

La Costa Residences

a tower by the shore

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MASTER OF ARCHITECTURE in ARCHITECTURE

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Abstract

This thesis choreographs the procession around and within a tower. An alternating sequence of compression and expansion of space creates a rich spatial experience. Each moment along the sequence is meant to complement or contrast the others, exaggerating their effect. The tower's form is designed by producing and then selecting from a series of potential solutions. Each iteration is guided by the aforementioned sequence of spatial conditions.

Acknowledgements

I would like to thank...

my parents, Herman and Marianita, for always making sure that I have everything I need in order to be successful in whatever I do.

my sister, Jennifer, for being a great role model that I look up to a lot.

my committee, Bill Galloway, Hunter Pittman, and Frank Weiner, for their guidance and support.

my classmates for inspiring me with their amazing talent.

my family for their encouragement.

my friends for being like a second family to me.

Most of all...

thank You, God, for putting all of these wonderful people in my life and for providing me with everything I need. Thank You for blessing me far beyond anything I deserve.

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Introduction

High-rise buildings are inevitably composed of a repetitive stack of floor plates. When spaced at the same interval, the floors establish a consistent pattern, or beat (to borrow the term from music). Architects must demonstrate control over this pattern and not just conform to the default. In other words, we must design the stacking.

One way to do this is to disrupt its monotony by superimposing a more complicated rhythm over it. This can be done with variations in balconies, spandrels, floor to ceiling heights, etc. While a complex rhythm can provide visual interest, applying such a rhythm to a tall building results in its nuances dominating the whole. Across the entire height of the building, the rhythm can only be perceived one segment at a time. This reduces the tower to a series of segments placed on top of one another and only enhances the notion of stacking.

Another possible approach is to eliminate the appearance of stacking by having it fade away or disappear entirely (i.e. a curtain wall that covers it). With the horizontal lines of the floors concealed, long vertical lines may now emphasize the tower's height. While this may result in a beautiful tower, has the stacking really been designed, or just hidden?

One other method of designing a tower is to emphasize the inherent repetition created by the stacked floor plates. Instead of hiding or complicating it, the floor plates are allowed to project and establish a simple rhythm. This consistent, repetitive rhythm allows for the parts and the whole to be understood at the same time. The overall form of the tower is not lost in the minute

intricacies of a complex rhythm. Additionally, the revealing of the floor plates gives the exterior of the tower texture that would otherwise be hidden inside a curtain wall.

The towers designed in this thesis, including the final design, use this last approach. Repetition is not avoided; it is sought. Stacking is not seen as a hindrance to verticality, but rather as a way to achieve it.

Arrival Sequence

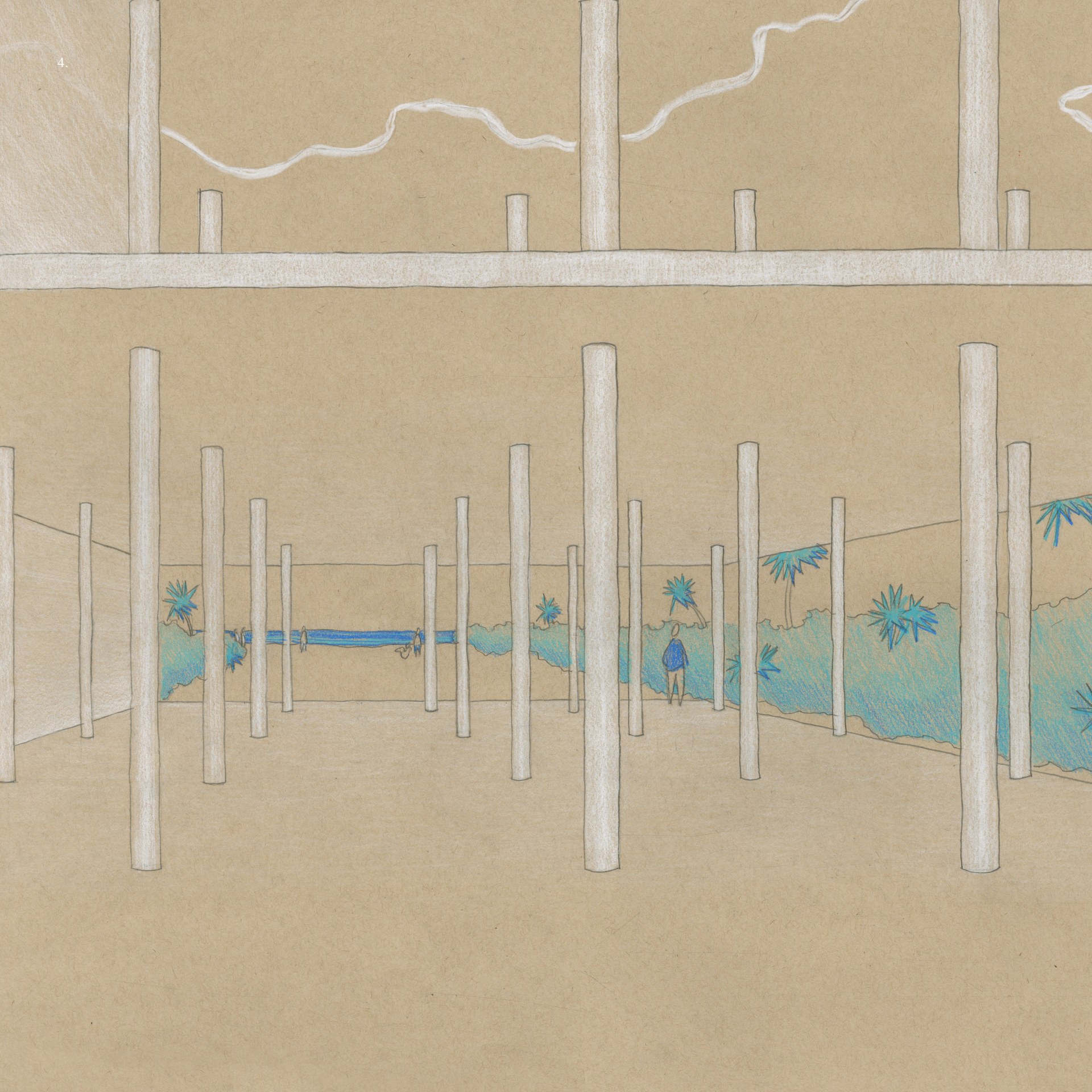
Upon entering the site one is surrounded by a lush, seaside garden. Immediately a sense of retreat from the city is evident. Glimpses of the tower are made possible by breaks in the surrounding canopy, but for the most part, the tower remains out of view, producing a sense of mystery. The dense vegetation creates a feeling of enclosure as one approaches the tower. At the base of the tower, the beach is framed into view for the first time. Sightlines to the horizon drastically contrast the previous movement through the dense garden. Placing the entrance on the side of the tower, as opposed to the front, forces one to face the ocean and then turn left to enter.

Before reaching the main lobby one passes through a small, enclosed vestibule. The dimly lit room helps to exaggerate the feeling of light and openness experienced by ascending to the main lobby. From the main lobby, a second view of the beach is attained, this time from a higher vantage point. Vertical movement within the tower is restricted to stairwells and elevators that provide no views to the exterior, once again compressing the space around one. From the upper levels, sightlines extend infinitely in every direction, producing the last and most dramatic expansion of space.

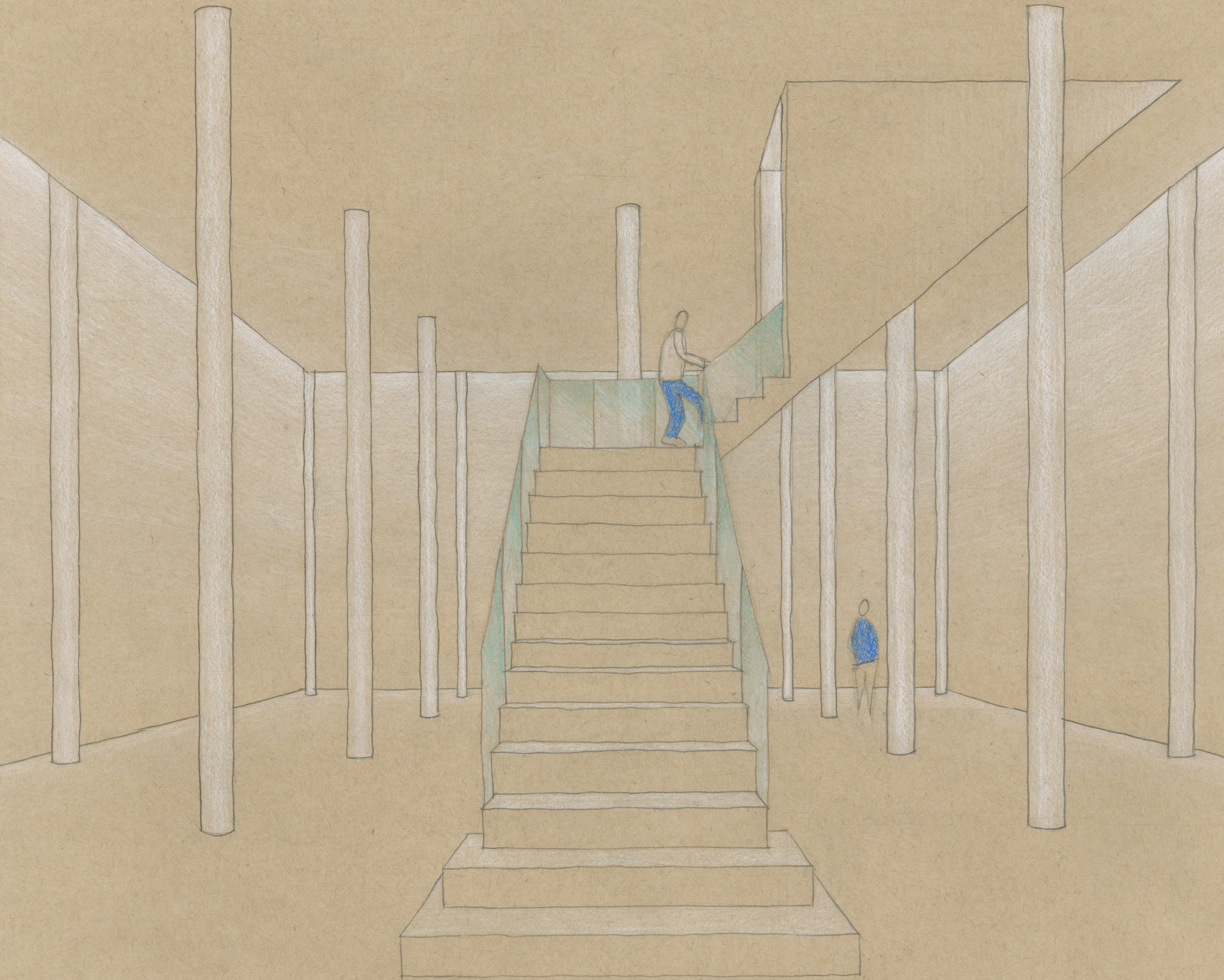
3. The initial approach provides only glimpses of the tower through dense vegetation.



*4. The porte-cochère frames
the first view of the ocean as
one arrives and then turns left
to enter the tower.*



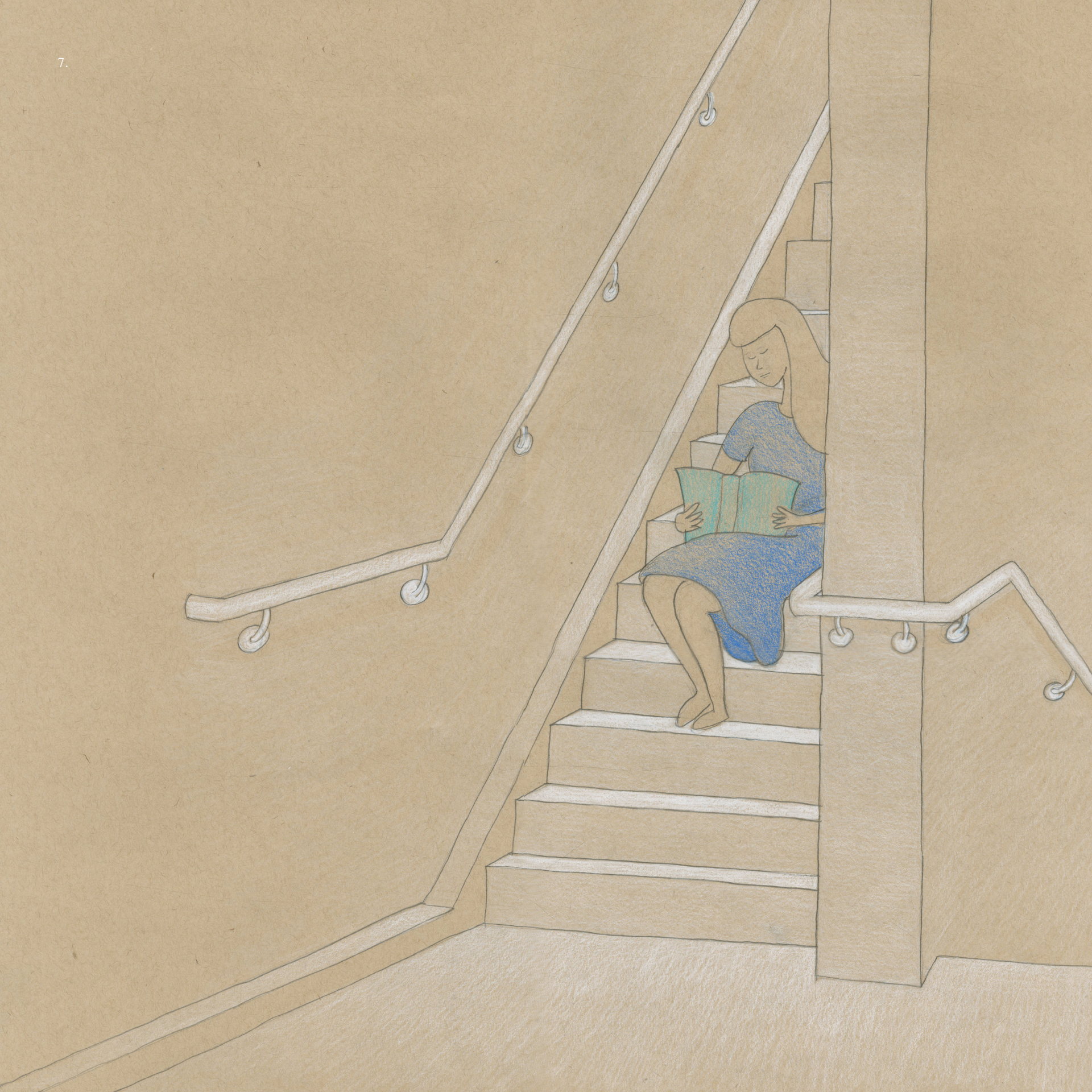
5. Once inside, a small, dimly lit vestibule compresses the space and leads one to the main lobby on the second floor.



6. The main lobby's large windows allow for views to the horizon and create a brightly lit space, contrasting the vestibule.



