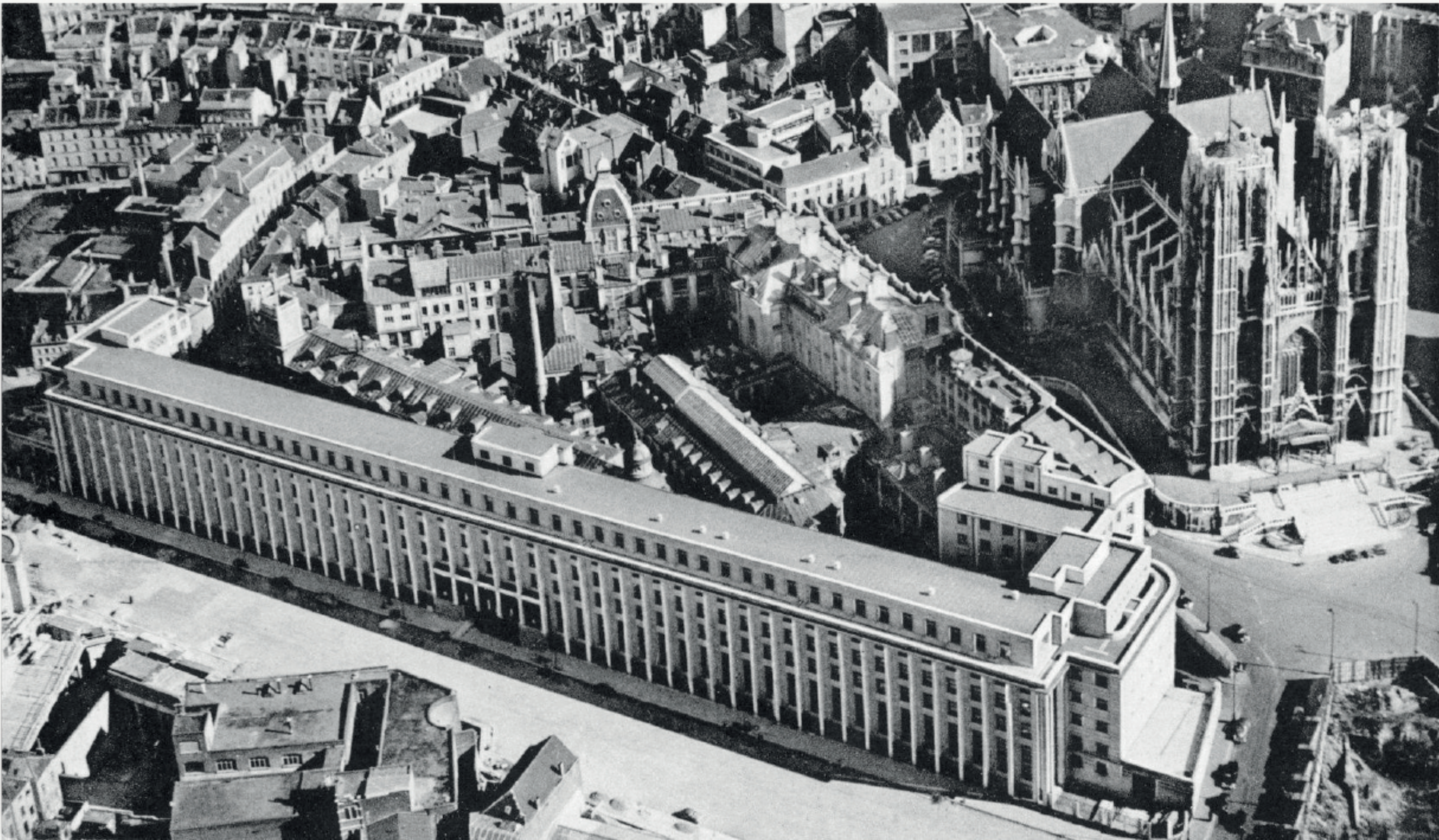


# Future Bank

2021-22 MSc3 AR3AI100



National Bank of Belgium, Boulevard de Berlaimont, 1950s. Source: hemels.brussels

## Introduction.

Contemporary society is governed by the regulation and flow of capital. The supply, perceived value and control of money determines, to a large extent, the conditions in which we live, and its accumulation underpins the perceived success of individuals, companies, cities, regions and nation states.

Capitalism enshrines this right of self-enrichment, at every scale. It does however place limits upon it. In order to regulate capitalist economies, complex financial systems have developed, which control finance and secure assets. Banks of many kinds provide liquidity and invest wealth. National Banks control the production and supply of money, regulate their commercial counterparts and, together with governments, define monetary policy and protect national interests. They are the lenders of last resort at times of crisis.

Modern industrialised economies measure their performance through growth, a desire for the sustained increase of national wealth which has underpinned the thinking of National Banks. A sustained increase in gross domestic product has been the mantra of prudent governance, fueled by work and production and regulated through finance, the control of interest rates and levels of inflation. However, we are arriving at the collective realisation that our obsession with enrichment has come at an enormous cost. The relentless extraction of profit has unbalanced the finite resources of the planet to the extent that

humanity now faces an existential threat. As we attempt to address the enormous challenges the future holds, we ask what might be the role of a future central bank?

Set in Brussels, the project will address the transformation of the National Bank of Belgium. This occupies a vast, triangular urban block of 91,000m2 that is situated at a critical moment between the upper and the lower parts of the city. This is made manifest in the 8m sectional shift across the site as it rises from the austere, 200m long, columnar façade that announces it to the Boulevard de Berlaimont.

From palatial beginnings, the present bank developed as a consolidated aggregation of buildings, planned by Marcel Van Goethem after the Second World War. Its current form is the result of a massive reconstruction project that transformed and rescaled this piece of city into an imposing, yet ultimately alienating urban environment. Built to its boundaries, the introverted nature of the complex reflects the historic need to secure Belgium’s financial reserves within its walls. However, since its completion, there has been a fundamental shift in the requirements placed upon it. Industrial functions like the printing and storage of currency have been relocated out of the city, or overseas; finance is becoming increasingly digital; while Belgium’s membership of the EU has led to much of the Bank’s traditional role being subsumed into the European Central Bank (ECB), based in Frankfurt. In response the National Bank has decided to redefine itself physically.

Interiors  
Buildings  
Cities

Palace





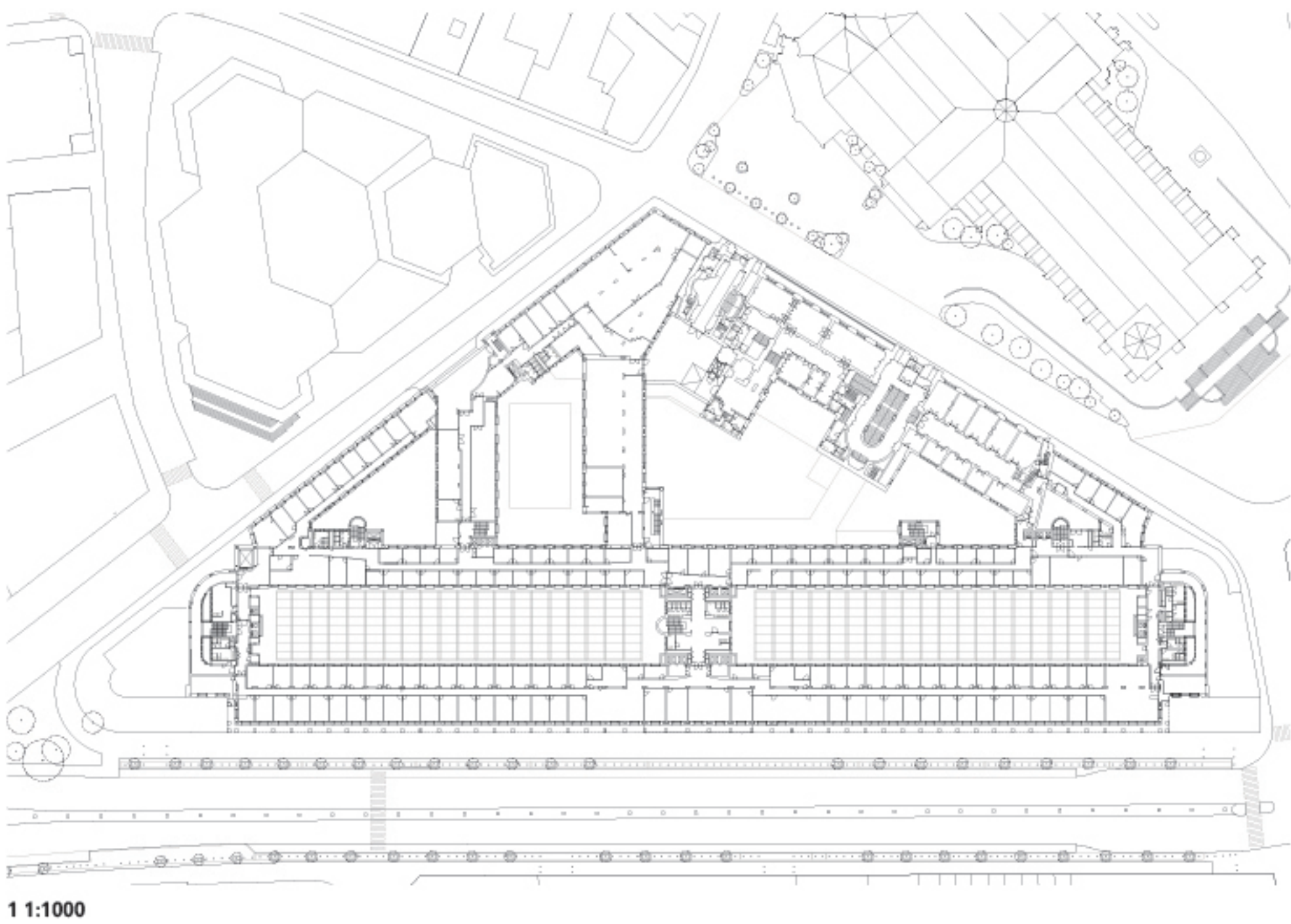
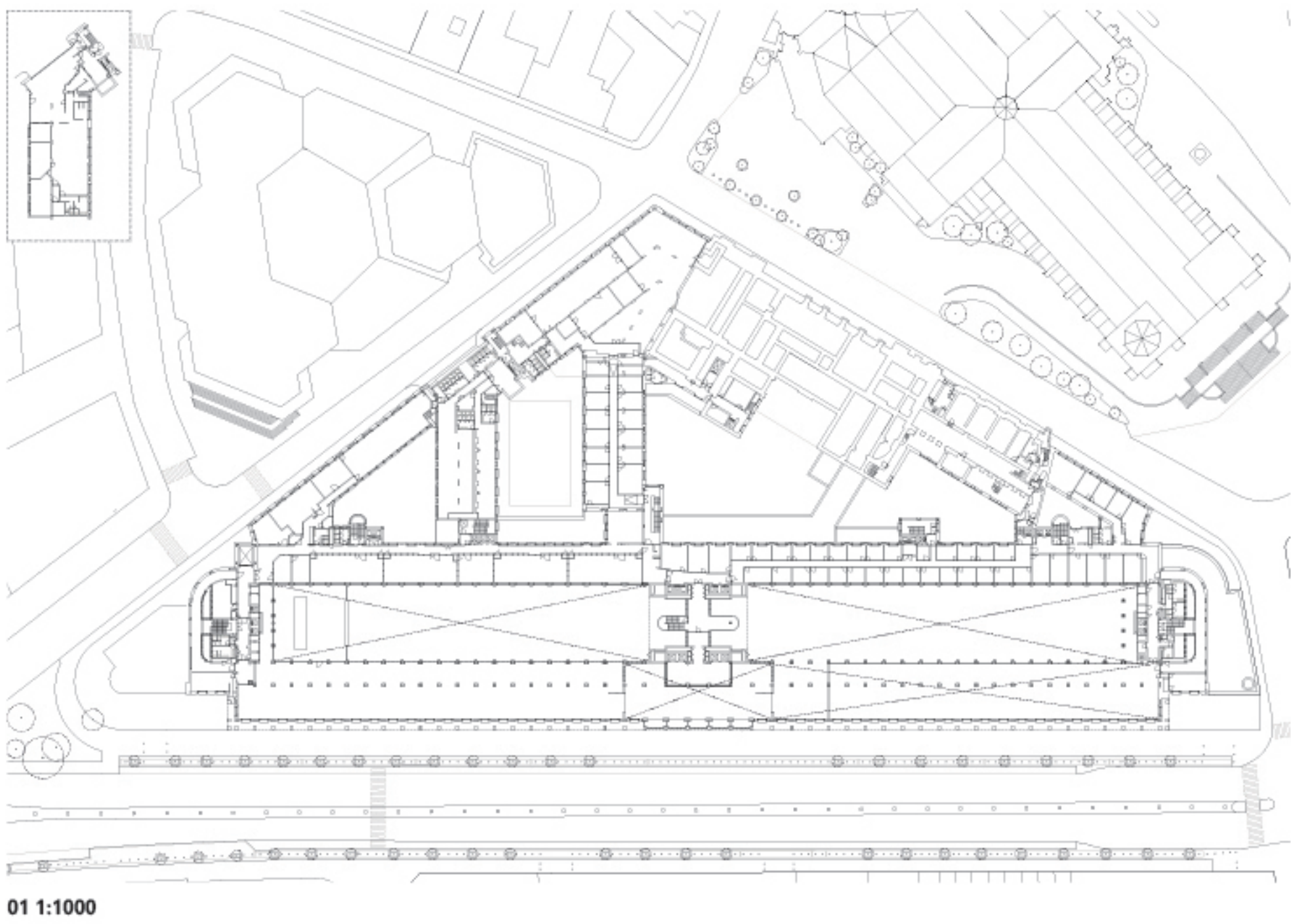
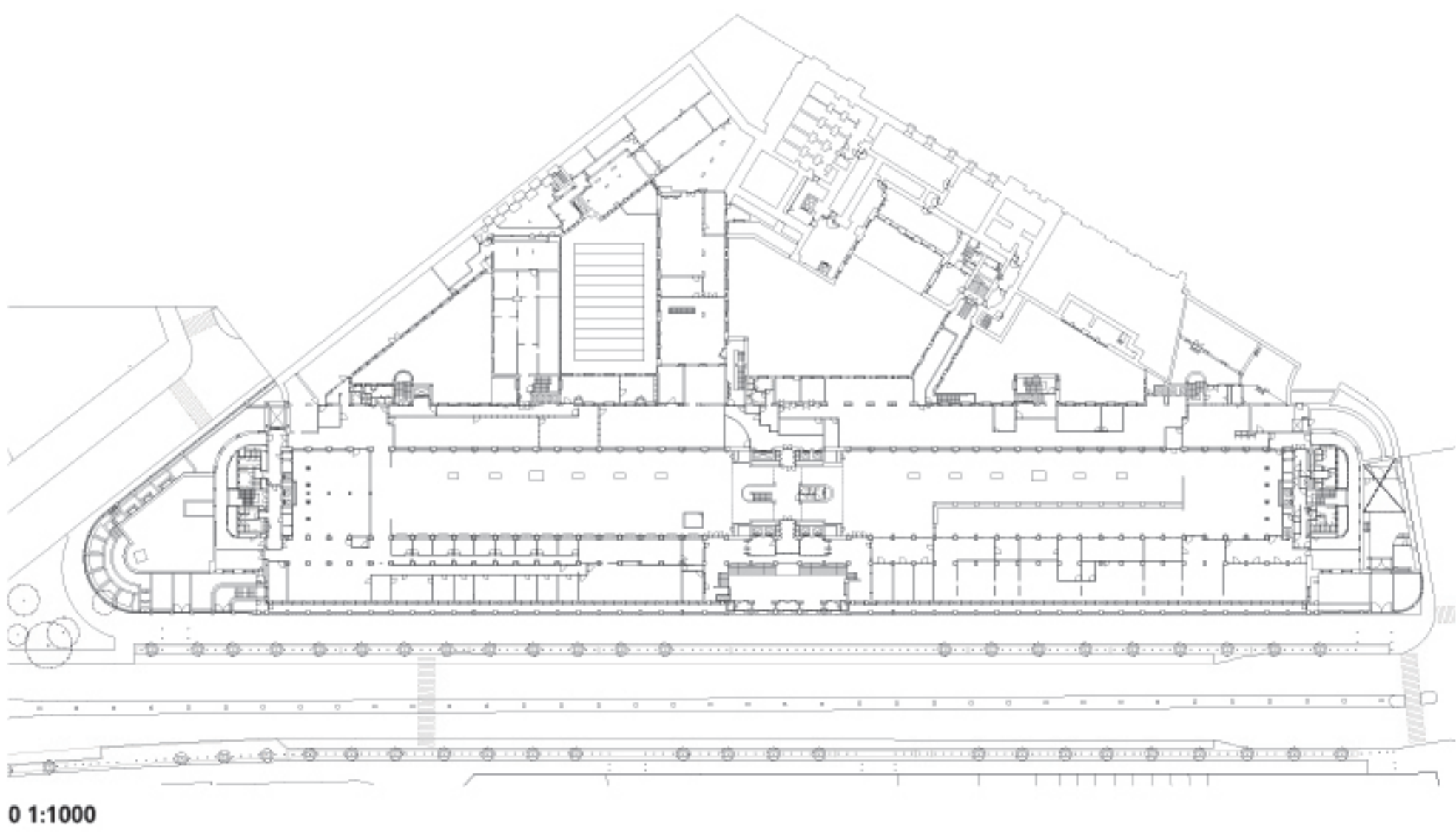
SOURCE: [HTTPS://WWW.DELCAMPE.NET/NL/COLLECTIES/](https://www.delcampe.net/nl/collecties/)

National Bank of Belgium, Brussels

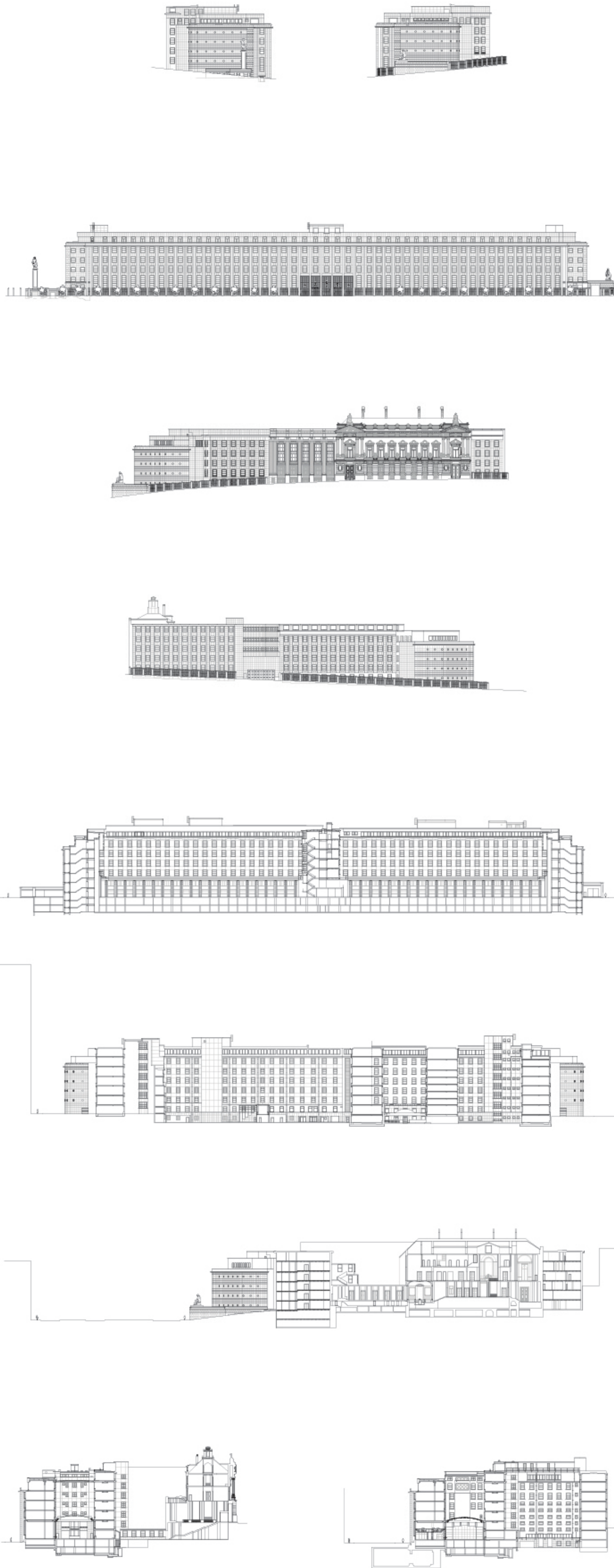








NATIONAL BANK OF BELGIUM DRAWINGS. SOURCE: IBC 2021-22



Studying the National Bank of Belgium





ORIGINAL IMAGES. SOURCE: HENN



REPRODUCED INTERIOR. SOURCE: IBC 2021-22

Collective research on offices and banks



Filter		Office	Where?	Notes	Calculation	Area	x	Total
								25,200
Typical bank office								
	1	Typical-workspace	Upper floors	1400 total employees, 200 WFH	12 sqm per person x 1200	14,400	1.4	20,160
	2	Typical-collective	Upper floors	Coffee corner, printing, kitchenette, lockers	3 sqm per person x 1200	3,600	1.4	5,040
Specific bank office								1,694
	1	Specific work	Upper floors	-	-	300	1.4	420
	2	Senior management	Upper floors	6 Senior managers 30 people Board room 10 people Dining room 2 small meeting rooms coffee corner	300sqm manager cabins x 6 100 sqm board room 40 sqm dining 300sqm meeting x 2 200sqm coffee	400	1.4	560
	3	HR	Upper floors	-	100sqm cabins x 6 40 sqm meeting 200sqm archive	120	1.4	168
	4	Trading hall	Upper floors	Rooms with screens like the big short	-	240	1.4	336
	5	Crisis centre	Underground	Crisis centre Data centre Control room	500sqm 500sqm 500sqm	150	1.4	210
Common bank office								1,234
	1	Office Reception	Ground	-	-	25	1.6	40
	2	Recreation room + Club	Underground	ping-pong, darts, pool	-	120	1.6	192
	3	External recreation	-	-	-	-	-	-
	4	Central meeting rooms	Upper floors	4 x 5 people 4 x 12 people 2 x 20 people 1 x 35 people 1 x 50 people 1 x 100 people	10 sqm room x 4 (2 sqm pp) 24 sqm room x 4 40 sqm room x 3 70 sqm room x 1 100 sqm room x 1 200 sqm room x 1	626	1.6	1,002
Bank hall								3,376
★	1	Entrance hall	Ground floor	Arrival / security	-	1,000	1.6	1,600
	2	Public reception	Ground floor	Desk + back office	-	60	1.6	96
★	3	Waiting area	Ground floor	For visitors	-	50	1.6	80
★	4	Public counters	Ground floor	30 sqm admin 15 sqm counters x 6 100 sqm safe 100 sqm safe room 50 sqm waiting hall	-	1,000	1.6	1,600
Public use								7,206
	1	Library + legal + innovation lab	Ground floor	-	500 sqm library 50 sqm legal library 50 sqm innovation lab	600	1.6	960
★	2	Bank Museum	Ground floor	-	-	2,000	1.6	3,200
	3	Art gallery	Ground floor	-	-	300	1.6	480
Institutional use								1,923
★	1	VIP meeting	Upper floors	Salon for 8 people	-	40	1.6	64
★	2	Public meeting rooms		2 x 6 people 2 x 12 people	12 sqm room x 2 (2 sqm pp) 24 sqm room x 2	72	1.6	112
★	3	Press room	Ground floor	20 seats - mini theatre	2 sqm per person	40	1.6	64
★	4	Foyer	Ground	250 people	1 sqm per person	250	1.6	400
★	5	Auditorium	Ground	250 people; should be able to function independently	2 sqm per person	500	1.6	800
	6	Exhibition space	Ground floor	-	-	300	1.6	480
Hospitality								2,360
★	1	Refectory	Ground floor	500 people	2 sqm per person	1,000	1.6	1,600
★	2	Restaurant	Upper floors	60 people	3 sqm per person	180	1.6	288
★	3	Lounge	Ground floor	180 people	2 sqm per person	360	1.6	576
★	4	Coffee bar	Ground floor	30 people + standing	2 sqm per person	60	1.6	96
Rental office								9,800
	1	Rental workspace	Upper floors	-	12 sqm per person x 300	3,600	1.4	5,040
	2	Rental collective	Upper floors	Coffee corner, printing, kitchenette, lockers	3 sqm per person x 300	900	1.4	1,260
	3	Rental	Upper floors	-	6000 sqm rental offices 500 sqm gym 500sqm nursery	7,000	1.4	9,800
Back of house								5,291
★	1	General facilities and circulation	-	-	-	-	-	-
	2	Building services	-	-	-	-	-	-
	3	Waste	-	-	-	-	-	-
★	4	Coat checking area	Ground	200 people	0.5 sqm per person	100	1.3	130
	5	Changing/ showers	-	Decentralised	-	300	1.3	390
	6	Medical facilities	Upper floors	Includes lactation room with 5 seats	-	150	1.3	195
★	7	Finishing kitchen	Underground	Catering for 300 people	0.5 sqm per person	150	1.3	195
★	8	Central archive	Underground	4500lm shelving	-	1,000	1.3	1,300
	9	Art store	Underground	-	-	150	1.3	195
	10	Workshop	Underground	-	-	450	1.3	585
	11	Print shop	Underground	-	-	450	1.3	585
	12	Delivery zone	-	-	-	-	-	-
	13	Security room	Underground	-	-	40	1.3	52
	14	IT	Underground	-	200 sqm 200 sqm stock	400	1.3	520
	15	Server room + data centres	-	-	110 sqm per floor	880	1.3	1,144
Parking								7,250
★	1	Parking	Underground	150 cars, 20 bikes	35 sqm per car x 150	5,250	1.0	5,250
★	2	Bike parking	Underground	300	2 sqm per cycle x 300	2,000	1.0	2,000
Total								65,334

BANK OFFICES: 45%

RENTAL/ PRIVATE: 15%

INSTITUTIONAL USE: 8%

PUBLIC USE: 8%

HOSPITALITY: 4%

BOH AND PARKING: 20%



# Social Plinth

## Future Bank

MSc3 AR3AI100 Week 1.5–1.8



Knossos, GR, 1994. Mark Pimlott

### Social Plinth

If one key aim of the Belgian National Bank is to provide a new consolidated workspace for its employees, another is to capitalize upon the possibilities that might be discovered in its reduced need for security. The Bank proposes to use this opportunity for openness to begin to define what it describes as a *social plinth*. As it is currently defined, the brief sees this social function in terms of representation. It will offer an invitation to the public to enter the world of the bank, to drink a coffee or look at a painting from the collection perhaps. However, one might imagine the opening up of the Bank's site in more fundamental terms, as a catalyst for transforming the ways in which the institution works, or as a means to define its role and responsibilities to society in new terms. Through this brief we ask you to begin to consider what this might mean.

During the remaining weeks of the research course, you will be studying historical examples of banks and examining the developing ways in which their banking halls, forms and facades have engaged with the city and the citizen in representational terms. Thought of in terms of architectural language, the plinth can be understood as a base or fundament upon which other things stand. It is a visible manifestation of the founding of the building, a new ground or platform from which the rest of a wall can be constructed. As such, it often takes on a different expression and material condition for both aesthetic and technical reasons. In making a new ground

to negotiate with or overcome the limitations of an existing topography or terrain, the plinth can also be understood as something which separates, distances or objectifies the architectural edifice which is constructed upon it, elevating it above its surroundings. This is the manner in which a plinth is traditionally understood in artistic practice, as a base or pedestal upon which an artwork – a sculpture or a statue – is placed in order to objectify it and enhance its presence and power in relation to both the viewer and the context. In this way it can also be understood as a scenography, or a stage; an architectural device that can monumentalise and express power and authority.

The idea of a social plinth is one then that requires both critique and interpretation. Is it to be understood as a re-grounding of the institution, as the antithesis of monumentality, as a platform for dialogue? Is it a foundation from which the transformed Bank of the future might be constructed? Or is the very notion of a plinth one to be countered?

The image of the plinth as a robust base, that defines the stability of the whole, has long been employed in the architecture of bank buildings, to assist in proposing them as strong and stable institutions, which people could trust. However, what has long been thought of as a stable economic model, which banks underpinned and National Banks helped regulate, a model of continuous growth supported by industrial production and the extraction of the very materials of which

Interiors  
Buildings  
Cities

Palace





Town hall of Mumbai, with its thirty-four steps. Photo by Rahul Mehrotra.

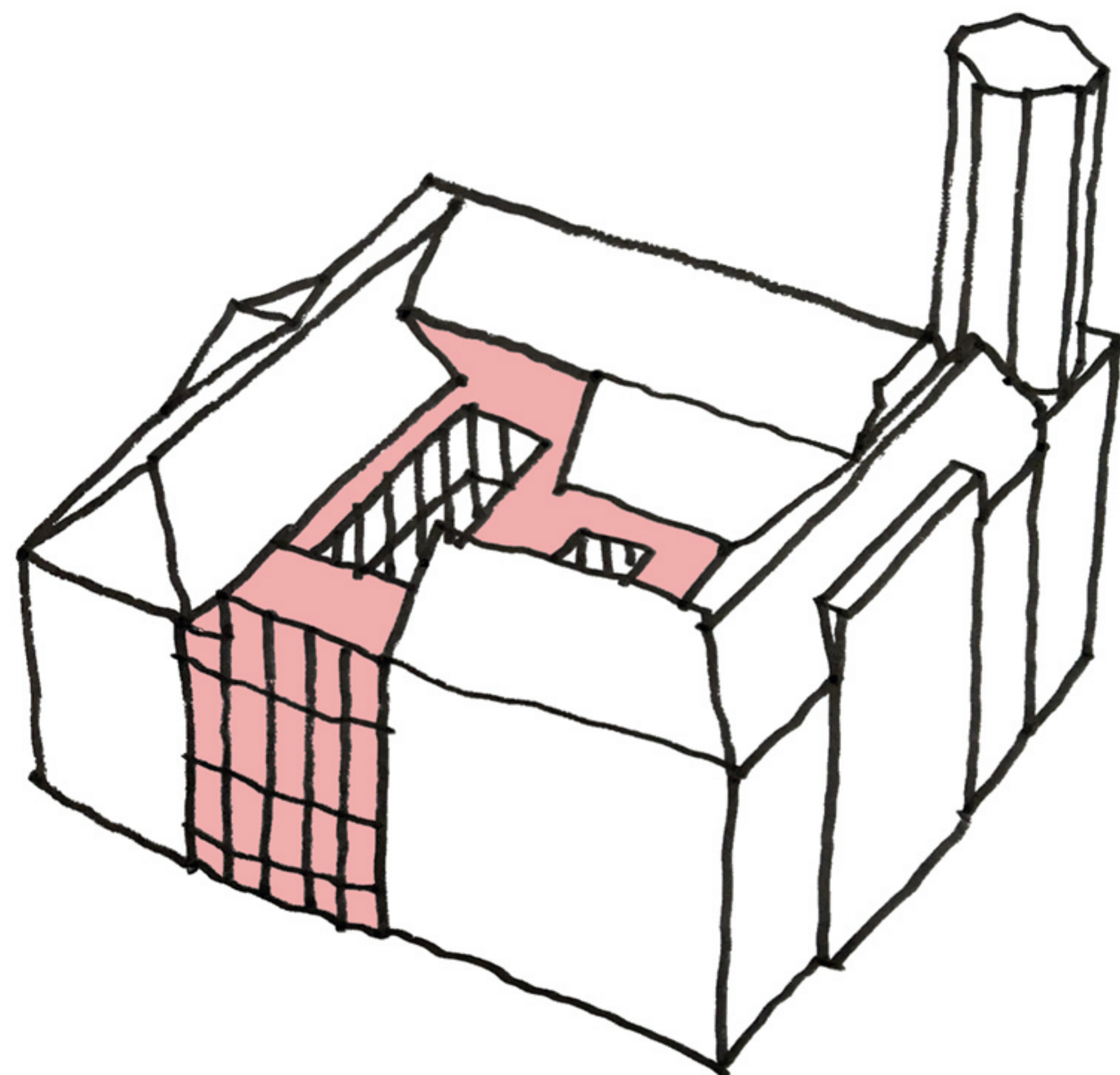


Town hall of Mumbai transformed on Independence Day. Photo by Rahul Mehrotra.

