

STUDIO BERLIN

HIGH-RISE BUILDING

DOCUMENTATION



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INTRODUCTION

1. Monumentality

Monument and habitat coincide in the style of the residential tower block. What does this mean? They are habitable towers whose presence is felt very strongly in a city skyline due to their vertical dimension and whose upright stature make them visible from afar. They exert a considerable influence on urban design and differ strikingly from standard buildings. Thus, whether intentionally or not, they occupy a dominant place in the tableau of a city. This is very challenging for the architect who must be aware of the fact that, in dealing with residential tower blocks rather than standard developments, utterly different project procedures are called for. Some keywords in this connection: monumentality, shading, statics, infrastructure, disposition (arrangement of forms), footprint, City Crown, plasticity, impact of materials and the careful yet monumental reconciliation of the city as body and the environment.

2. Creators of high-rise buildings

We all know the Lake Shore Drive Apartments by Mies van der Rohe in Chicago, the Torre Velasca by BBPR in Milano, Marina City by Bertrand Goldberg in Chicago: paradigmatic examples of residential towers. They originated in a specific context and bear testimony to the authors' intent to expose their vision of architecture whilst at the same time being a component in the urban morphology. Rationality and the creators' intention are united. They arose in the dynamics of a city's growth which made possible the alternative of having residential tower blocks. High-rise buildings can build a spacious relationship to each other, communicate respectfully with one another and have together a "three-dimensional conversation".

3. City skyline

The strong presence and height of a cluster of high-rise blocks will substantially shape the city skyline. What does "City Crown" mean? It refers to the meshing of the sky with the earth, to the demarcation of landscapes, to the peculiar effect on the sunsets, to the way in which the horizon complements the tableau of the city, to act out a three-dimensional play in the light. They are strong tokens and symbols, voluntarily or not. As a city's building blocks, their shape bestows great responsibilities on us architects and offers an opportunity to mindfully form a city skyline (light and shade, environment, dynamics).

4. Investigating the forms

Aldo Rossi states in "l'architettura della città": "[...] that a functional explanation of urban elements does not lead to clarification but rather inhibits an examination of the forms and prevents knowledge of the true architectonic laws." Let us think about this: The aim is to examine the logic of form as analogy and the purely functional consideration does not constitute architecture or a city. Analogical reasoning occurs directly, intuitively, not merely functionally. Rossi observes furthermore: "l'architettura sono le architetture", i.e. architecture is in fact encompassed in all of existing architecture and can be further developed by looking with new eyes at the historic examples to make them productive for our time.

Therefore, it is not only the program and the functional argument in favor of densification that matter (a notion that is anyway disintegrating, judging by the high costs and low occupancy of recent high-rise buildings), but rather the examination of the architectonic laws themselves, such as economy and beauty, geometry and expressiveness of the structures. The inner disposition of the flats is significant and we will examine the differences of living in a high-rise building as compared to living within the periphery of a city block (section, view, light).

5. Aim

Our goal is to cross-fertilize our own concepts and notions with rational and generalizing arguments to achieve strong and independent designs that will be continuously improved during the debate (intermediary reviews, meetings with assistants and professors).

PROJECT

We are interested in the development of new high-rise buildings in Berlin. The city boasts a long tradition of such buildings, though the most famous is paradoxically an unbuilt design of a glass high-rise building at the Friedrichstrasse by master architect Ludwig Mies van der Rohe, a design that was revolutionary for its time. Like a diamond, the repeatedly re-fractured glass façade would have been reflected reciprocally. Quite unlike the stone skyscrapers by the Chicago School of Sullivan and his contemporaries, Mies tried to give the appearance of lightness to the mass by using glass. Ever since then, there has been an on-going debate about the two materials, stone or glass, when designing a high-rise building.

The planning of high-rise buildings requires an urbanistic analysis and a tour of the city, which we will undertake together at the beginning of the semester.

Our perimeter is situated at the Flutgraben of the Spree, with a view to the Oberbaum Bridge. The area is characterized by a strong typological mix: voluminous and striking solitary buildings alternate with disparate morphological units appearing prominently at the riverbank. In this environment, we integrate high-rise buildings that are able to establish a close and dramatic relationship with the river landscape and its corresponding skyline. There are neighboring buildings of similar size and dimensions. In this connection, we are interested in the settlement of huge volumes that become focal points within the urban area and thus need to be integrated with the utmost care. Paradigmatic examples would include the Torre Velasques in Milano, Marina-City in Chicago among many others.

The southern bank of the river Spree with the swimming-ship has turned into a cultural meeting point, where large industrial buildings from the 19th century have been transformed into multipurpose-halls and flats. How do old and new structures stand each other, how can they mutually enrich one another? In this context, it is of great importance to pay attention to the architectural design. We will study "The tall building artistically considered" by the architect Louis Sullivan.

Bearing in mind the steady increase in per capita use of square meters, one of our main interests is in projects that scrutinize critically the absolute size of living space and are also able to compensate for additional work and costs involved by the requirements of a high-rise building (connections to services, statics, fire protection). Our references will also serve us in this respect. On the one hand, considerations on housing facilities, social mix and choice of community facilities are important in order to develop a vision of the type of dwelling, on the other hand it is also necessary to develop a structural idea showing a higher-level of design logic in terms of geometry and proportion.

An input by the civil engineer & architect Lorenz Kocher on the topic of the load-bearing structures and high-rise buildings will supplement the program.

SHORT EXERCISE CITY SILHOUETTE (ON SITE)

Reflecting on the city skyline, we will approach the design task by closely observing and representing in particular the empty space, the section of sky, the in-between space. We will thus develop an awareness of and sensitivity to the interplay between the close-up and long-distance effects of monuments. The assignment will require the inspection of the operating parameters and the observation of the different especially vertical protagonists and their spatial relationship to one another. The location can be chosen subjectively in order to allow better expression to individual observation. The medium is an A2 charcoal drawing exclusively. Submission: city silhouette, charcoal, A2, vertical or horizontal.



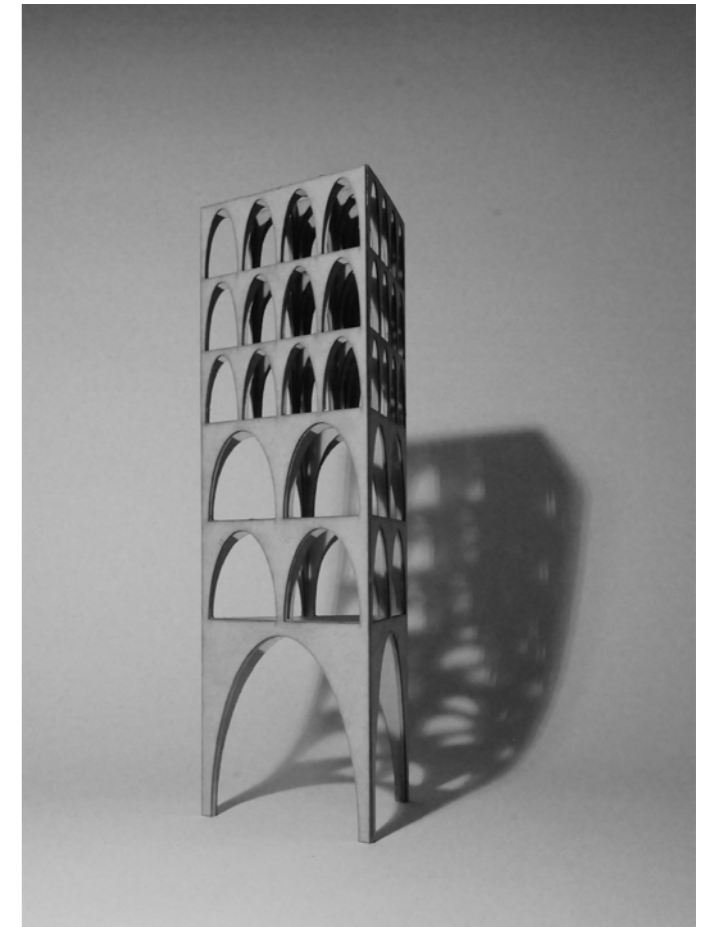
Charcoal sketches, Student Works, 2013

SCULPTING THE SUPPORTING STRUCTURE, PRELIMINARY EXERCISE ON STRUCTURE

To start off, each student will create a model, independent of scale. We will approach the task of designing a high-rise building by developing a structural shape. In this respect, we will reflect on the proportions of shape, on the interplay between supporting structure and spatial expression, on the play of light and shadow, and on the expressiveness and character. We will thus acquire a sensitivity for the interplay of space and structure and will seek to grasp the designed spatial sculpture in terms of space. The scaleless sculpture must be done white.