7. As one ascends to the upper floors, the space compresses once again inside the stairwell.

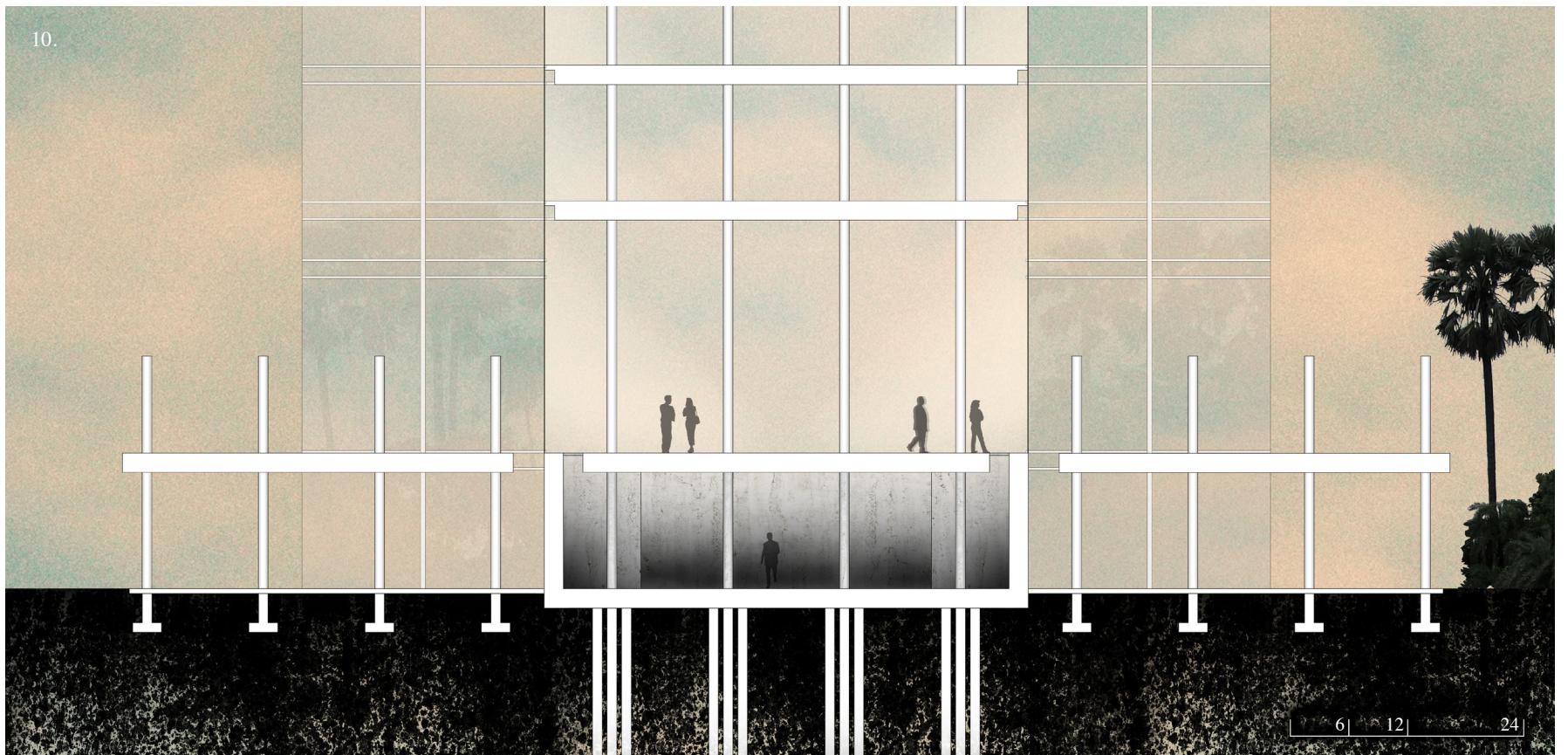
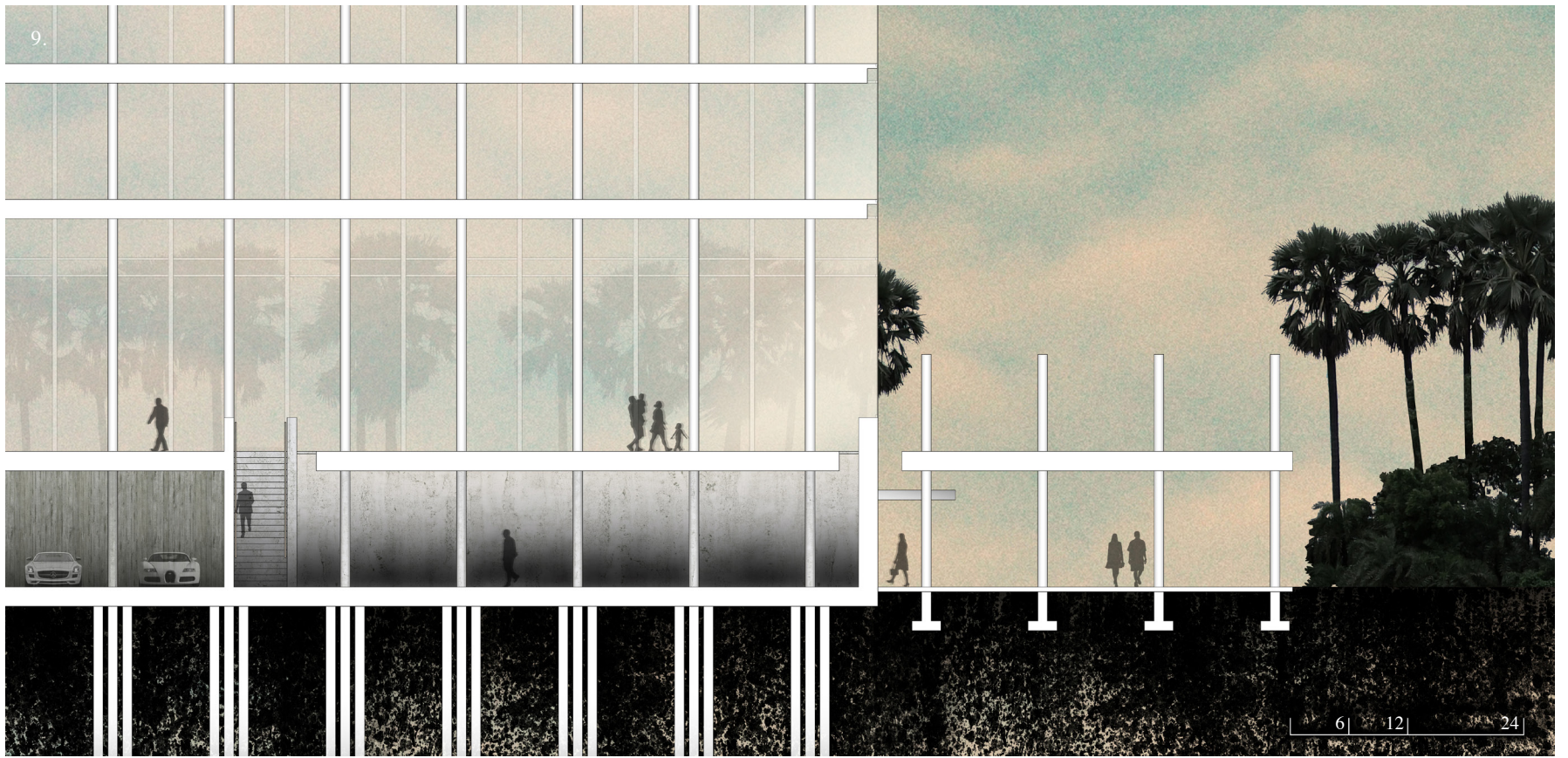


8. A dramatic expansion of space occurs as one reaches a balcony and looks out to the ocean.



*9. North-South Section of
porte-cochère, vestibule, and
main lobby*

*10. East-West Section of porte-
cochère, vestibule, and main
lobby*

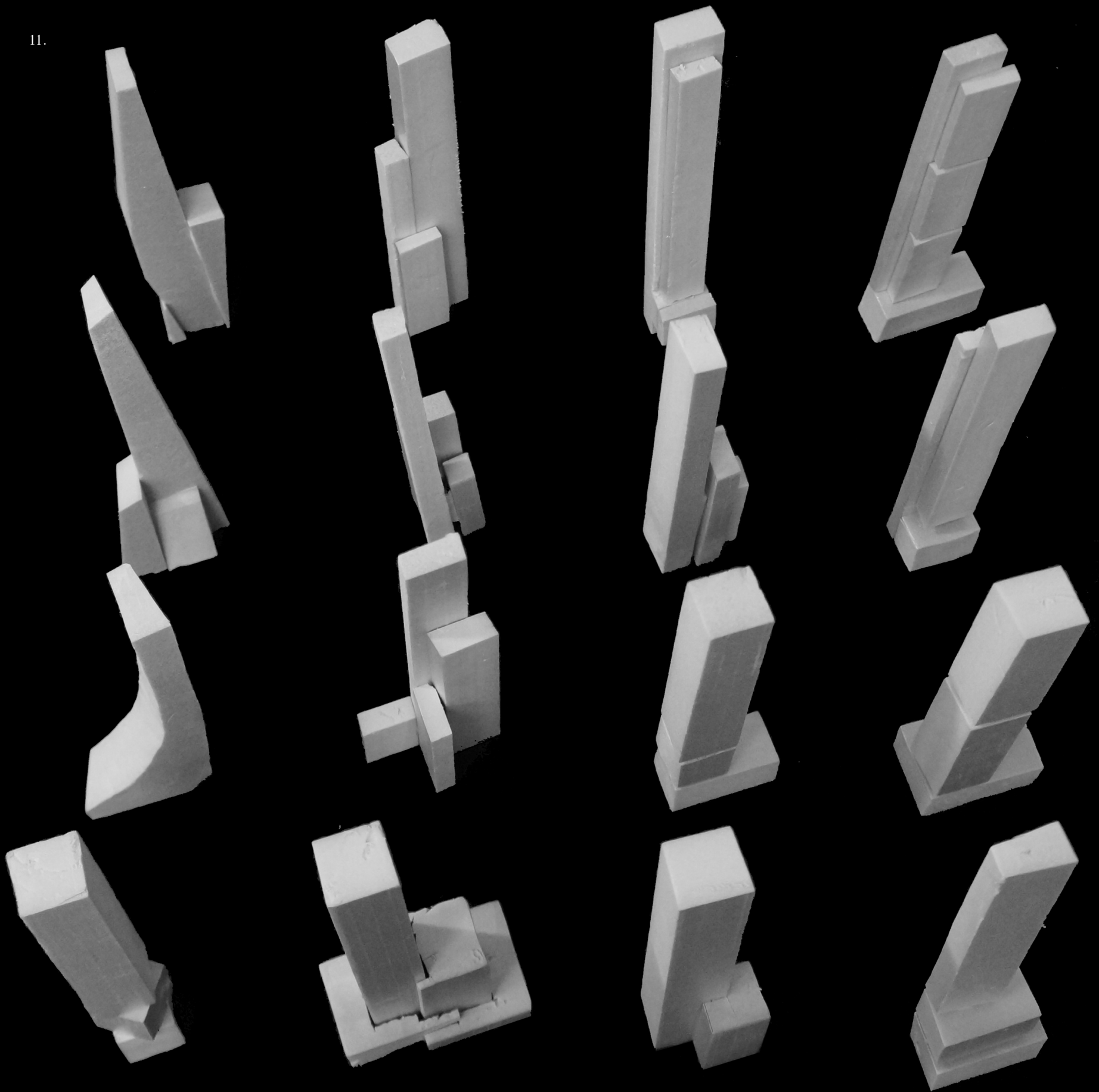


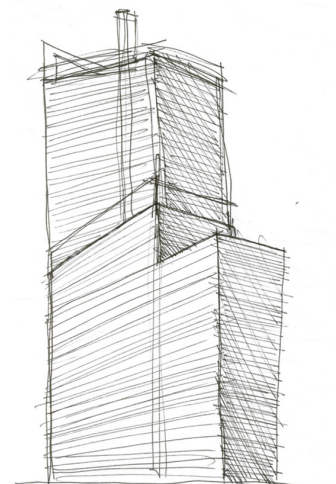
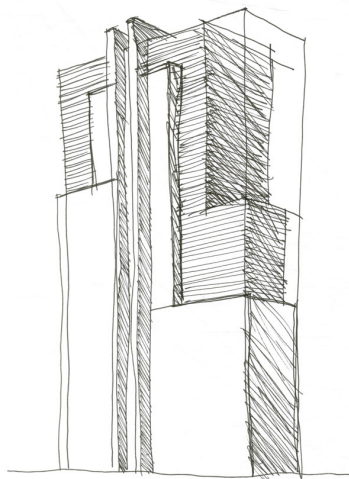
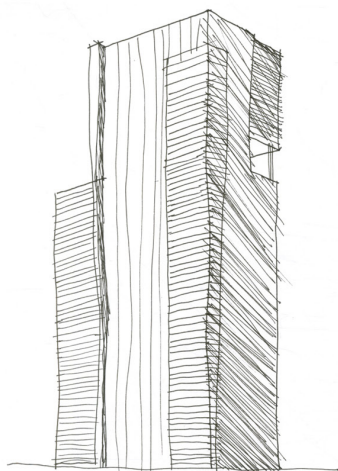
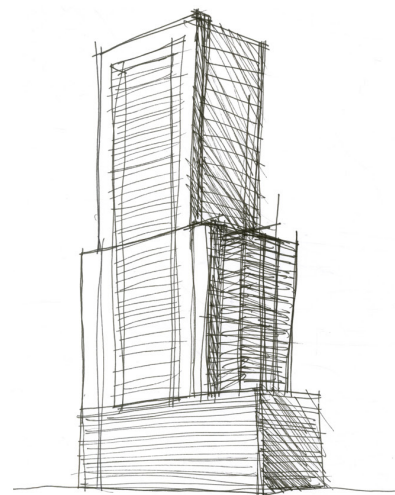
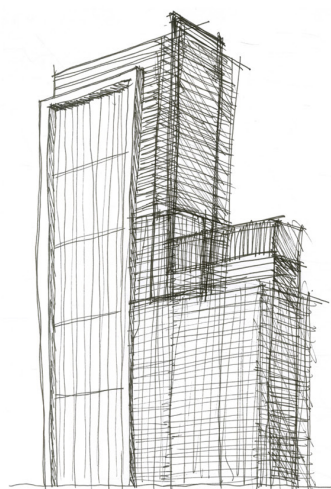
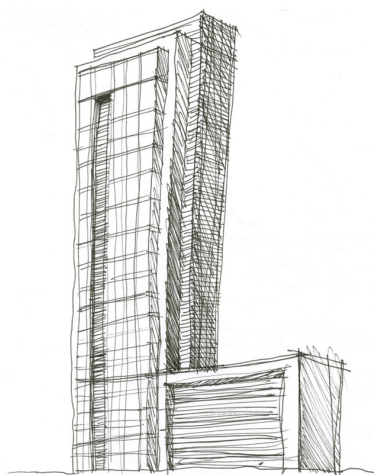
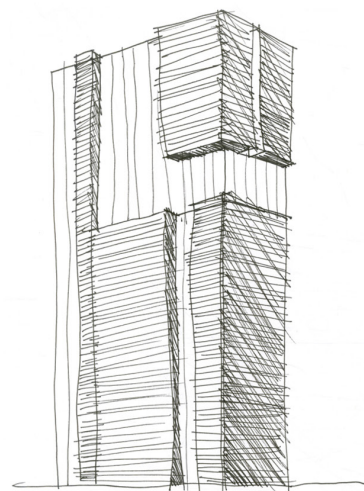
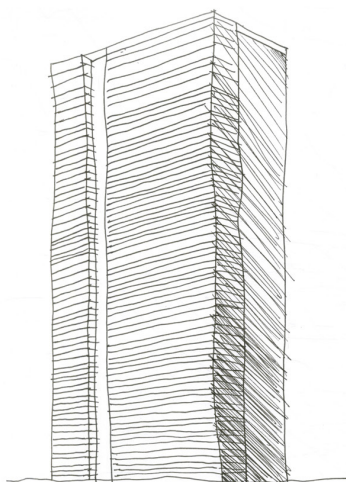
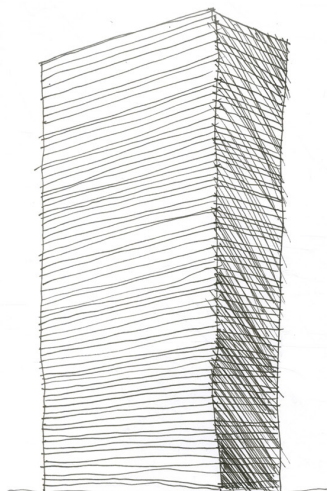
Iterations

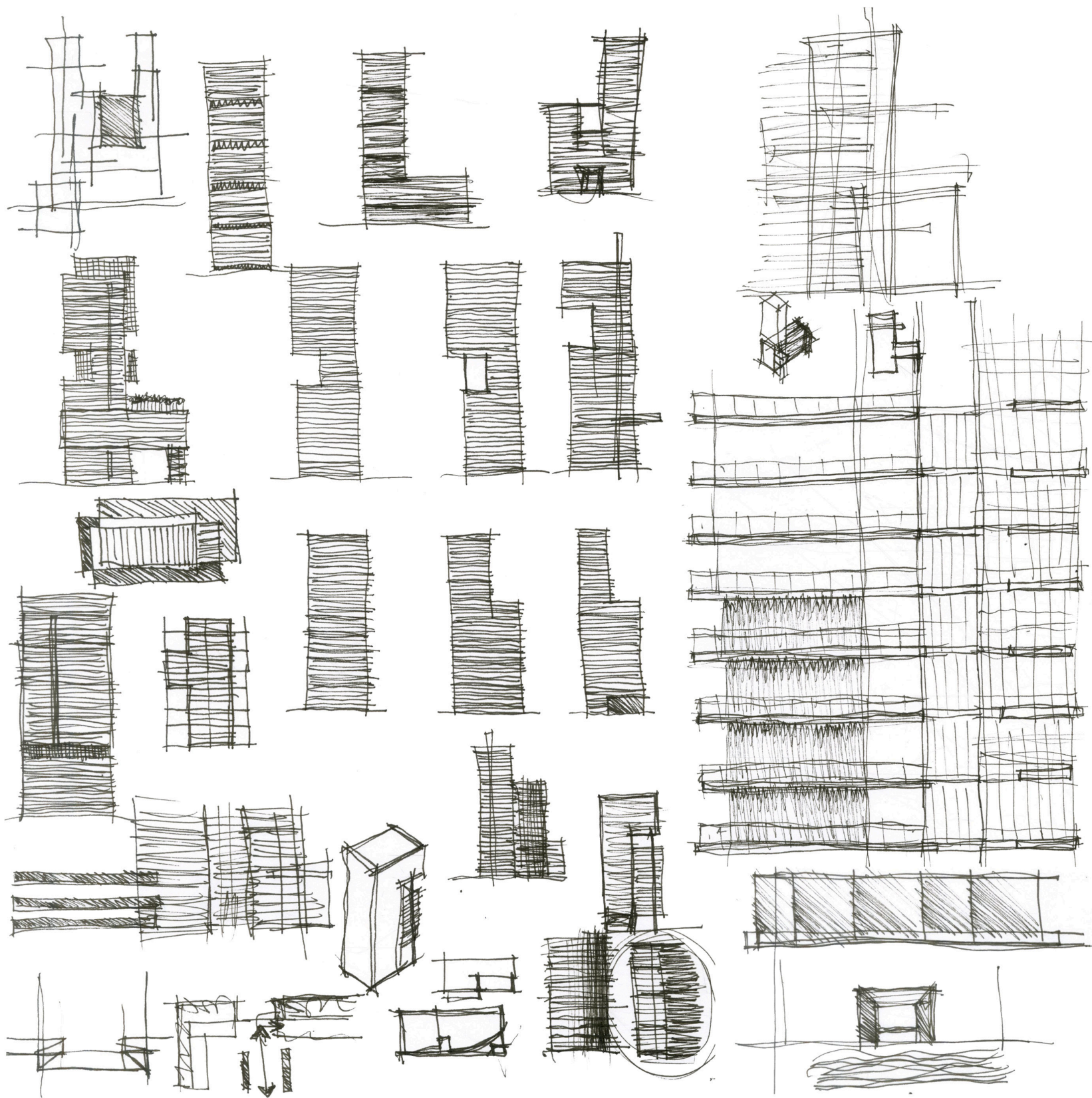
Initially the tower is treated more like a sculpture. Sketches and study models allow for the quick testing of design ideas. As more sketches and models are produced, subsequent forms begin to be derived from previous ones until eventually the models can be grouped into sets of similar qualities. Throughout the process, the previously described sequence of spatial conditions remains critical to every preliminary design.

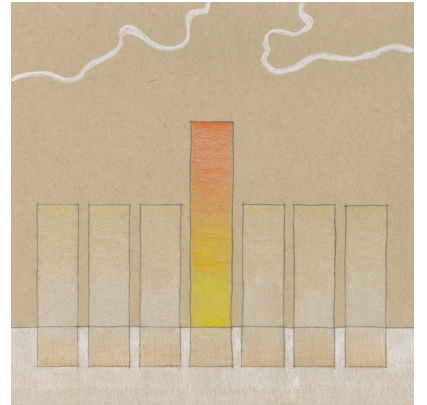
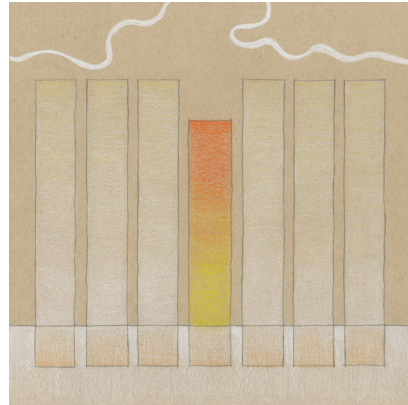
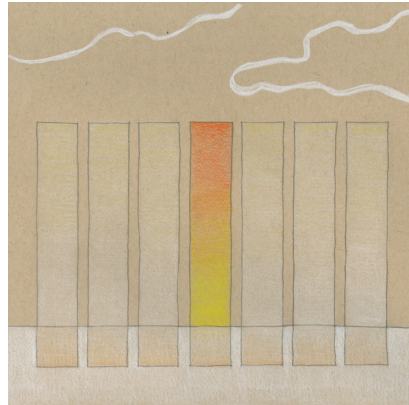
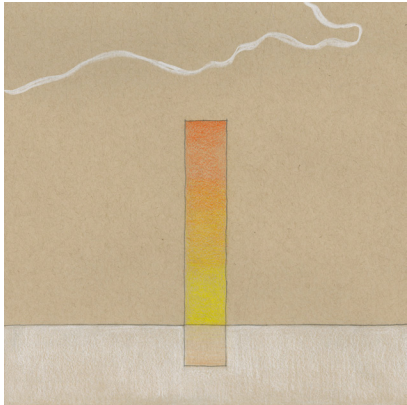
Across the various schemes, the massing of the tower is limited to one main volume that rises from a base or from a series of smaller volumes. The proportions of the base increase the towers apparent verticality and give it a sense of anchoring to the ground.