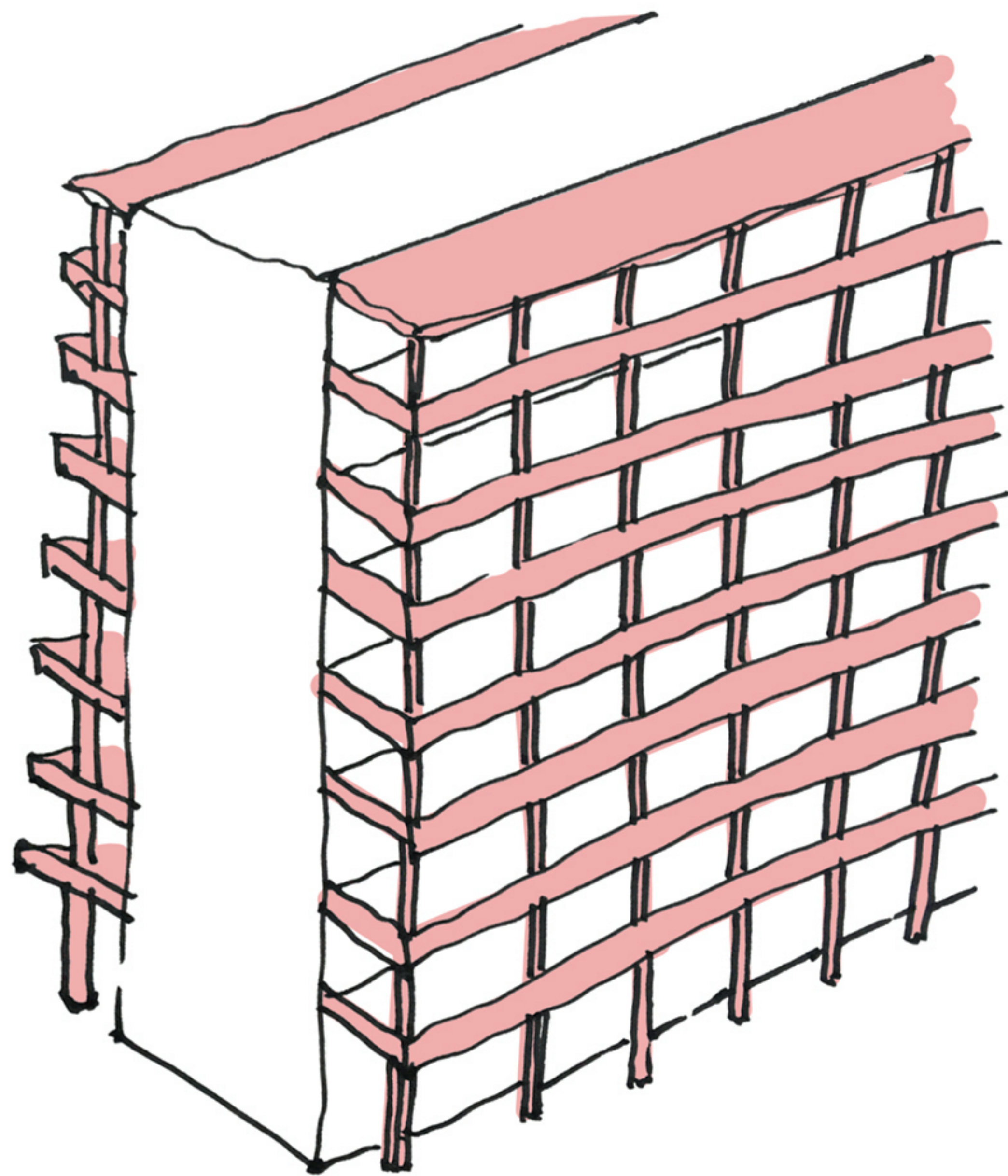


P1 social plinth: temporary threshold





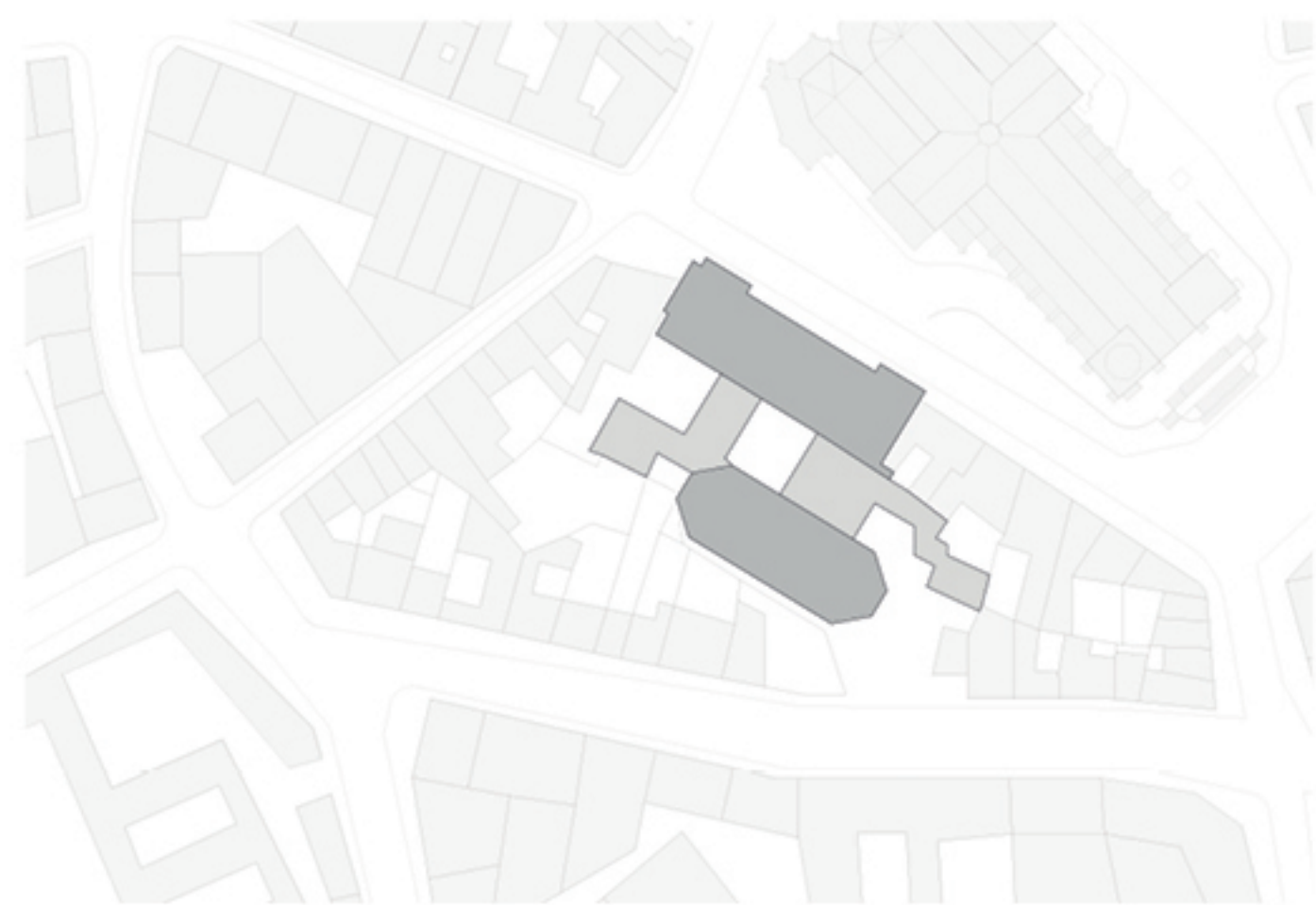
TOWN HALL MENEN, NOAARCHITECTEN



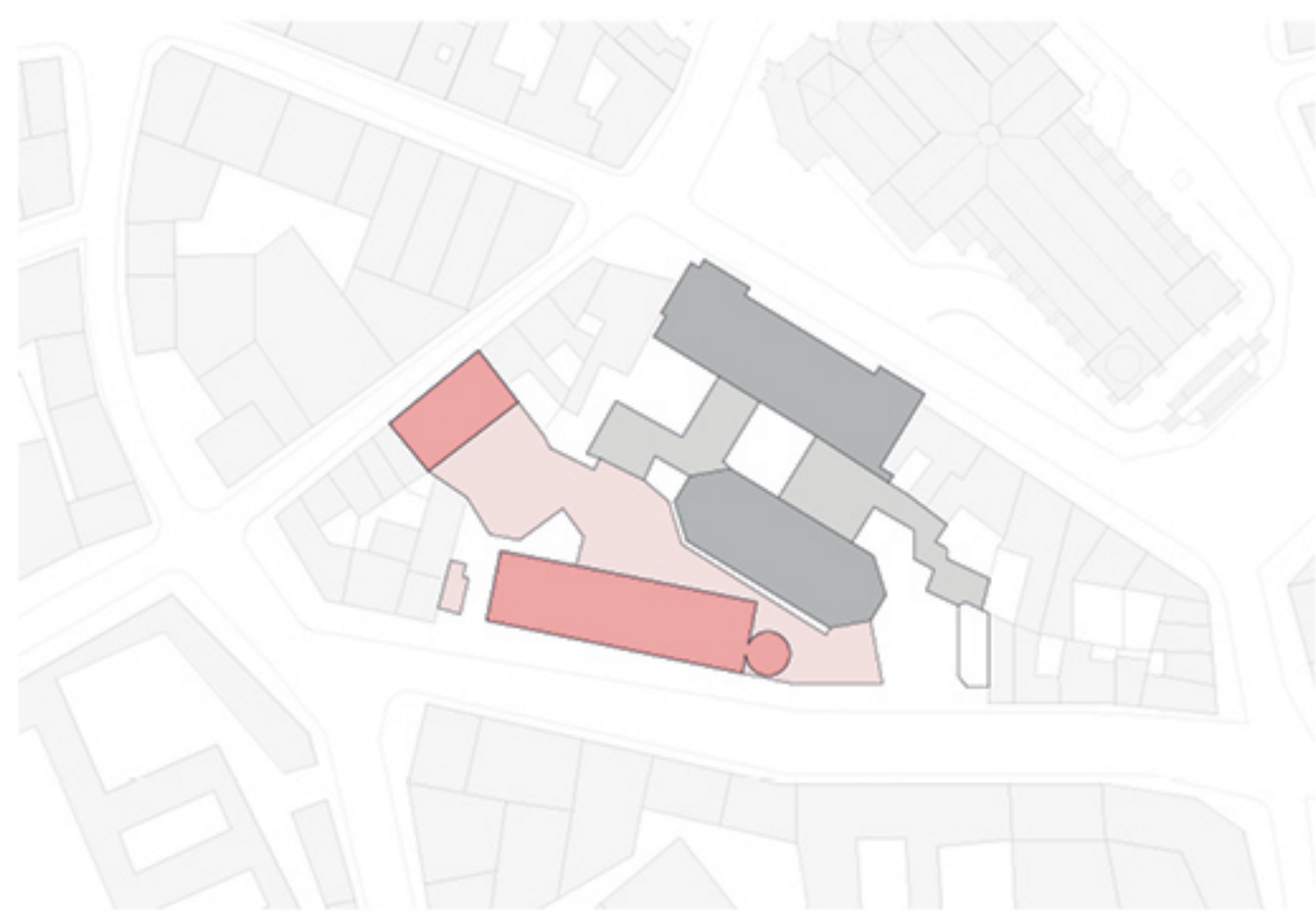
530 DWELLINGS AT BORDEAUX, LACATON & VASSAL

Precedents for precise addition of volume

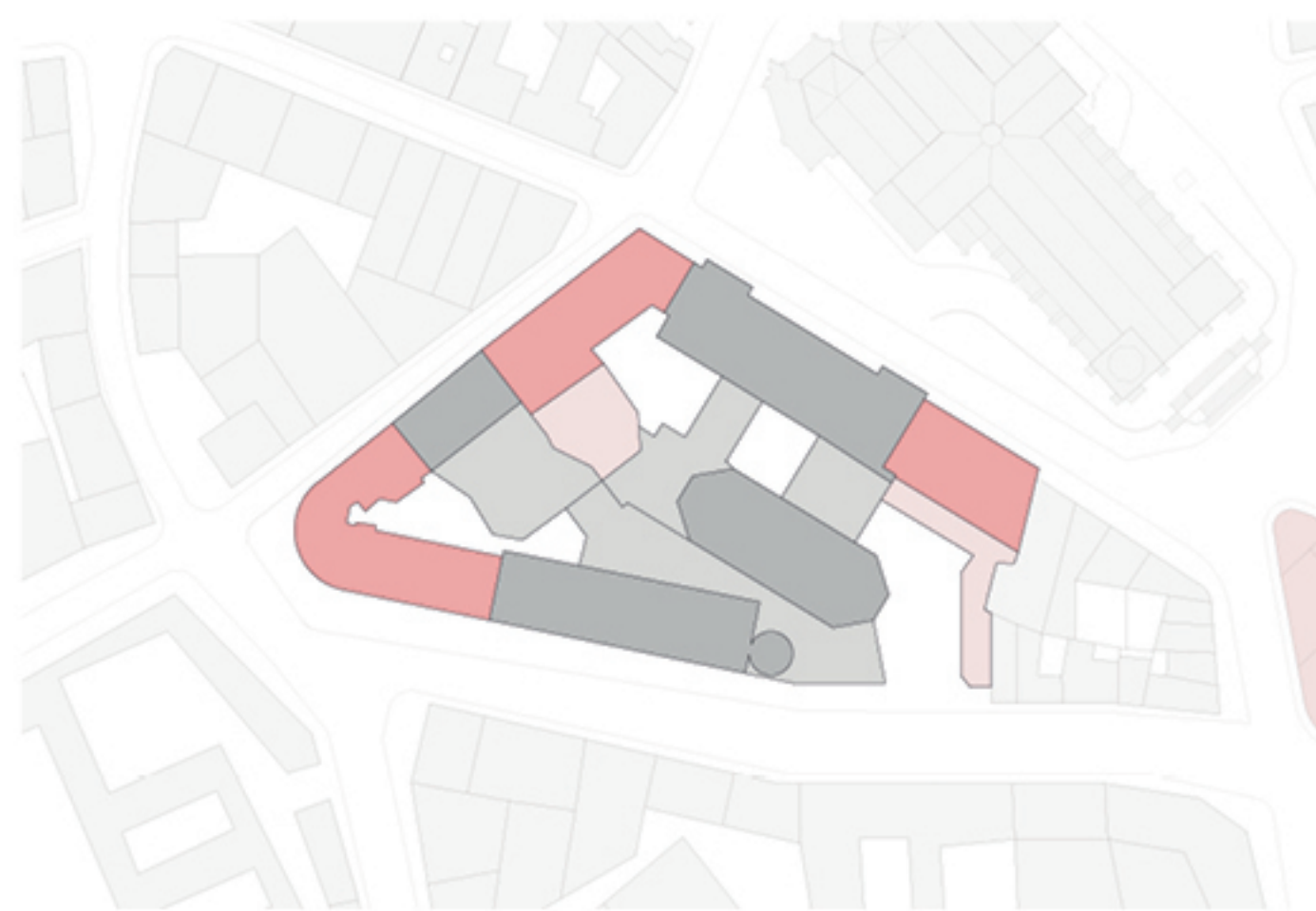




1869



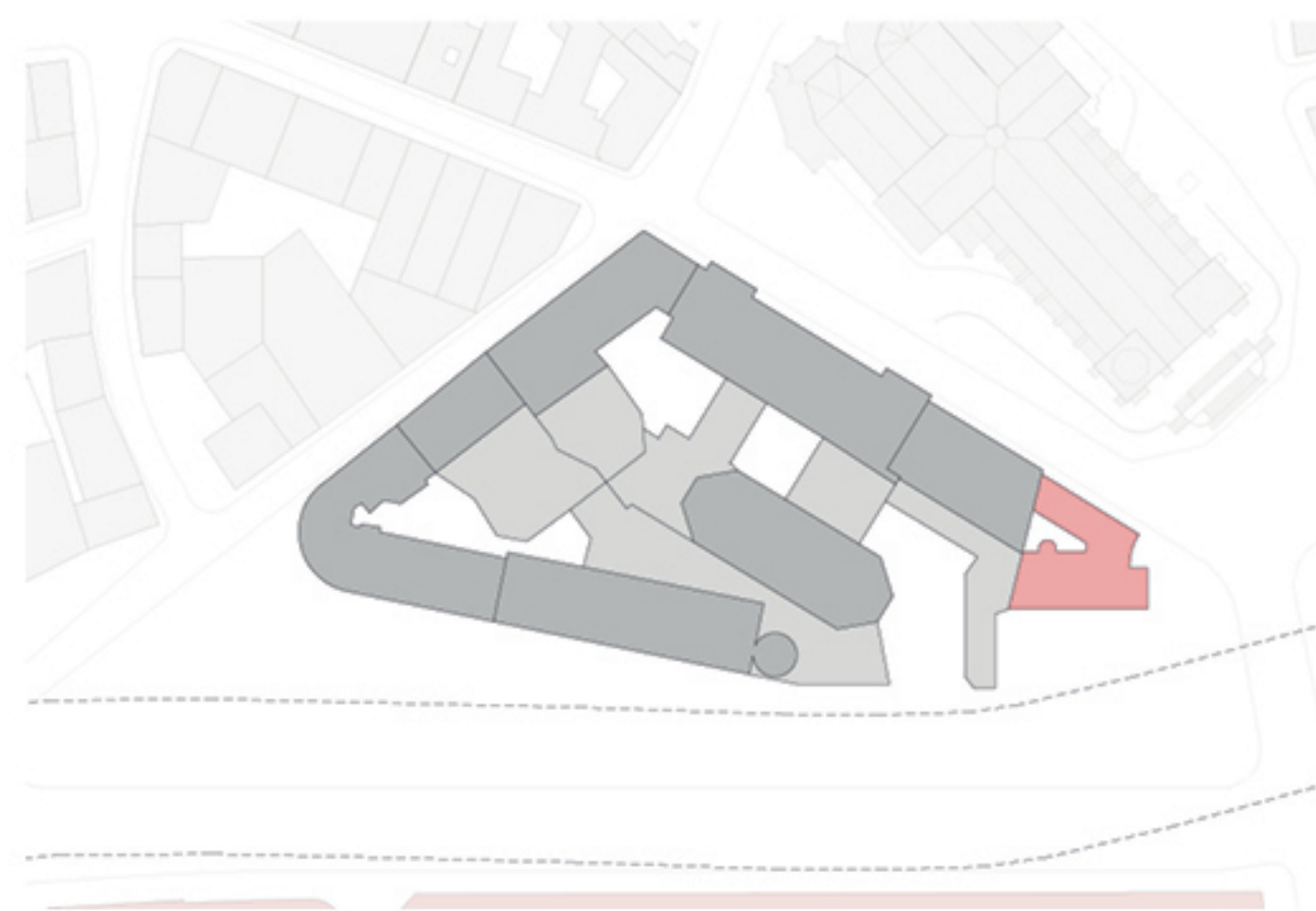
1876



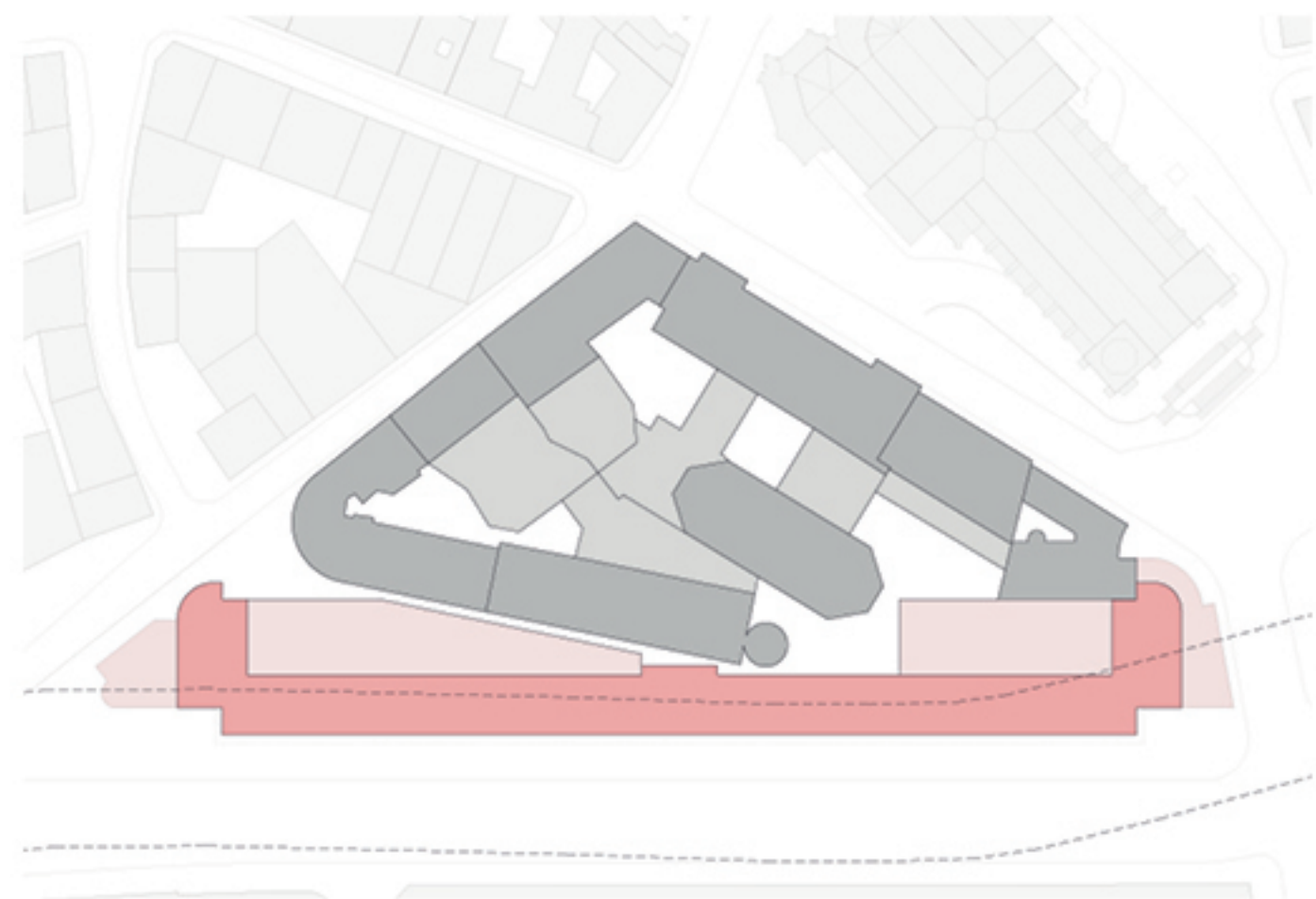
1908



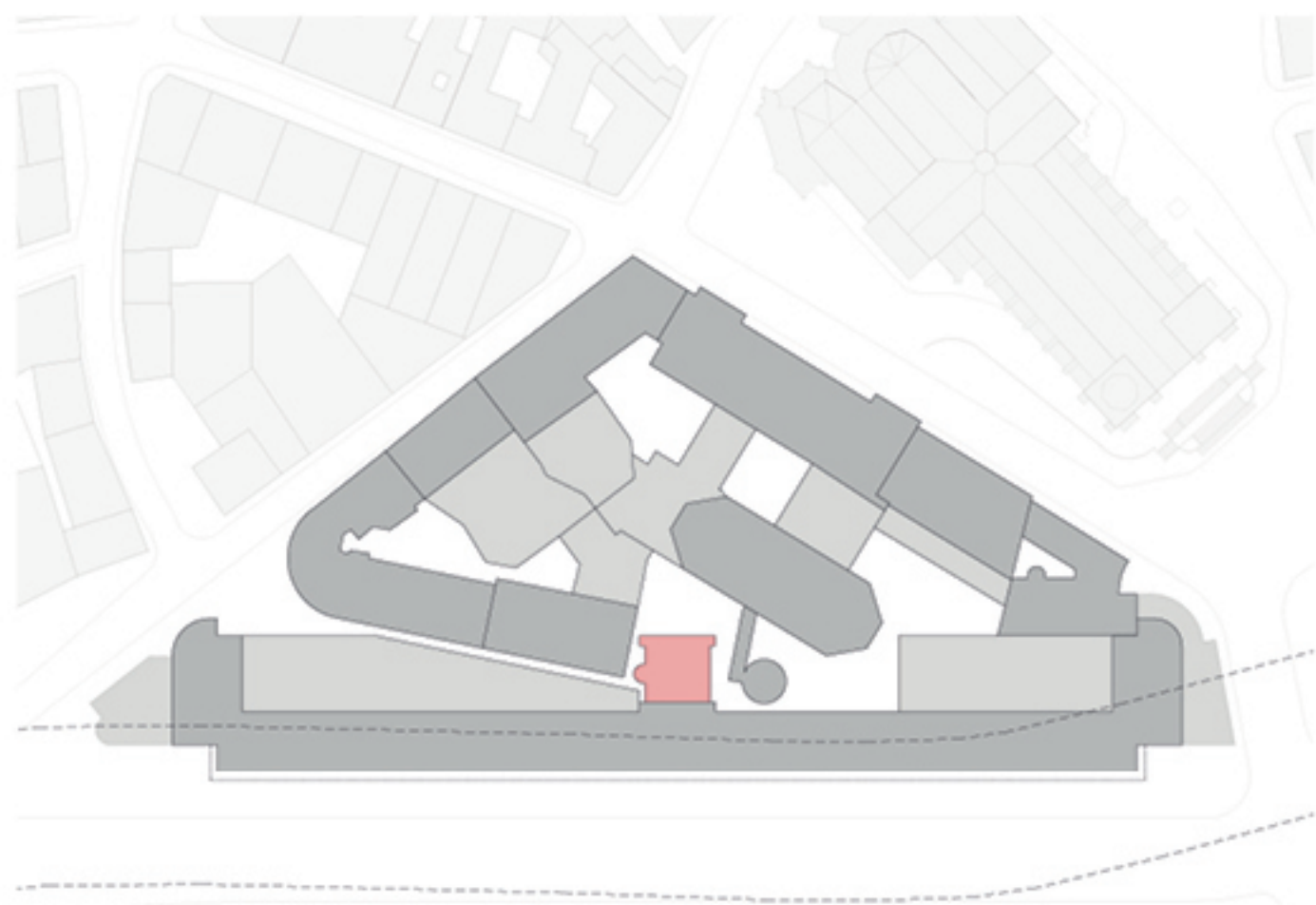
1940



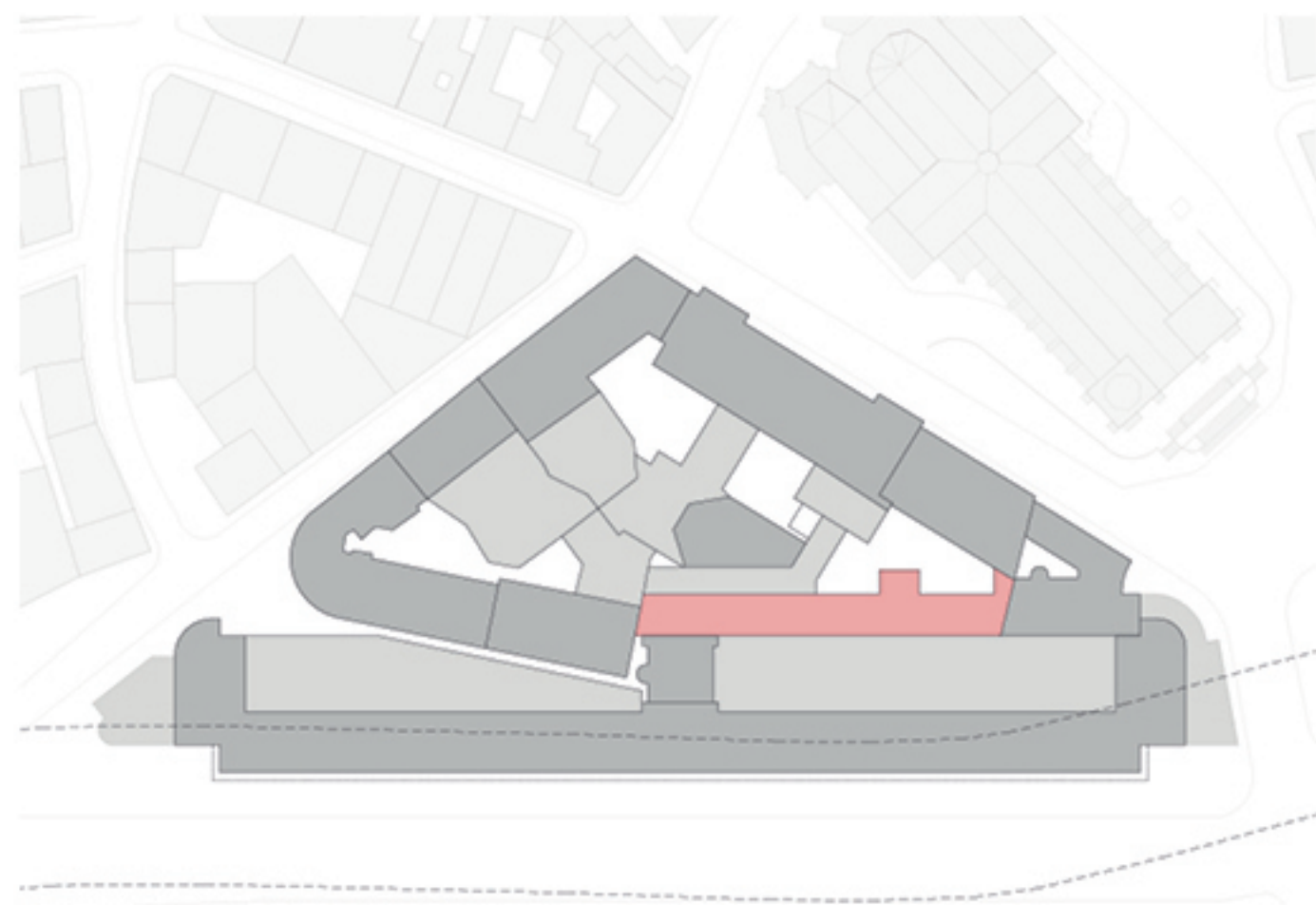
1948



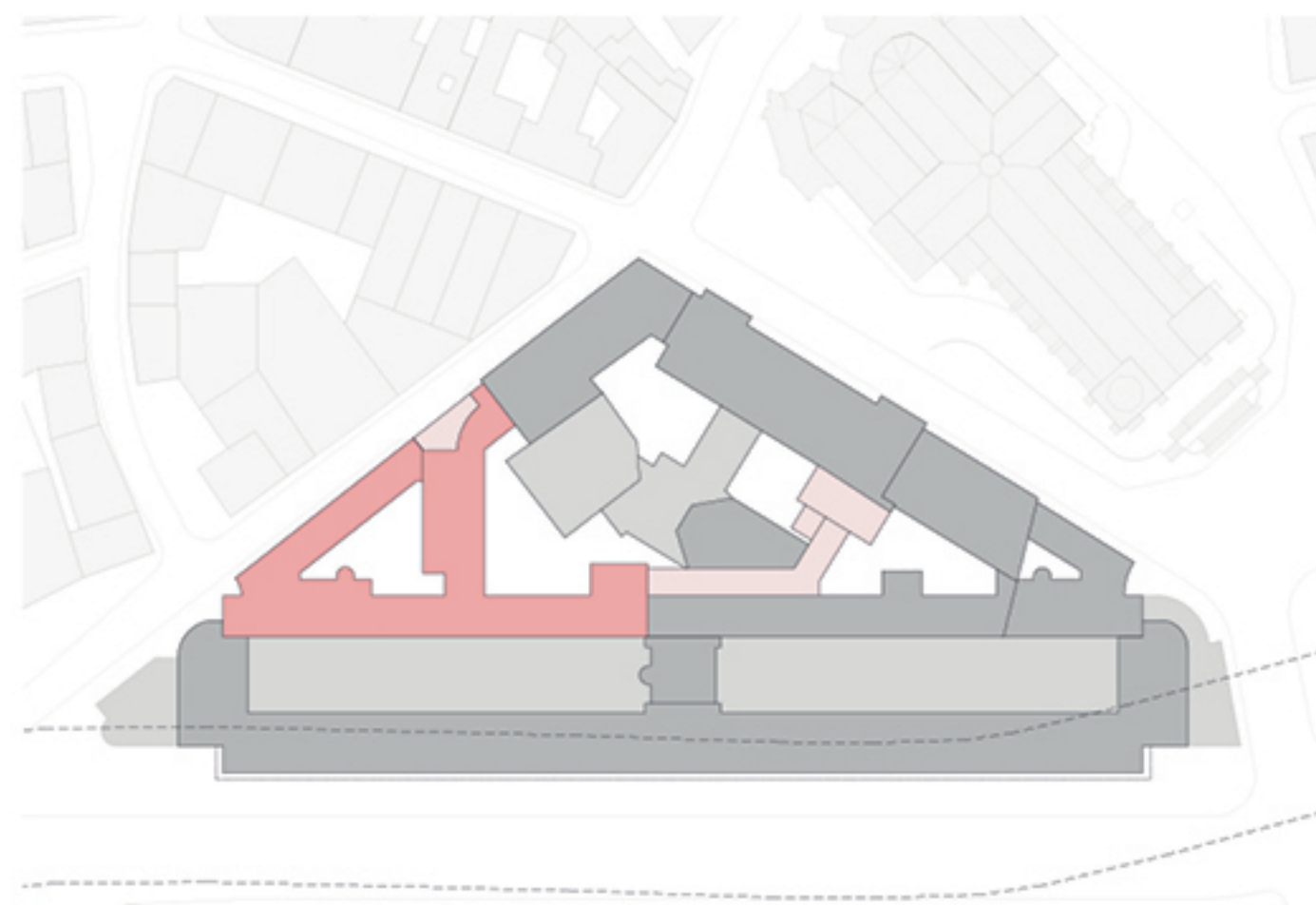
1949



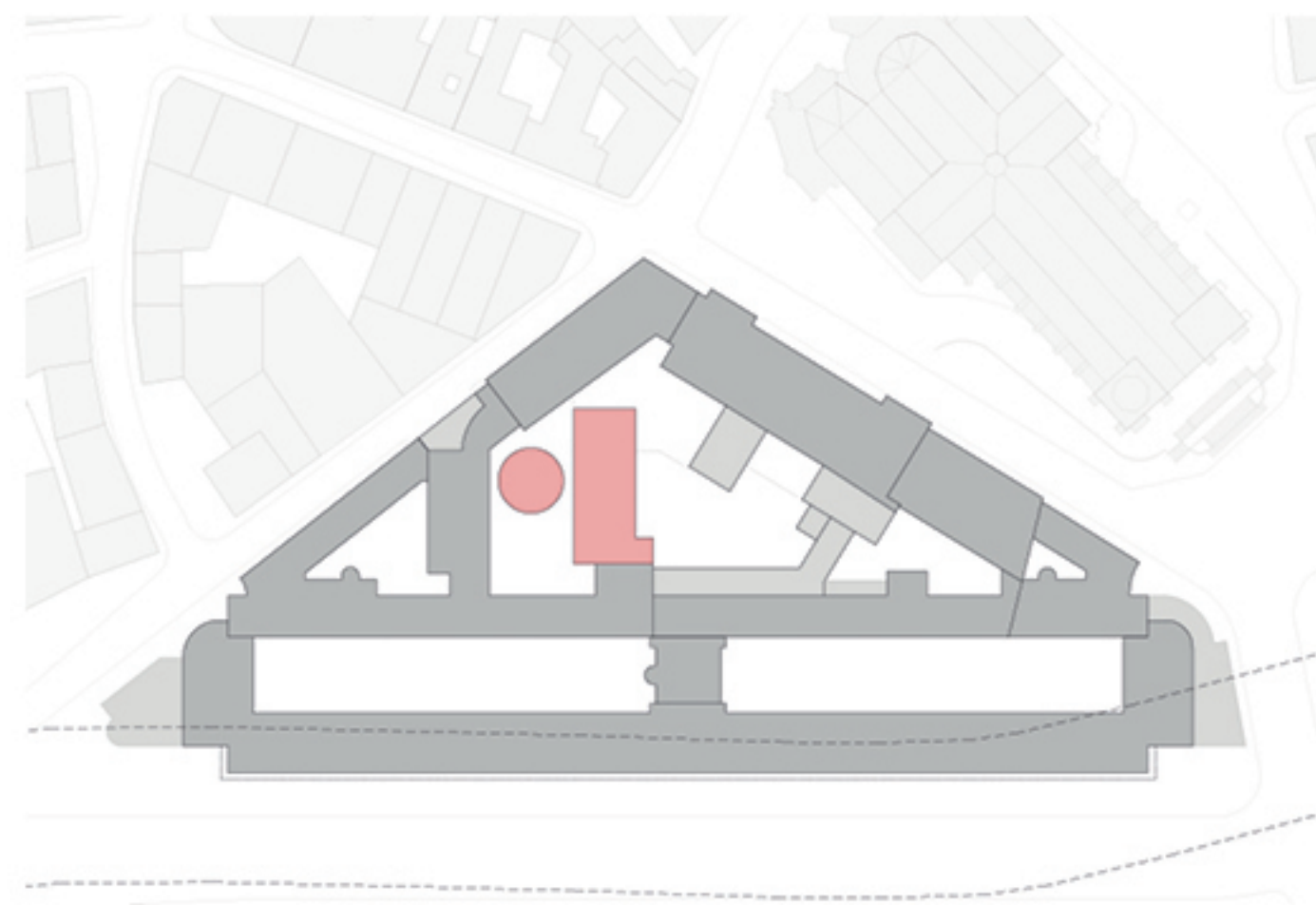
1952



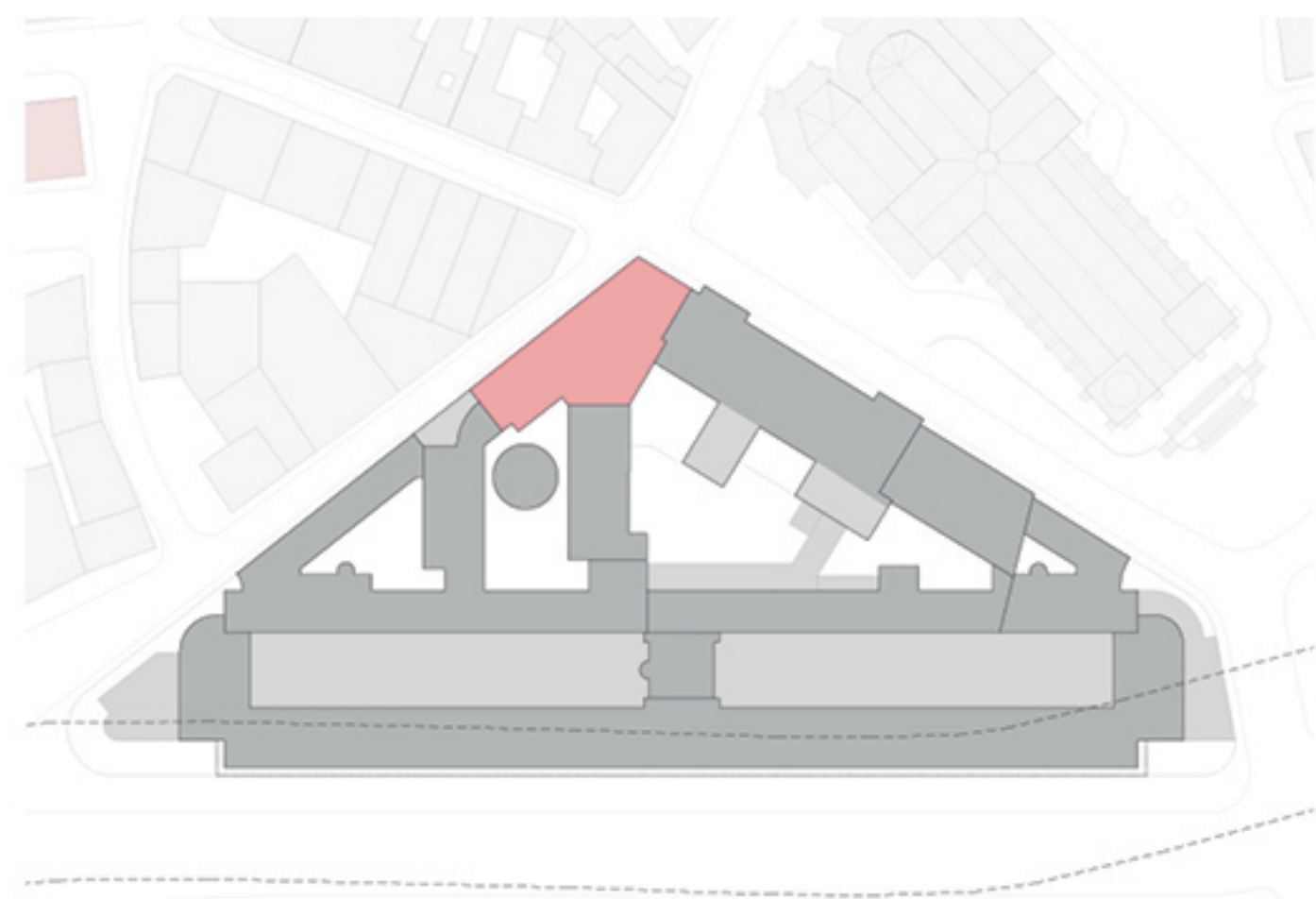
1953



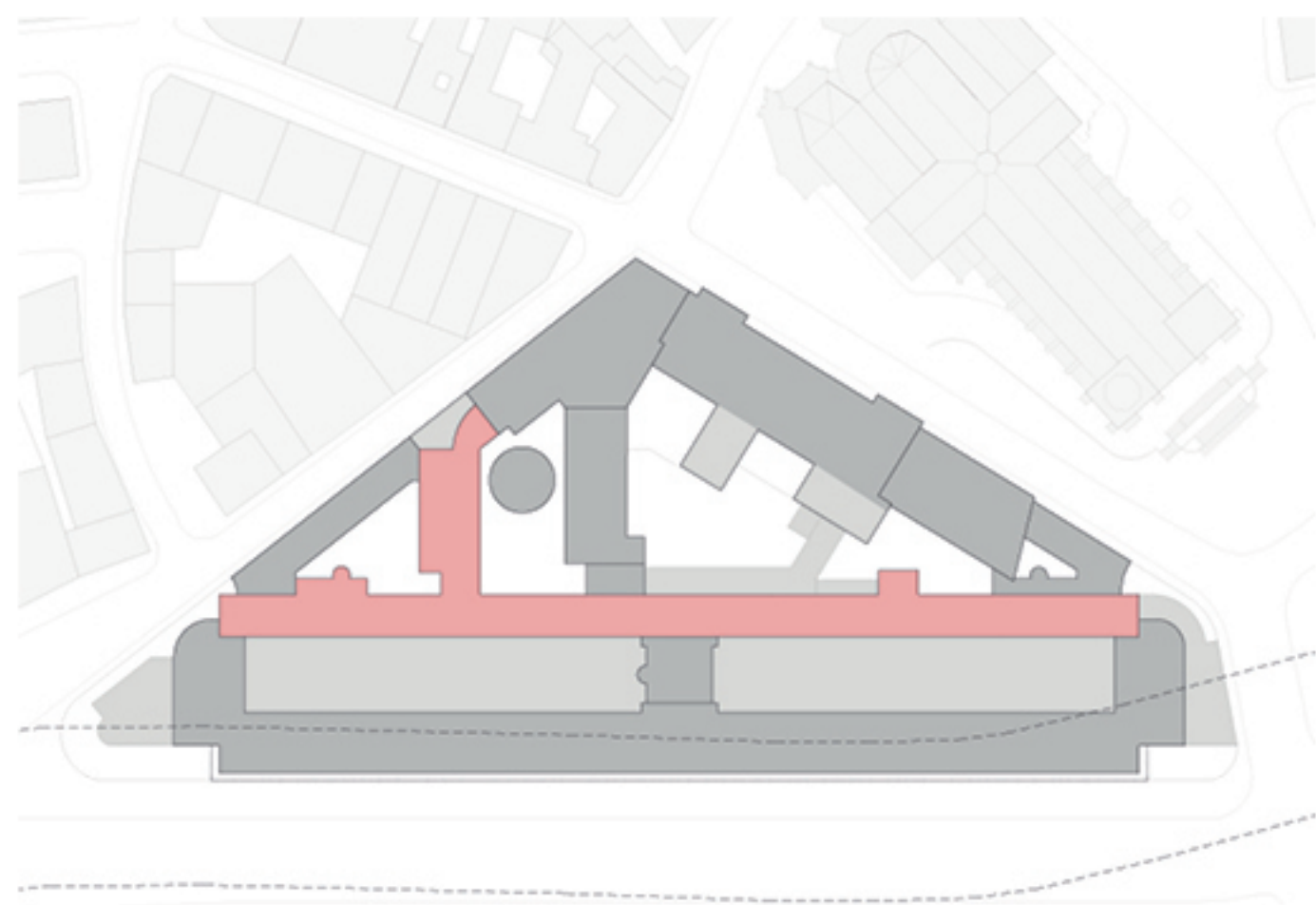
1954



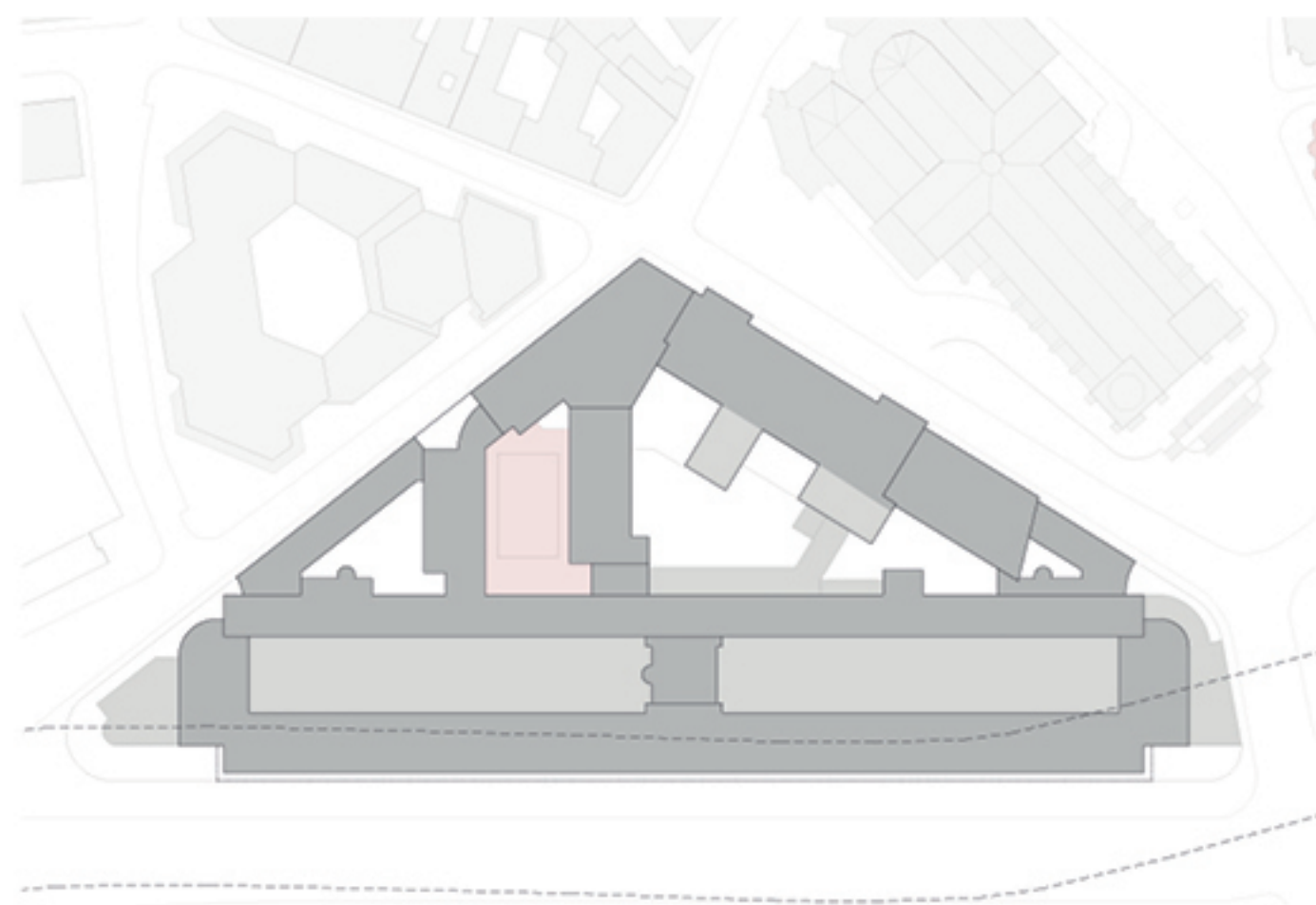
1955



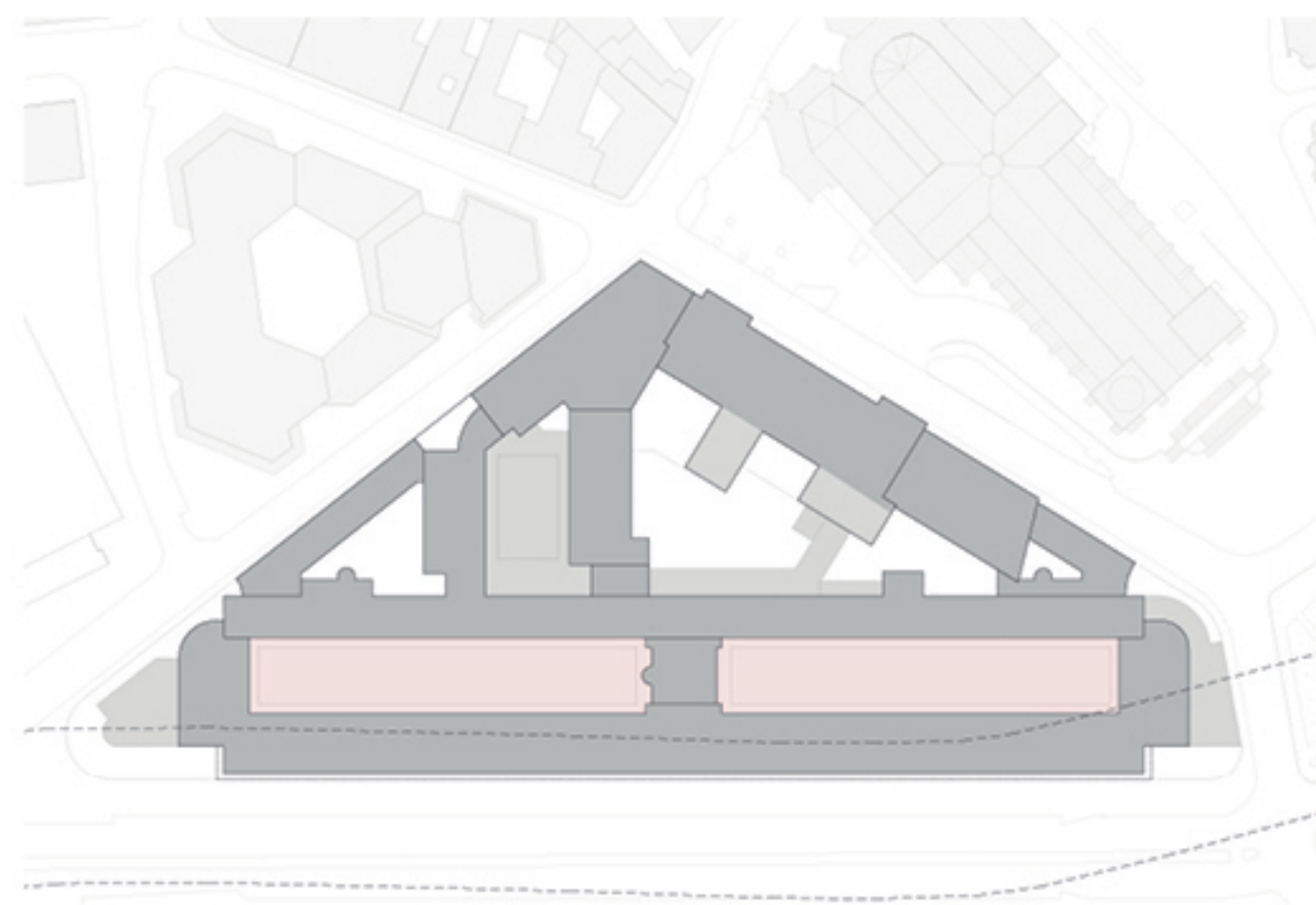
1963



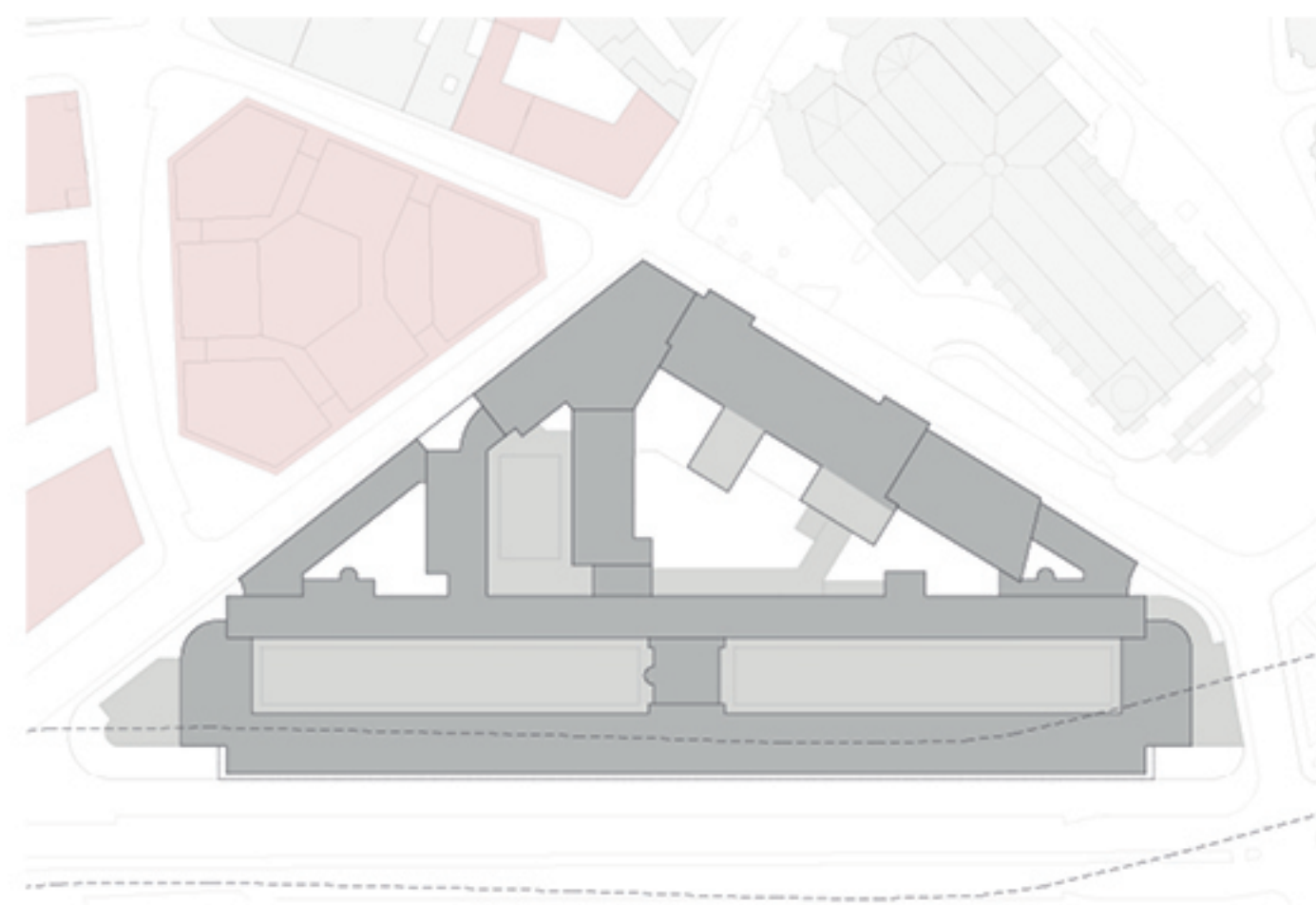
1965



2000



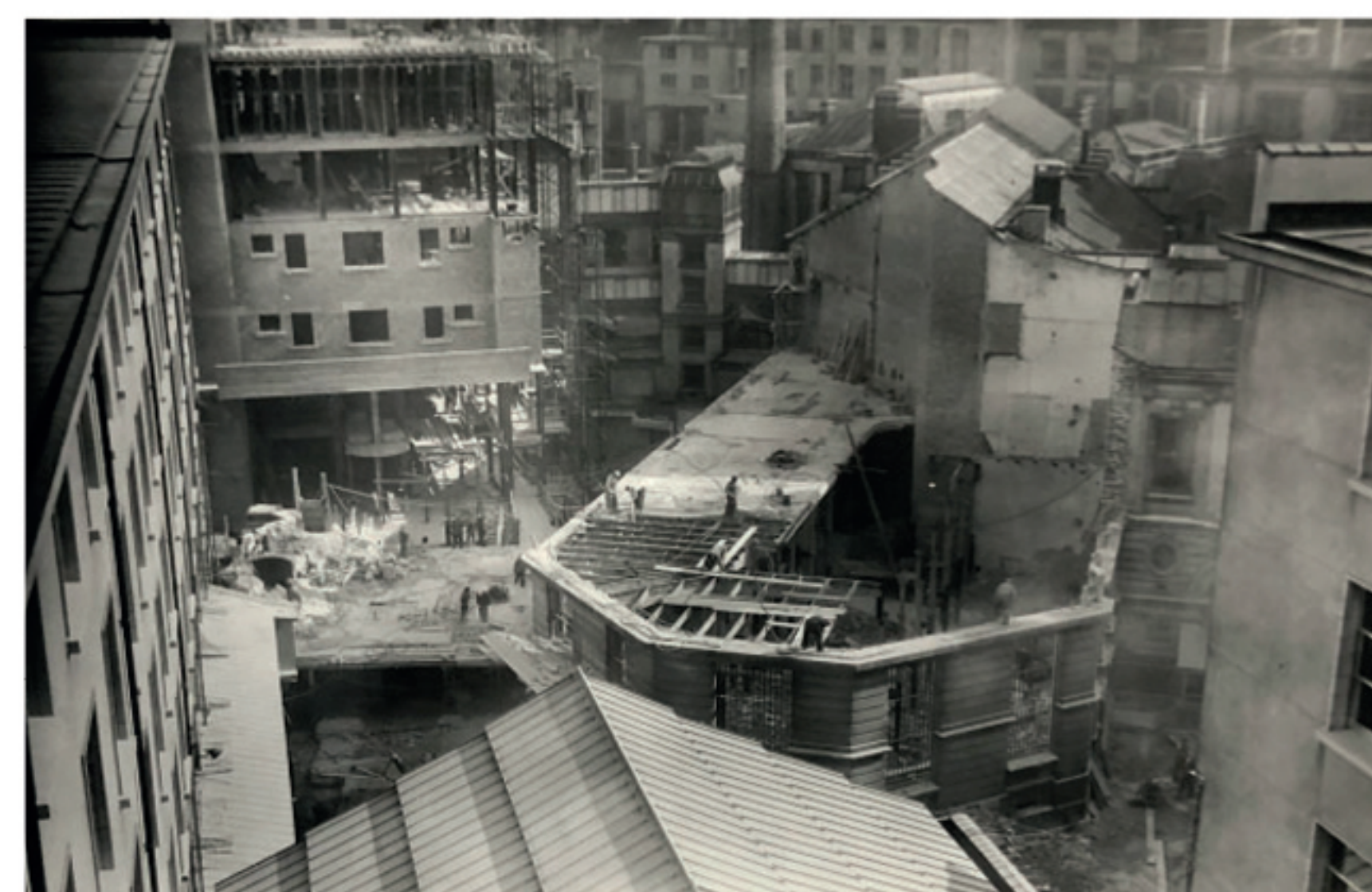
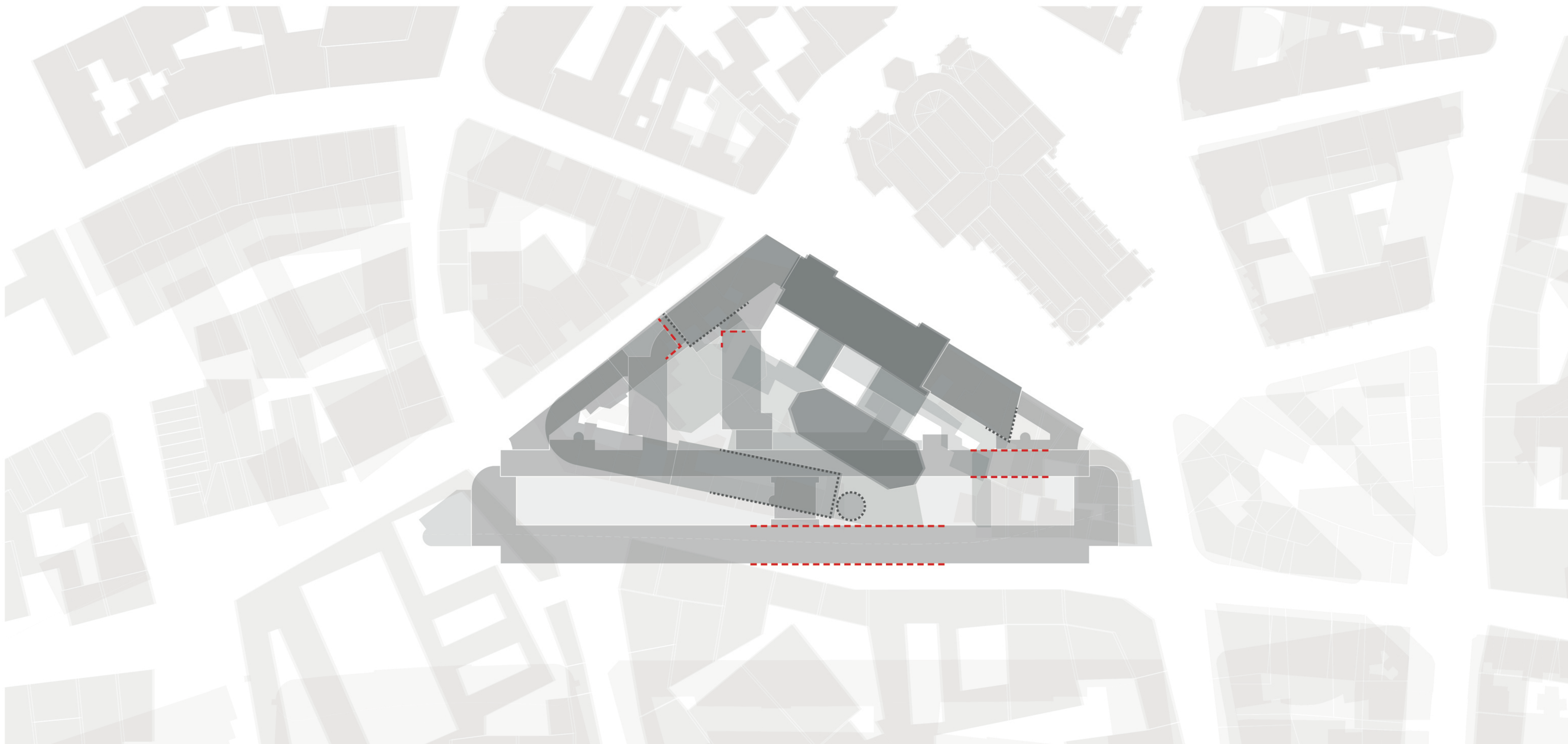
2015



2025

Piecemeal growth

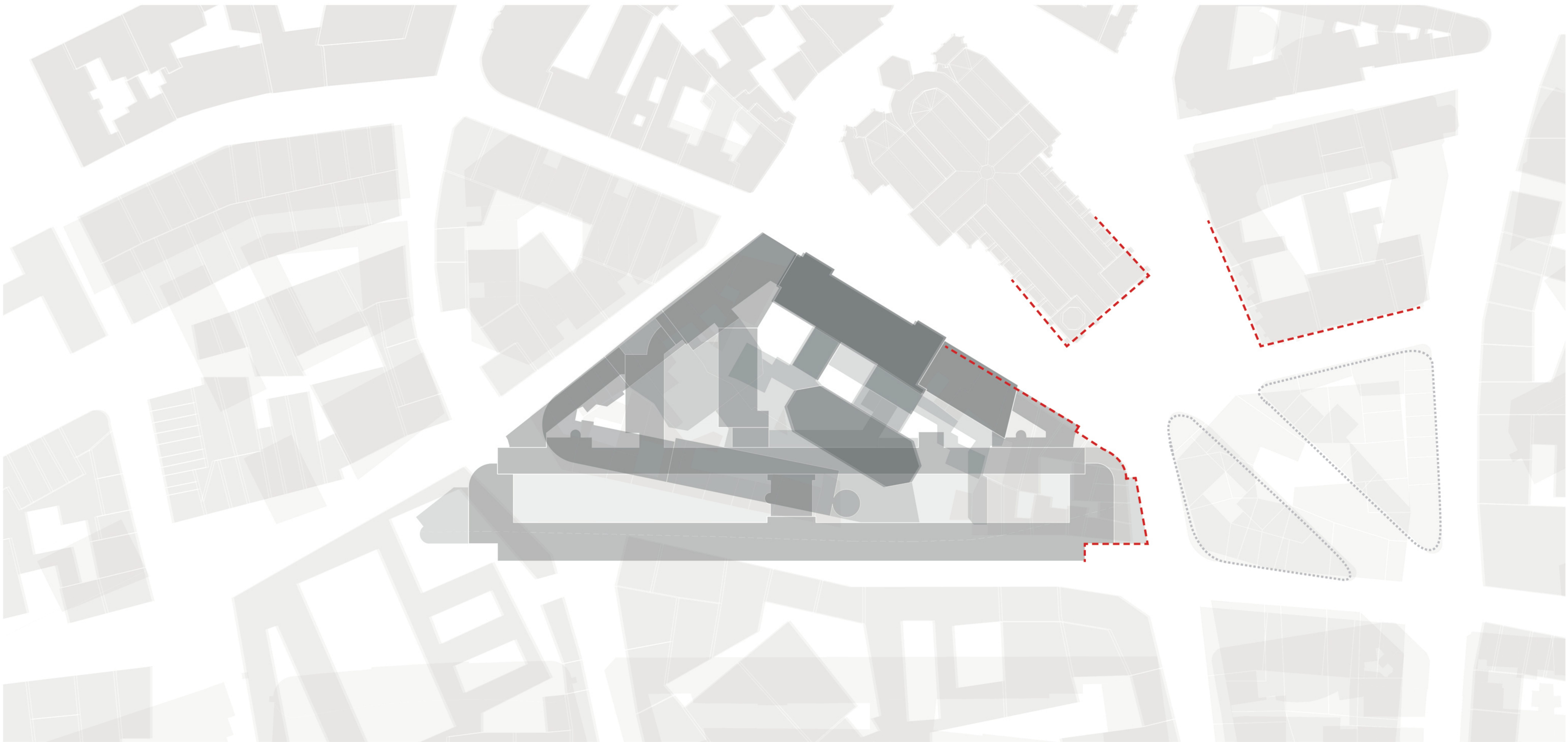




BAEYART TOWER AND NEW BUILDING. SOURCE: NBB

Width of new buildings determined by distance from older structures





1835



1865



1898



ST. GUDULA STREET, 1900s



ST. GUDULA PLAZA, 1950s



ST. GUDULA SQUARE PARK, 2000s

Relationship with St. Gudula Plaza axis





Monumental facades





Three service courts

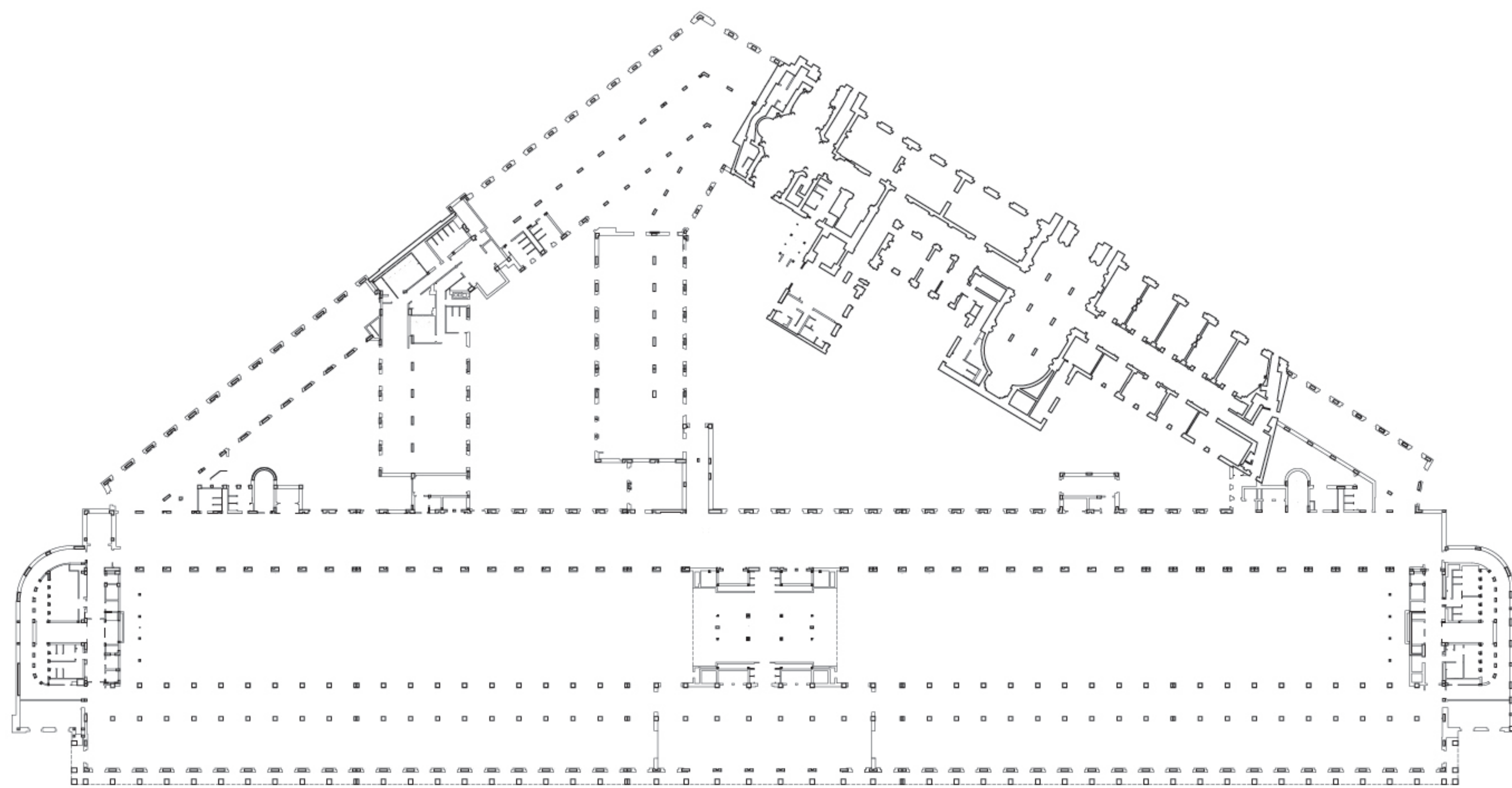
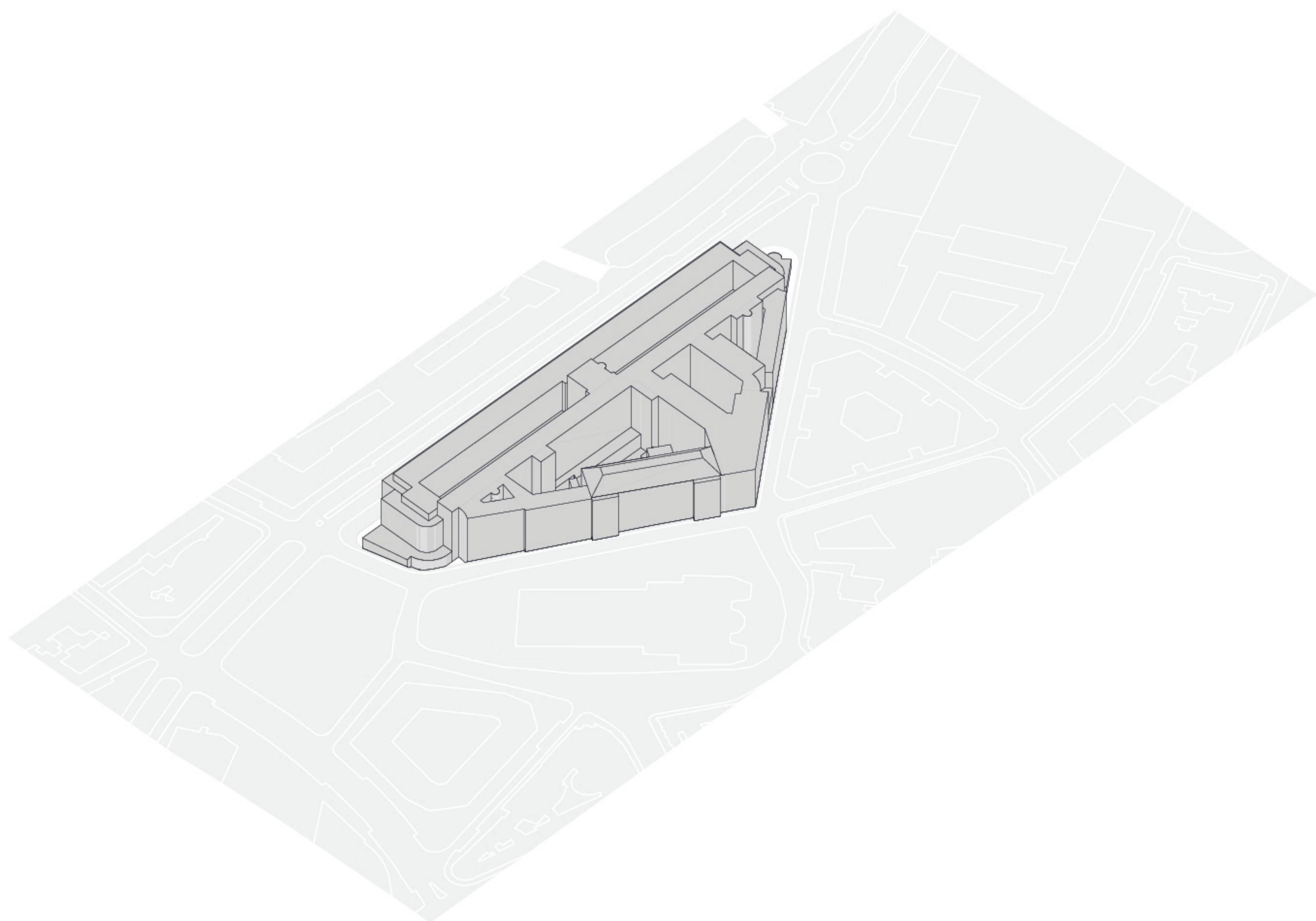




NBB, 1970s. SOURCE: NBB

Closed facade to St. Gudula plaza

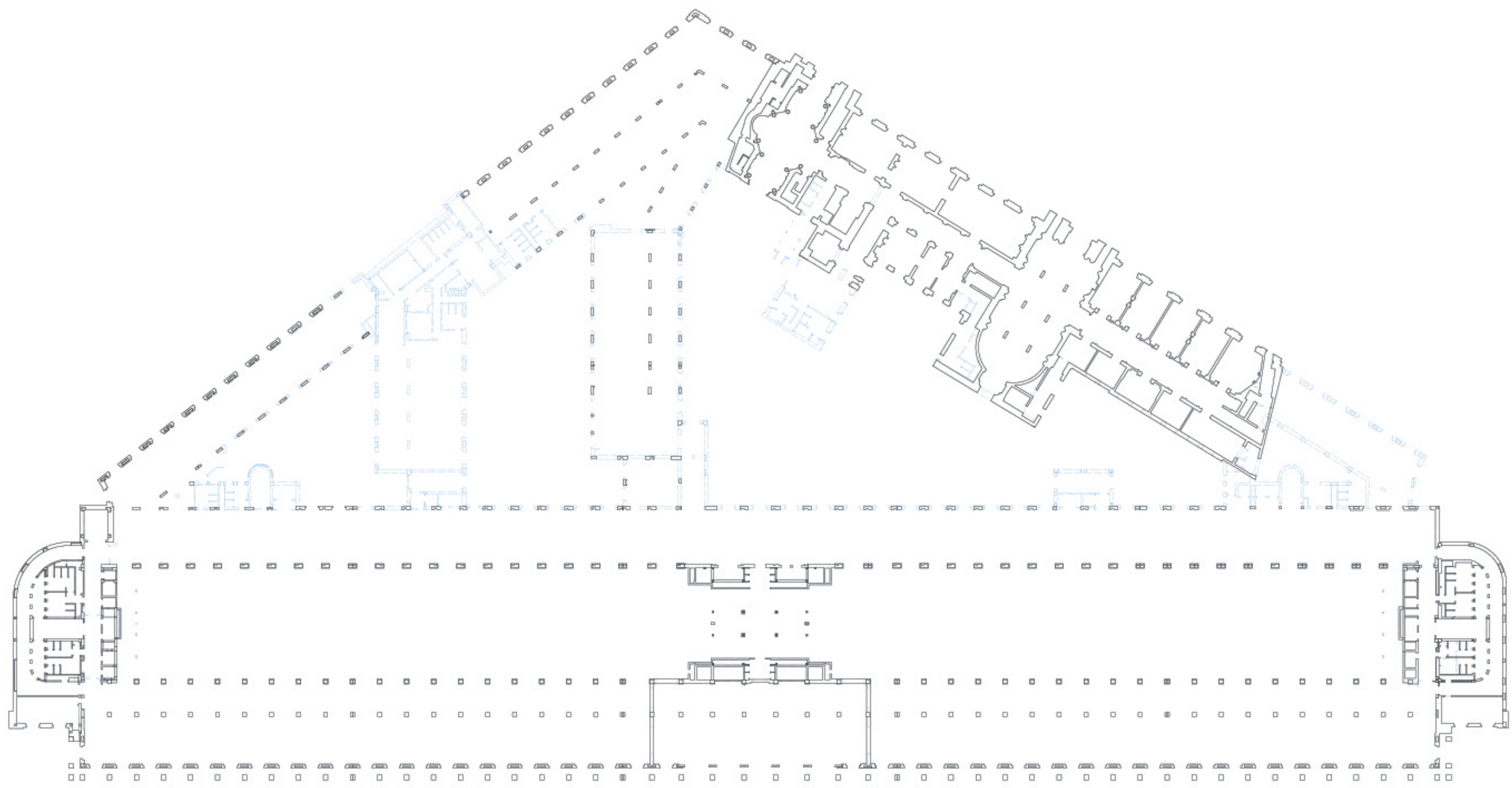
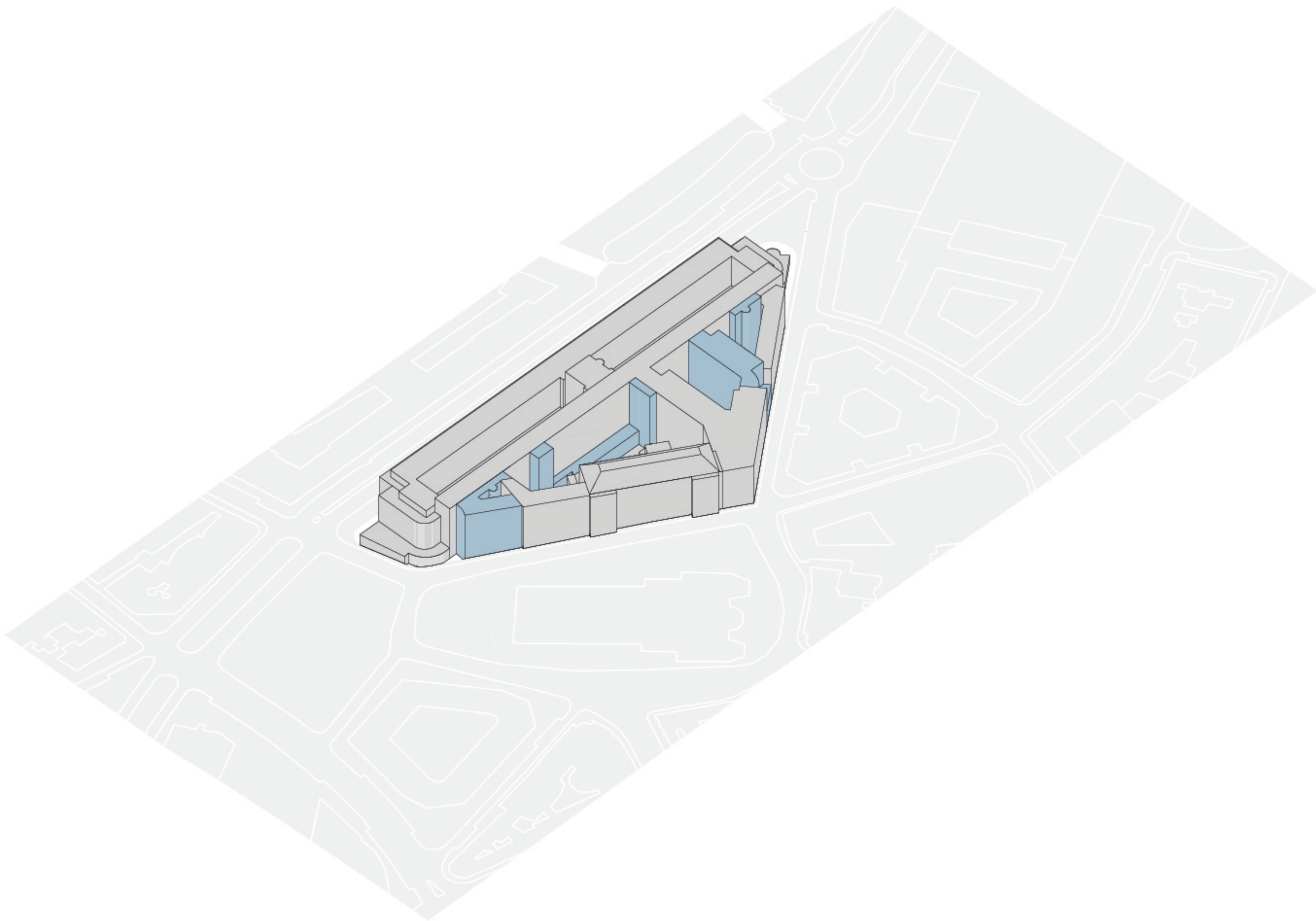




UPPER GROUND FLOOR

Existing building



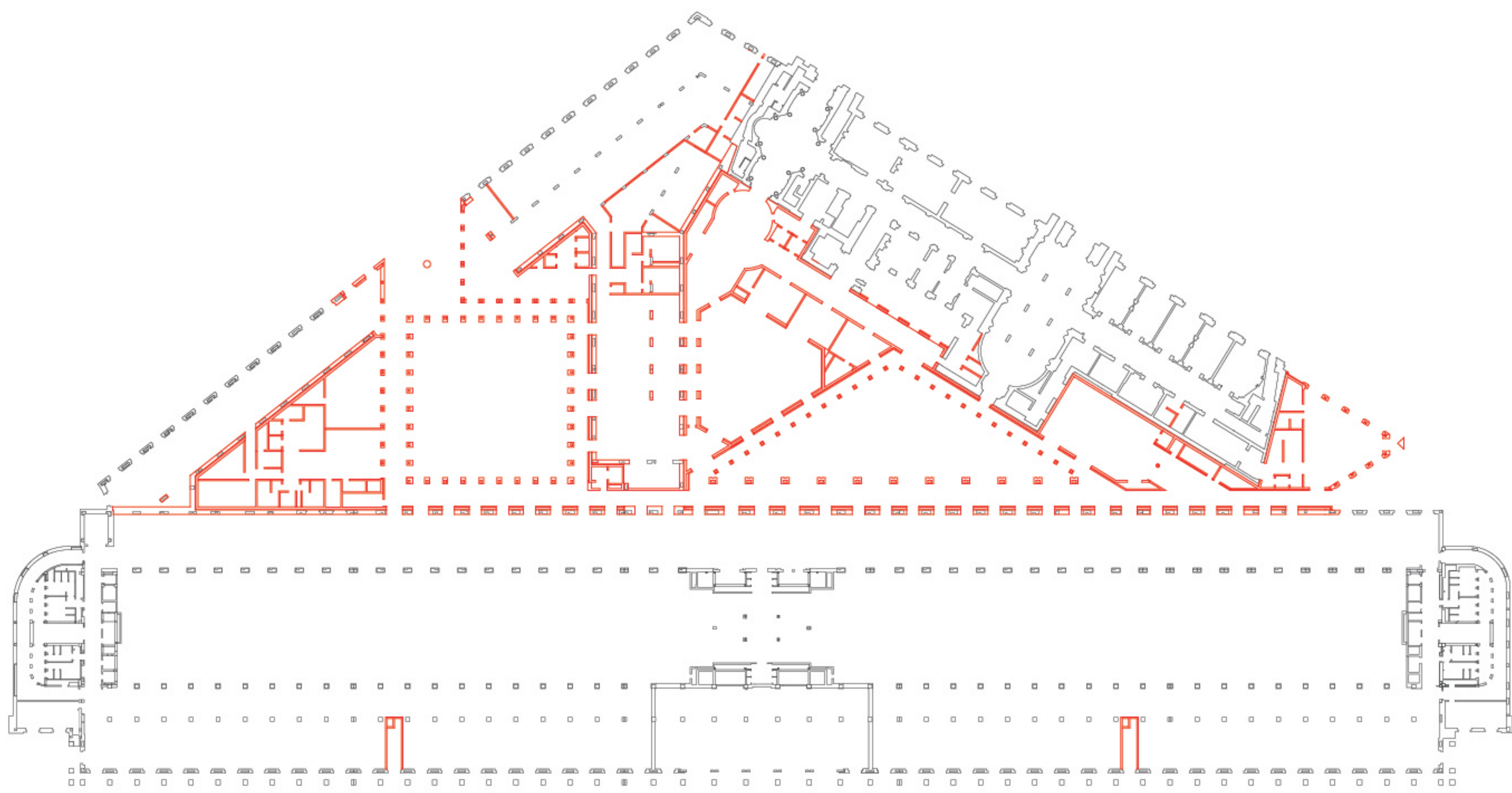
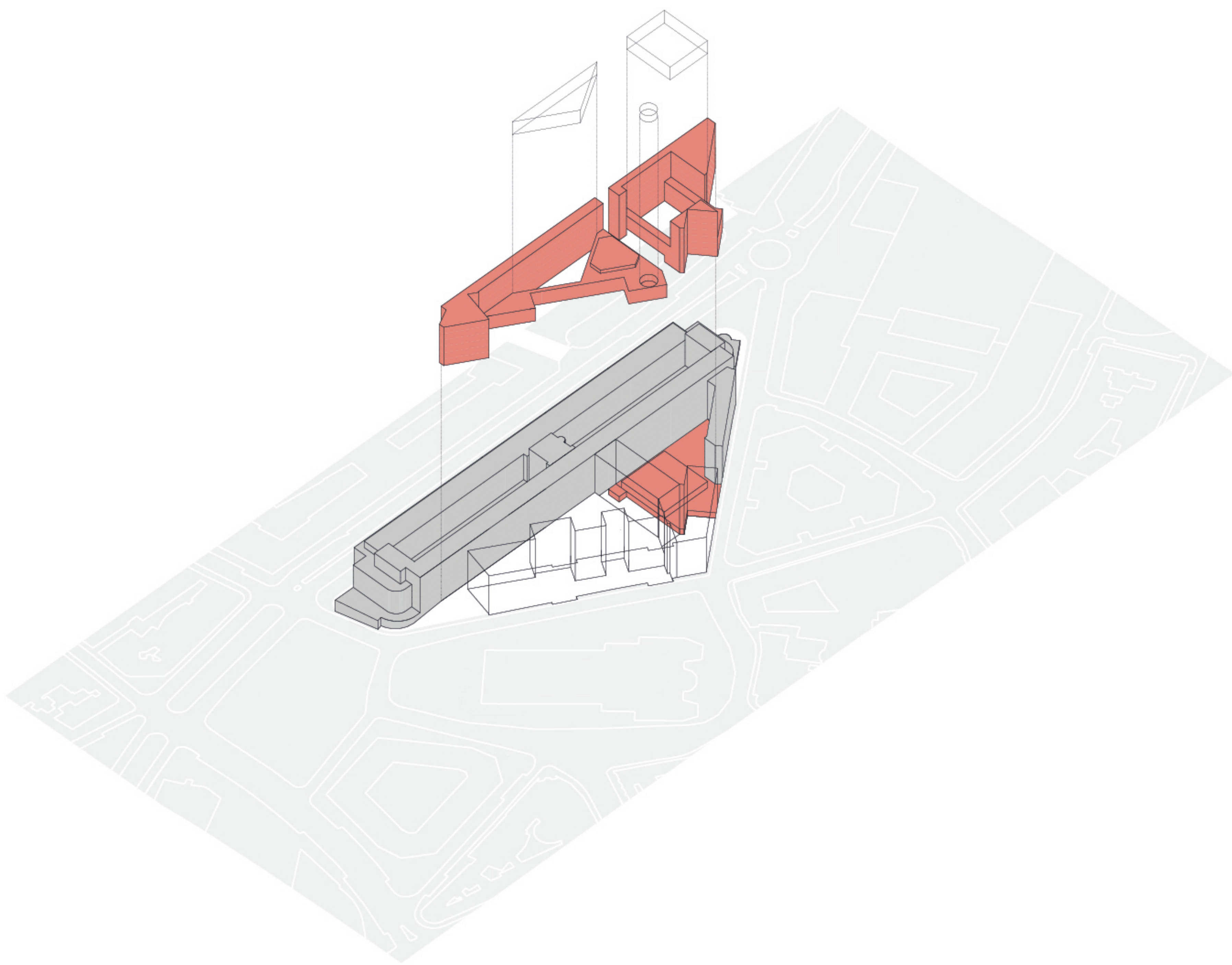


