

BORDERS & --- BOUNDARIES

HERITAGE AND ARCHITECTURE DESIGN STUDIO
BY DAPHNE HOMAN

Heritage and Architecture
MSc 1 2017 - 2018
AR1AR011

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Group 3, Peter van Velzen


















February 2018, Faculty of Architecture, TU Delft




FROM PRISON TO UNIVERSITY

A DESIGN FOR THE KOEPELGEVANGENIS IN HAARLEM

VALUE ASSESSMENT

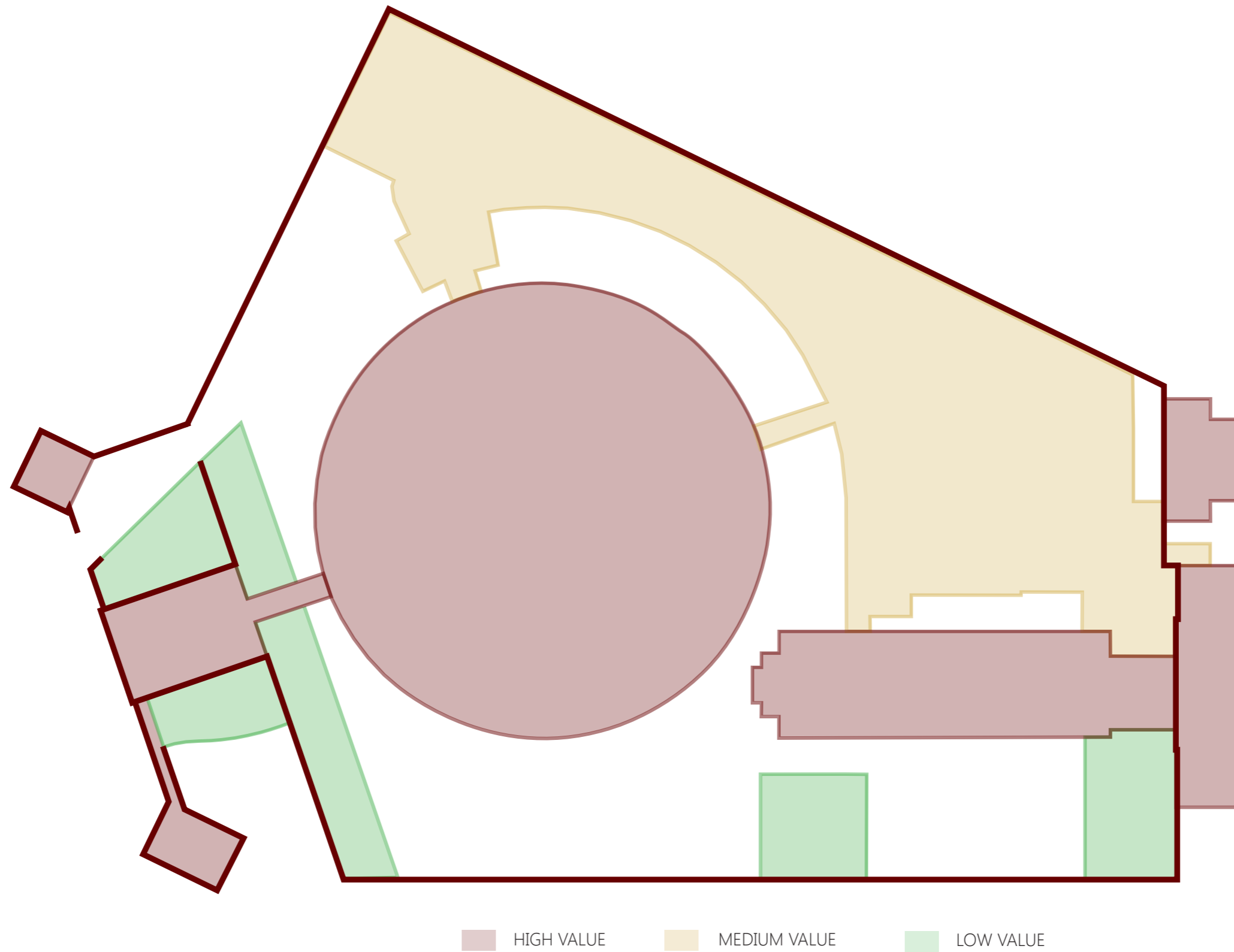
QUALITIES IN HERITAGE VALUE MATRIX

	RIEGL +	AGE VALUE	HISTORICAL VALUE	AESTHETIC VALUE
BRAND + SURROUNDINGS / SETTING			Position in the city 	Dominant in skyline of Haarlem 
SITE		 Different areas represented different ages and typologies	 Prison wall	
SHAPE / VOLUME		Building represent the historical development of prisoners 		Landmark 
SKIN (exterior)		Colors and damages shows timespan of the building	 Small windows show the function of the building	 Style, rhythm, repetition
STRUCTURE		Steel structure represents industrial revolution 	Use of traditional masonry 	Steel structure shows the way the cupola is constructed 
SPACE PLAN		 Changes in organizing the floorplan	Panopticon typology 	
SURFACE (interior)		Layers of paint 	Cell doors  Writings, graffiti, paintings, refugees messages on the wall	Ventilation elements on top floor  Brick pattern (ornaments)
SERVICES				 Ventilation elements as a service Stone sinks
SPIRIT OF PLACE		Character and identity city of Haarlem	Historical character Dome can connect different cultural activities	

HIGH VALUE 
MEDIUM VALUE 
LOW VALUE 

VALUE ASSESSMENT

QUALITIES IN FLOORPLAN

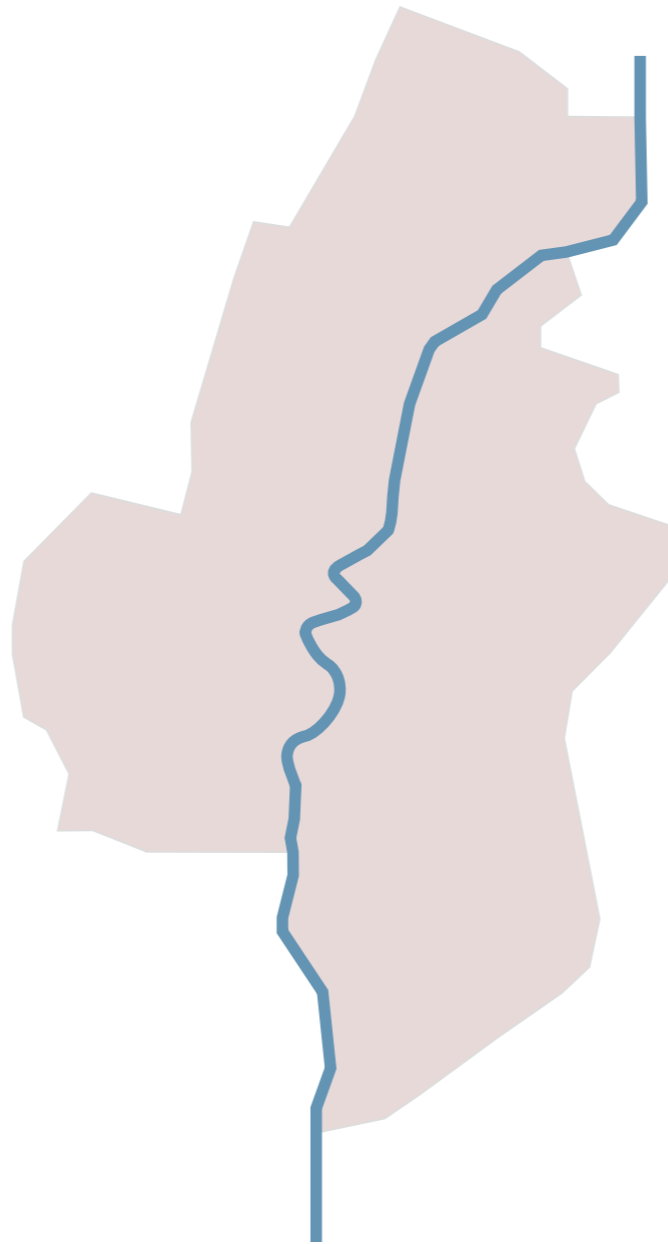


ANALYSIS

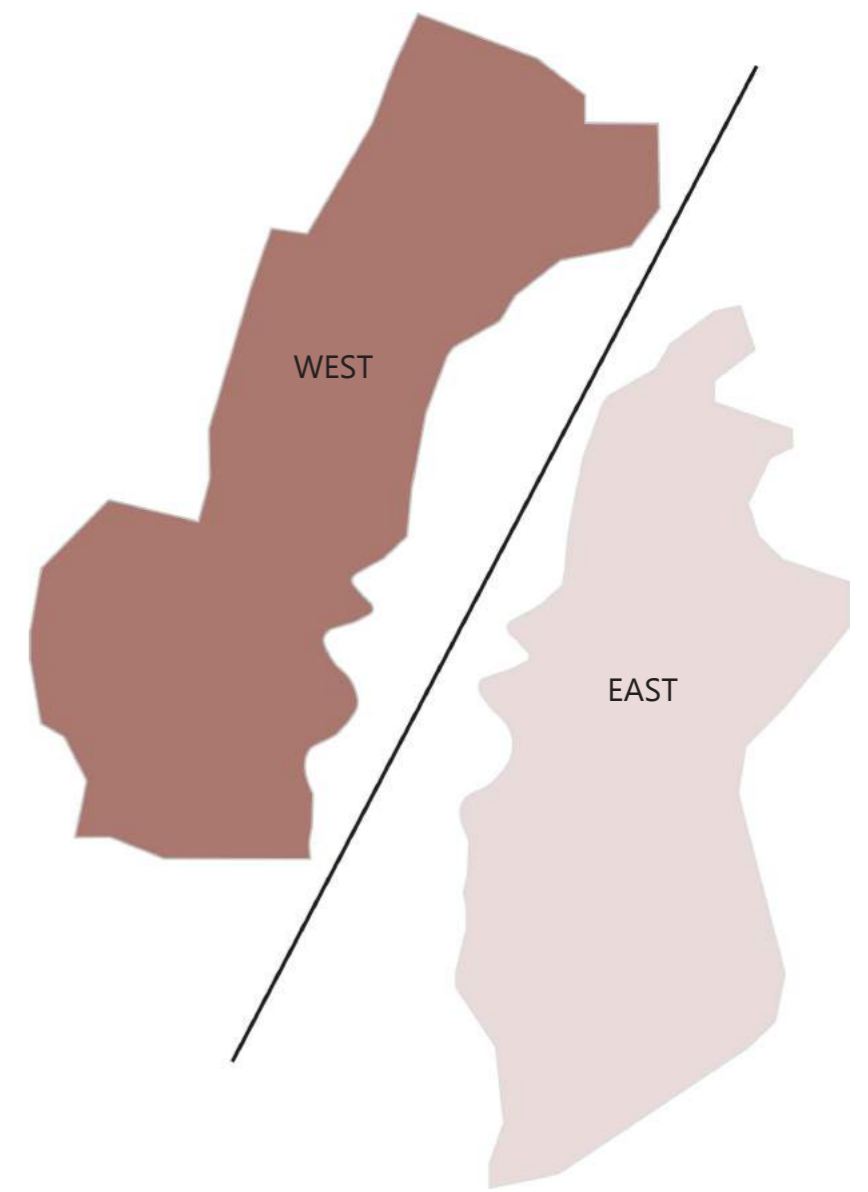
URBAN CONTEXT



OUTLINES OF HAARLEM



HAARLEM DIVIDED BY THE SPAARNE



BOUNDARY BETWEEN EAST- AND WEST-HAARLEM

ANALYSIS

THE SPAARNE AS BORDER



THE SPAARNE SEPARATES EAST- FROM WEST-HAARLEM

ANALYSIS

CULTURAL ACTIVITIES / LANDMARKS



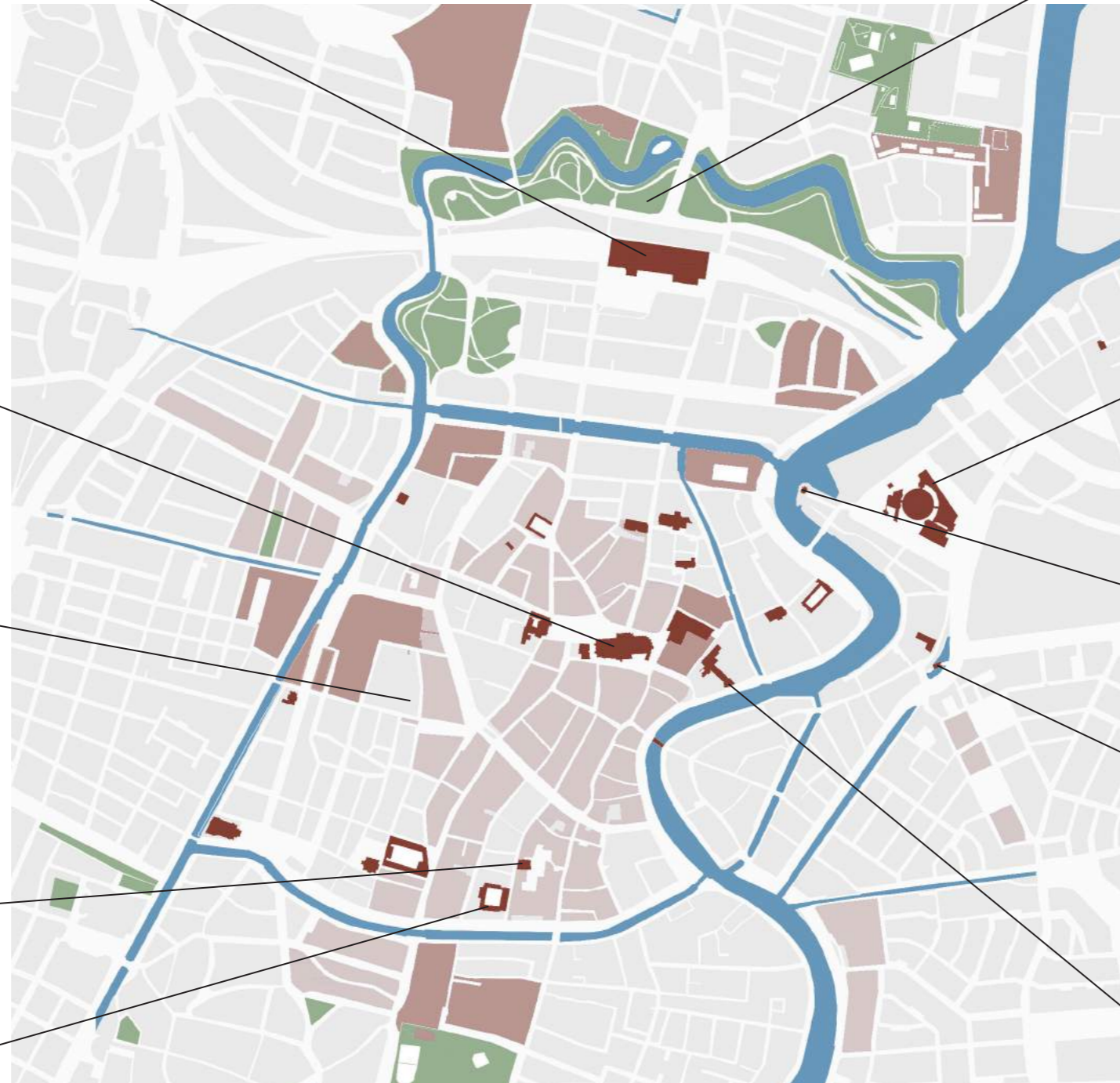
HAARLEM TRAIN STATION



PARC 'DE BOLWERKEN'



SINT BAVOCHURCH



PANOPTICUM PRISON



HAARLEM PUBLIC LIBRARY



MILL 'DE ADRIAAN'



HISTORICAL MUSEUM HAARLEM



'AMSTERDAMSE POORT'