One desired quality of the tower is the establishing of a consistent rhythm on the elevations. To accomplish this, floor slabs and balconies are allowed to project from each floor. From the exterior, this results in a stack of horizontal lines. From the interior, it extends the floor and ceiling past the building's glass enclosure, framing the surroundings and the sky into view. Although the structure is mostly concealed within the building's enclosure, numerous models and sketches explore revealing the structure at several points along the tower's height.

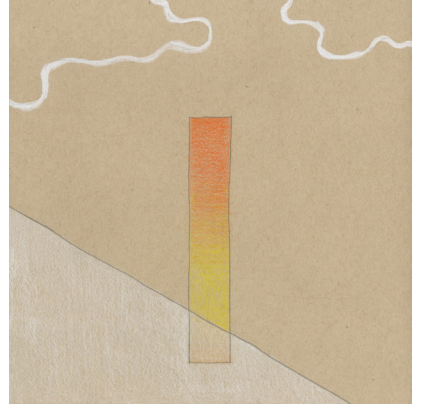
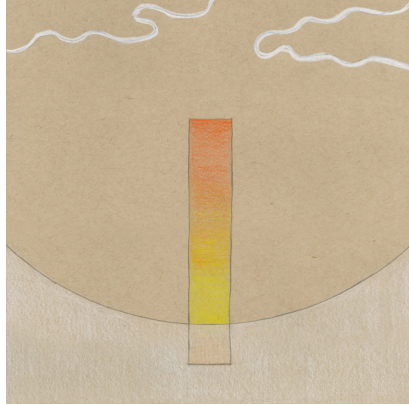
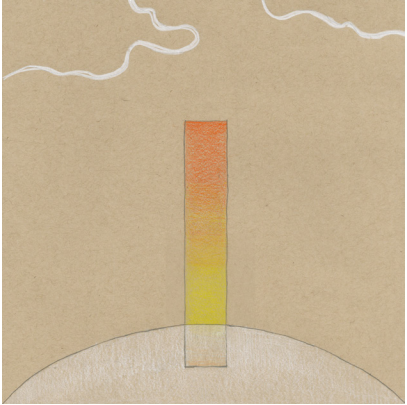




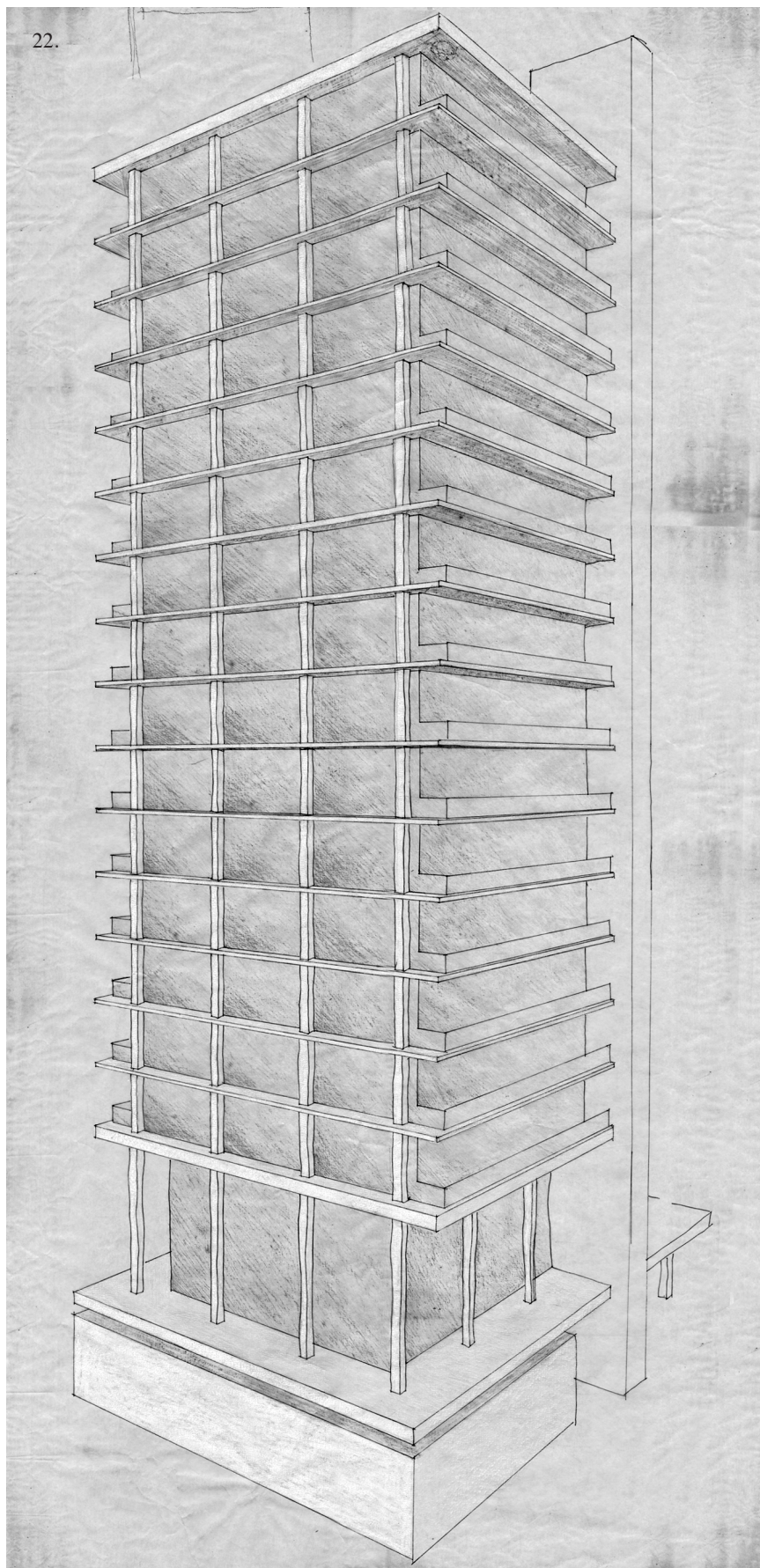




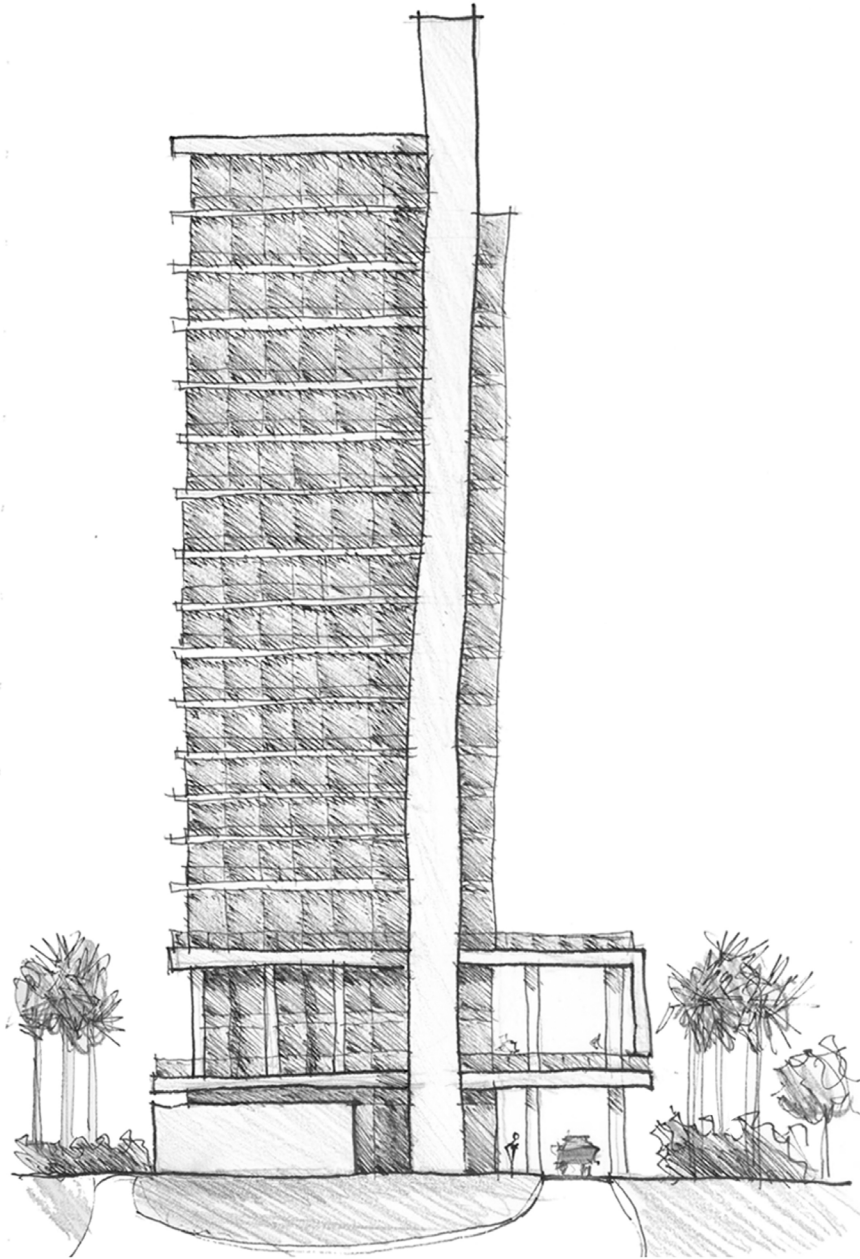
14-21. Diagrams comparing how the tower's context affects its perceived verticality



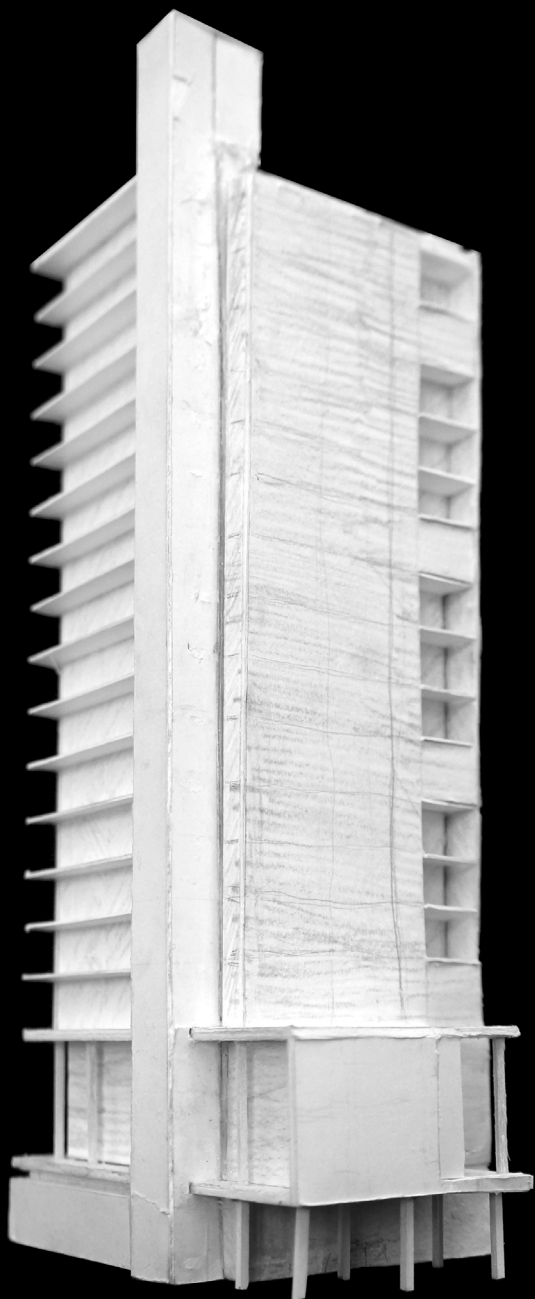
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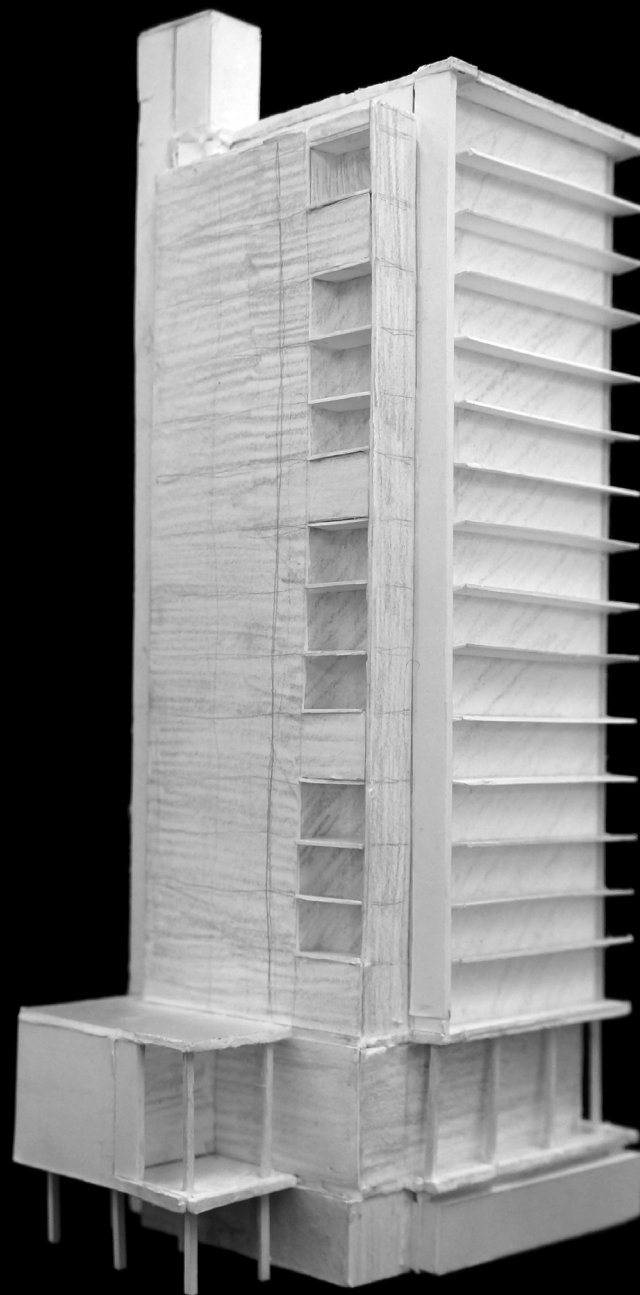
22, 23. Early tower design that emphasizes the repetition of the projecting floor slabs



24.

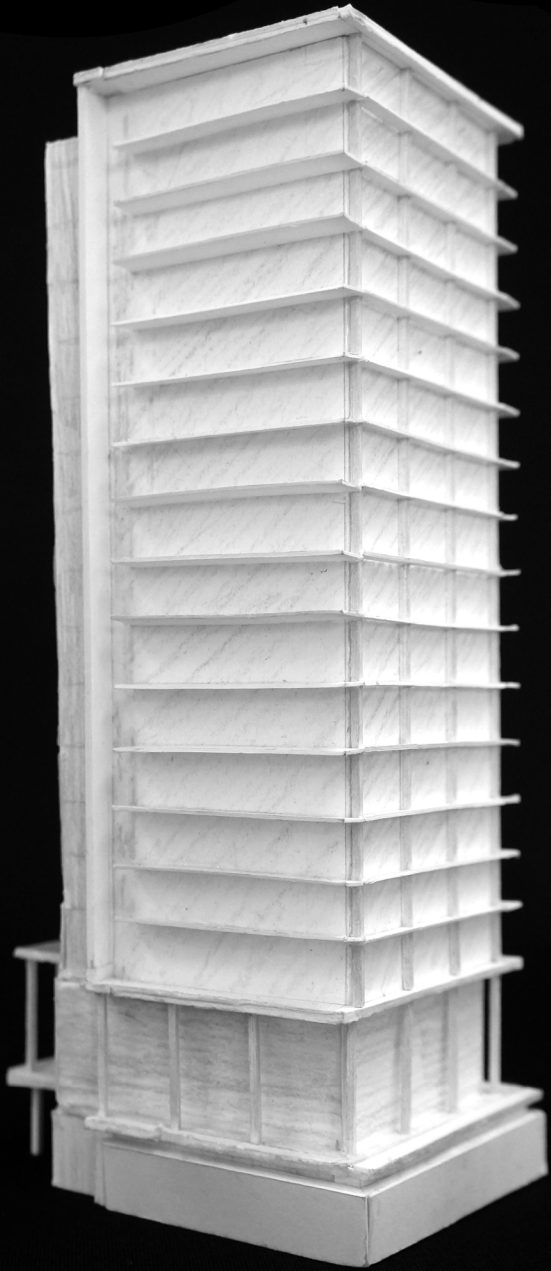


25.