UPPER GROUND FLOOR

- RETAINED
- REMOVED

Inadequate parts of the building removed



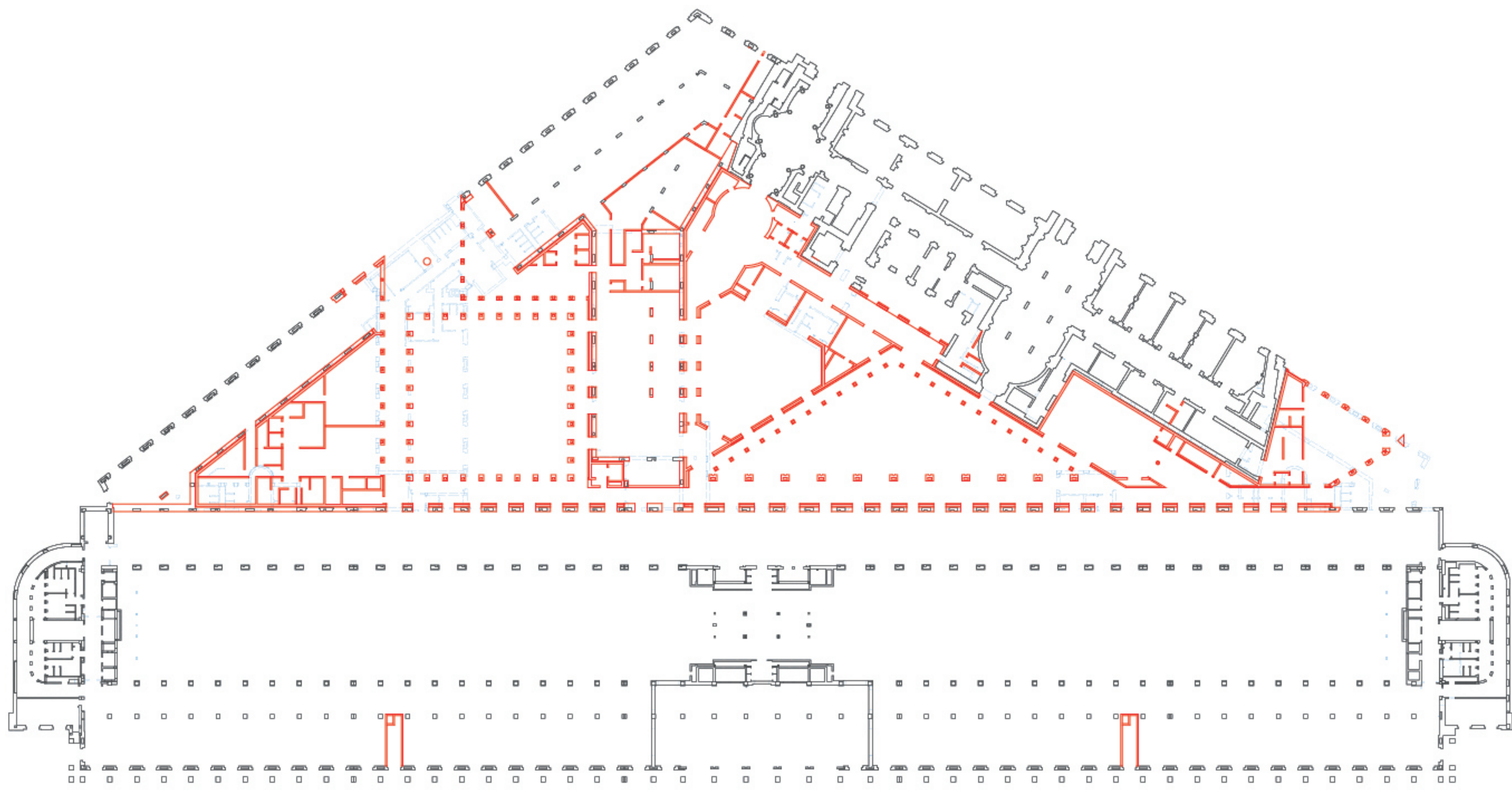
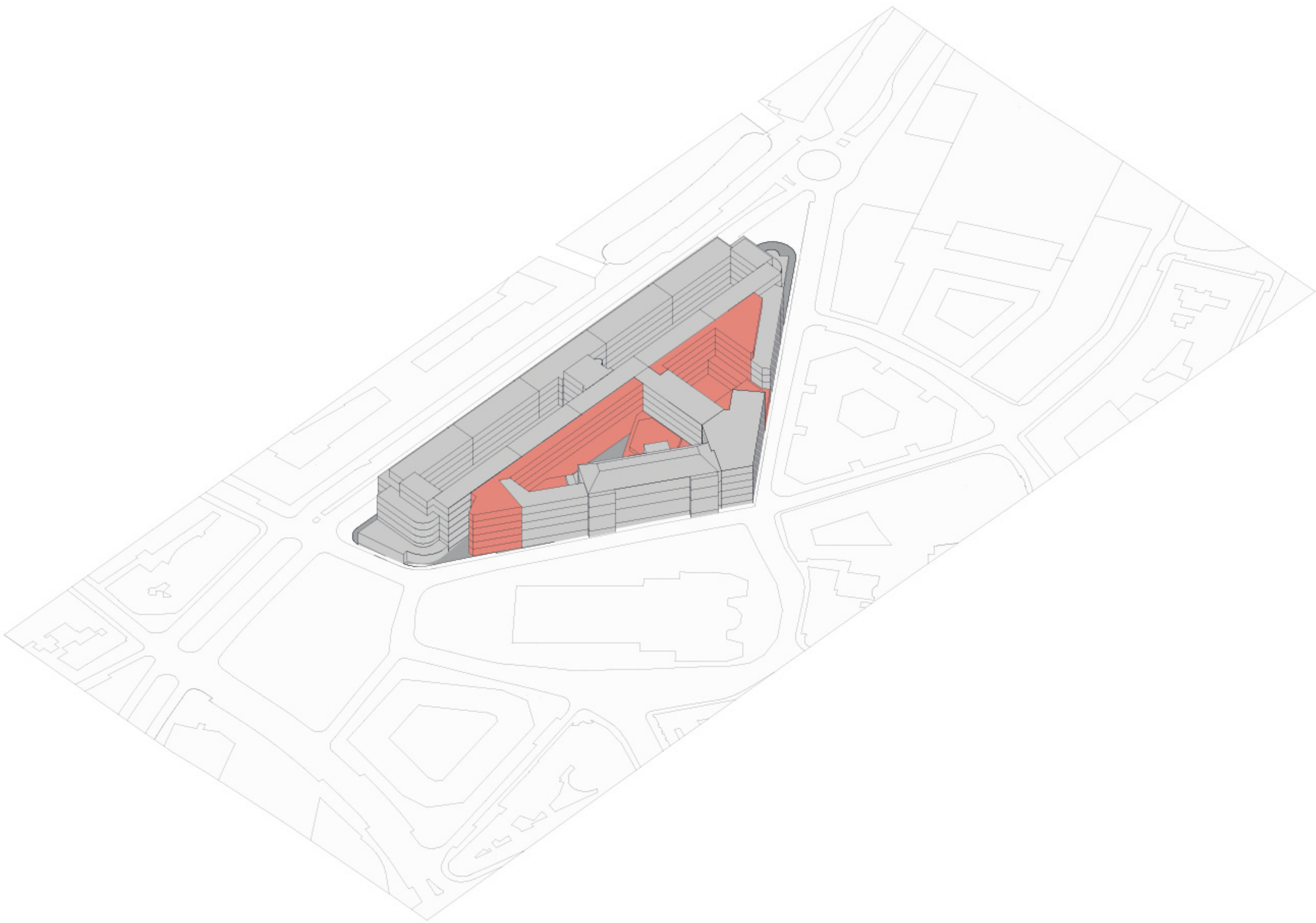


UPPER GROUND FLOOR

- RETAINED
- ADDITION

New volumes: vessel in a vessel



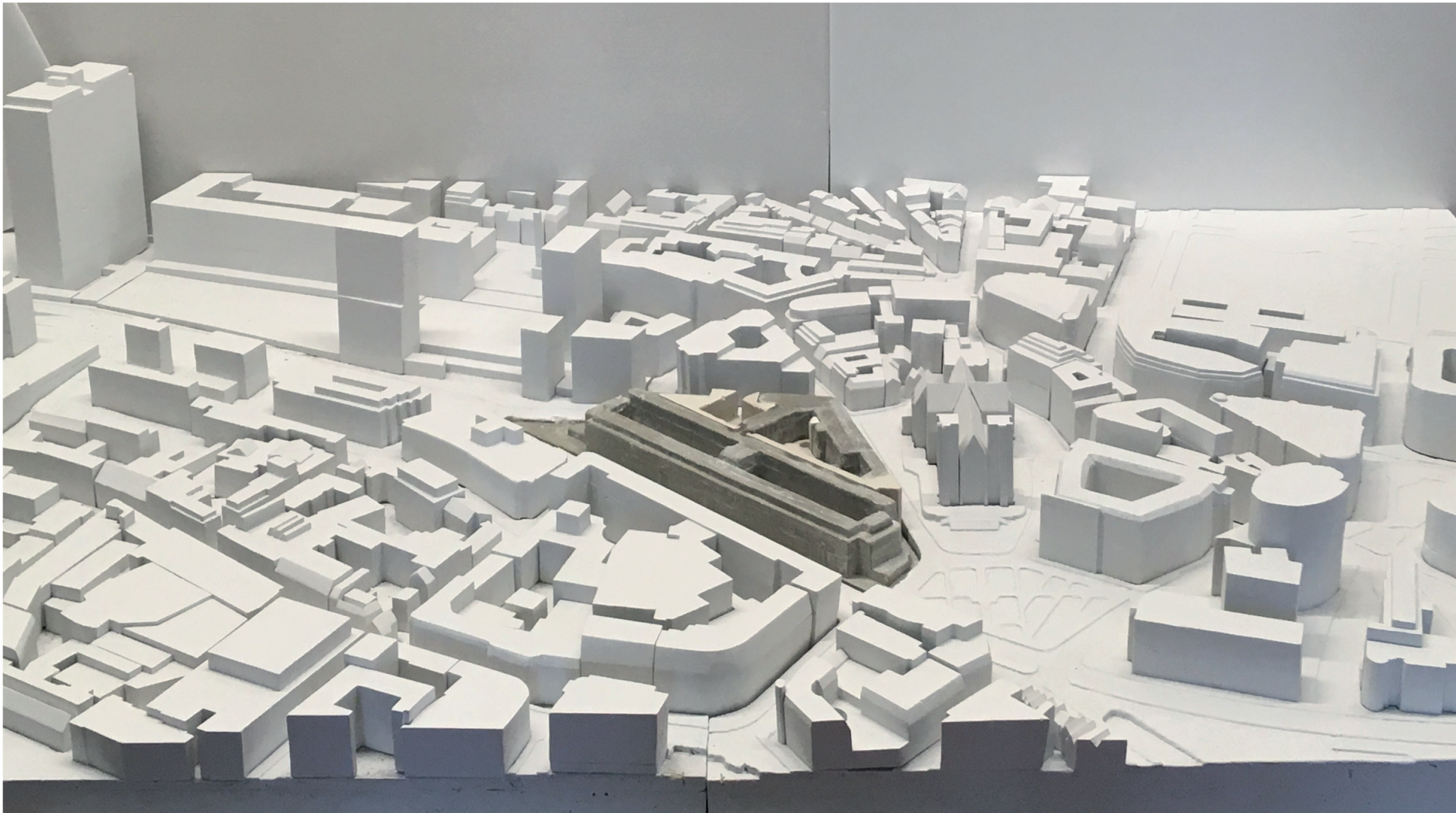


UPPER GROUND FLOOR

- RETAINED
- ADDITION

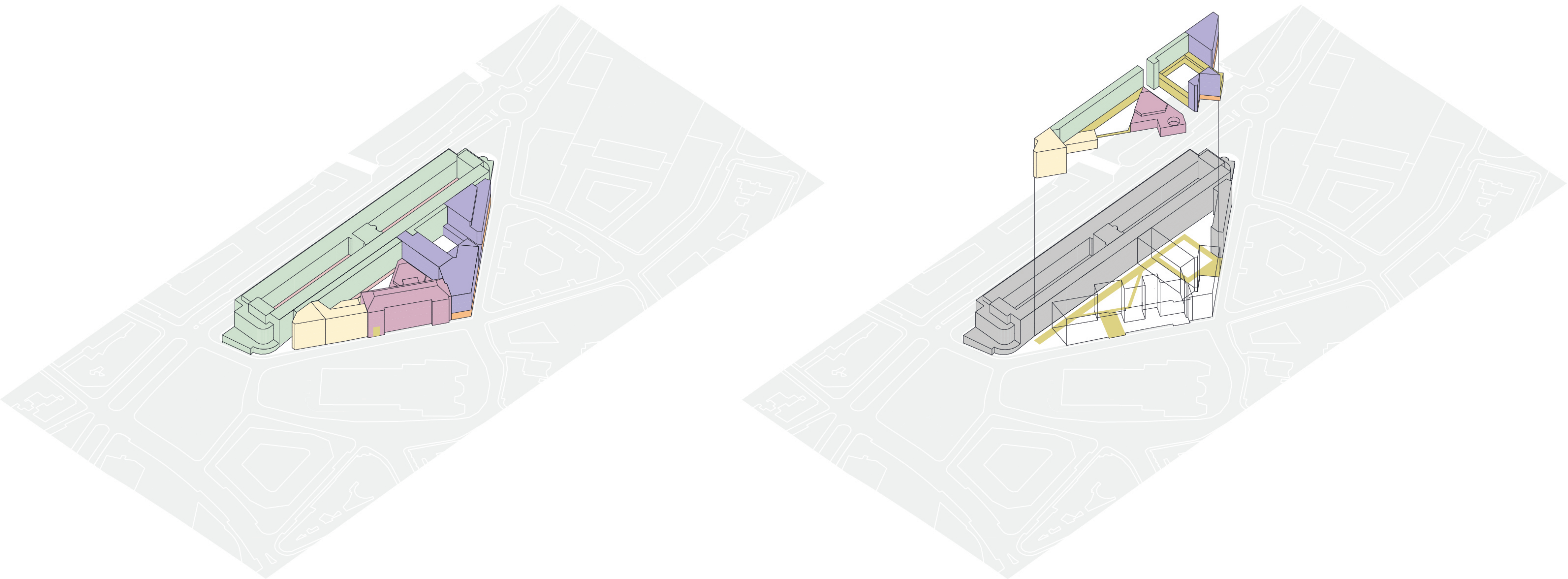
New facades of varying depth





Massing in context

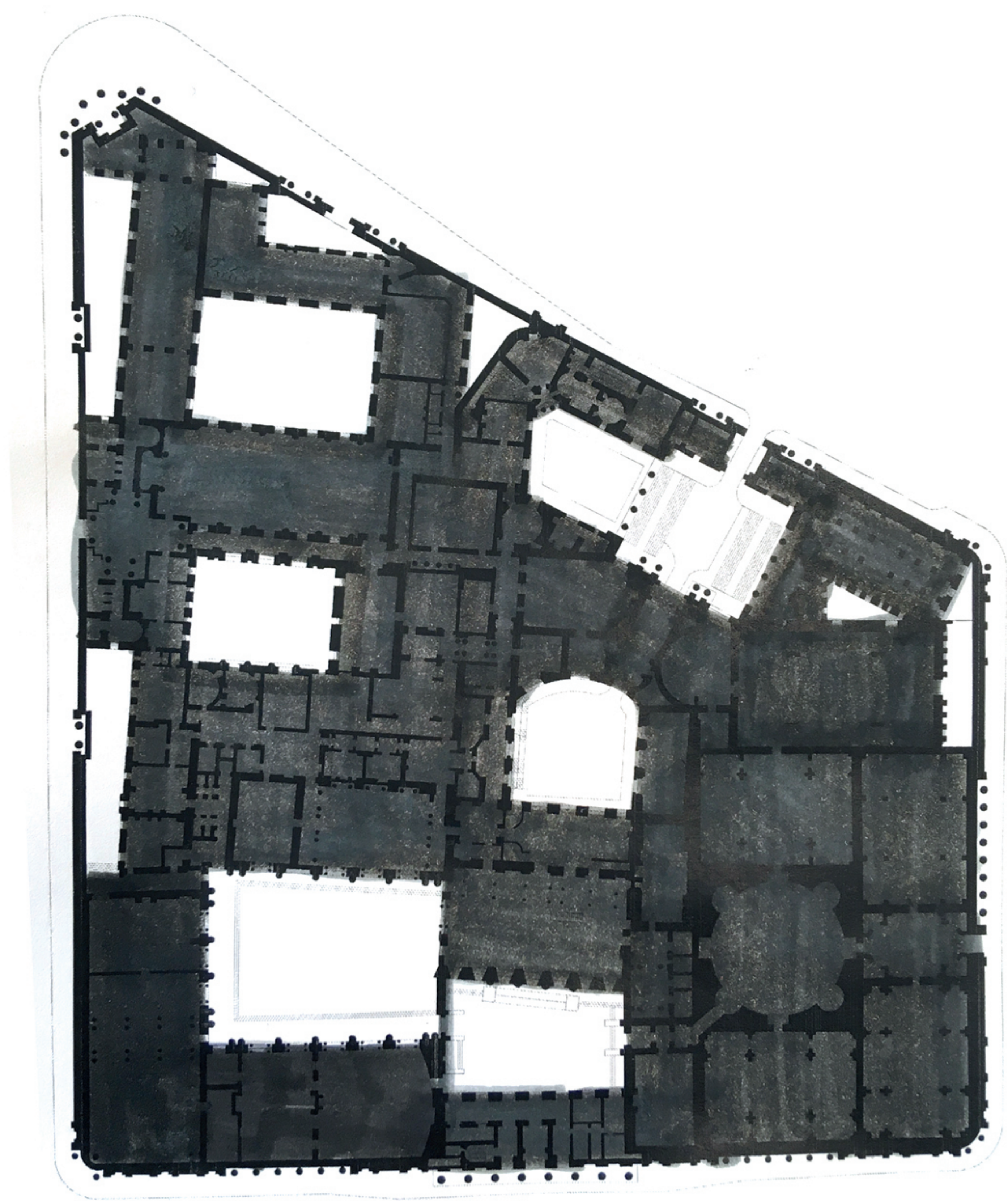




- BANK OFFICES
- PUBLIC USE
- INSTITUTIONAL USE
- HOSPITALITY
- RENTAL OFFICES
- PUBLIC CIRCULATION ROUTE

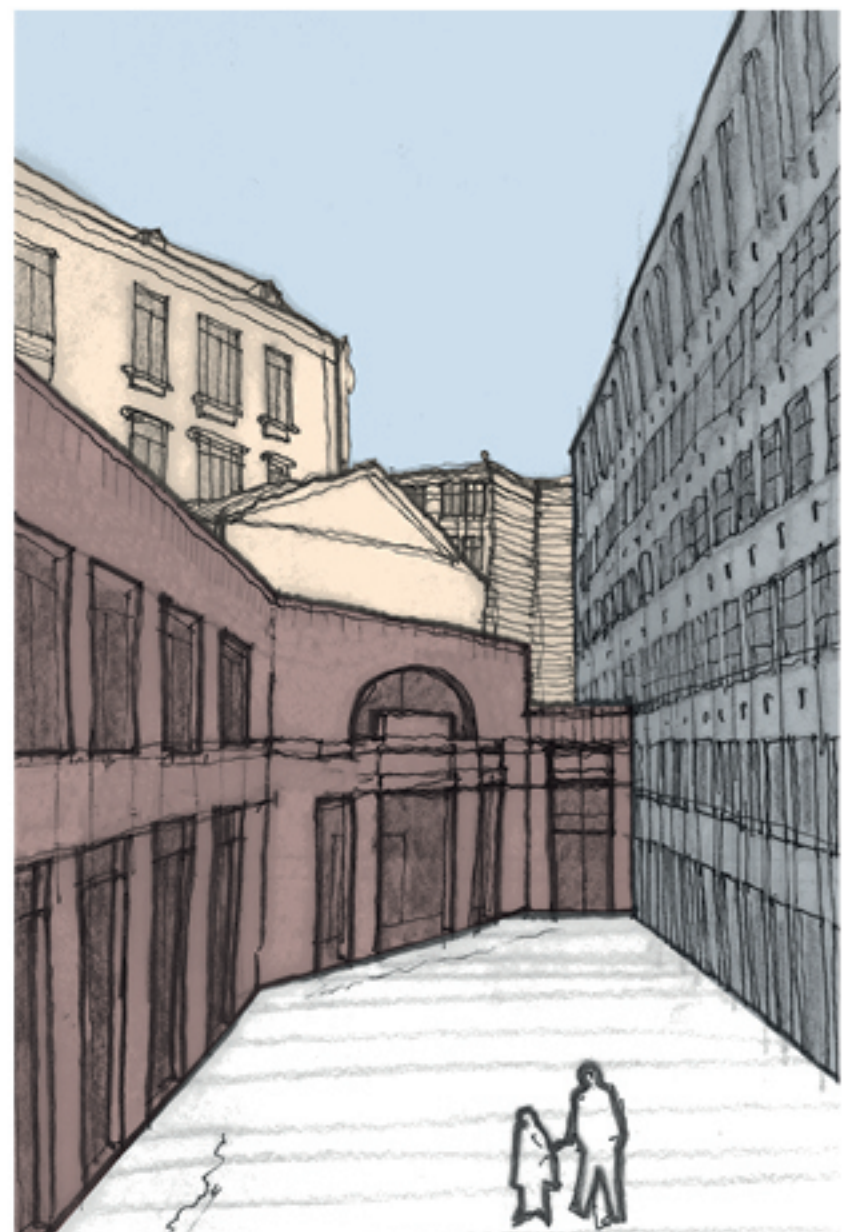
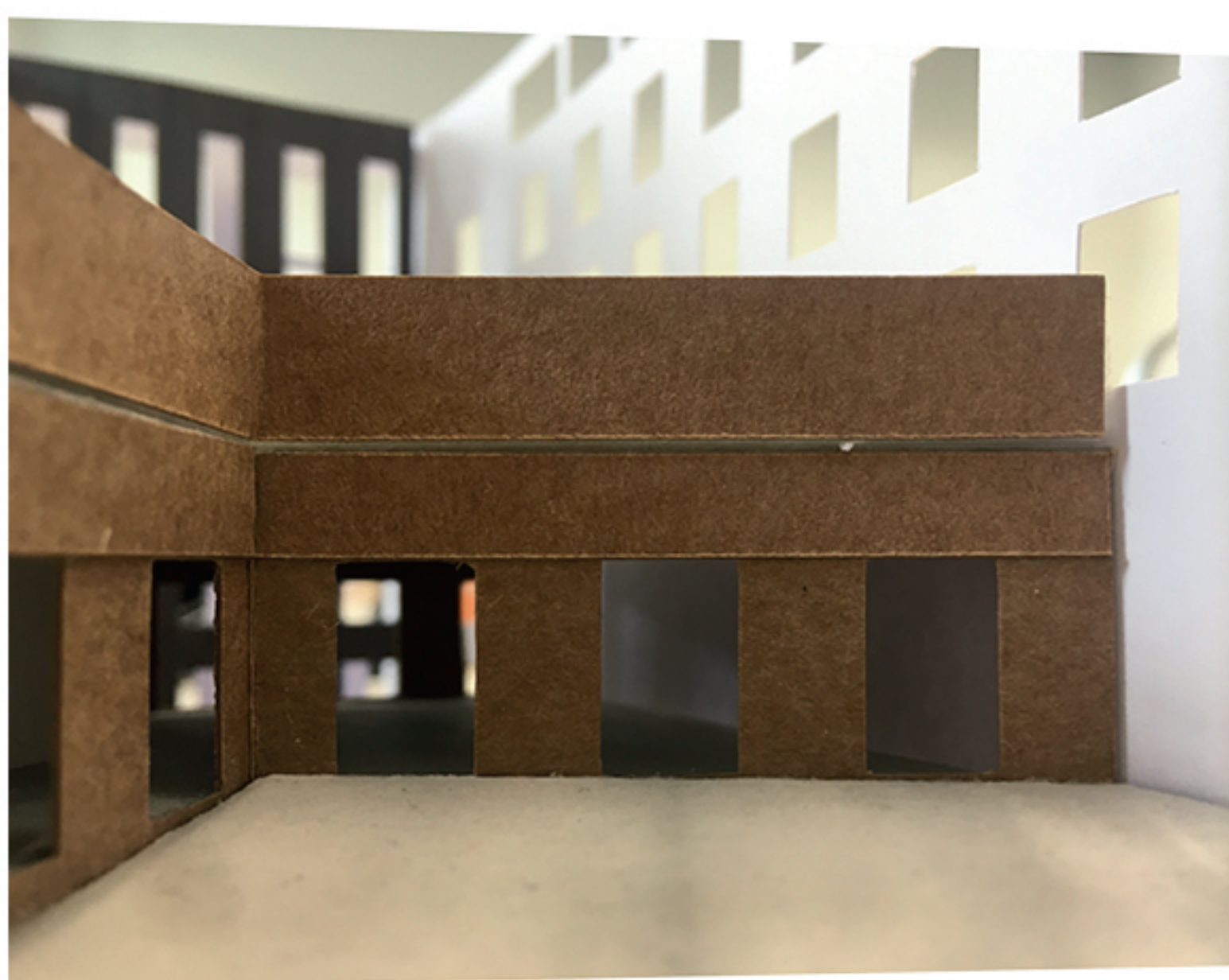
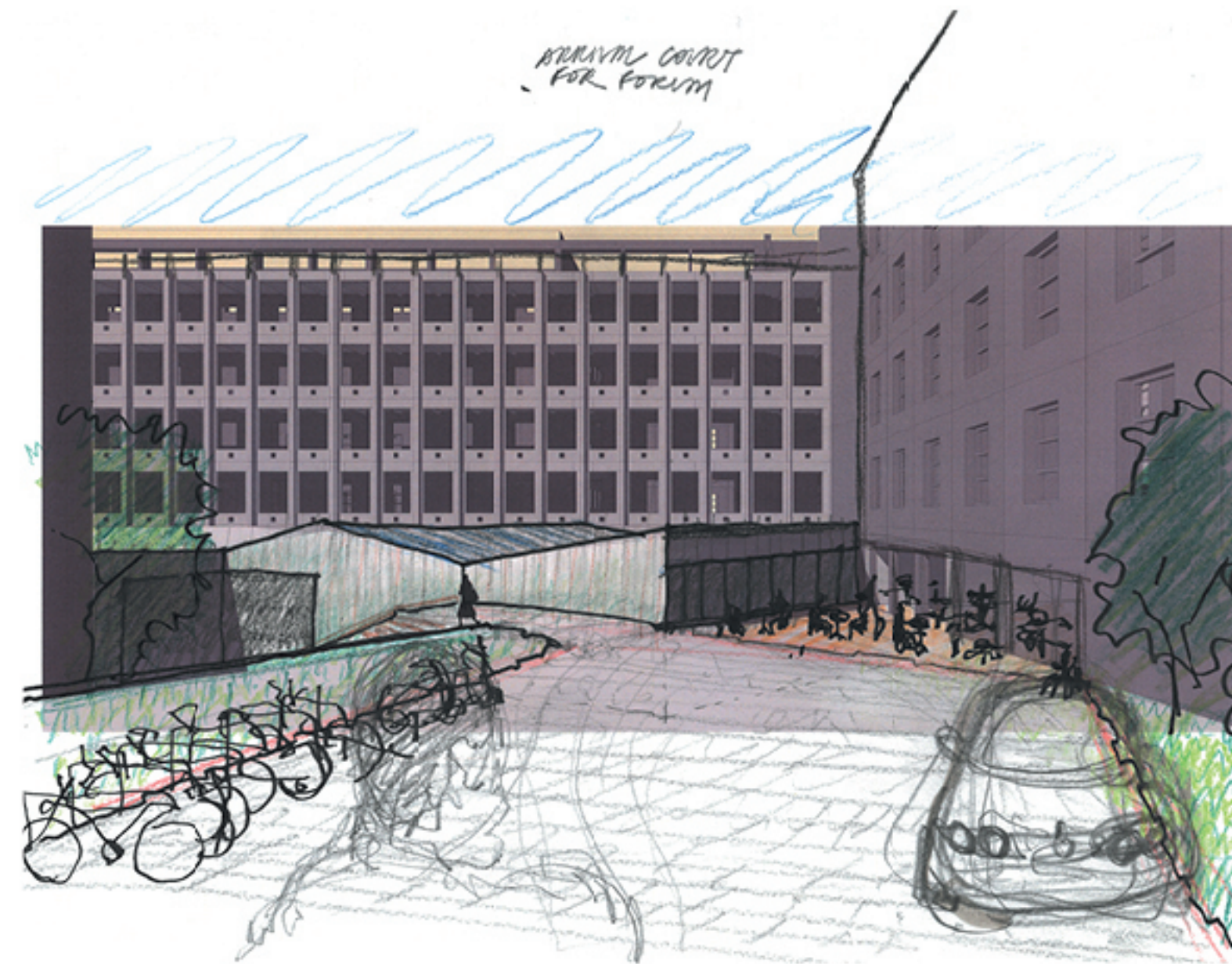
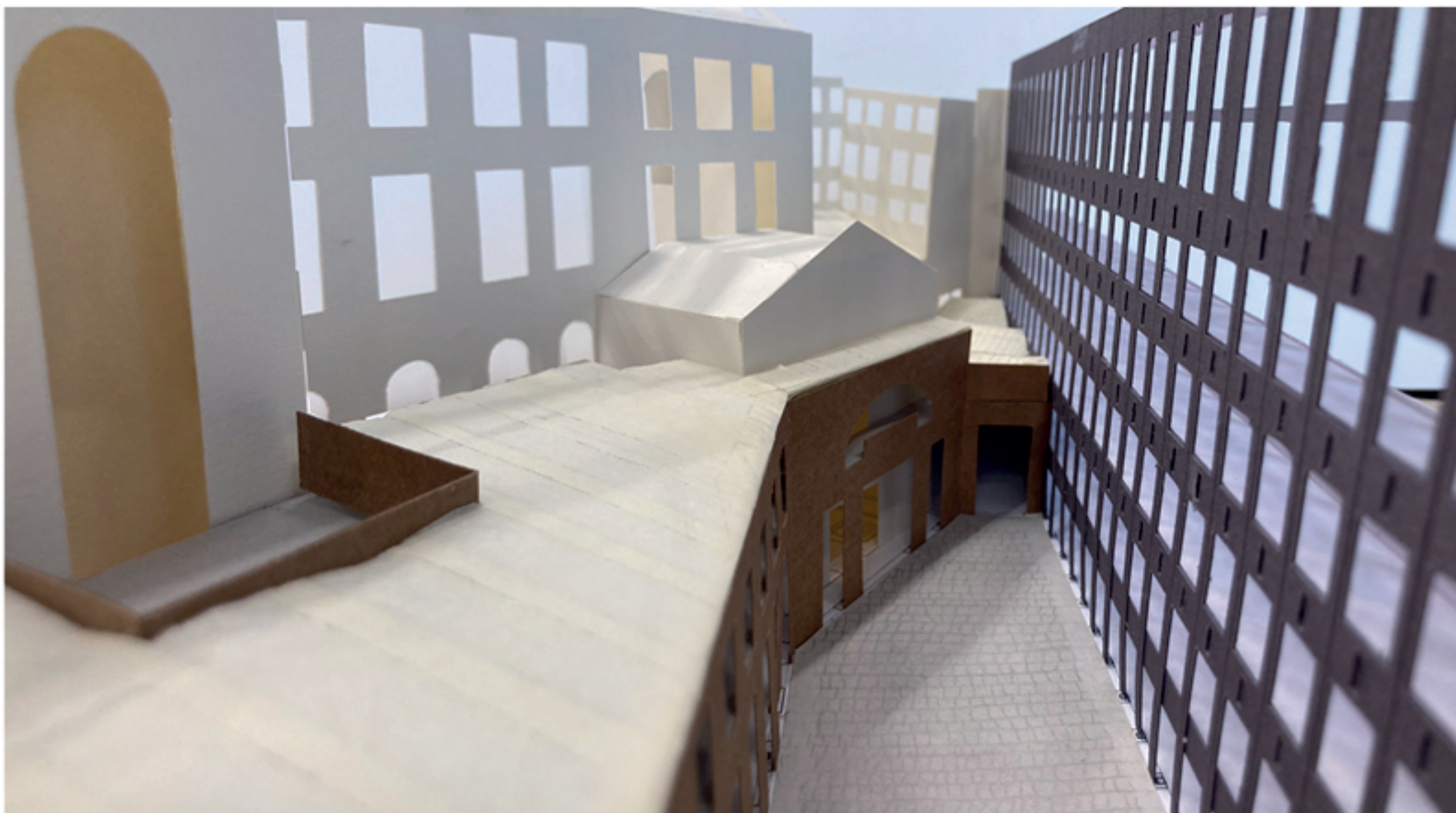
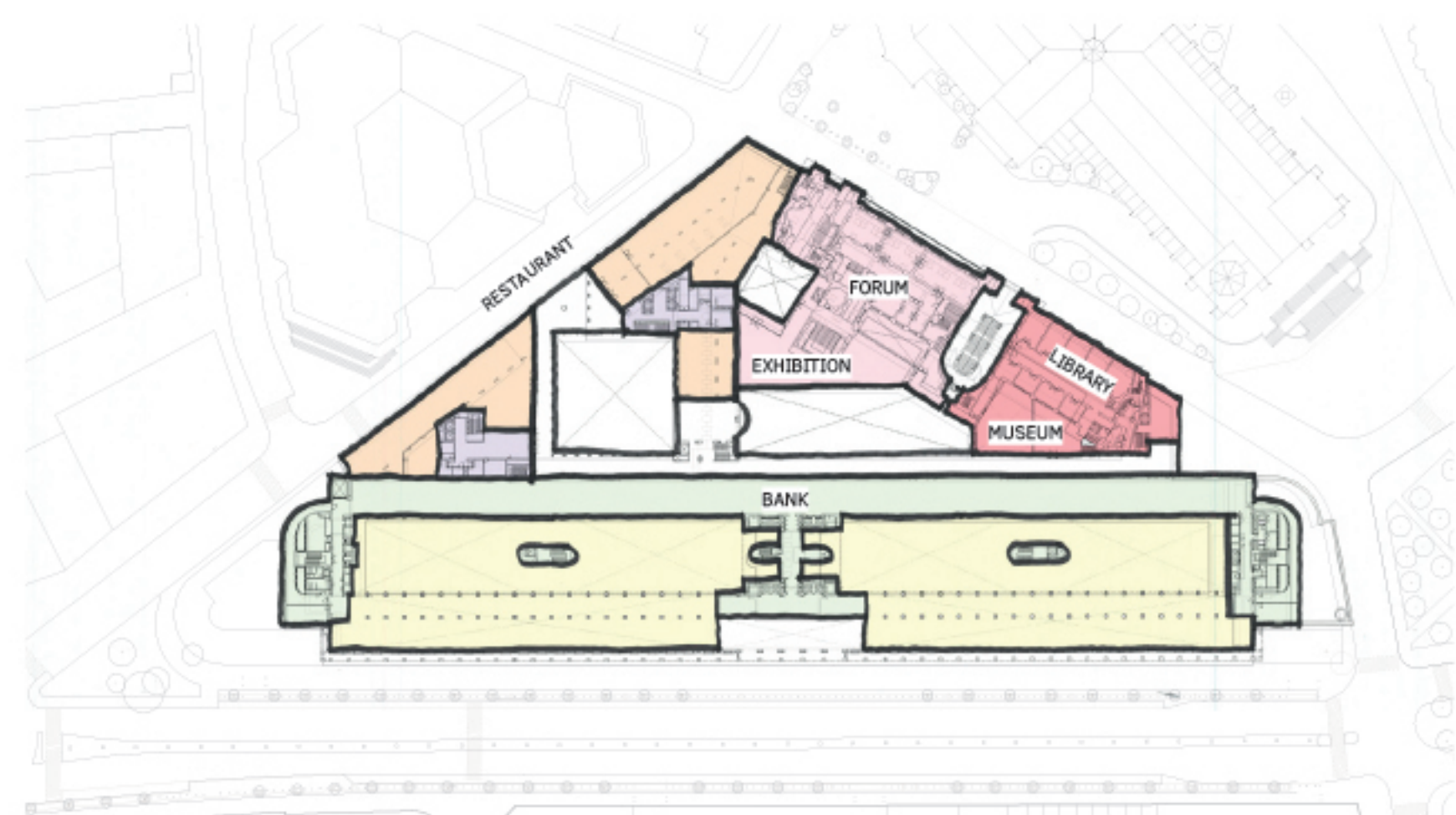
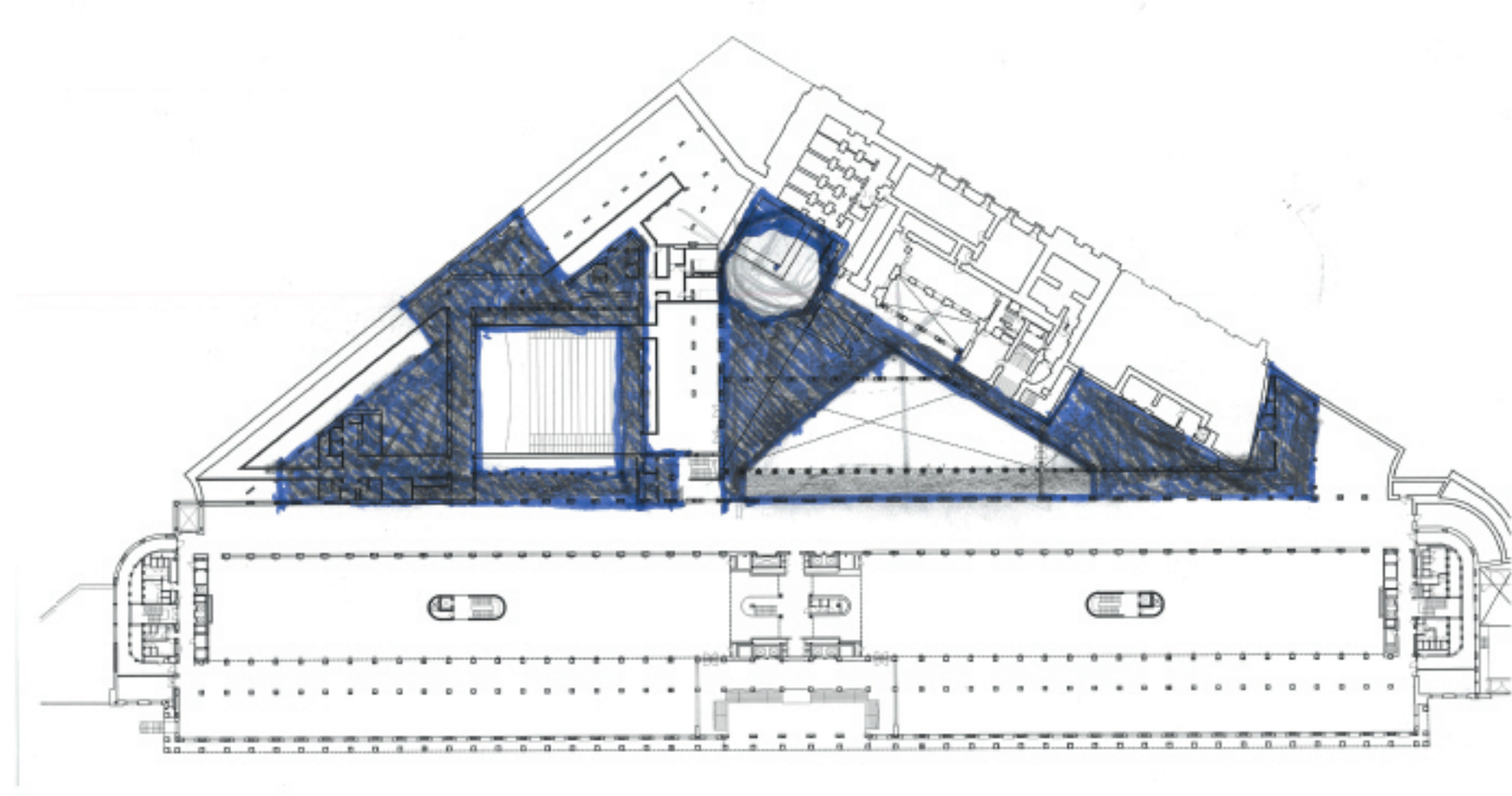
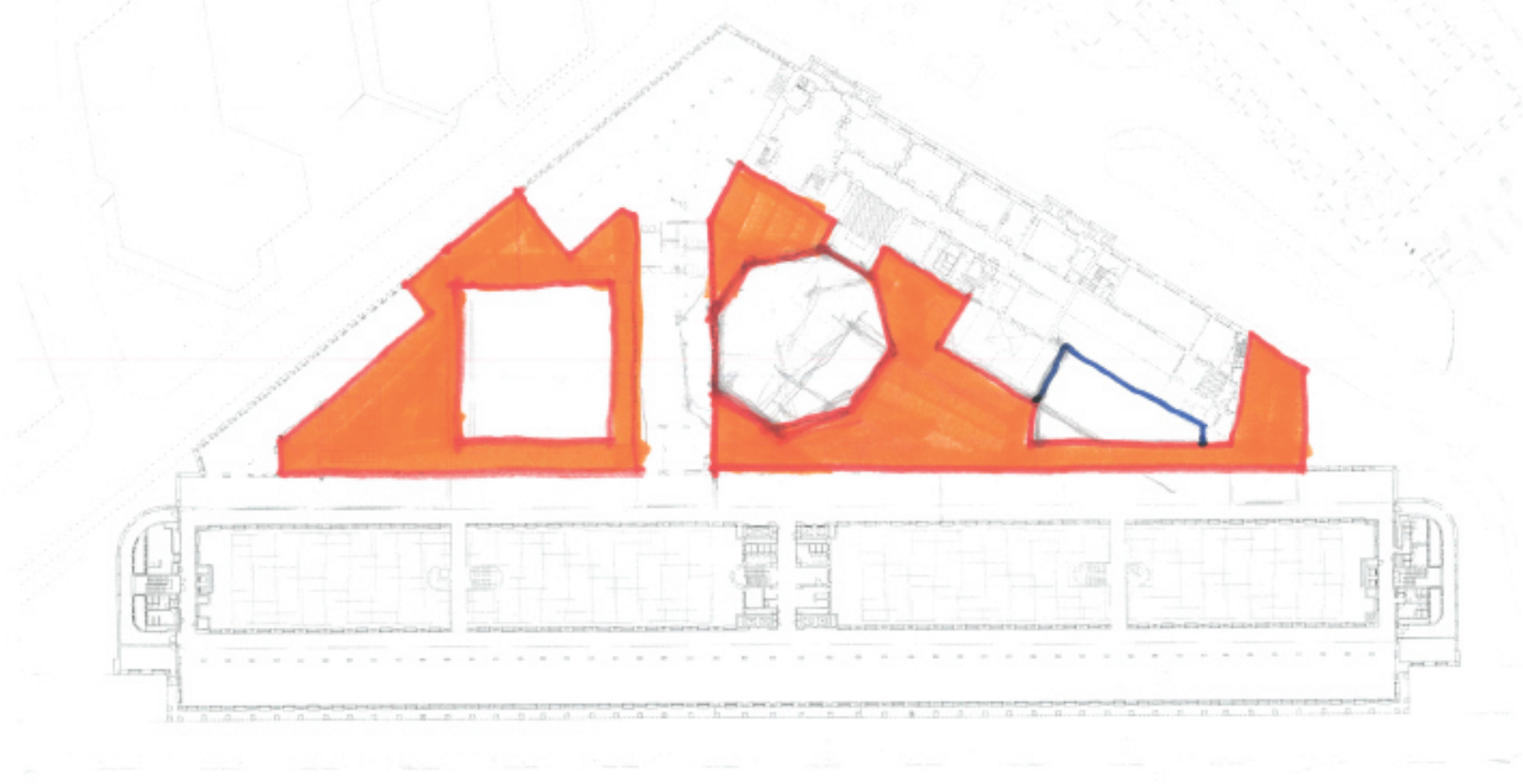
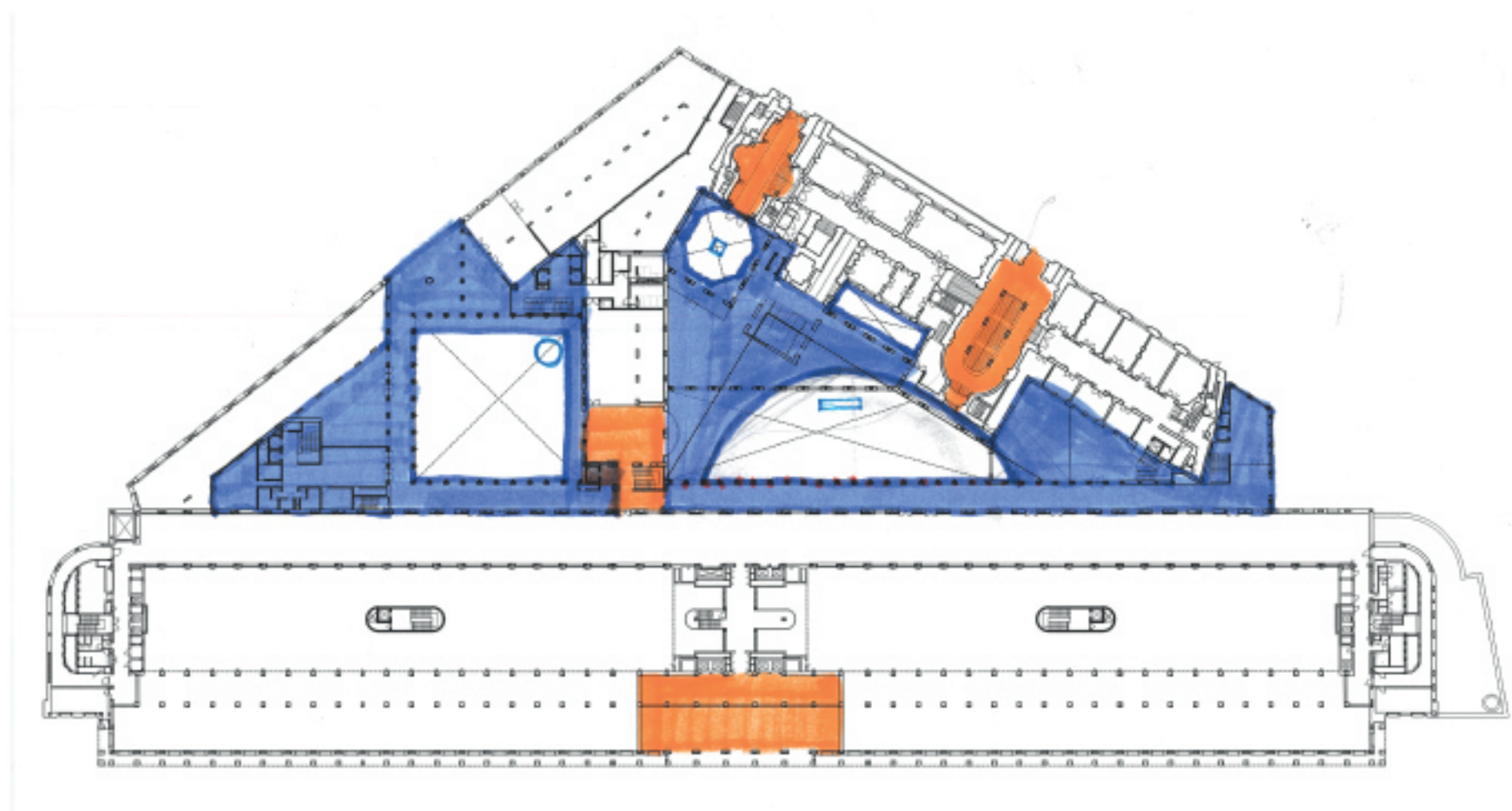
Program and circulation axo





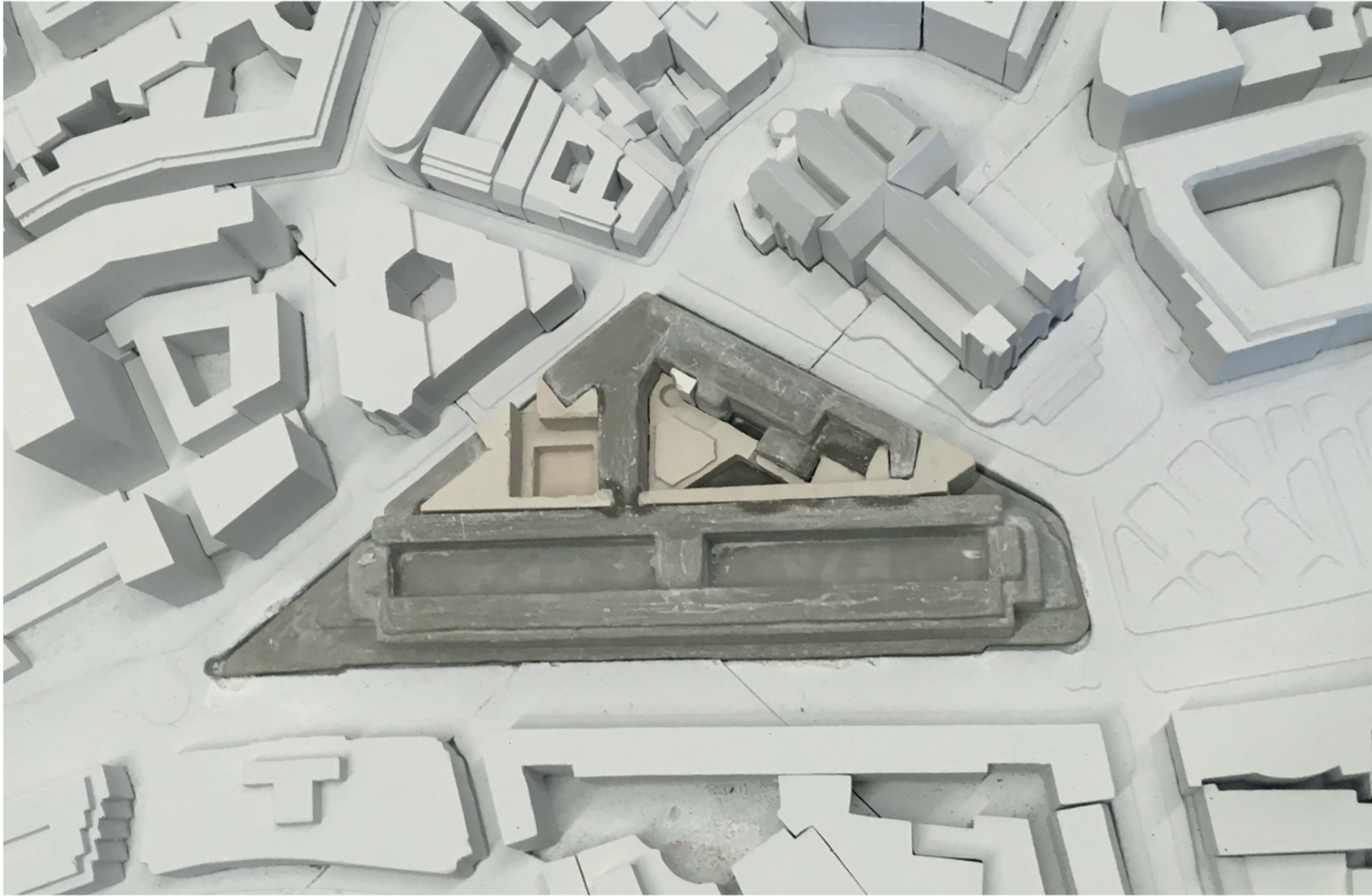
Bank of England





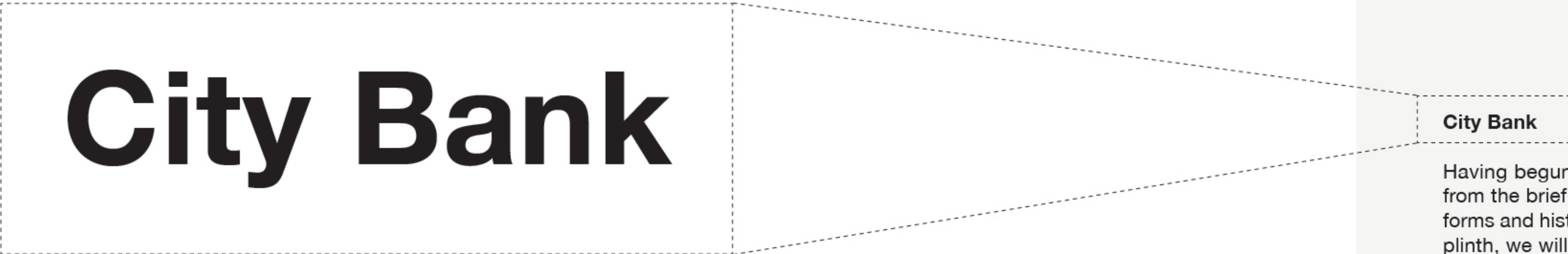
Courtyard process





Mirroring the context





# City Bank

## Future Bank

MSc3 AR3AI100 Week 2.1-2.3



Belgian National Bank. View towards Saint Michael and Gudula Cathedral, 2021. Mark Pimlott

### City Bank

Having begun to address some particular issues which arise from the brief for the transformation of the National Bank: the forms and histories of the workspace and the idea of the social plinth, we will now turn our attention to the building itself and its situation within Brussels. The façade of the National Bank on the Boulevard de Berlaimont is a continuous colonnade, nearly 200m long, an attenuated temple with little to no hierarchy. It is set against a vast, anonymous street, straightened in relation to the building and the infrastructure below and with a similar sense of disdain for the scale of a human, representing the building's current position as an institution, an entity impossible to either deny or to penetrate. The facades on Rue de la Banque are still more anonymous, apparently undifferentiated, suggesting only that some sort of bureaucratic or administrative labour goes on within. A major part of the facade to Rue du Bois Sauvage, on the other hand, is specific. Although its evocation of a palace in a grand manner may not be particularly inviting to everyman, that same everyman might at least have an idea of significant spaces within: entrances, staircases, salons, inner sanctums. This representation of the Bank also gives a sense that the triangular site on which it sits was once an aggregation of individual building blocks, set within a dense urban grain, before their remnants were sublimated within its present, fortress-like condition. Around it, other institutions are gathered, within a part of Brussels which is at an intersection, in section, of the highly differentiated urban conditions that constitute the

city, but which is nonetheless bereft of many of the qualities that exemplify it. Therefore, multiple images, suggestions, and relations constitute the 'identity' of the National Bank in the City of Brussels. Together, they might be considered to invoke the several ideas, which the Bank has wished to communicate about itself to the city and the nation over the course of its history: that it is a serious institution, opaque in its operations but with connections to elites and traditions, which is working hard and anonymously on behalf of the State, and by extension, its citizens. The collage of the building exemplifies this sense of aloofness, assisted by the disconnectedness of each of the three sides of the sites: a virtue, one might say, of the triangular block that has been in place for a very long time. But are the fictions of this arrangement and the distribution of its various identities relevant in the present, and how might it be adjusted or transformed to indicate a new reality and a new future for the Bank, at the centre of a transformed economy?