FRANS HALS MUSEUM

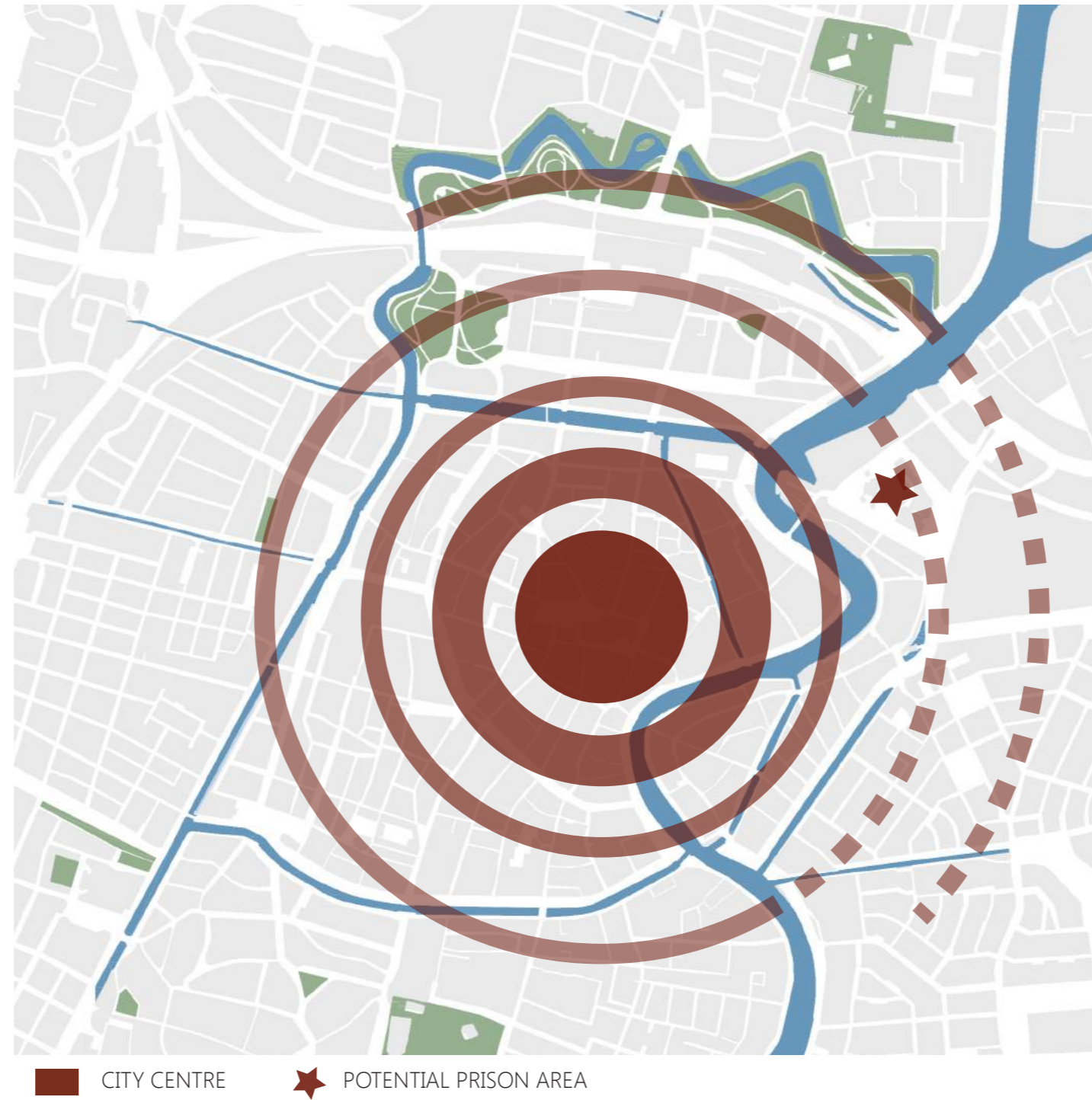


TEYLERS MUSEUM

■ LANDMARKS ■ INDUSTRIAL AREA ■ COMMERCIAL AREA ■ HOUSING

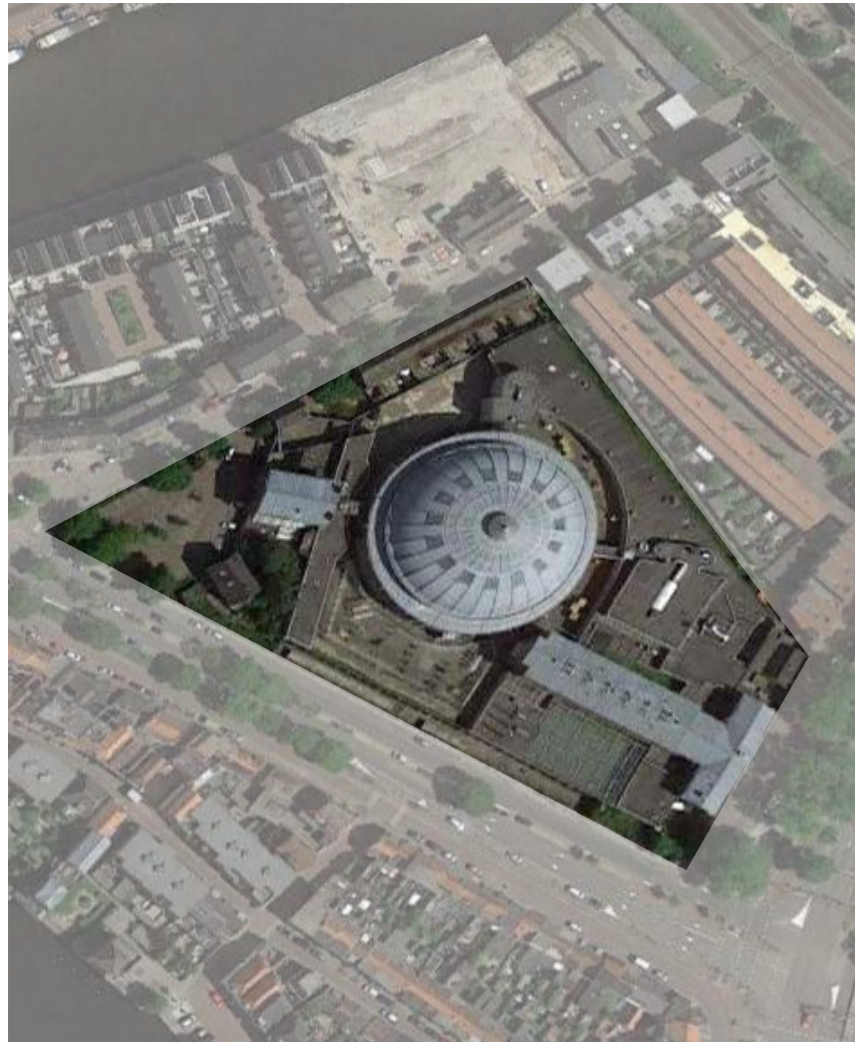
CONCLUSION

URBAN SCALE: EXTENDING THE CITY CENTRE

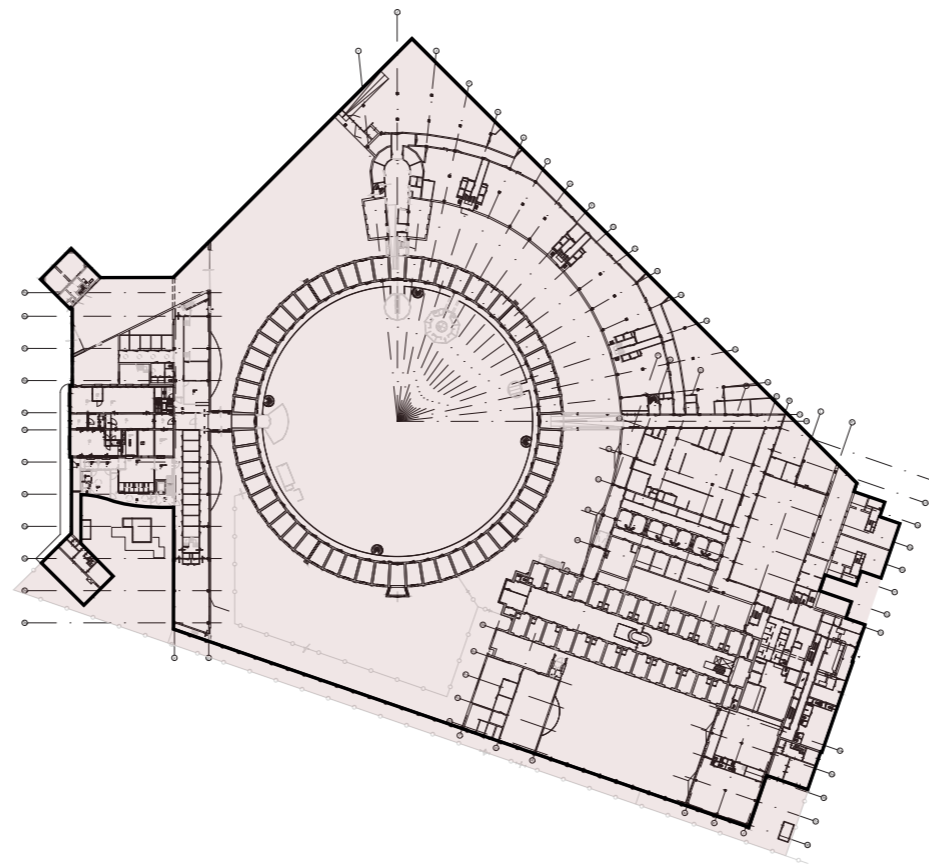


ANALYSIS

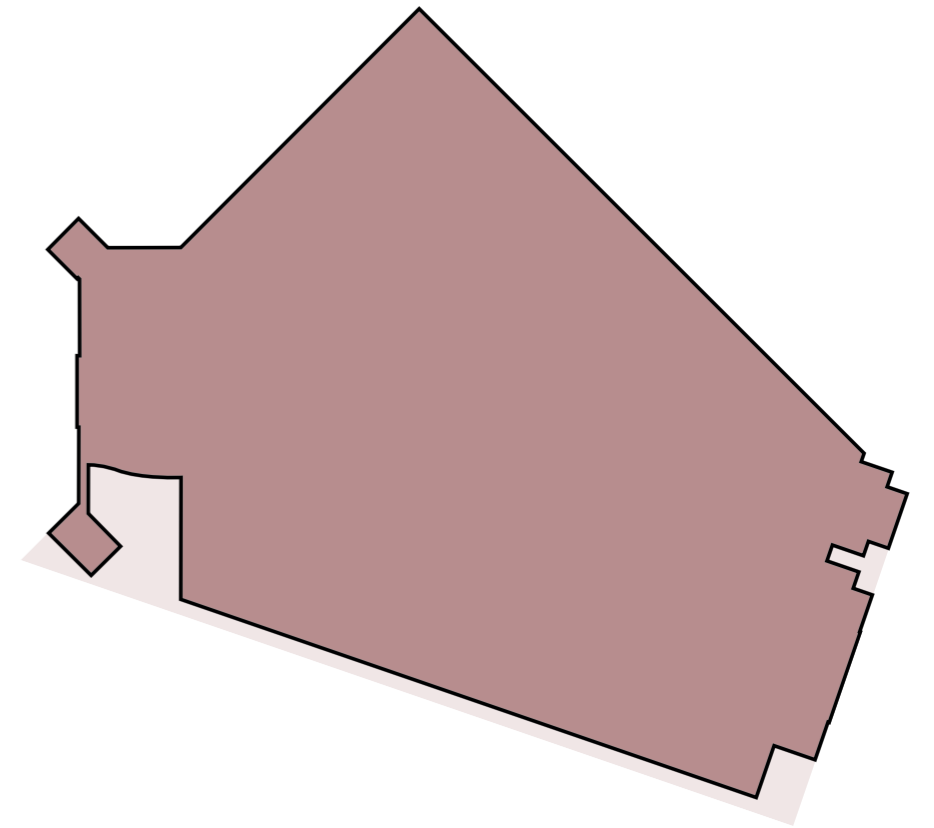
PLOT CONTEXT



OUTLINES OF THE PLOT






THE WALL AS SEPARATING ELEMENT

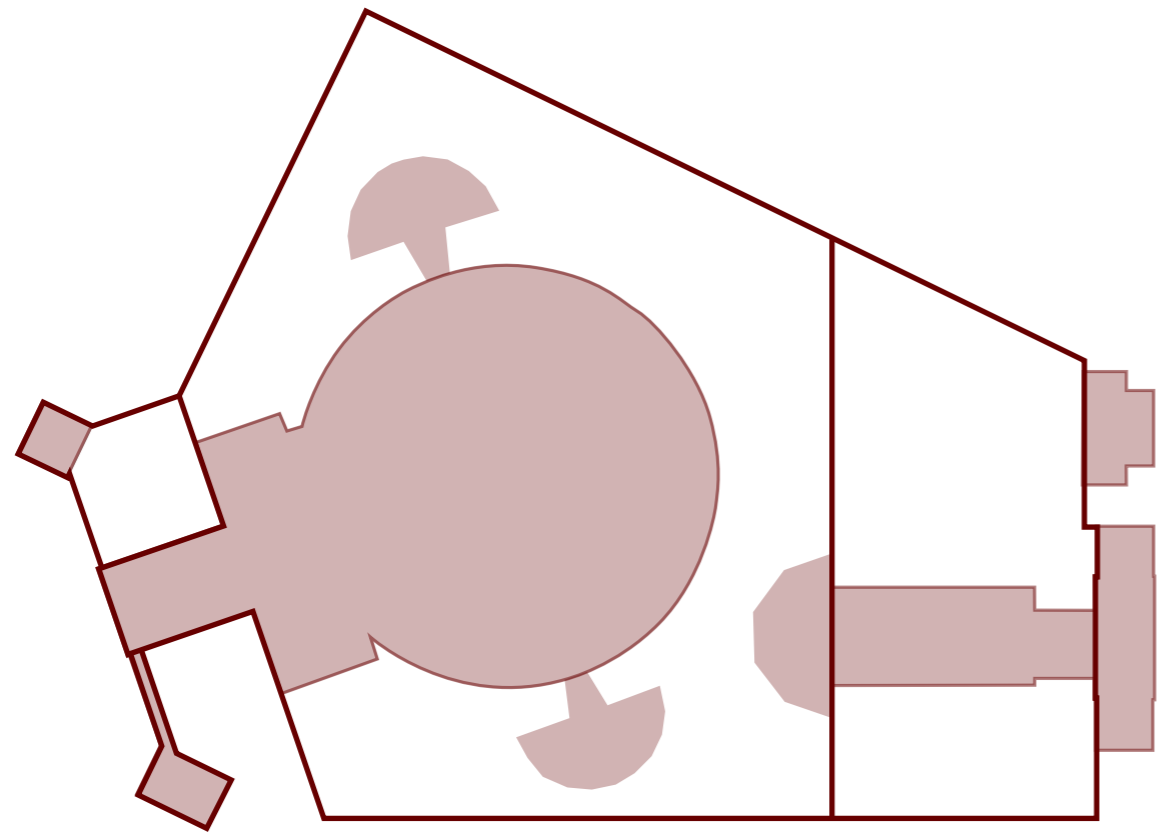


BOUNDARY BETWEEN THE CITY AND THE PLOT

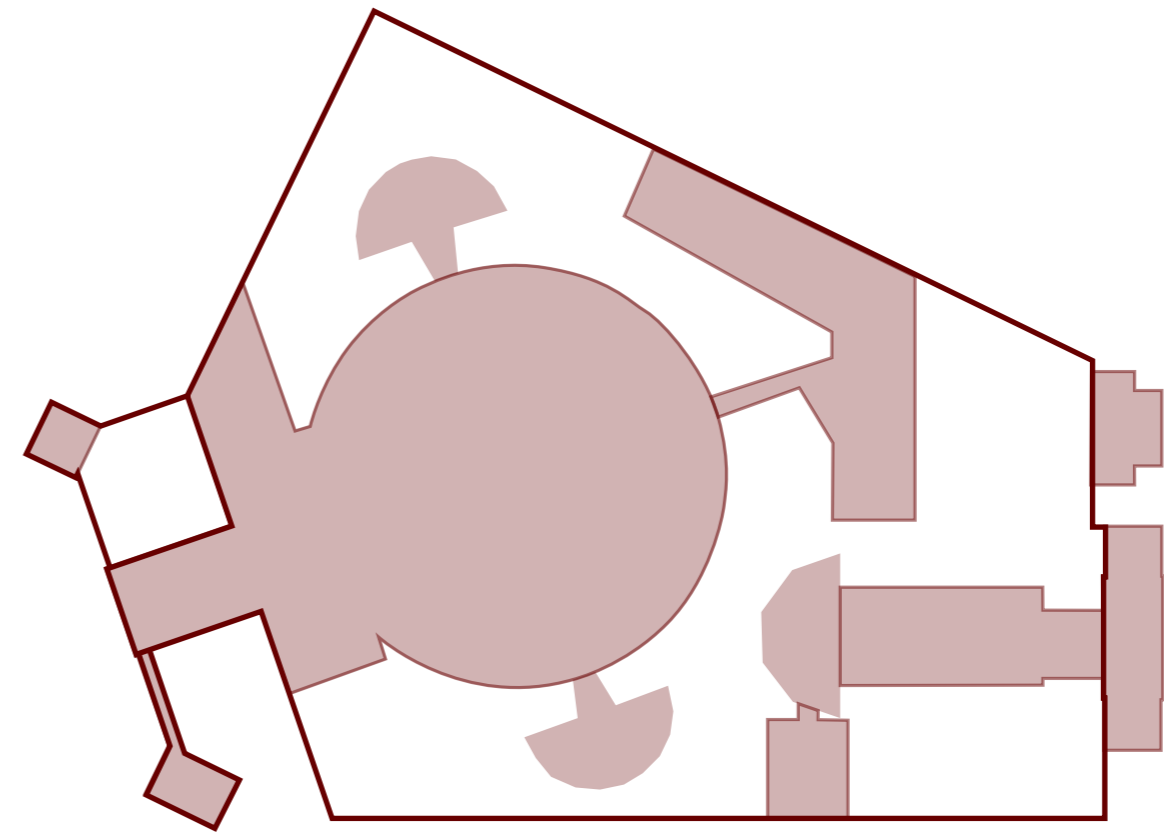
ANALYSIS

BORDERS CHANGING OVER TIME

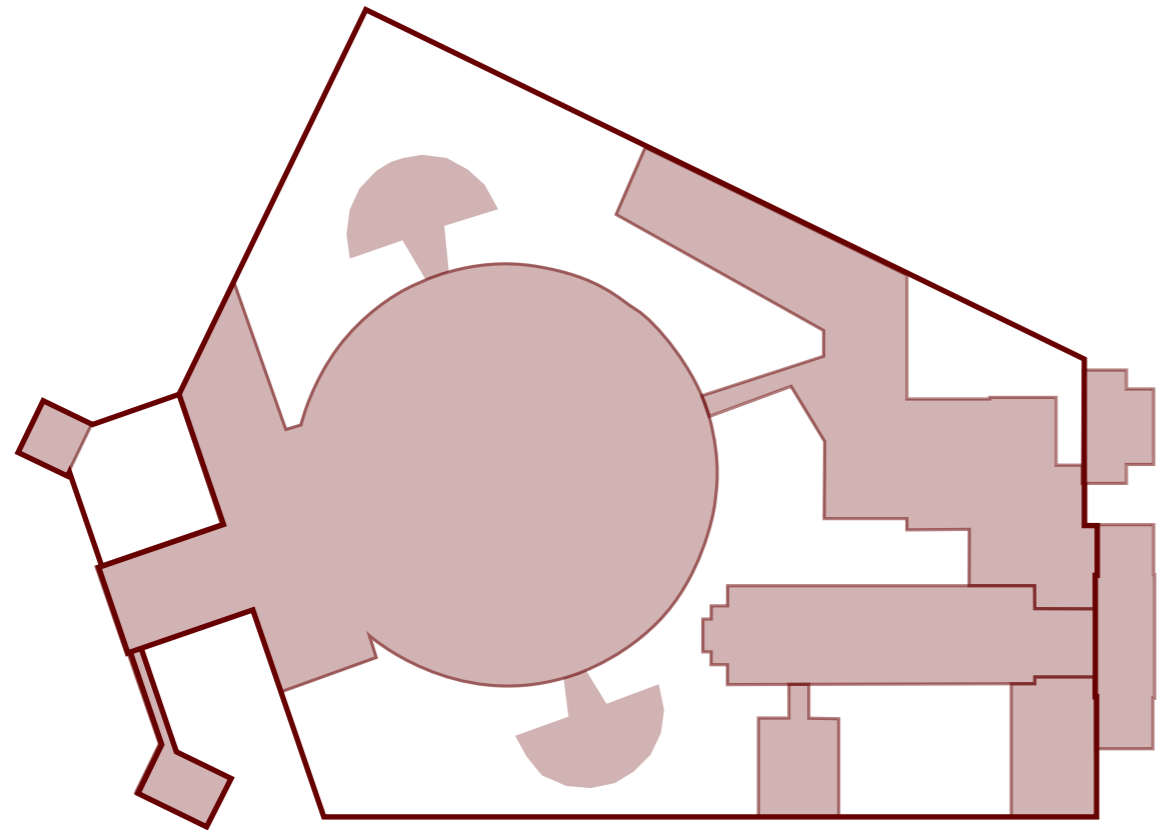
- VOLUME 
- INTERNAL BORDER 
- EXTERNAL BORDER 