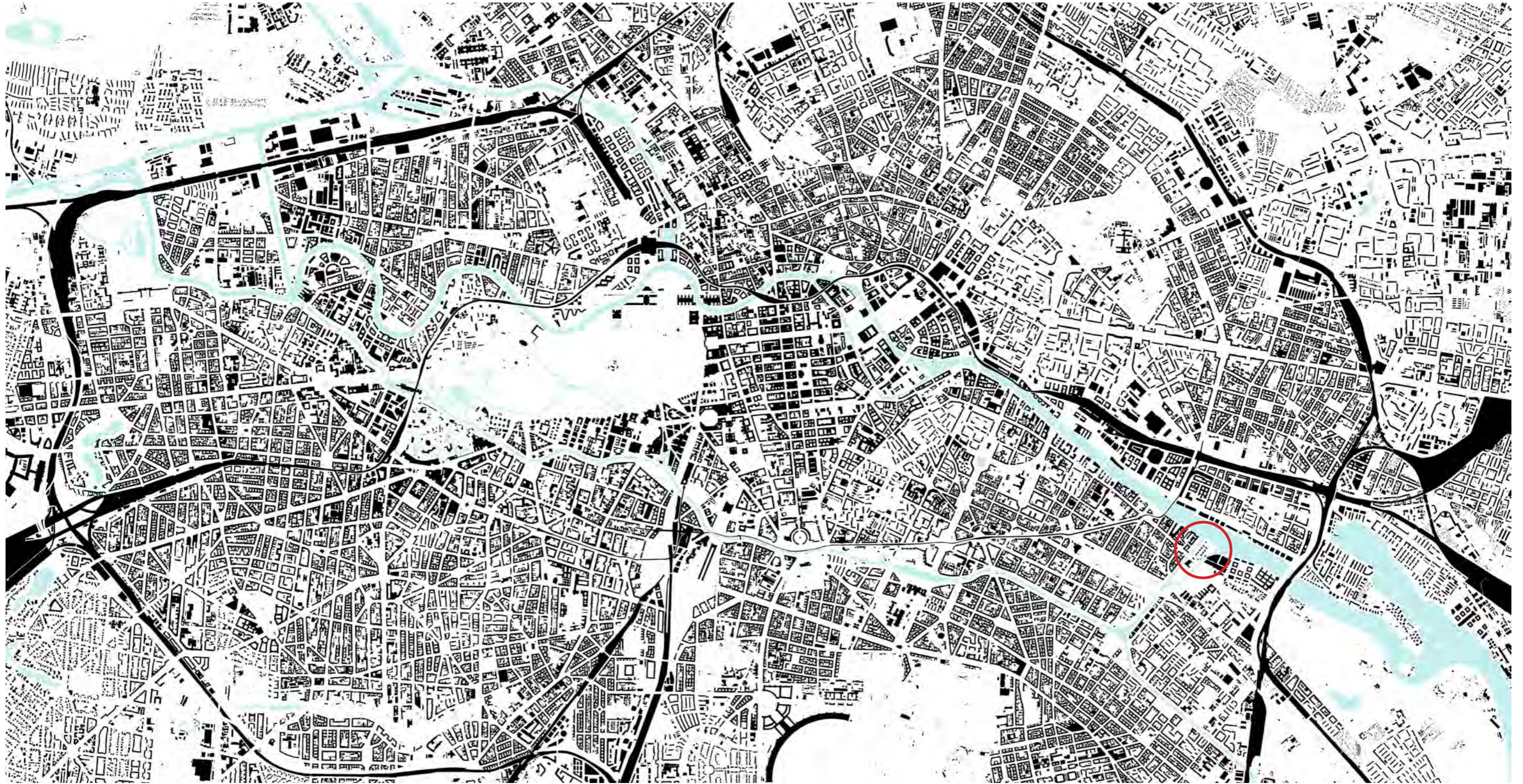


Victoria Simancas, 2012



Ondrej Havlín, 2012

SITE



SITE



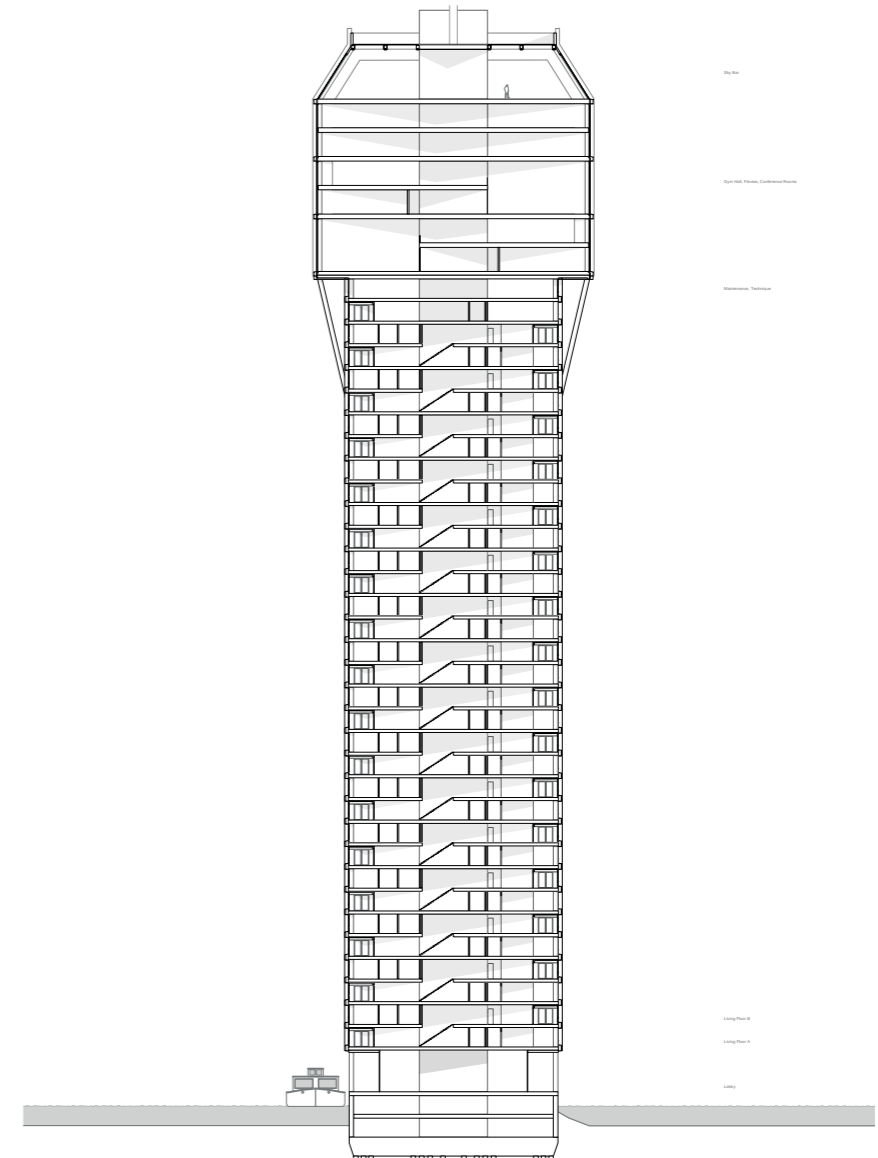
Google Earth



Geo data, Senate Department for Urban Development and the Environment

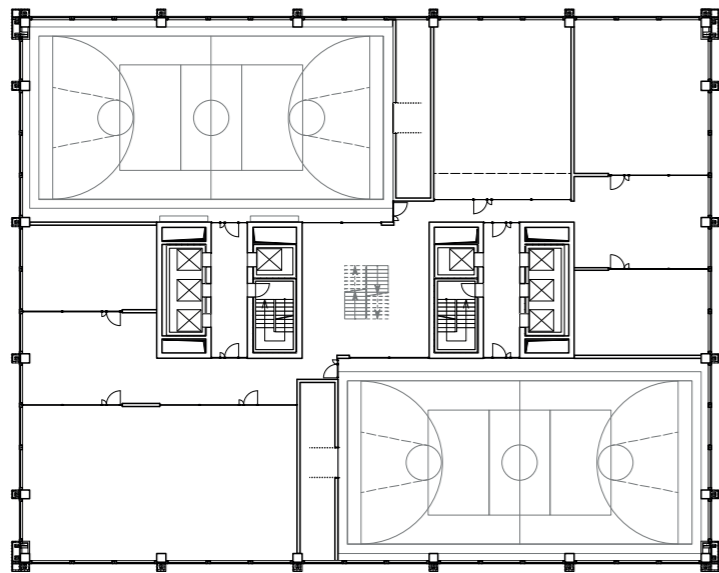
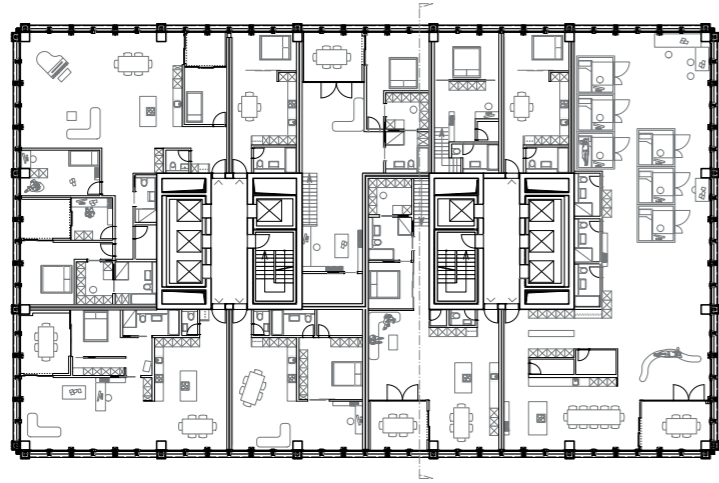
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Marc Kammermann