If one is able to penetrate beyond the security lines, which mark the limits of possible engagement for most of the public, into the block's interior, then one discovers a complex, aggregated structure in both plan and section, a labyrinthine and heterogeneous architecture that represents the multiple tasks and hierarchies that the Bank historically developed and depended upon. Much of this complexity and many of the spaces that accommodated are now redundant and perhaps irrelevant to the issues of today. Although the Bank project is ostensibly concerned with the consolidation of its Brussels

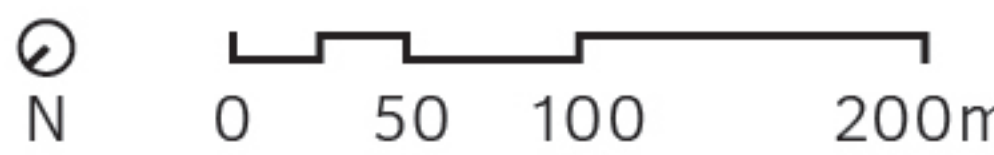
Interiors  
Buildings  
Cities

## Palace

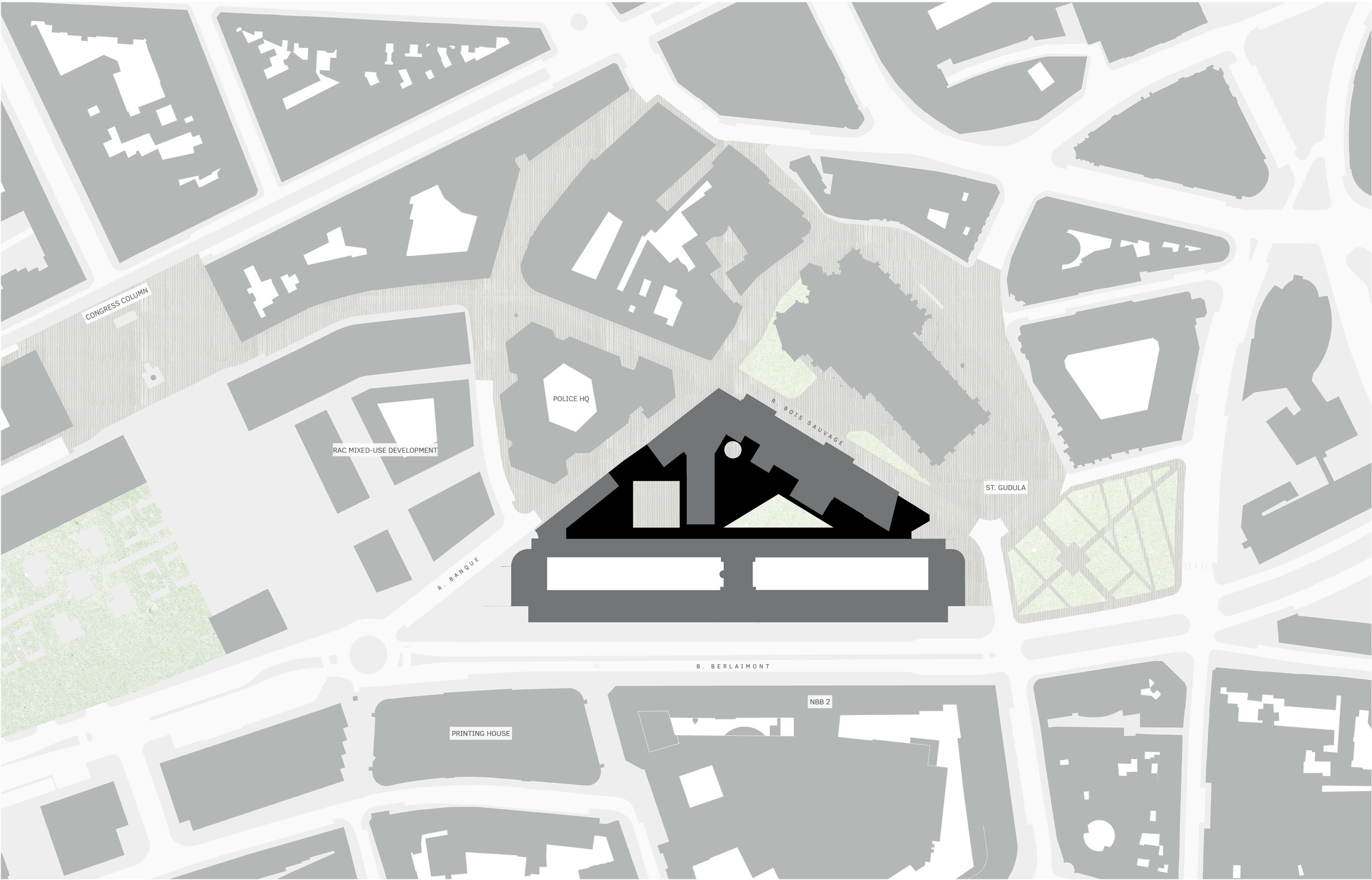




Context

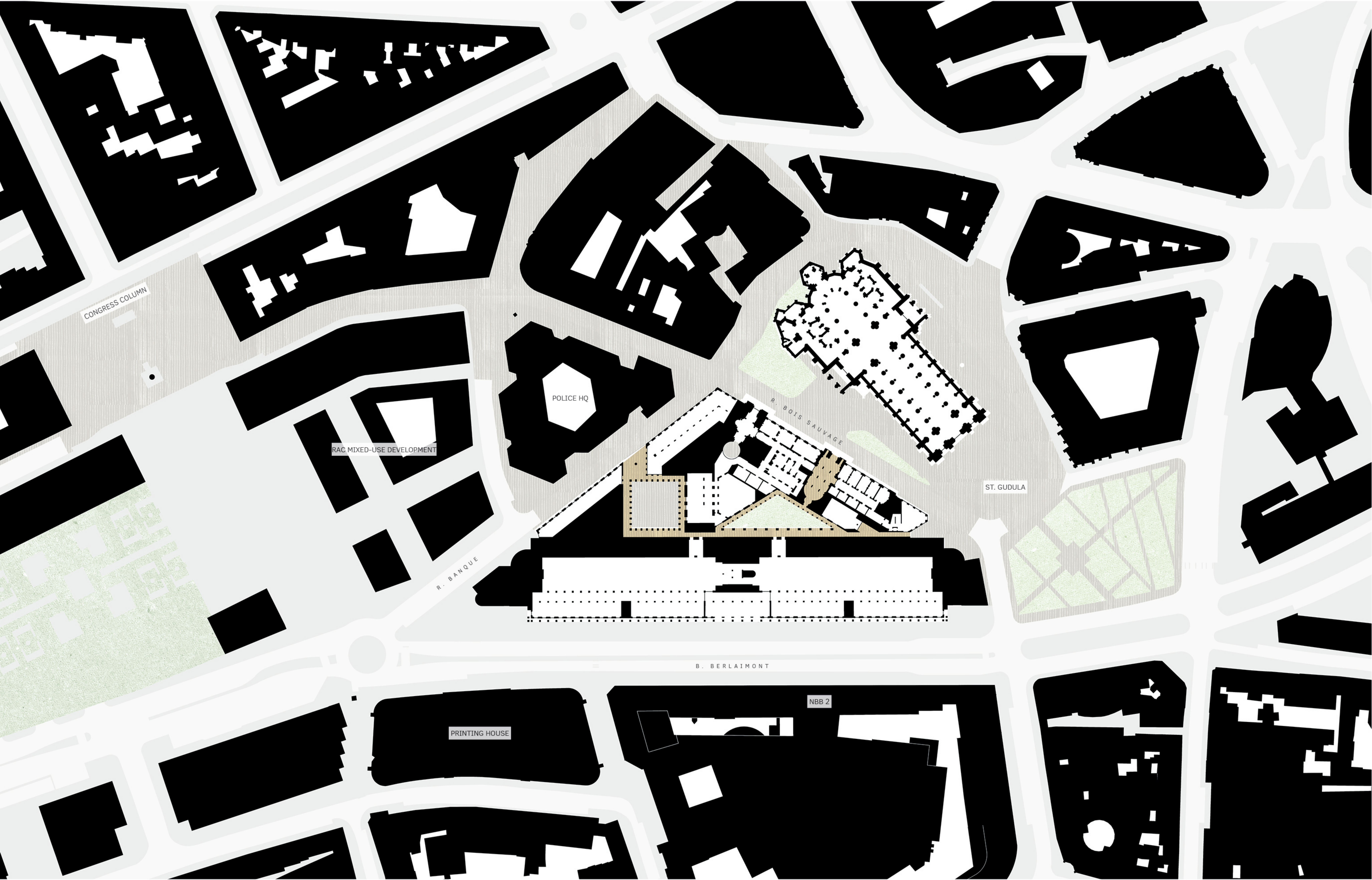




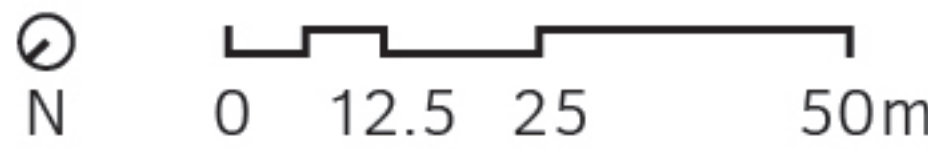


Site plan, figure-ground

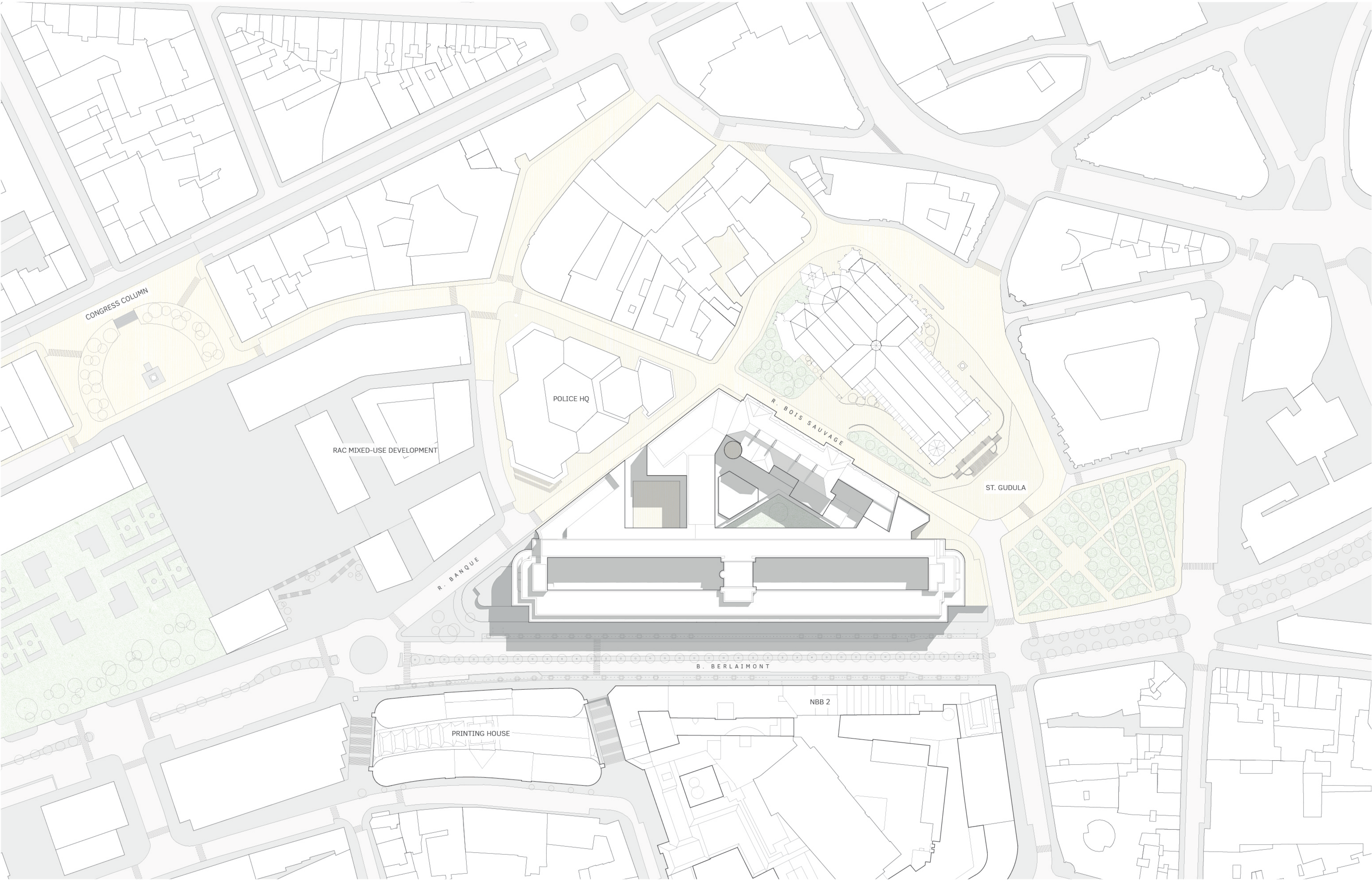




Site plan, Nolli map







Site plan



# Bank Building

## Future Bank

MSc3 AR3AI100 Week 2.4-2.10



Photograph of room with models, of the National Theatre, South Bank, London, with added autograph remarque perspective drawing, 1991, Sir Denys Lasdun RA (1914 - 2001)

### Bank Building

As we have collectively experienced, the National Bank of Belgium is an accreted, conglomerate form, the complex outcome of many plans, large and small, grandiose and expedient. Together these have combined to create an almost impenetrable, labyrinthine structure. One might understand this as a direct, spatial translation of the many hierarchies and segregations that historically defined both its working processes and the relations between its employees. In some ways, we might also imagine it as a representation of the financial system itself. Since the first buildings of the bank appeared on the site, this has become ever more complex and increasingly challenging to understand and control. The inherent dangers of the ever more tenuous grasp, which institutions like National Banks have managed to maintain on the proliferating and increasingly abstracted mechanisms of the market, are demonstrated in the disastrous effects of the 2008 financial crash on the lives of ordinary people and since by new threats, such as the rise in cryptocurrencies and the inability of governments to adequately control tax or address the global climate emergency.

Our project takes as its starting point the premise that all this is understood. A bank has always been a place to store valuable things, but now it must demonstrate that it knows what needs to be valued. For us then, the opportunity to physically remake the Bank is seen as a means to clarify and transform it into an

open, transparent and publicly engaged institution, which can speak and listen to all parts of society, as well as itself. We propose that its physical, material character – its architecture – has agency in re-understanding its role as a catalyst. One that can assist in the enormous challenge of profoundly reshaping the economy, redefining society's attitude to the expenditure of resources and the questions of fairness that must underpin such a transformation.

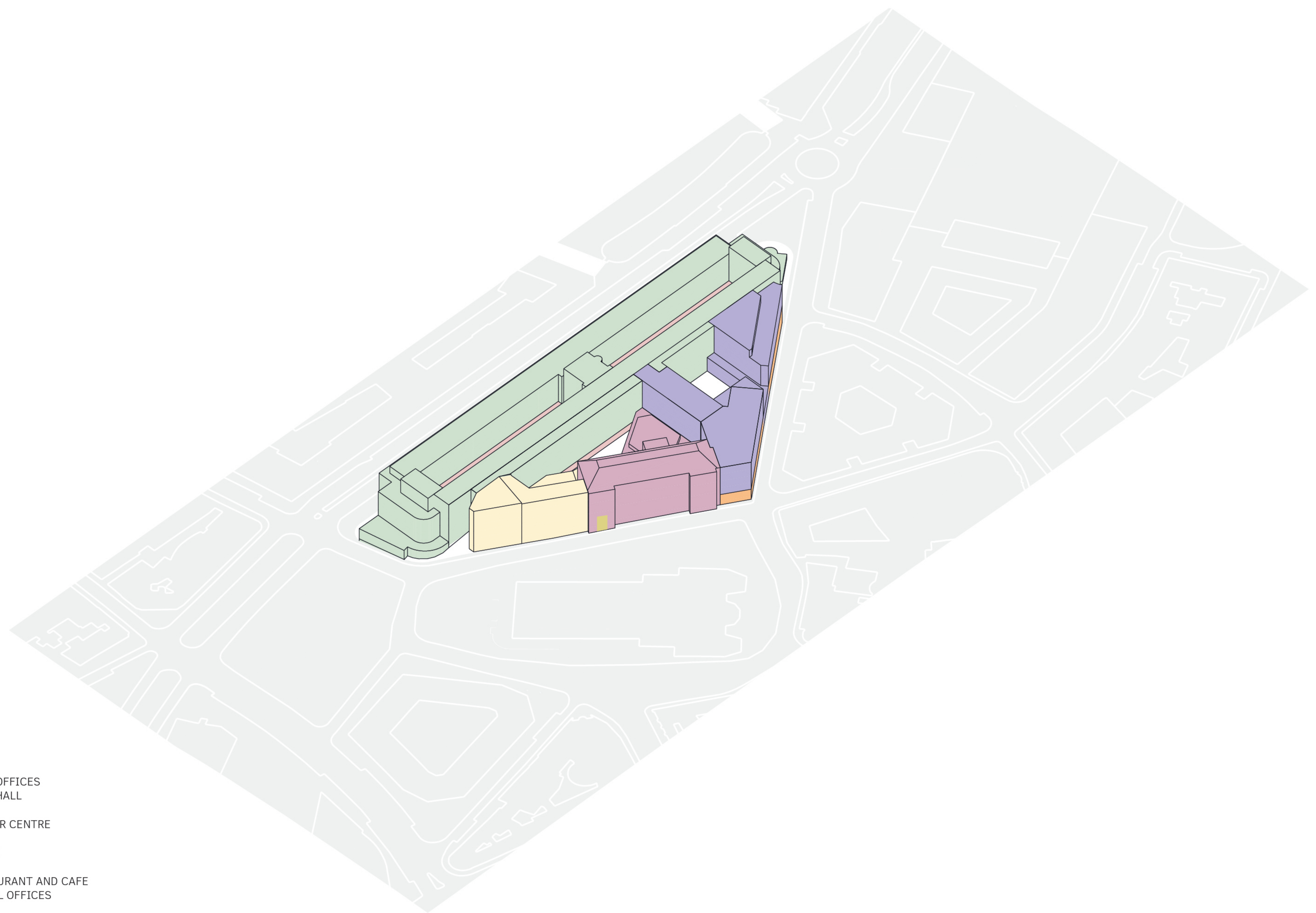
The processes and thinking that reshape this reinvented Bank will have as much bearing on the project's success as the final forms and spaces. Questions abound: What will be kept? What can or should be taken away? What will happen to the materials that are no longer needed? What new materials are necessary, and what is their embodied footprint? The Future Bank should understand the environmental impact of its consumption and retention of resources.

In its redefined form, it will need to more fully address people and nature, as well as *things*. How, for example, will it define a better working environment, one that encourages innovative and open thinking across a spectrum of expertise? How will it represent and communicate its ideas and the necessary changes in systems of regulations, not only to the network of financial institutions of which it is a component, but also to wider society, its own government and those of other nations, as well as at the level of the individual? How will the new relationships it fosters allow the Bank to listen to those many

Interiors  
Buildings  
Cities

Palace





- BANK OFFICES  
BANK HALL
- VISITOR CENTRE
- FORUM
- RESTAURANT AND CAFE  
RENTAL OFFICES
- PUBLIC CIRCULATION ROUTE

Program axo

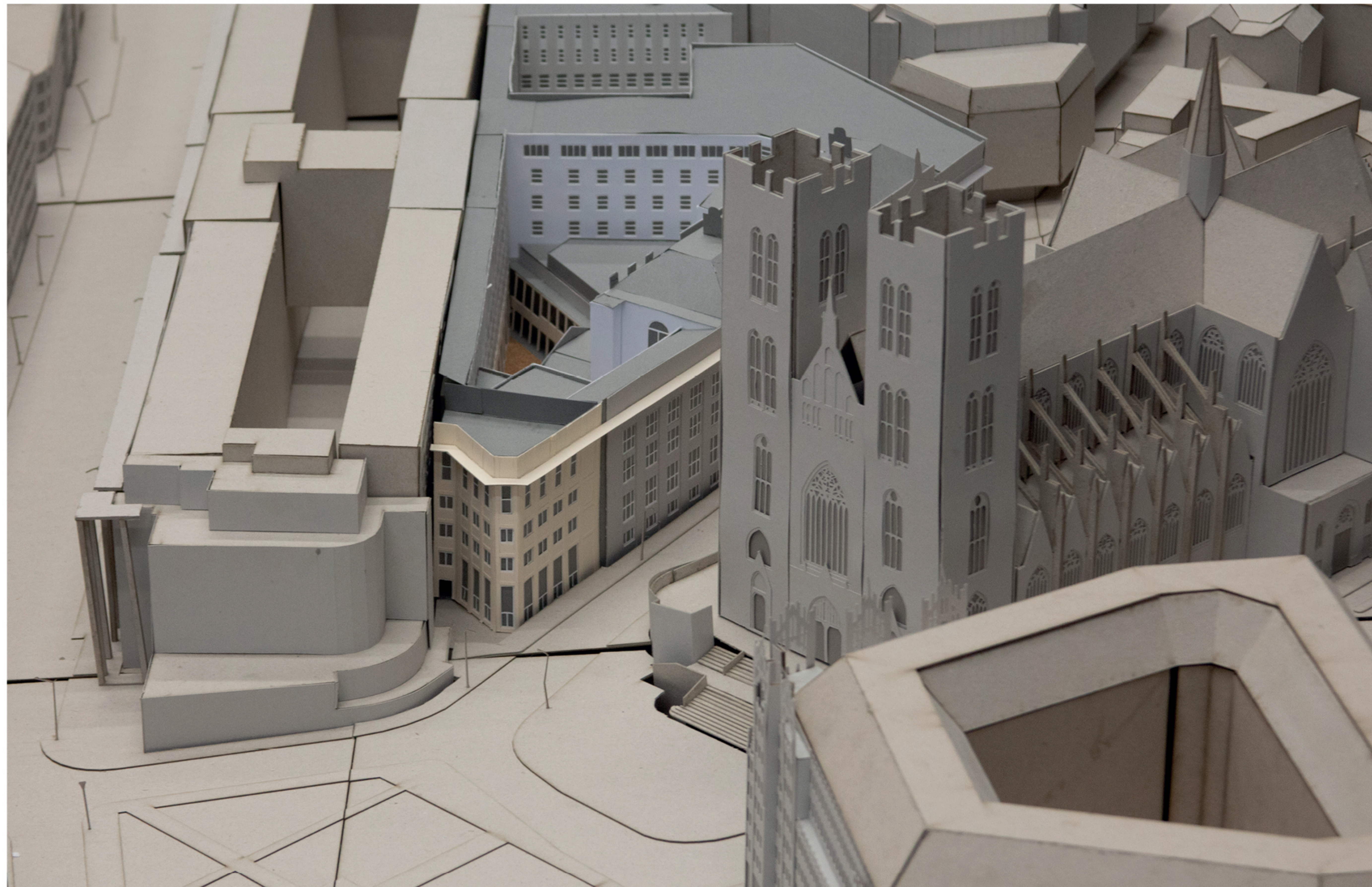




ST. GUDULA PARK, 1950s. SOURCE: NBB

View from St. Gudula park





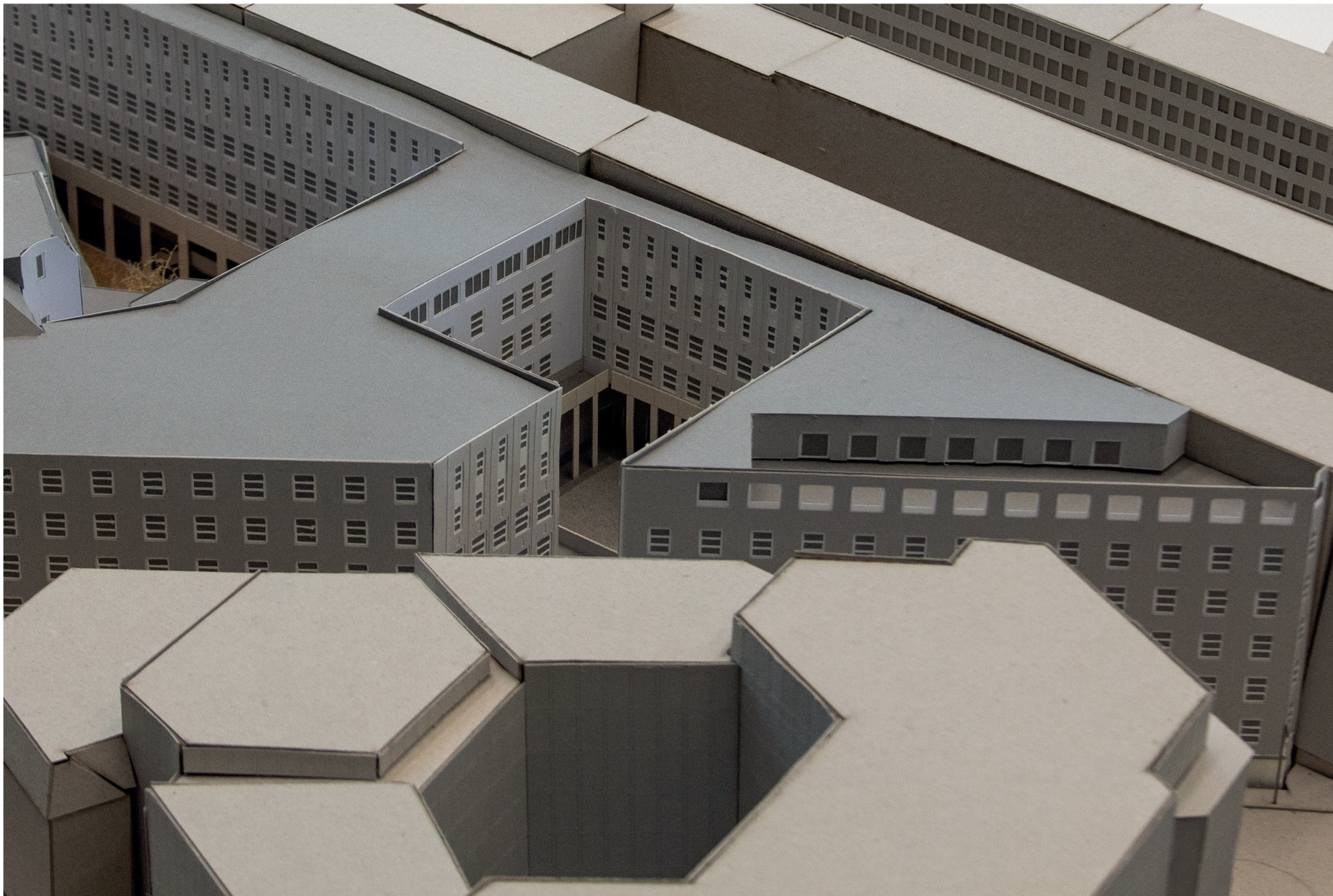
Visually distinct corner building





Baeyart hotel as entrance to Forum





Notch in building line





Entrance to square courtyard





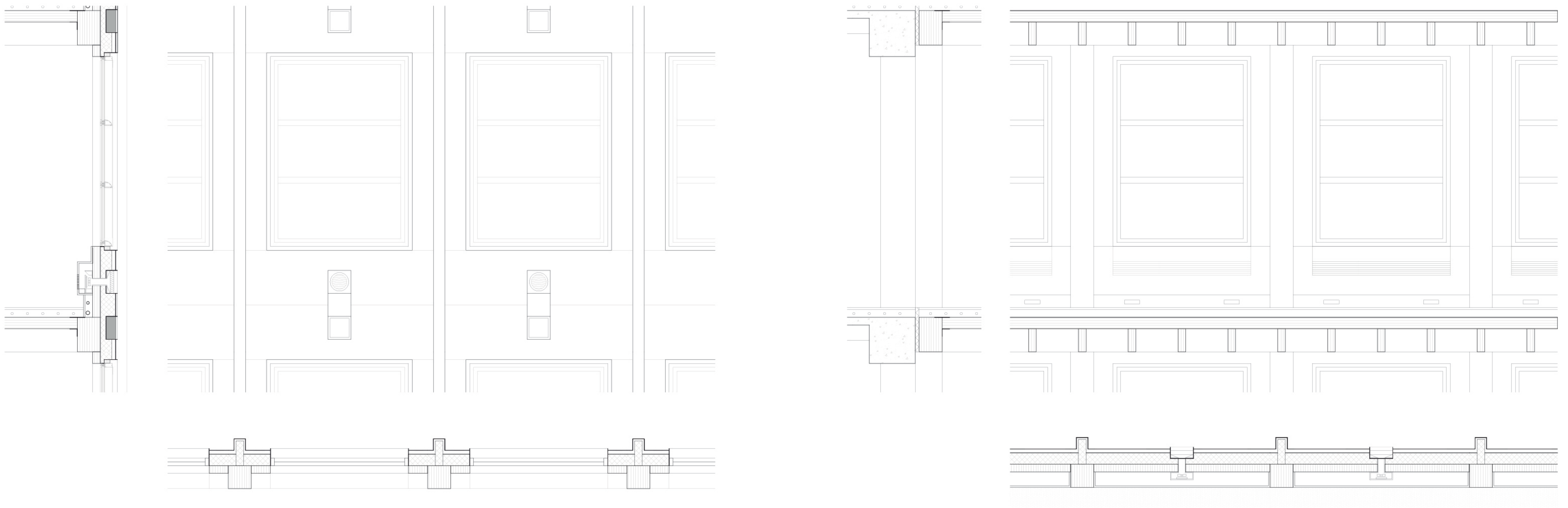
Image of the Bank





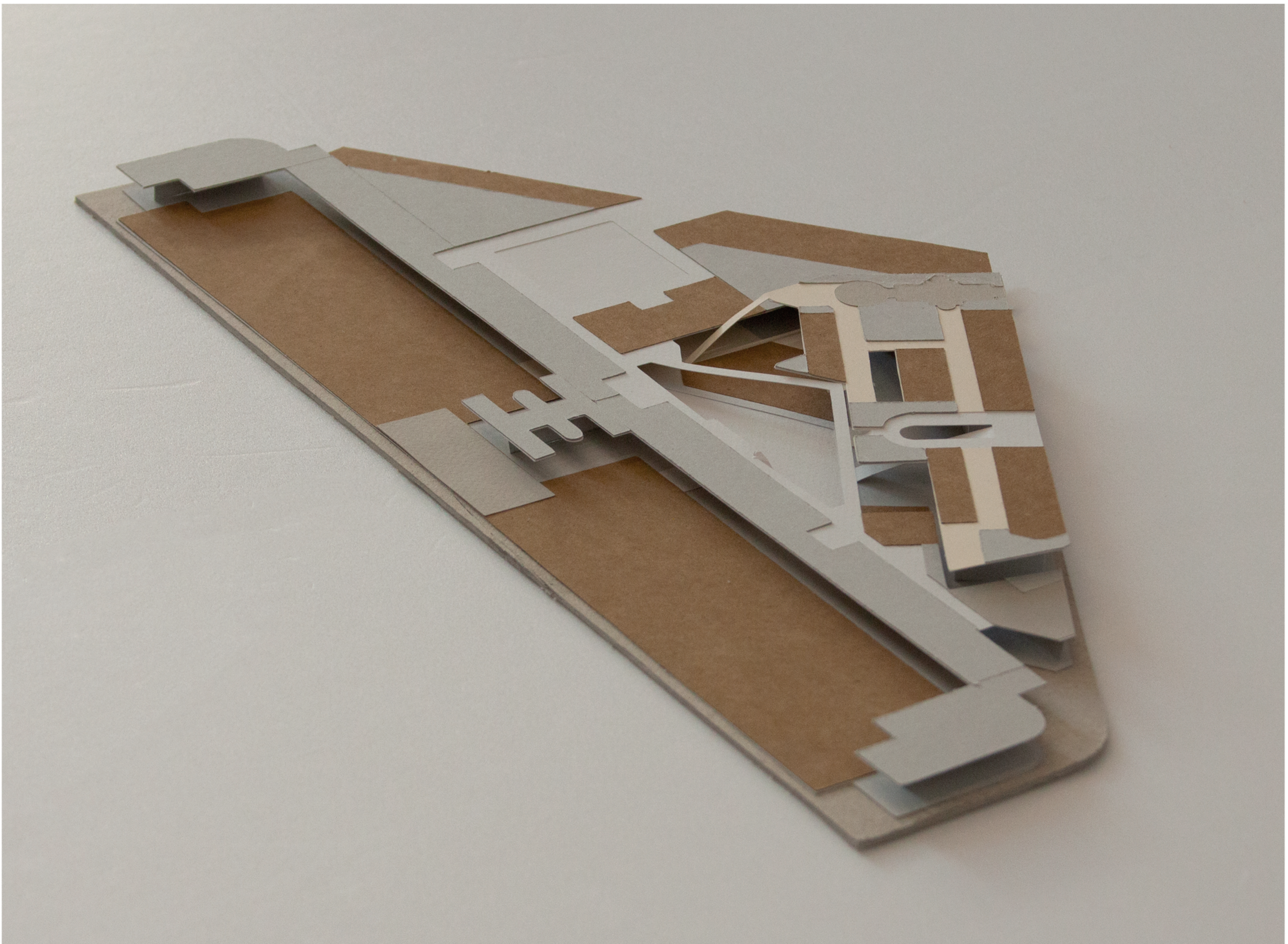
Facade fragment





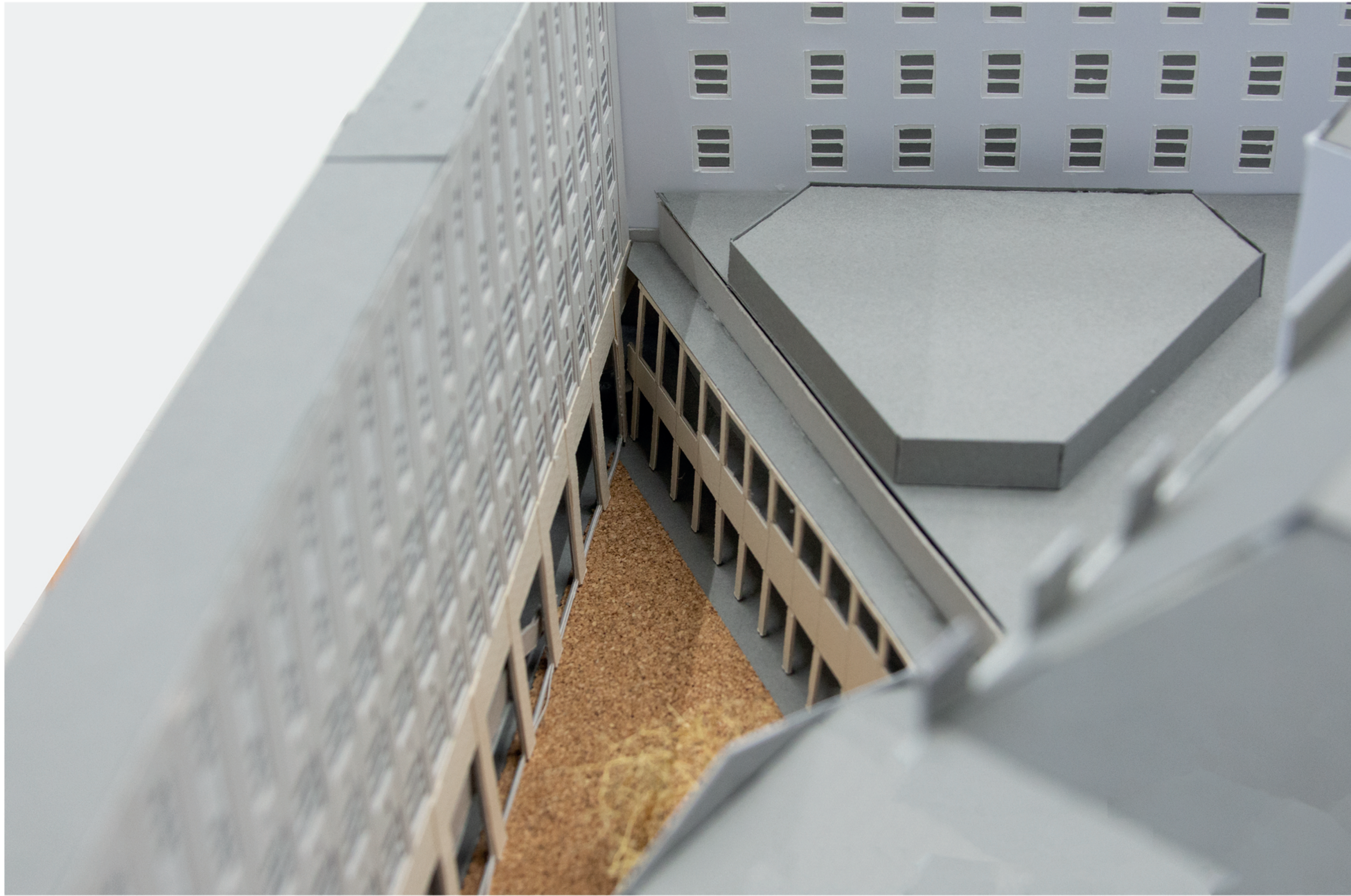
Facade fragment





Infrastructure of connectivity

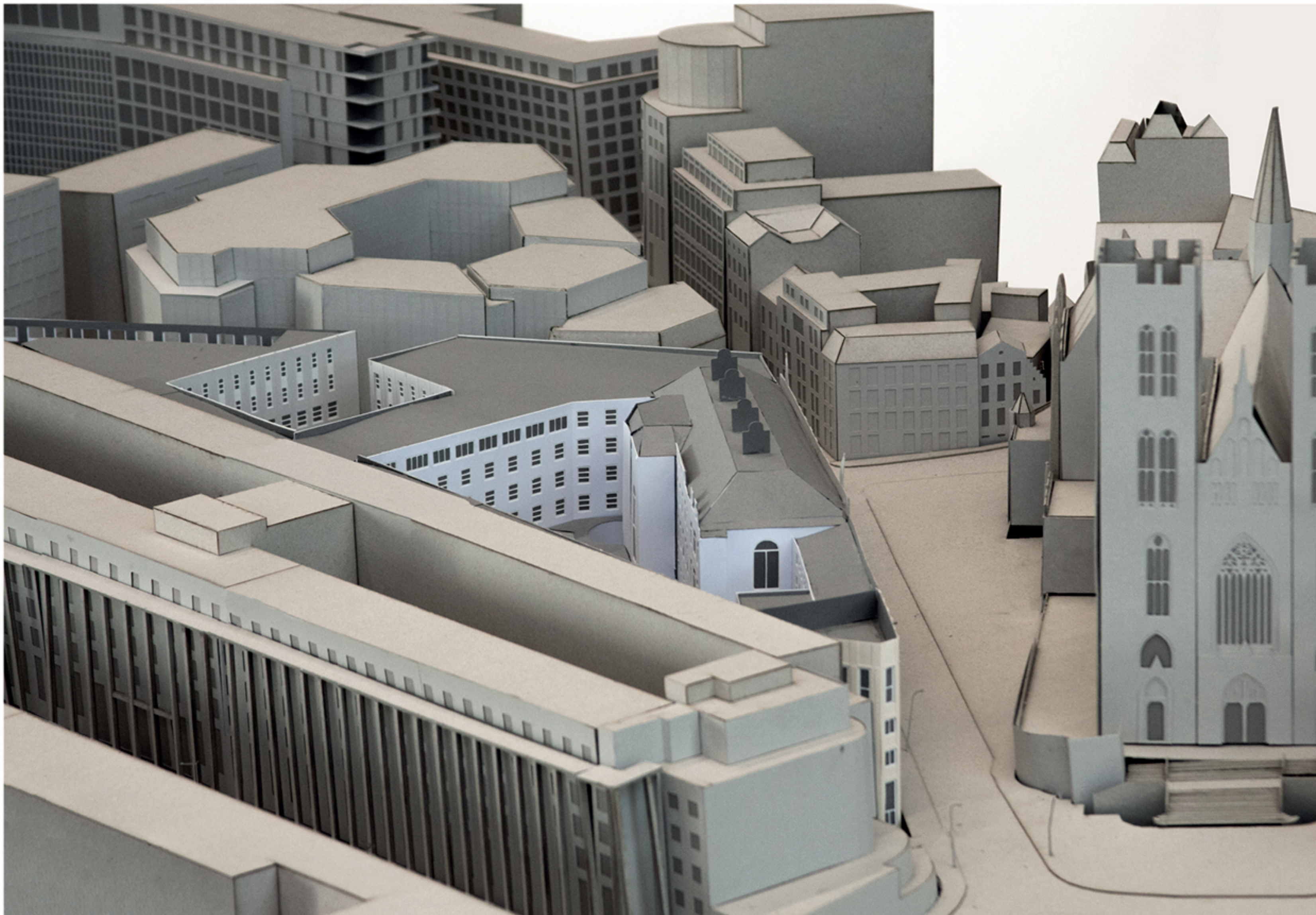
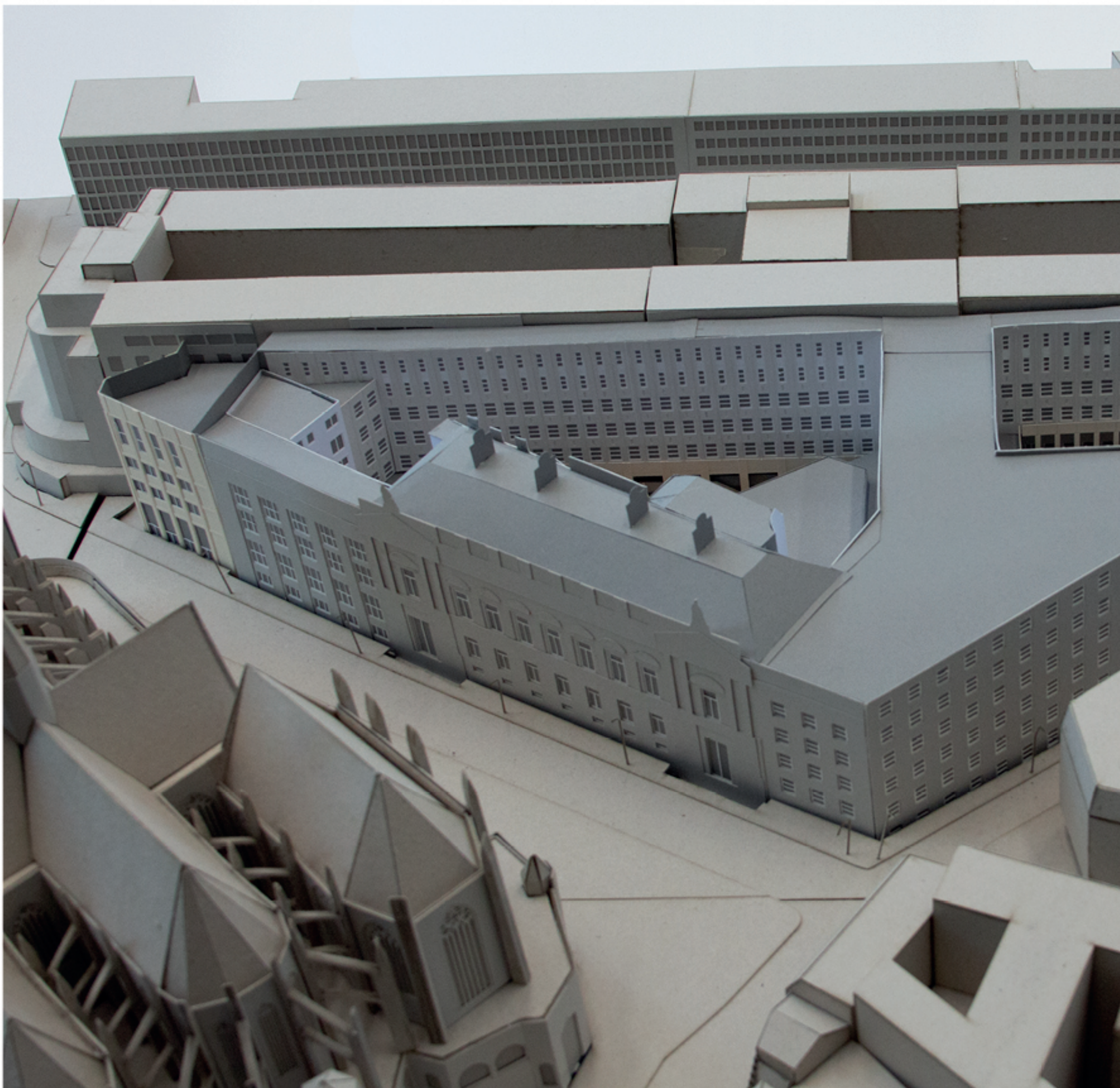




ST. MARIA DELLA PACE CLOISTER, ROME

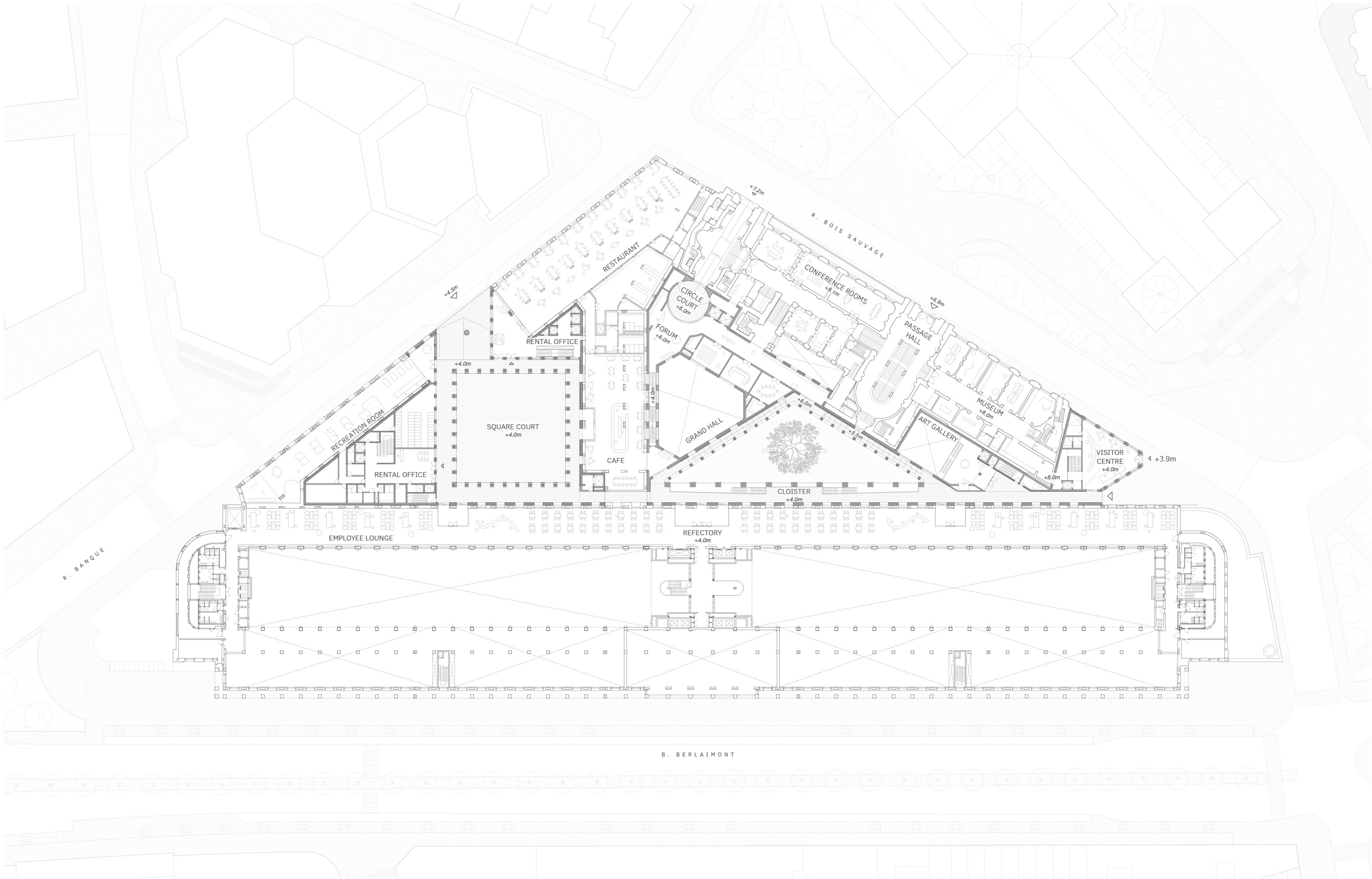
Cloister





New facades



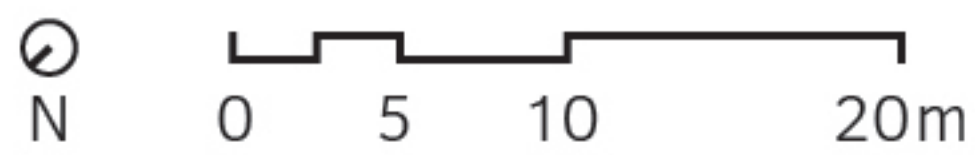


PROGRAM

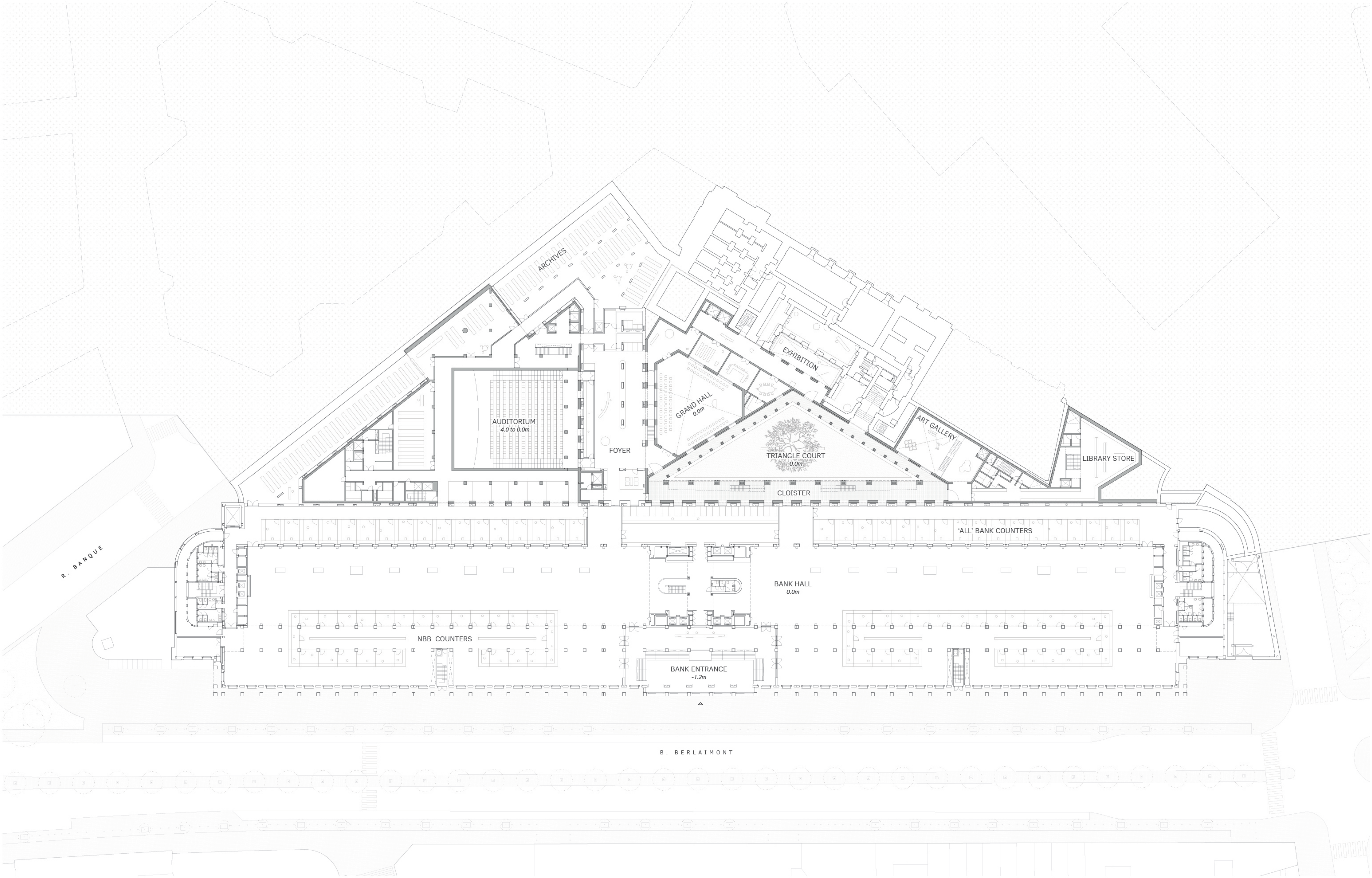
PUBLIC ACCESS

NEW/ OLD

Upper ground floor, Rue du Bois Sauvage

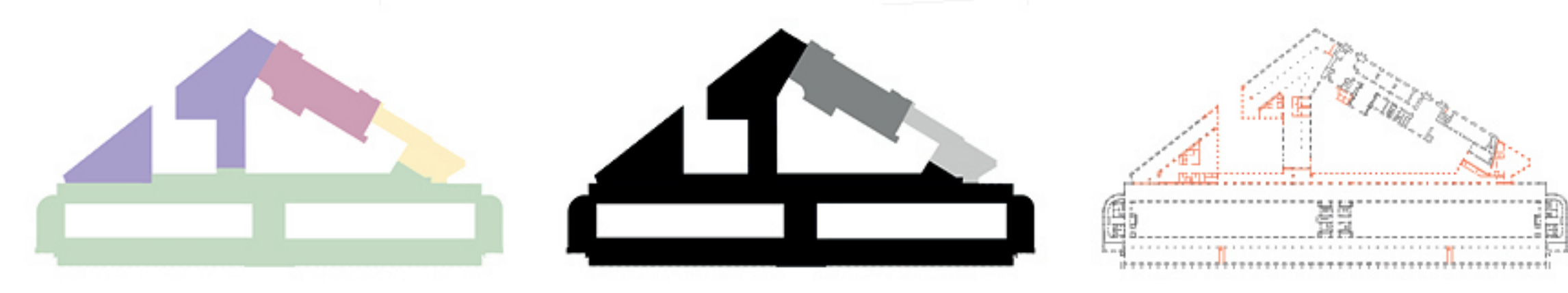
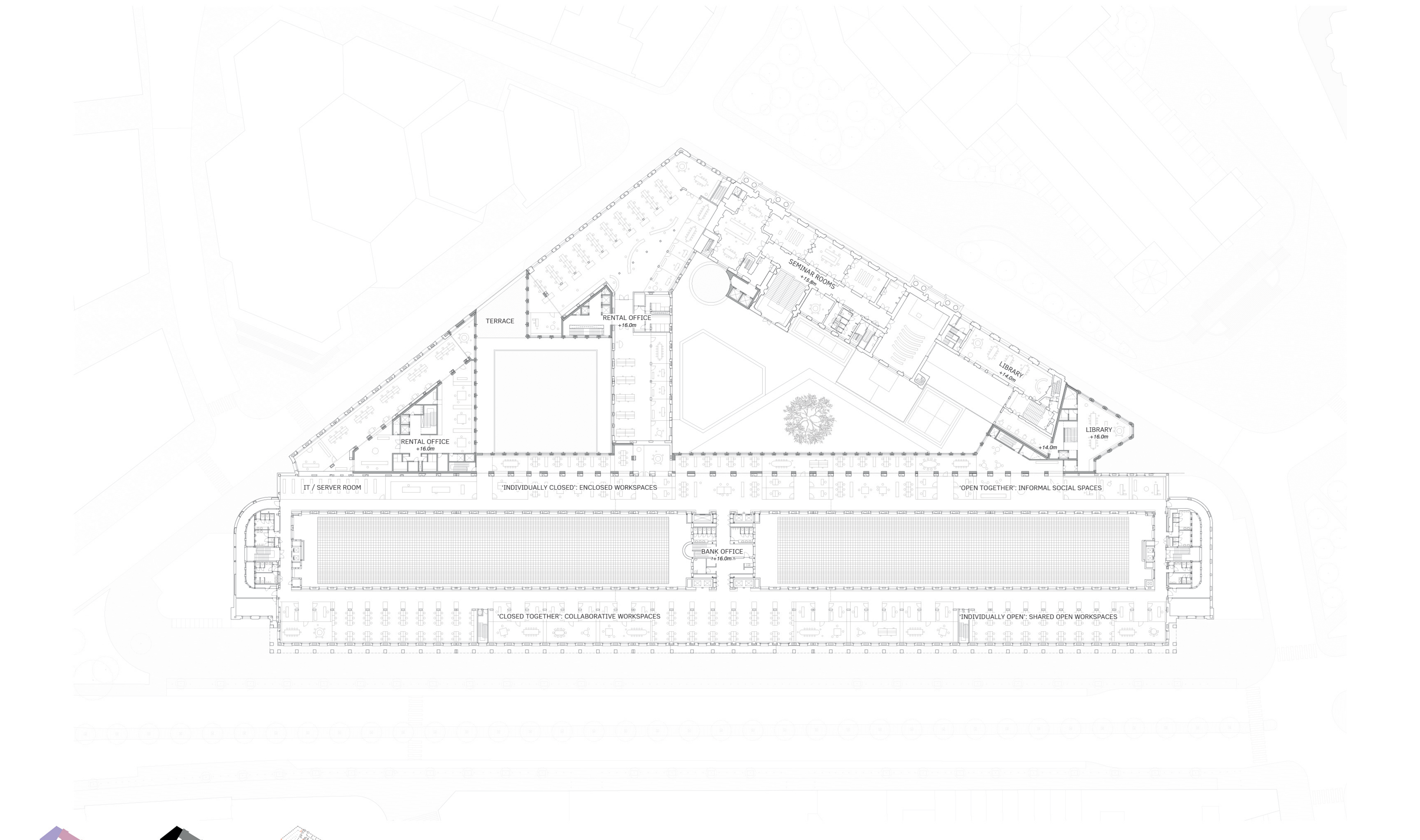