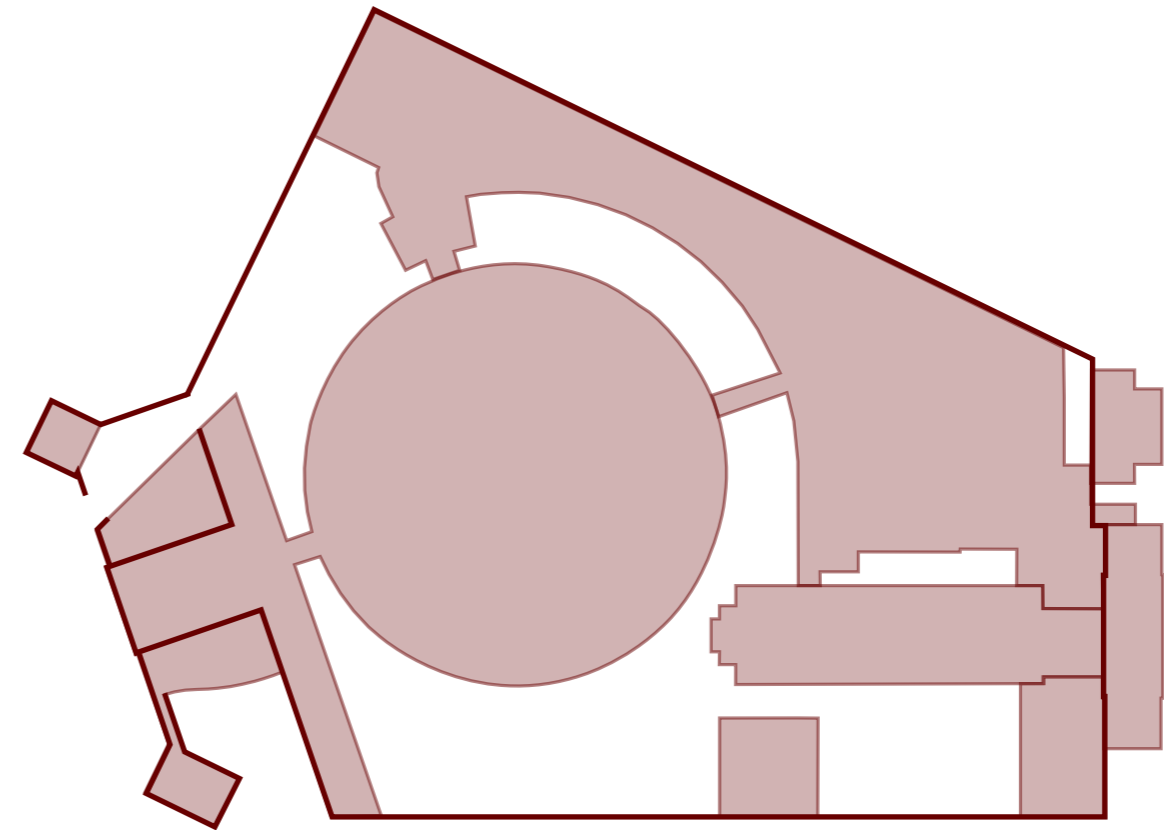
SITUATION IN 1901



SITUATION IN 1922 - FIRST RENOVATION



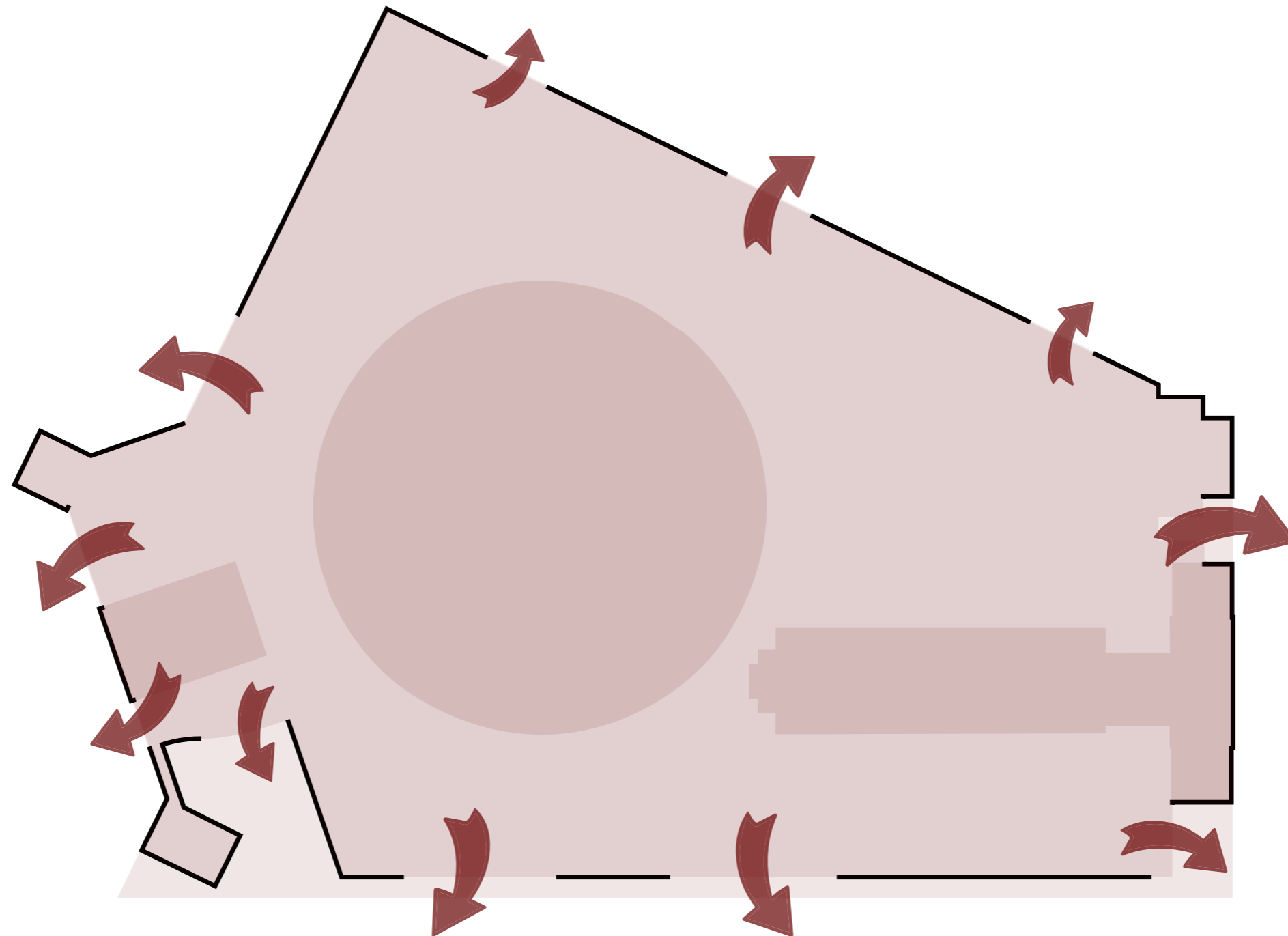
SITUATION IN 1968 - SECOND RENOVATION



SITUATION IN 1990 - THIRD RENOVATION

CONCLUSION

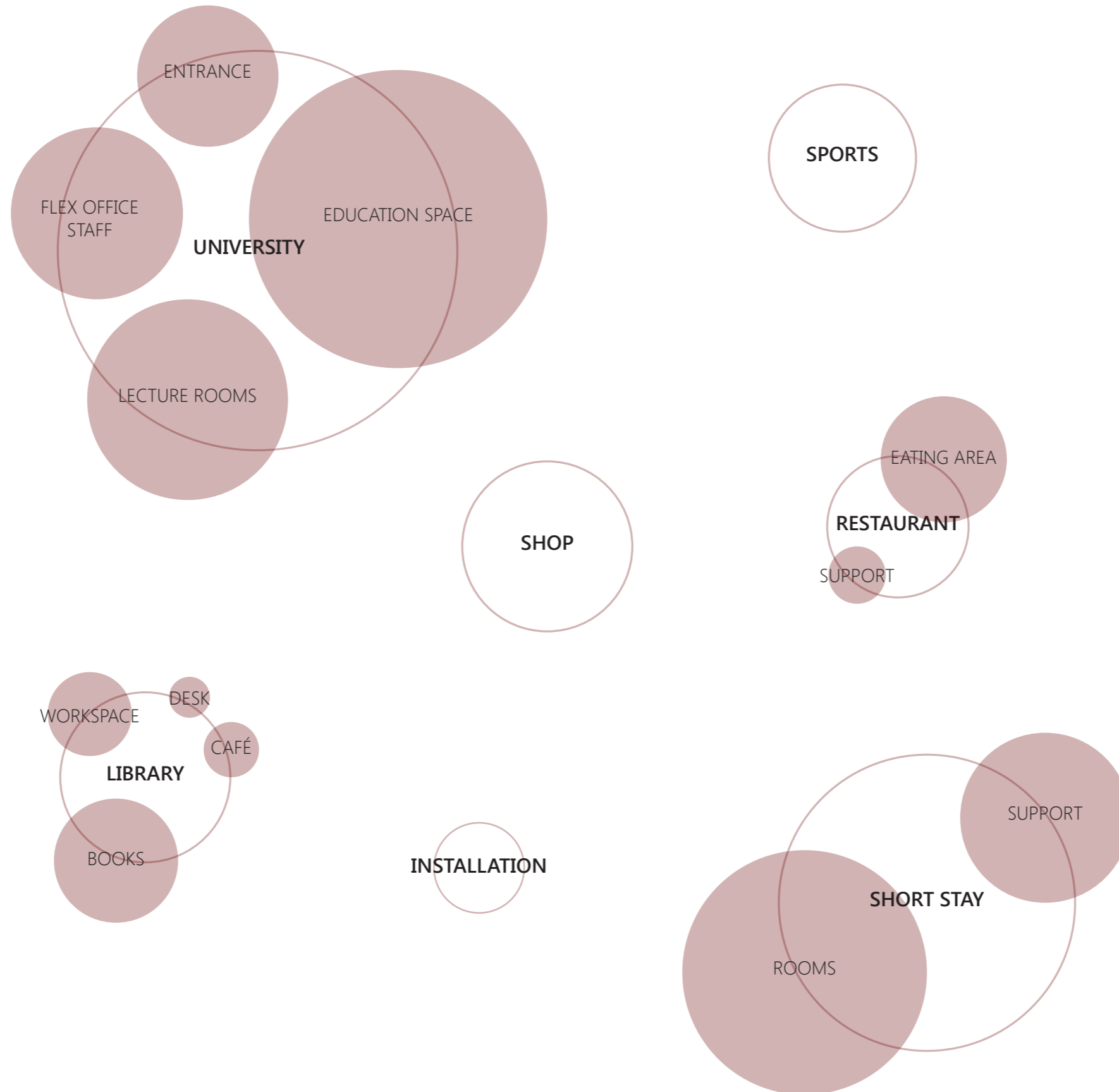
BUILDING SCALE: OPENING THE PLOT



OPENING THE BORDER BETWEEN THE PLOT AND THE CITY

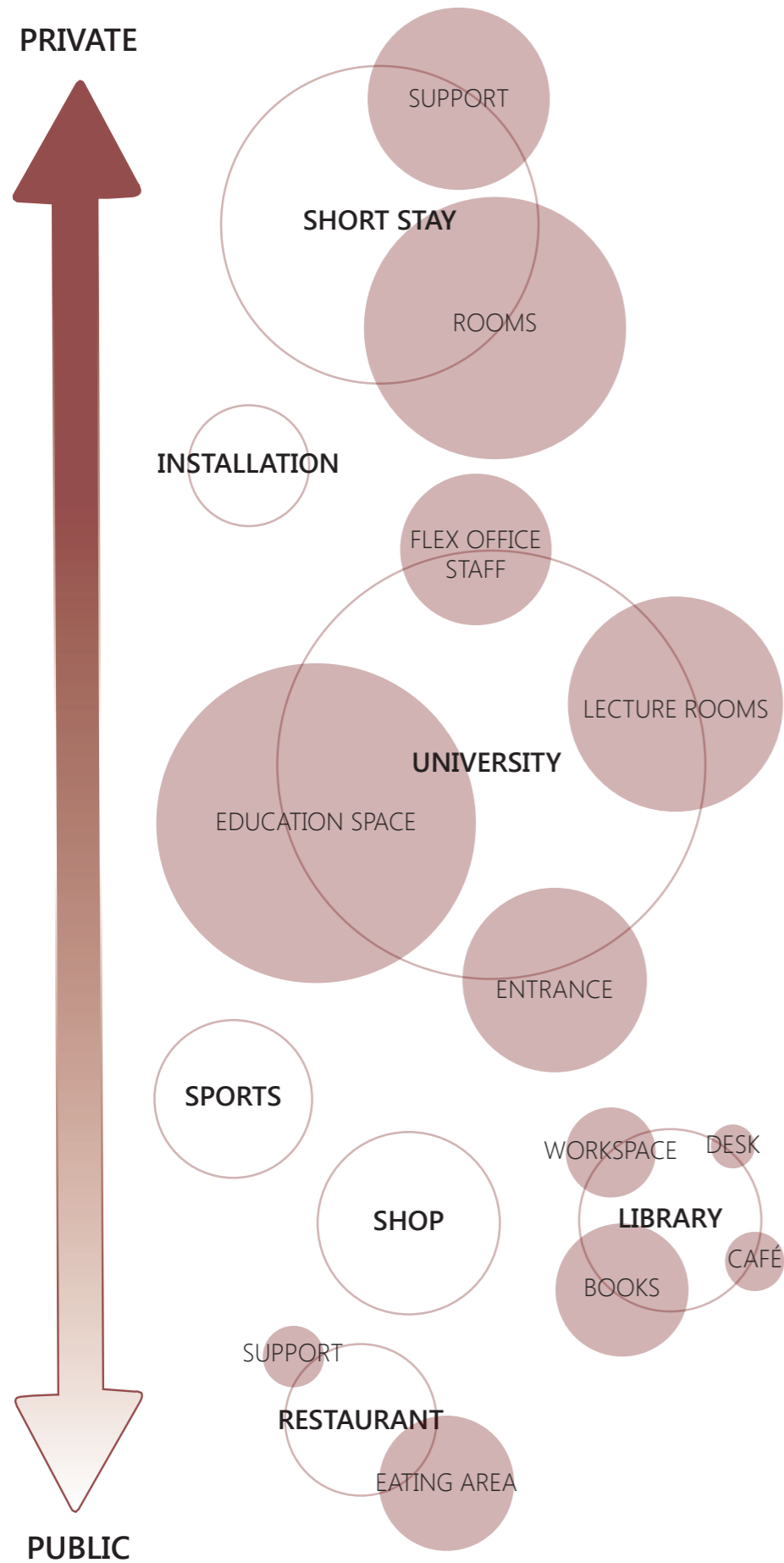
ANALYSIS

OVERVIEW PROGRAM

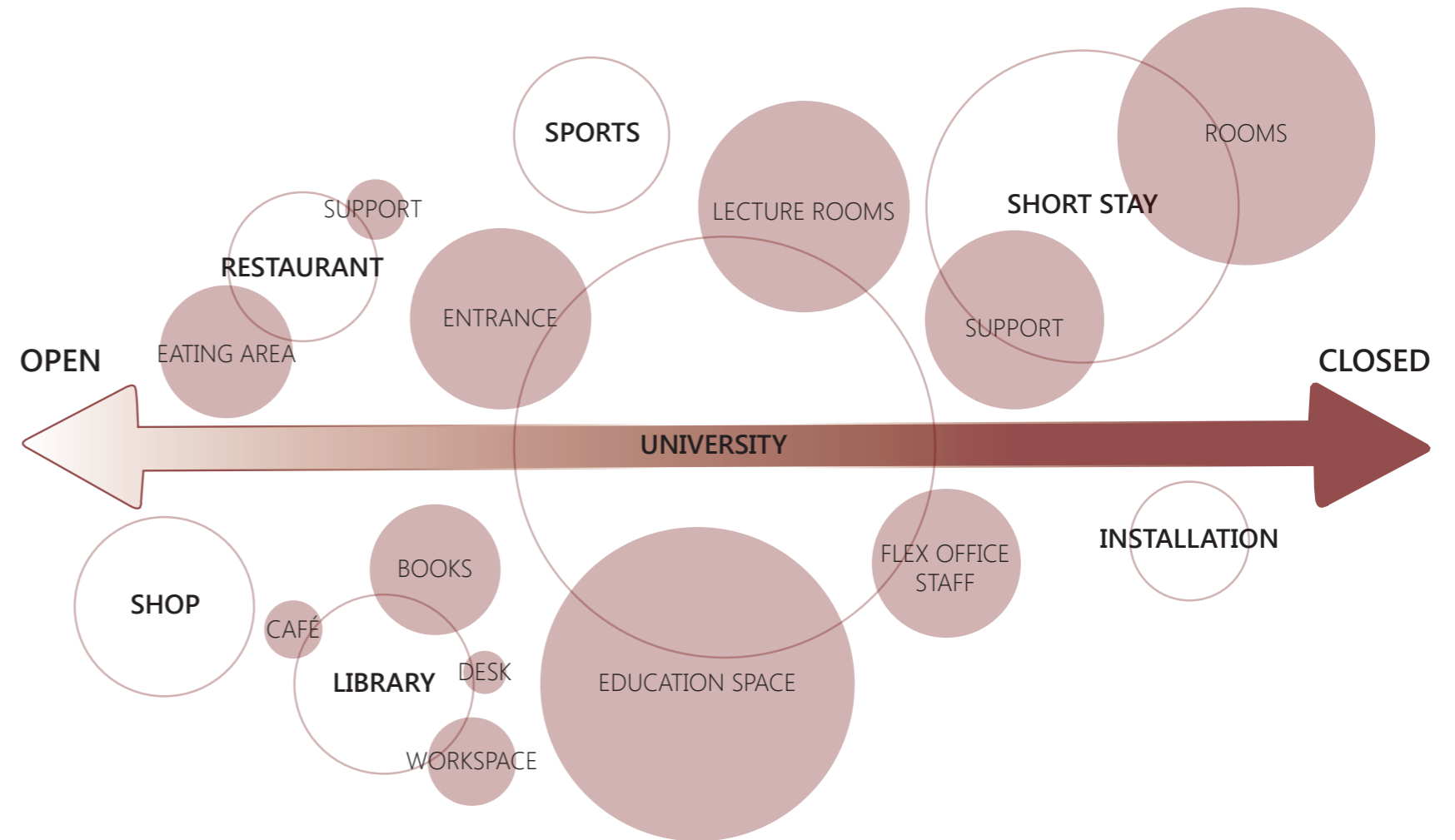


ANALYSIS

ORGANIZING THE FUNCTIONS



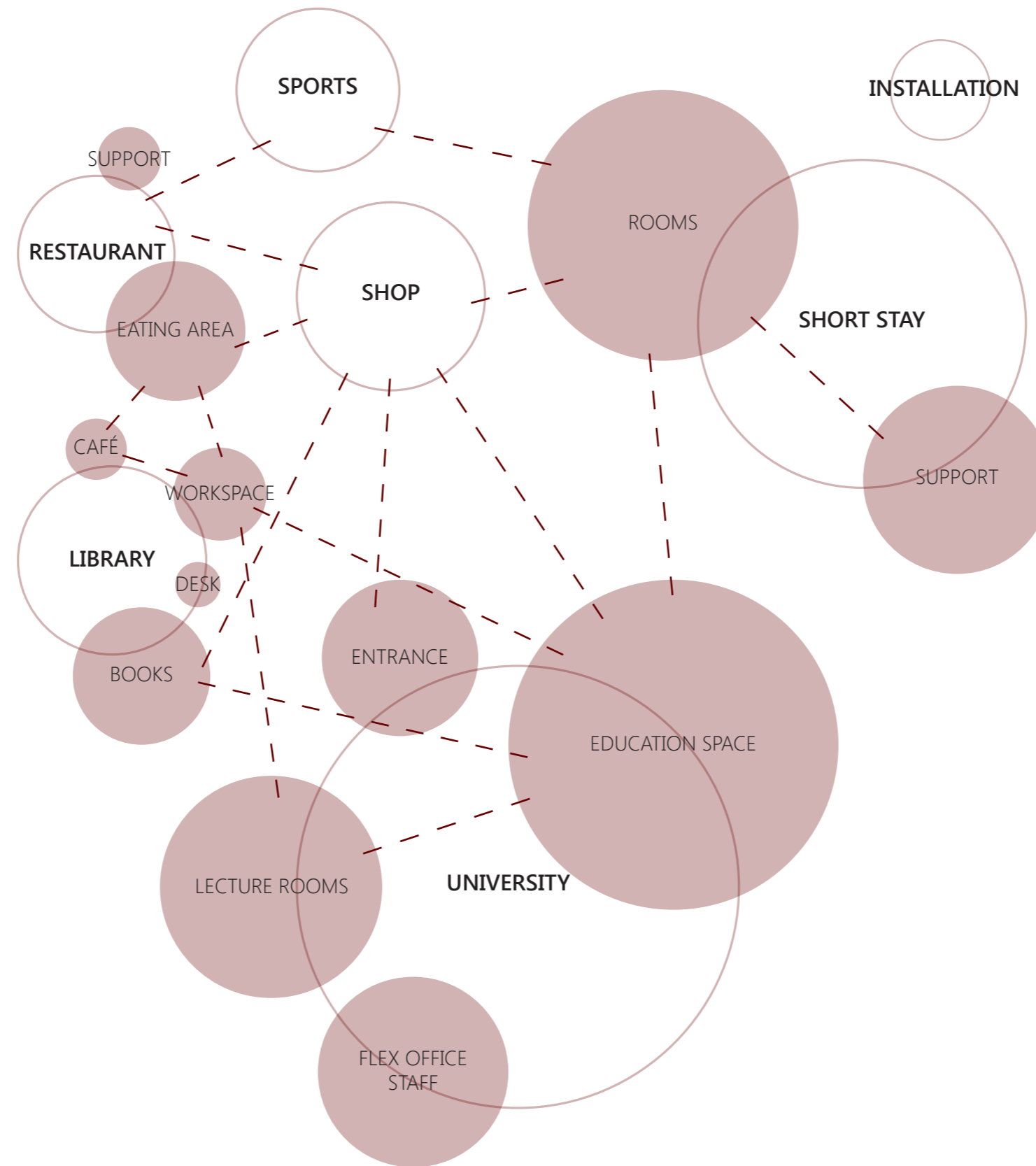
ORGANIZED BY DIVIDING IN PUBLIC AND PRIVATE