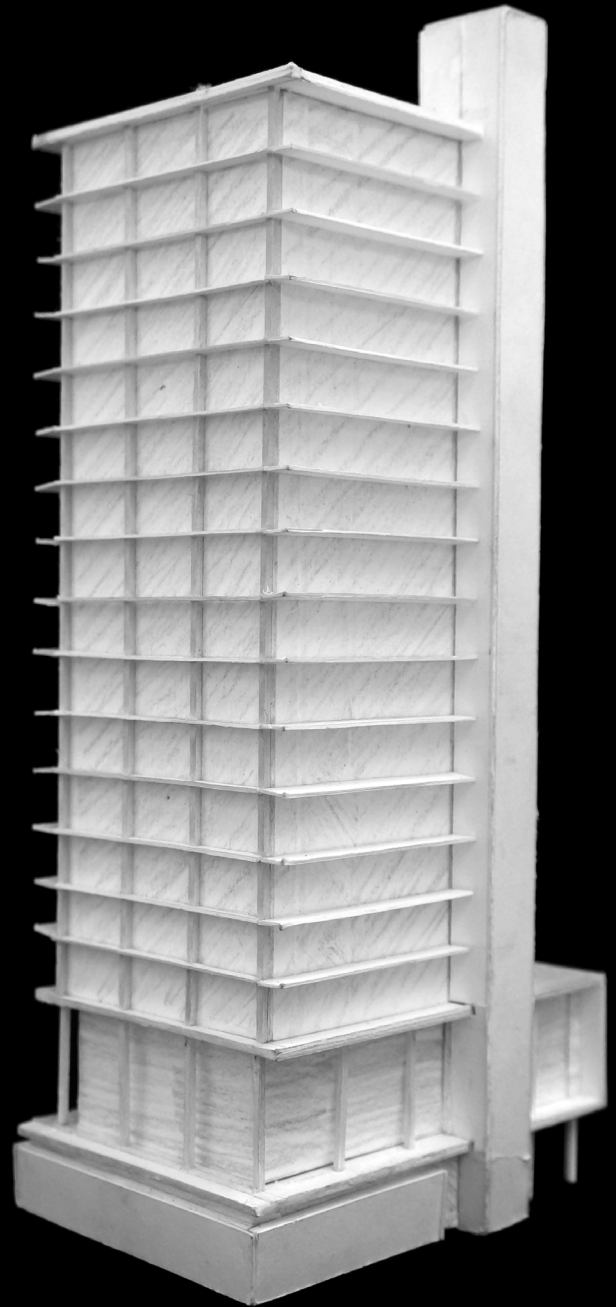


24-27. Photographs of early model

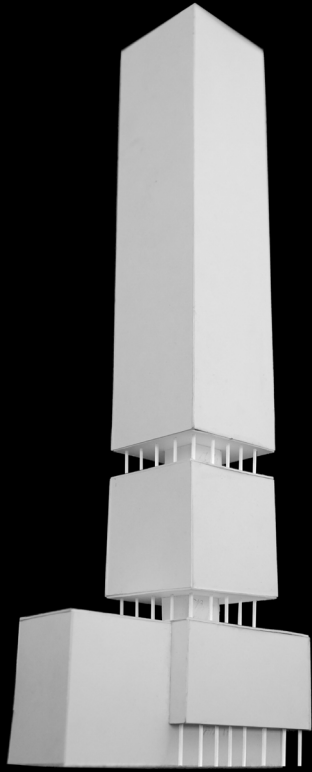
26.



27.

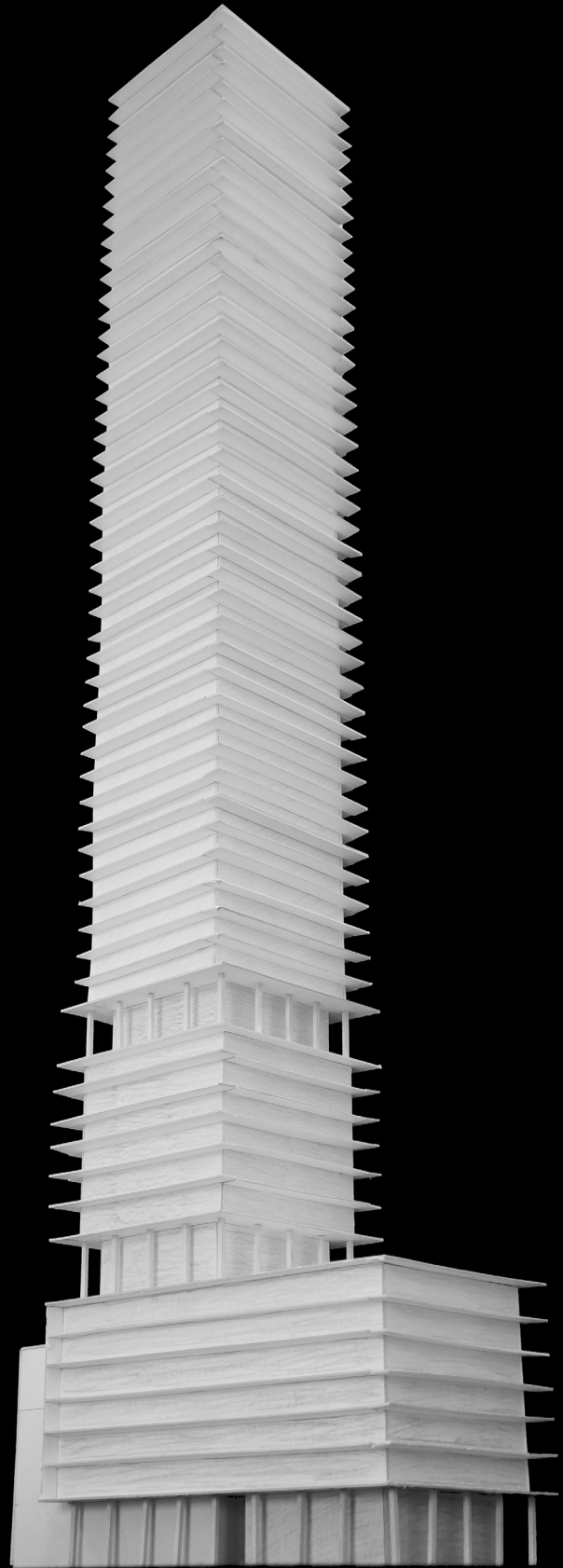


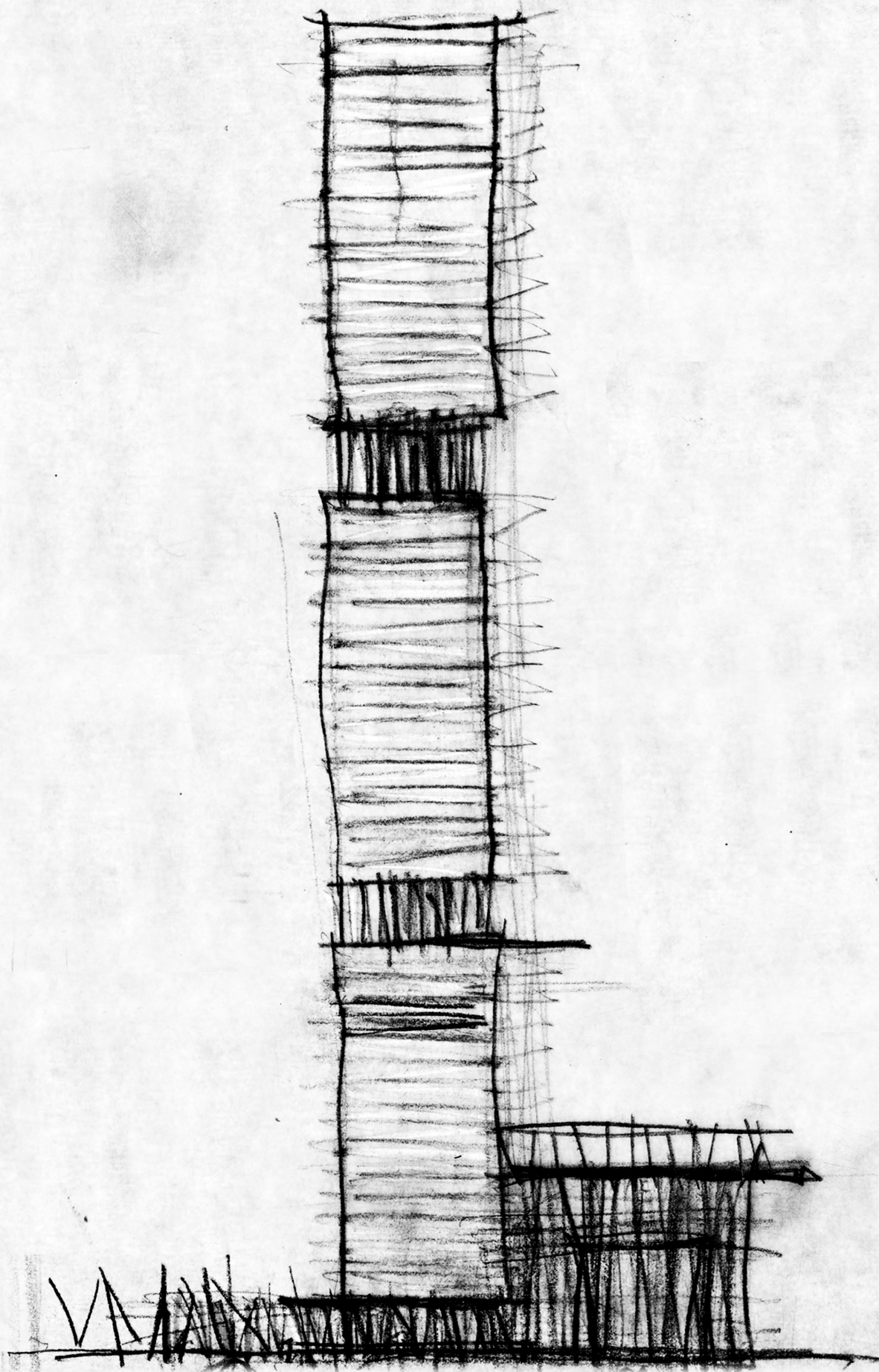
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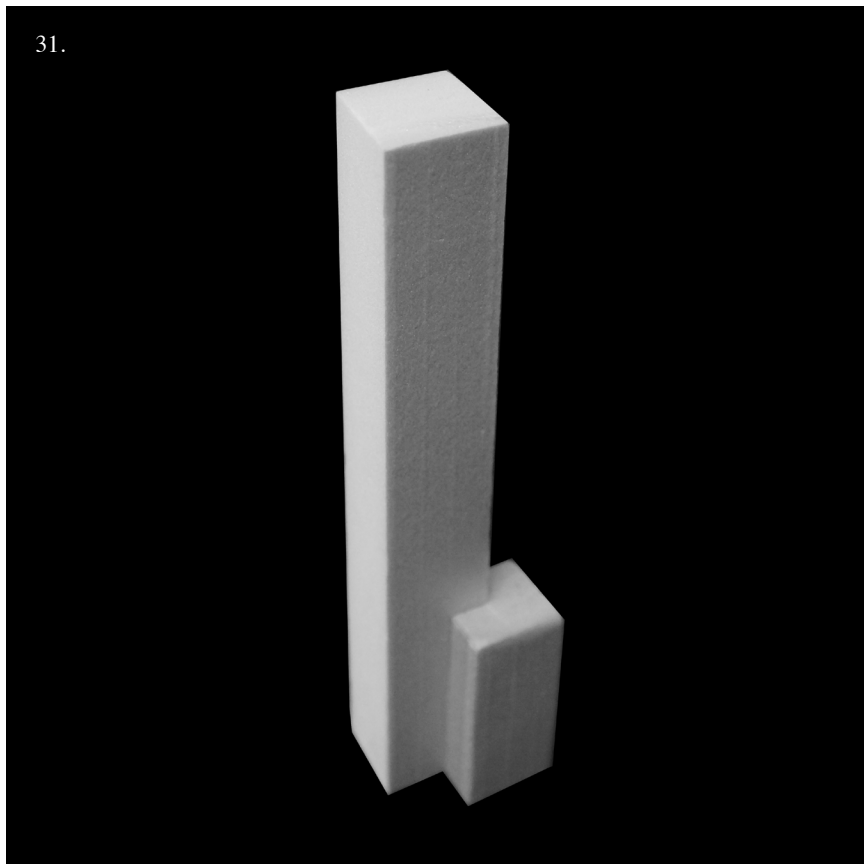
28-30. Early tower design that reveals structure along several points and contrasts the verticality of the structure with the horizontality of the balconies

29.

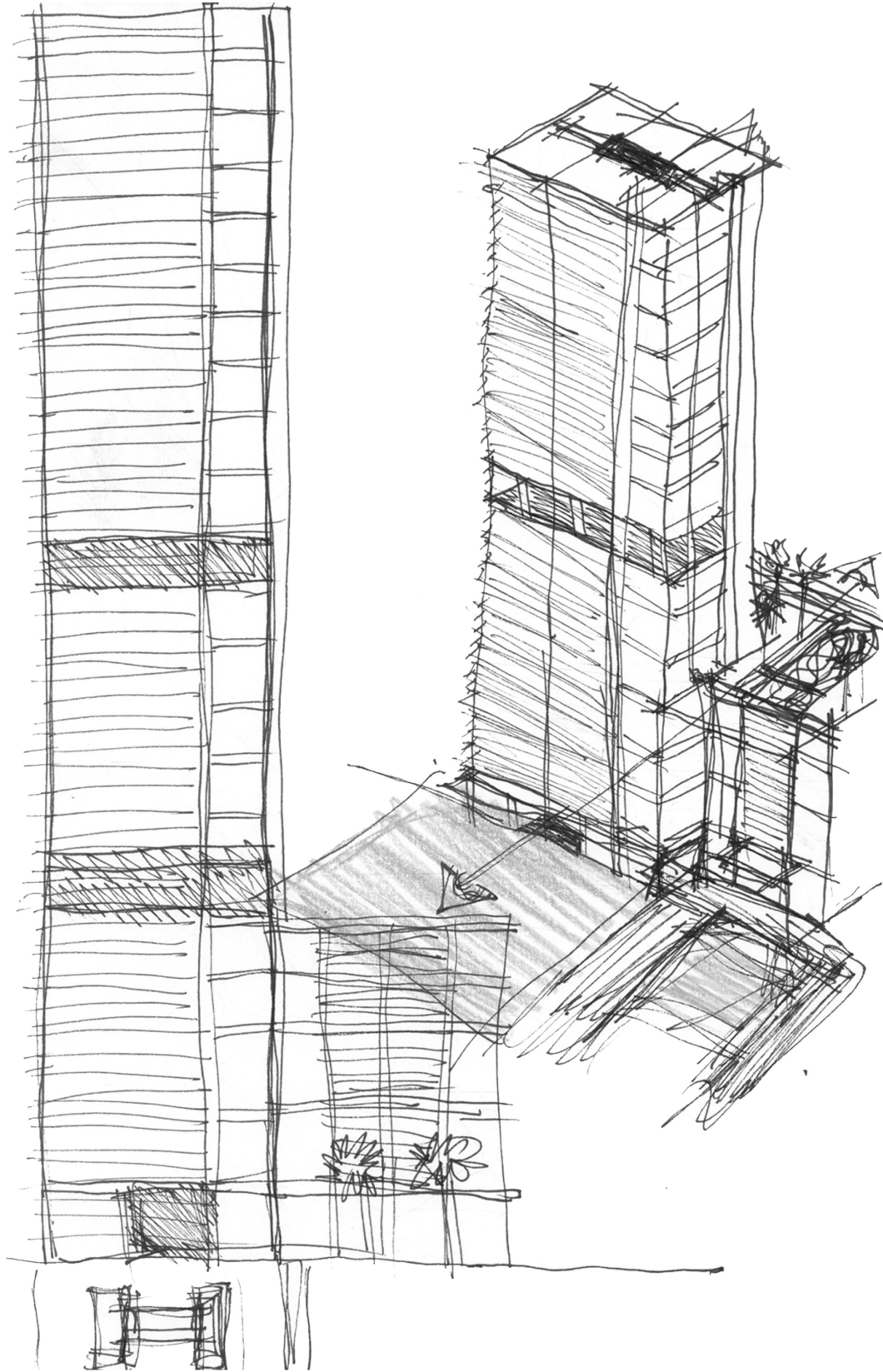




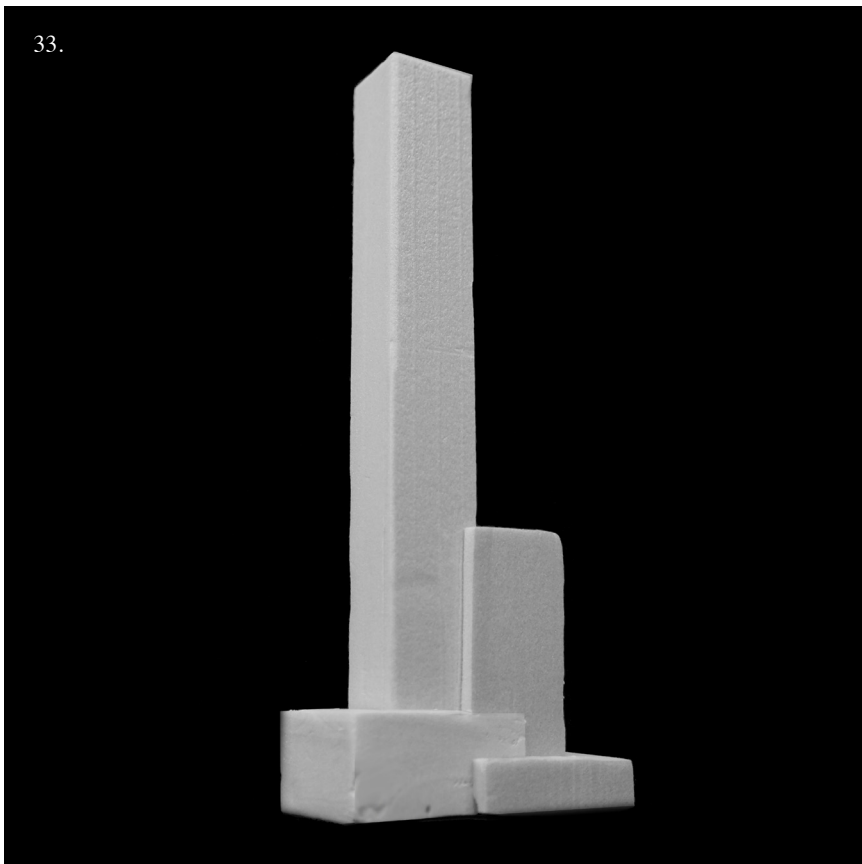
31.