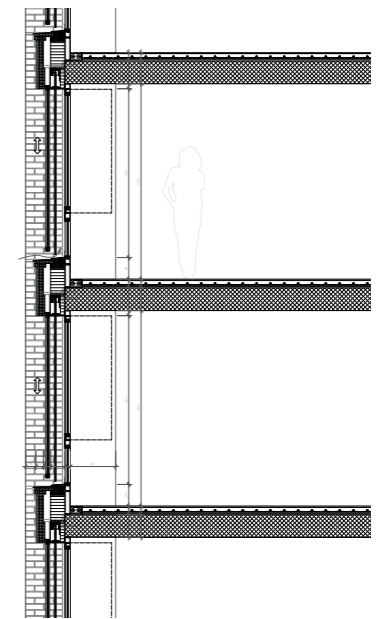
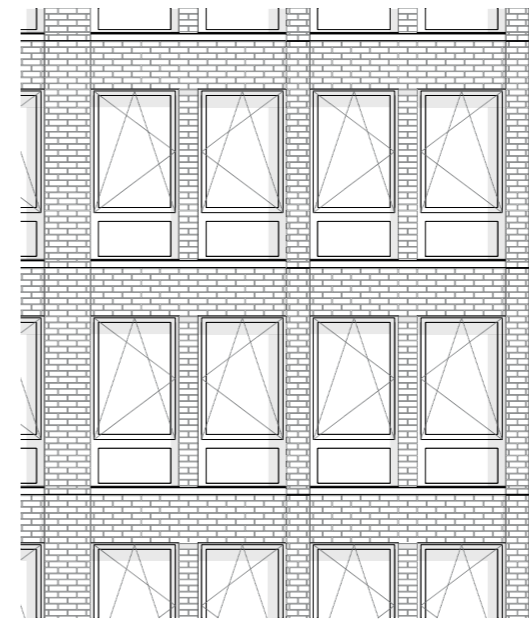


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Marc Kammermann



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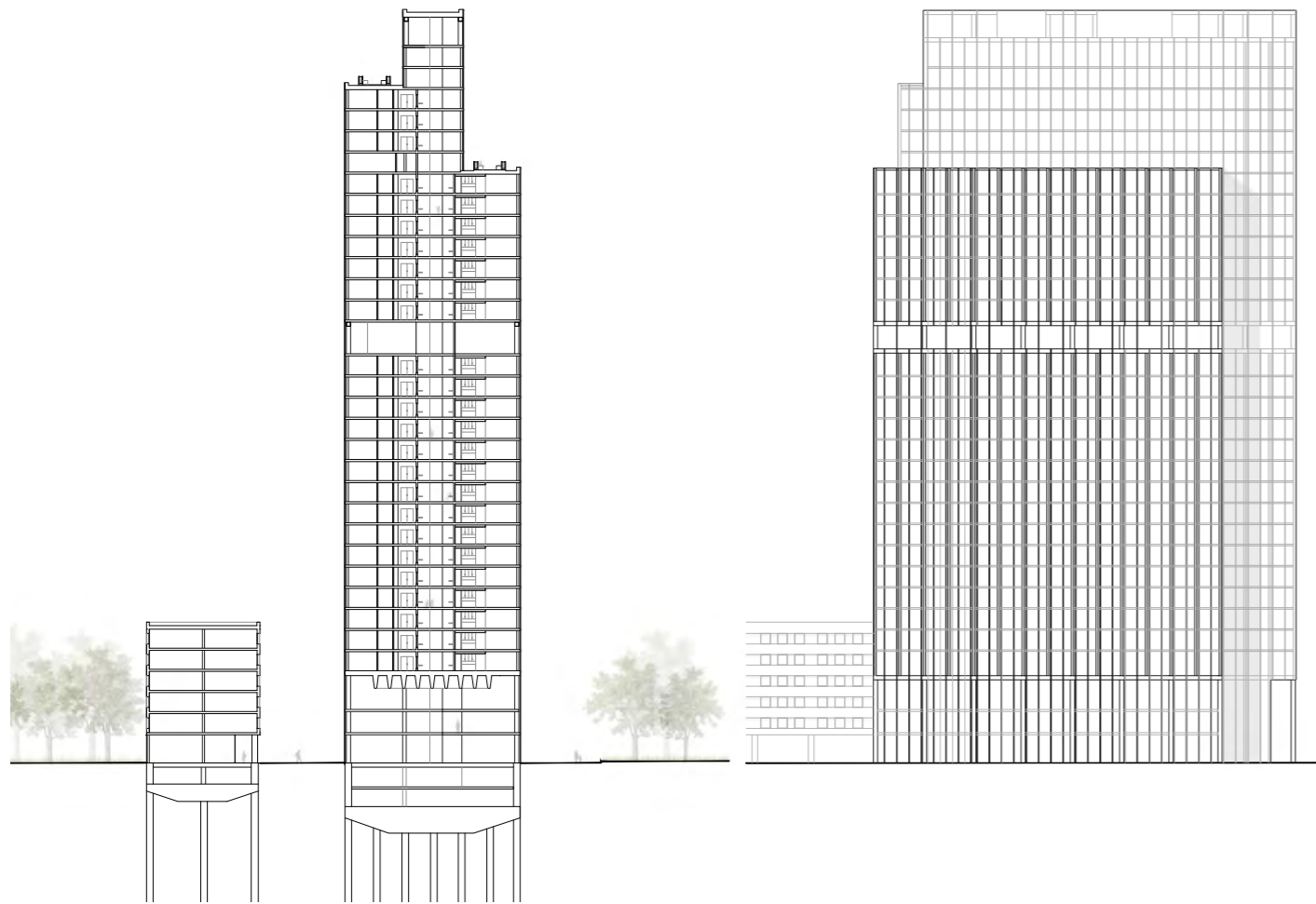
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Andrea Soto Gonzalez