ORGANIZED BY DIVIDING IN OPEN AND CLOSED FUNCTIONS

ANALYSIS

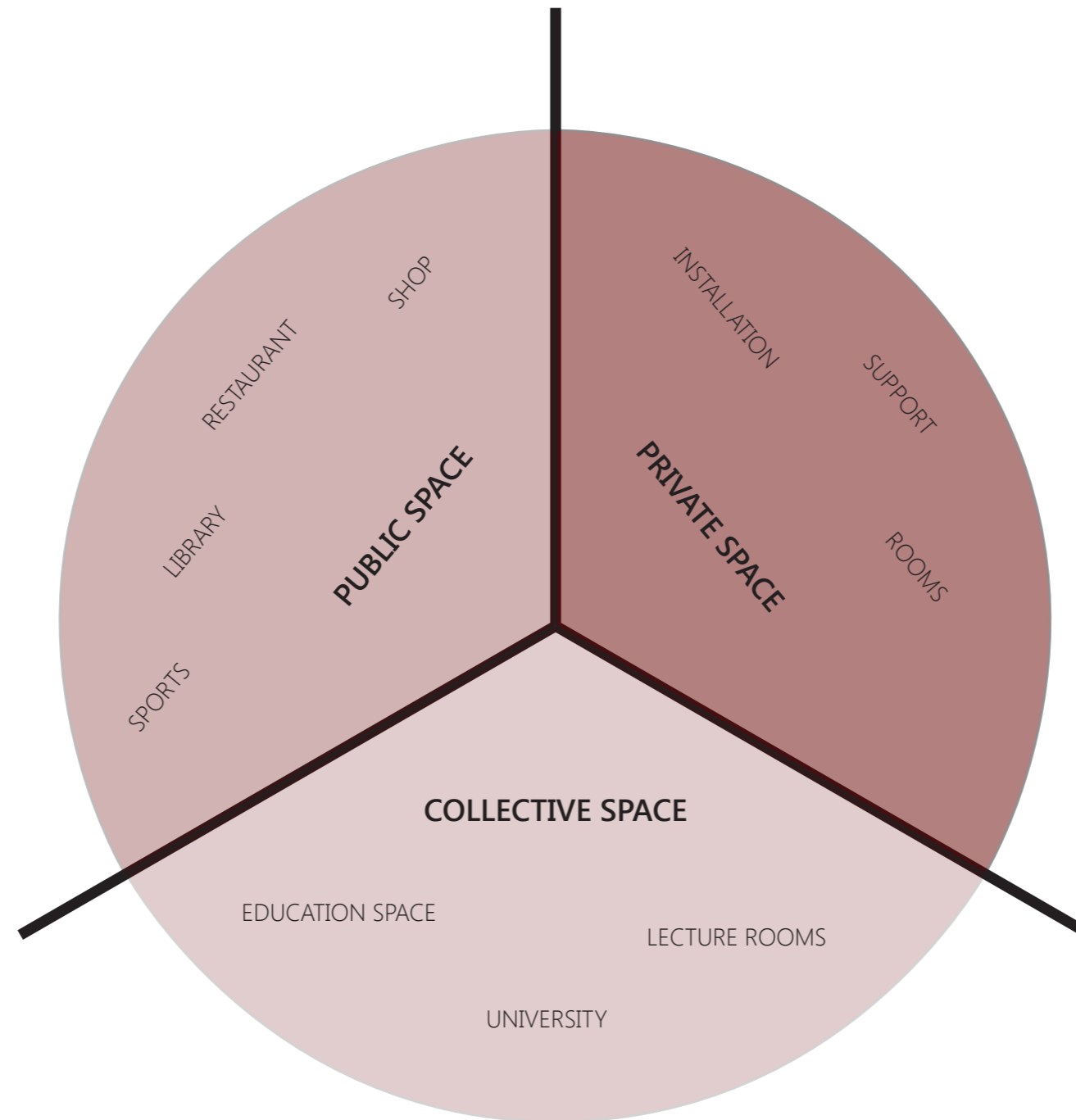
CONNECTING THE FUNCTIONS



CONNECTION BETWEEN FUNCTIONS

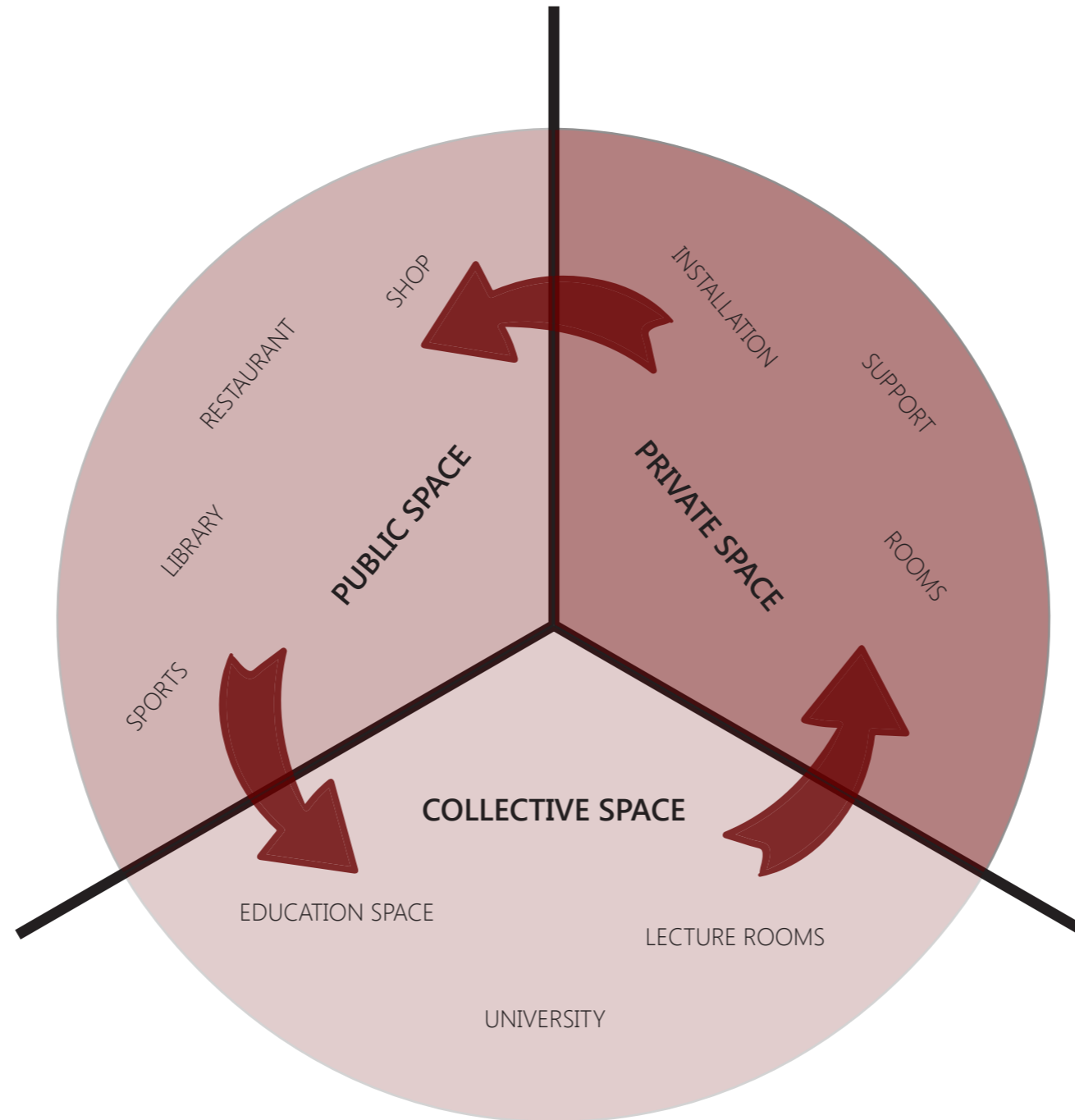
CONCLUSION

PROGRAM: DIVIDING IN THREE TYPES



CONCLUSION

PROGRAM: BOUNDARIES & CONNECTIONS

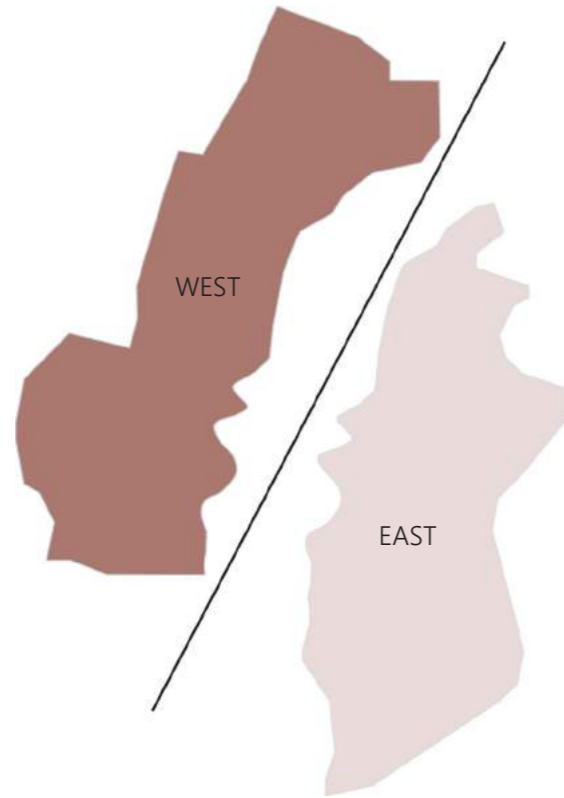


CONCLUSIONS & INTERVENTIONS

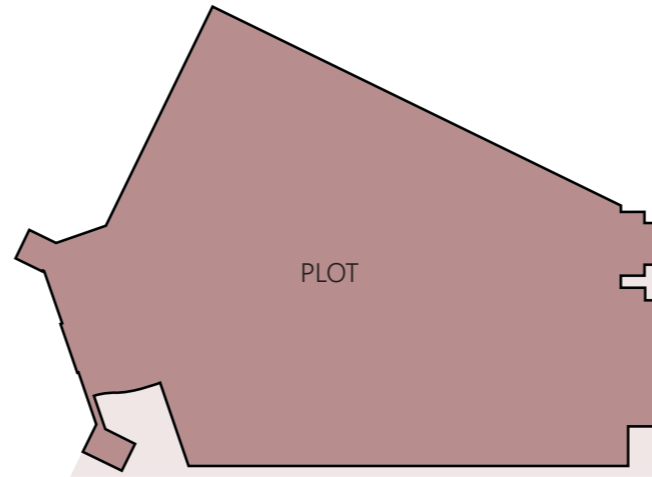
BOUNDARIES ON THREE SCALES

CONCLUSIONS

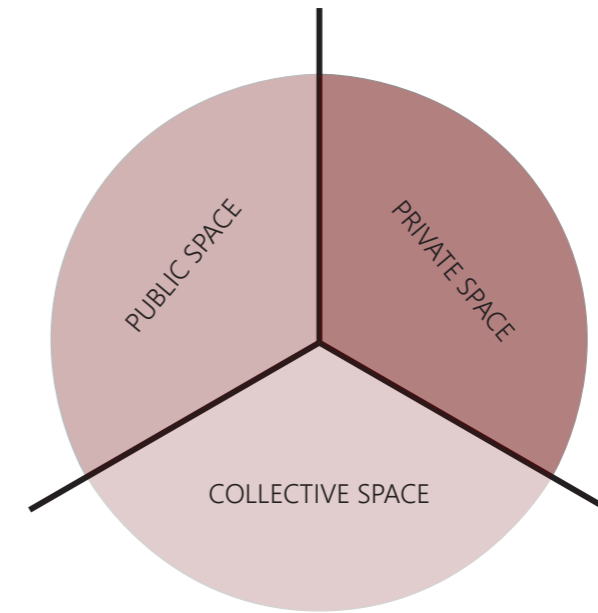
URBAN SCALE



BUILDING SCALE



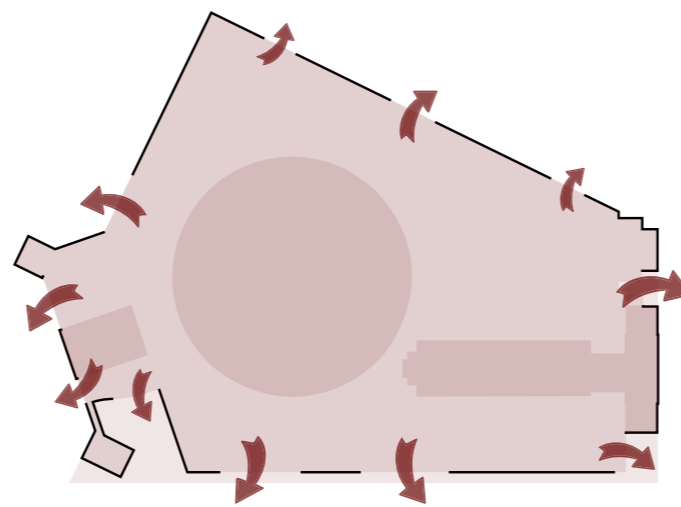
PROGRAM SCALE



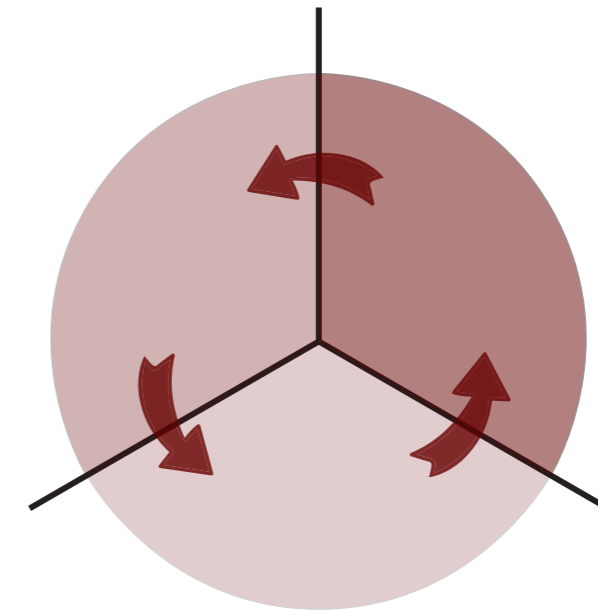
INTERVENTIONS



Extending the city centre



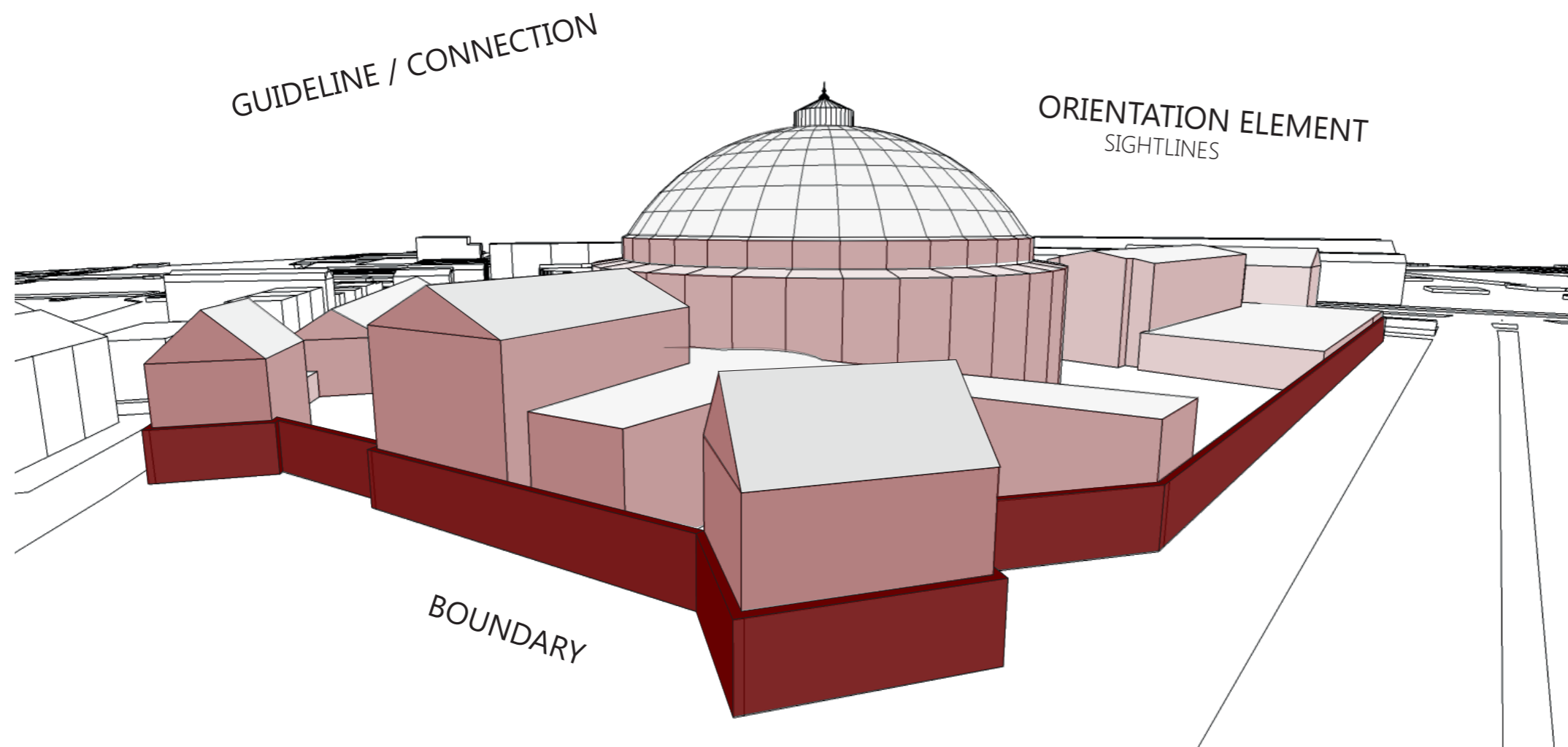
Opening the border between the plot and the city



Creating a lively place to connect the three different spaces

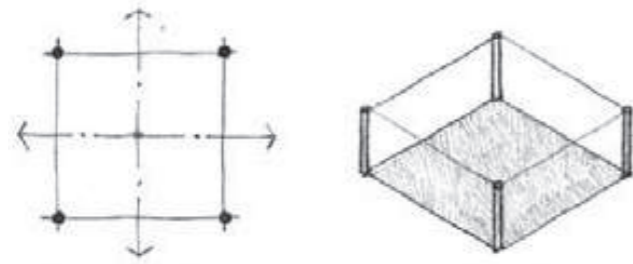
GUIDING THEME

BORDERS & BOUNDARIES



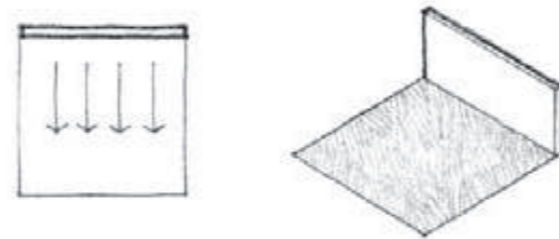
RESEARCH

VERTICAL SPACE DEFINING ELEMENTS

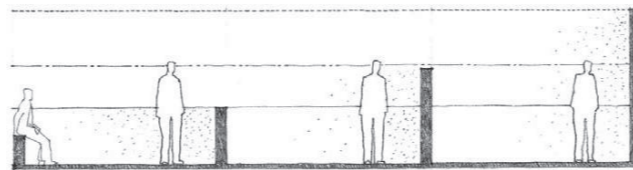


VERTICAL LINEAIR ELEMENTS

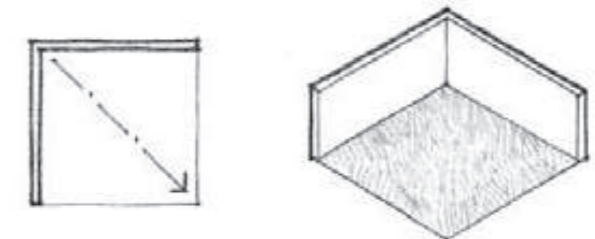
"When a column is located within a defined volume of space, it will generate a spatial field about itself and interact with the spatial enclosure."



SINGLE VERTICAL PLANE

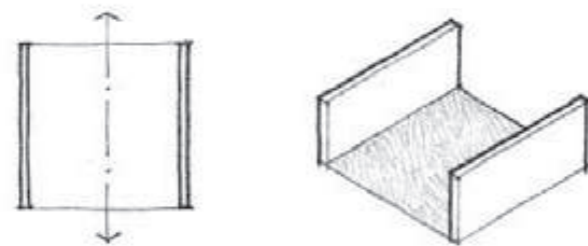
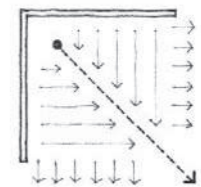


"The height of a vertical plane relative to our body height and eye level is the critical factor that affects the ability of the plane to visually describe space... and define a sense of enclosure."



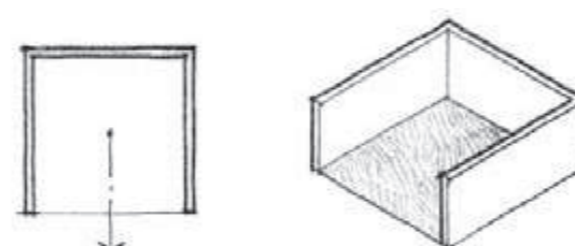
L-SHAPED PLANE

"While this field is strongly defined and enclosed at the corner of the configuration, it dissipates rapidly as it moves away from the corner."



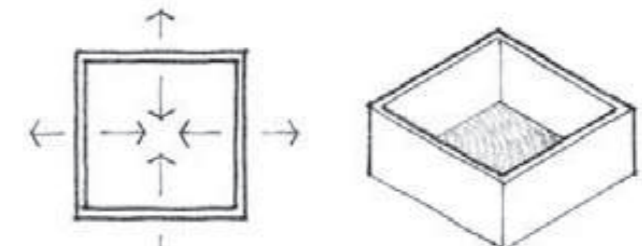
PARALLEL PLANES

"A pair of parallel vertical planes defines a field of space between them. The open ends of the field give the space a strong directional quality."



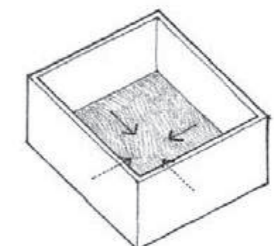
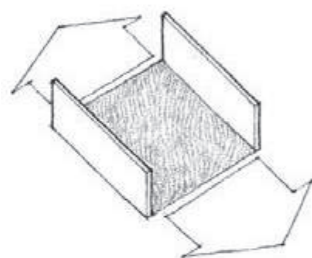
U-SHAPED PLANE

"A U-shaped configuration of vertical planes defines a field of space that has an inward focus as well as an outward orientation. The open end allows the field to have visual and spatial continuity with the adjoining space."