Lower ground floor, Bd. de Berlaimont



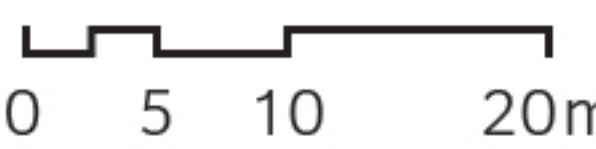


Typical floor plan





Boulevard de Berlaimont elevation



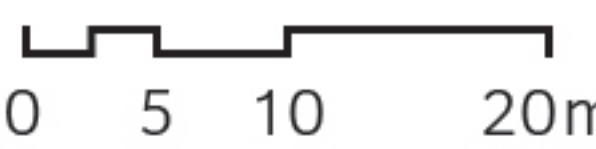




South rotunda elevation



NEW/ OLD





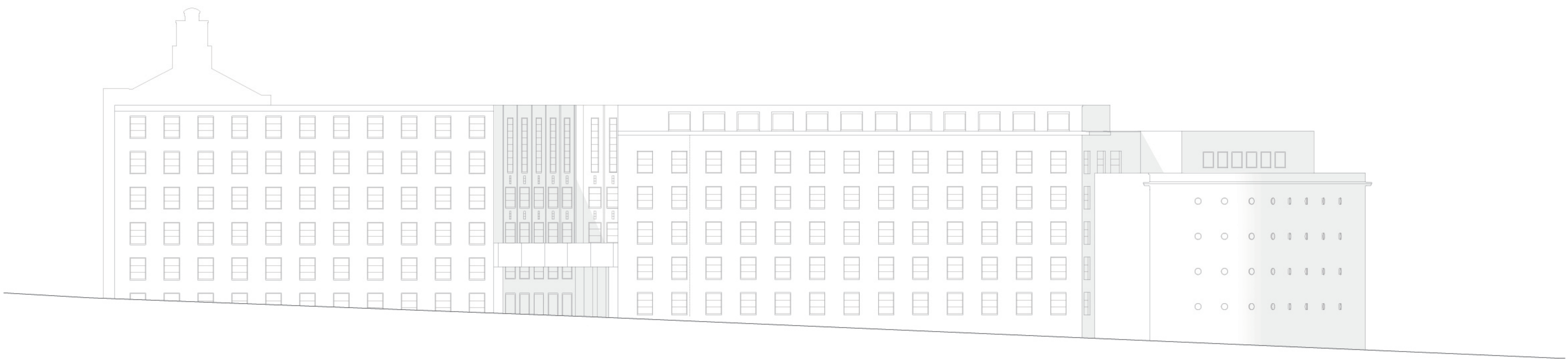


NEW/ OLD

Rue du Bois Sauvage elevation

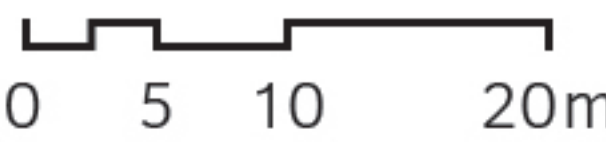
0 5 10 20m



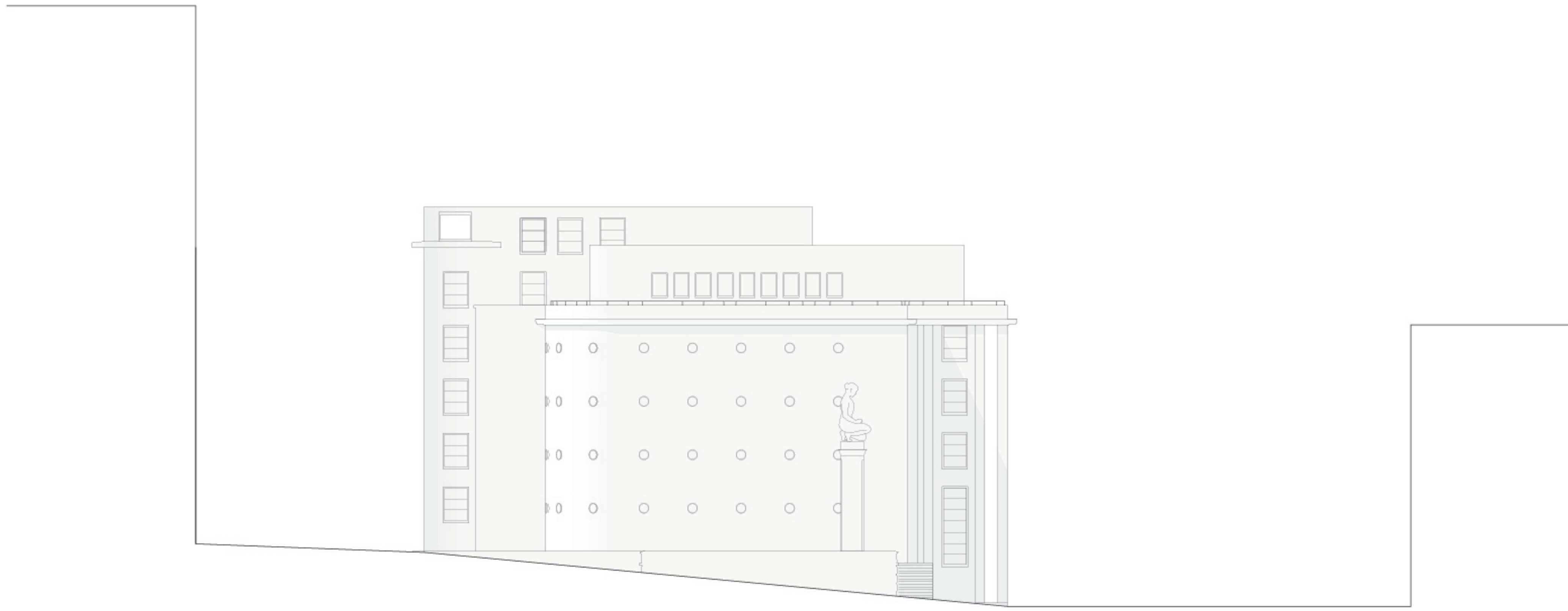


NEW/ OLD

Rue de la Banque elevation



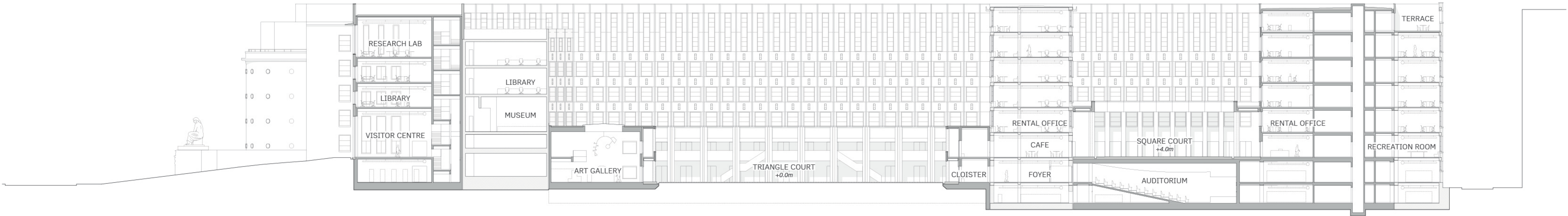




North rotunda elevation



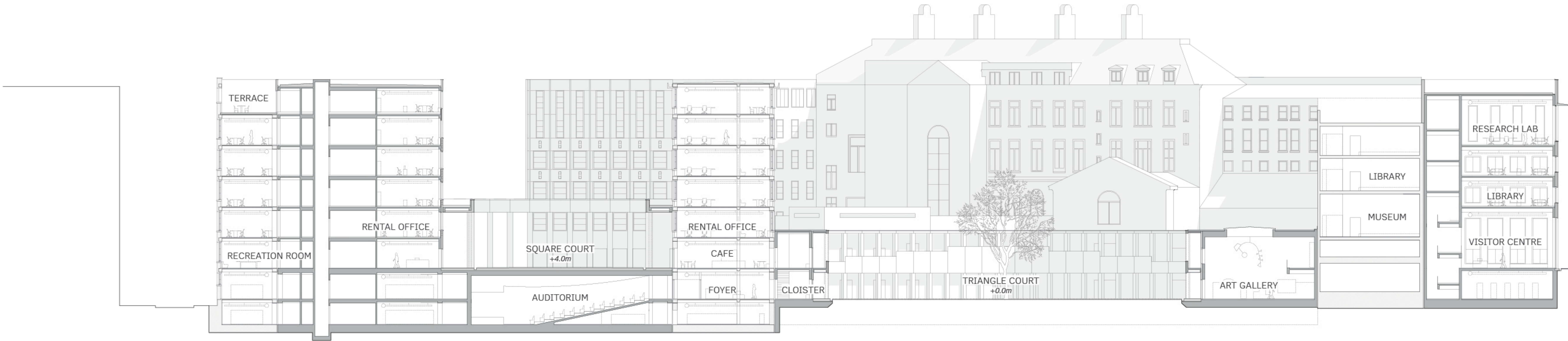




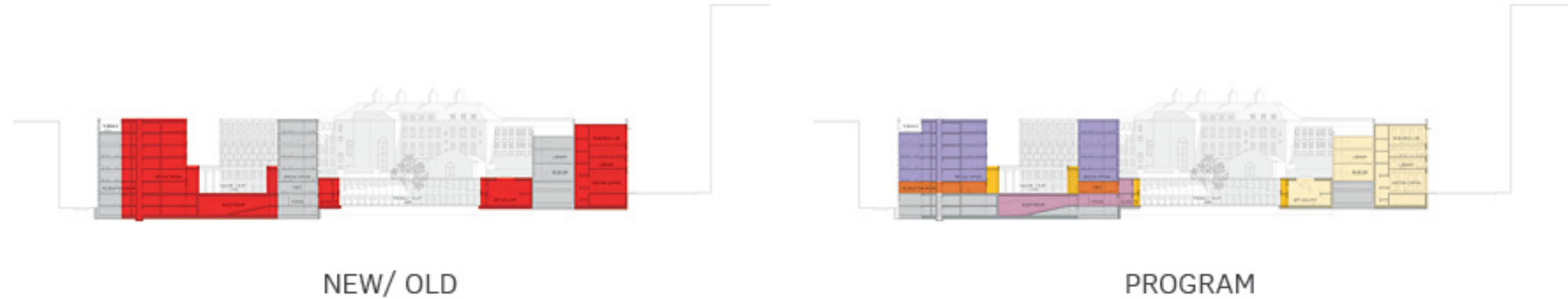
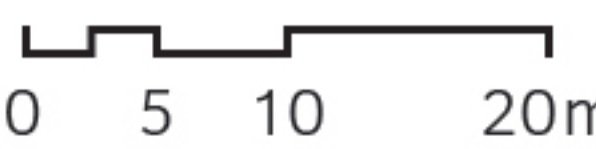
Longitudinal section through courtyards, facing Bank



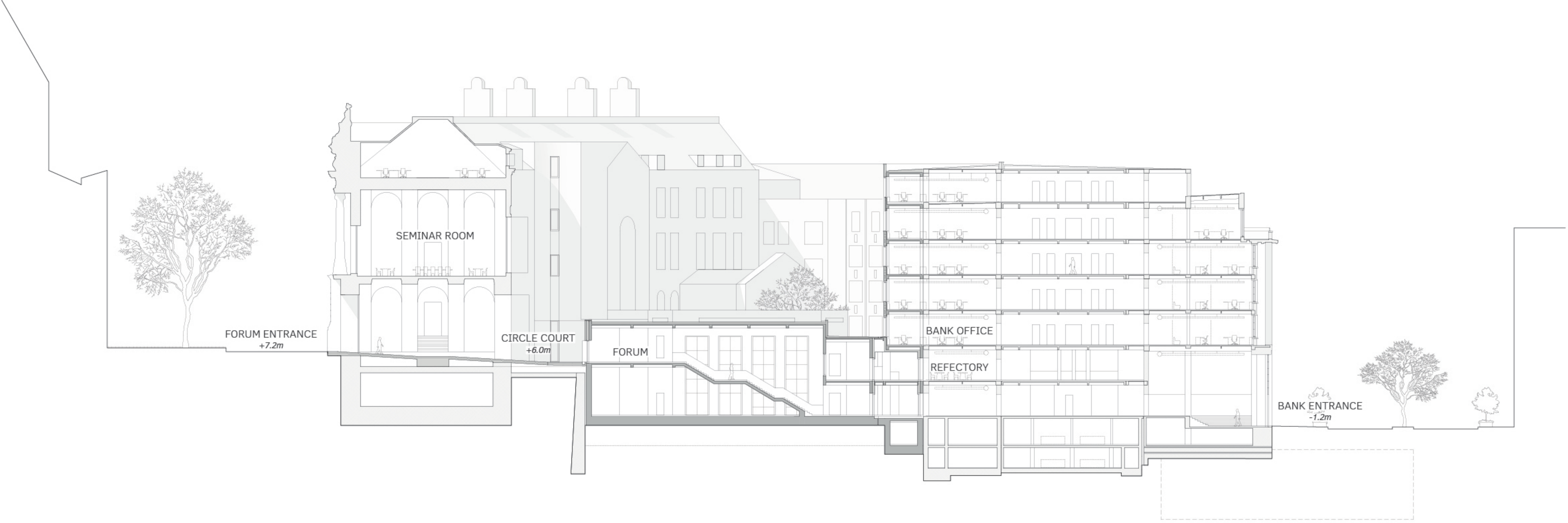




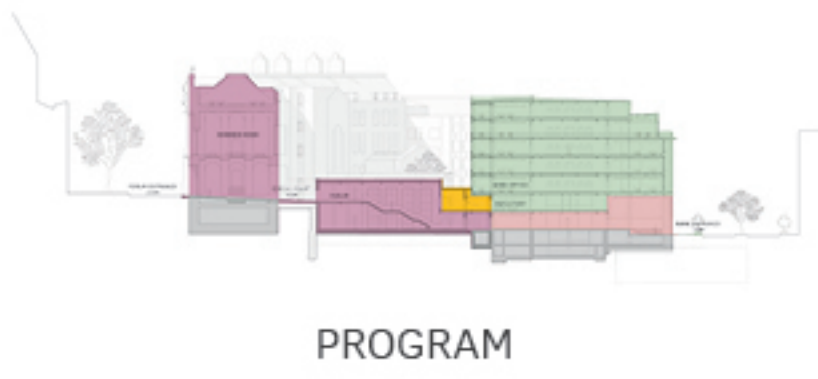
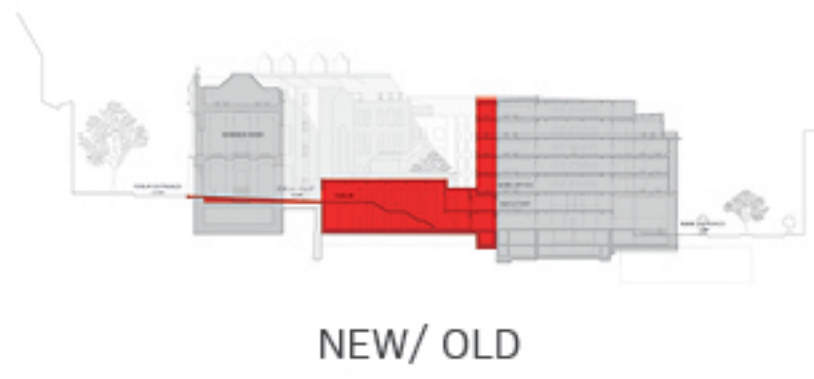
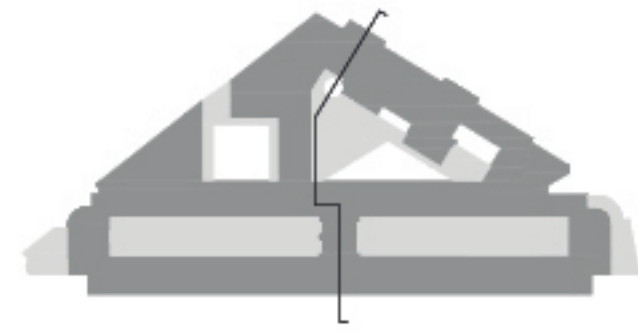
Longitudinal section through courtyards, facing Hotel



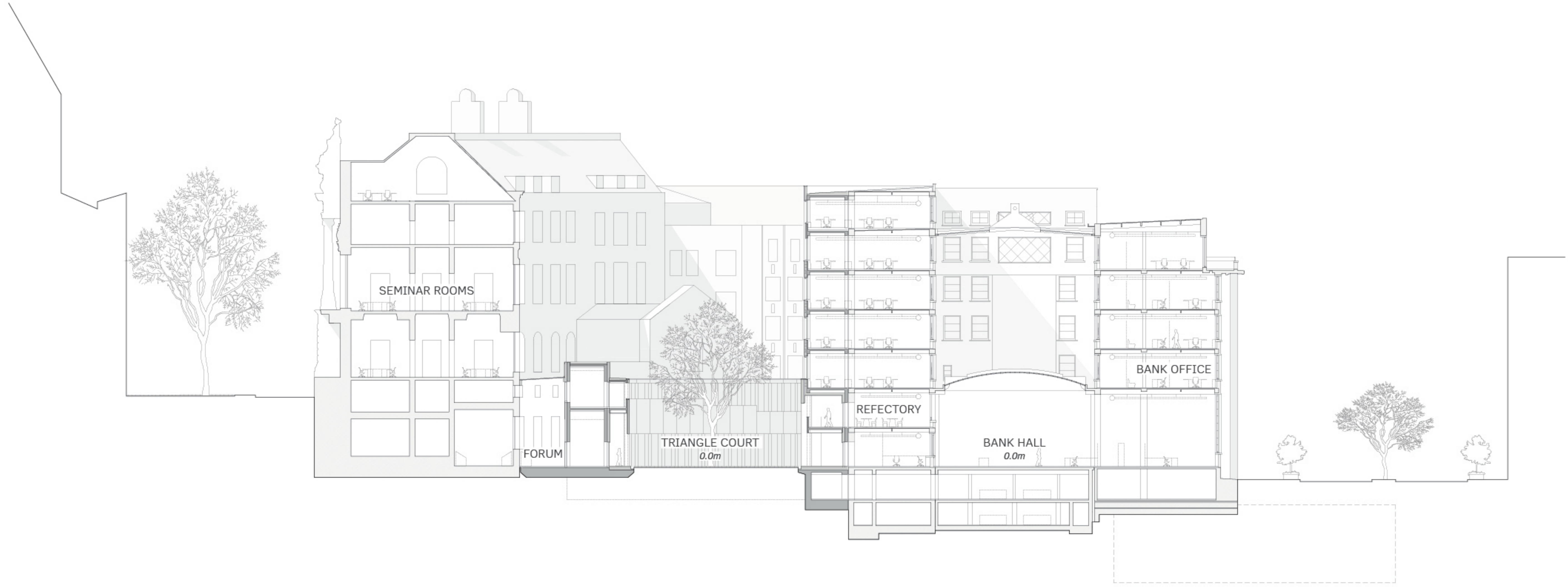




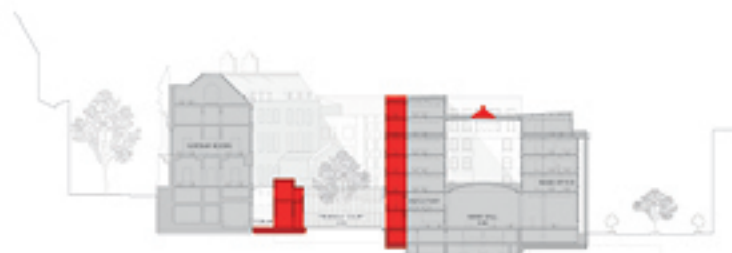
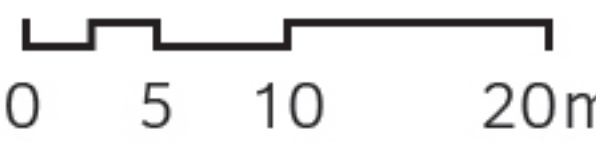
Transverse section through Bank entrance at Bd. de Berlaimont and Forum







Transverse section through triangular courtyard

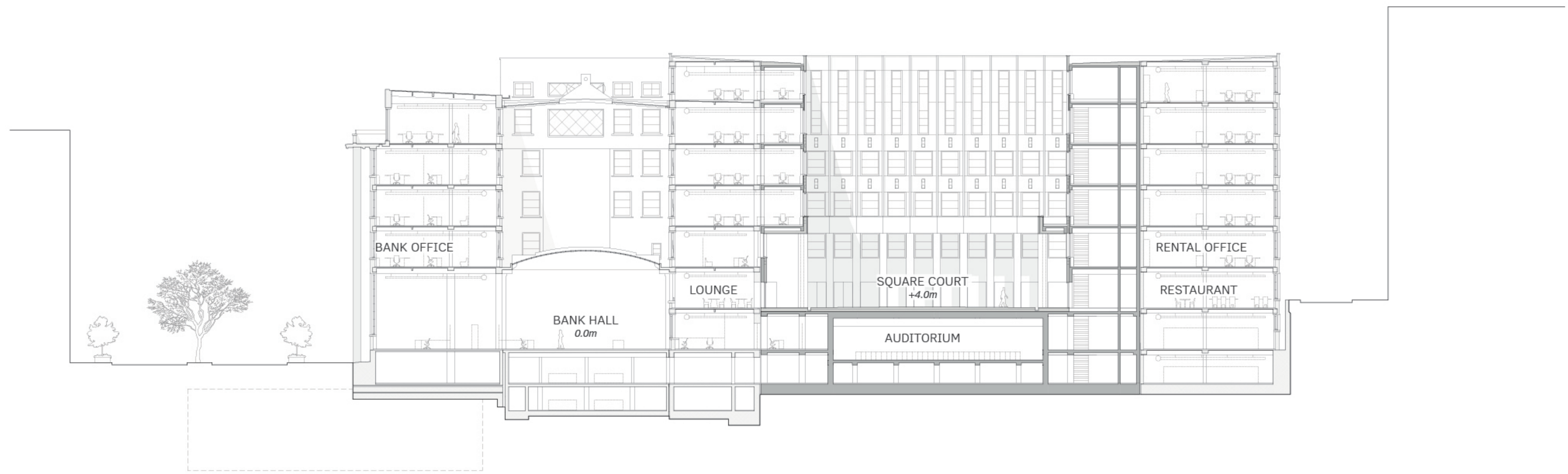


NEW/ OLD

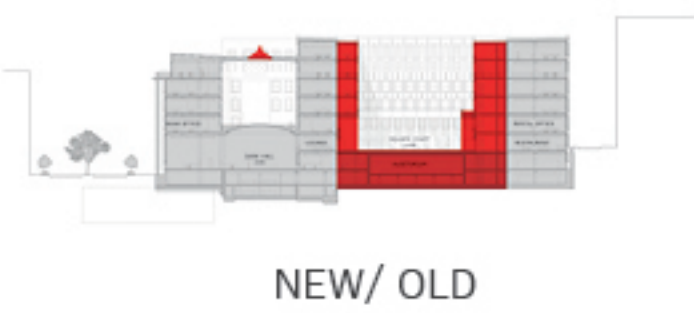
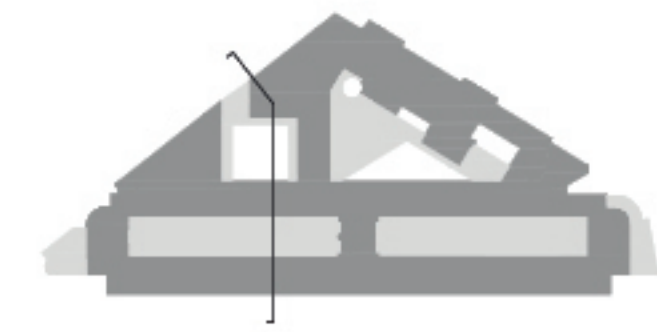
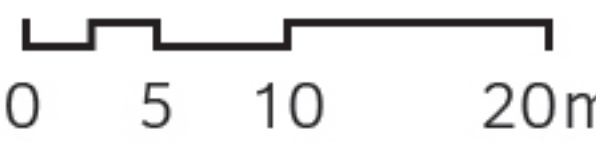


PROGRAM

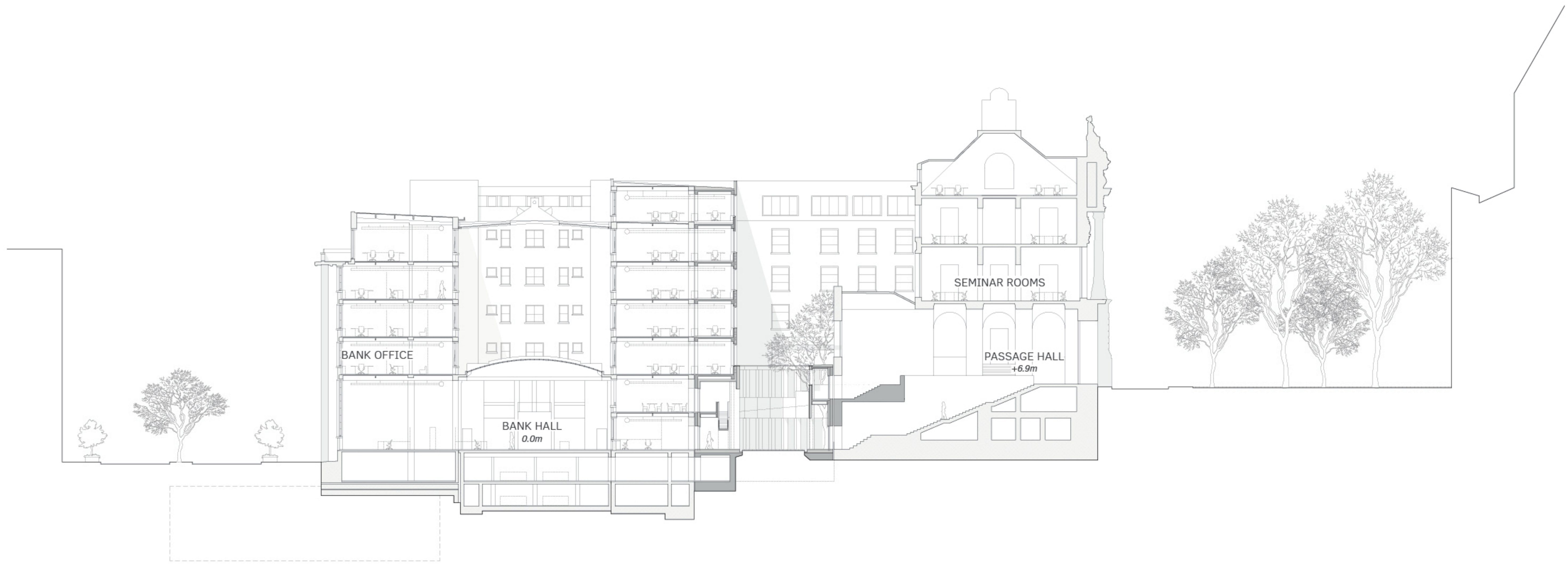




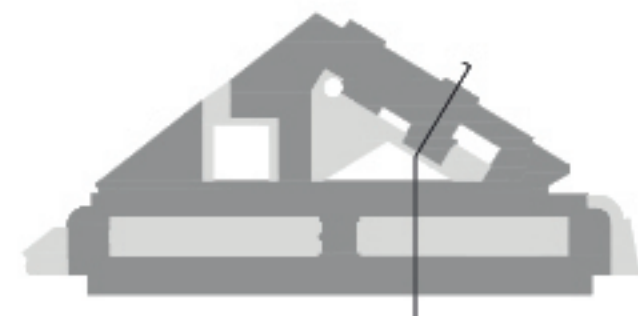
Transverse section through square courtyard



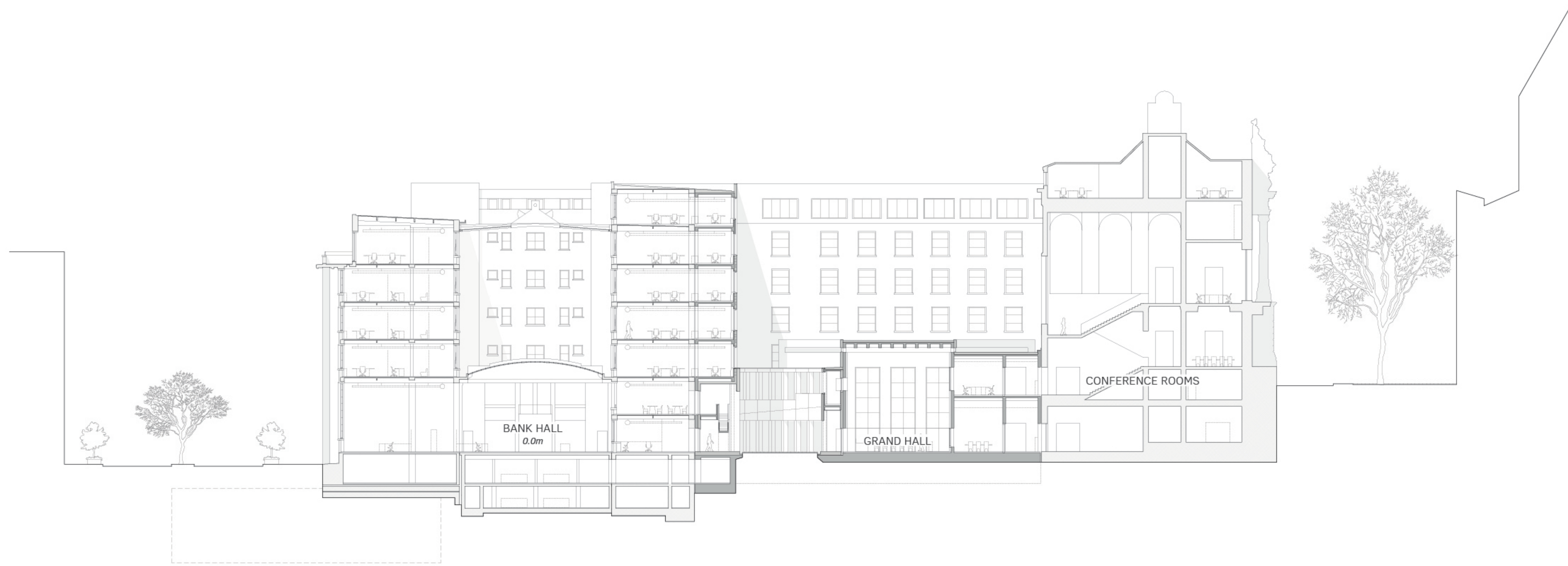




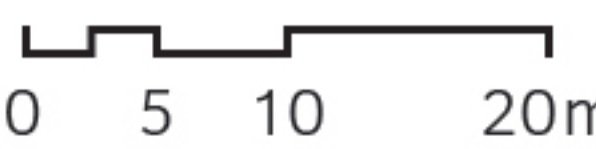
Transverse section through Hotel staircase-passage







Transverse section through Forum grand hall

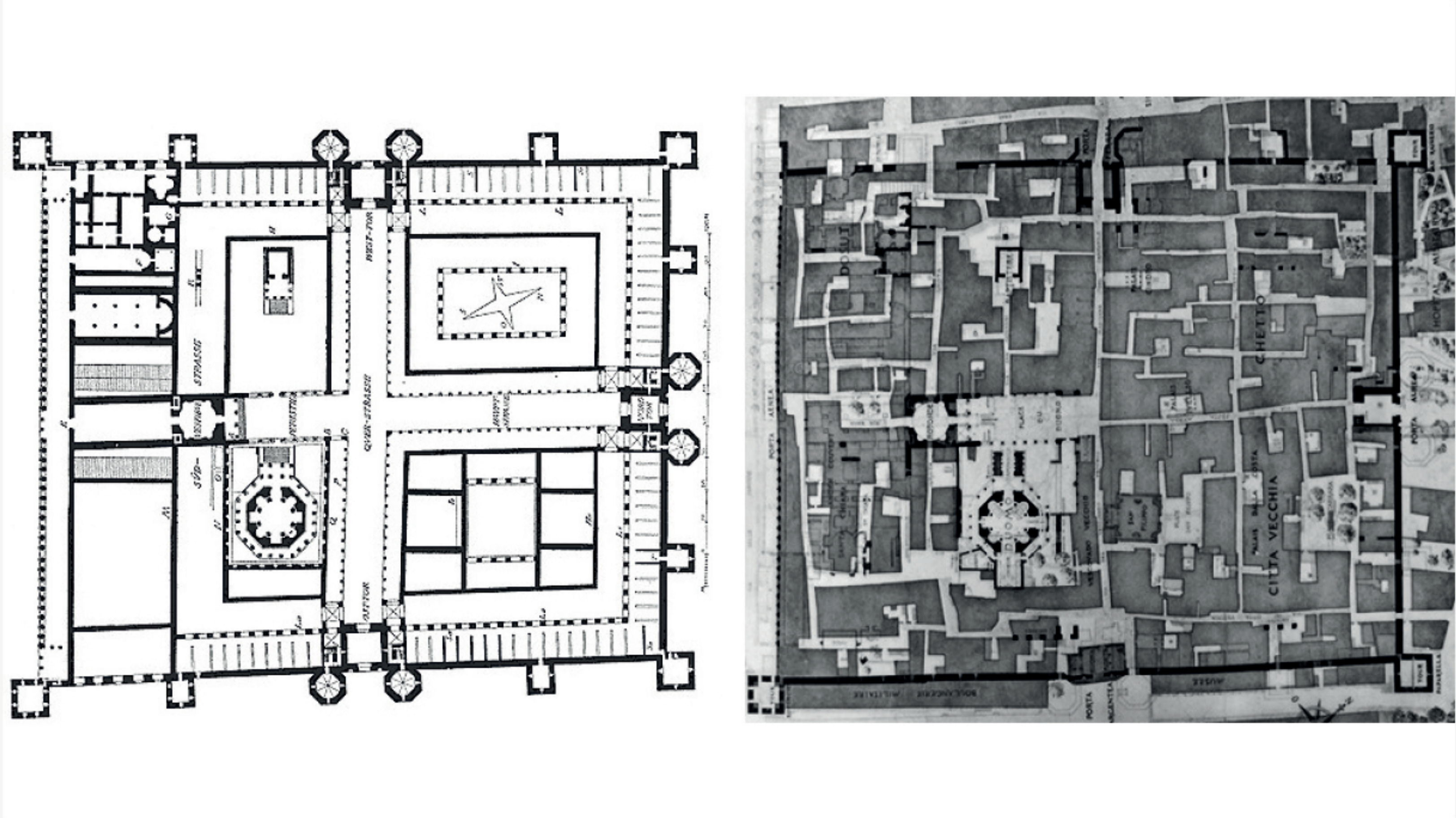




# Intelligent Ruin

## Future Bank

MSc4 AR3AI100 Week 3.1-3.3



Diocletian's Palace, Split, Plan of original palace 305 AD and Map of 1912

### Intelligent Ruin

*A building is a possibility, is conducive, preferably taciturn, silent, is willing, liberates space and mediates. Buildings as intelligent ruins. Suitable for use, fit for purpose, as Charles Voysey expressed it. Good buildings hide daily use; they are stable and stubborn, obstinately distributive and (following Kant) 'purposive without a purpose.' Therein lies the quality of their durability, of their cultural durability, which yields dignity. Expediency asks for the right scale, an utmost precision that leaves everything open that cannot be predicted. Aldo Rossi used to point unceasingly at this: a feeling for measure, discretion and preparedness, committed but not concerned. Architecture does not pass in time; time passes in architecture. Good buildings are straightforward. They are generous. The result of designing and building does not need to be simple but straightforward. We do not solve formal problems but building problems, and because of this, we do not need to involve ourselves with the arbitrariness of formal invention. In doing so, architecture can avoid becoming designed, and it is spared artificial homogeneity.*

From Bob van Reeth 'Good Architecture' Oase 90-42

How many lives can a building have? When we look at the Pantheon in Rome or the Hagia Sofia in Istanbul, we deal with structures whose form and material have allowed them to stand the test of time and accommodate many lives, shaping the

form of the city around them. If we think about the Diocletian Palace in Split, we recall the fabric of a building that literally became the bones of a city. Their interiors, and many others, have accommodated changing programmes according to the evolving needs. While a building's programme can be a leading design tool, when functions and necessities change over time – look at the given brief for the National Bank of Belgium project – a good building knows how to deal with change.

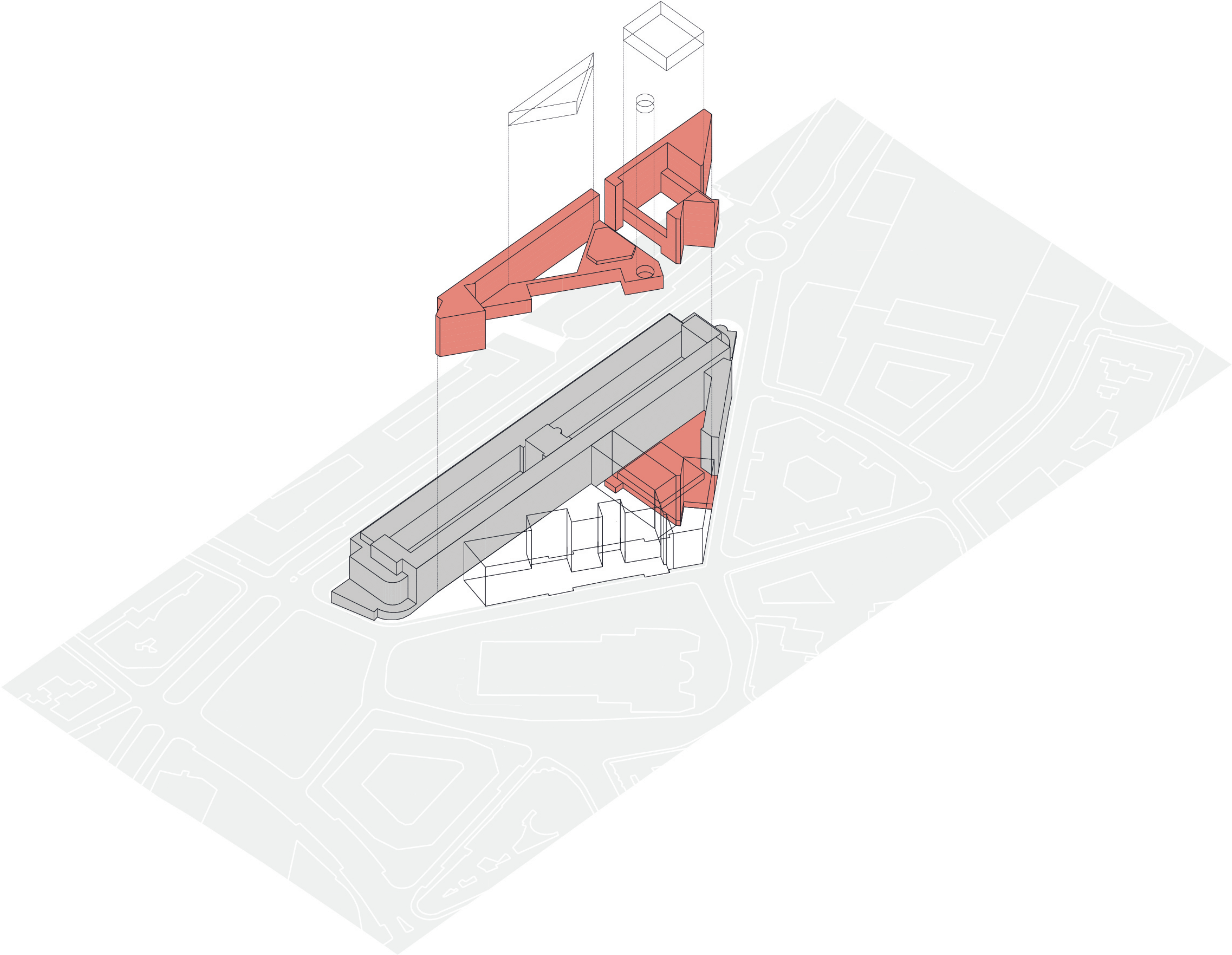
Vitruvius has given us the trinity: Firmitas, Utilitas, Venustas. Firmness, usefulness and beauty are three characteristics that can order an interior, a building or a city. Each can also be the reason to protect a building from demolition. If a building has a solid structure, this might have a lifespan of more than 100 years; think of the buildings that formed the tissue of the 19th-century expansions of historic European towns and which are now the playground for thankful contemporary architects. Those buildings had facades which were generally part of that structure. Now, thanks to ever more stringent energy policies, a building's skin might last 20-30 years. At the same time, an interior, along with the systems that service it, could change more frequently, depending on its quality and refinement, in line with the changing requirements of users or inhabitants.

So far, you have been thinking about the National Bank of Belgium as a repository of ideas about the city and society while trying to understand and critique its complex programme, as described in the brief of the NBB, programme requirements.

Interiors  
Buildings  
Cities

## Palace

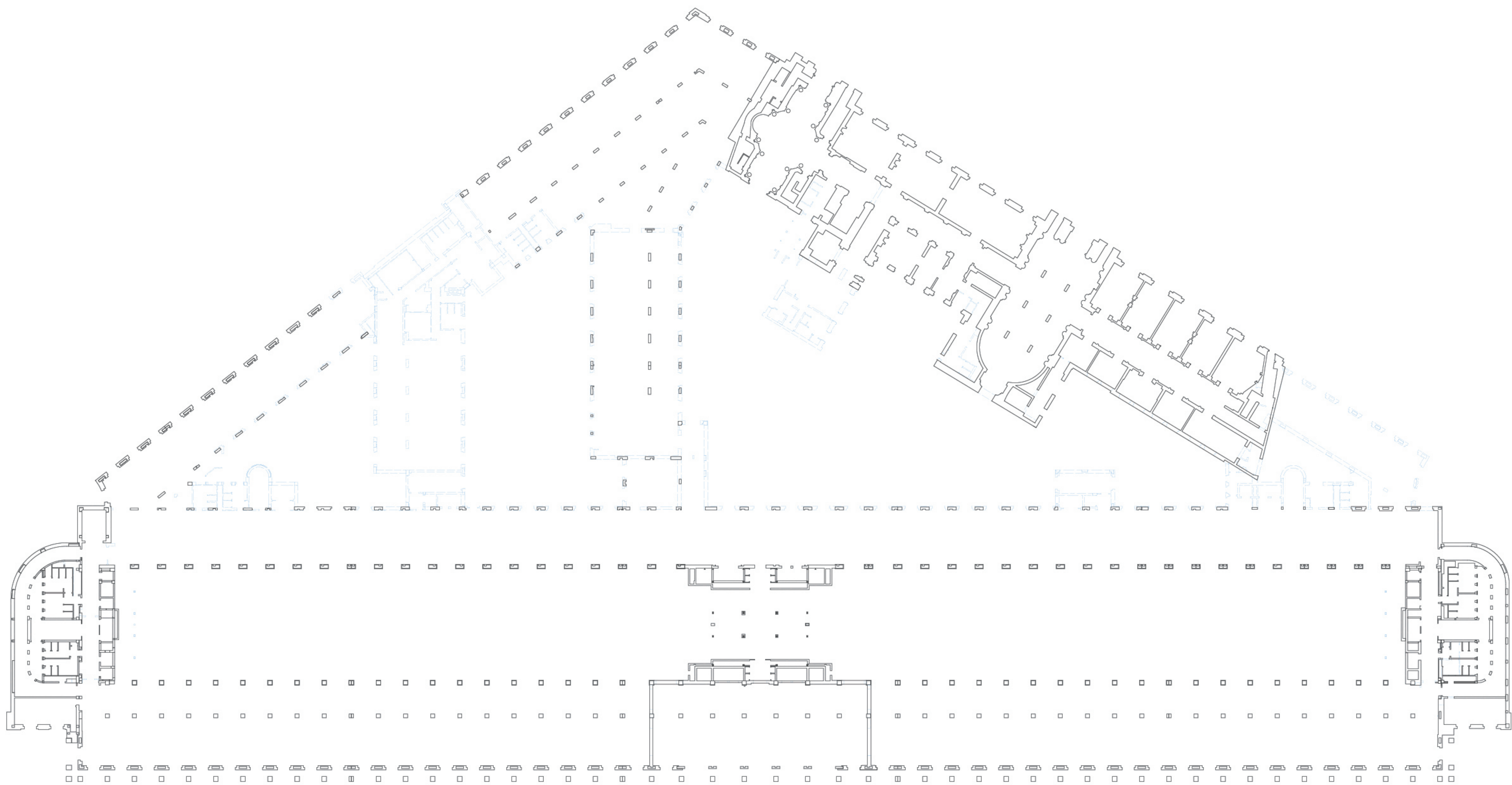




RETAINED  
ADDITION

New volumes: vessel in a vessel



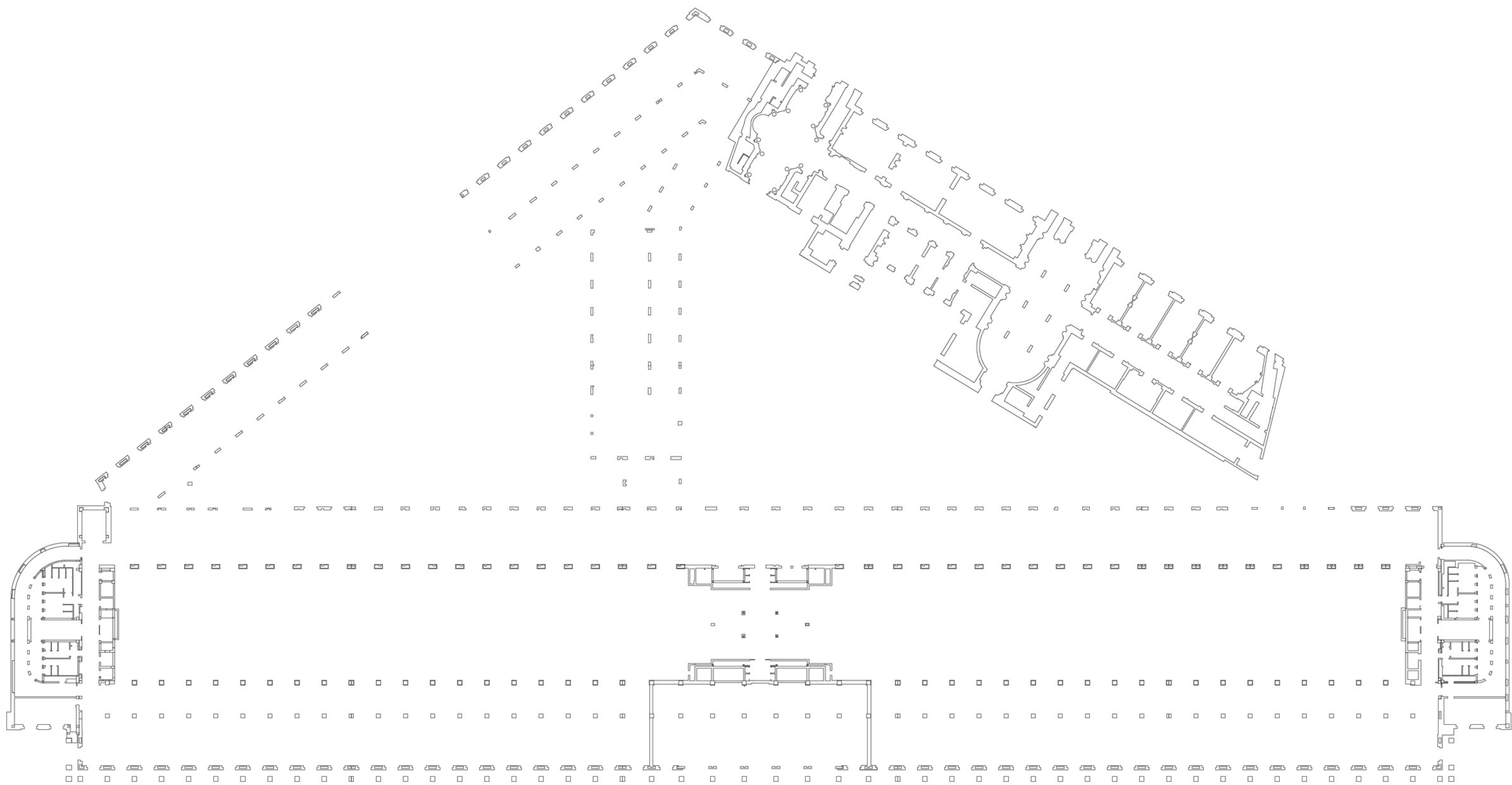


UPPER GROUND FLOOR

- RETAINED
- REMOVED

Inadequate parts of the building removed





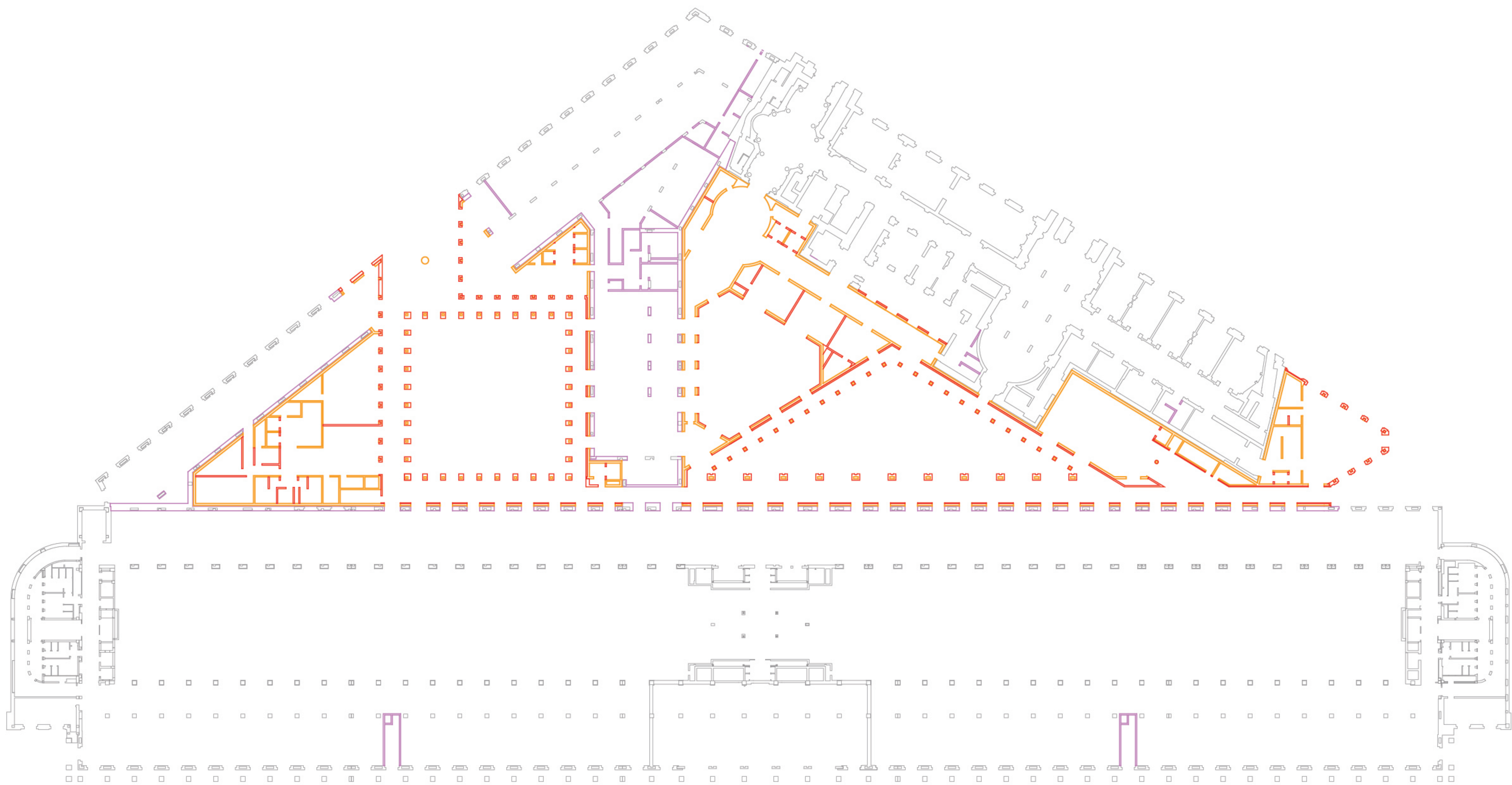
UPPER GROUND FLOOR



RETAINED

‘Inherited’ structure



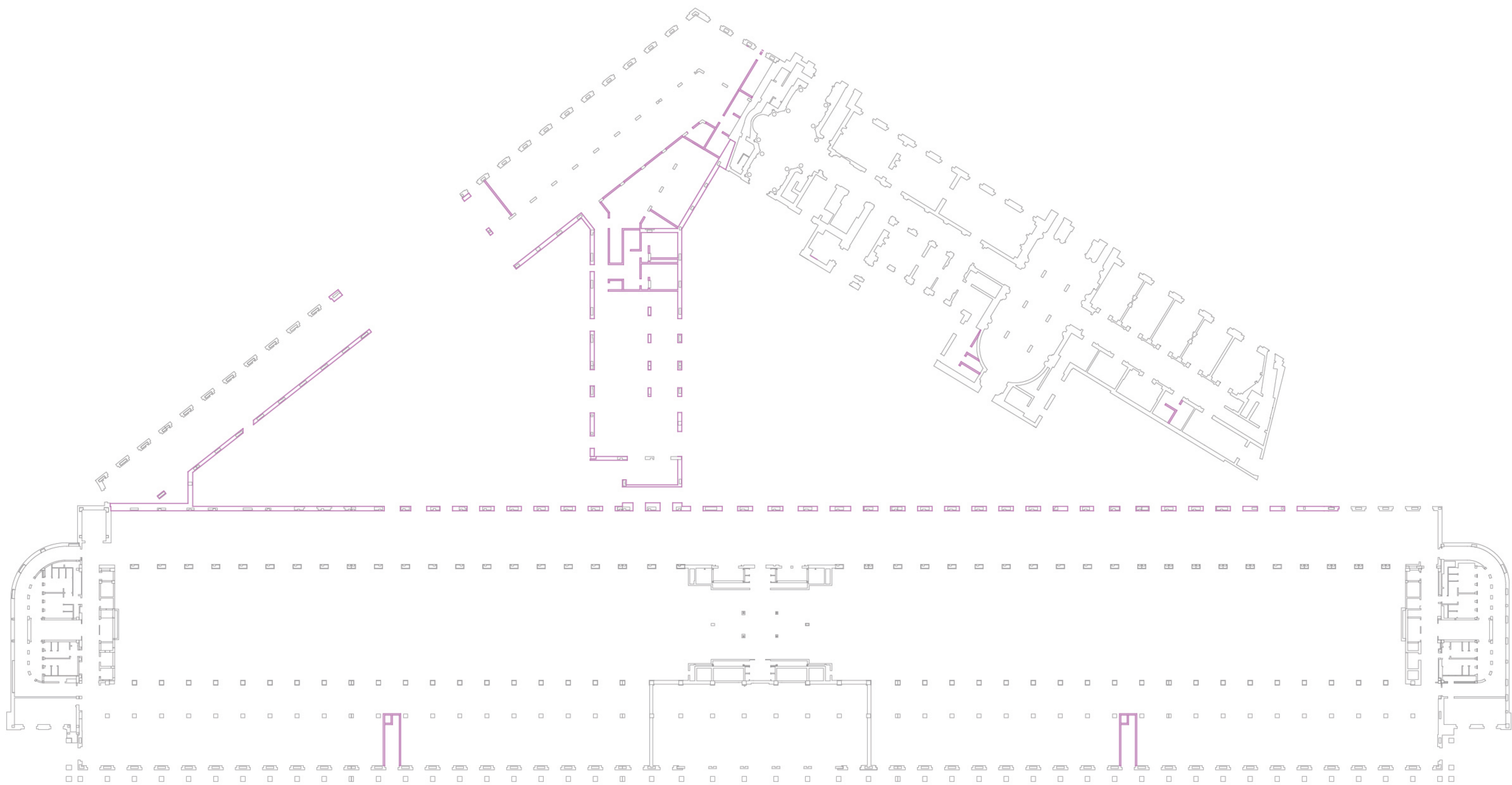


UPPER GROUND FLOOR

- RETAINED STRUCTURE AND WALLS
- NEW WALLS IN EXISTING STRUCTURE
- NEW STRUCTURAL WALLS AND COLUMNS (CLT)
- NEW WALLS IN NEW STRUCTURE

Layers of construction



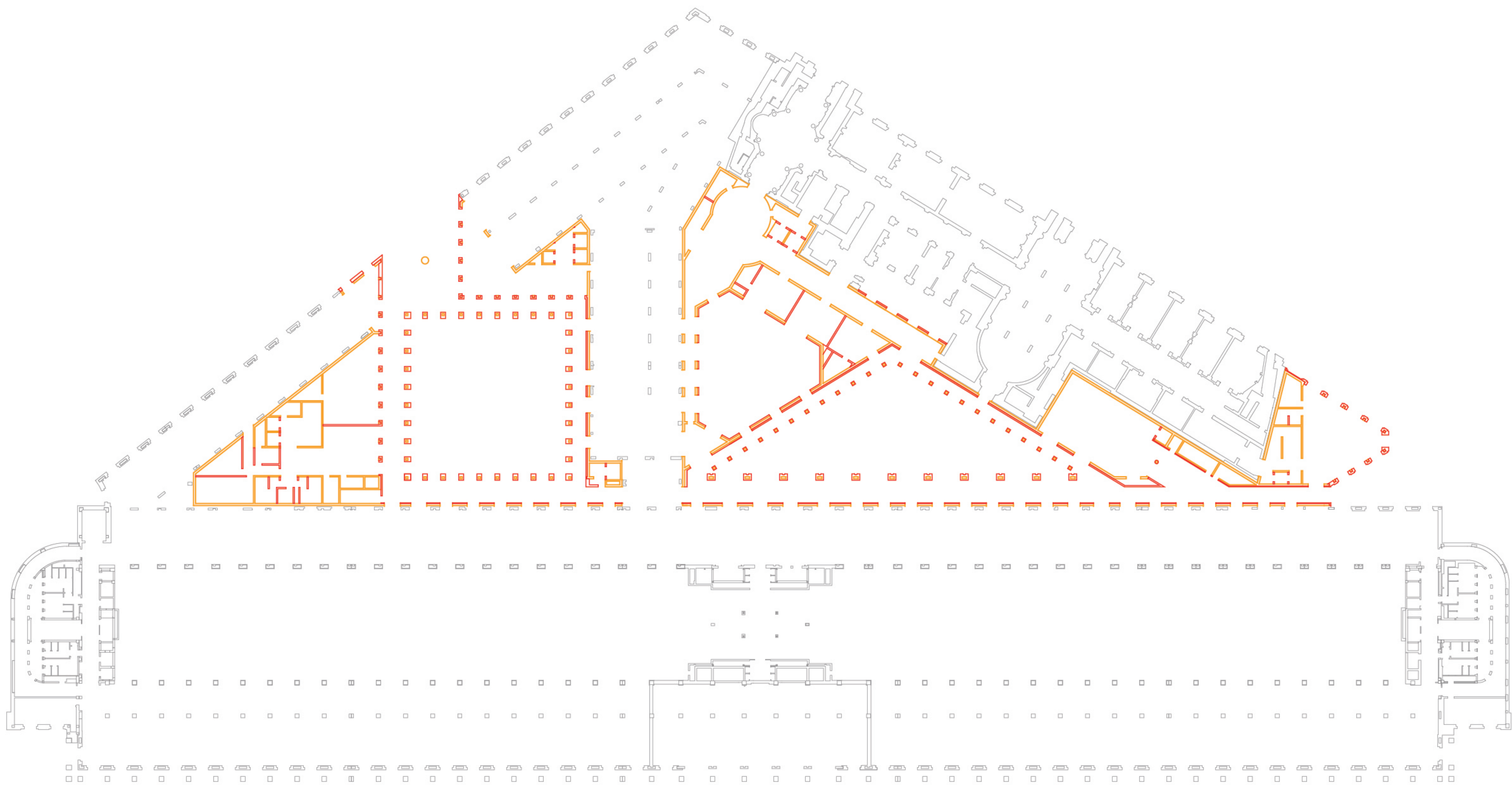


UPPER GROUND FLOOR

- RETAINED STRUCTURE AND WALLS
- NEW WALLS IN EXISTING STRUCTURE
- NEW STRUCTURAL WALLS AND COLUMNS (CLT)
- NEW WALLS IN NEW STRUCTURE

Modifications to existing building



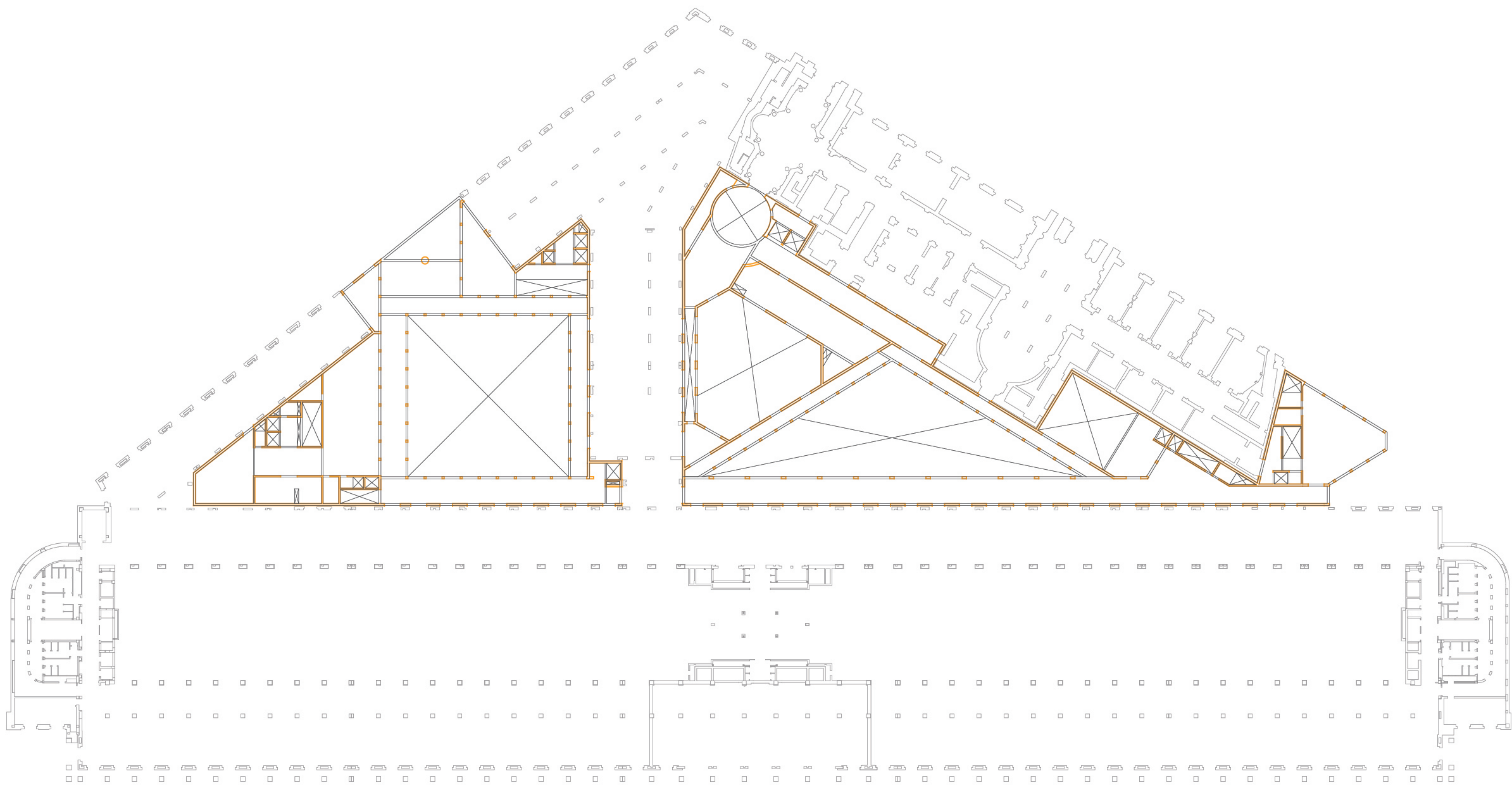


UPPER GROUND FLOOR

- RETAINED STRUCTURE AND WALLS
- NEW WALLS IN EXISTING STRUCTURE
- NEW STRUCTURAL WALLS AND COLUMNS (CLT)
- NEW WALLS IN NEW STRUCTURE