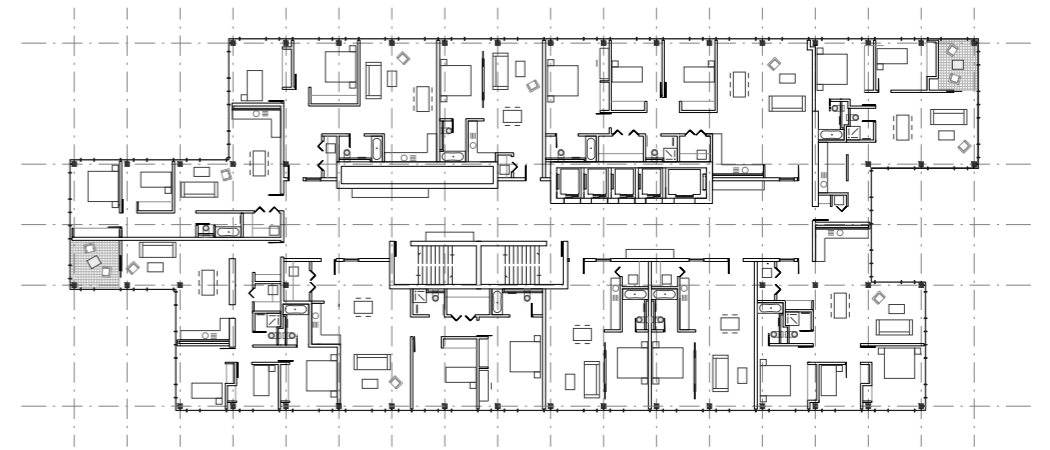


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Andrea Soto Gonzalez

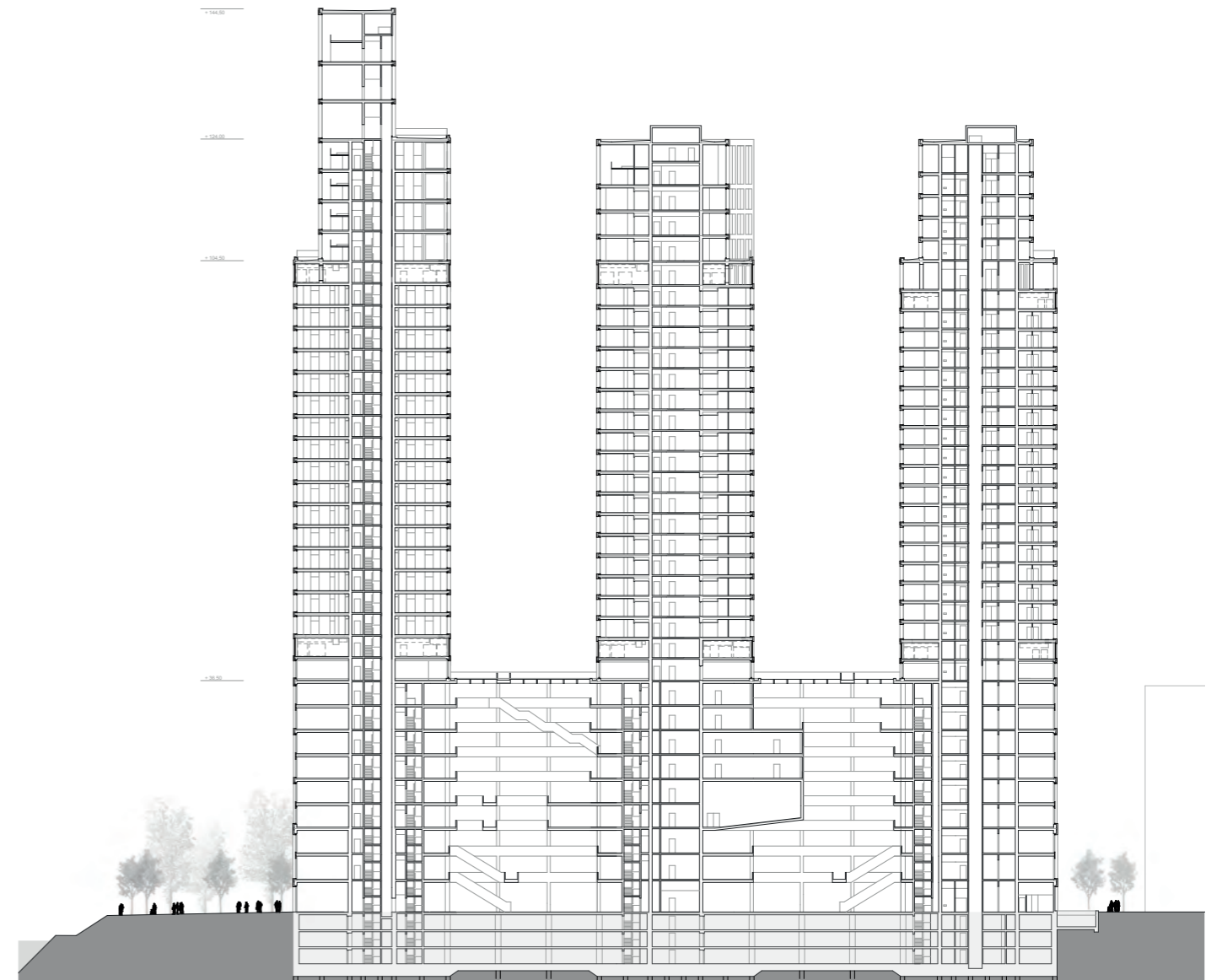


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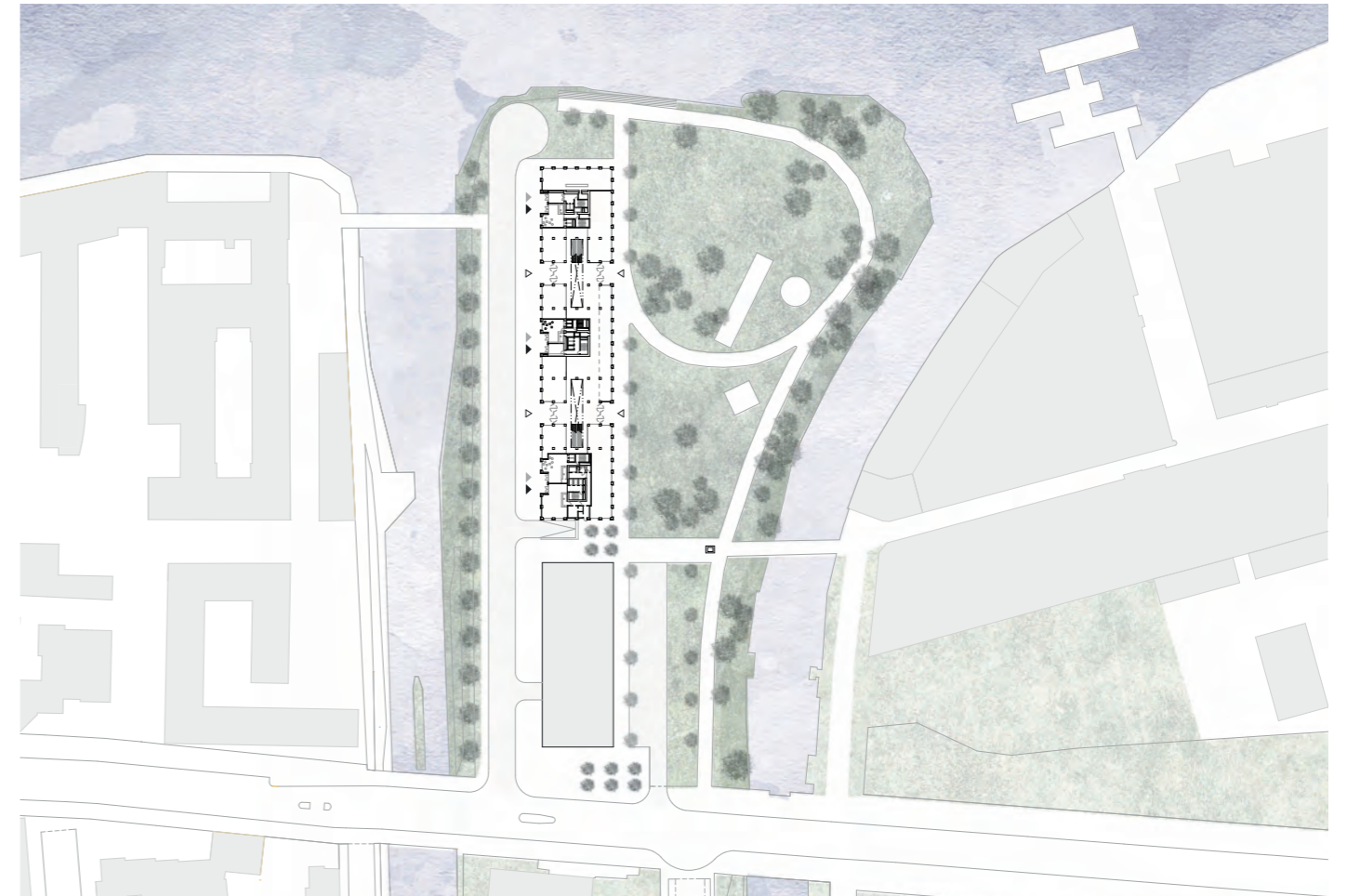
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Ondrej Havlin