FOUR PLANES: CLOSURE

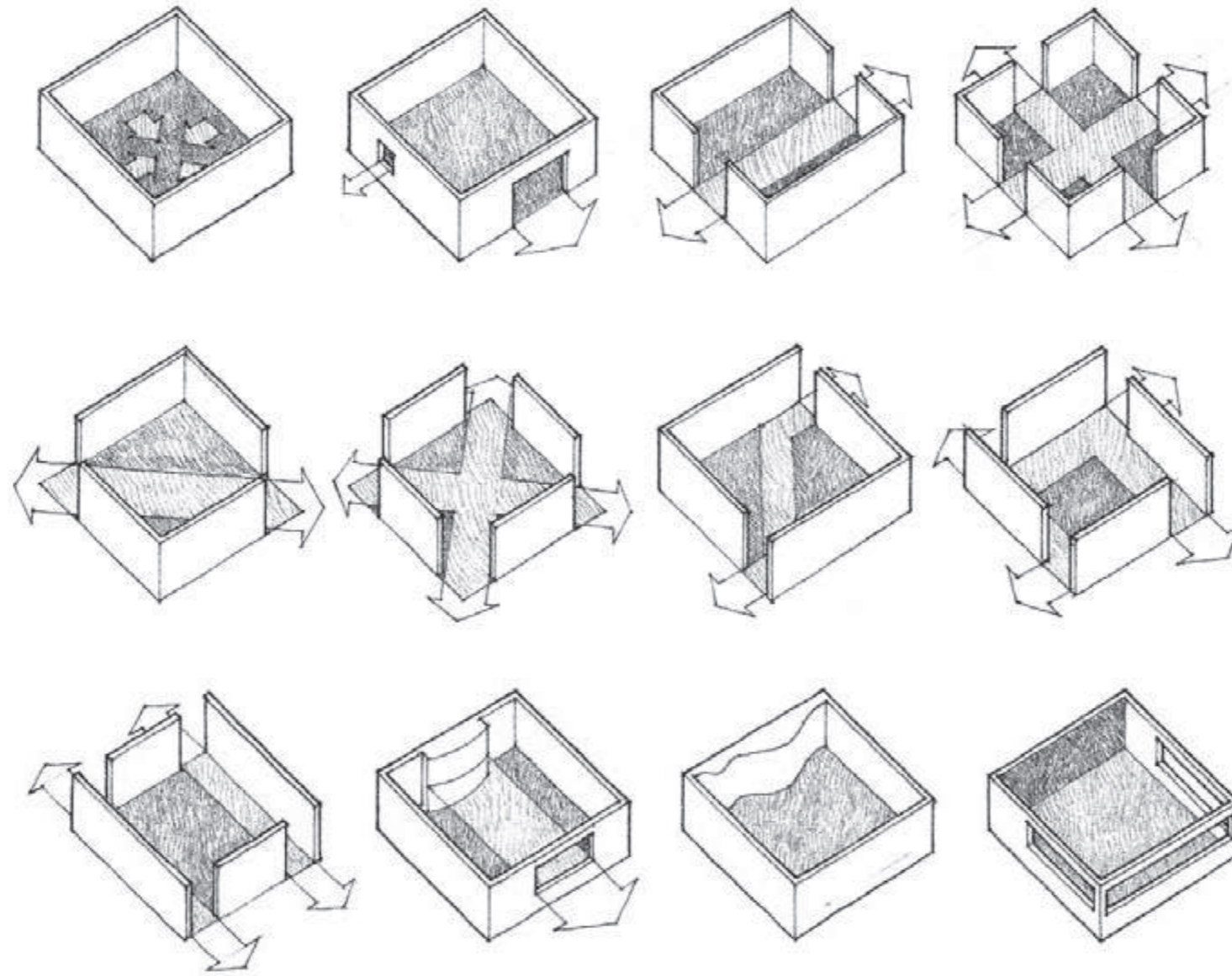
"Four vertical planes encompassing a field of space is the strongest type of spatial definition in architecture. Since the field is completely enclosed, its space is naturally introverted."



RESEARCH

OPENINGS IN SPACE-DEFINING ELEMENTS

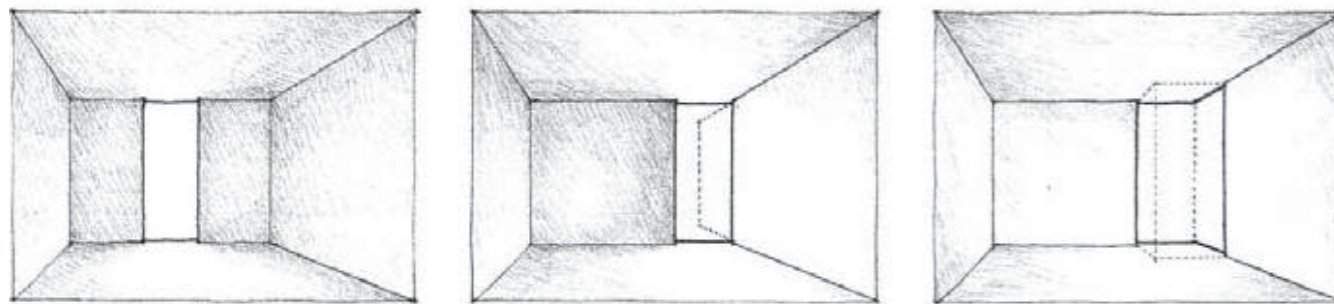
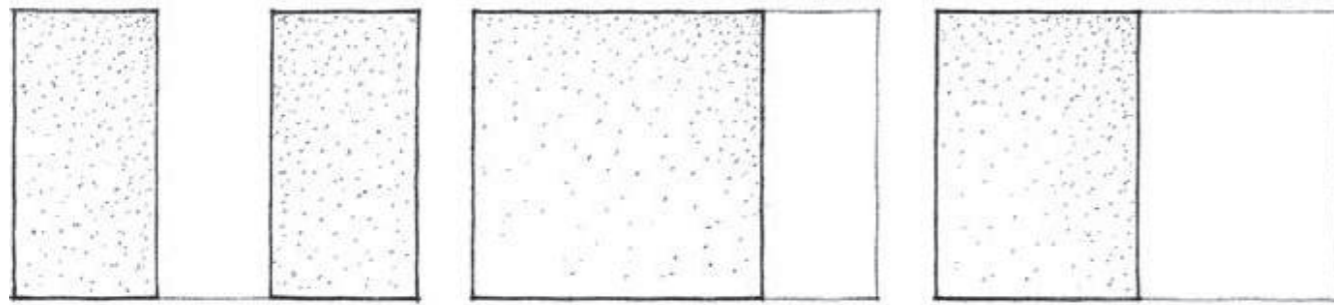
"No spatial or visual continuity is possible with adjacent spaces without openings in the enclosing planes of the spatial field."



WAYS OF OPENING THE ENCLOSING PLANES OF A SPATIAL FIELD

RESEARCH

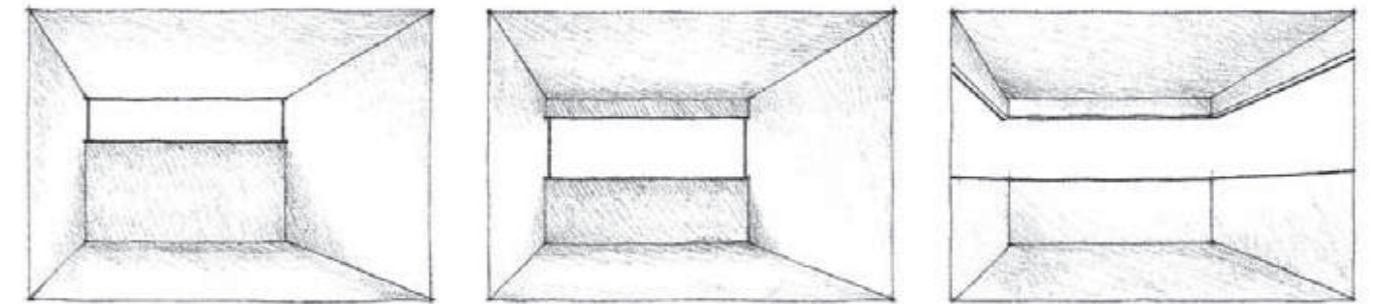
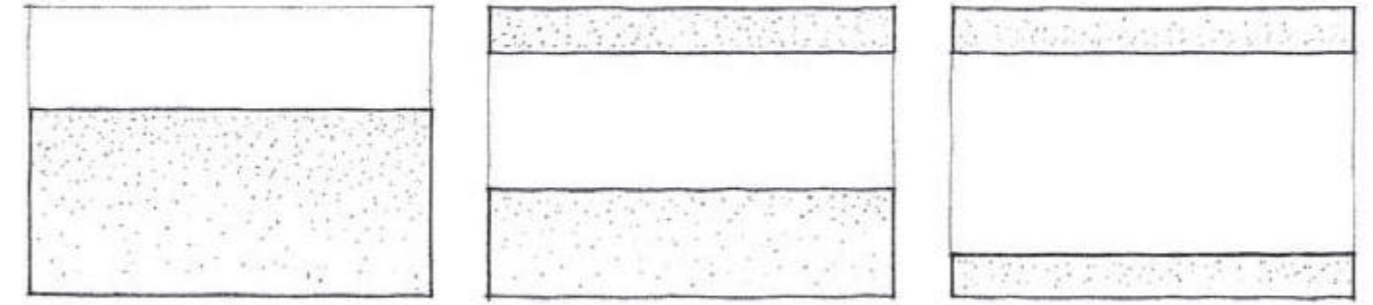
OPENINGS BETWEEN PLANES



VERTICAL OPENINGS BETWEEN PLANES

"A vertical opening that extends from the floor to the ceiling plane of a space visually separates and articulates the edges of the adjacent wall planes."

"If located at a corner, the vertical opening will erode the definition of the space and allow it to extend beyond the corner to the adjacent space."



HORIZONTAL OPENINGS BETWEEN PLANES

"A horizontal opening that extends across a wall plane will separate it into a number of horizontal layers. The opening will become a positive element when its depth is greater than the bands above and below it."

"A corner with a horizontal opening reinforces the horizontal layering of space and broadens the panoramic view from within the space."

ATTITUDE

DESIGN APPROACH

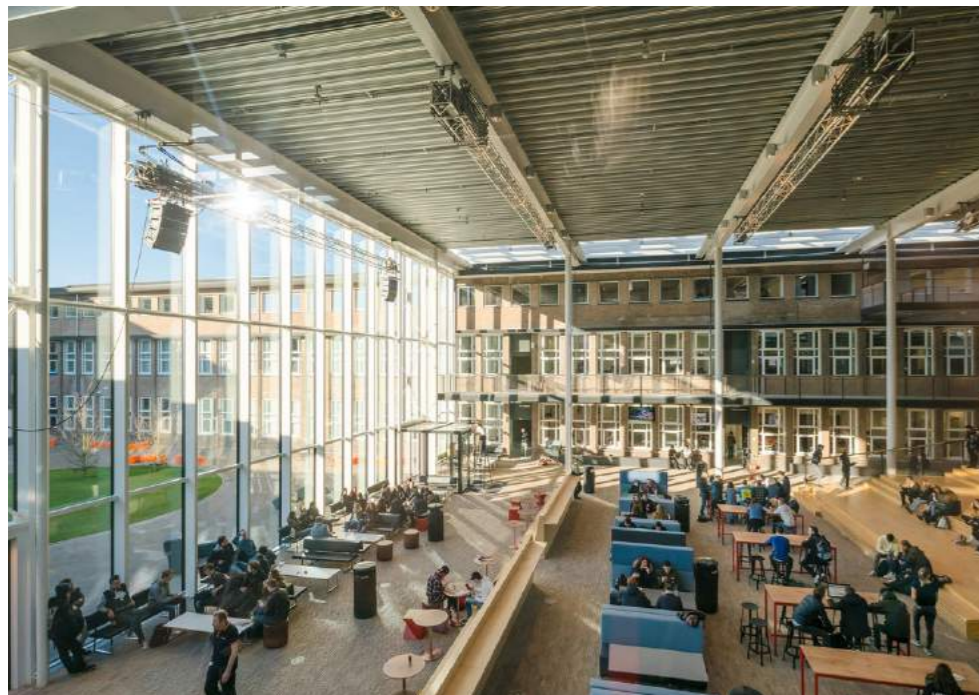
“Make smart use of what the building has to offer”

“Combine strong elements of the old to create something new”

“Looking to the building in a different perspective”

“Make changes when necessary”

“Use small interventions to make the building usable again”



NATLAB, SINT LUCAS SCHOOL, EINDHOVEN, THE NETHERLANDS - CEPEZED



ÄRIPÄEV OFFICE, TALLINN, ESTONIA - ARCHITECT 11



CENTRE OF DESIGN, MONS, BELGIUM - MATADOR ARCHITECTS

“Keep the intangible value in mind!
Focus not only on the tangible value”

“Keep the story of the place/ building”

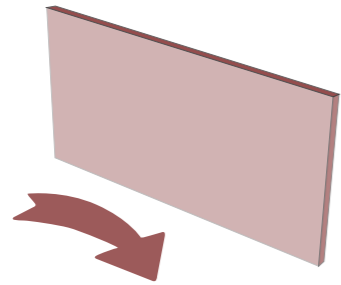
“Recognize limitations as challenges or opportunities”

“Create a balance between old and new”

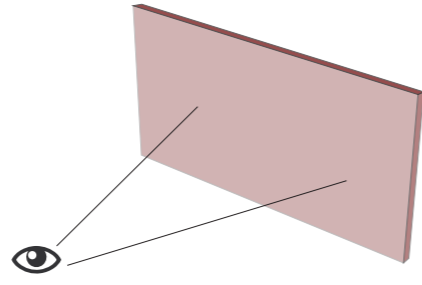
CONCEPT

BORDERS & BOUNDARIES

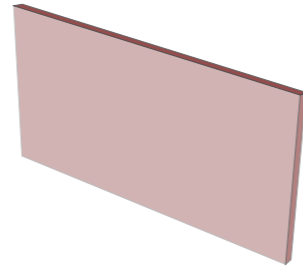
DESIGN TOOLS



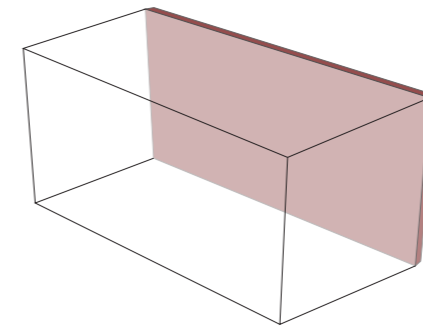
WALL AS GUIDELINE



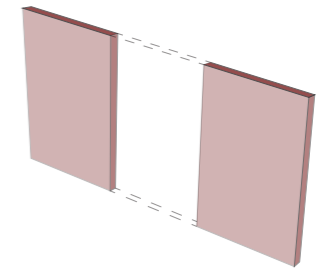
WALL AS ORIENTATION ELEMENT
(SIGHTLINES)



ORIGINAL WALL

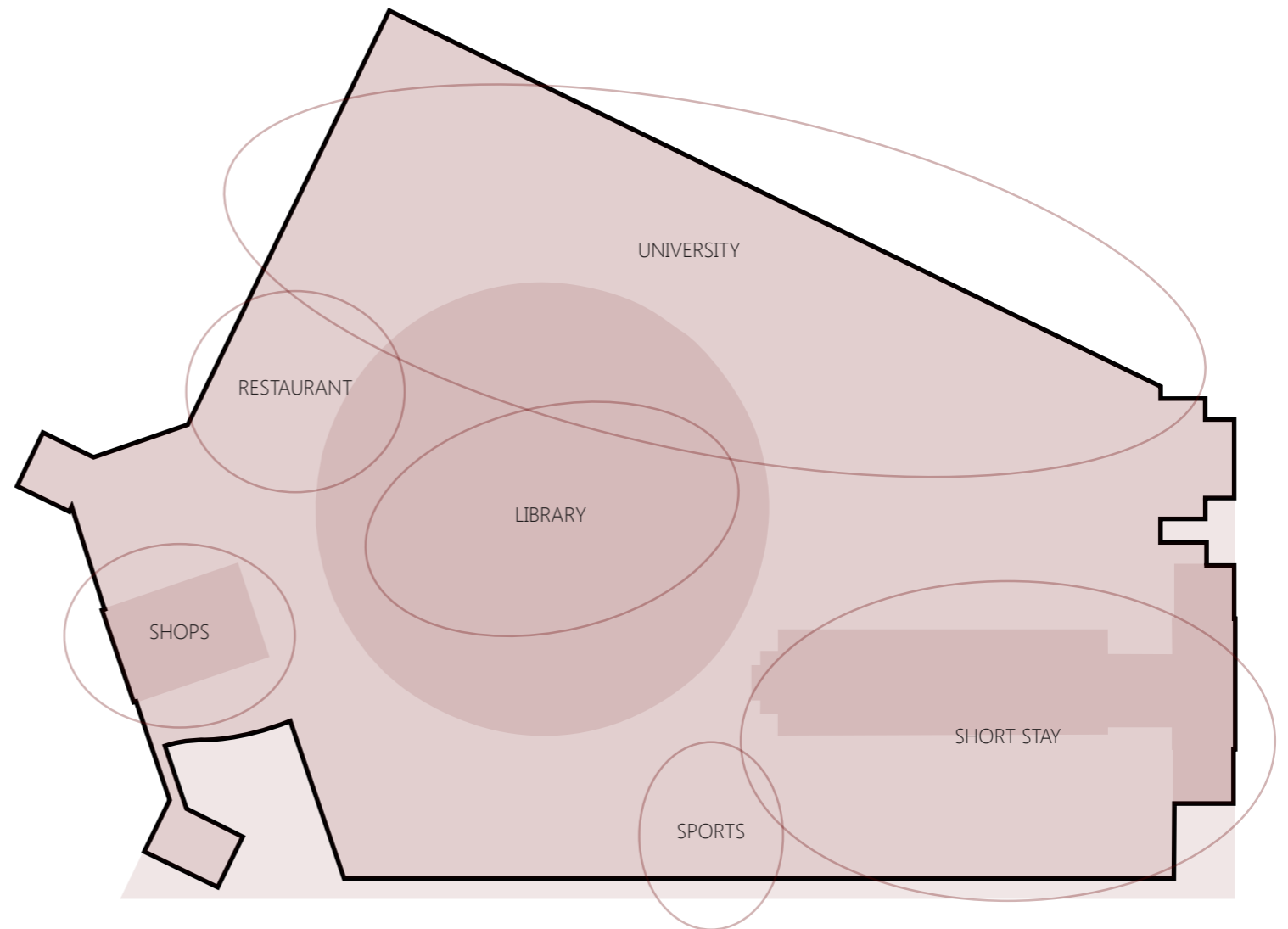
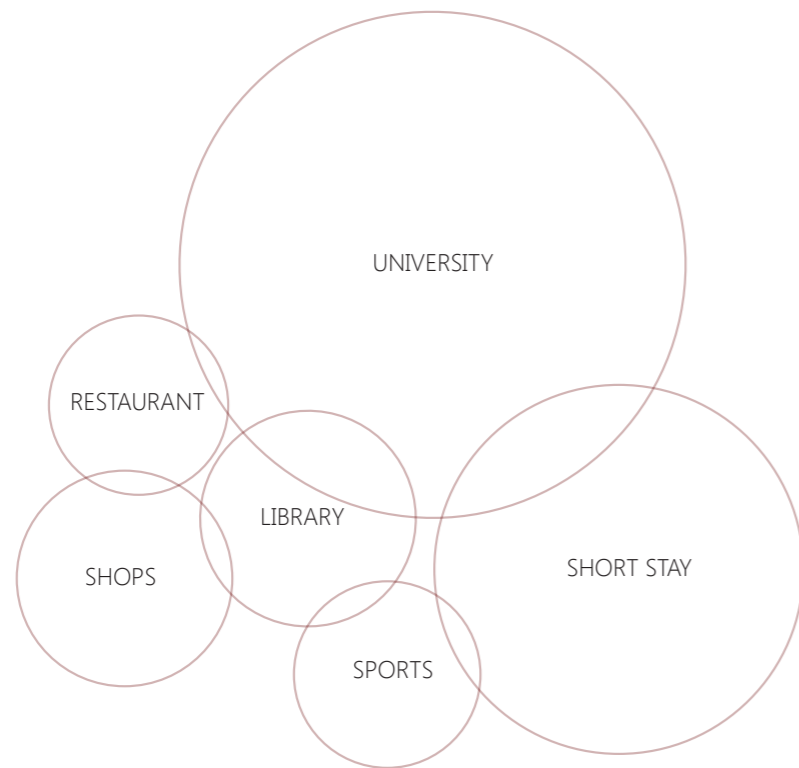


WALL AS BOUNDARY
(STRENGTHEN THE BORDER)



WALL AS BOUNDARY
(WEAKEN THE BORDER)