New additions



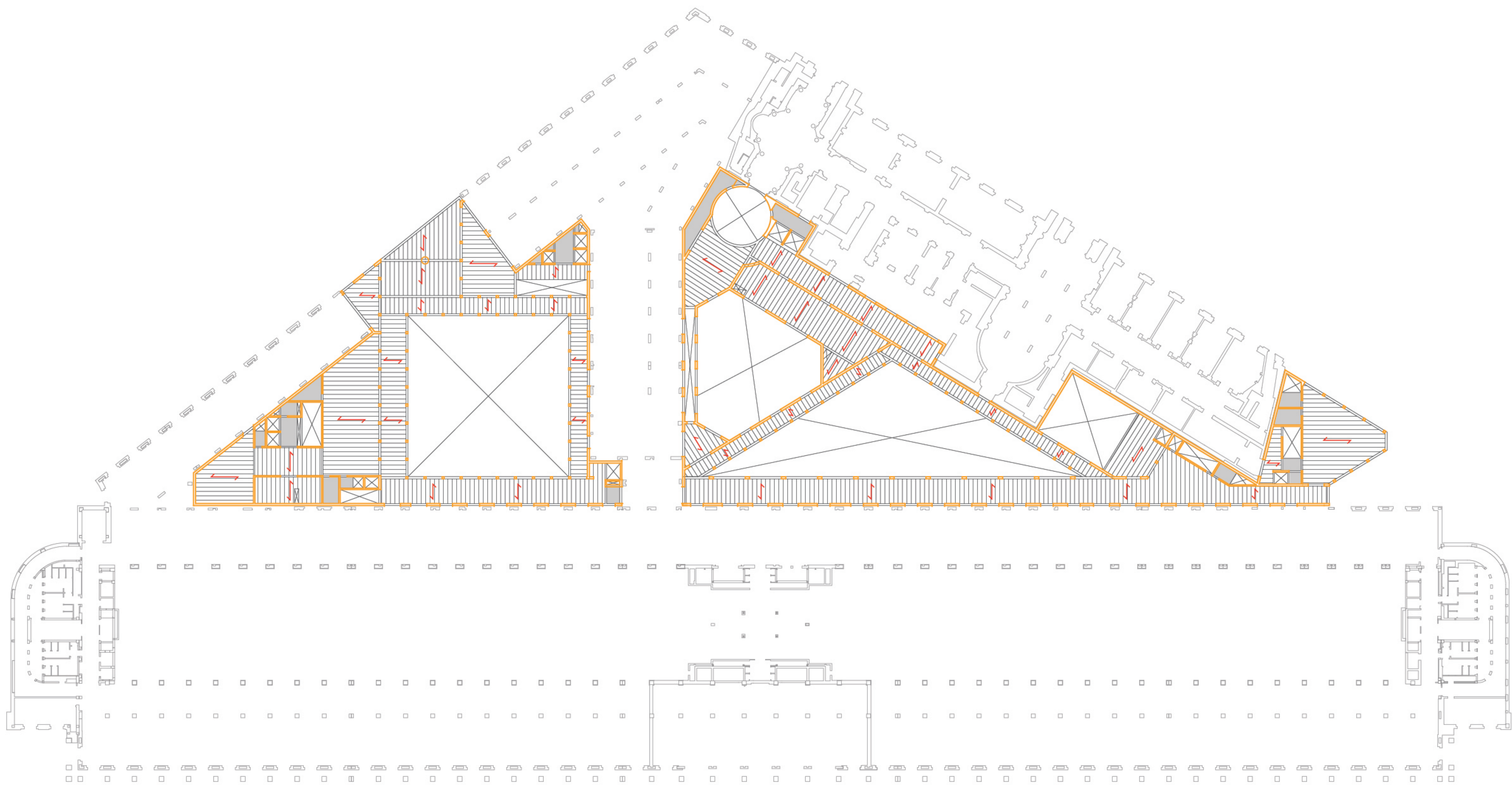


UPPER GROUND FLOOR

- RETAINED STRUCTURE AND WALLS
- NEW WALLS IN EXISTING STRUCTURE
- NEW STRUCTURAL WALLS AND COLUMNS (CLT)
- NEW WALLS IN NEW STRUCTURE

New floor slabs and cut-outs



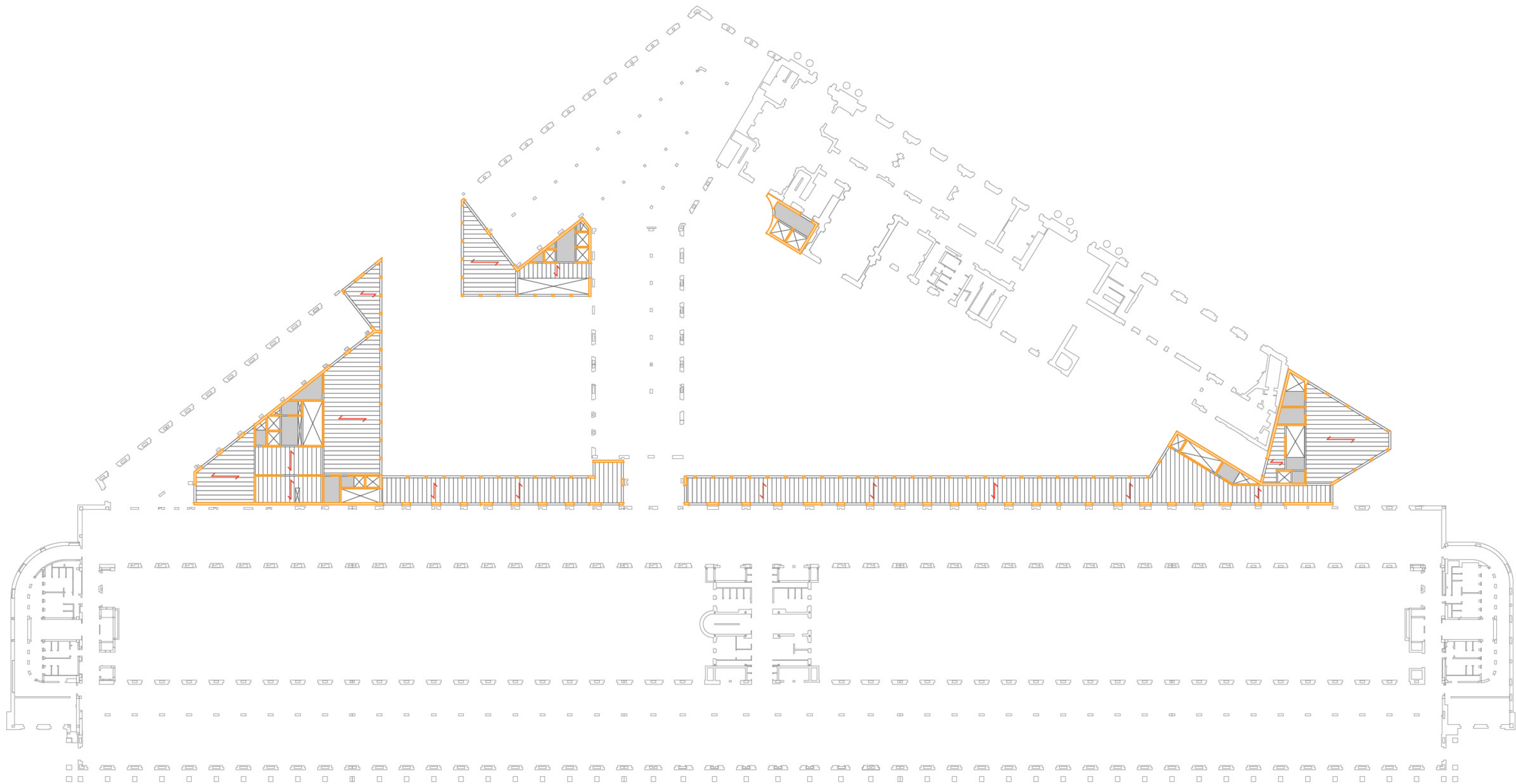


UPPER GROUND FLOOR

- RETAINED STRUCTURE AND WALLS
- NEW WALLS IN EXISTING STRUCTURE
- NEW STRUCTURAL WALLS AND COLUMNS (CLT)
- NEW WALLS IN NEW STRUCTURE

Structural spans



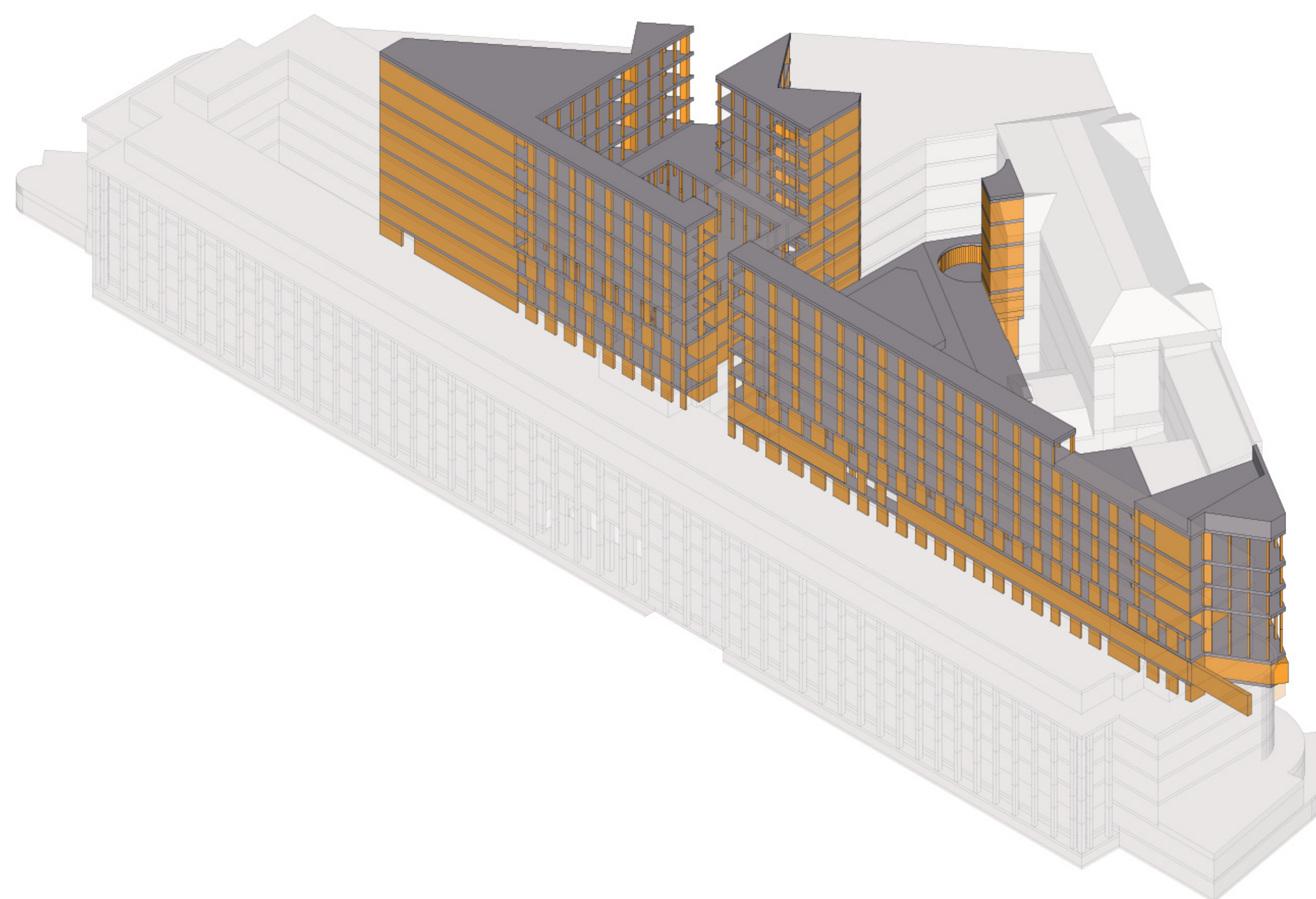
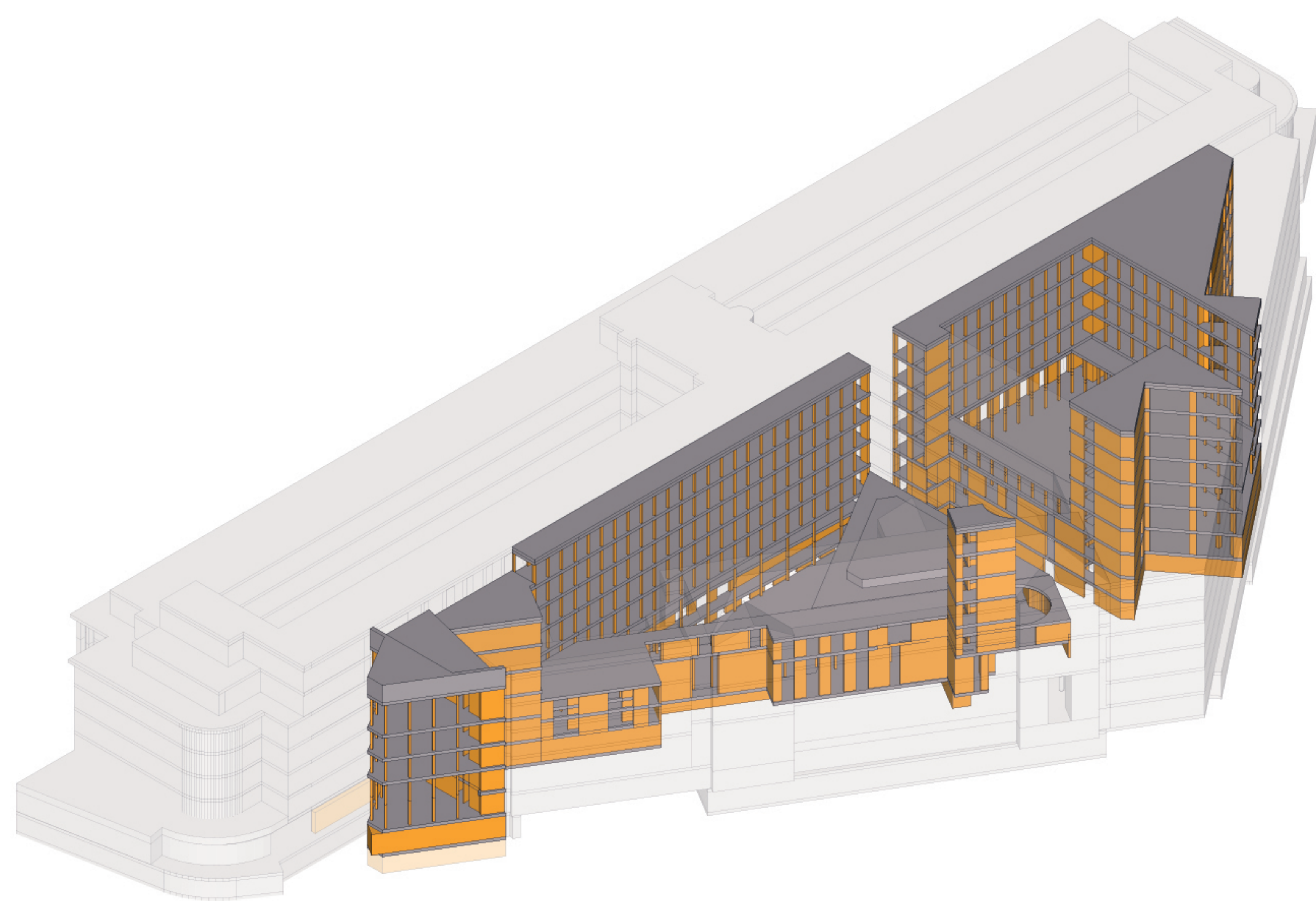


TYPICAL FLOOR

- RETAINED STRUCTURE AND WALLS
- NEW WALLS IN EXISTING STRUCTURE
- NEW STRUCTURAL WALLS AND COLUMNS (CLT)
- NEW WALLS IN NEW STRUCTURE

Structural spans





CLT wall panels and columns



PROPOSED MIXED SYSTEM:  
USING BOTH AIR AND HYDRONIC SYSTEMS.

1. ALWAYS PRESENT: PRIMARY HEATING/ COOLING  
VIA HYDRONIC SYSTEM - RADIANT HEATING PIPES.  
HEATS/ COOLS TO A FIXED TEMPERATURE ALL YEAR:  
24 DEGREES.

2. VENTILATION AND EXTRA HEATING/ COOLING  
VIA CENTRALIZED HVAC (SUPPLY ONLY) THAT USES  
MIXERS TO REGULATE LOCAL TEMPERATURE.

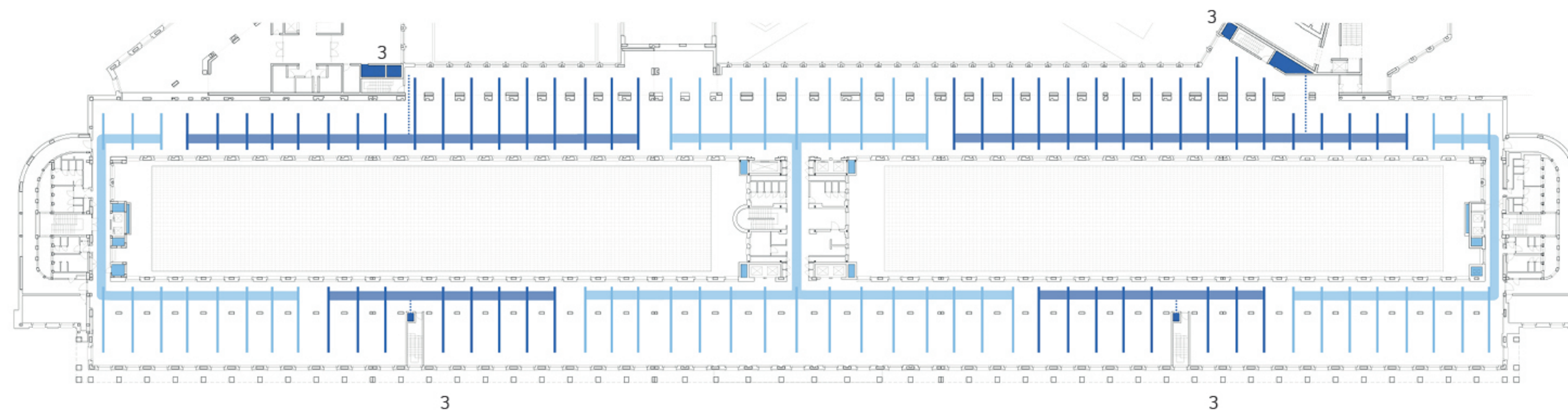
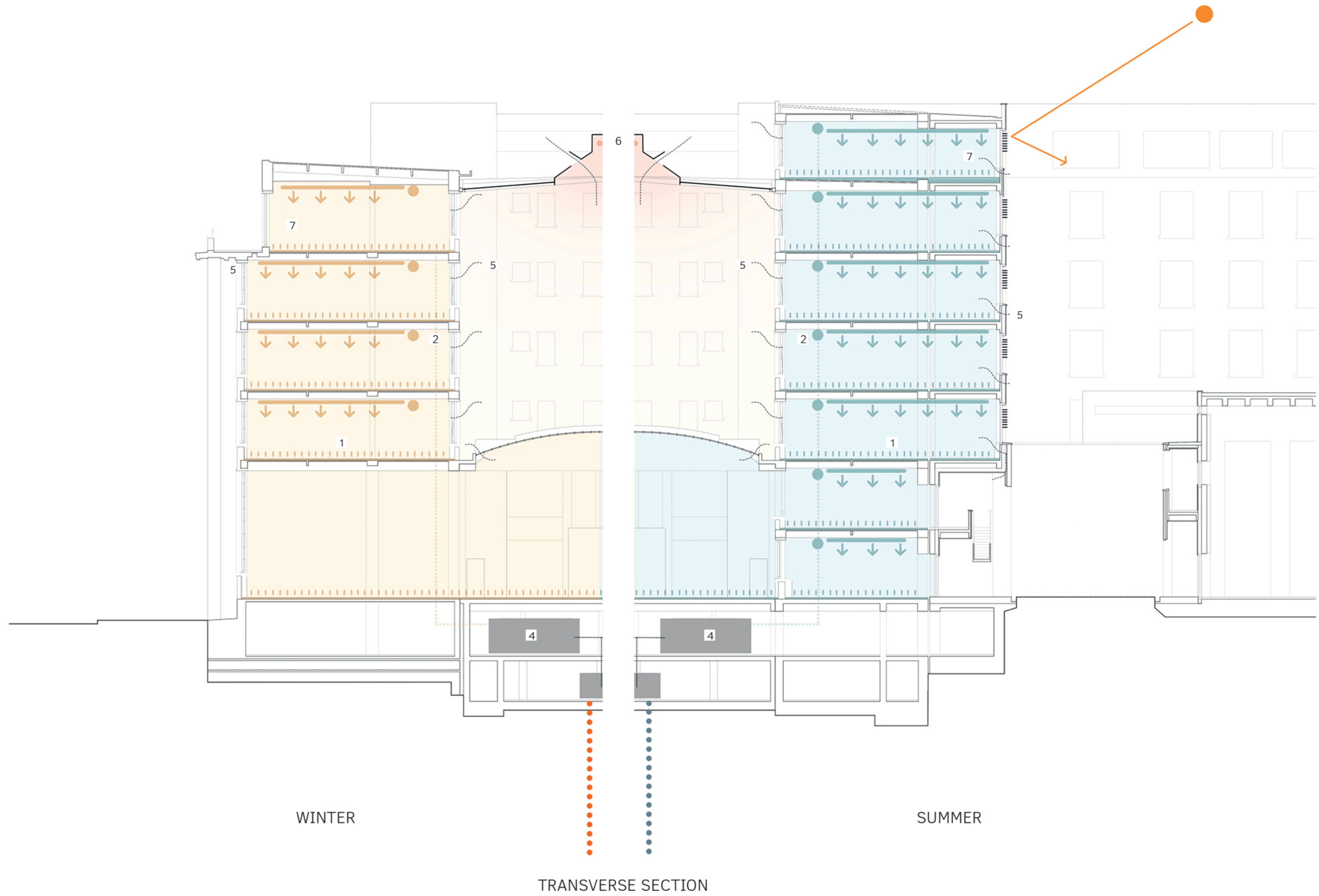
3. MAIN VERTICAL RISERS SPREAD EVENLY OVER THE  
NEW CORES (5 INSTEAD OF 3) TO REDUCE THE DUCT  
SIZES.

4. ALONG WITH THE BOILER/CHILLER, THE NEW  
AHUs ARE LOCATED ON THE BASEMENT TO AVOID  
ENCROACHING THE TERRACE. BOTH SYSTEMS ARE  
CONNECTED TO GEOTHERMAL WELLS BELOW THE  
GROUND.

5. EXHAUST VIA NATURAL VENTILATION. FILTERED  
PRESSURE VENTS ADDED TO NEW AND EXISTING  
FACADES TO AID WITH VENTILATION EVEN WHERE  
WINDOWS CANNOT BE OPENED.

6. ATRIUM ROOM MODIFIED TO ACT AS SOLAR  
CHIMNEY, WITH OPENINGS TO EXHAUST AIR FROM  
THE OFFICES. HEAT RECOVERY COIL STORES SOLAR  
HEAT IN THE BASEMENT/ GEOTHERMAL WELL.

7. USER CONTROL: VENTS AND WINDOWS CAN BE  
OPENED/ CLOSED. HVAC TEMPERATURE CAN BE  
CHANGED BY MODIFYING FAN SPEED OR USING A  
THERMAL MIXER. WINDOWS FACING SOUTH AND WEST  
EQUIPPED WITH BLINDS TO BLOCK GLARE.



## Climate strategy



# Fragment

## Future Bank

MSc4 AR3AI100 Week 3.4-3.7



Entrance Querini Stampalia, Venice, architect Carlo Scarpa (1950-63)

### Fragment

If the existing building, as it stands, can be understood as an intelligent ruin, then how do your plans for change at the bank adjust or transform it while taking advantage of its inherent structure and qualities?

You have individually started to consider this strategically in relation to the site as a whole and its place within the city. Up to P3, we would like you to translate your more intimate knowledge of the buildings, in terms of form, material, structure and operation, by concertedly addressing a detailed fragment. You should choose where to work with care, as a means to elucidate your broader concerns and as being exemplary of your attitude to the whole. It should be a significant part of the building and address significant thresholds: where new relates to old; interior relates to exterior; private relates to public, or the bank relates to another function, for example - focusing on interesting architectural conditions and junctions. Your development should consider the totality of the building fabric, beyond structure and envelope; considering secondary and tertiary layers, how elements such as services and linings might be integrated and the ways in which the resulting architecture might accommodate people and inhabitation in time as well as in space. This development should be presented through large scale plans and sections and three-dimensional models, which might be physical, digital or both.

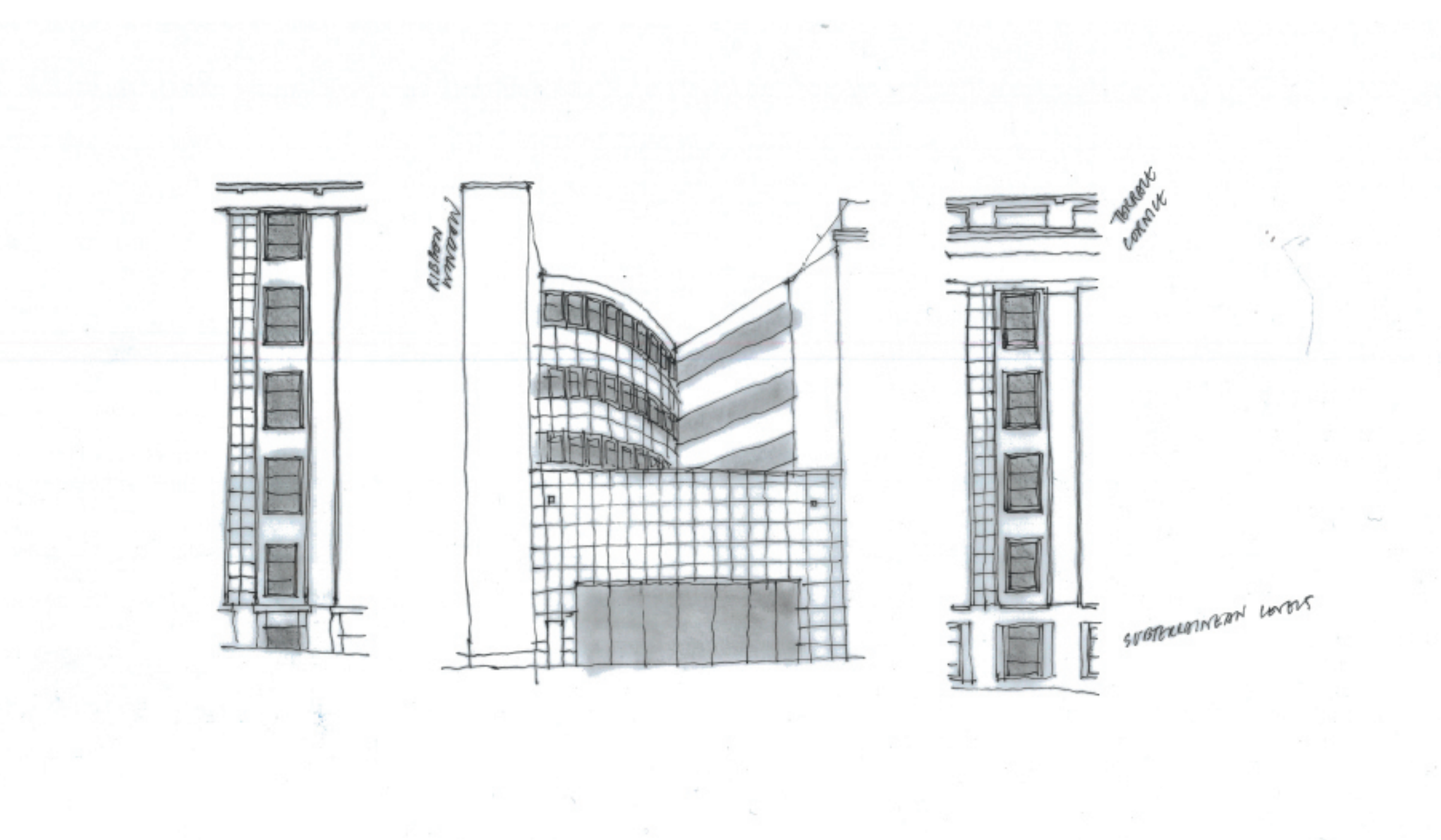
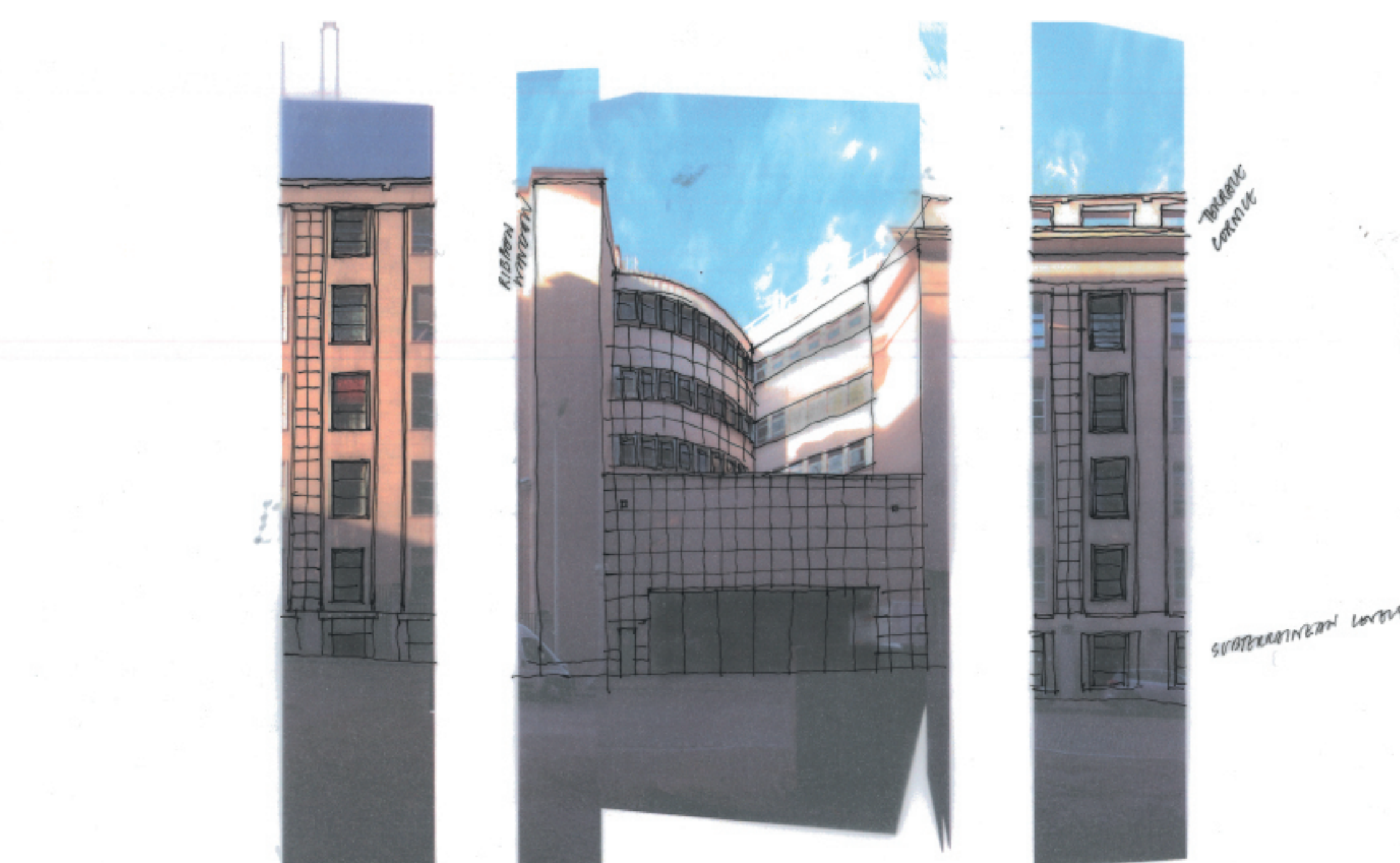
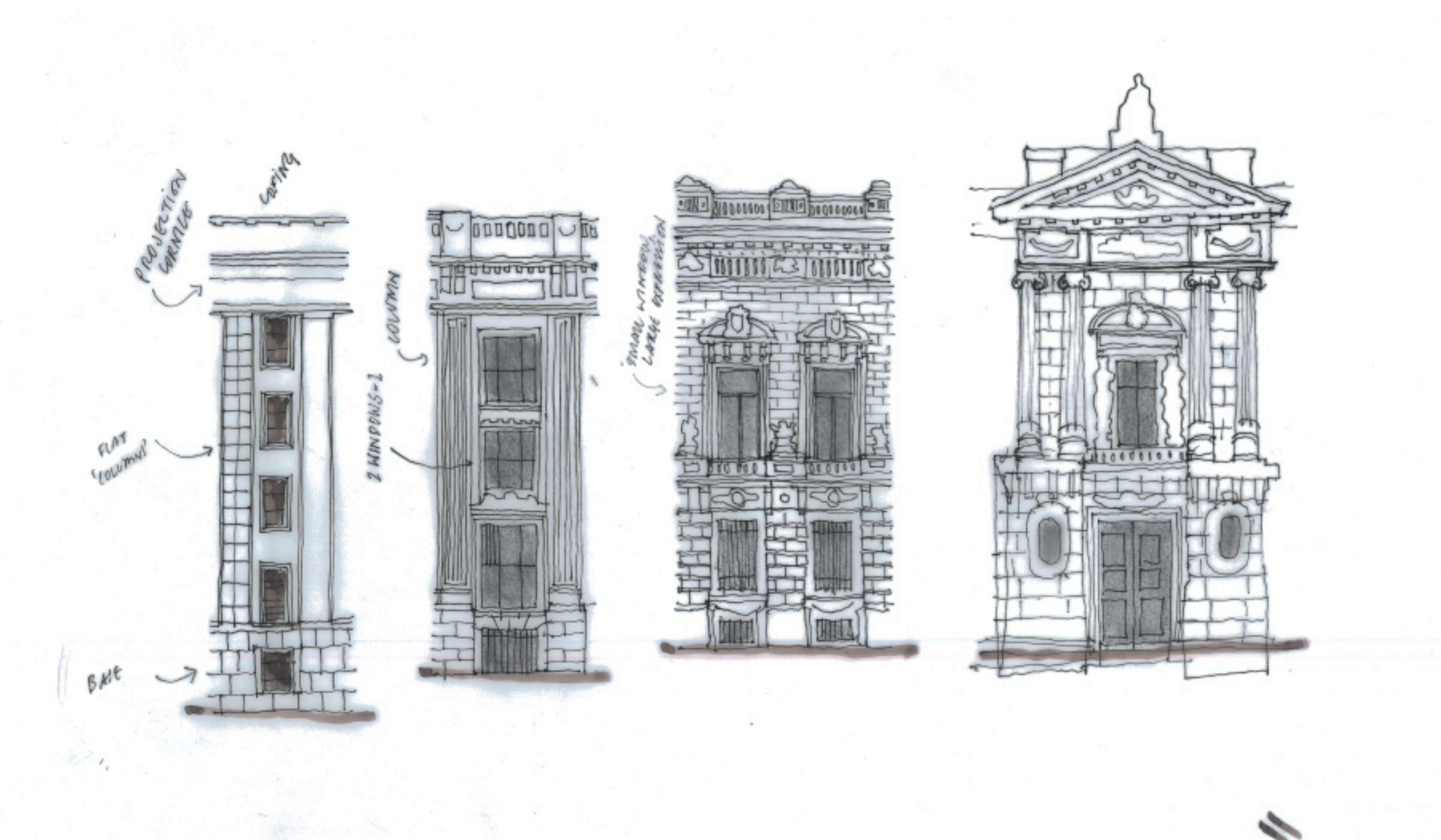
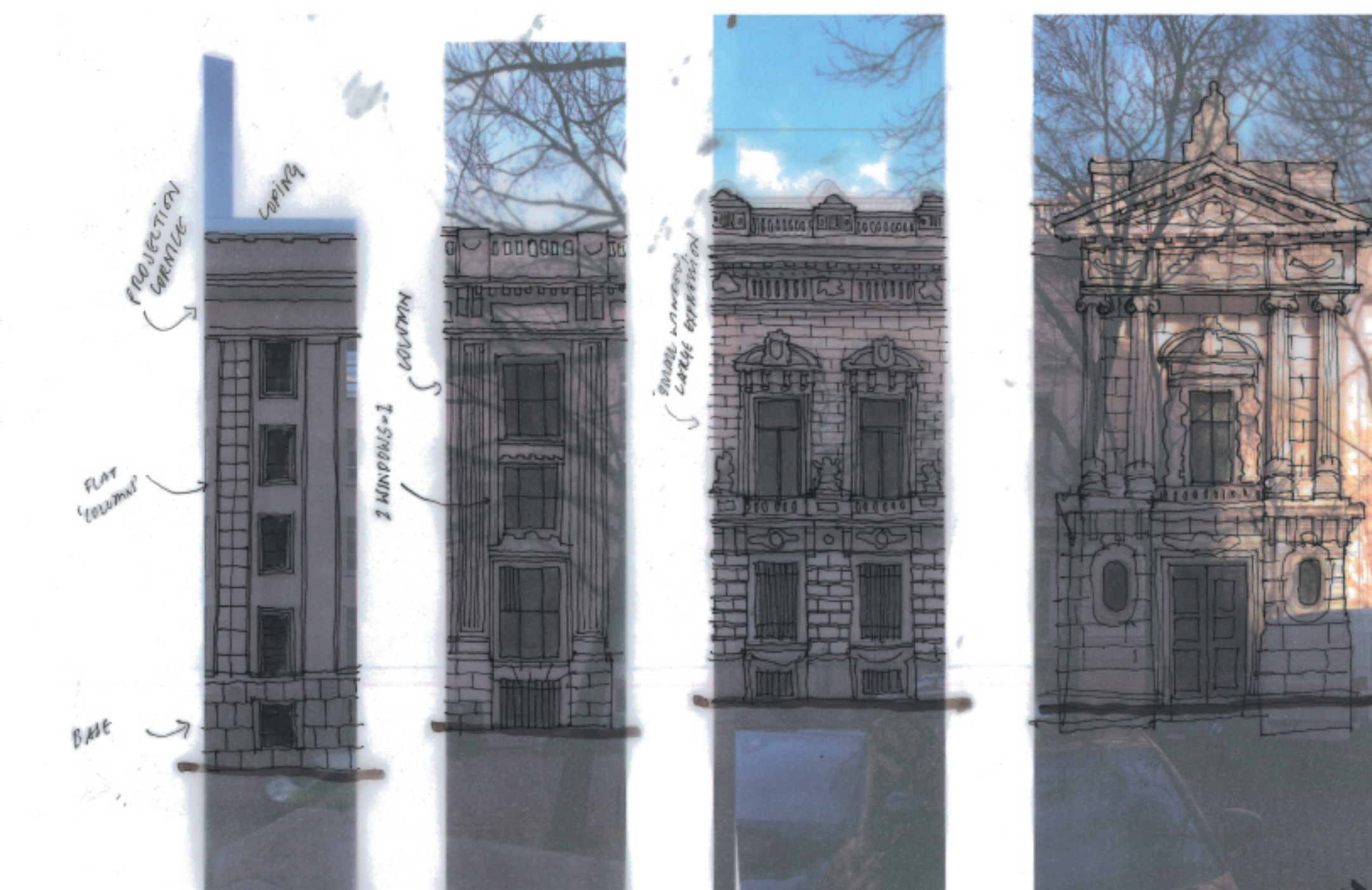
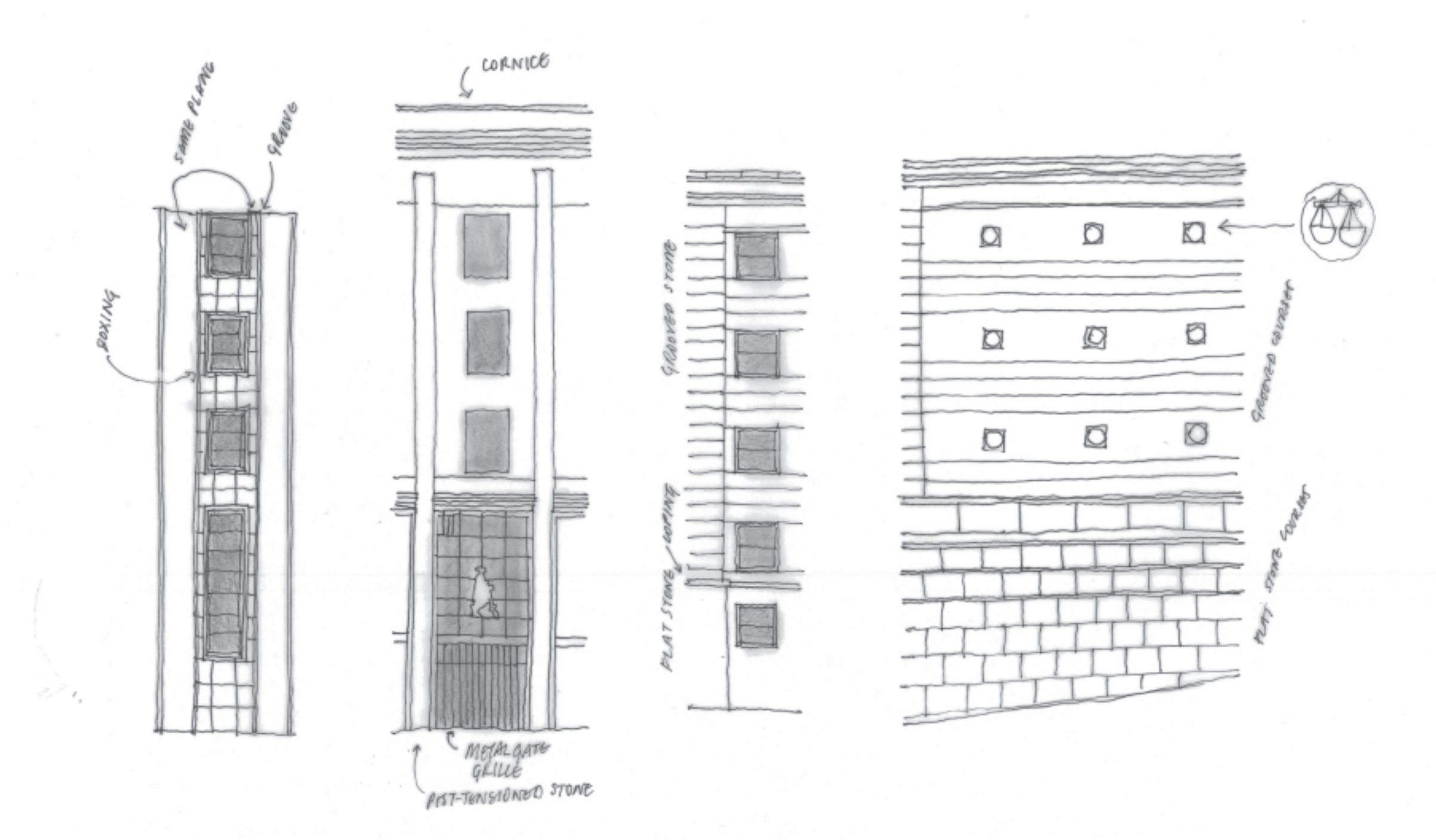
### Fragment of a fragment

Through a large scale physical model, a fragment of the fragment 1:25 scale, a subsequent brief will ask you to speculate on how different publics might inhabit this piece of building through the course of a day. This engagement in the relationship between strategy and detail is a critical space within which the architect operates. The fragment should allow you to address questions of building technology, construction and material usage at one scale, but the insights gained from it should also be folded back into your attitude towards the buildings as a totality and inform your design of the wider project

Interiors  
Buildings  
Cities

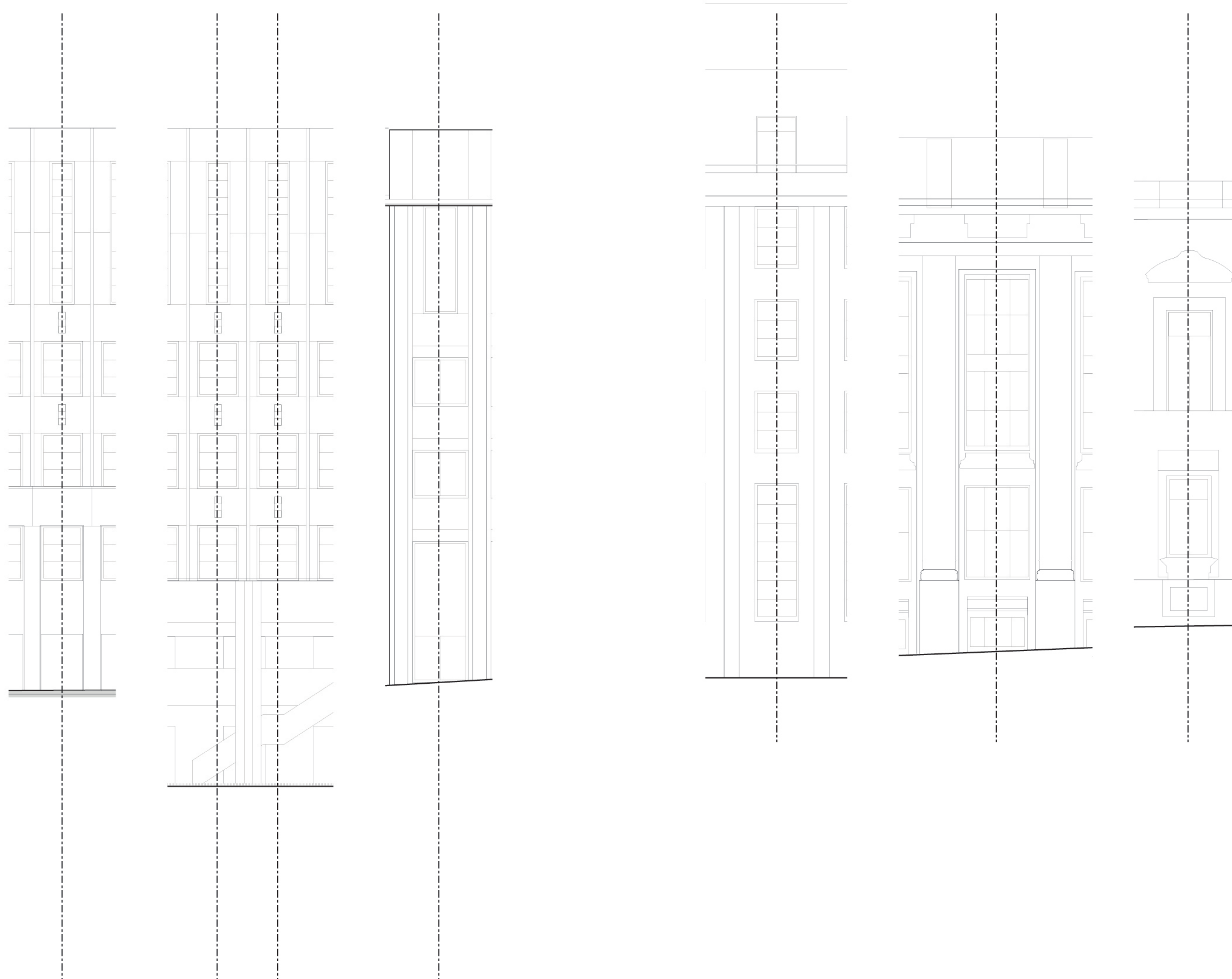
Palace





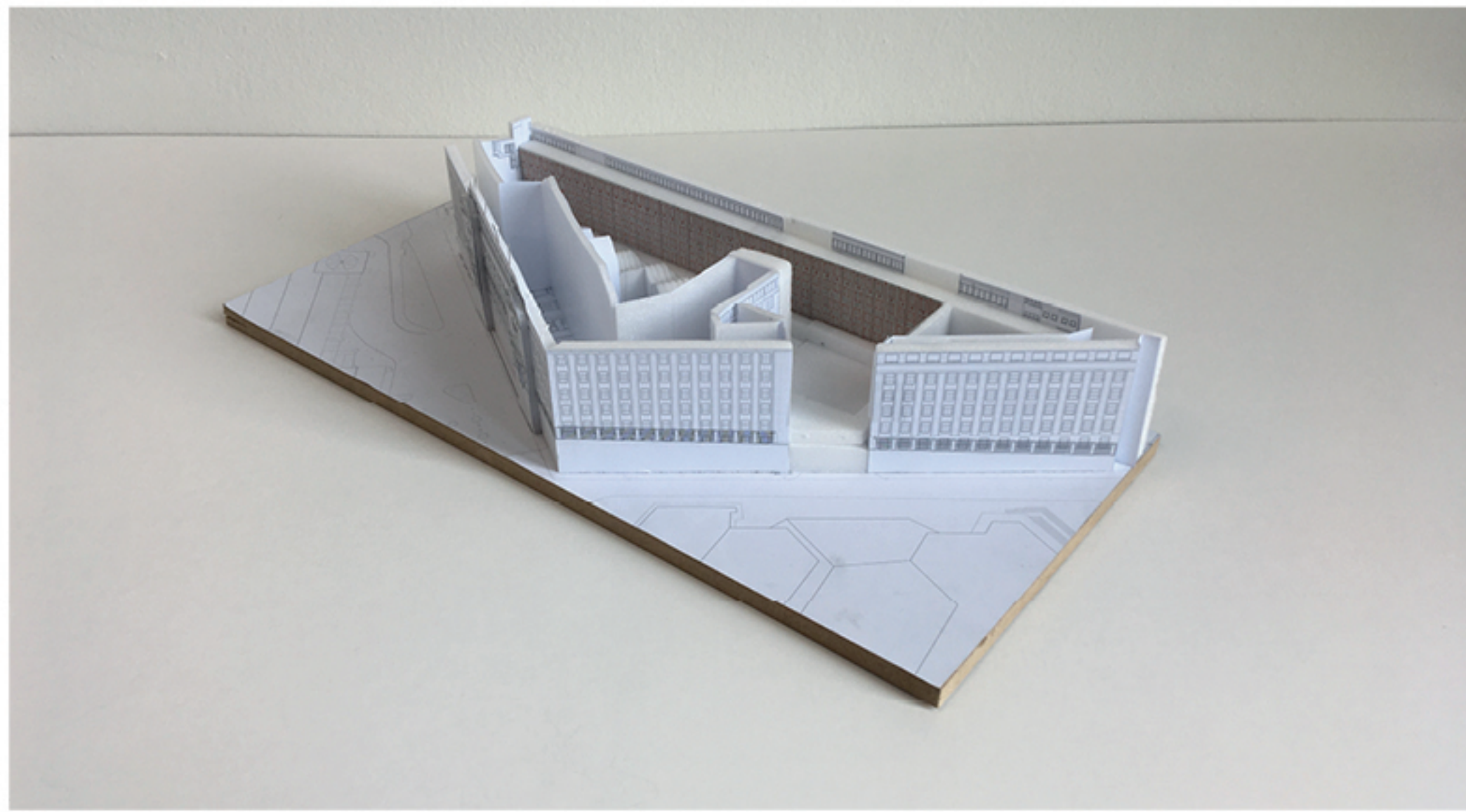
## Understanding existing facades





### Comparison with existing facades





Facade process





TERRACOTTA THAT RESEMBLES LIMESTONE. SOURCE: NBB



ALUMINIUM CLADDING TO RECALL BANK HALL COLUMNS. SOURCE: NBB

Materiality





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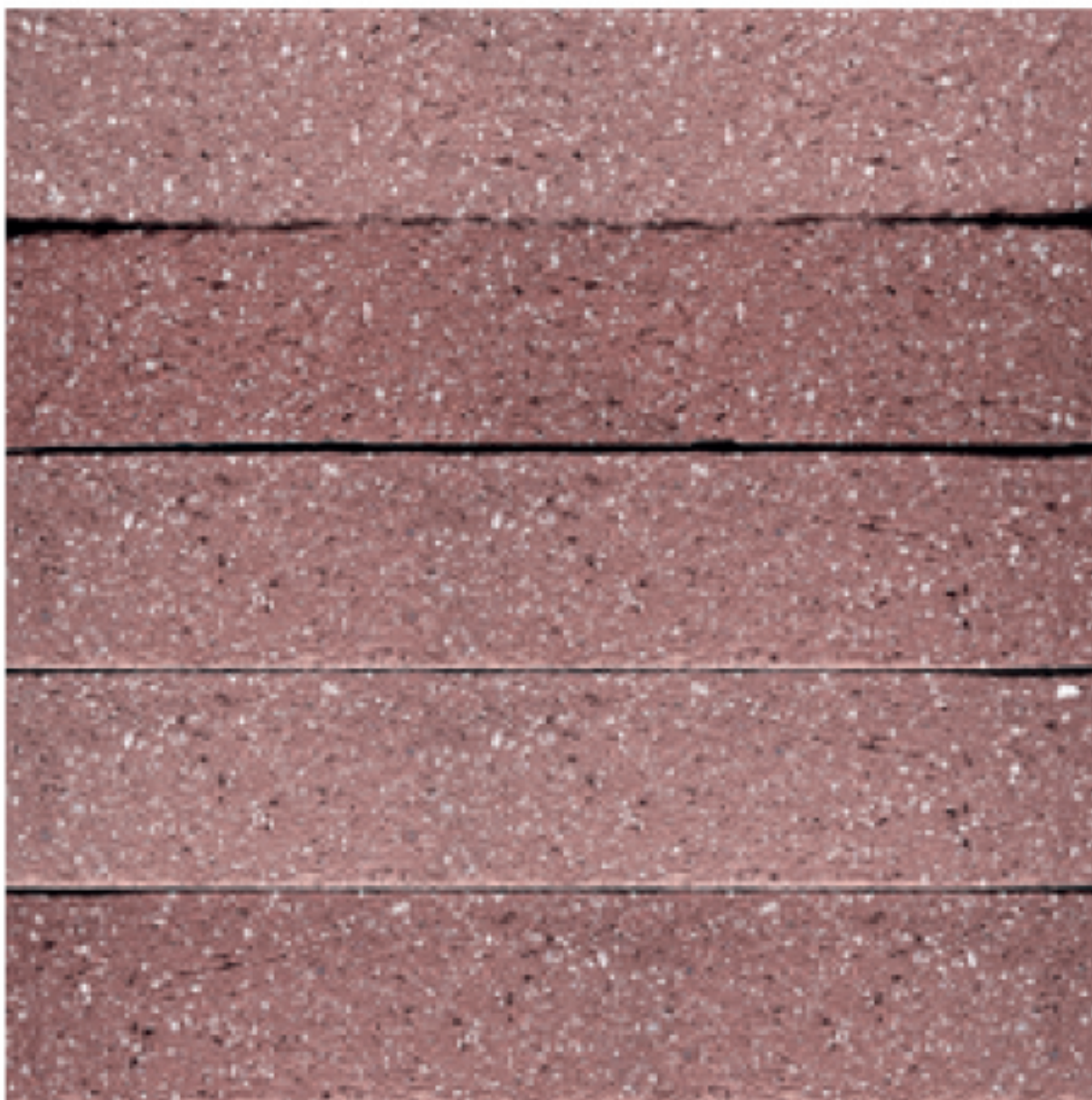
[Contact](#)

# WasteBasedBricks®

The WasteBasedBrick® is our proof that it's possible to build high-quality, aesthetic structures from waste.