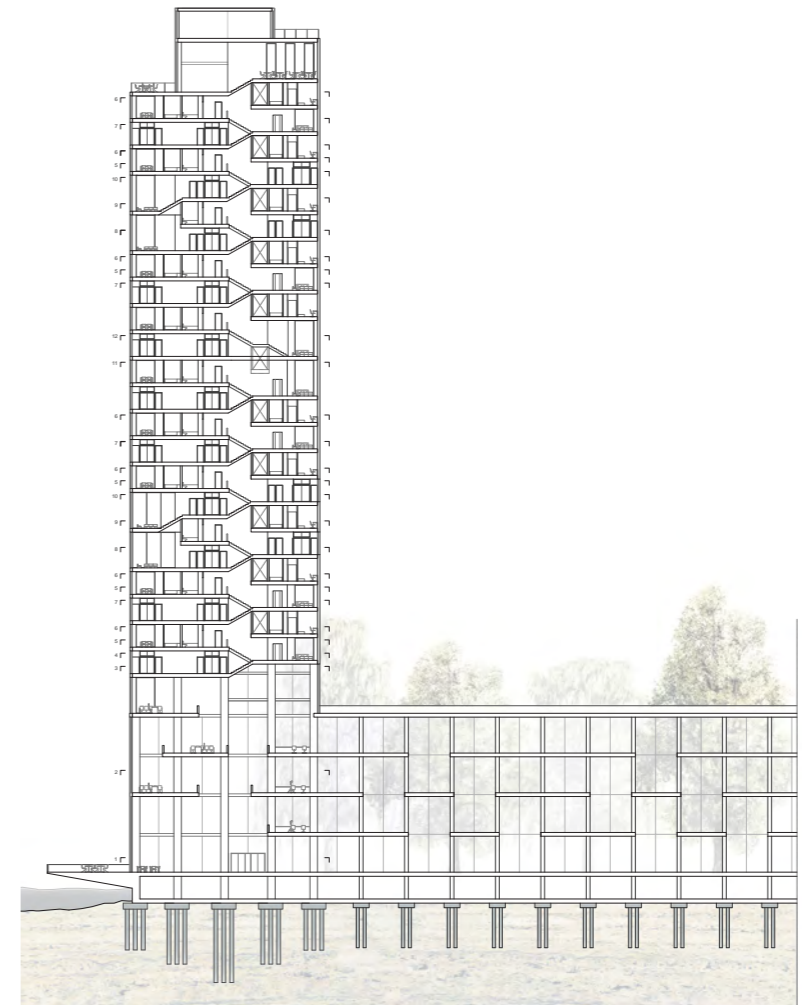
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Ondrej Havlin



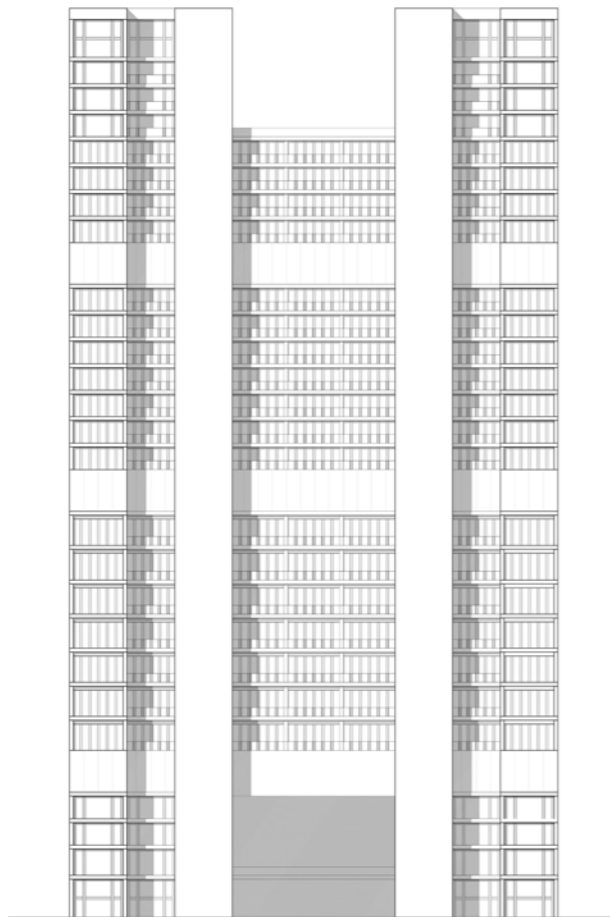
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Héctor Alamar Tamarit