*31, 32. Early tower design
that is composed of two joined
volumes*

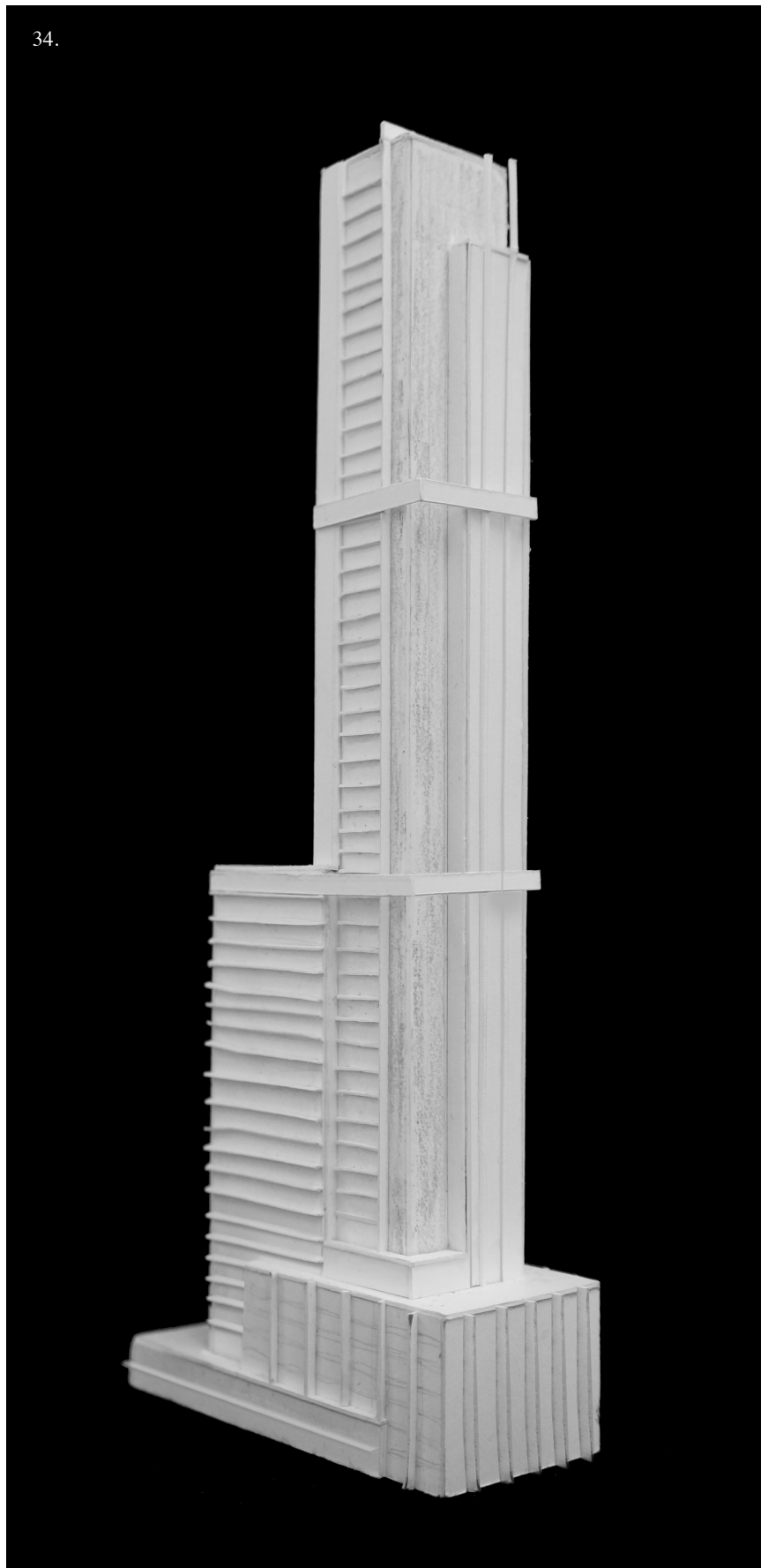


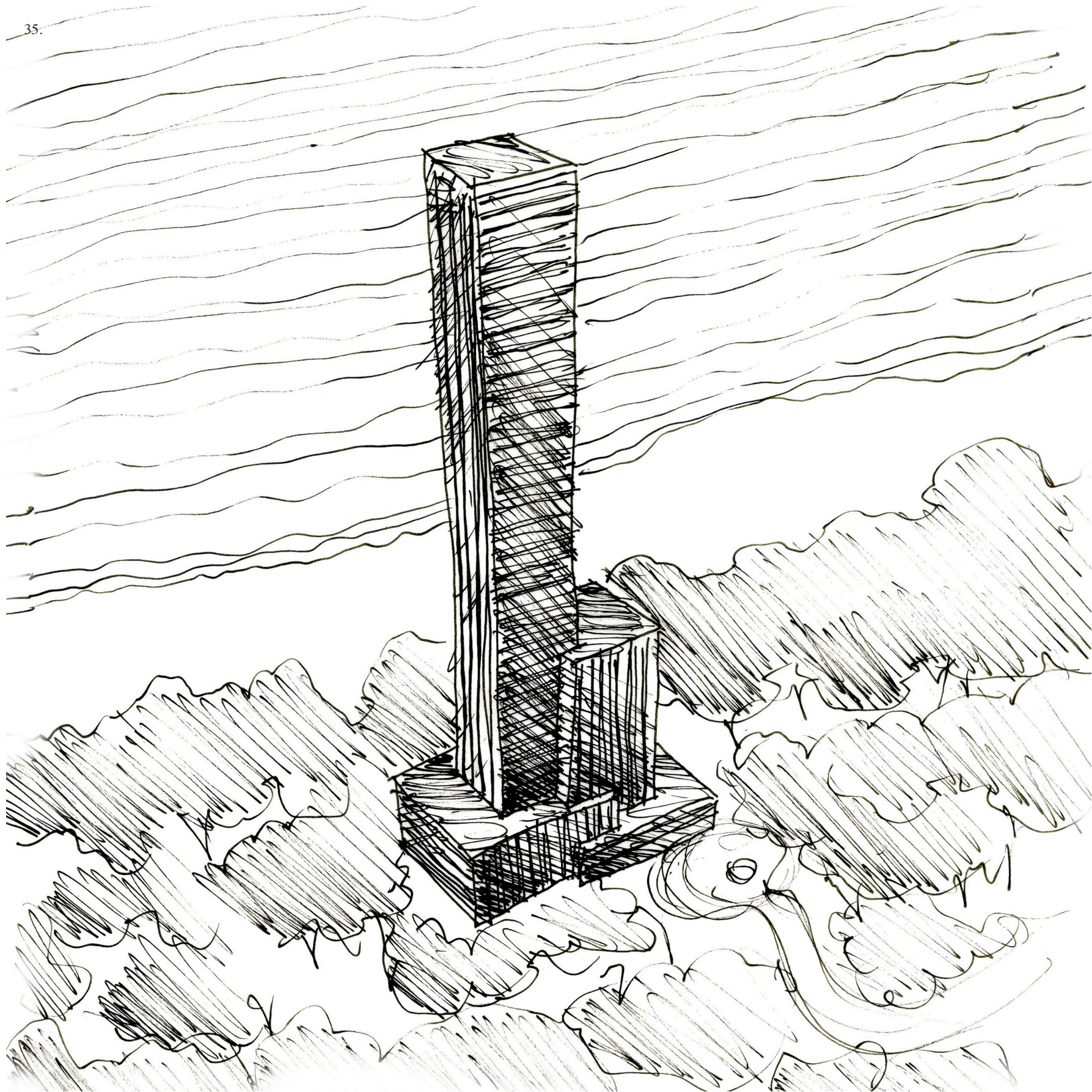
33.



33-35. Early tower design that is composed of a series of joined volumes and emphasizes either vertical or horizontal lines on each side

34.



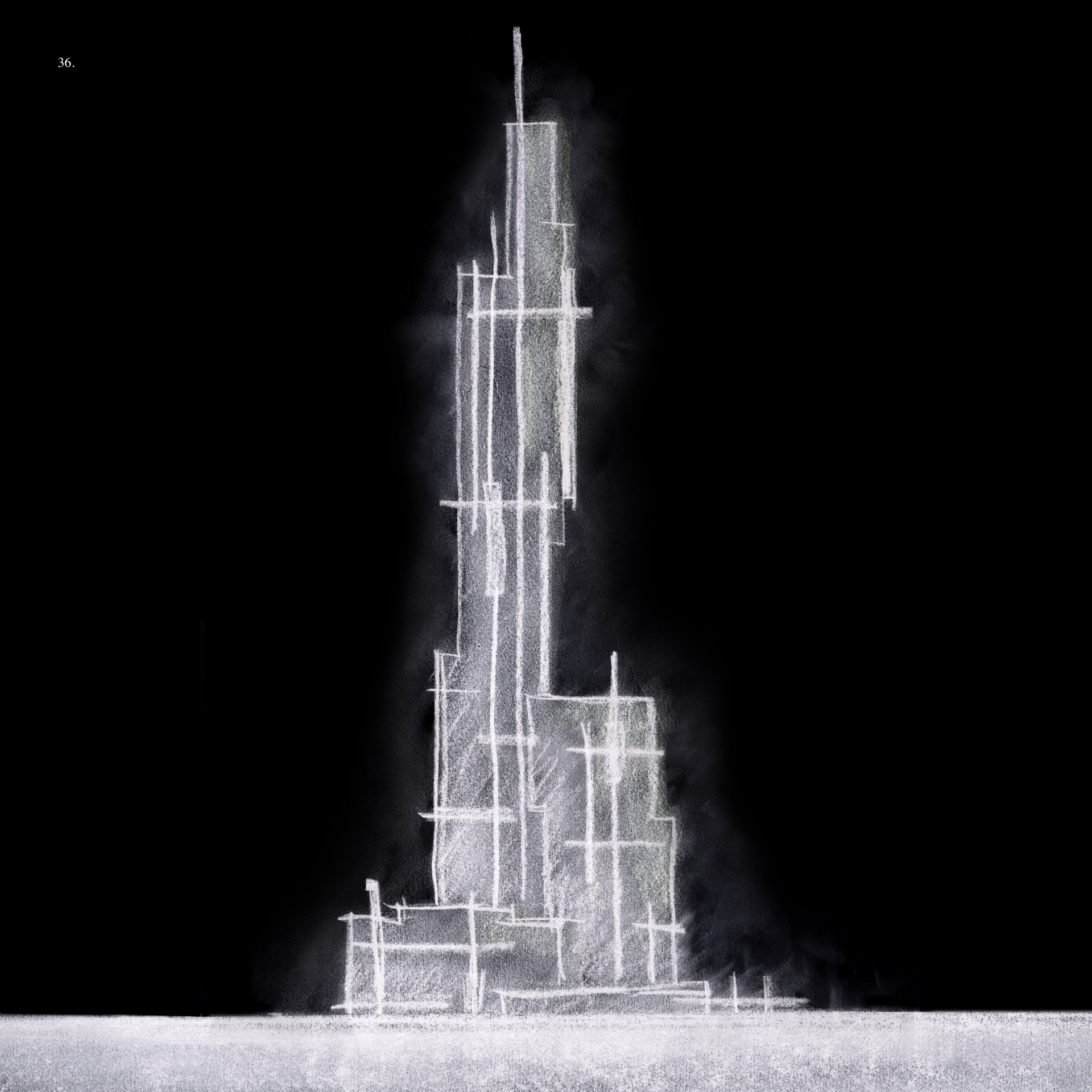


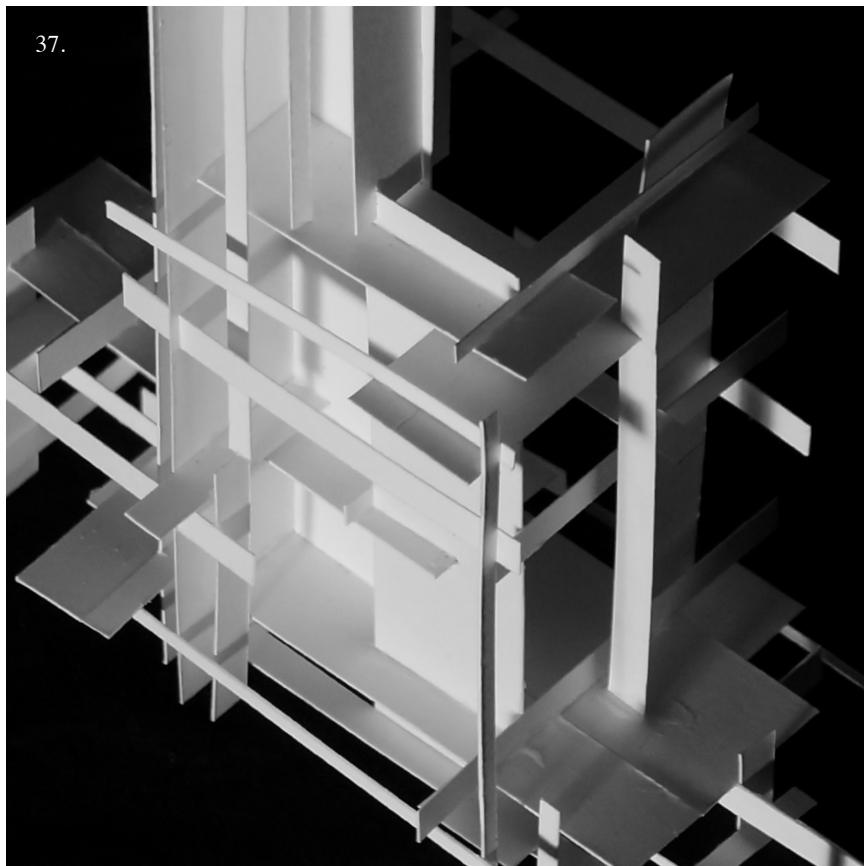
A Counterpoint

Returning to the notion of a tower as a sculpture, the following set of studies is presented. Regularity and repetition have been emphasized to this point. Now, a different position is explored, a counterpoint of sorts. The intention is not to disregard or dismiss any previous discoveries, but rather to inform them and provide something to test them against.

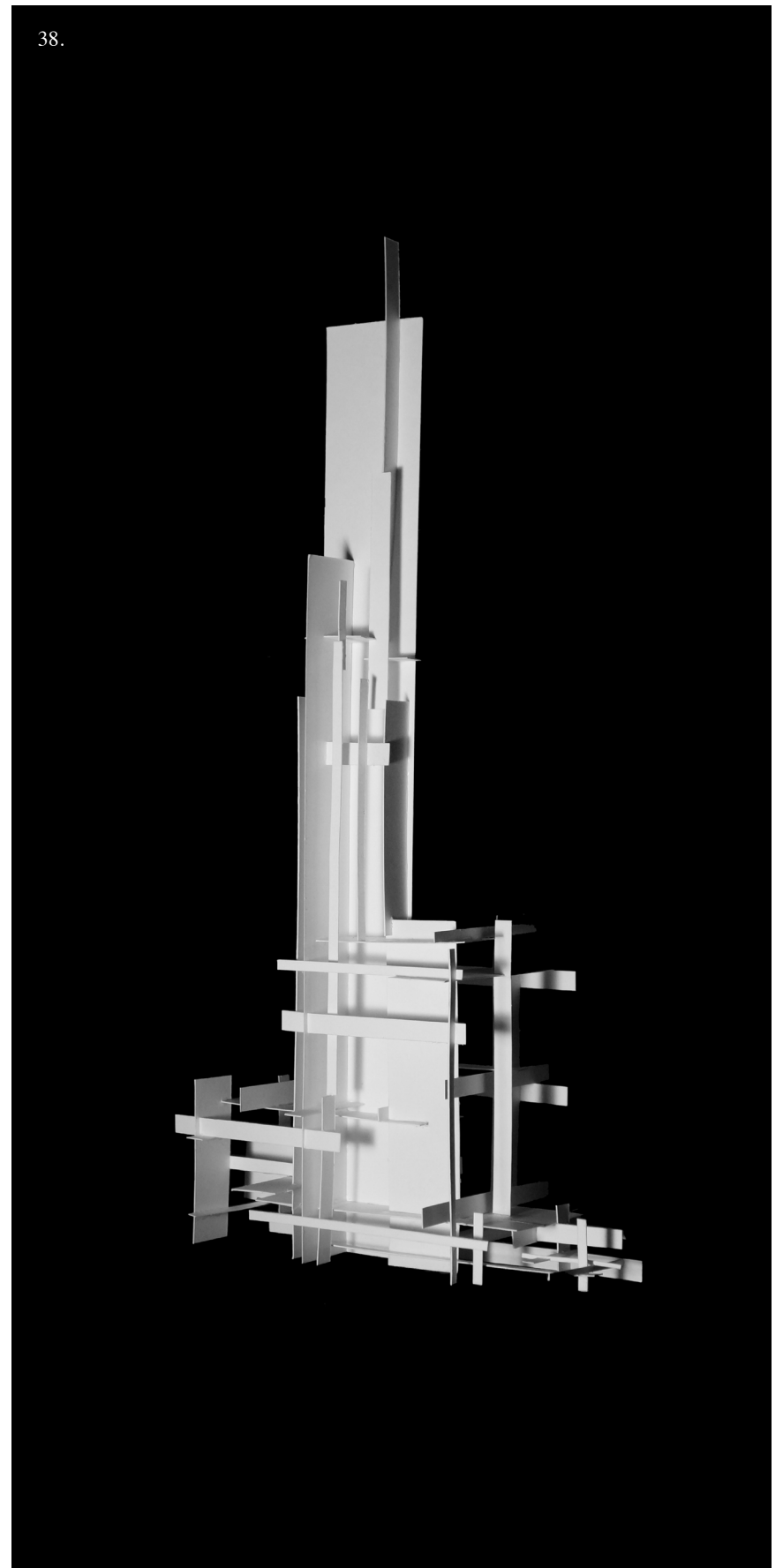
The first model uses the same general form as one of the previous study models, but instead of reading as a solid mass, the sculpture's form is created by intersecting and overlapping tectonic planes. The planes vary in size and proportion, with larger planes acting as structure and smaller ones rendering out the sculpture's massing. Volumes are never fully enclosed, but visually, the planes combine to imply larger forms.

A second model attempts to further differentiate the sculpture's components. It transforms the previous model's depthless planes into three dimensional pieces. Additionally, transparent and translucent materials are introduced to define spaces. Though it is not meant to be literally interpreted as a building, these decisions do make it possible to consider architectural questions of structure, circulation, and enclosure.