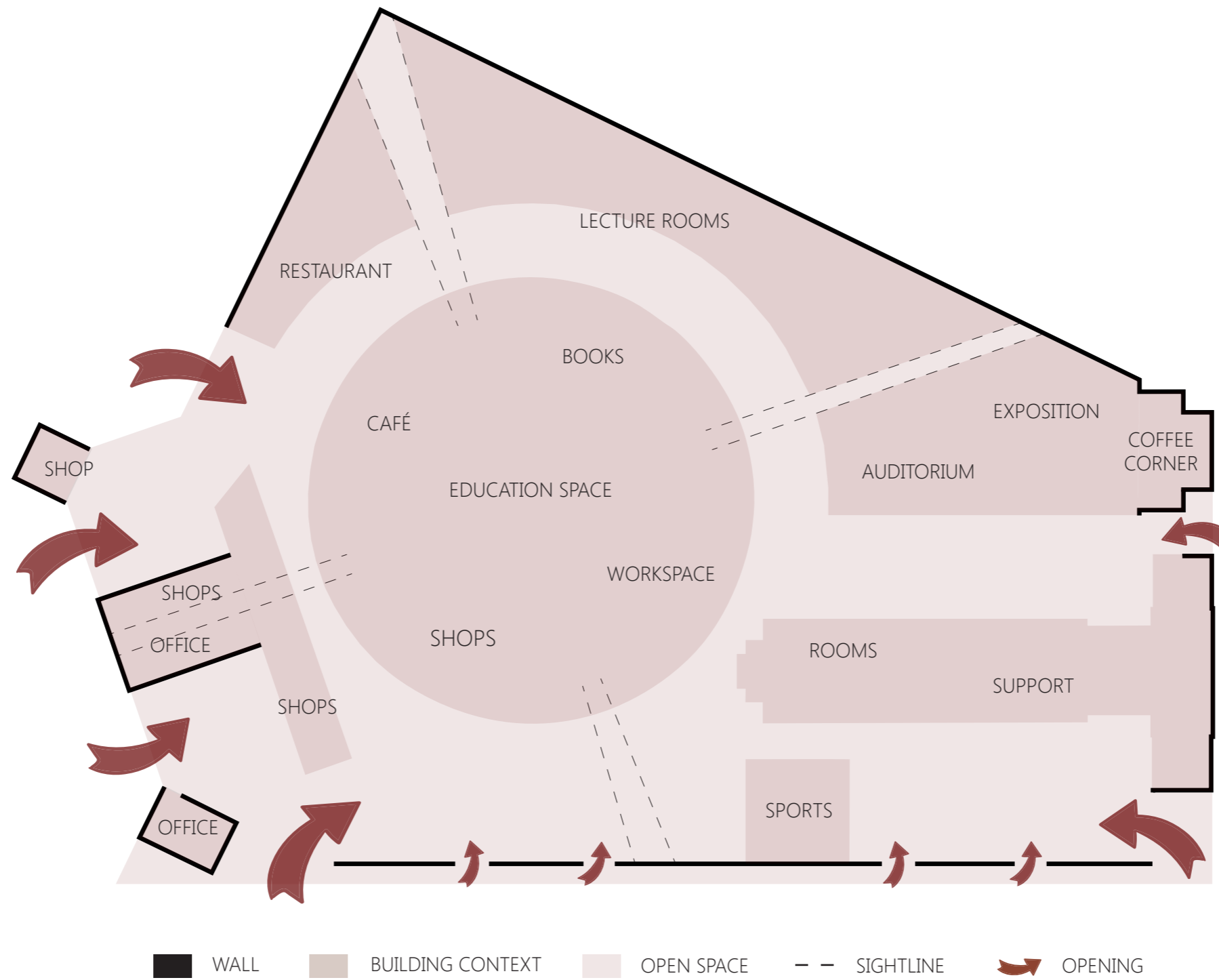
ORGANIZATION-SCHEME



ORGANIZE THE PLOT BY DIVIDING THE PUBLIC, PRIVATE AND COLLECTIVE SPACE

CONCEPT

INTERVENTIONS ON BUILDING LEVEL



CONCEPT

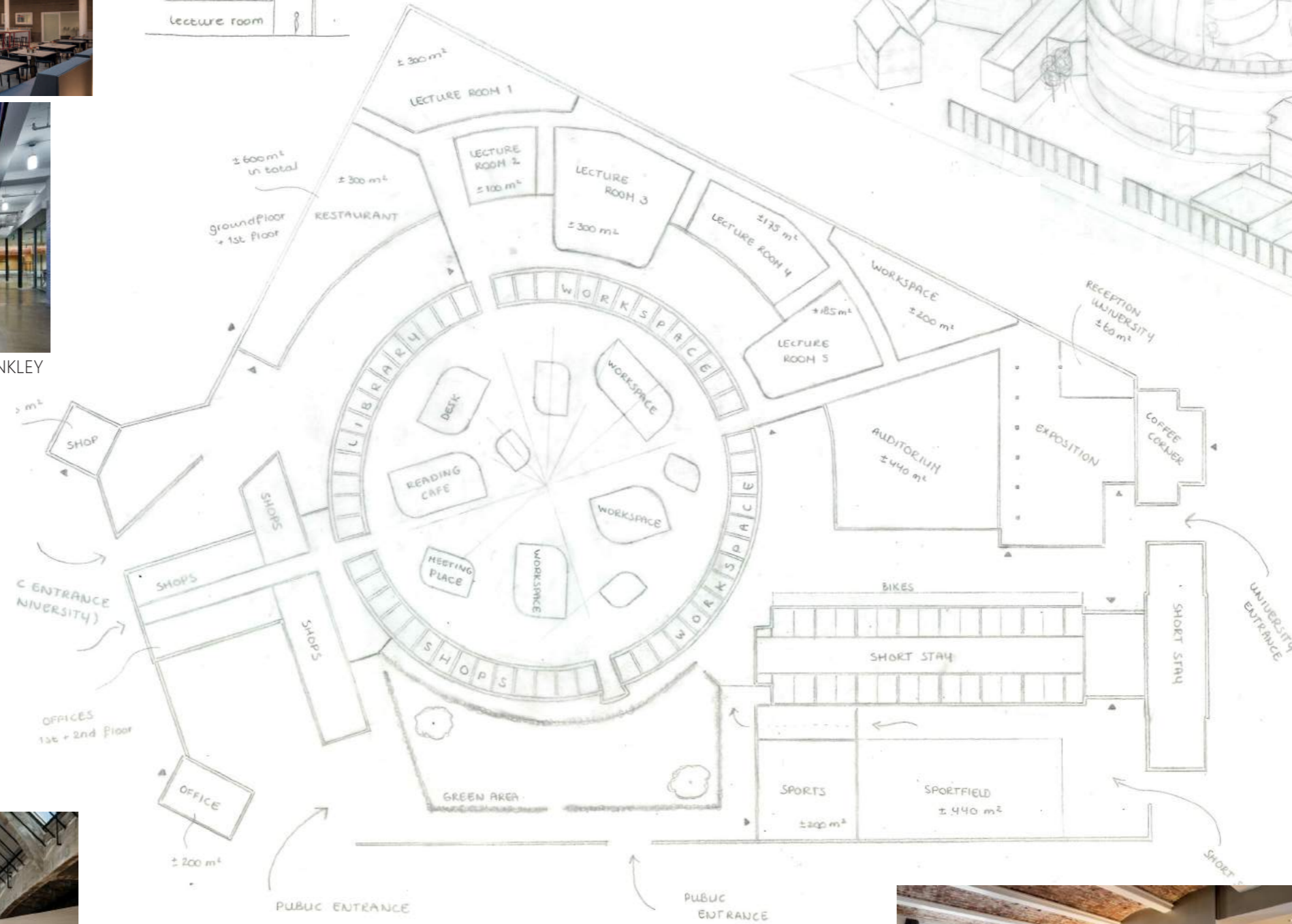
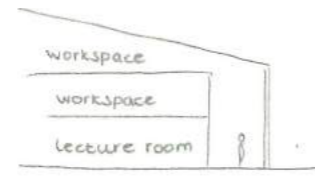
FIRST DESIGN IDEAS - EXPERIENCING THE BOUNDARIES