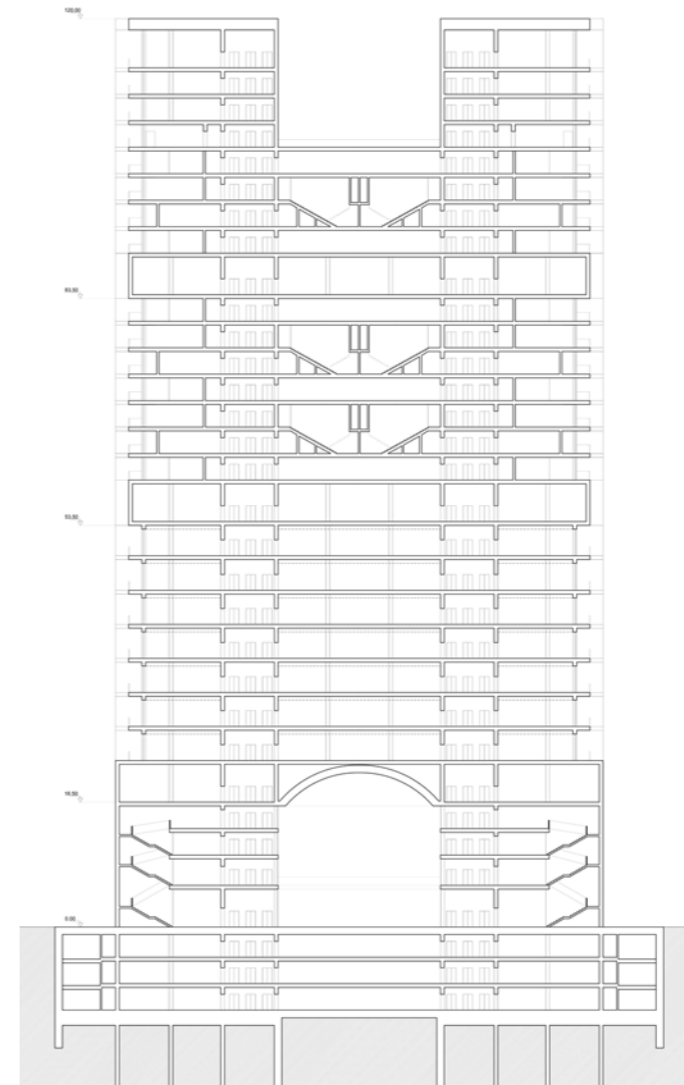


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Elisa Prete



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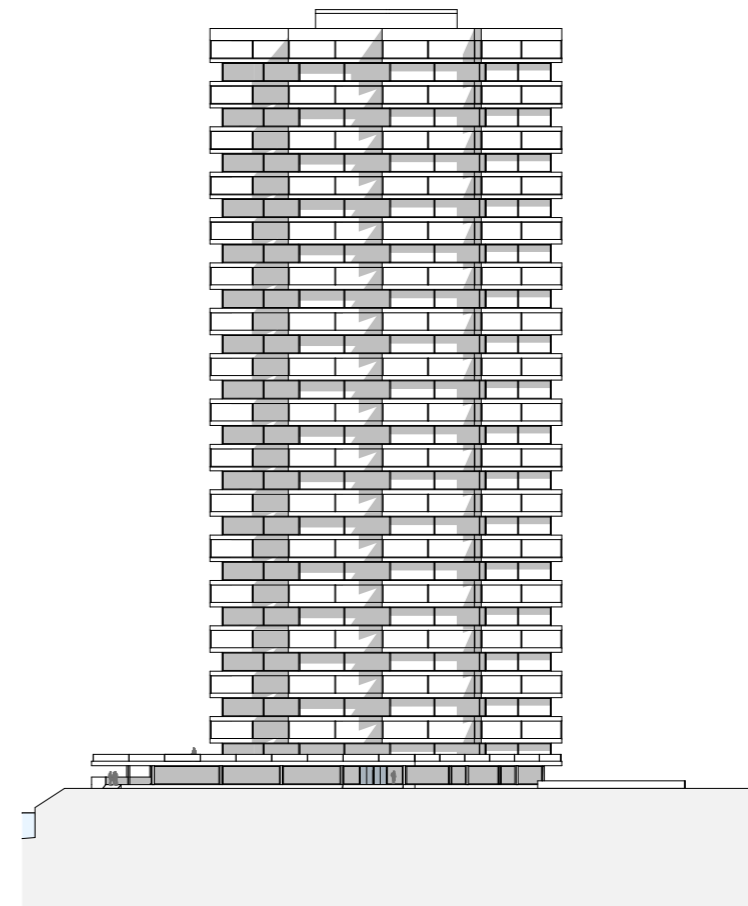


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Mario Moor



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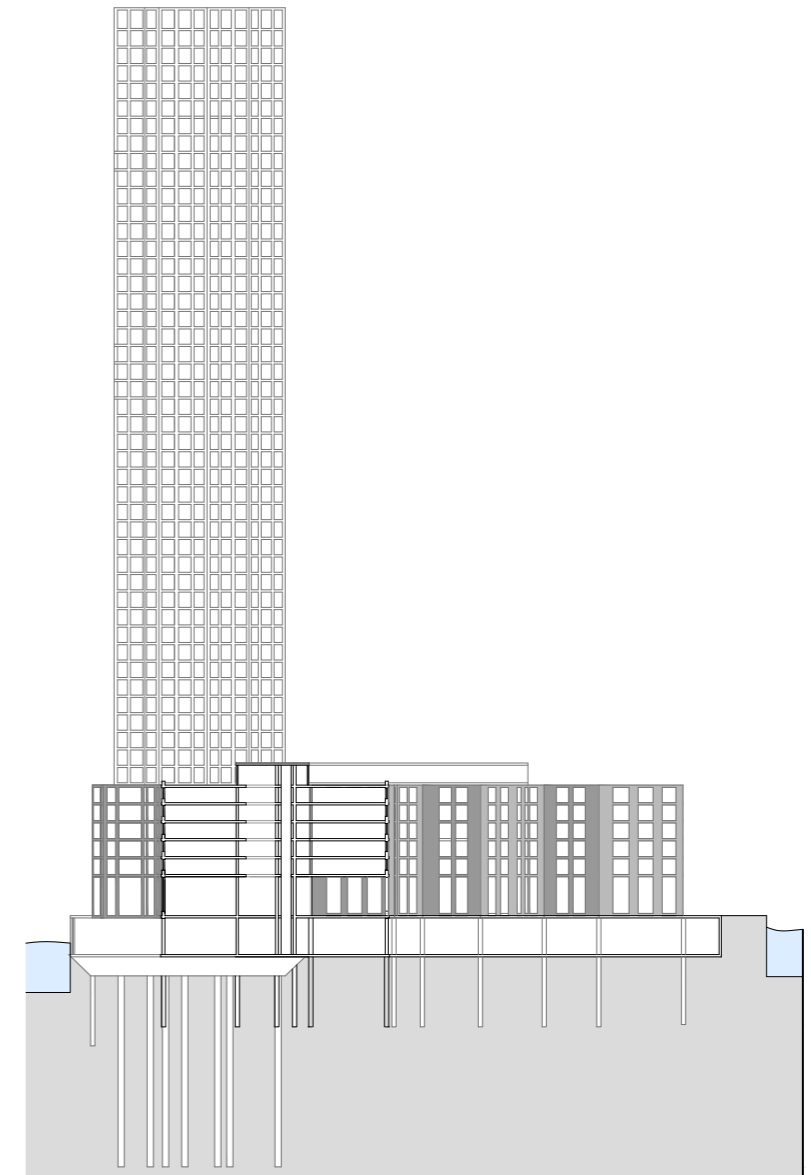