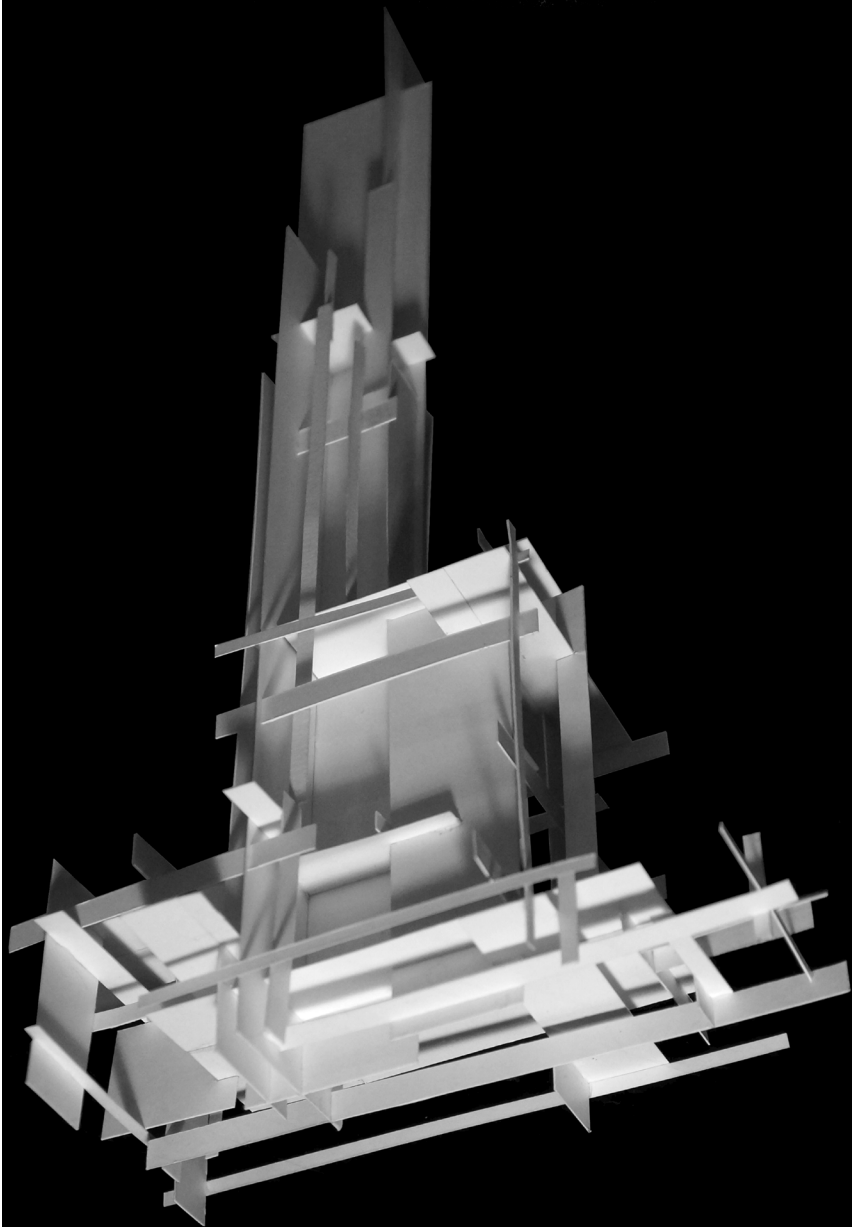




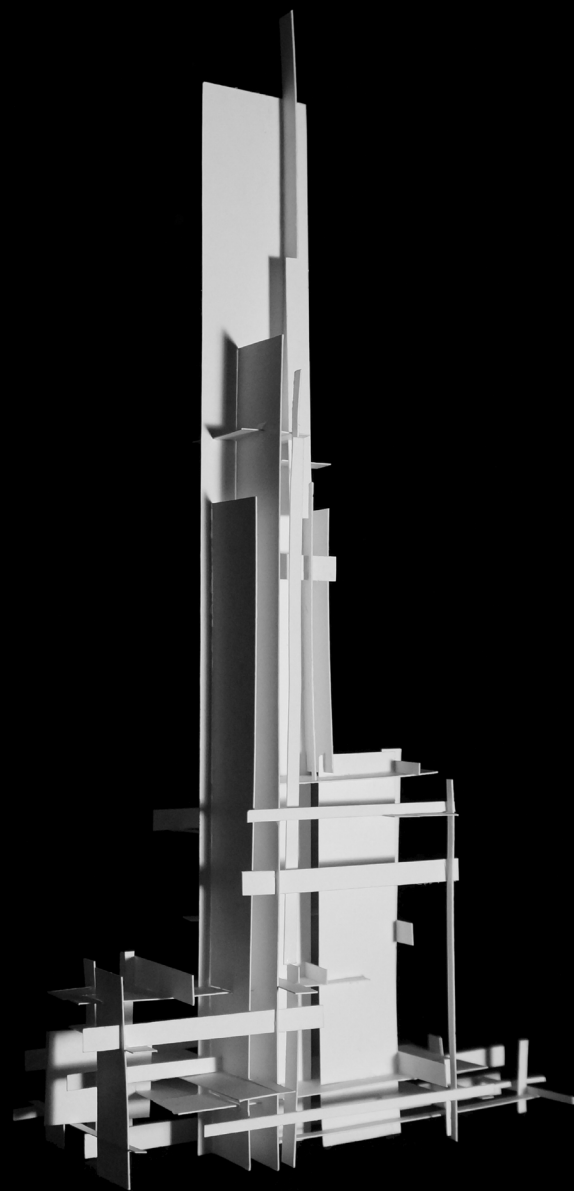
37-40. Photographs of the first study model



39.



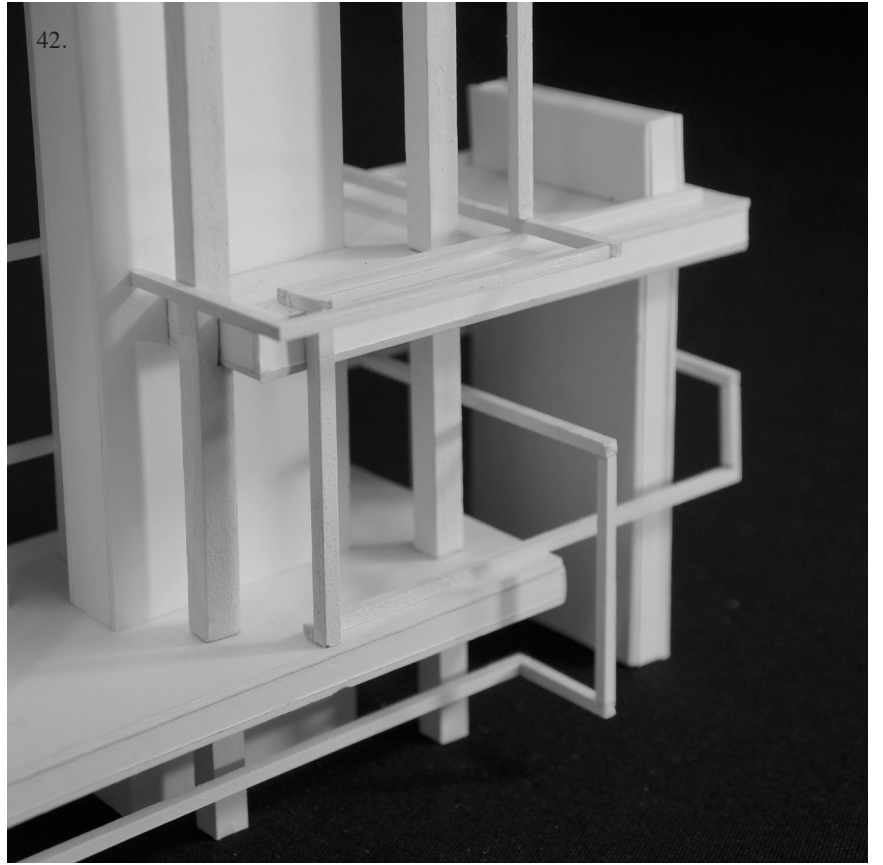
40.



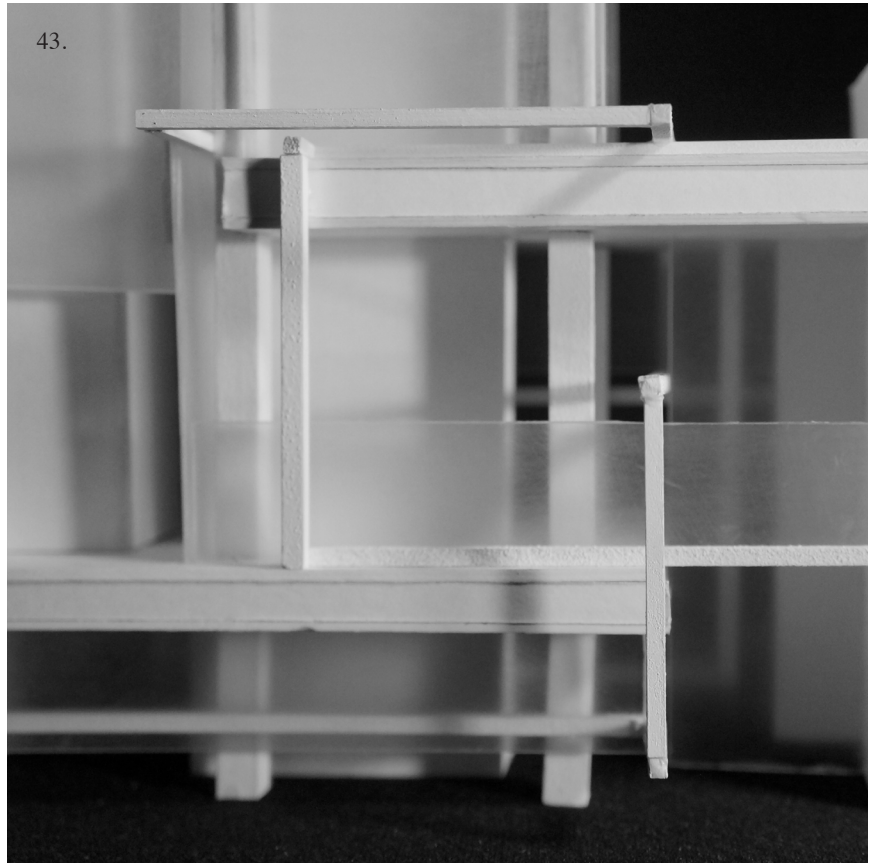
41.

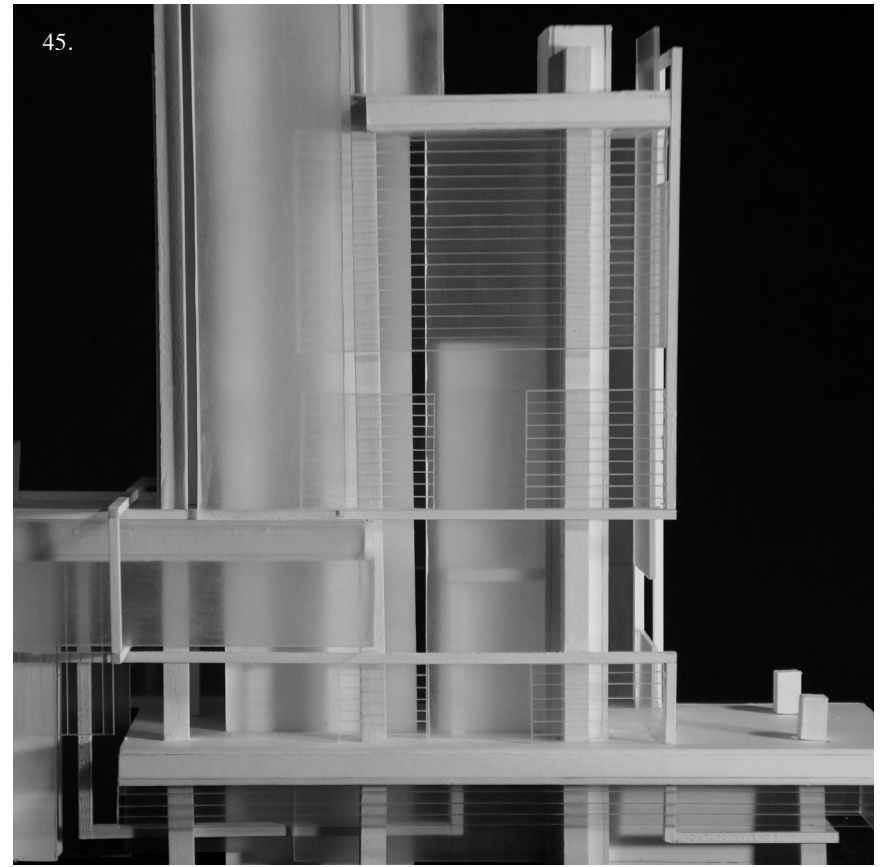
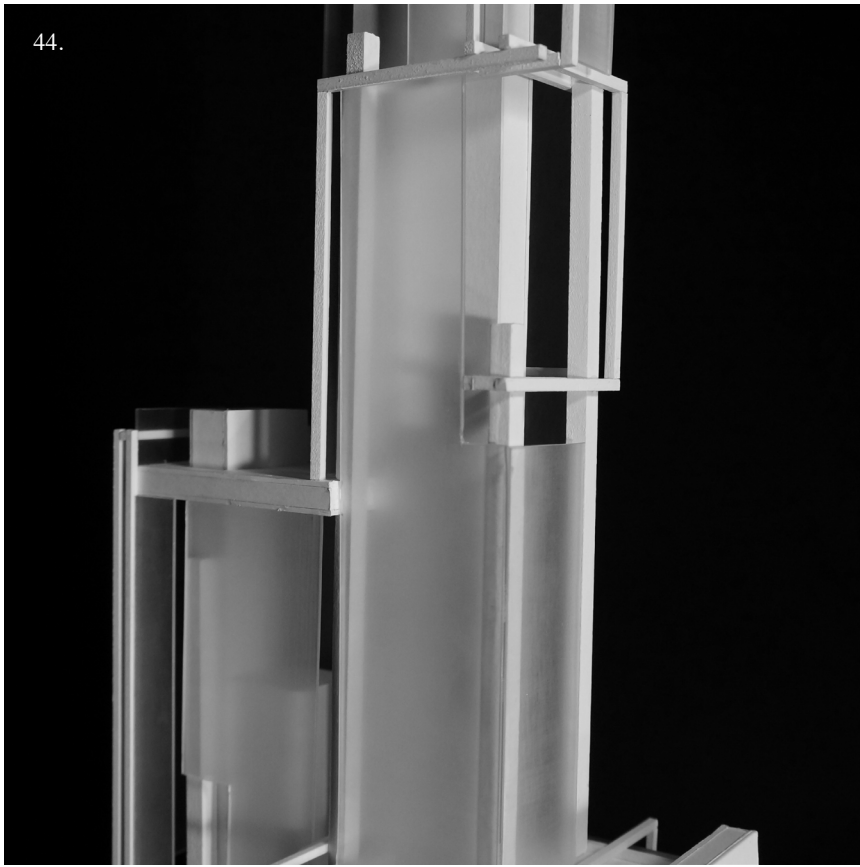


42.



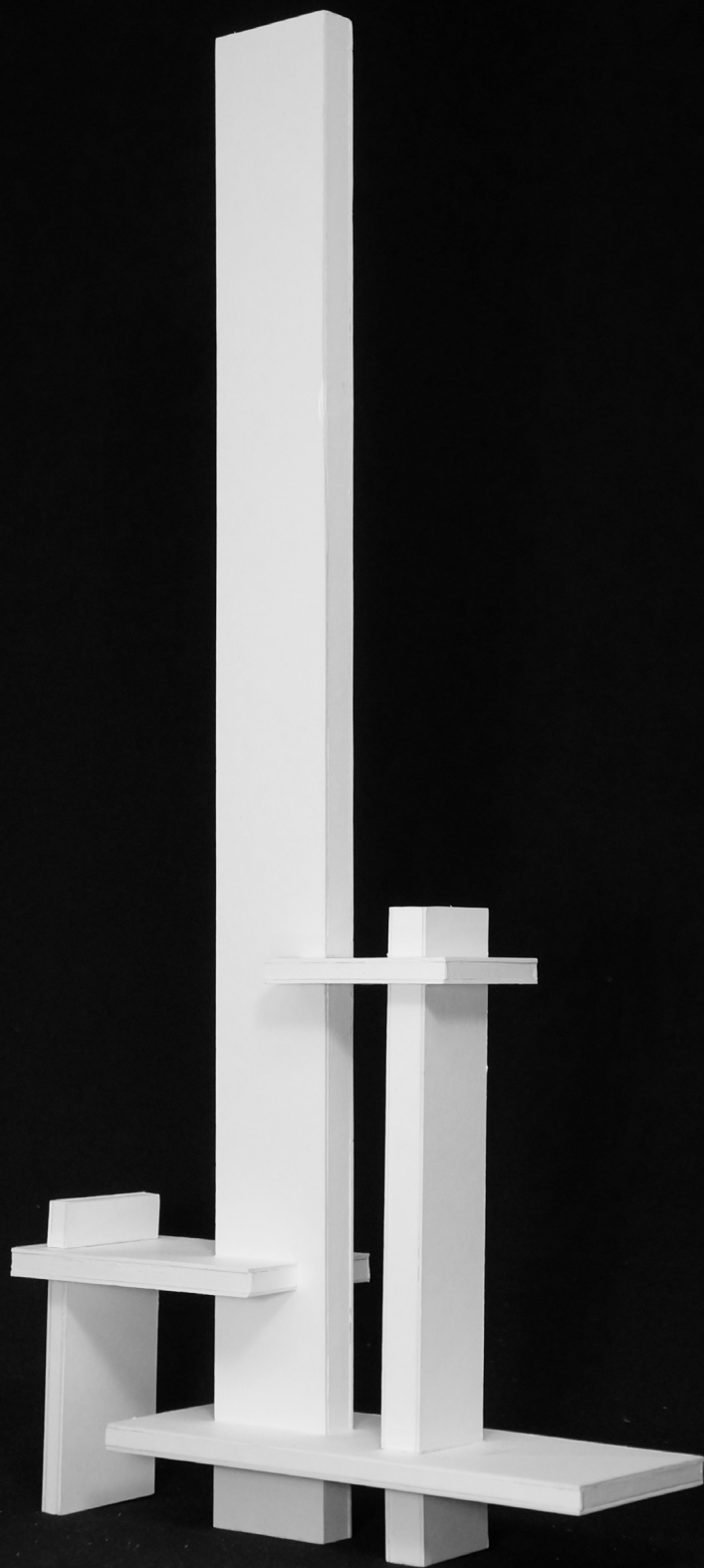
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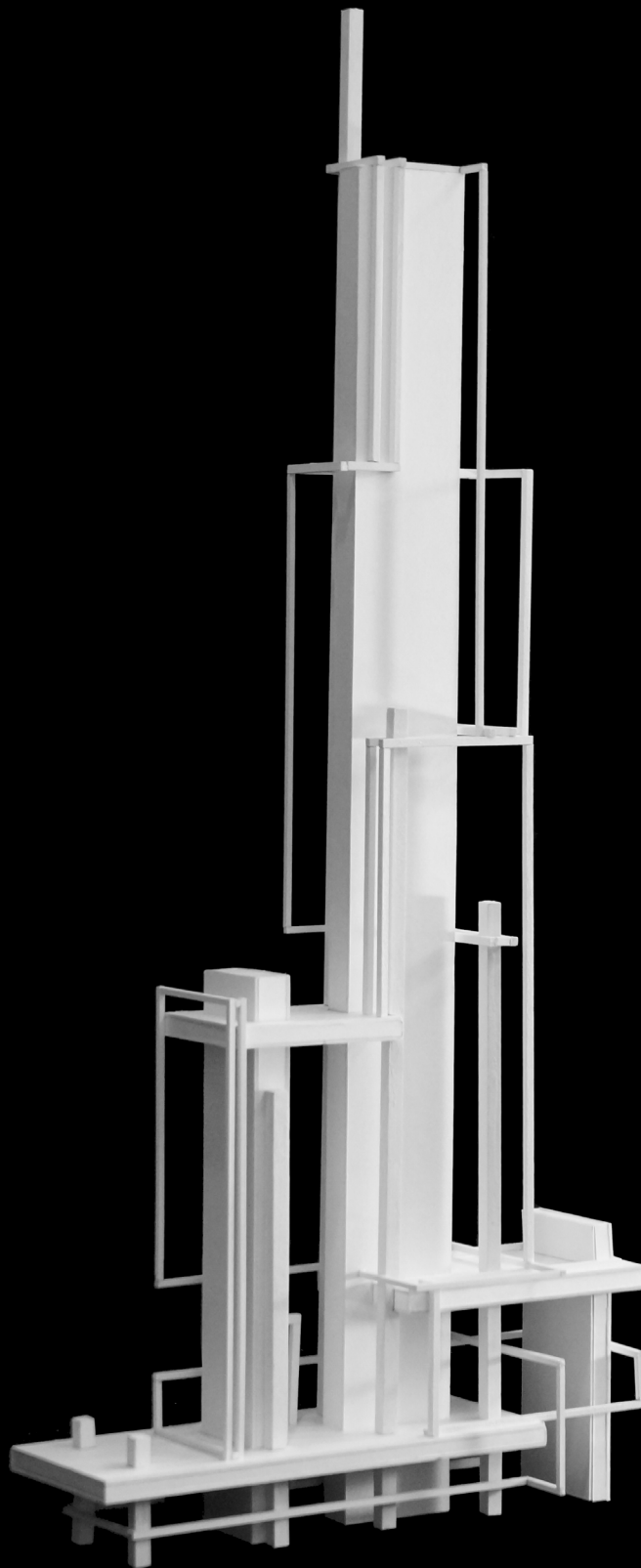