**WasteBasedBricks®**  
Orange / Punched



**WasteBasedBricks®**  
Radish / Sliced



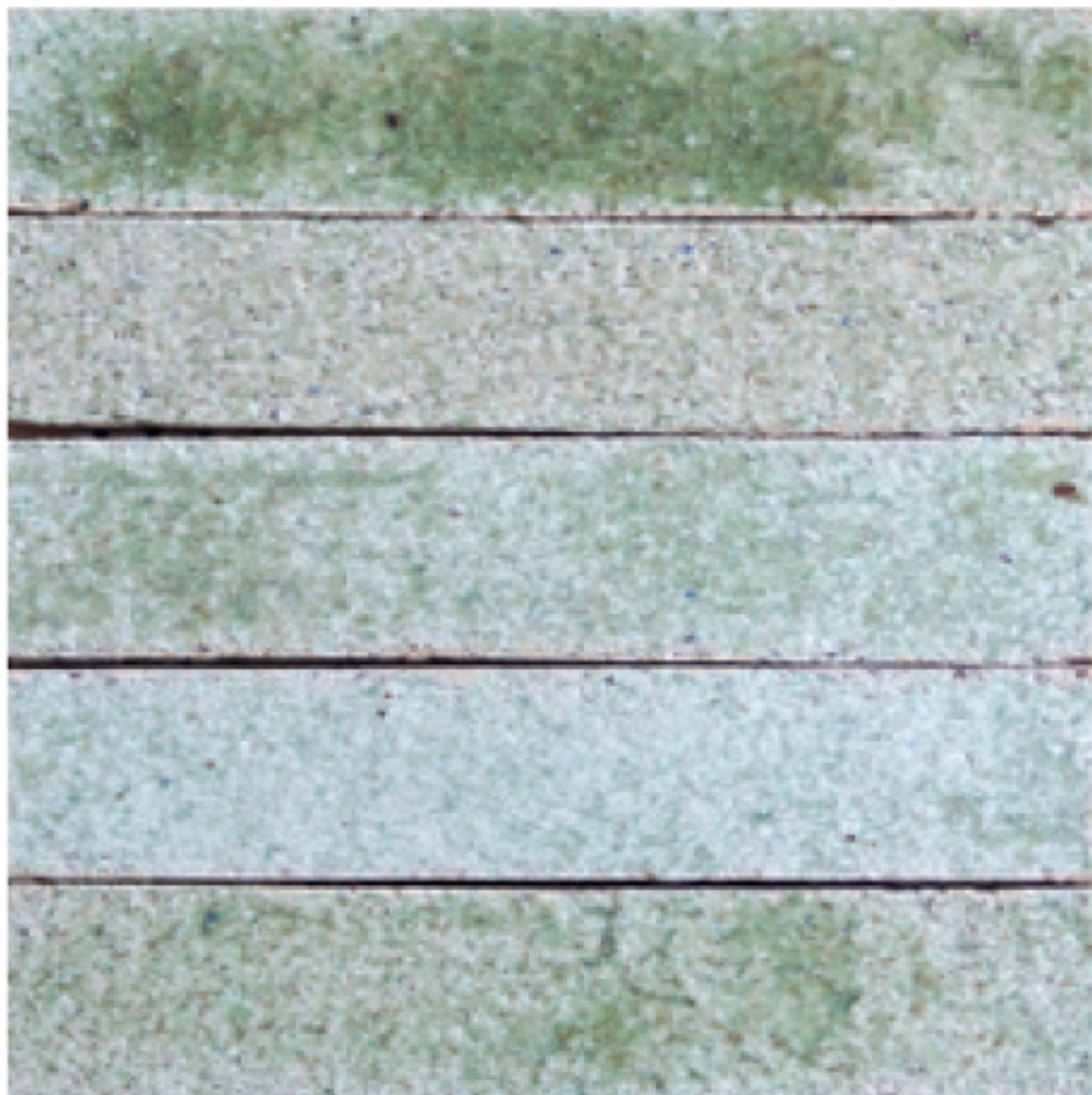
**WasteBasedBricks®**  
2Good2Waste / Sliced



**WasteBasedBricks®**  
Mushroom / Raw



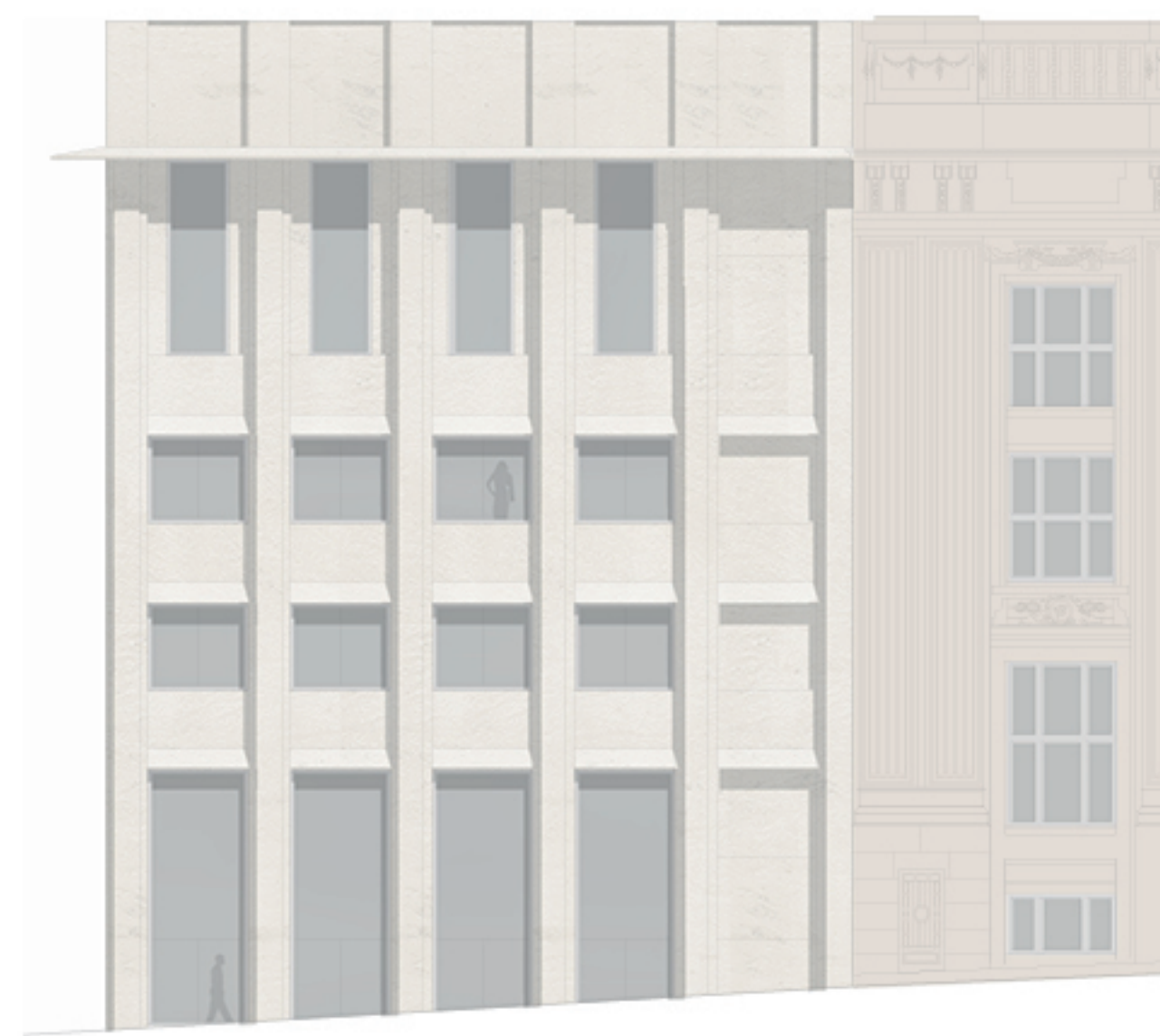
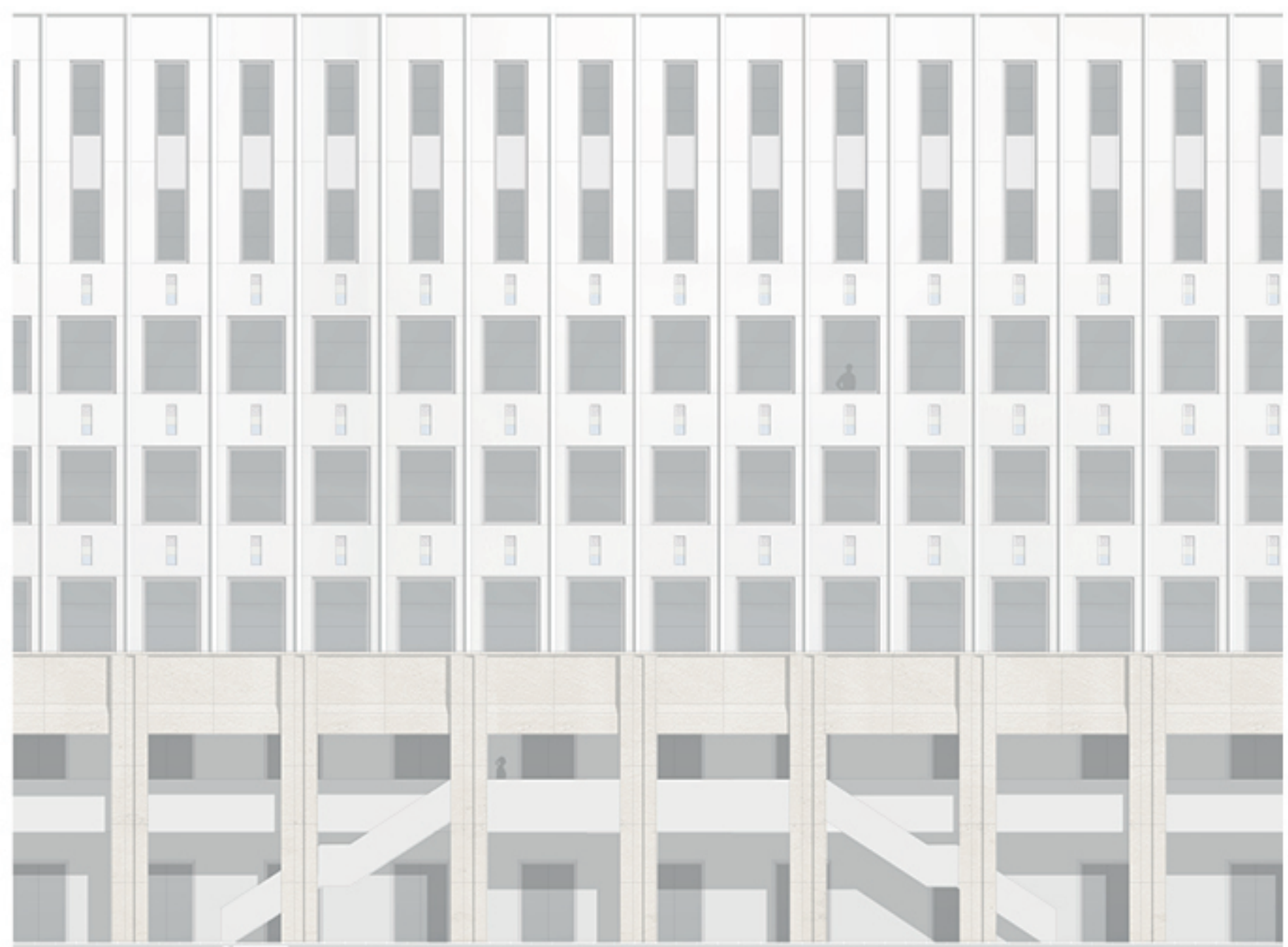
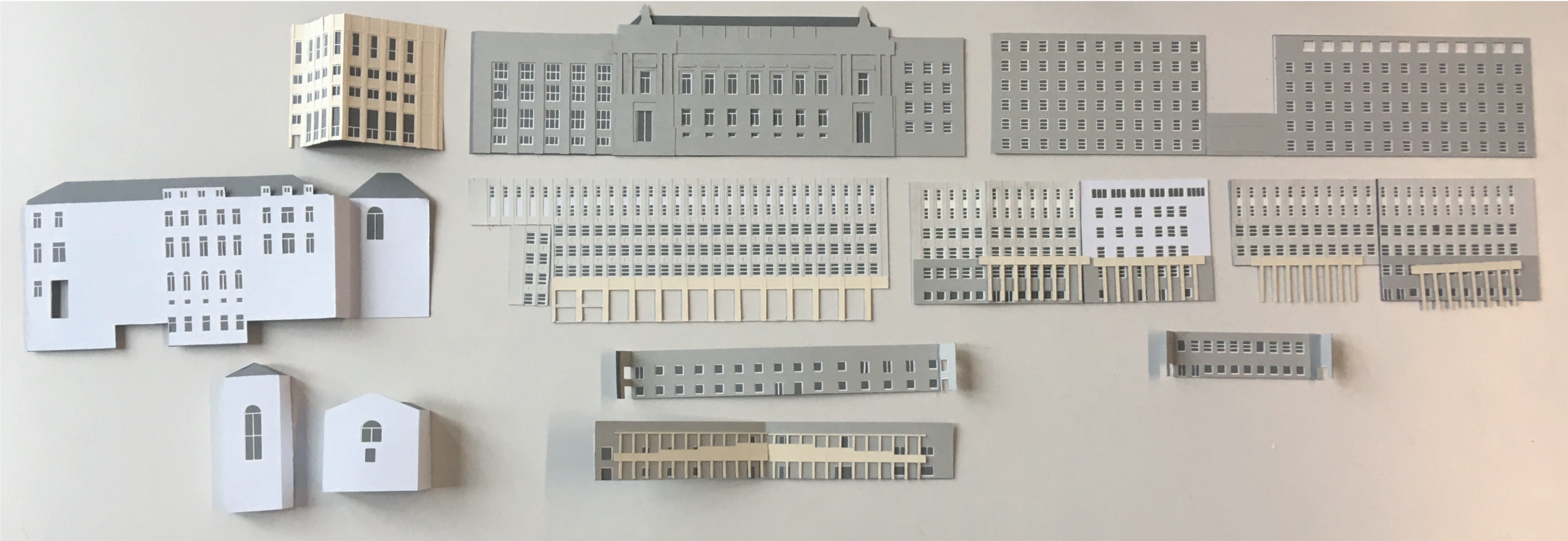
**WasteBasedBricks®**  
Orange / Raw



**WasteBasedBricks®**  
Wasabi / Shine

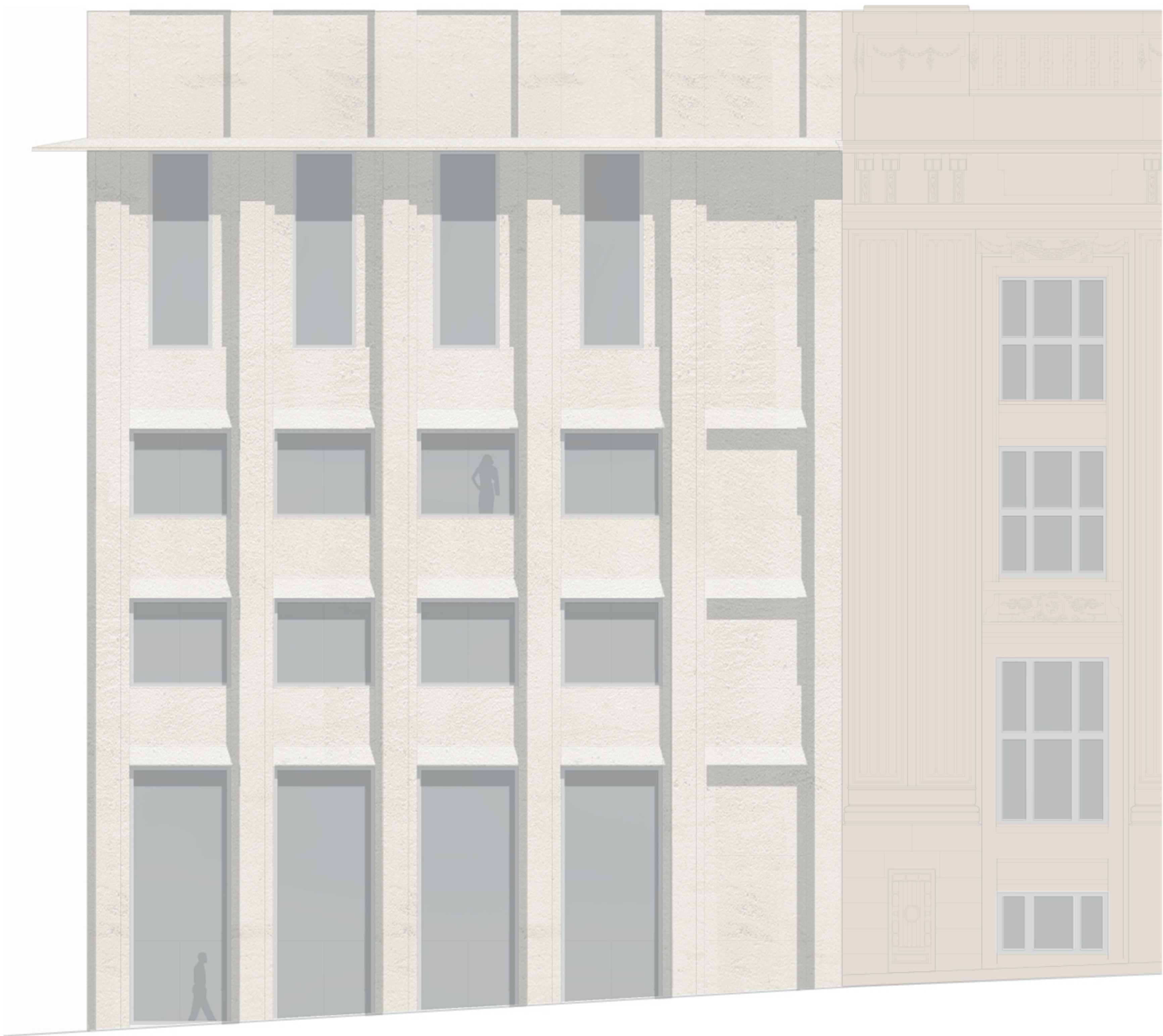
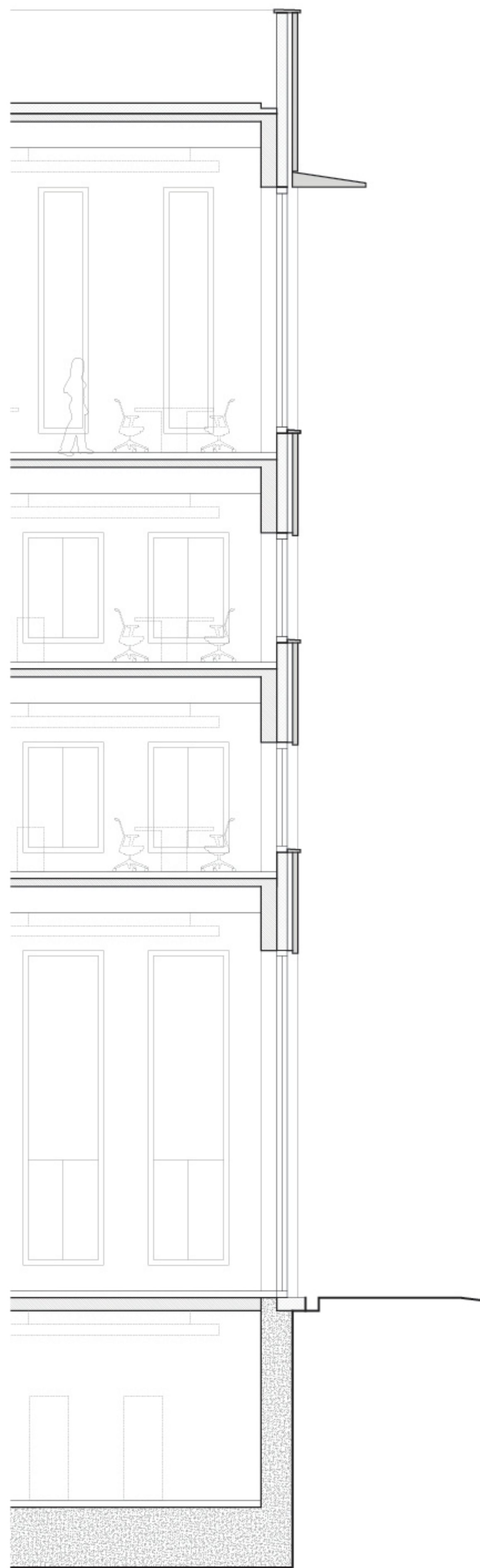
Potential for circularity





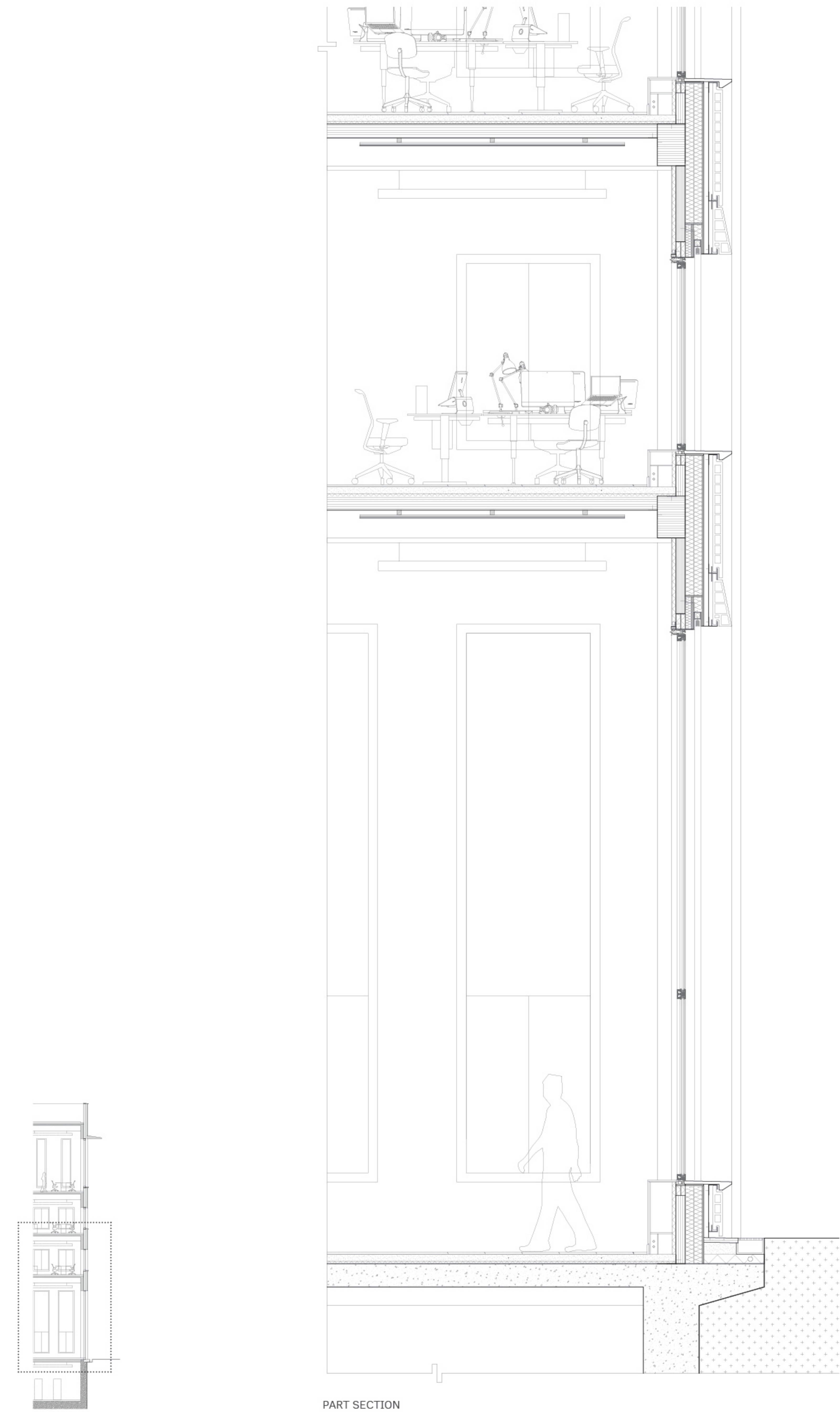
Overall coherence





Facade and typical wall section, Visitor centre





PART SECTION

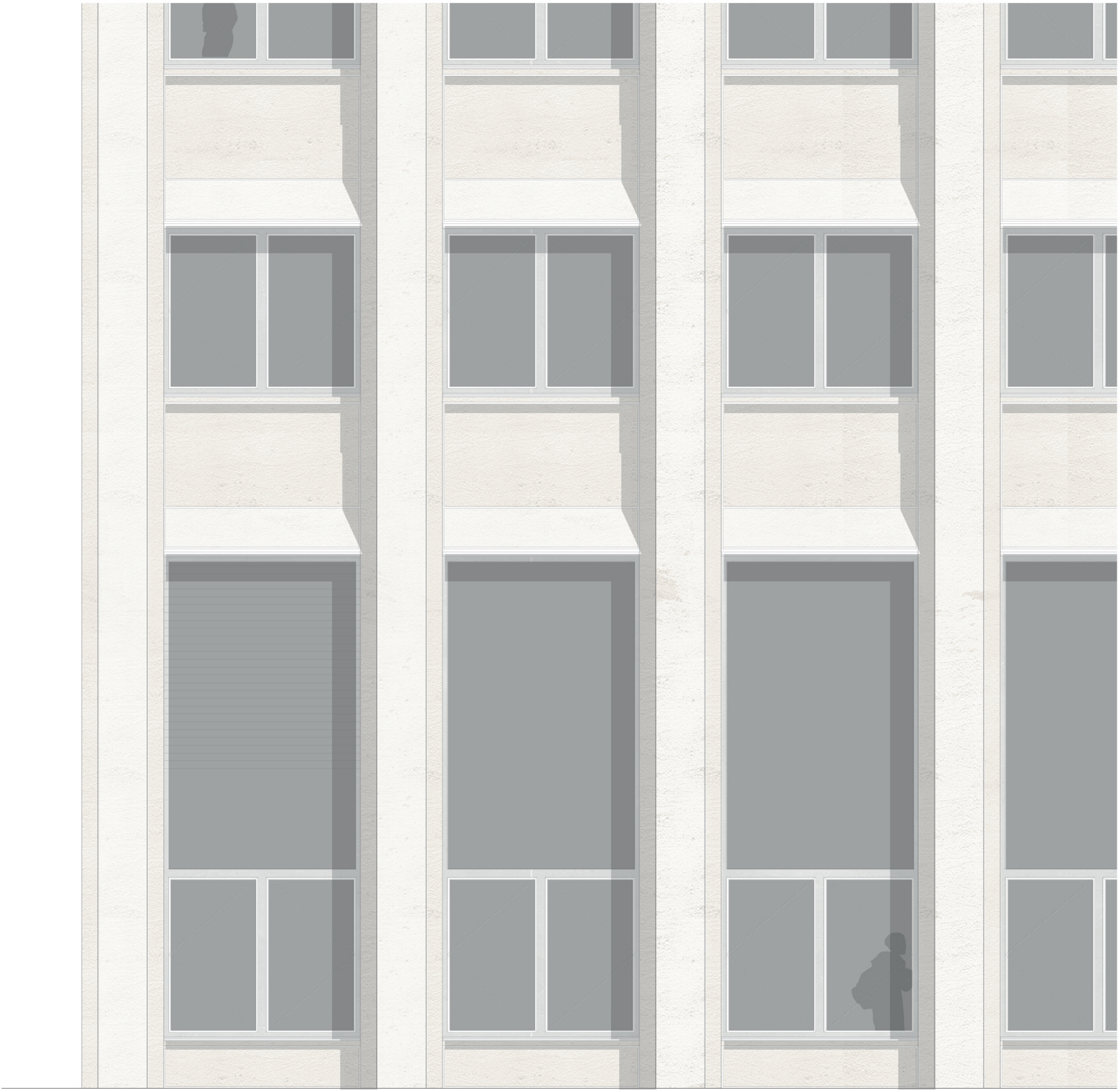
ACOUSTIC CEILING  
PANELS FIXED BETWEEN  
CLT RIBS

HVAC DUCTS IN  
FABRIC, AND LIGHTING  
FIXTURES SUSPENDED  
FROM CLT RIBS

VENTILATED FACADE  
IN LARGE-FORMAT  
TERRACOTTA ELEMENTS  
(NBK) OVER METAL SUB-  
STRUCTURE

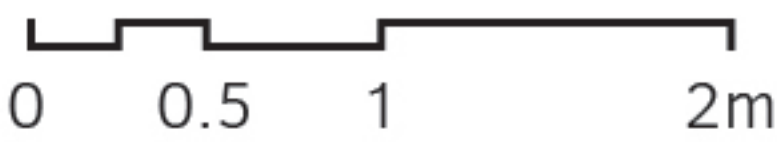
NEW OPENABLE  
ALUMINIUM WINDOWS  
(SCHUCO) WITH OVER-  
FRAME VENTILATION  
GRILLE (DUCO).  
SHADING VIA EXTERNAL  
ALUMINIUM SLIDING  
BLINDS (WAREMA)

FOUNDATION AND  
BASEMENT IN IN-  
SITU RCC

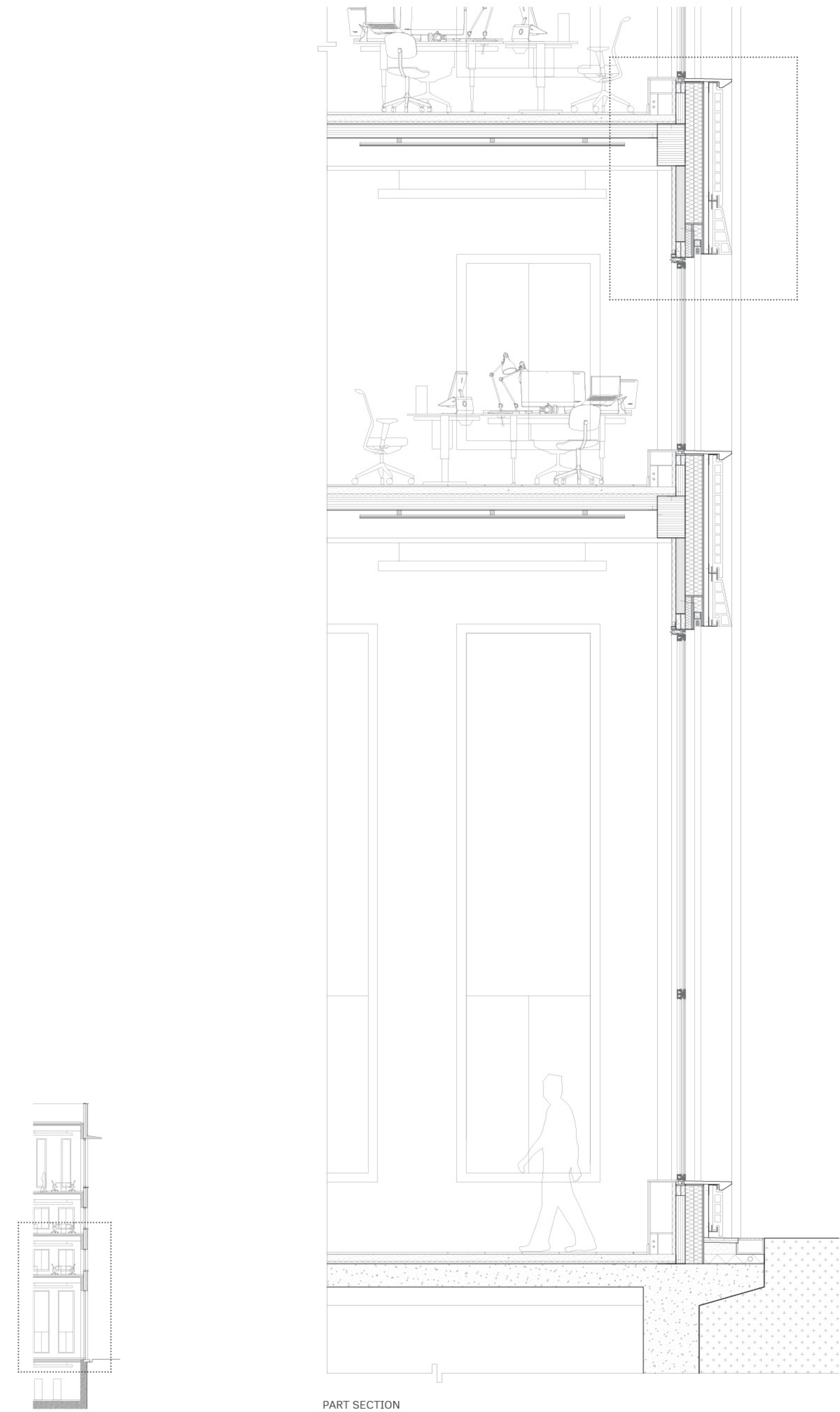


PART ELEVATION

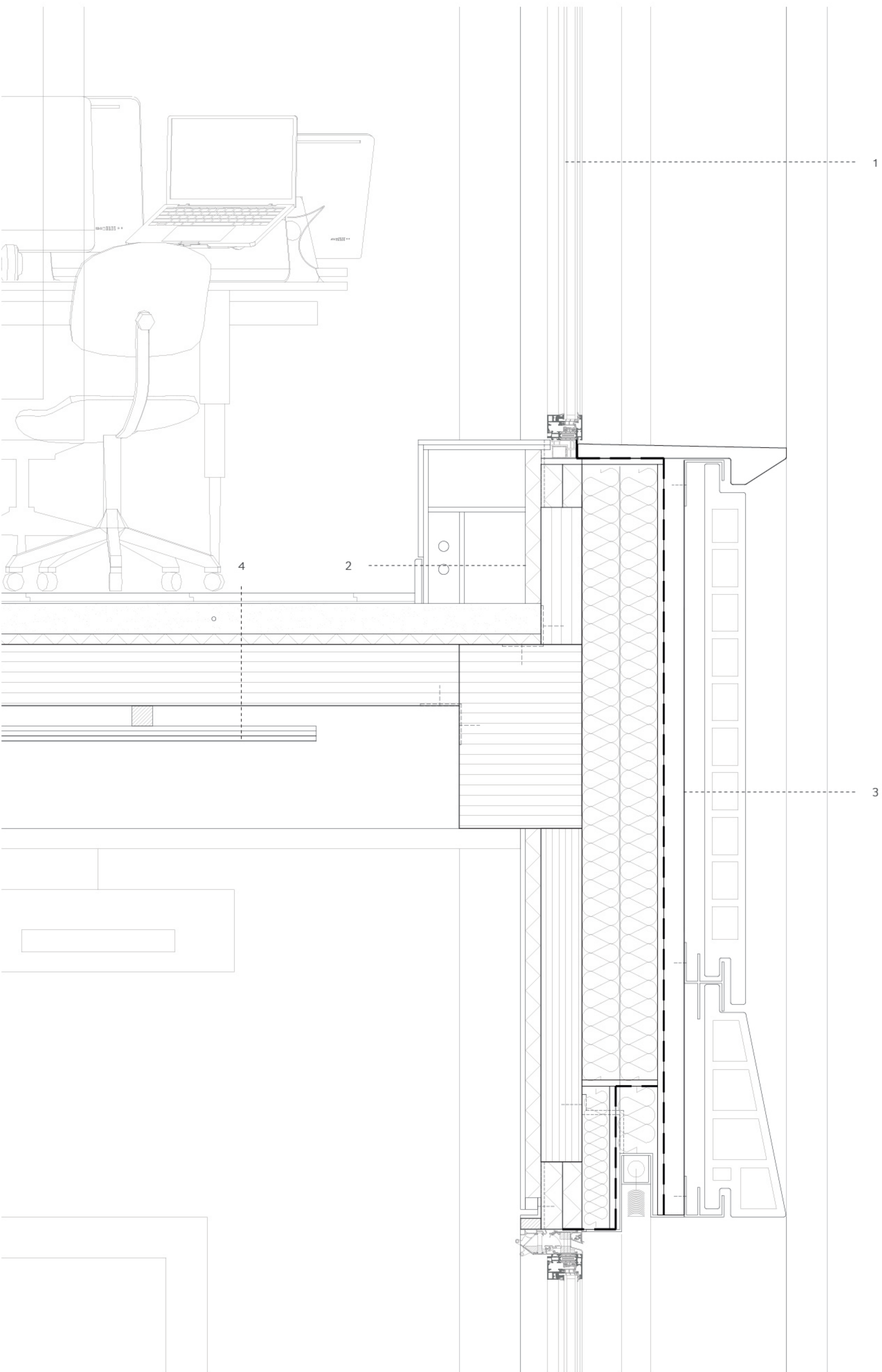
Detailed facade 1/2, Visitor centre







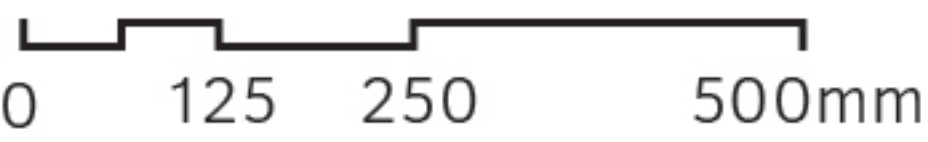
PART SECTION



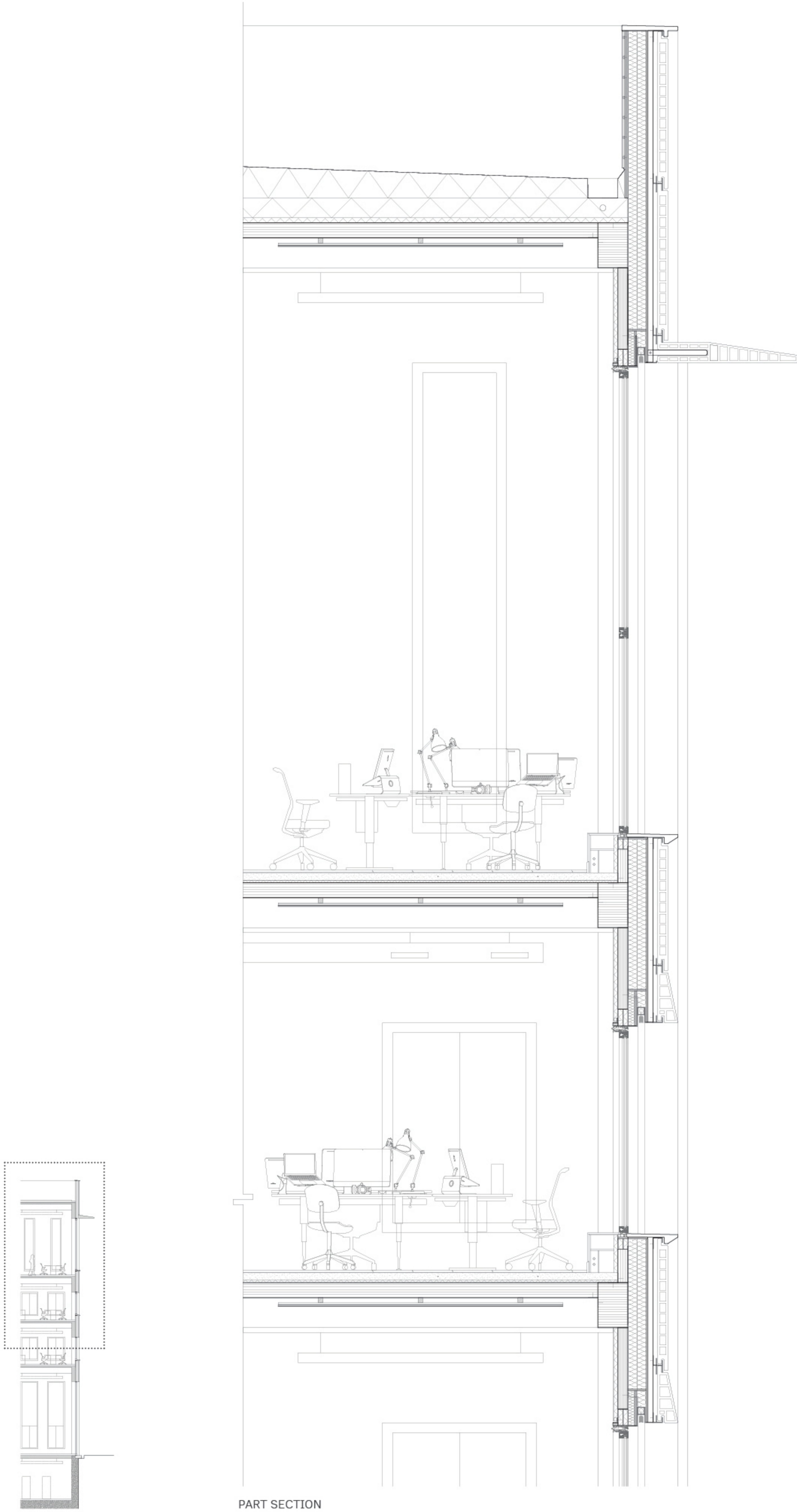
DETAIL SECTION

1. WINDOW:
- NEW OPENABLE ALUMINIUM WINDOWS (SCHUCO); 85mm
  - OVER-FRAME VENTILATION GRILLE (DUCO); 165mm
  - EXTERNAL ALUMINIUM SLIDING BLINDS (WAREMA); 80mm
2. INTERNAL SURFACES (OUT-IN):
- INSULATED WOODEN VERTICAL TECHNICAL CAVITY; 50mm
  - BIRCH WOOD CABINET WITH HORIZONTAL TECHNICAL CAVITY FOR ELEC. CABLE TRAYS; 250mm
  - WOODEN SKIRTING, SAME AS WOODEN FLOORING; 20mm
3. TYPICAL WALL SECTION (OUT-IN):
- EXTRUDED TERRACOTTA ELEMENTS (NBK) OVER METAL SUB STRUCTURE; 100-200mm
  - TERRACOTTA CILL (NBK)
  - WEATHERPROOFING LAYER
  - BACKING GYPSUM FIBRE BOARDS OVER INSULATION LAYER; 16mm
  - MINERAL WOOL INSULATION; 185mm
  - CLT WALL PANEL; 100mm
  - CLT COLUMN; 300x300mm
4. SLAB (TOP-BOTTOM):
- WOODEN FLOORING; 25mm
  - CEMENT SCREED WITH RADIANT HEATING/ COOLING PIPES; 75mm
  - IMPACT AND SOUND INSULATION; 25mm
  - CLT SLAB; 150mm. CLT BEAM; 300mm. FIXED VIA BOLTED STEEL L-ANGLES
  - FABRIC ACOUSTIC BOARD MOUNTED ON PLY BACKING AND FIXED TO SLAB SOFFIT VIA WOODEN BATTENS

Typical wall-cill-lintel detail, Visitor centre







PART SECTION

SERVICE-ACCESS ONLY  
ROOF. PARAPET COPING,  
FACADE IN TERRACOTTA  
CLADDING (NBK).

CORNICE TERRACOTTA  
ELEMENT (NBK),  
SUSPENDED FROM CLT  
STRUCTURE

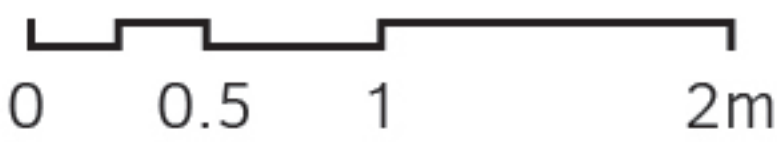
NEW OPENABLE  
ALUMINIUM WINDOWS  
(SCHUCO) WITH OVER-  
FRAME VENTILATION  
GRILLE (DUCO).  
SHADING VIA EXTERNAL  
ALUMINIUM SLIDING  
BLINDS (WAREMA)

VENTILATED FACADE  
IN LARGE-FORMAT  
TERRACOTTA ELEMENTS  
(NBK) OVER METAL SUB-  
STRUCTURE

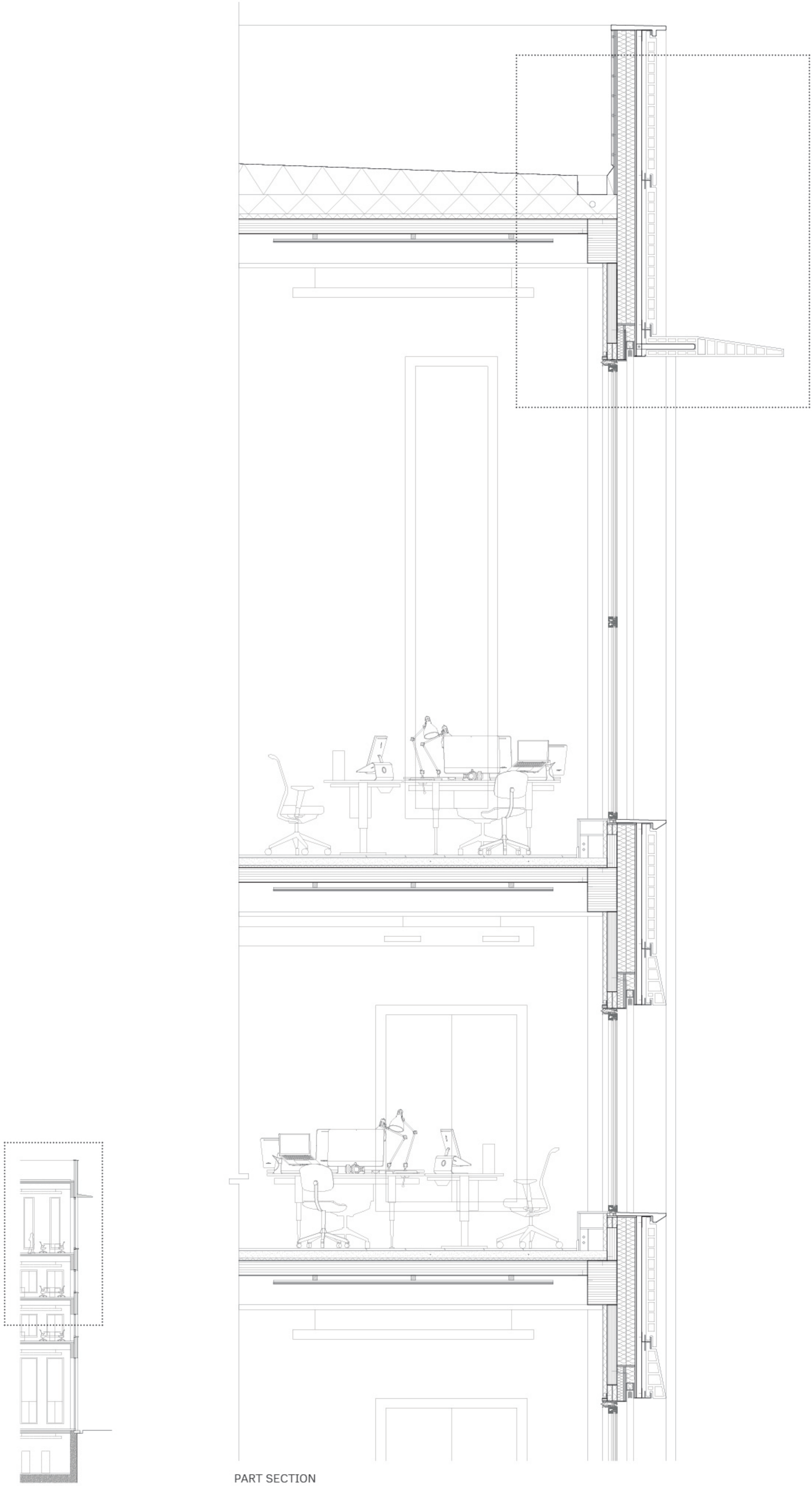


PART ELEVATION

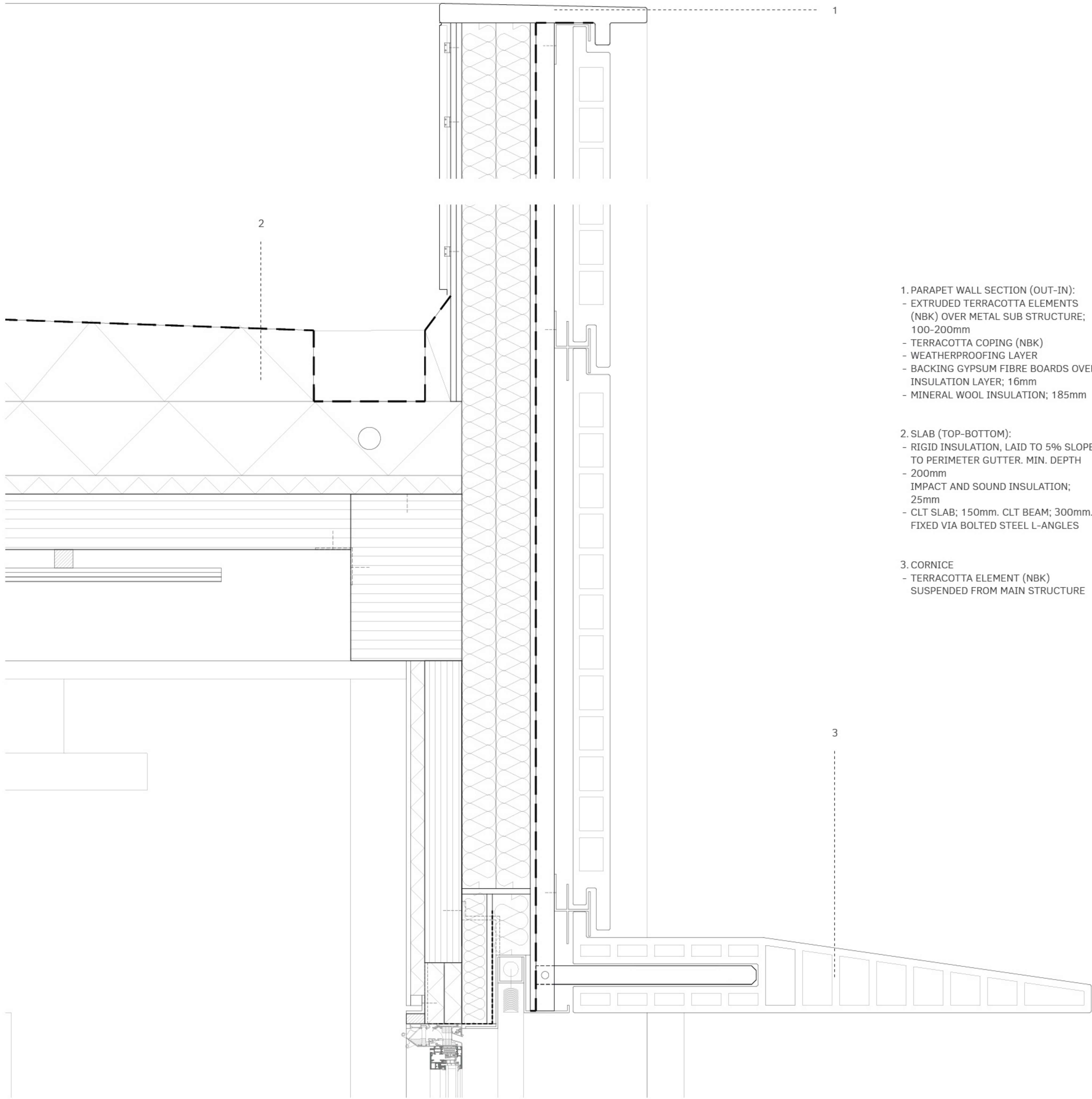
Detailed facade 2/2, Visitor centre







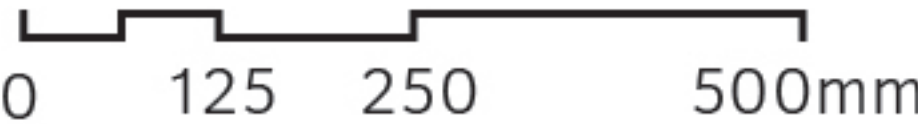
PART SECTION



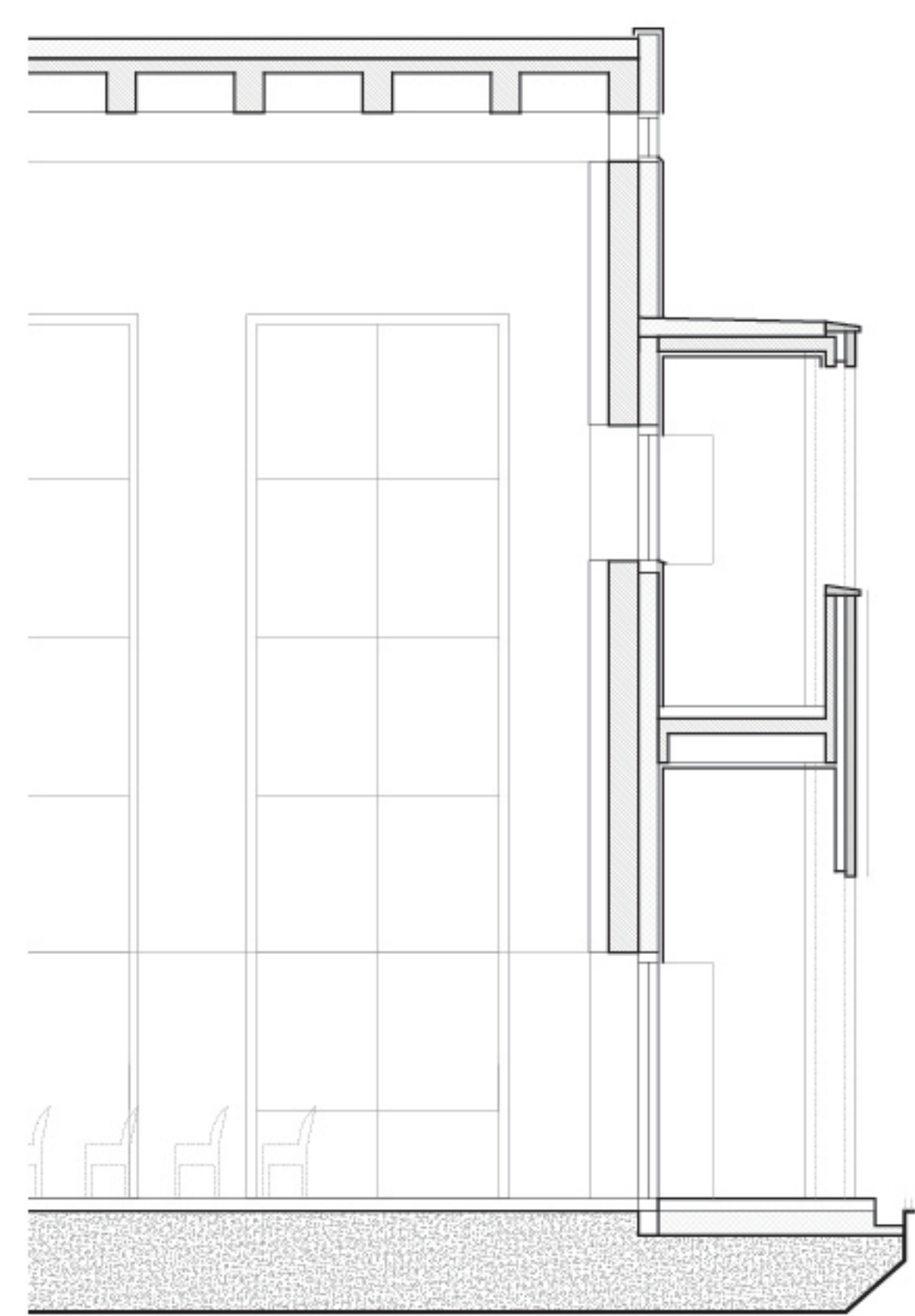
DETAIL SECTION

1. PARAPET WALL SECTION (OUT-IN):
- EXTRUDED TERRACOTTA ELEMENTS (NBK) OVER METAL SUB STRUCTURE; 100-200mm
  - TERRACOTTA COPING (NBK)
  - WEATHERPROOFING LAYER
  - BACKING GYPSUM FIBRE BOARDS OVER INSULATION LAYER; 16mm
  - MINERAL WOOL INSULATION; 185mm
2. SLAB (TOP-BOTTOM):
- RIGID INSULATION, LAID TO 5% SLOPE TO PERIMETER GUTTER. MIN. DEPTH 200mm
  - IMPACT AND SOUND INSULATION; 25mm
  - CLT SLAB; 150mm. CLT BEAM; 300mm. FIXED VIA BOLTED STEEL L-ANGLES
3. CORNICE
- TERRACOTTA ELEMENT (NBK) SUSPENDED FROM MAIN STRUCTURE

Roof parapet detail, Visitor centre

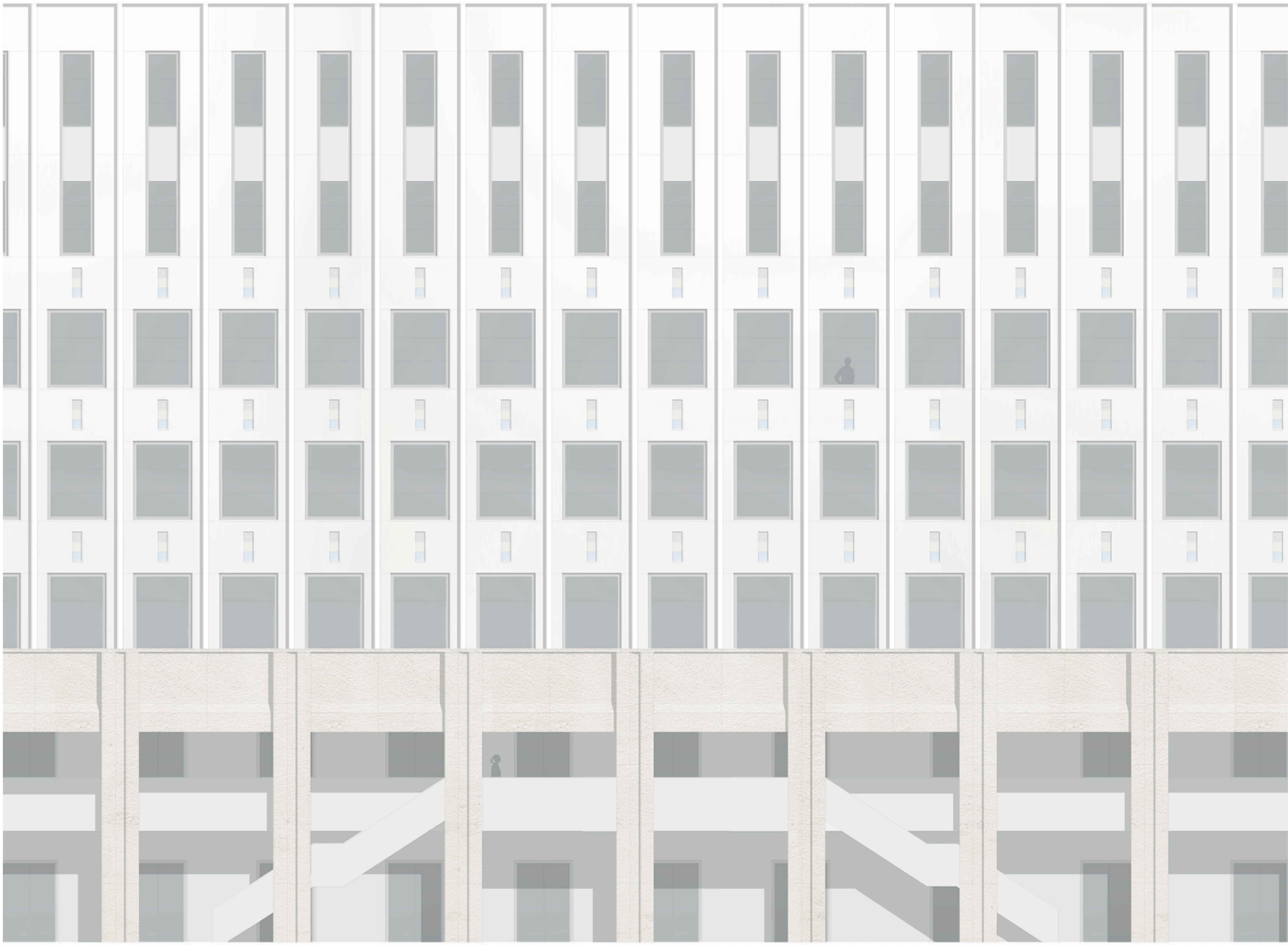
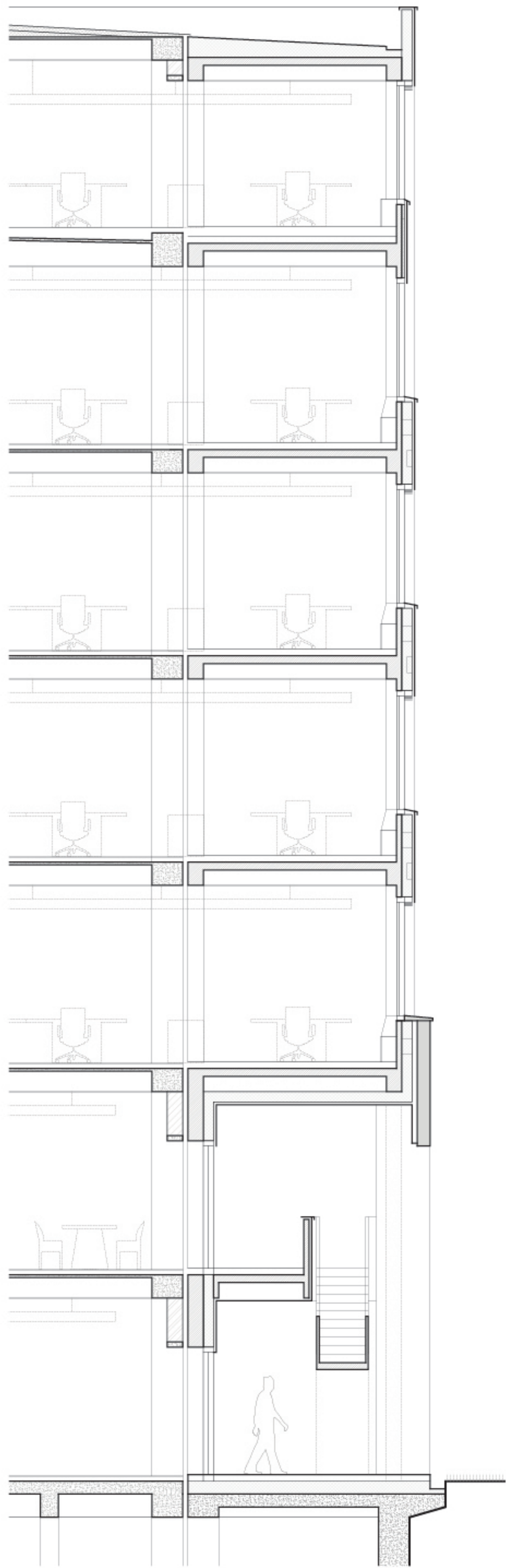