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Martin Pose Vidal

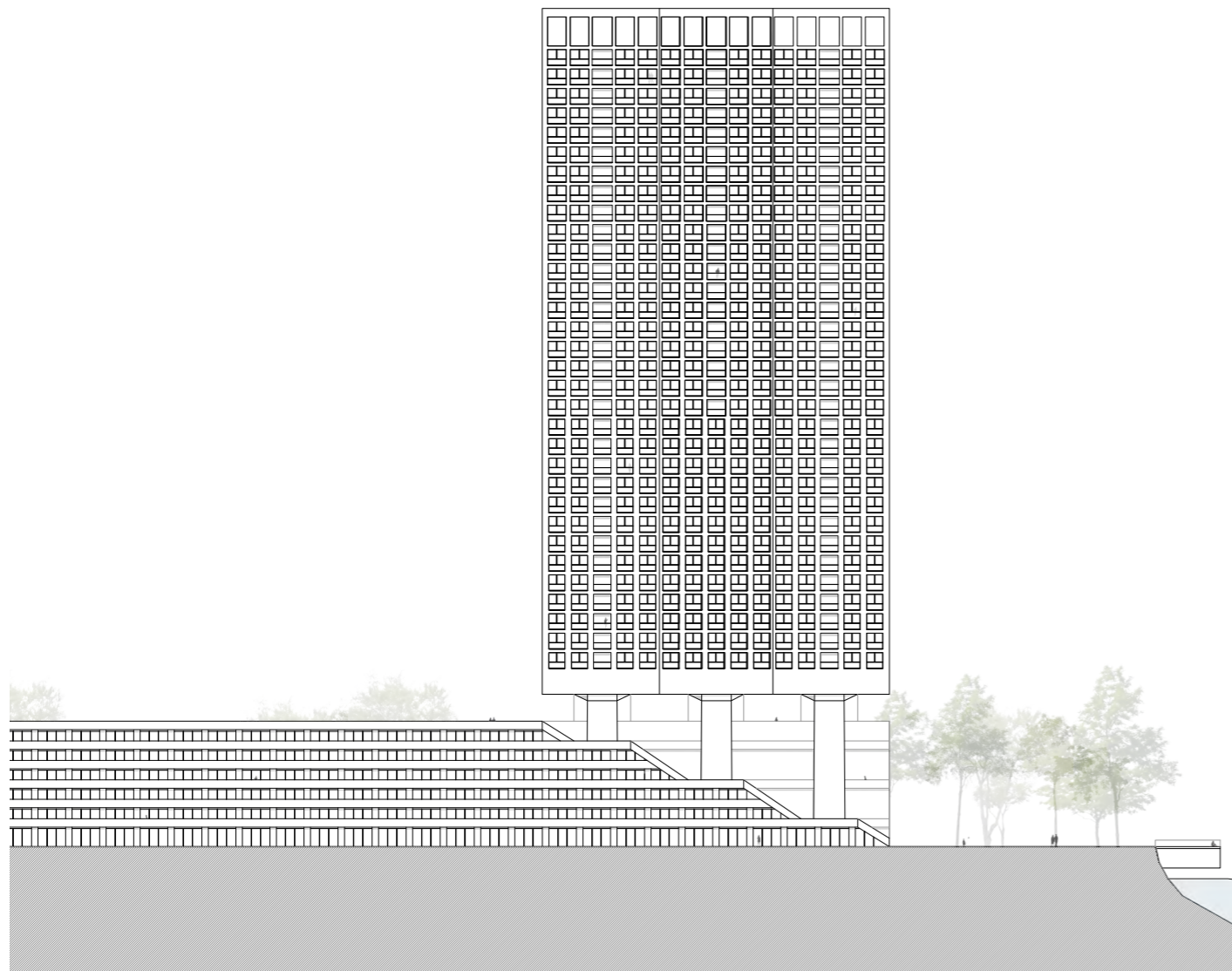


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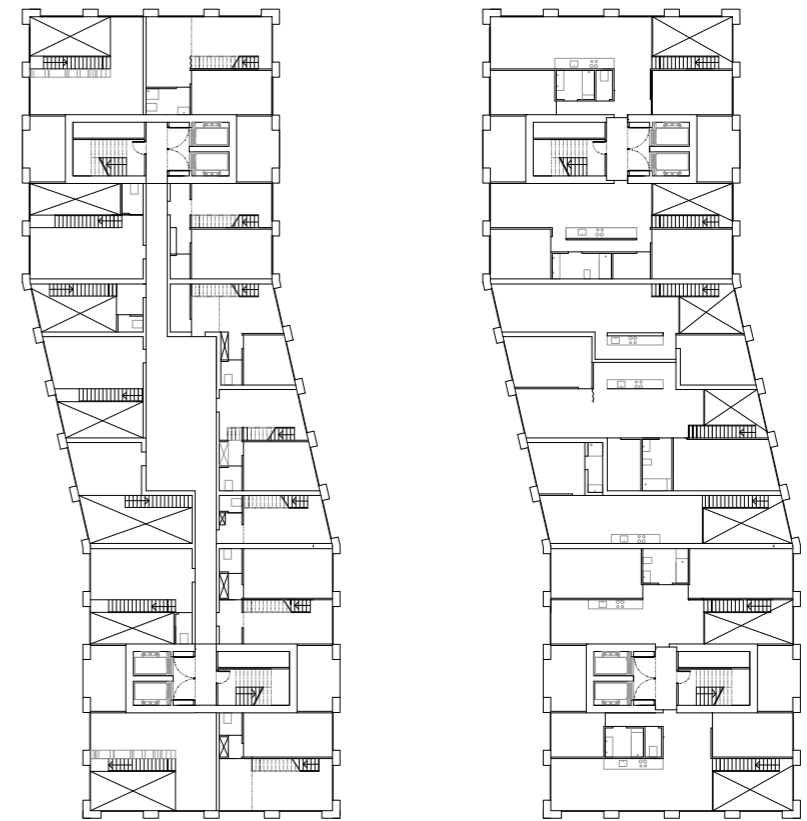


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Mathilde Loiseau

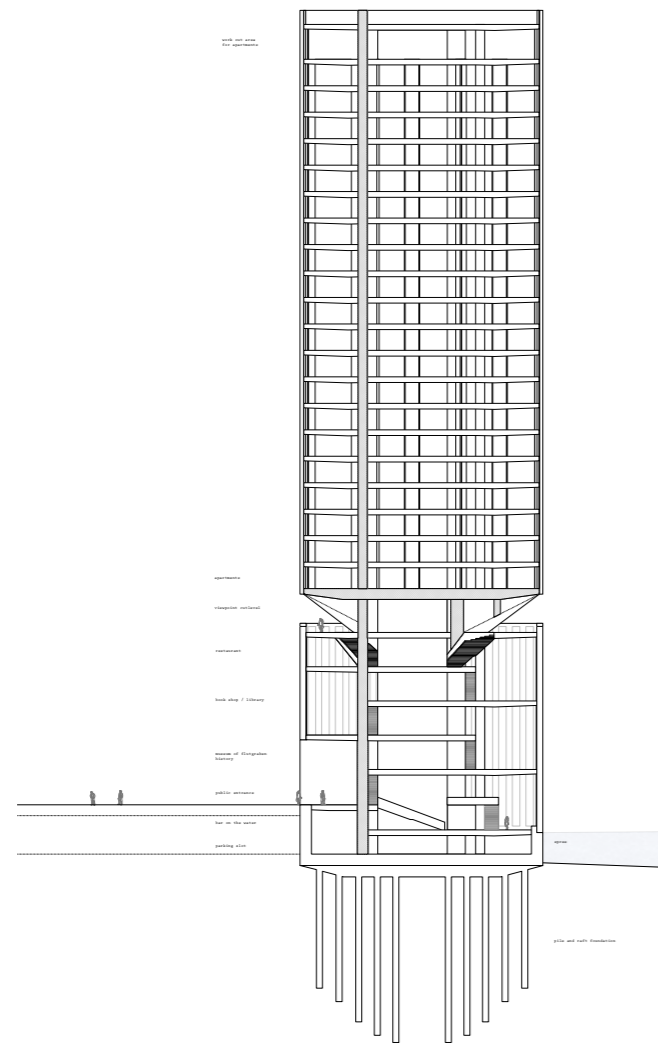


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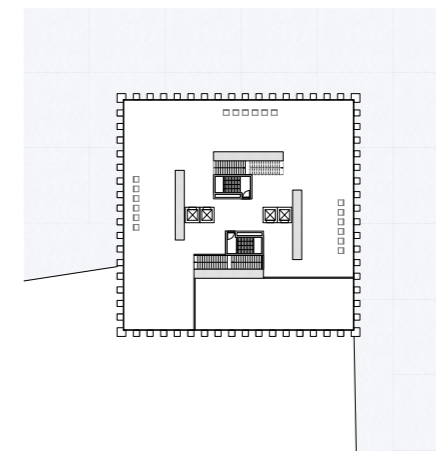
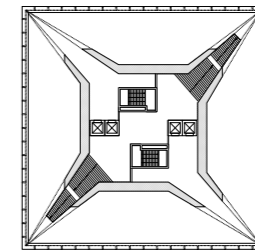
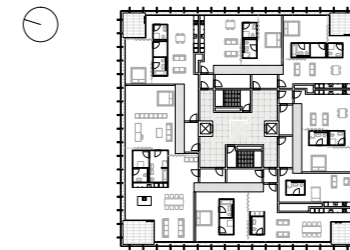