*41-45. Detail photographs
of the second study model
showing the different layers*

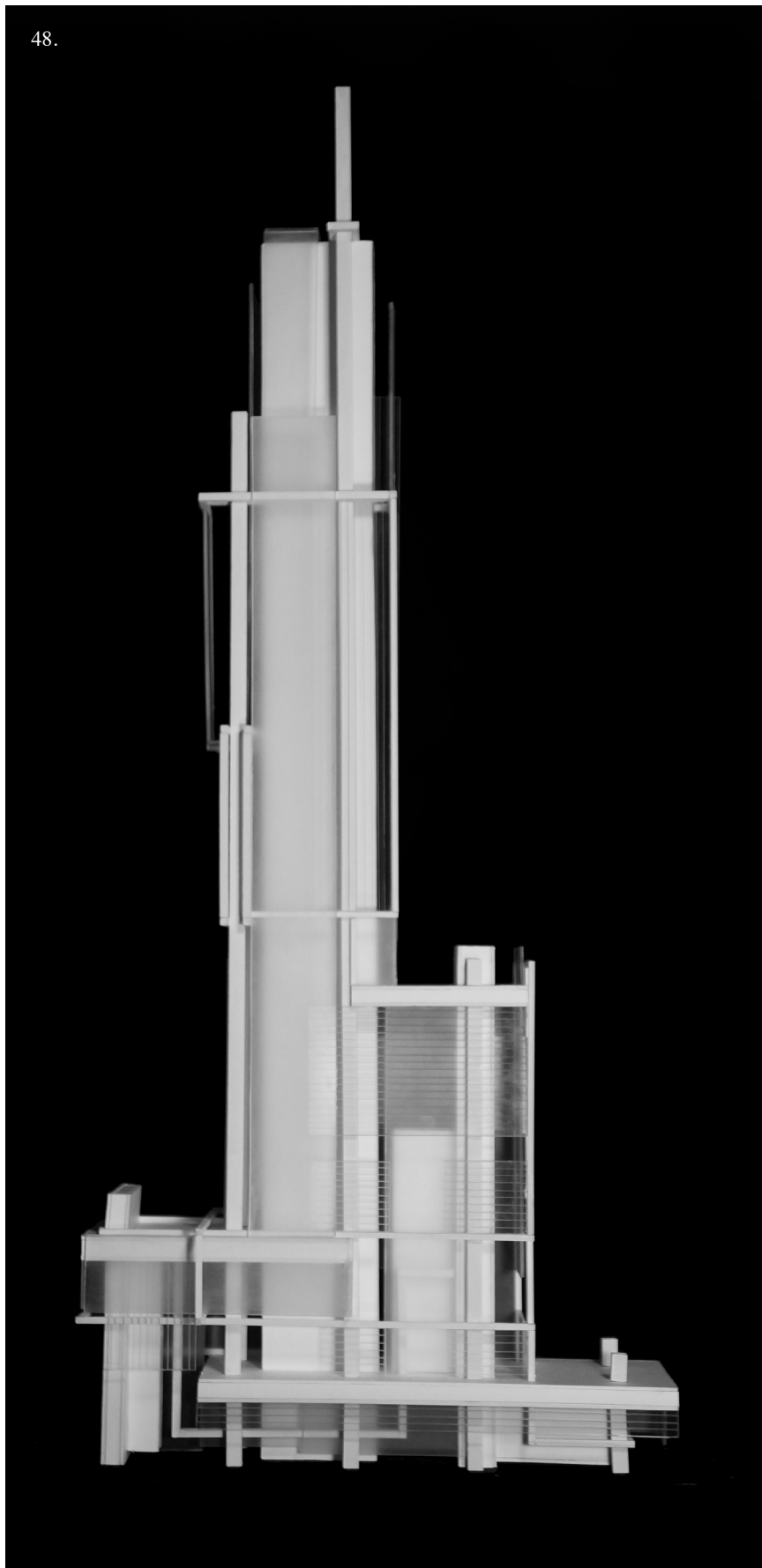
46.



47.



48.



46-48. Photographs of the second study model showing the different layers

The Tower

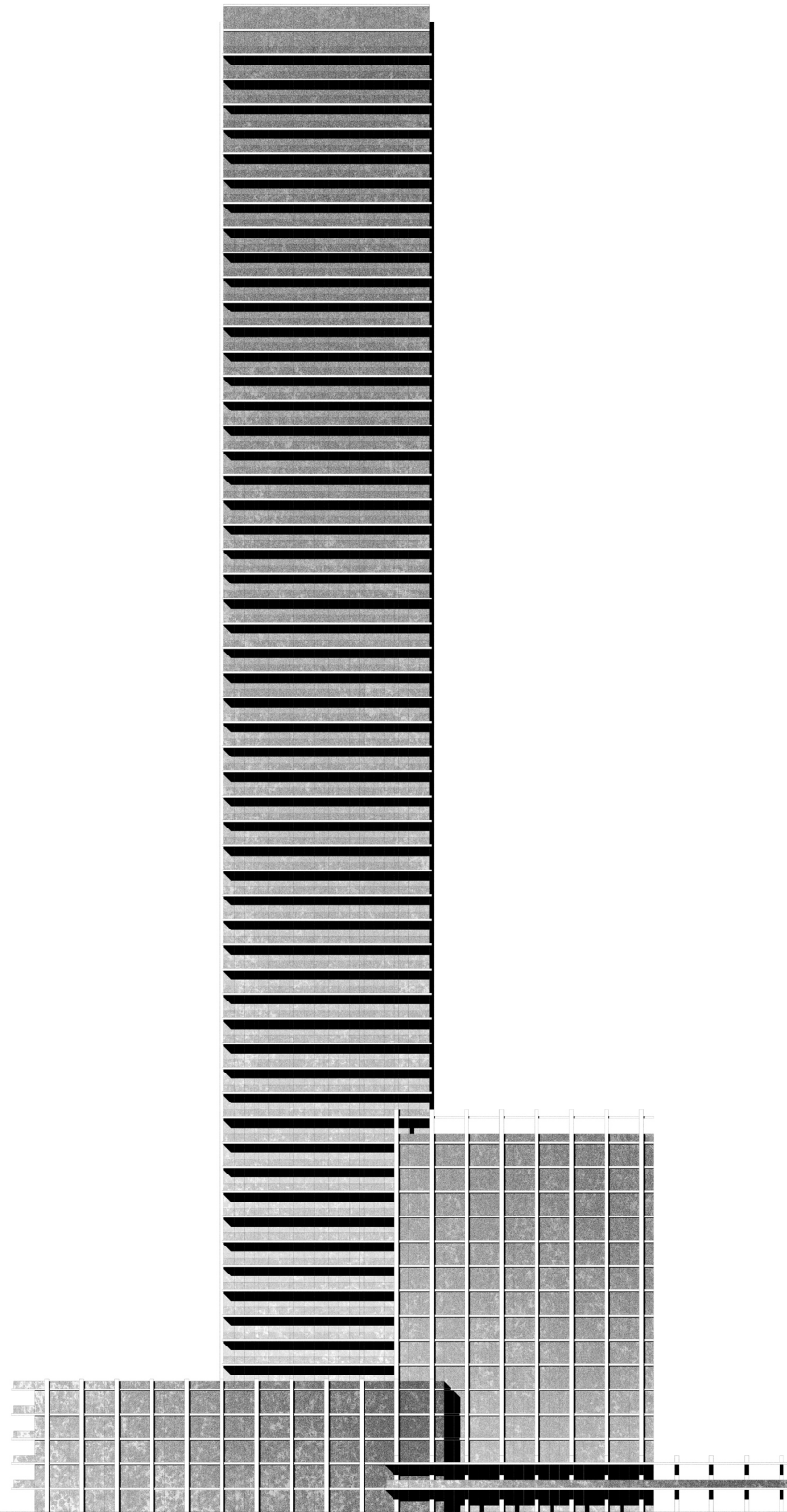
The final design for the tower takes into account all of the previous study models and sketches. Its most striking feature is the relentless repetition of the projecting balconies. The balconies are meant to emphasize the horizontality of the floor slabs on two parallel sides. This is contrasted by the other two sides, which accentuate the verticality of the structure instead. Where double-height spaces occur, the window frame continues the horizontal line that would otherwise be created by the floor slabs.

Guardrails along the outer edges of the balconies are critical to the overall appearance of the tower. They also greatly influence views out from the tower. With this in mind, the guardrails are composed of glass held in place by a recessed track in the balcony. The track eliminates the need for bulky supports, while stanchions hold the handrail in place, creating a comfortable place to look out from.

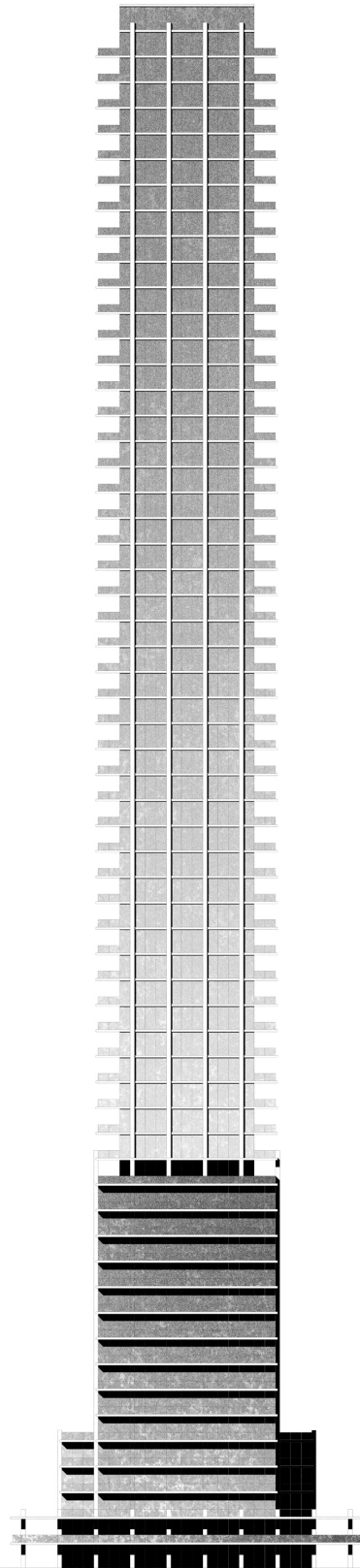
The white concrete structure allows the eye to appreciate the many colors surrounding the tower (e.g. the orange of the sunset, the blue of the ocean, the green of the vegetation, etc.). The glass enclosure reflects these colors during hours of sunlight, producing a vibrant elevation. At night the tower sits as a beacon on the coast, shining brightly from within.

49. View of the tower from the ocean

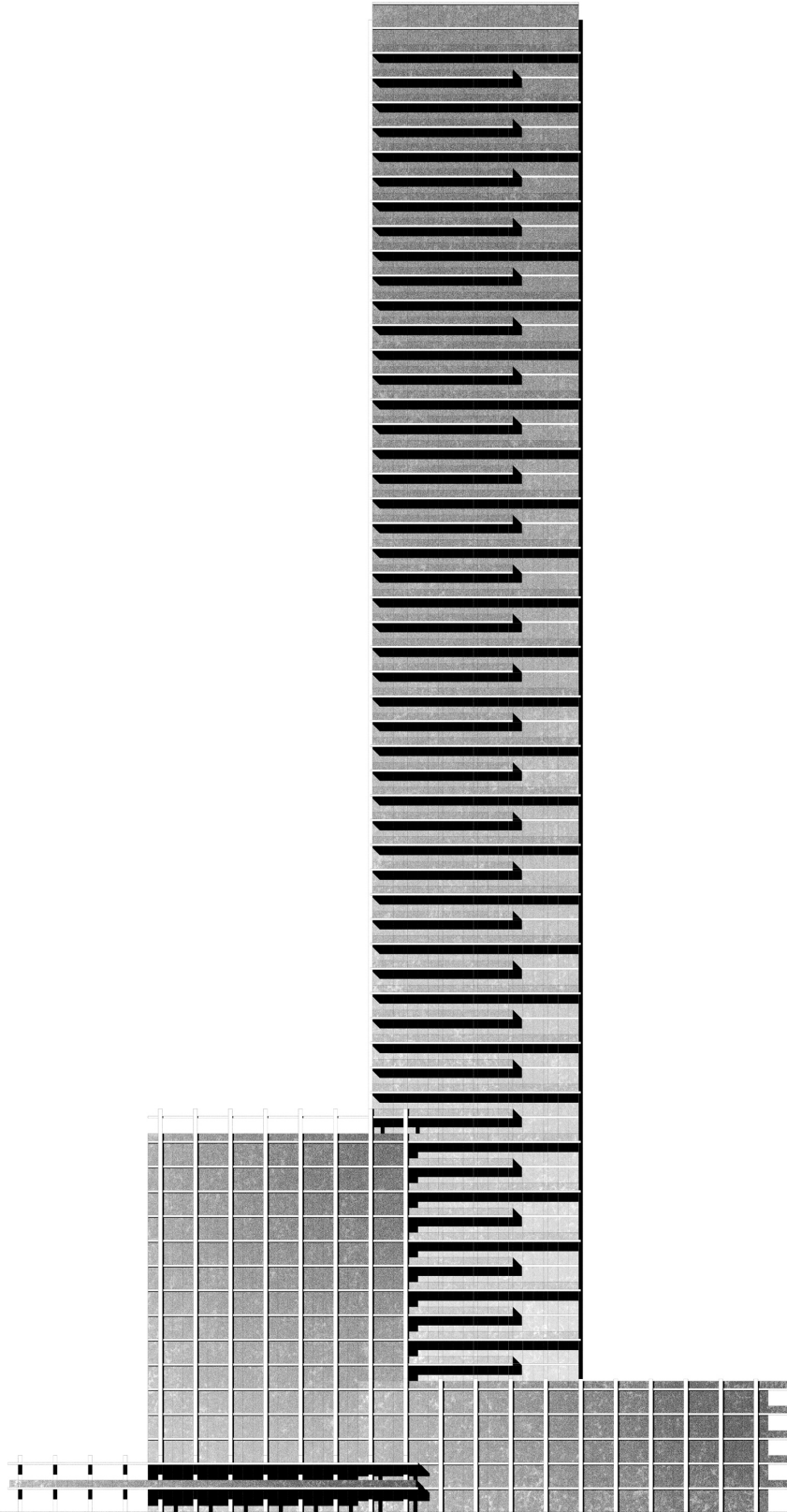




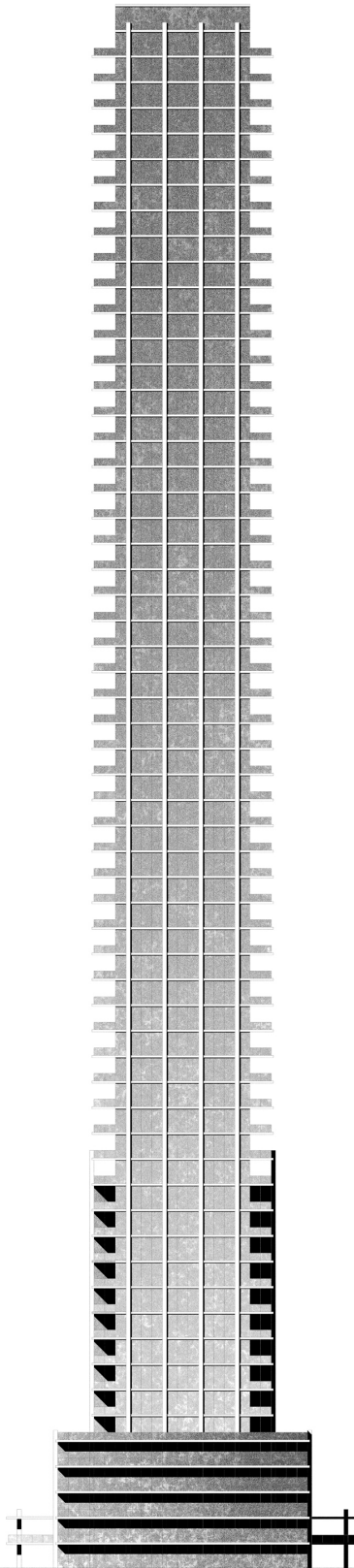
South elevation



| 10| 20| 40|

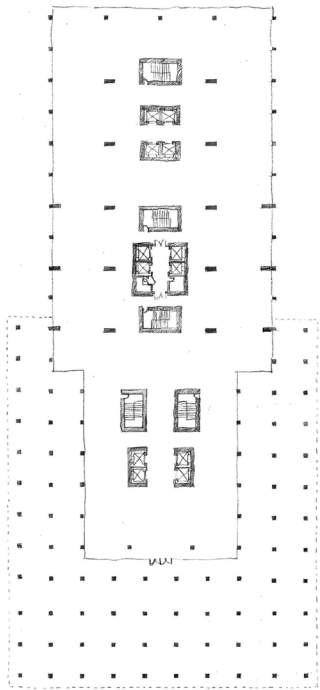


North elevation

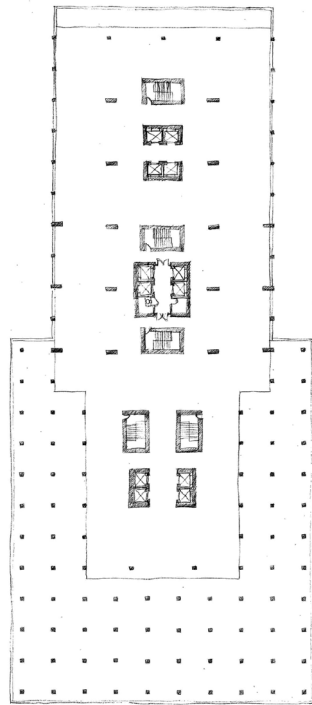


| 10 | 20 | 40 |

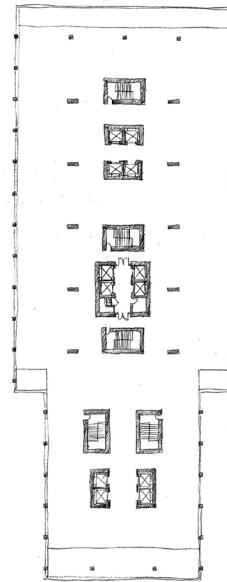
Ground floor



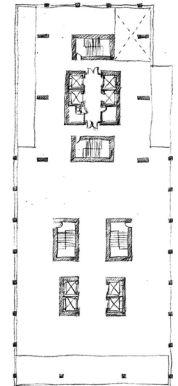
Second floor



Floors 3 - 5

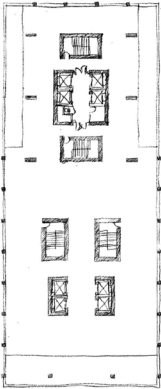


Floors 7 - 15 (odd)