NATLAB, SINT LUCAS SCHOOL - CEPEZED

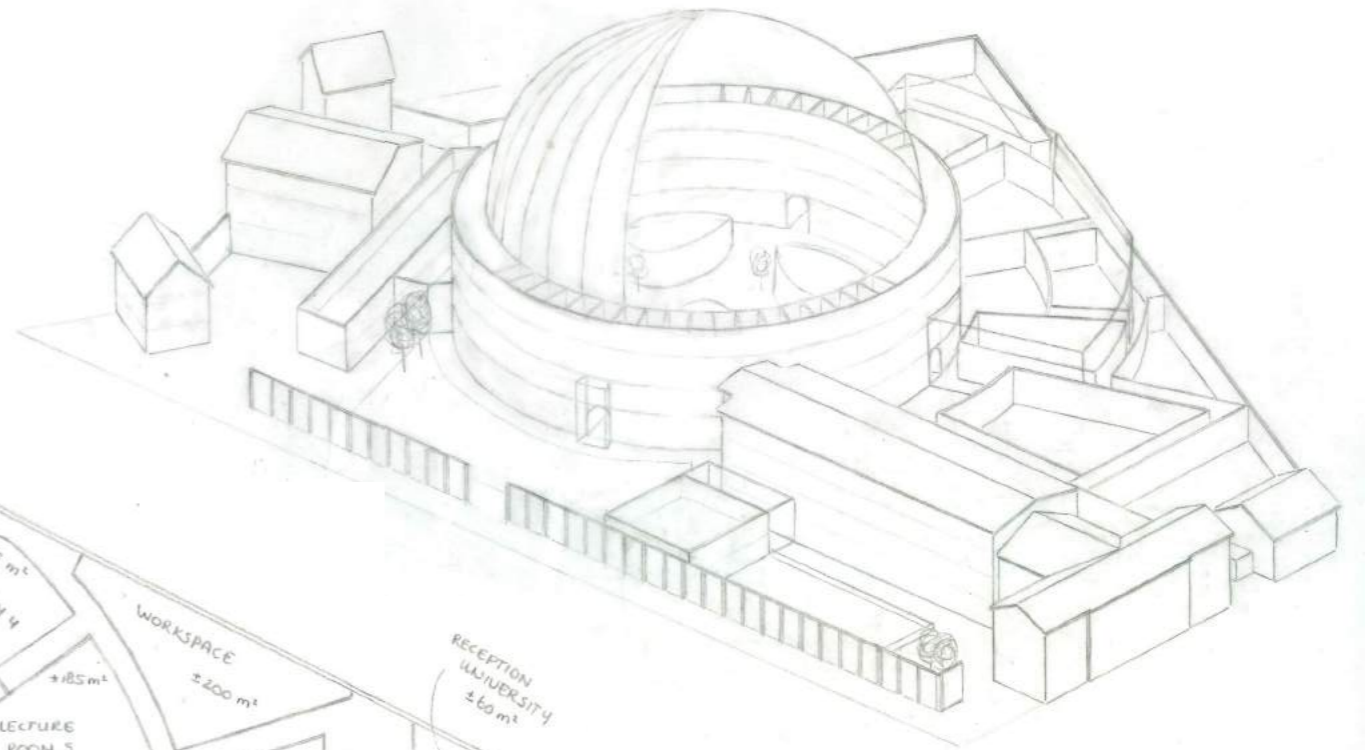


UNIVERSITY NORTH CAROLINA - PEARCE BRINKLEY

ÄRIPÄEV OFFICE, TALLINN - ARCHITECT 11



FLOORPLAN



3D-IMPRESSION

PRISON HOTEL LANGHOLMEN, STOCKHOLM

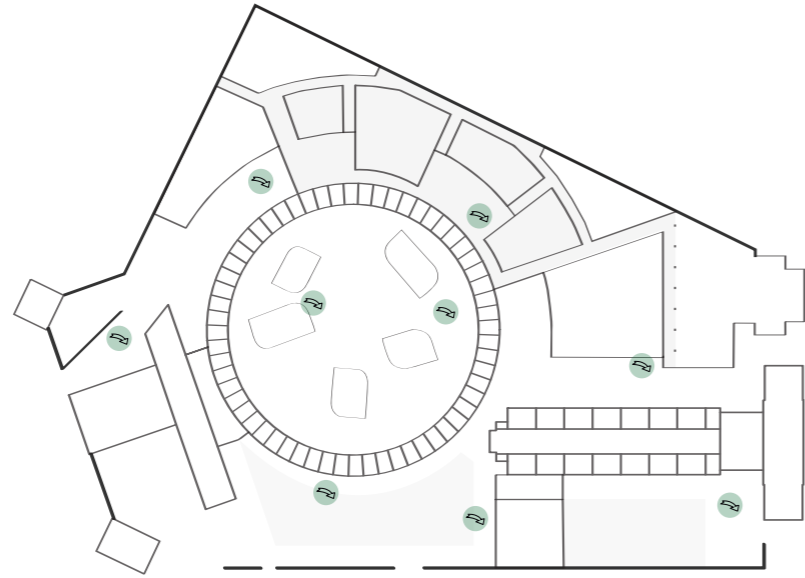


HOTEL 'HET ARRESTHUIS', ROERMOND - ENGELMAN ARCHITECTEN

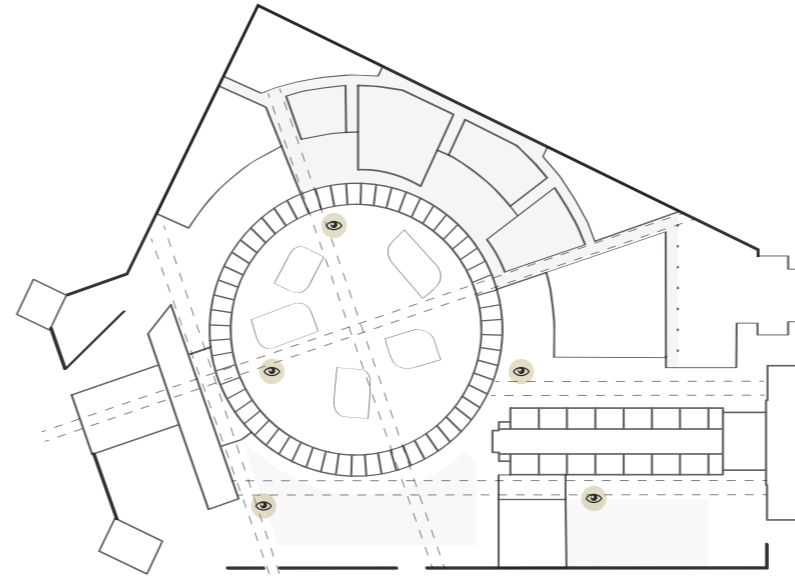


DESIGN

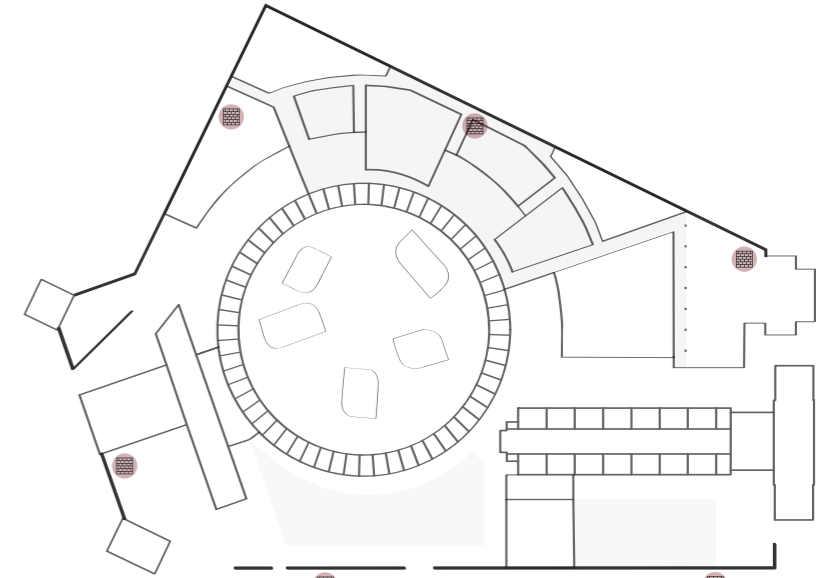
INTERVENTIONS



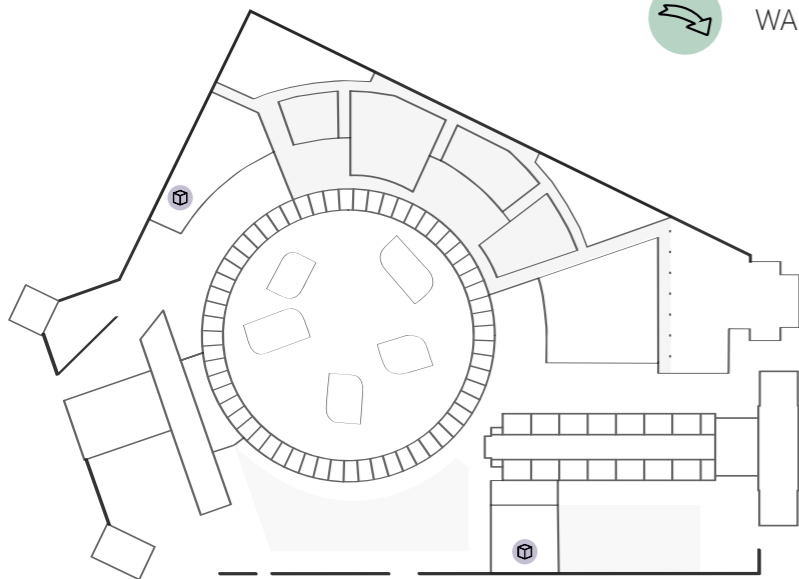
 WALL AS GUIDELINE



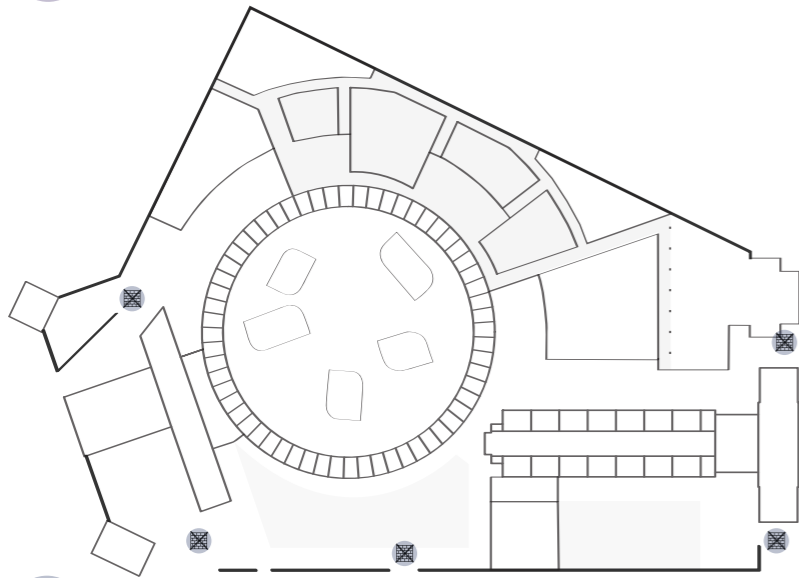
 WALL AS ORIENTATION ELEMENT



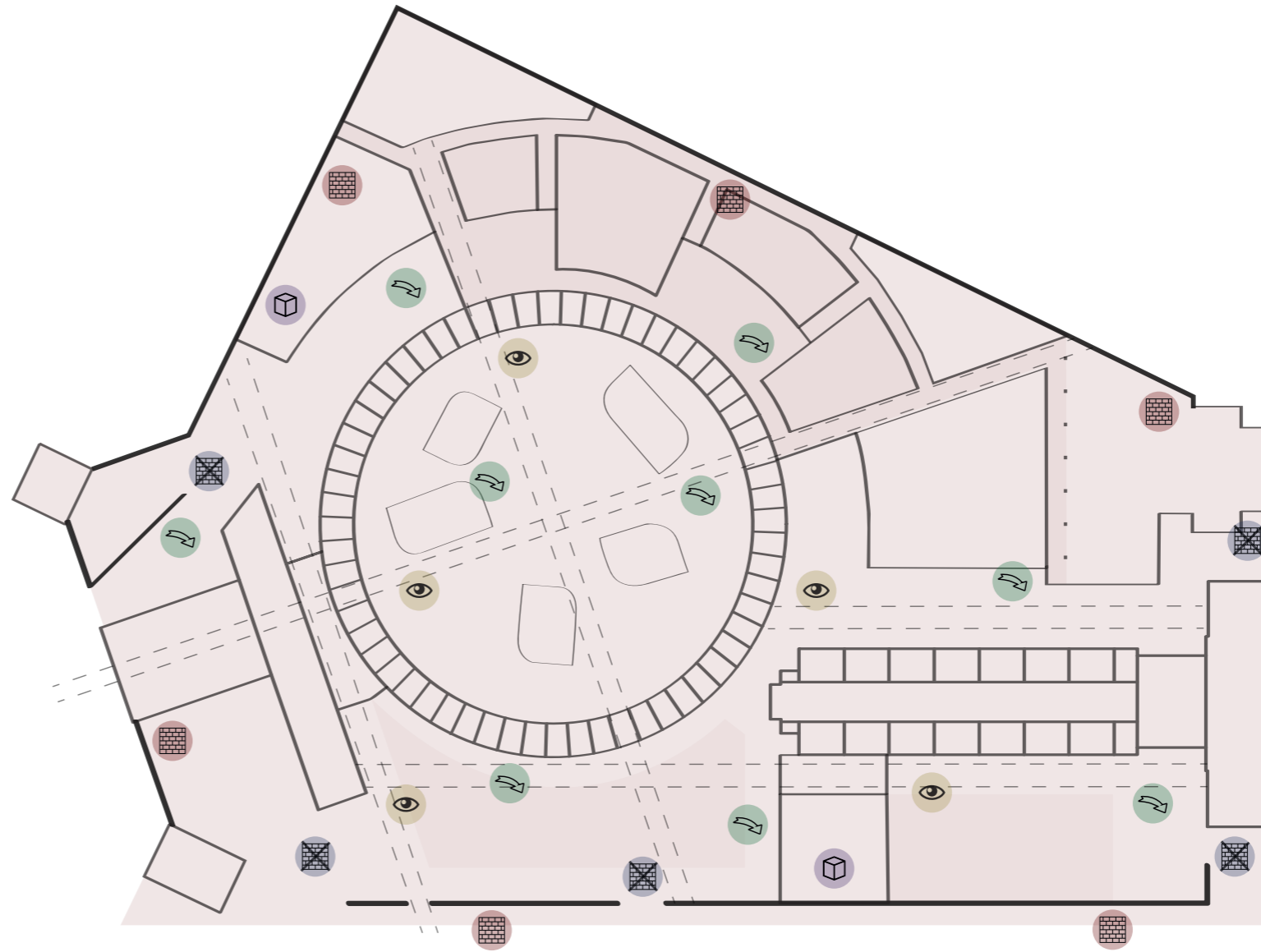
 ORIGINAL WALL



 WALL AS BOUNDARY - STRENGTHEN THE BORDER

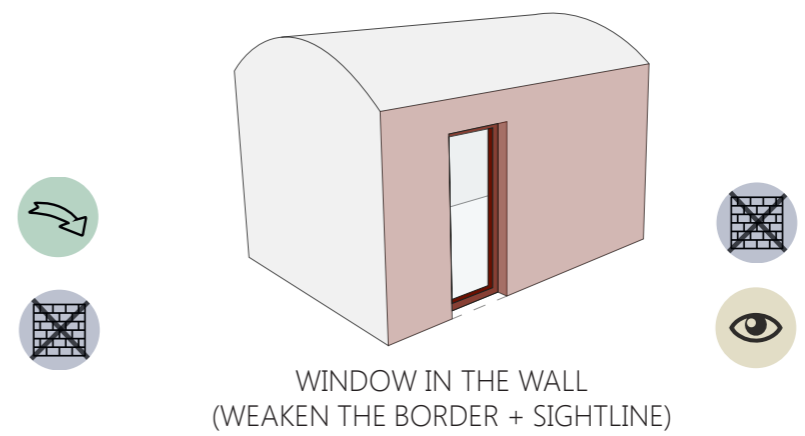
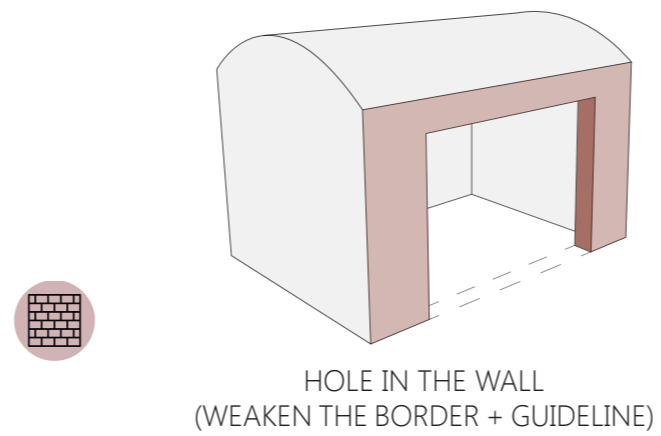
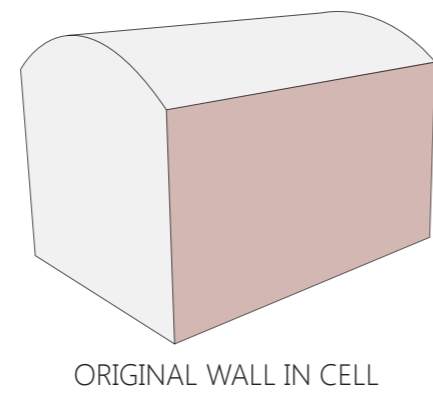
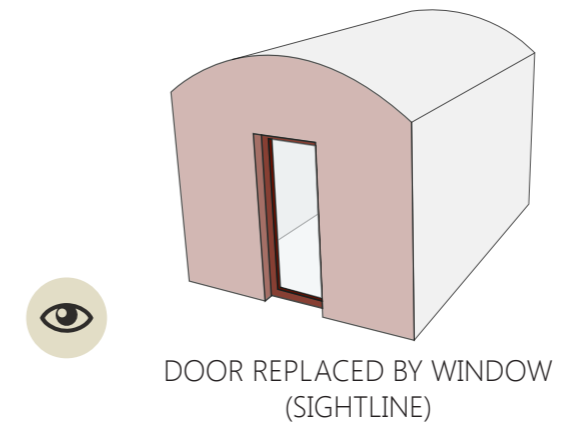
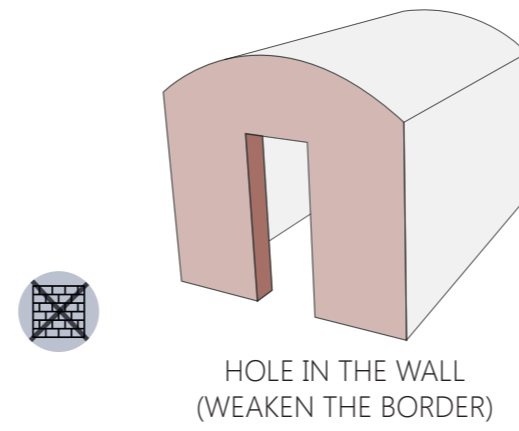
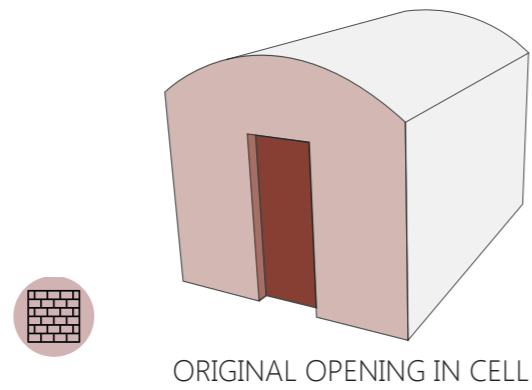


 WALL AS BOUNDARY - WEAKEN THE BORDER



CONCEPT

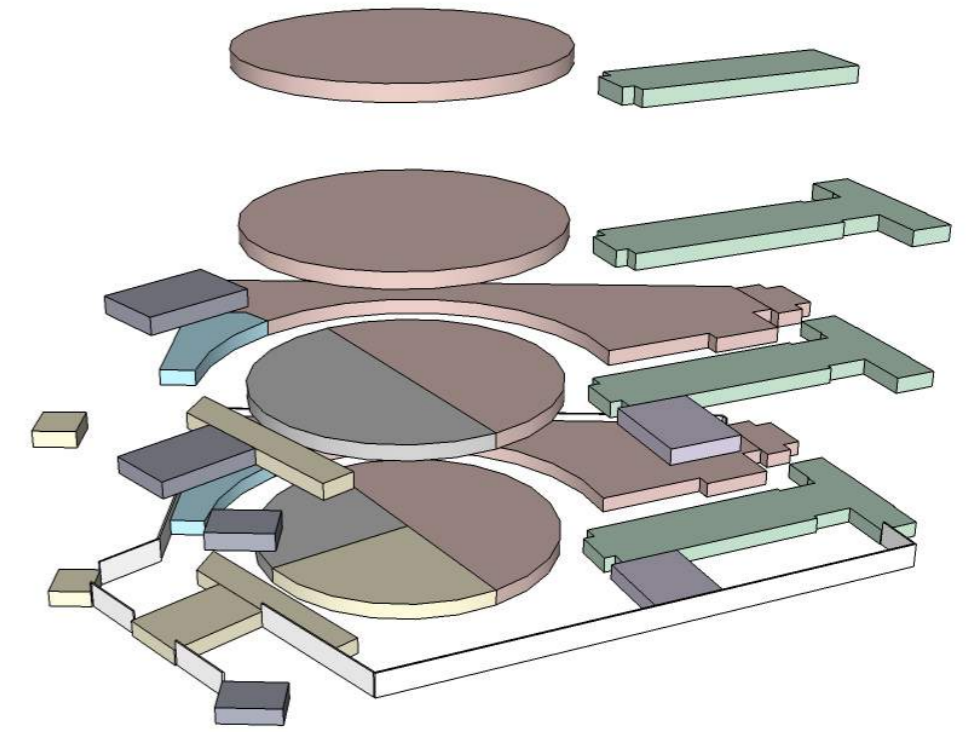
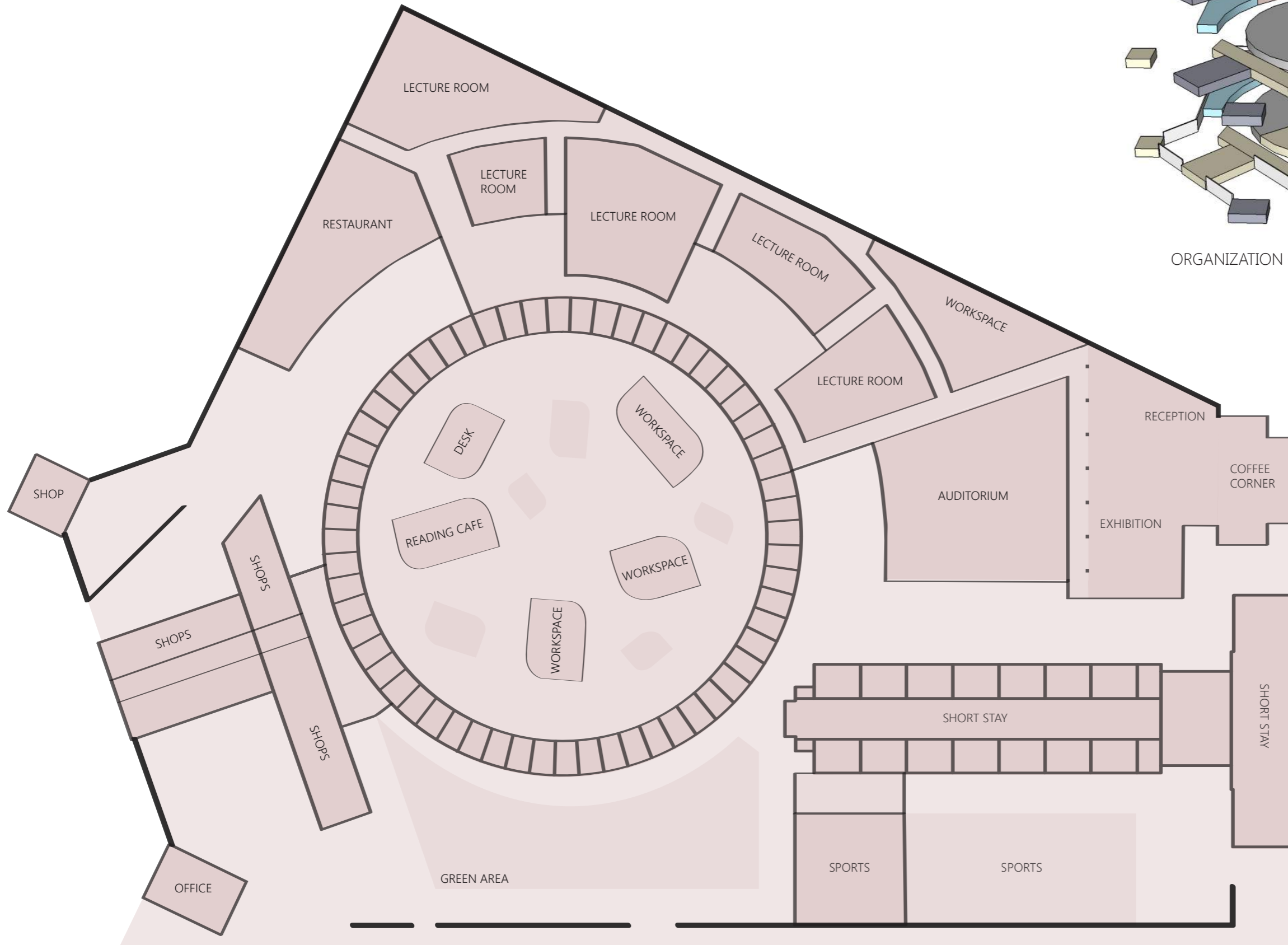
CELL-TOOLBOX