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Patrick Rieder

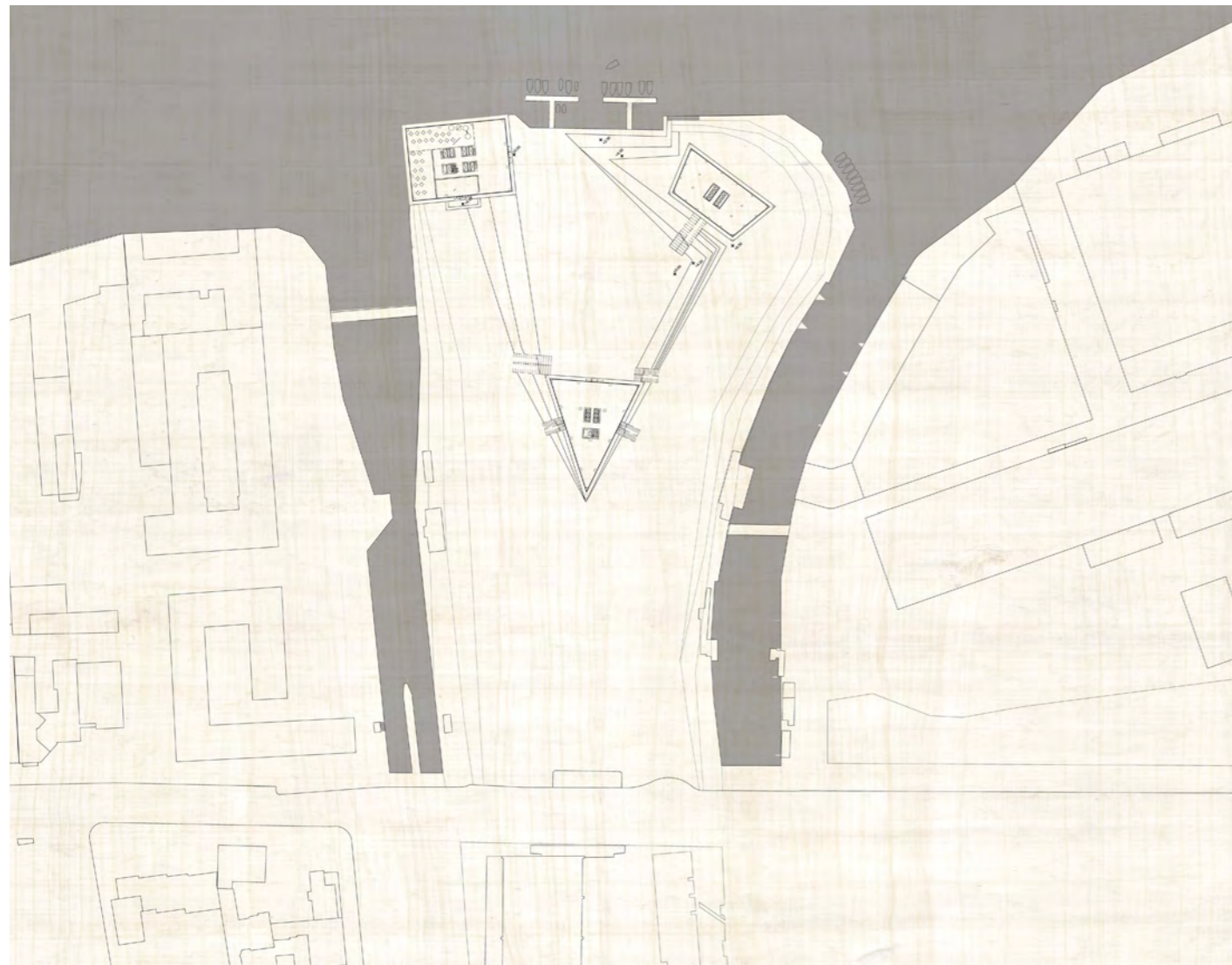


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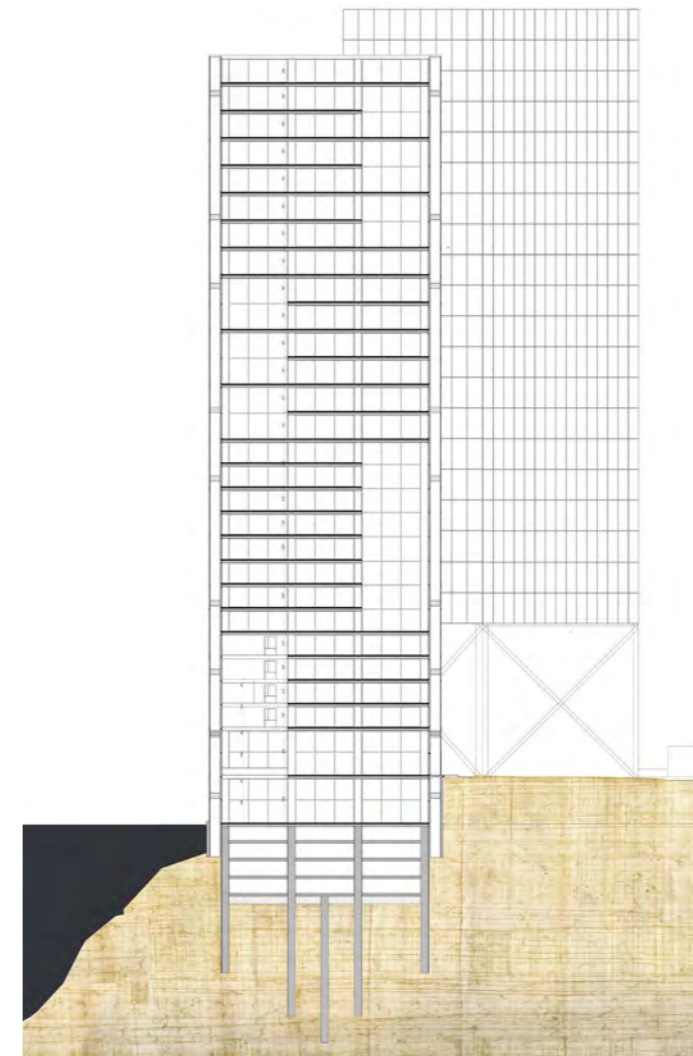


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Sarah Jane Fourness



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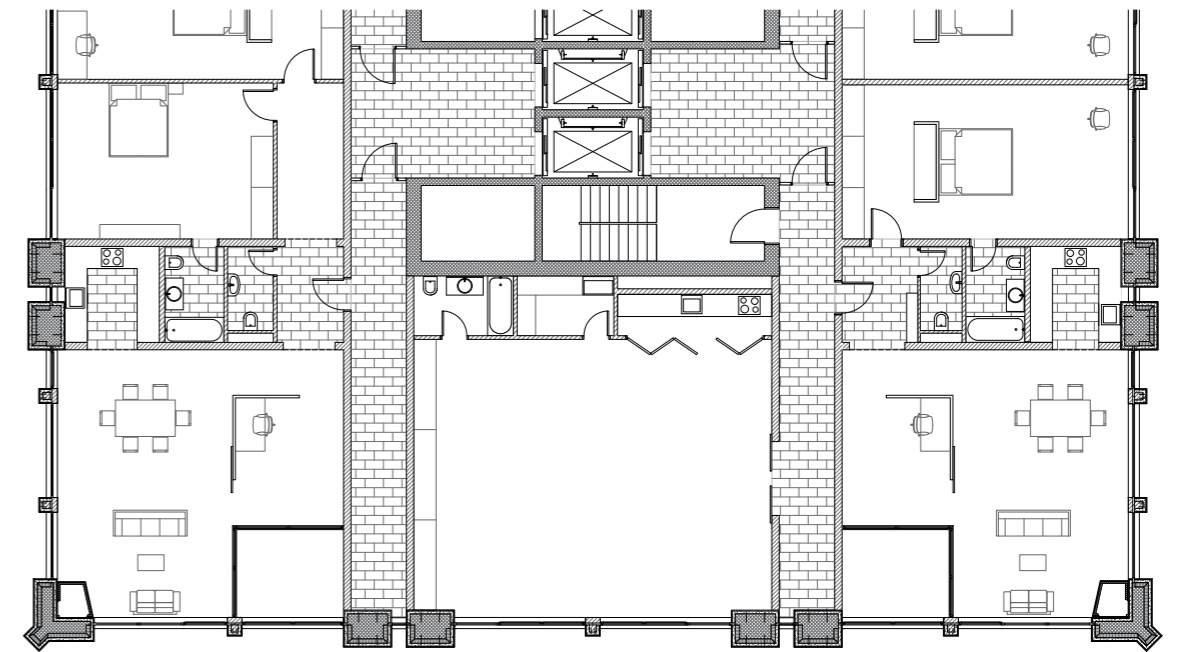


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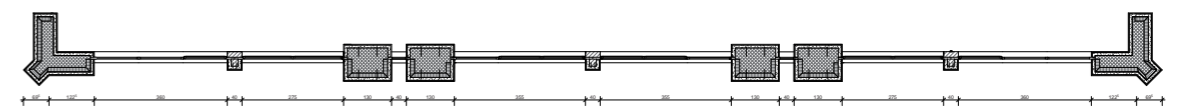
Victoria Simancas



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Studio High-Rise Building, Berlin
Jointmaster Burgdorf, Fall 2013-2014

Héctor Alamar Tamarit
Sarah Jane Fourness
Andrea Soto Gonzalez
Ondrej Havlin
Marc Kammermann
Mathilde Loiseau
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