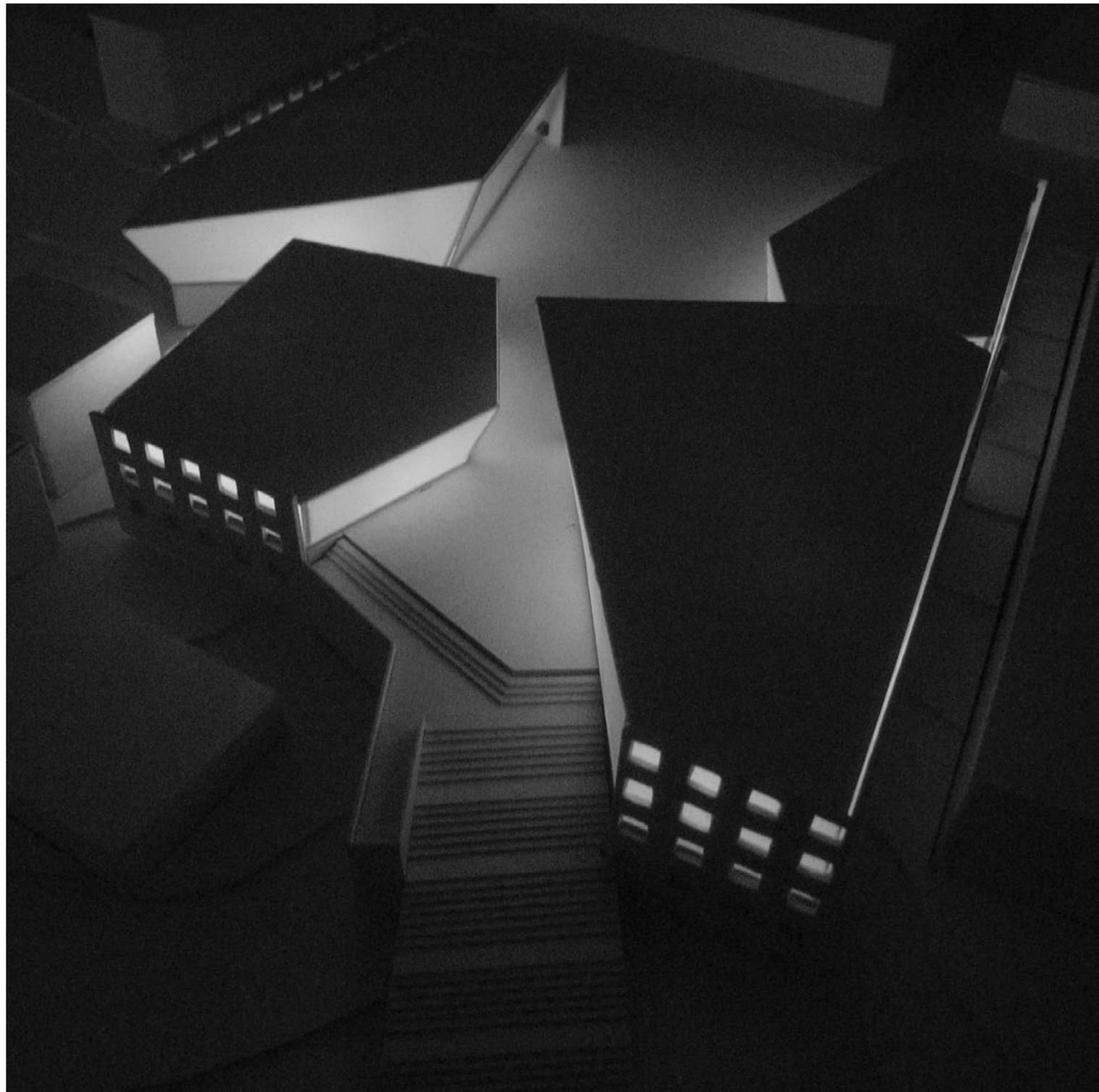




The atrium walls enclosing each auditorium are finished with a diffuse, reflective material and illuminated with floodlights. The buildings act as the primary light source for the plaza.



At night, the glass surfaces disappear when illuminated from within.



In articulating this public space for the City of Martinsville, I found the power that exists within a site, influencing and creating opportunities for phenomenal potential which can be attained only through an understanding of construction.

References

Jaeger, Falk. "Mexikanische Botschaft". Baumeister. March 2001: 66 – 73

Nolli, Giambattista. 1748 Roma : La Pianta Grande di Giambattista Nolli in Facsimile. Introductory Essay by Allan Ceen; [Testo italiano, Traduzione di Anna Cioli]. J.H. Aronson, Highmount, New York, 1991.

Images

All photographs and drawings are original work by the author unless otherwise noted.

Aerial Photography

*Henry County, Virginia. Anderson and Associates, Inc. 21 May 2007
<<http://arcims2.webgis.net/henryco/default.asp>>*

Vita

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A sincere Thank You to all who have supported, encouraged, and challenged me