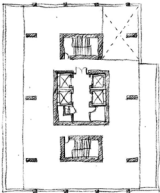


30 60 120

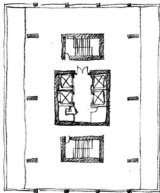
Floors 6 - 14 (even)

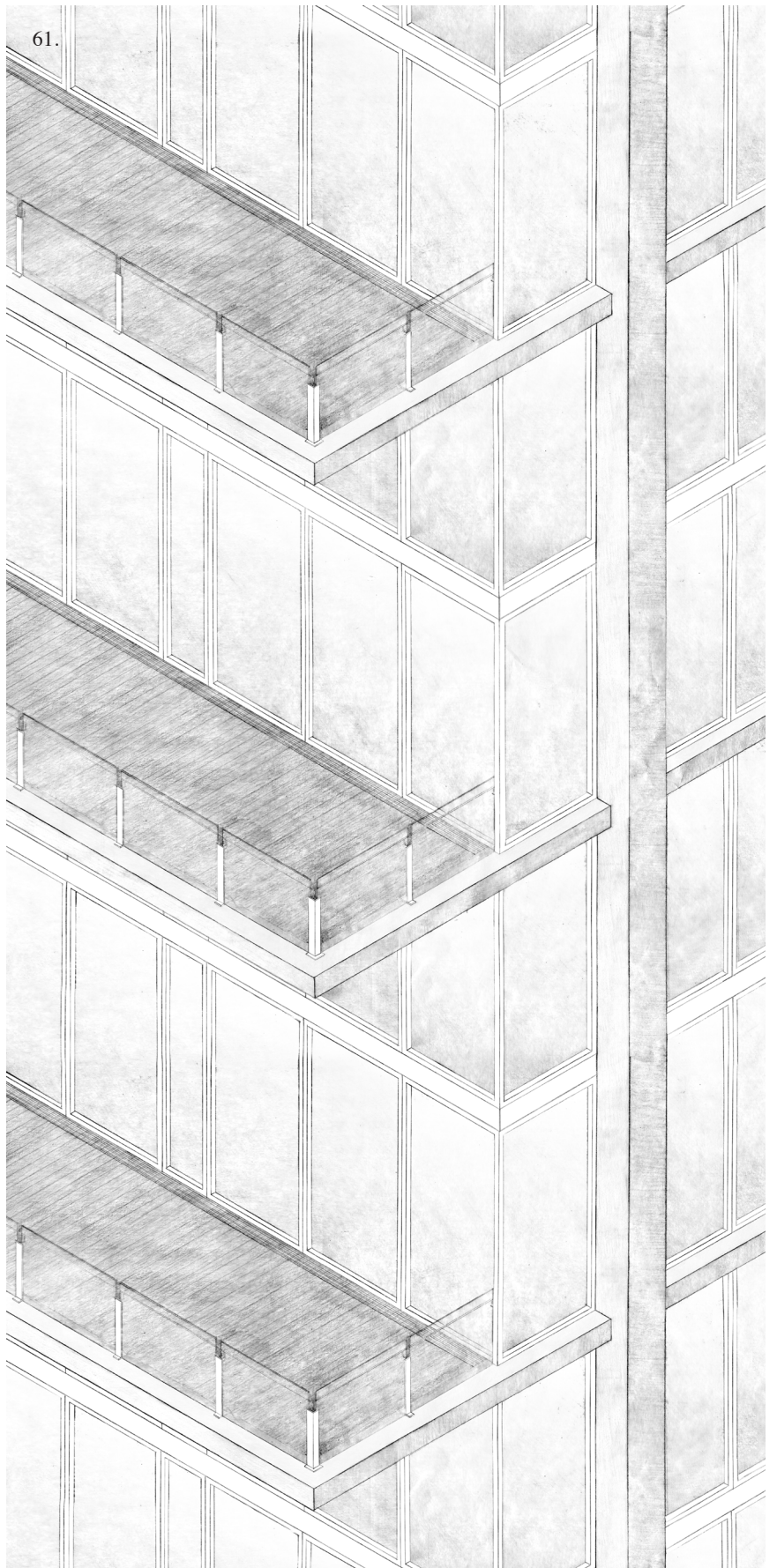


Floors 17 - 61 (odd)



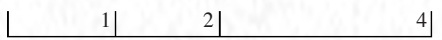
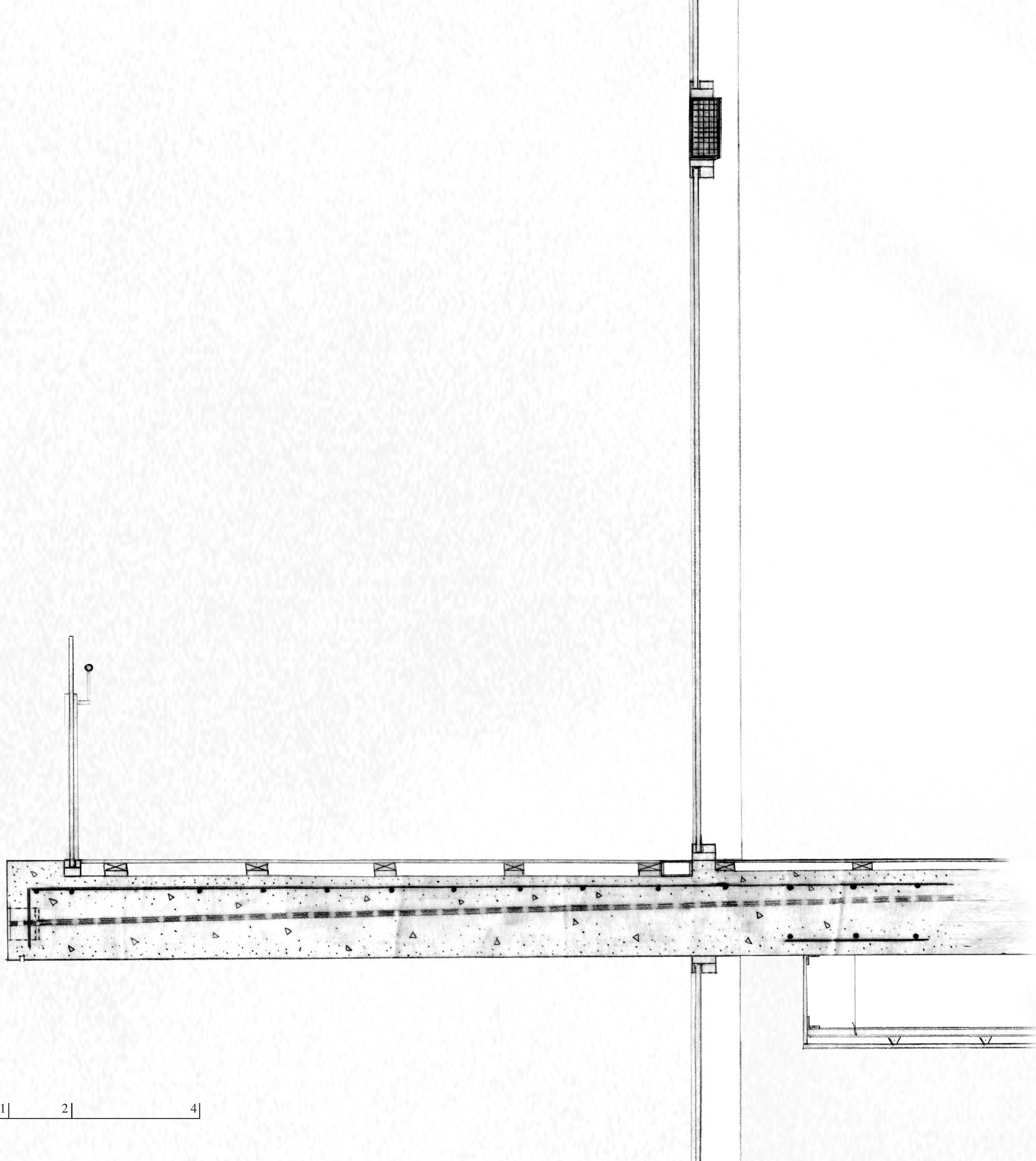
Floors 16 - 60 (even)



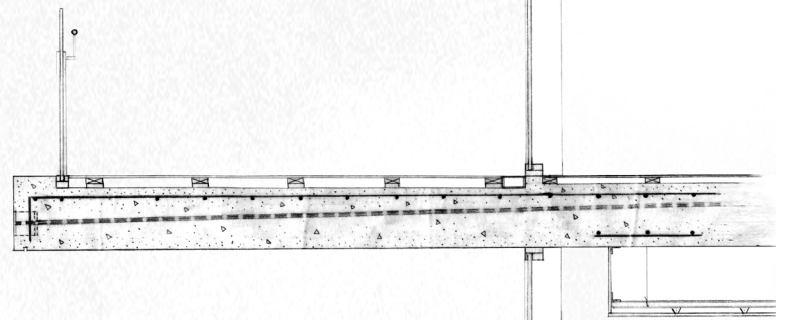
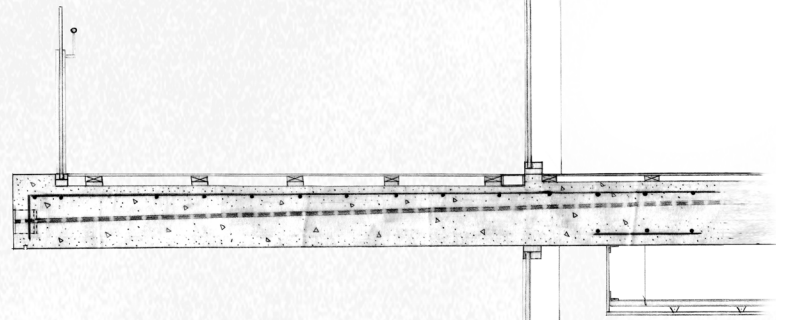


61. Deep window frames reinforce the horizontal lines that would otherwise be created by projecting floor slabs.

62. Section of a balcony

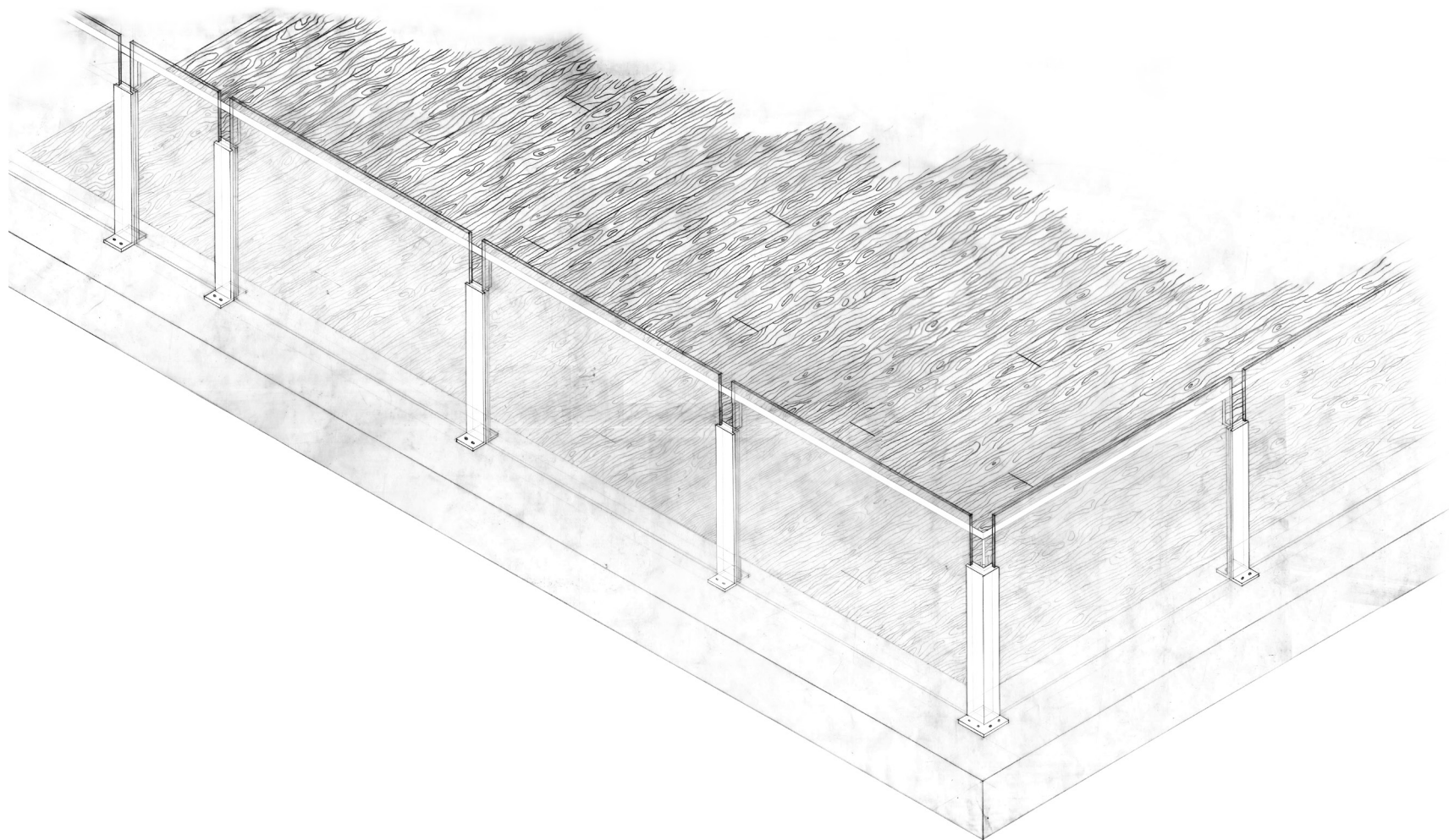


63.



2 | 4 | 8

64.



63. Section of balconies and floor to ceiling windows

64. Axon of balcony showing guardrail corner

65. The white concrete structure allows the eye to appreciate the many colors surrounding the tower.





*66. At dusk, light from within
transforms the tower into a
shining beacon by the shore.*

A Residence

From an elevator, one enters a small foyer. Opening the front door to the apartment creates a sense of arrival, something that is often lost when a private elevator replaces the front door. Upon entering the apartment one is faced with a wall. While at first it might seem rather uninviting, the wall forces a decision to turn right or left and then proceed down a hallway. One end of the hallway ends in the double-height, brightly lit living room with views to the ocean, while the other ends with the hallway turning a corner and leading to bedrooms. The change in ceiling height and glow of the natural light coming from the living room is intended to pull one away from the entrance and towards the ocean.

Wood flooring gives the room directionality, leading one's eyes towards the water. Floor to ceiling windows extend the living room's visual boundaries beyond the enclosure. To further blur the line between the interior and exterior, wood flooring is used on the balconies as well. Visual obstruction is minimized in some balconies by eliminating the guardrail on the ocean-facing side. Instead of a guardrail, floor to ceiling glass encloses that side of the balcony.

67. Upon opening the doors to the apartment one is forced to turn either left or right.



*68. One end of the hallway
opens into a double-height
space with large windows and
views to the ocean.*



69. The other end of the hallway turns the corner and leads towards the more private bedrooms.



70. The change in ceiling height and presence of light is intended to pull one from the hallway and towards the ocean.



*71. Floor to ceiling windows
expand the living room's visual
boundaries past the residence's
interior.*



72. For privacy, the master bedroom is accessed by going up stairs and passing a small loft, from which the living room can be observed.



73. To reduce visual obstruction, some ocean-facing balconies are enclosed by glass rather than guardrails.



Appendix A: Image List

All images by the author

1. Miami Price (*drawing*)
2. Unfinished Business (*drawing*)
3. The 90's Called...They Want Their Car Back (*drawing*)
4. Loitering (*drawing*)
5. Stair in the Lobby (*drawing*)
6. Stare out the Window (*drawing*)
7. Too Good to Put Down (*drawing*)
8. Somewhere Beyond the Sea (*drawing*)
9. North-South Lobby Section (*drawing*)
10. East-West Lobby Section (*drawing*)
11. Pink Foam City (*photograph*)
12. Nine Towers (*drawing*)
13. Sketch Excerpt (*drawing*)
- 14-21. Relative Verticality Diagrams (*drawings*)
22. Sketched Up (*drawing*)
23. Cute Little Booger (*drawing*)
- 24-27. Model Pictures (*photographs*)
28. Exclamation Mark (*photograph*)
29. Texture (*photograph*)
30. Your Structure is Showing (*drawing*)
31. Simple (*photograph*)
32. Stacks on Deck (*drawing*)
33. The Latest... (*photograph*)
34. And Greatest (*photograph*)
35. View from the Chopper (*drawing*)
36. The Sci-Fi's not Working (*drawing*)
- 37-40. Model Planes (*photographs*)
- 41-48. The Greater Planes (*photographs*)
49. Miami Price 2 (*drawing*)
50. West Elevation (*drawing*)
51. South Elevation (*drawing*)
52. East Elevation (*drawing*)
53. North Elevation (*drawing*)
54. Ground Floor (*drawing*)
55. Second Floor (*drawing*)
56. Floors 3-5 (*drawing*)
57. Floors 6-15 (odd) (*drawing*)
58. Floors 7-14 (even) (*drawing*)
59. Floors 17-61 (odd) (*drawing*)
60. Floors 16-60 (even) (*drawing*)
61. Got My Axe On (*drawing*)
62. Stressed (*drawing*)
63. Stressed Reprise (*drawing*)
64. Balcony Corner (*drawing*)
65. Miami Sunset (*photograph*)
66. Miami Nights (*photograph*)
67. Welcome Home (*photograph*)
68. Keep Your... (*photograph*)
69. Head on a Swivel (*photograph*)
70. Good Choice (*photograph*)
71. Double Height (*photograph*)
72. Lofty Goals (*photograph*)
73. What the Realty Website Would Show (*photograph*)

Appendix B: Bibliography

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