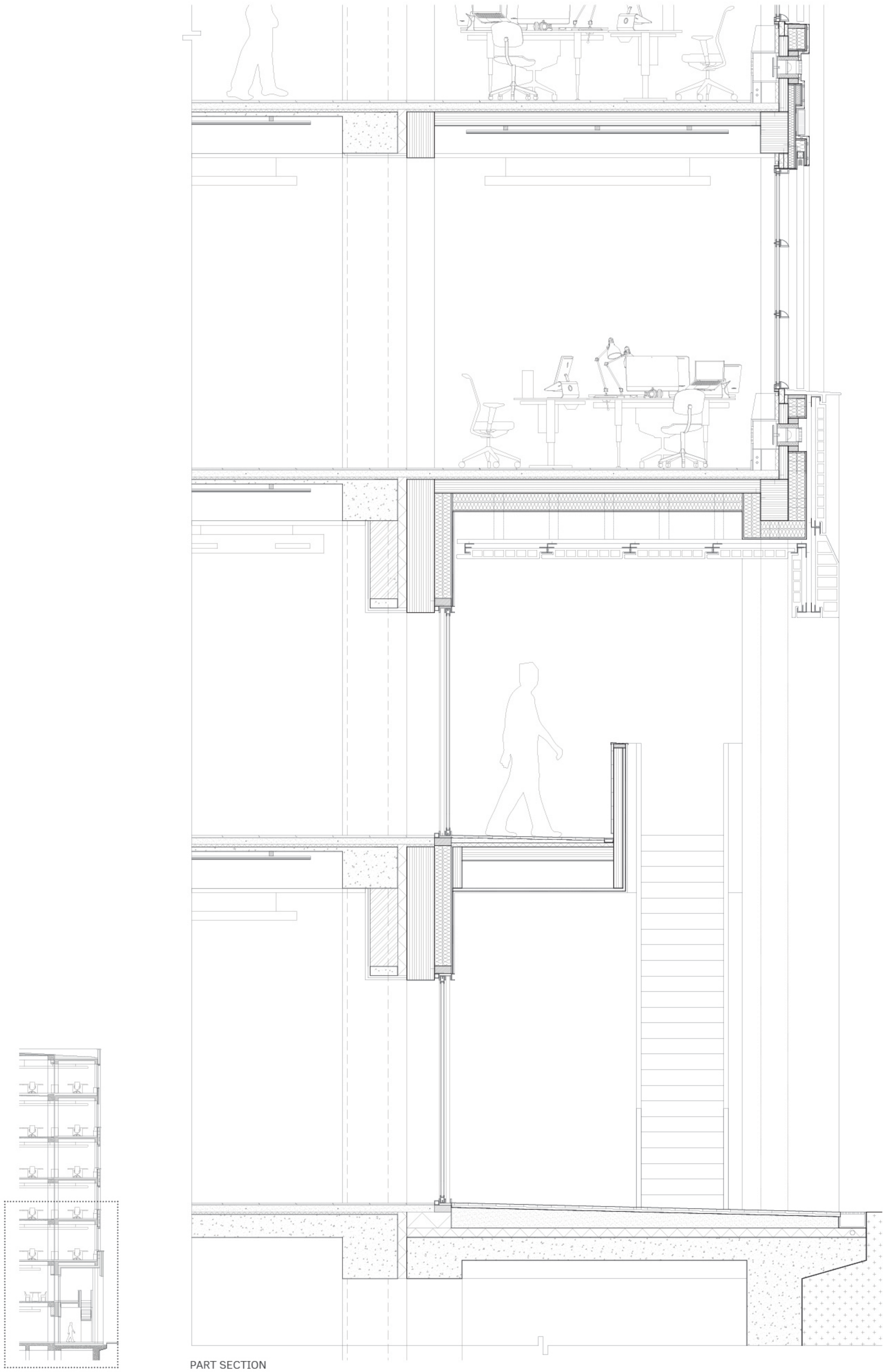
Facade and typical wall section, Forum facing triangular court





Facade and typical wall section, Bank facing triangle court





PART SECTION

RECLAIMED FIXED  
ALUMINIUM WINDOWS  
FROM DEMOLISHED  
STRUCTURES

TERRACOTTA CILL/  
COPING ELEMENT (NBK)

VENTILATED FACADE  
IN LARGE-FORMAT  
TERRACOTTA ELEMENTS  
(NBK) OVER METAL SUB-  
STRUCTURE

CLOISTER CEILING IN  
TERRACOTTA ELEMENTS  
(NBK) SUSPENDED VIA  
METAL SUB-STRUCTURE

CLOISTER RAILING  
AND PARAPET IN GREY  
STUCCO, PARAPET  
INTERNAL FINISH +  
FLOORING IN BLUE  
GRANITE

STAIRCASE IN STEEL  
STRUCTURE CLAD WITH  
CEMENT-FIBRE BOARDS,  
GREY STUCCO FINISH

CLT COLUMNS CLAD  
WITH SCALLOPED  
TERRACOTTA ELEMENTS  
(NBK)

NEW ALUMINIUM  
SLIDING DOORS AND  
WINDOWS (SCHUCO)

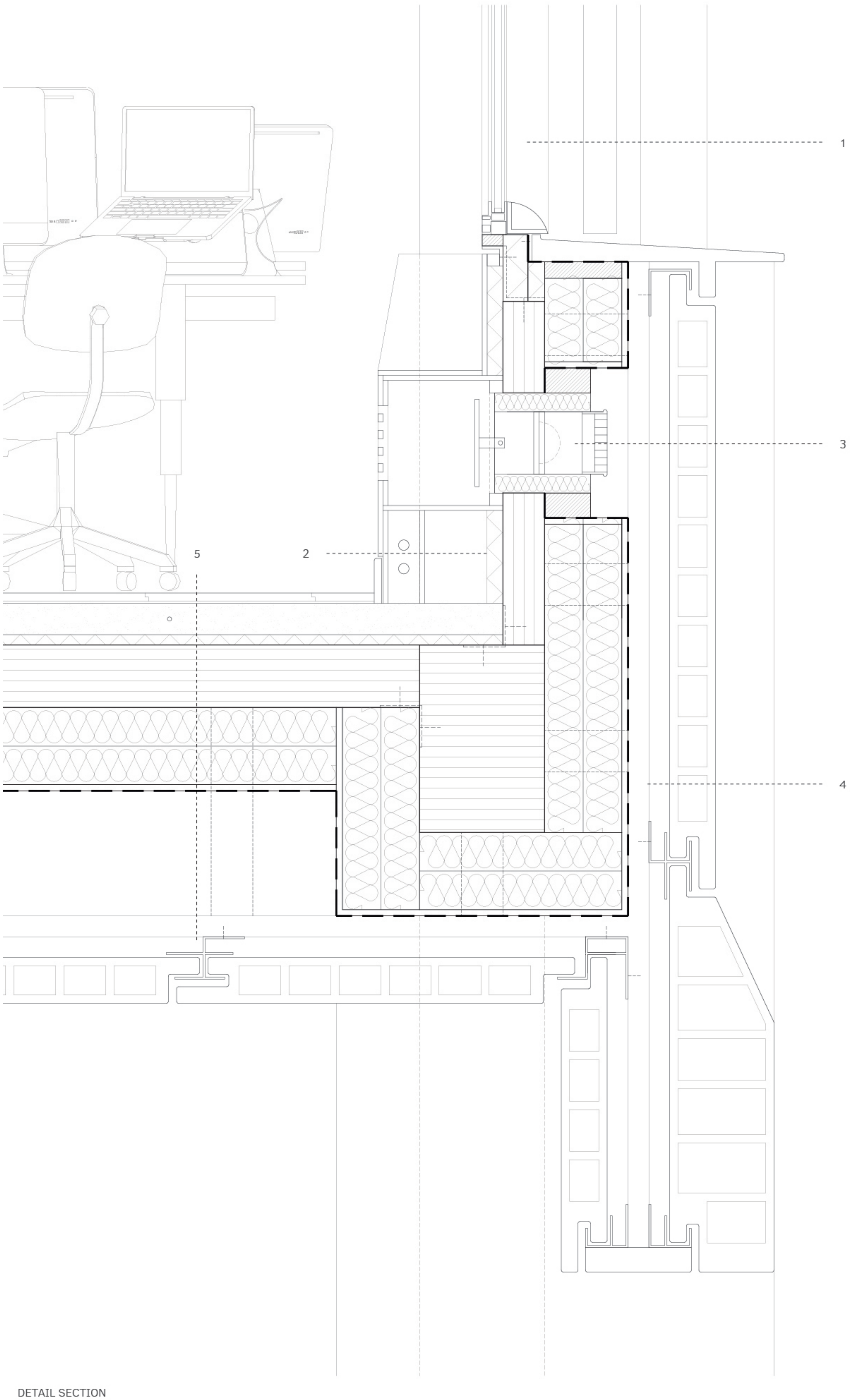
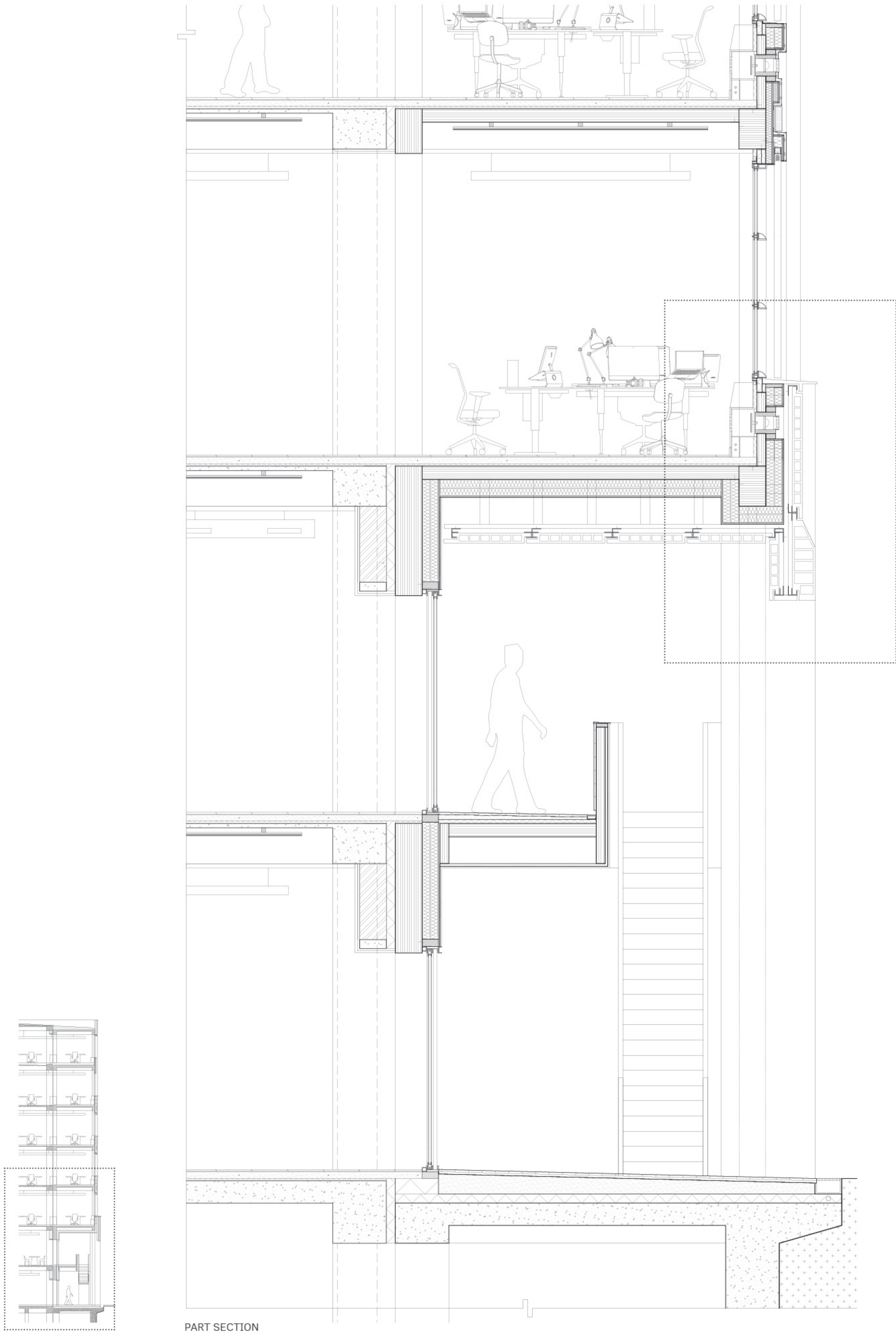
FOUNDATION AND  
BASEMENT IN IN-  
SITU RCC



PART ELEVATION

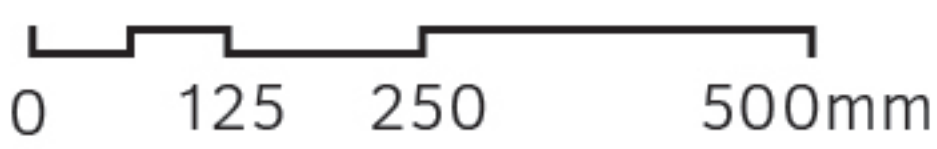
Detailed facade 1/3, Bank facing triangle court



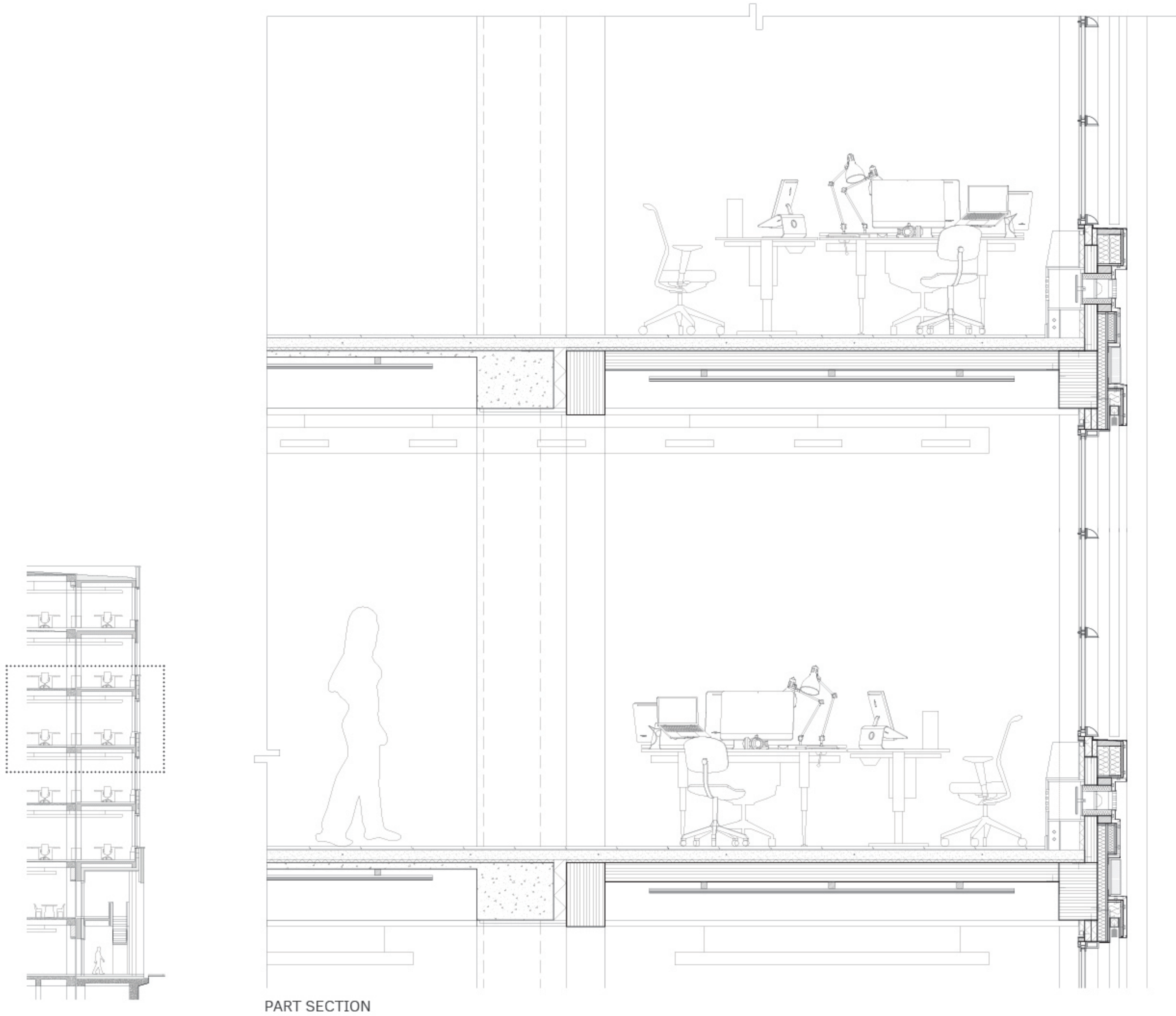


1. WINDOW:
- RECLAIMED FIXED ALUMINIUM WINDOWS; 160mm
  - EXTERNAL ALUMINIUM SLIDING BLINDS (WAREMA); 80mm
2. INTERNAL SURFACES (OUT-IN):
- INSULATED WOODEN VERTICAL TECHNICAL CAVITY; 50mm
  - BIRCH WOOD CABINET/ BOOKSHELF WITH INTEGRATED VENTILATION GRILLS AND HORIZONTAL TECHNICAL CAVITY FOR ELEC. CABLE TRAYS; 250mm
  - WOODEN SKIRTING, SAME AS WOODEN FLOORING; 20mm
3. ORNAMENTS
- PRESSURE SENSITIVE VENT WITH USER CONTROL (DUCO)
4. TYPICAL WALL SECTION (OUT-IN):
- EXTRUDED TERRACOTTA ELEMENTS (NBK) OVER METAL SUB STRUCTURE; 100-250mm
  - WEATHERPROOFING LAYER
  - BACKING GYPSUM FIBRE BOARDS OVER INSULATION LAYER; 16mm
  - MINERAL WOOL INSULATION; 185mm
  - CLT WALL PANEL; 100mm
  - CLT COLUMN; 300x300mm
5. SLAB (TOP-BOTTOM):
- WOODEN FLOORING; 25mm
  - CEMENT SCREED WITH RADIANT HEATING/ COOLING PIPES; 75mm
  - IMPACT AND SOUND INSULATION; 25mm
  - CLT SLAB; 150mm. CLT BEAM; 300mm. FIXED VIA BOLTED STEEL L-ANGLES
  - EXTERNAL INSULATION
  - TERRACOTTA ELEMENTS

Cloister ceiling detail, Bank facing triangle court







STRUCTURALLY  
INDEPENDENT CLT  
FRAME WITH INSULATED  
EXPANSION JOINT  
BETWEEN NEW AND OLD  
STRUCTURES

RAINWATER DOWNTAKE  
PIPES CONCEALED IN  
ALUMINIUM CLADDING  
'FINS'

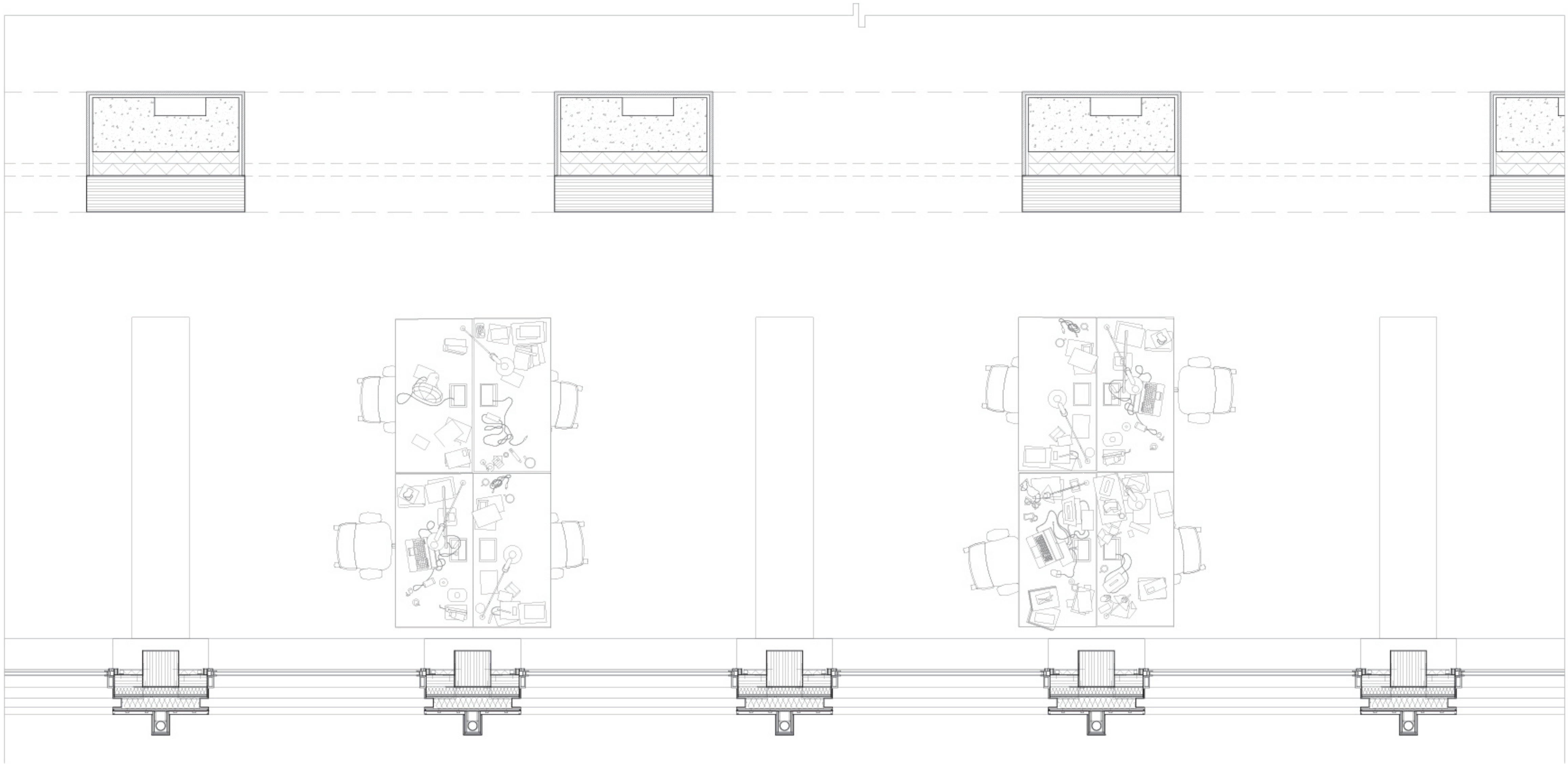
RECLAIMED FIXED  
ALUMINIUM WINDOWS  
FROM DEMOLISHED  
STRUCTURES. SHADING  
VIA EXTERNAL  
ALUMINIUM SLIDING  
BLINDS (WAREMA)

VENTILATED FACADE IN  
RECYCLED ALUMINIUM  
SHEET PANELS (HYDRO  
CIRCAL) OVER METAL  
SUB-STRUCTURE

ACOUSTIC CEILING  
PANELS FIXED BETWEEN  
CLT RIBS

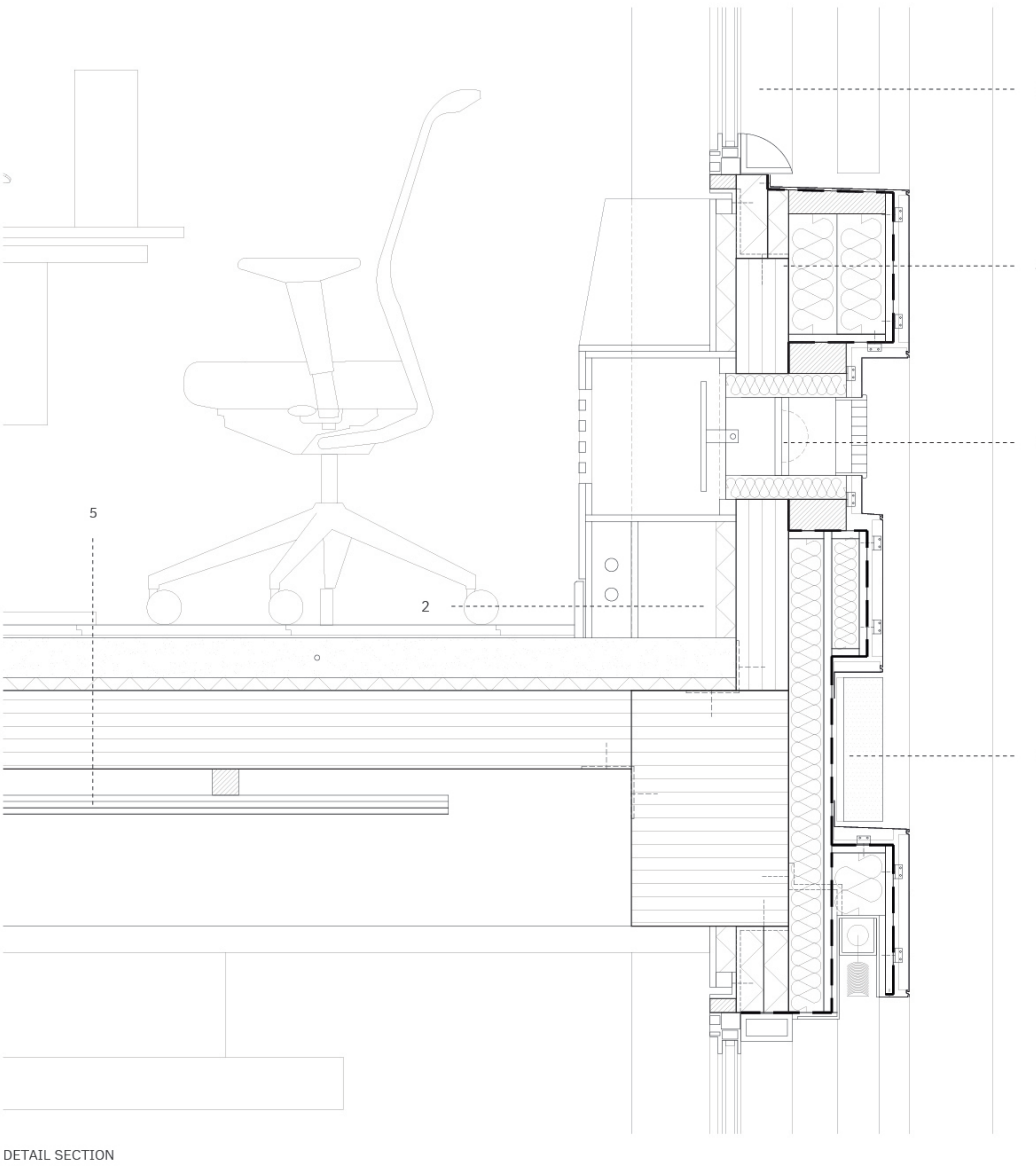
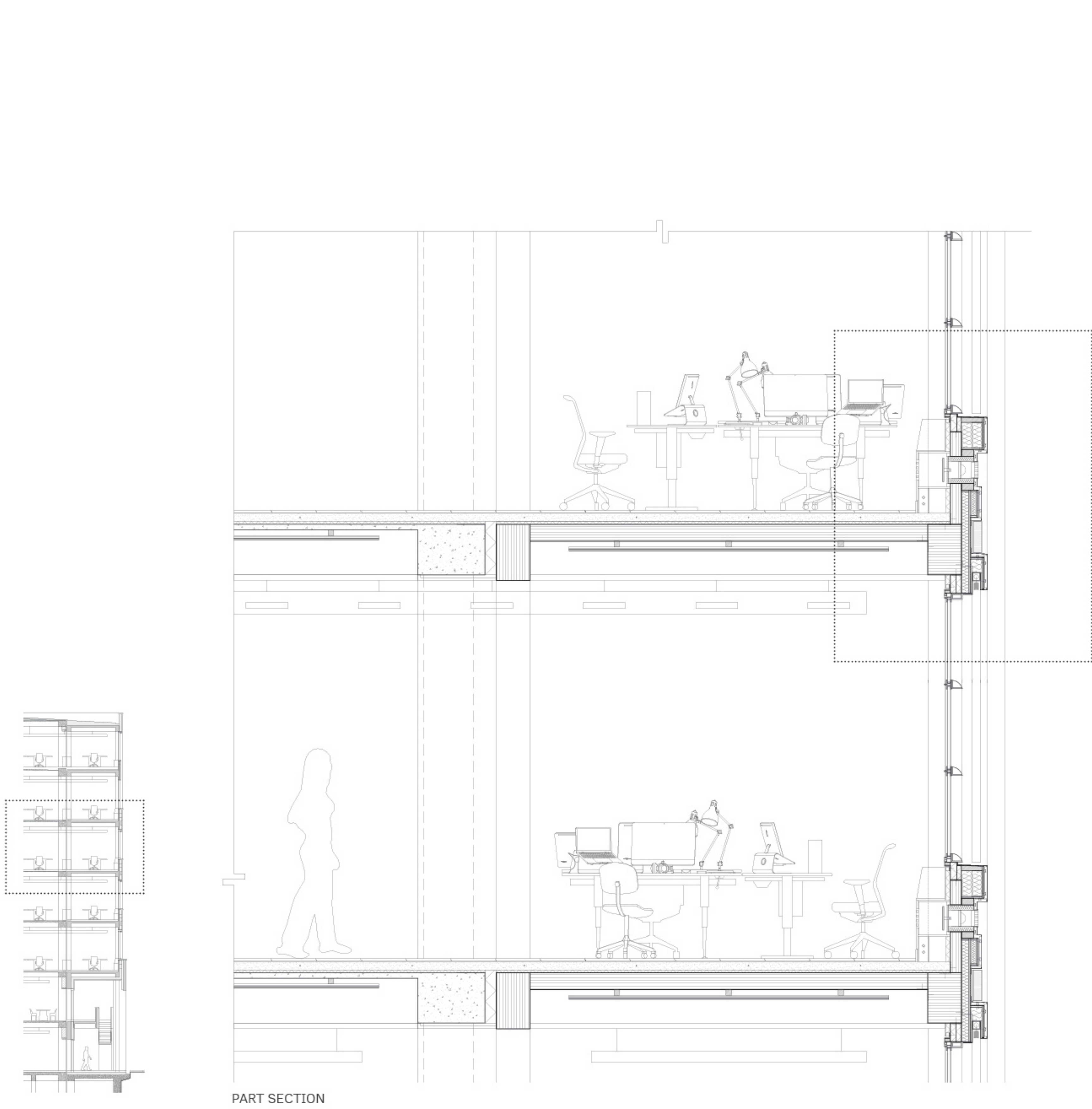
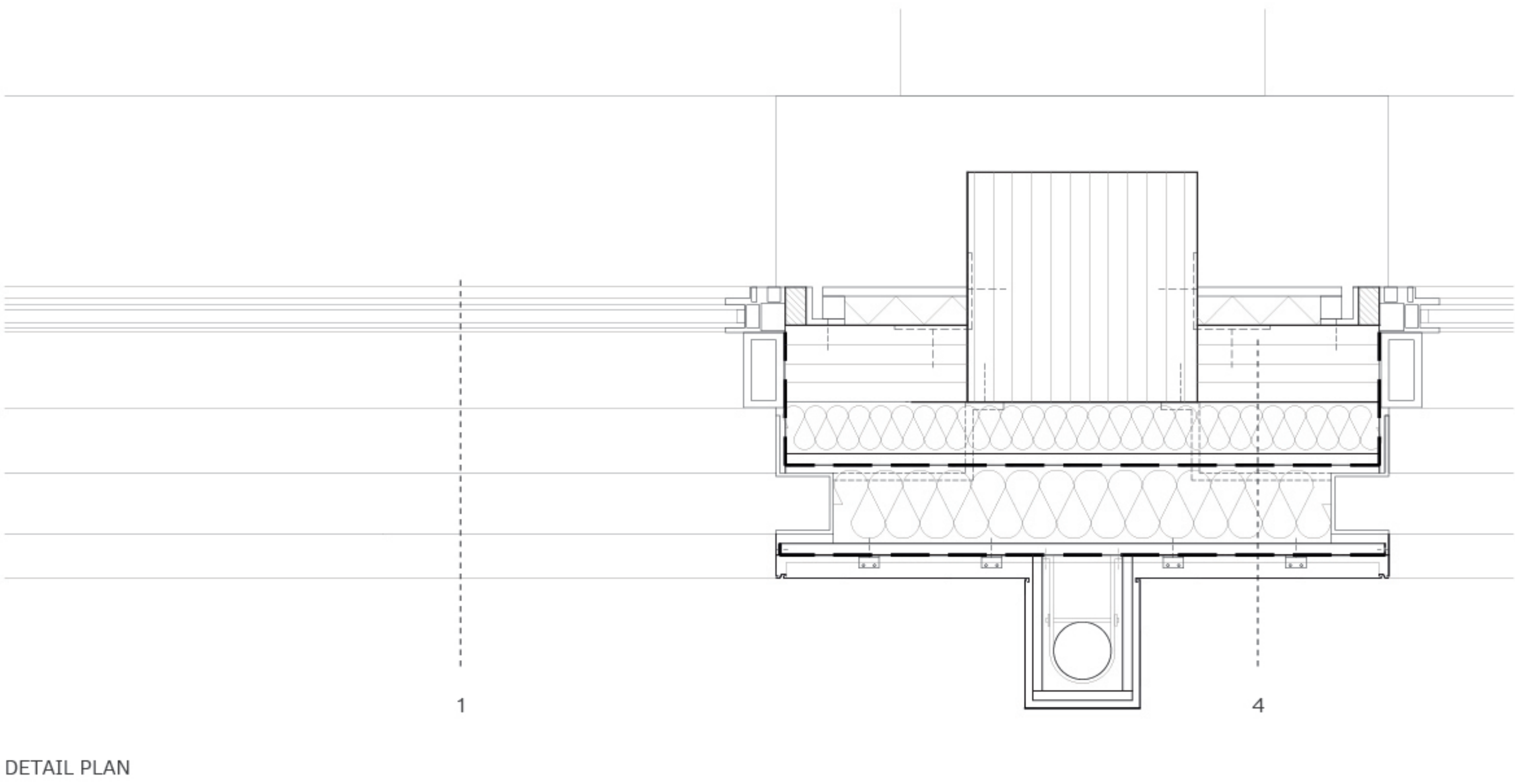
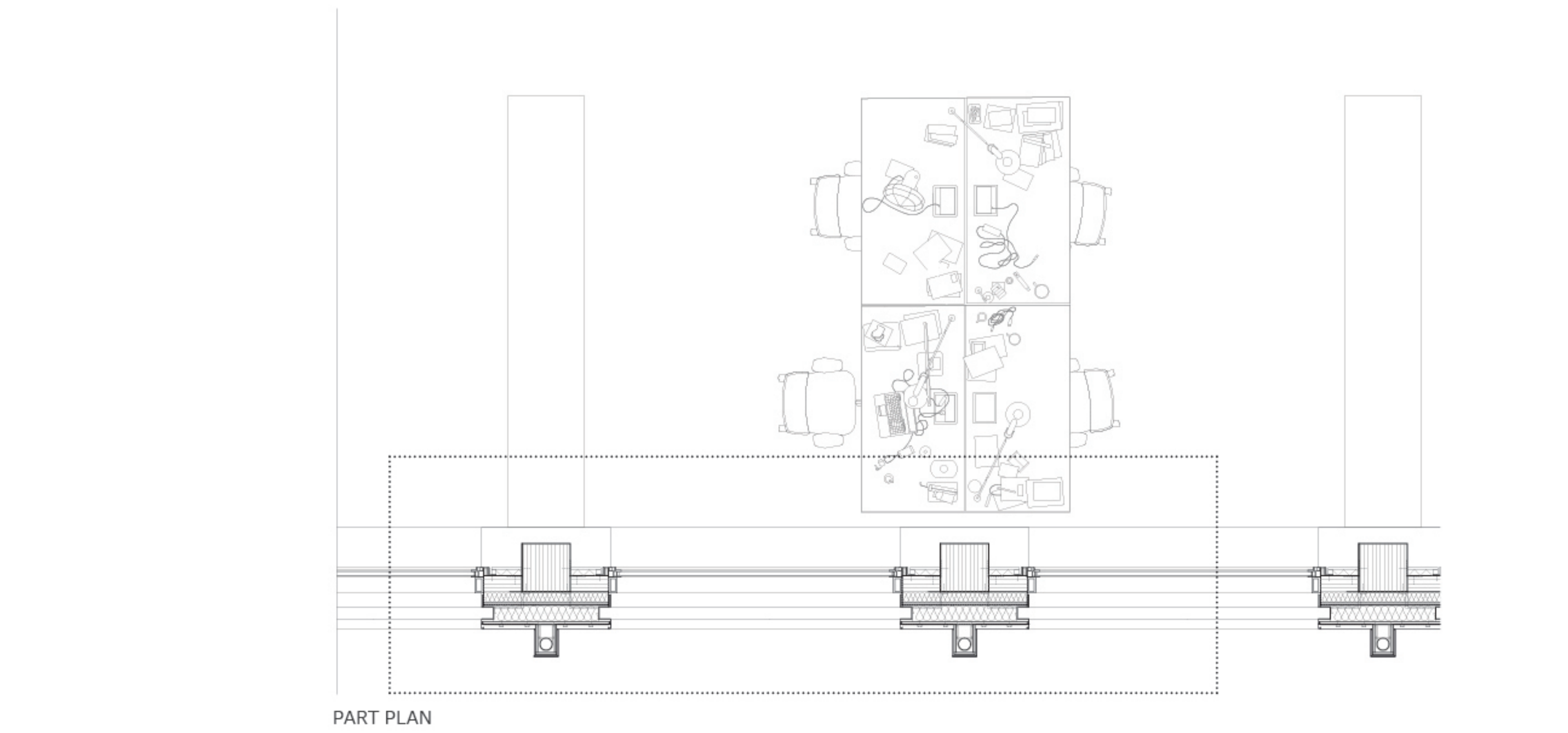
HVAC DUCTS IN  
FABRIC, AND LIGHTING  
FIXTURES SUSPENDED  
FROM CLT RIBS

'ORNAMENTS' IN  
FACADE: PRESSURE-  
SENSITIVE VENT  
(DUCO), RECLAIMED  
GLASS BRICKS + LED  
STRIP LIGHT FIXTURE



Detailed facade 2/3, Bank facing triangle court

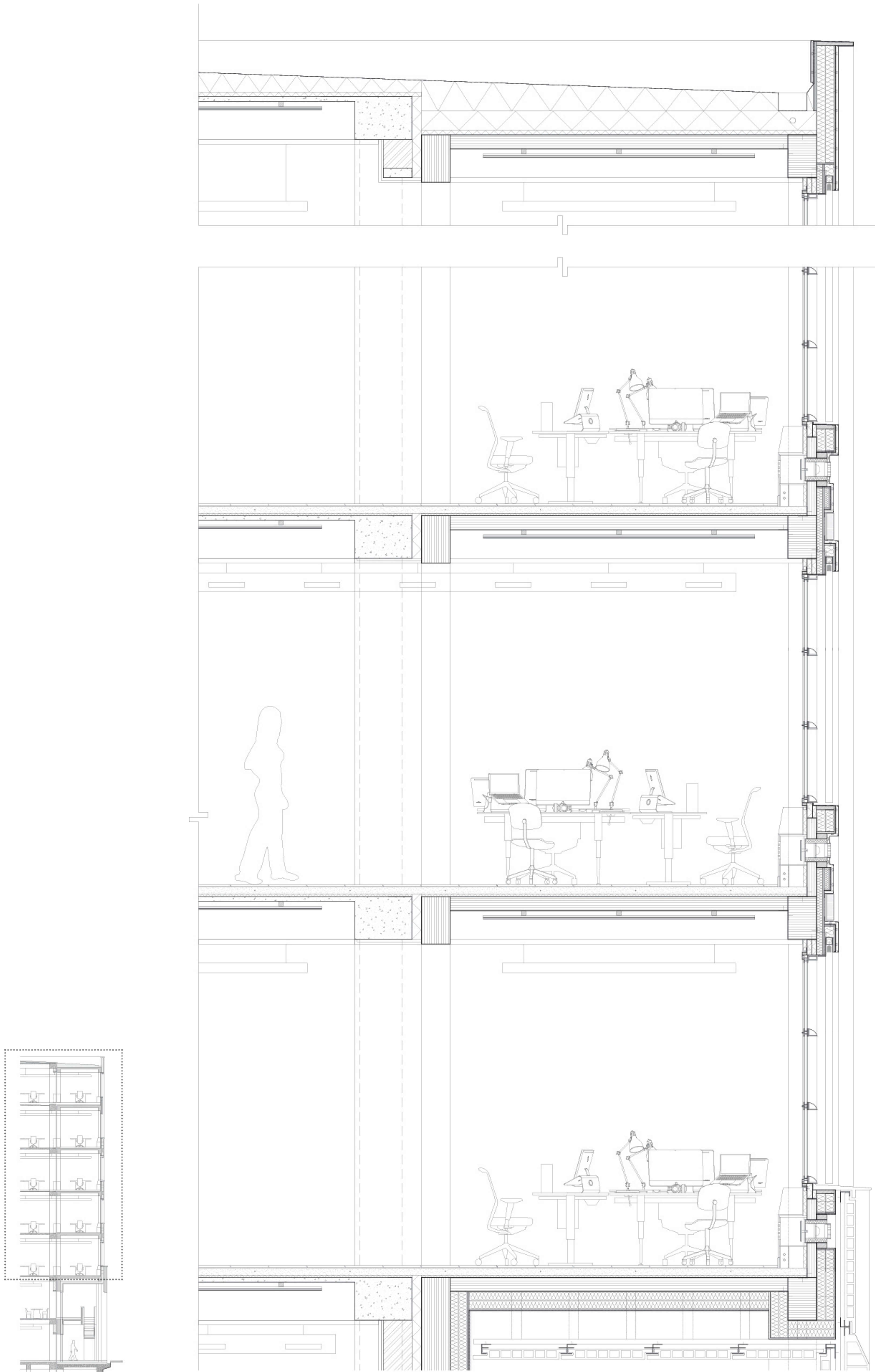




1. WINDOW:
- RECLAIMED FIXED ALUMINIUM WINDOWS; 160mm
  - EXTERNAL ALUMINIUM SLIDING BLINDS (WAREMA); 80mm
2. INTERNAL SURFACES (OUT-IN):
- INSULATED WOODEN VERTICAL TECHNICAL CAVITY; 50mm
  - BIRCH WOOD CABINET/ BOOKSHELF WITH INTEGRATED VENTILATION GRILLS AND HORIZONTAL TECHNICAL CAVITY FOR ELEC. CABLE TRAYS; 250mm
  - WOODEN SKIRTING, SAME AS WOODEN FLOORING; 20mm
3. ORNAMENTS
- PRESSURE SENSITIVE VENT WITH USER CONTROL (DUCO)
  - LIGHT FIXTURE: RECLAIMED GLASS BRICKS AND LED STRIP
4. TYPICAL WALL SECTION (OUT-IN):
- 2mm ALUMINIUM SHEET (HYDRO CIRCAL) OVER LIGHT GAUGE SUBFRAME BENT TO PROFILE; 30mm
  - RAINWATER DOWNTAKE PIPES CONCEALED WITHIN 'FINS'
  - WEATHERPROOFING LAYER
  - BACKING GYPSUM FIBRE BOARDS OVER INSULATION LAYER; 16mm
  - MINERAL WOOL INSULATION; 185mm
  - CLT WALL PANEL; 100mm
  - CLT COLUMN; 300x300mm
5. TYPICAL SLAB (TOP-BOTTOM):
- WOODEN FLOORING; 25mm
  - CEMENT SCREED WITH RADIANT HEATING/ COOLING PIPES; 75mm
  - IMPACT AND SOUND INSULATION; 25mm
  - CLT SLAB; 150mm. CLT BEAM; 300mm. FIXED VIA BOLTED STEEL L-ANGLES
  - FABRIC ACOUSTIC BOARD MOUNTED ON PLY BACKING AND FIXED TO SLAB SOFFIT VIA WOODEN BATTENS

Typical wall-cill-lintel detail, Bank facing triangle court





PART SECTION

SERVICE-ACCESS ONLY  
ROOF, PARAPET COPING  
IN ALUMINIUM SHEET  
(HYRDO CIRCAL)

'ORNAMENTS' IN  
FACADE: PRESSURE-  
SENSITIVE VENT  
(DUCO), RECLAIMED  
GLASS BRICKS + LED  
STRIP LIGHT FIXTURE

RECLAIMED FIXED  
ALUMINIUM WINDOWS  
FROM DEMOLISHED  
STRUCTURES. SHADING  
VIA EXTERNAL  
ALUMINIUM SLIDING  
BLINDS (WAREMA)

VENTILATED FACADE IN  
RECYCLED ALUMINIUM  
SHEET PANELS (HYDRO  
CIRCAL) OVER METAL  
SUB-STRUCTURE

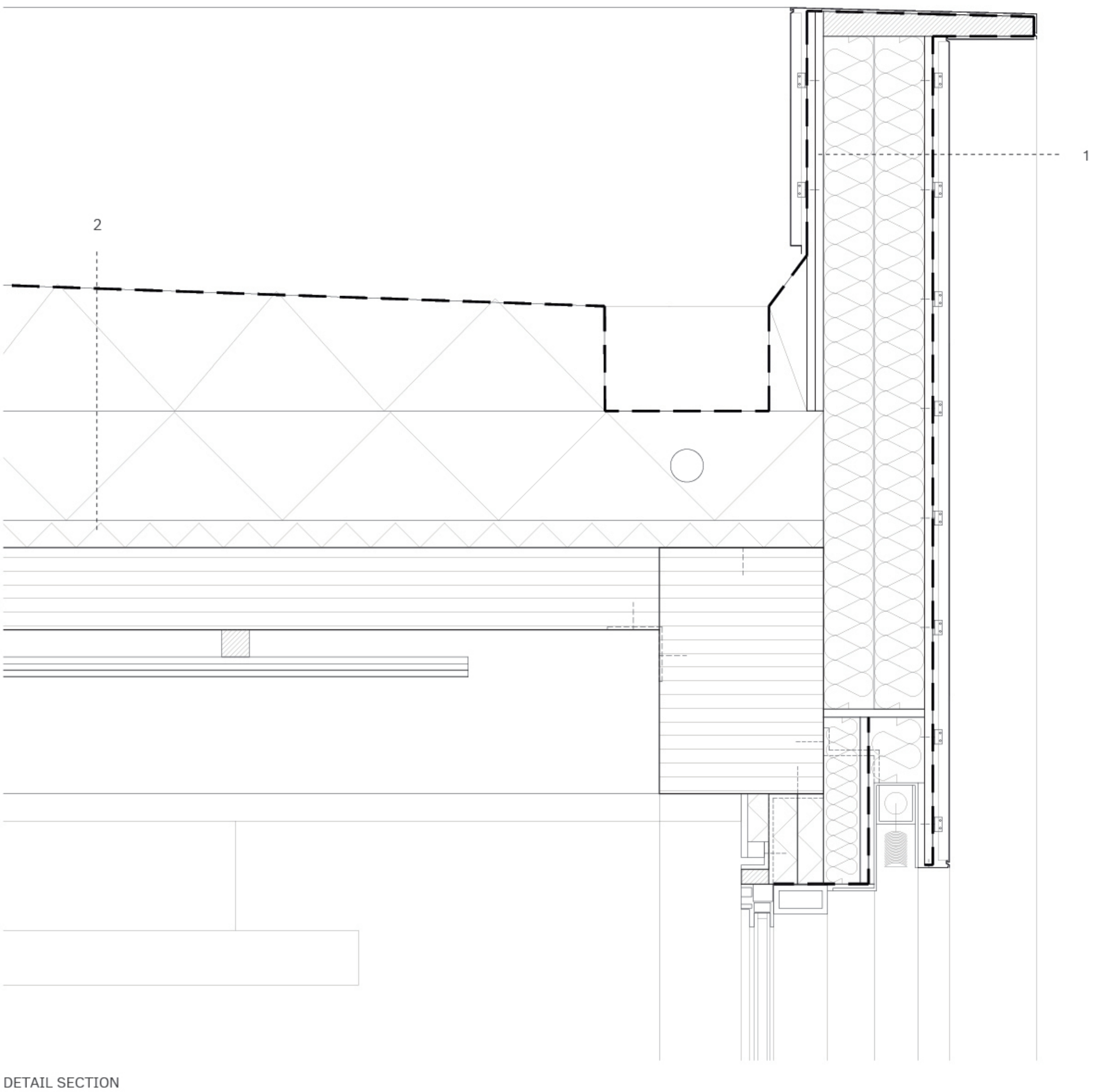
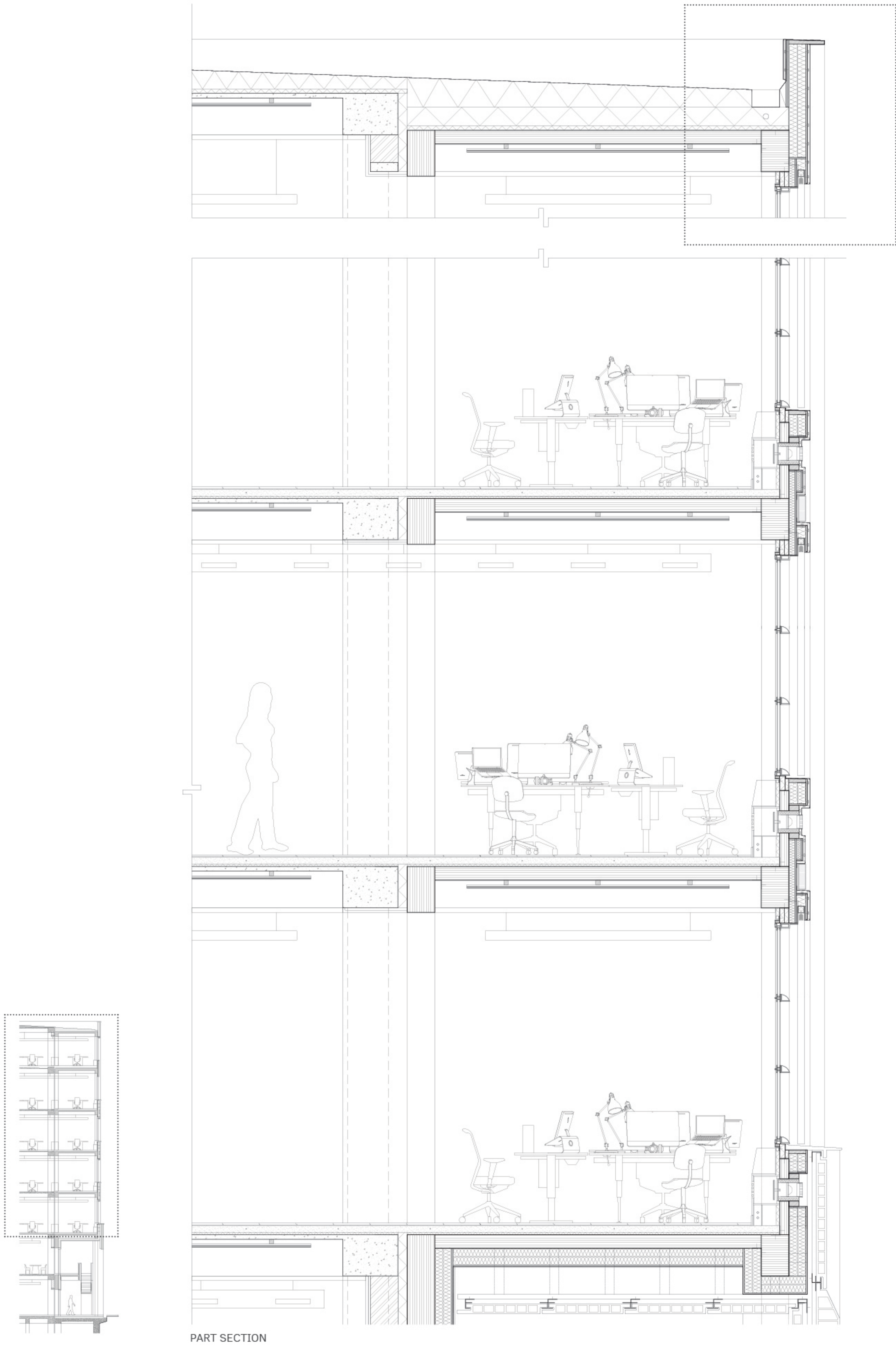
VENTILATED FACADE  
IN LARGE-FORMAT  
TERRACOTTA ELEMENTS  
(NBK) OVER METAL SUB-  
STRUCTURE



PART ELEVATION

Detailed facade 3/3, Bank facing triangle court

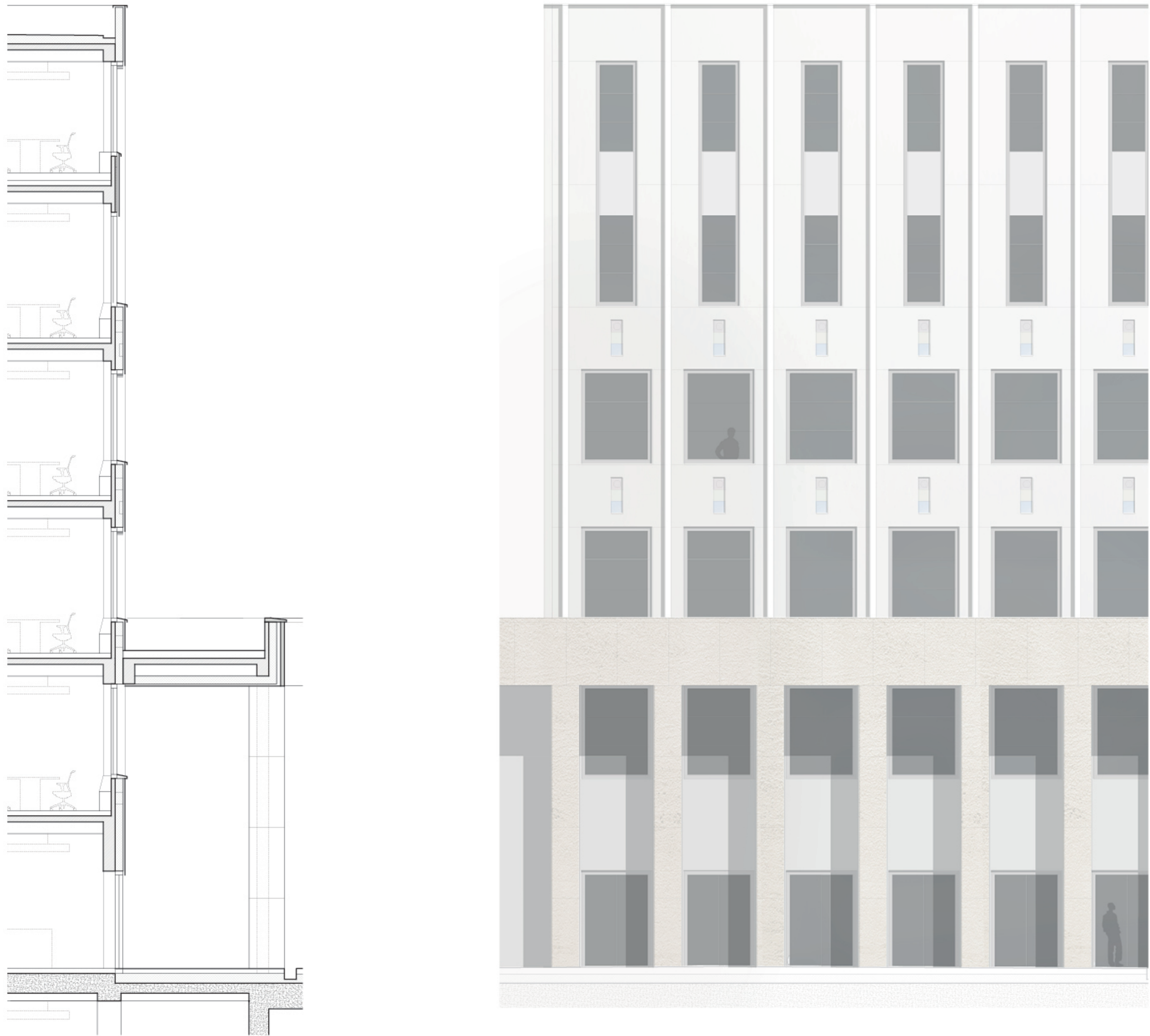




1. PARAPET WALL SECTION (OUT-IN):
- ALUMINIUM COPING SHEET OVER WOODEN BASE
  - 2mm ALUMINIUM SHEET (HYDRO CIRCAL) OVER LIGHT GAUGE SUBFRAME BENT TO PROFILE; 30mm
  - RAINWATER DOWNTAKE PIPES CONCEALED WITHIN 'FINS'
  - WEATHERPROOFING LAYER
  - BACKING GYPSUM FIBRE BOARDS OVER INSULATION LAYER; 16mm
  - MINERAL WOOL INSULATION; 185mm
2. ROOF SLAB (TOP-BOTTOM):
- RIGID INSULATION, LAID TO 5% SLOPE TO PERIMETER GUTTER. MIN. DEPTH 200mm
  - IMPACT AND SOUND INSULATION; 25mm
  - CLT SLAB; 150mm. CLT BEAM; 300mm. FIXED VIA BOLTED STEEL L-ANGLES

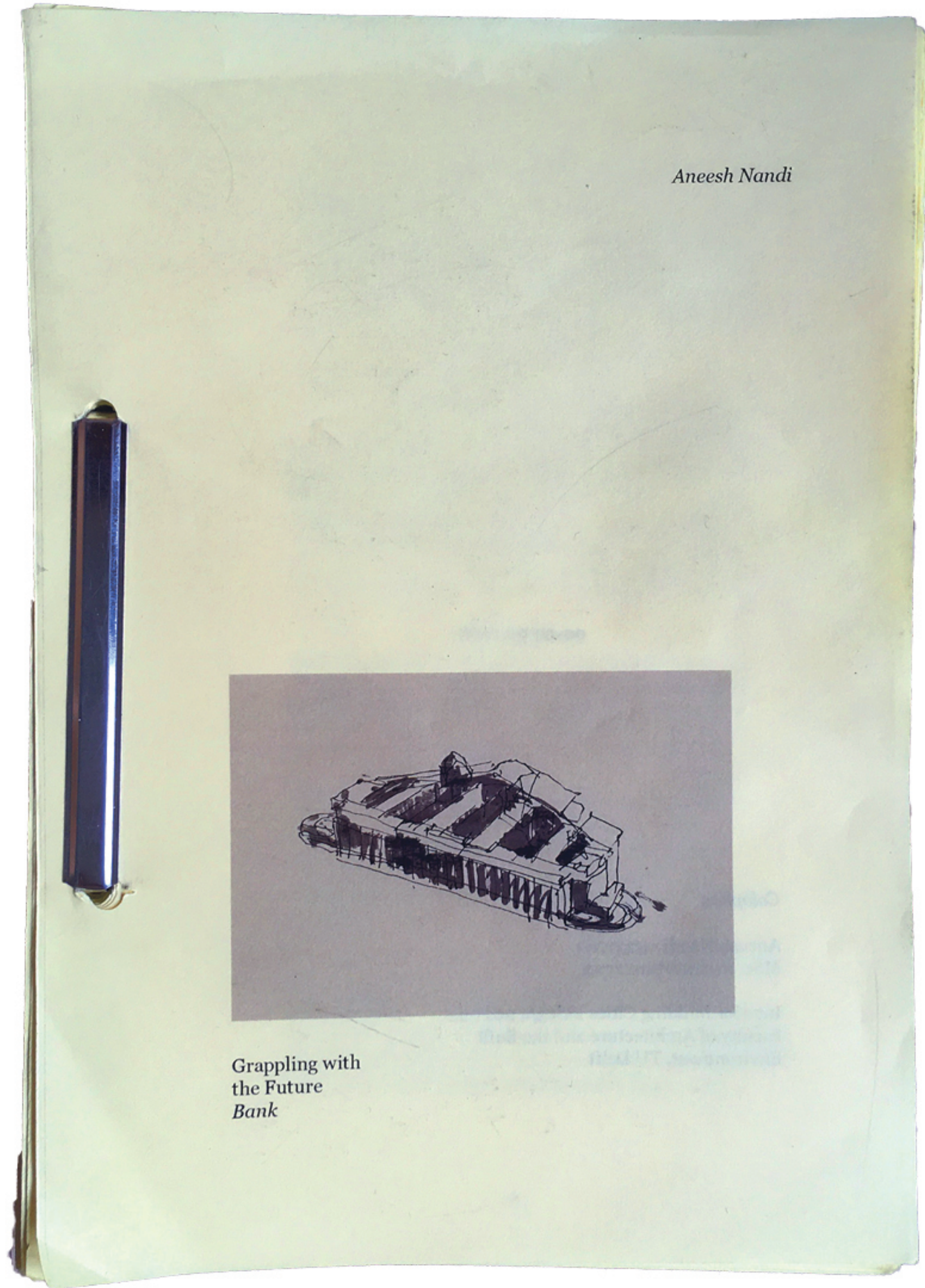
Roof parapet detail, Bank facing triangle court





Facade and typical wall section, square court





Conclusion / reflection