DESIGN

FLOORPLAN

FLOORPLAN GROUNDLEVEL



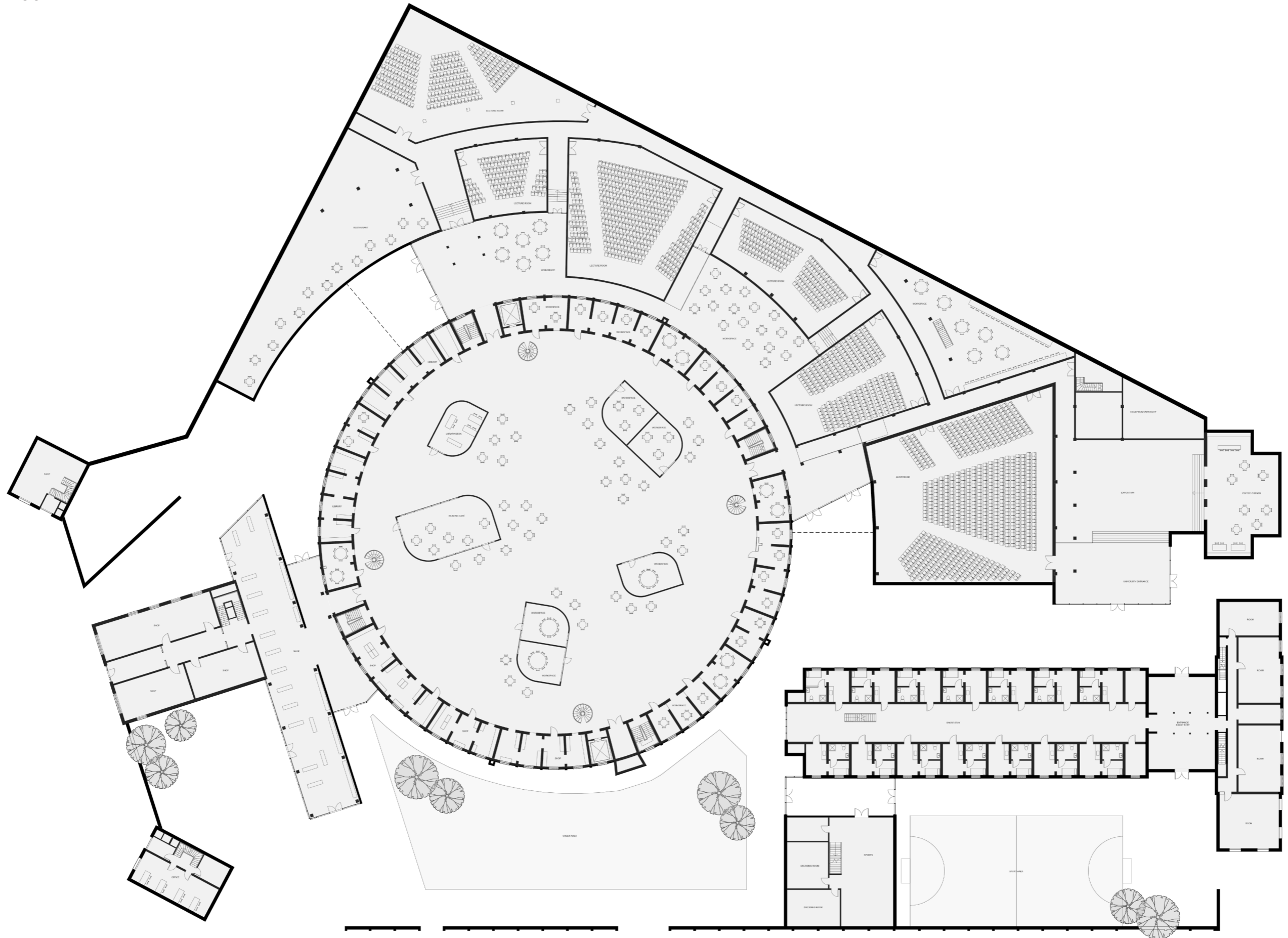
ORGANIZATION OF FUNCTIONS

- SHORT STAY
- SPORTS
- UNIVERSITY
- LIBRARY
- SHOPS
- OFFICES
- RESTAURANT

DESIGN

FLOORPLAN 1:500

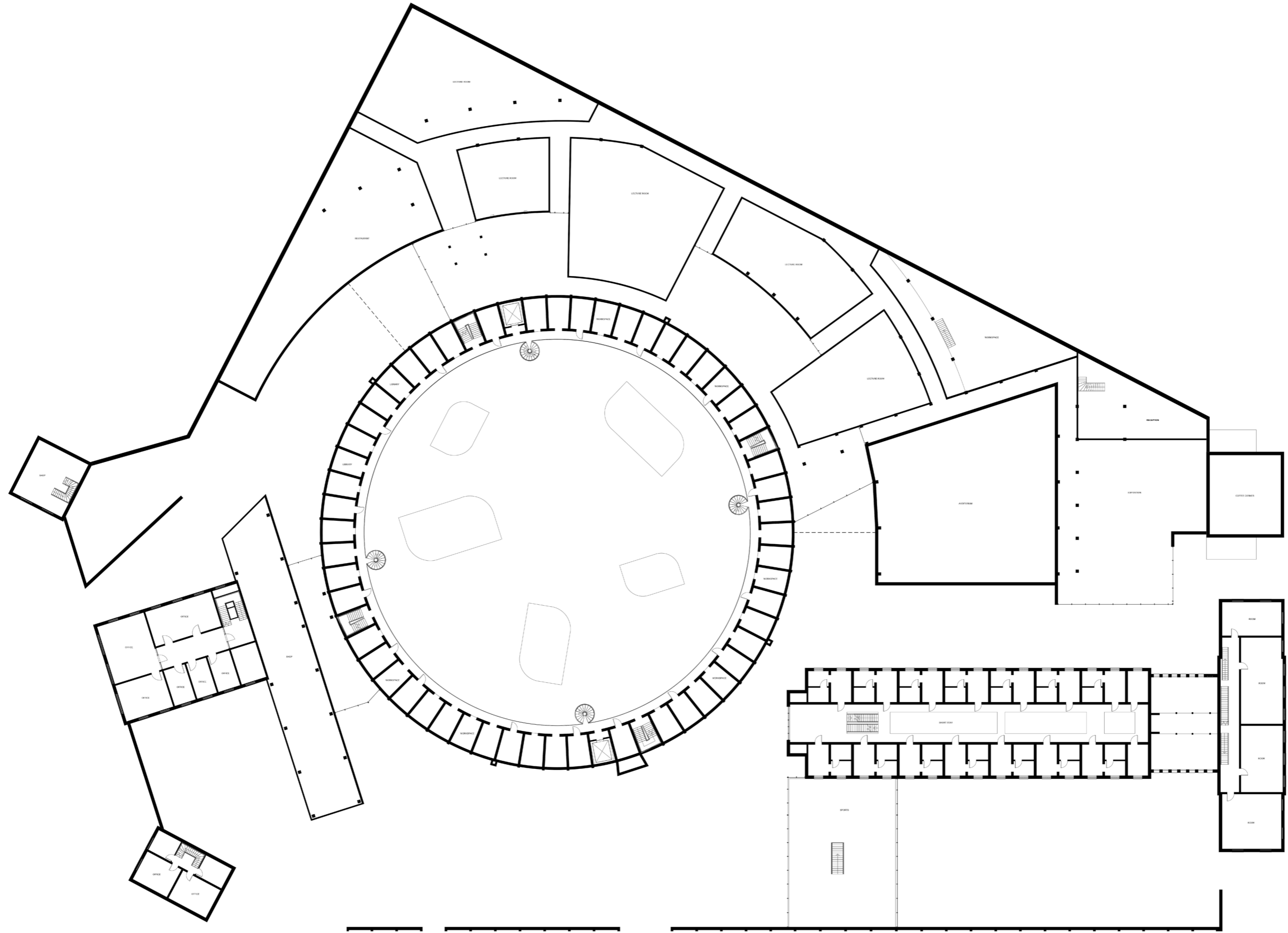
GROUND FLOOR



DESIGN

FLOORPLAN 1:500

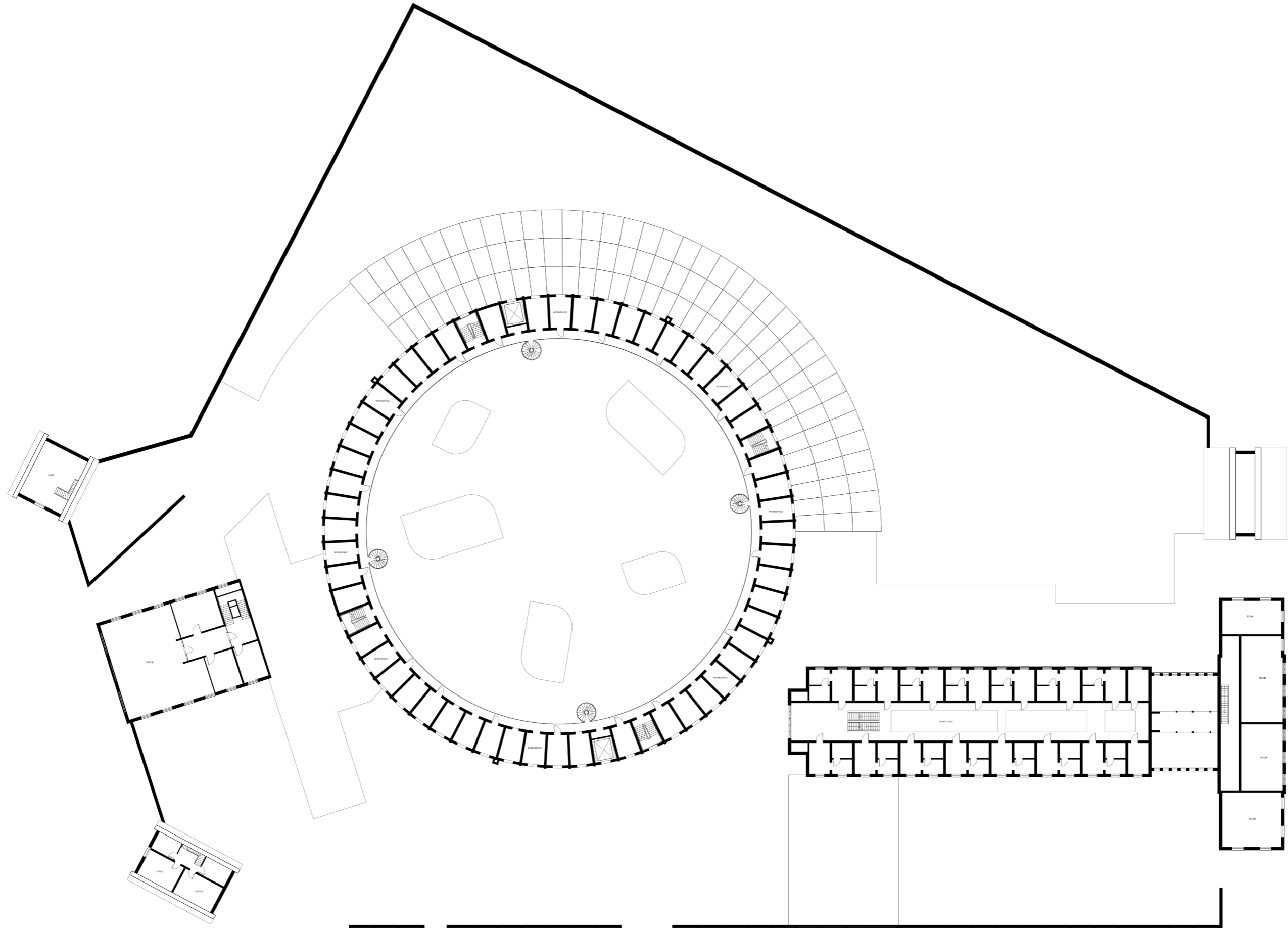
FIRST FLOOR (+ 3300)



DESIGN

FLOORPLAN 1:500

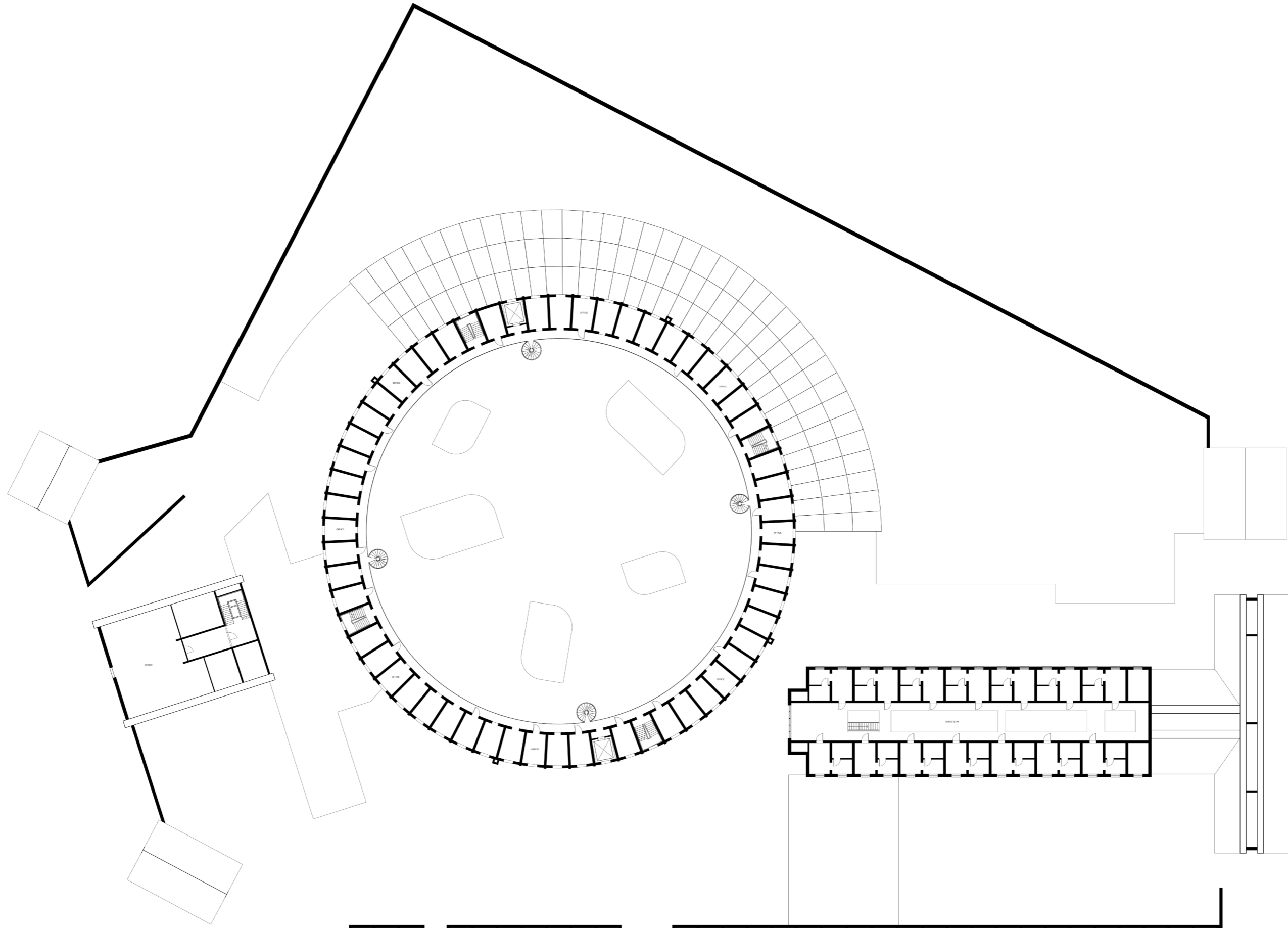
SECOND FLOOR (+ 6600)



DESIGN

FLOORPLAN 1:500

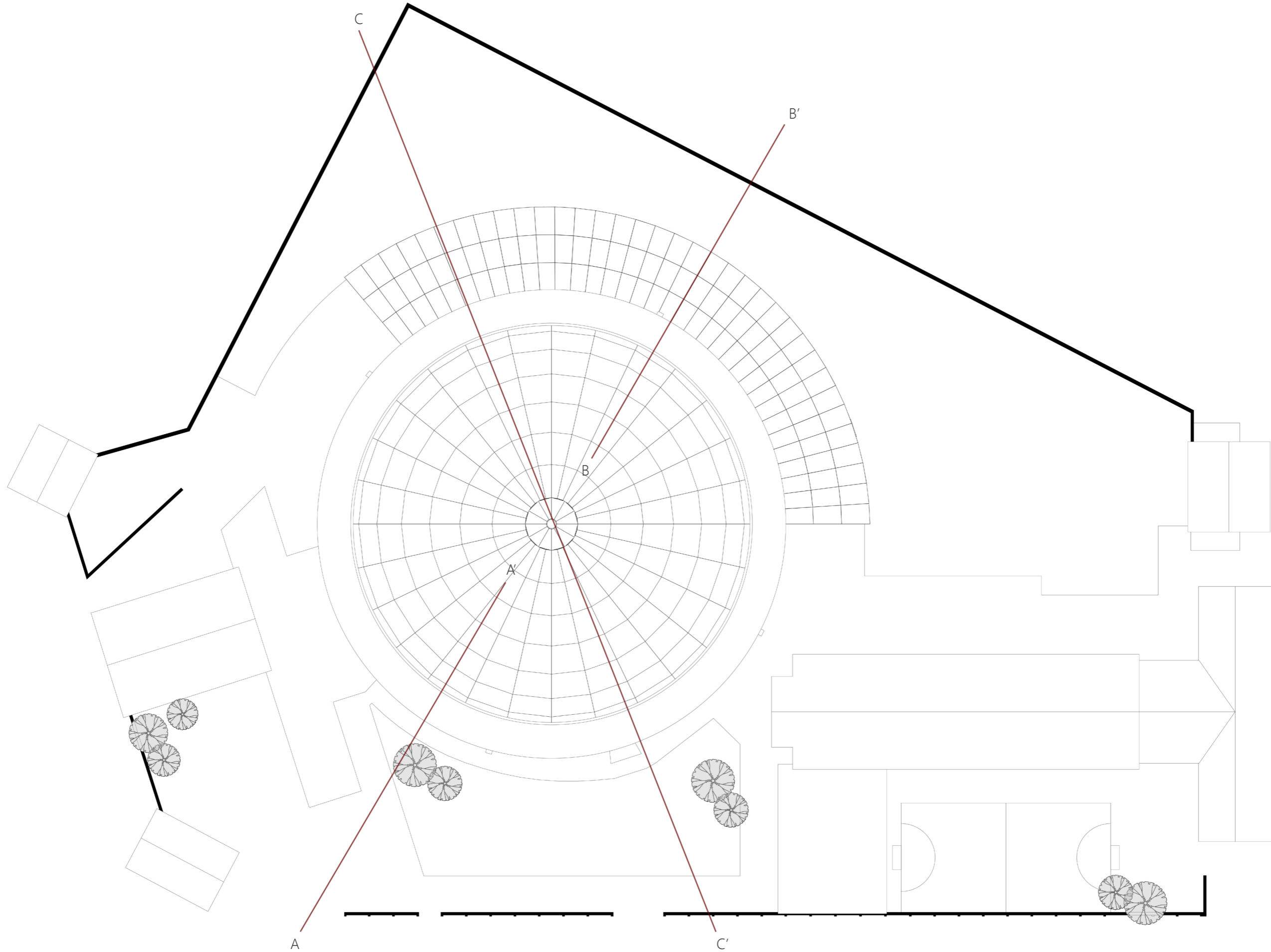
THIRD FLOOR (+ 9900)



DESIGN

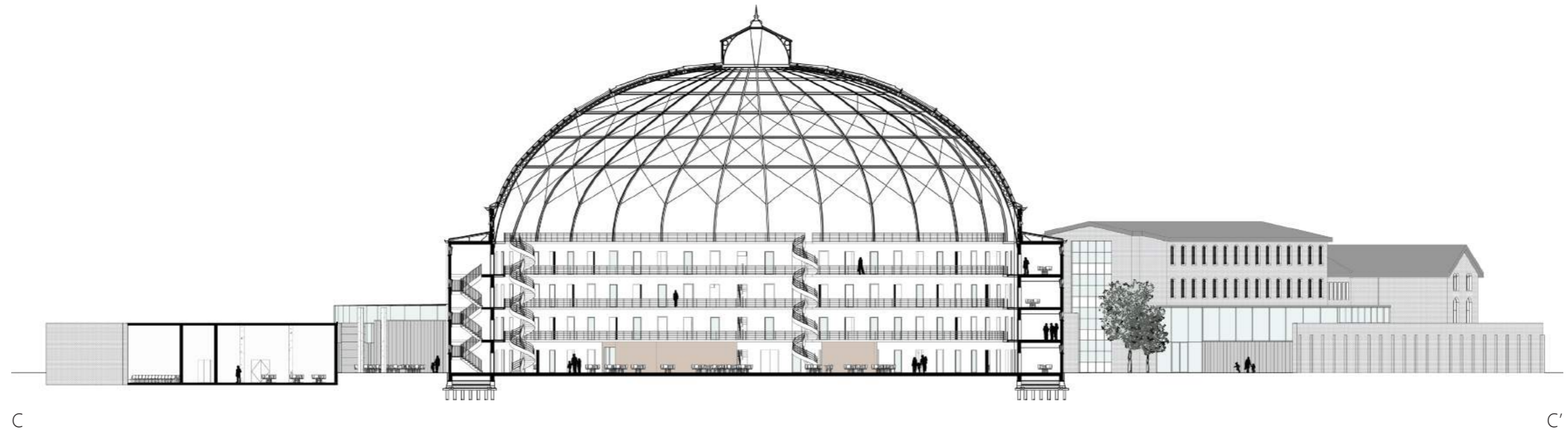
FLOORPLAN 1:500

TOP VIEW (+ 35000)



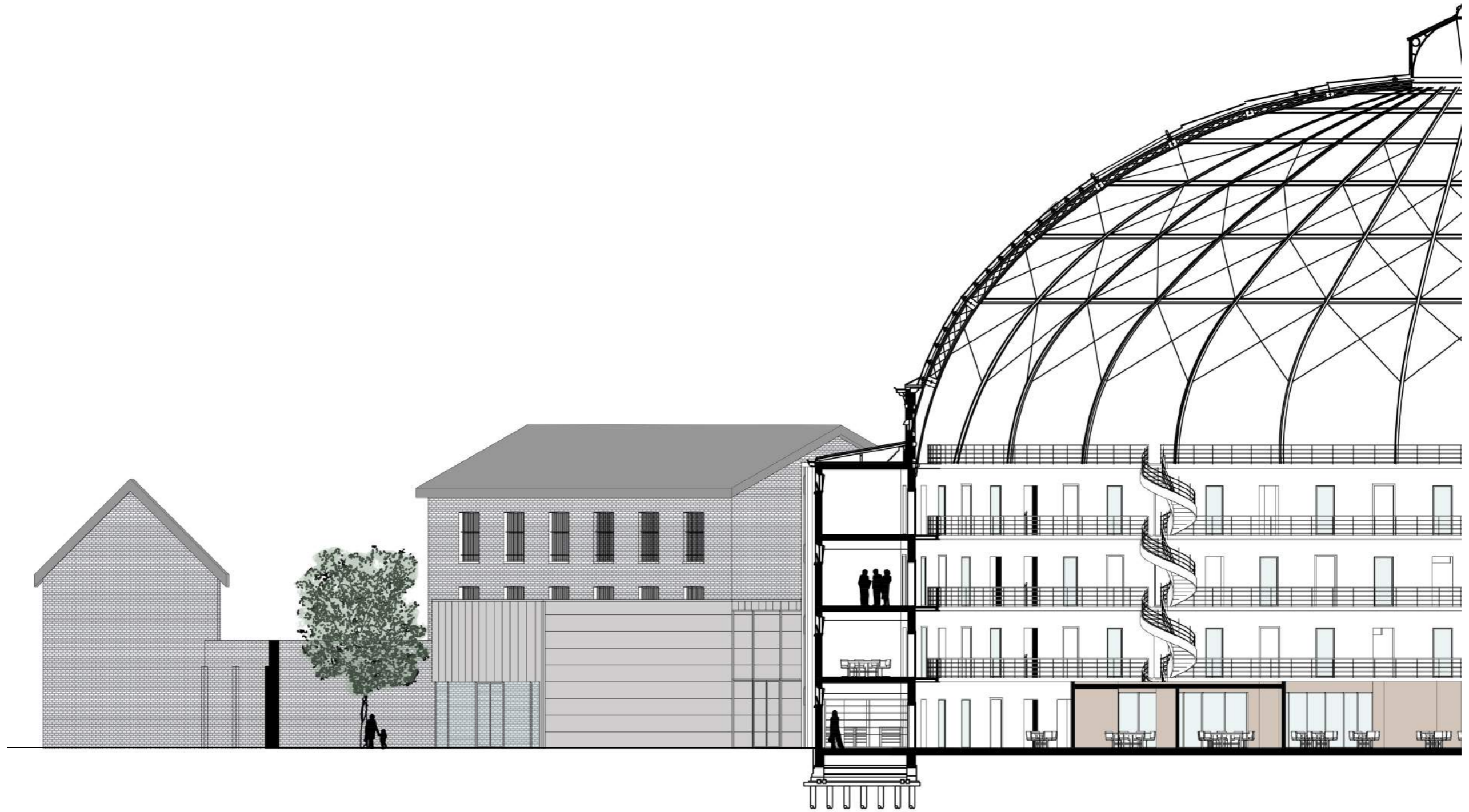
DESIGN

SECTION 1 : 500



DESIGN

SECTION 1 : 200

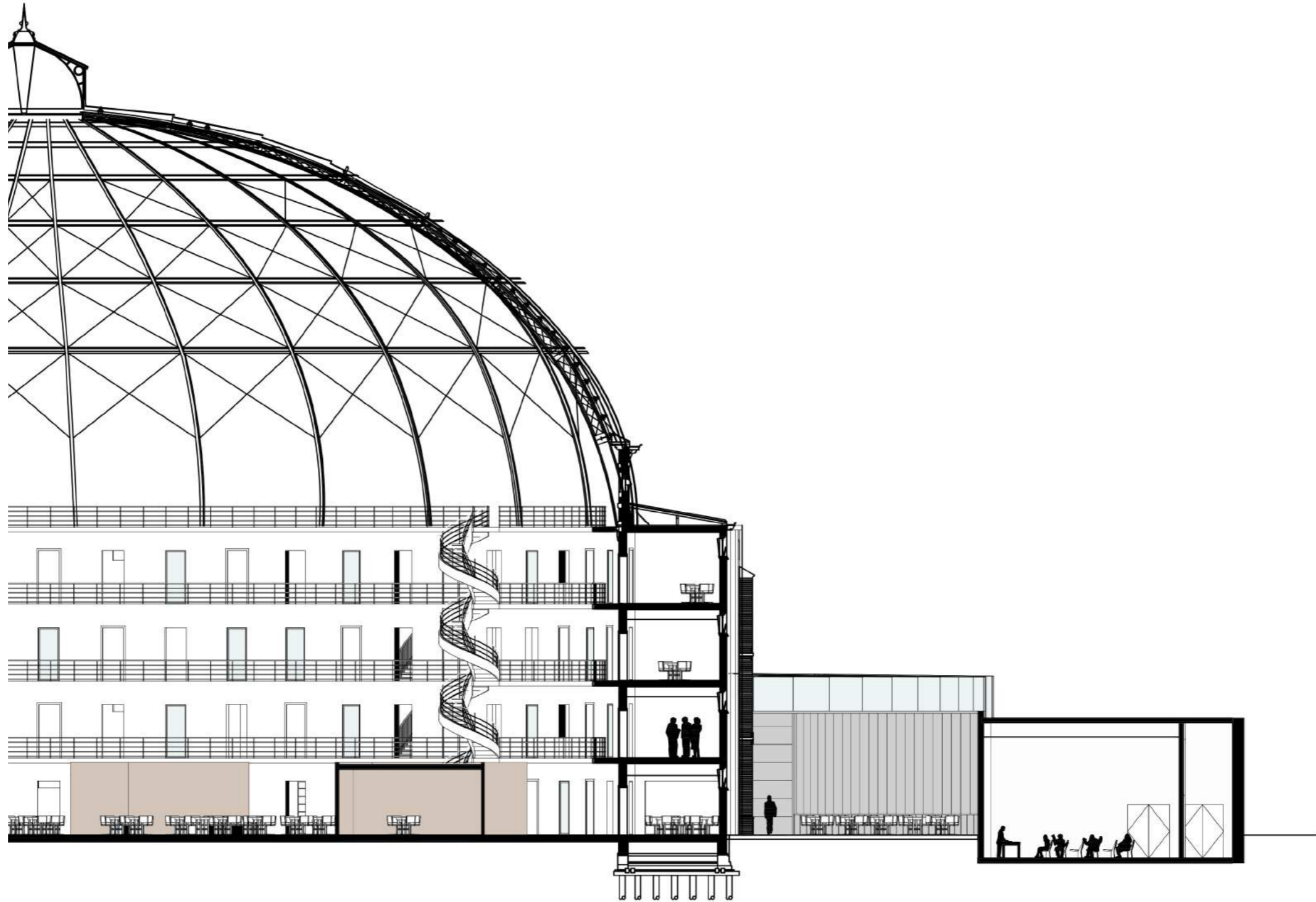


A

A'

DESIGN

SECTION 1 : 200



B

B'

DESIGN

IMPRESSIONS



DESIGN

IMPRESSIONS



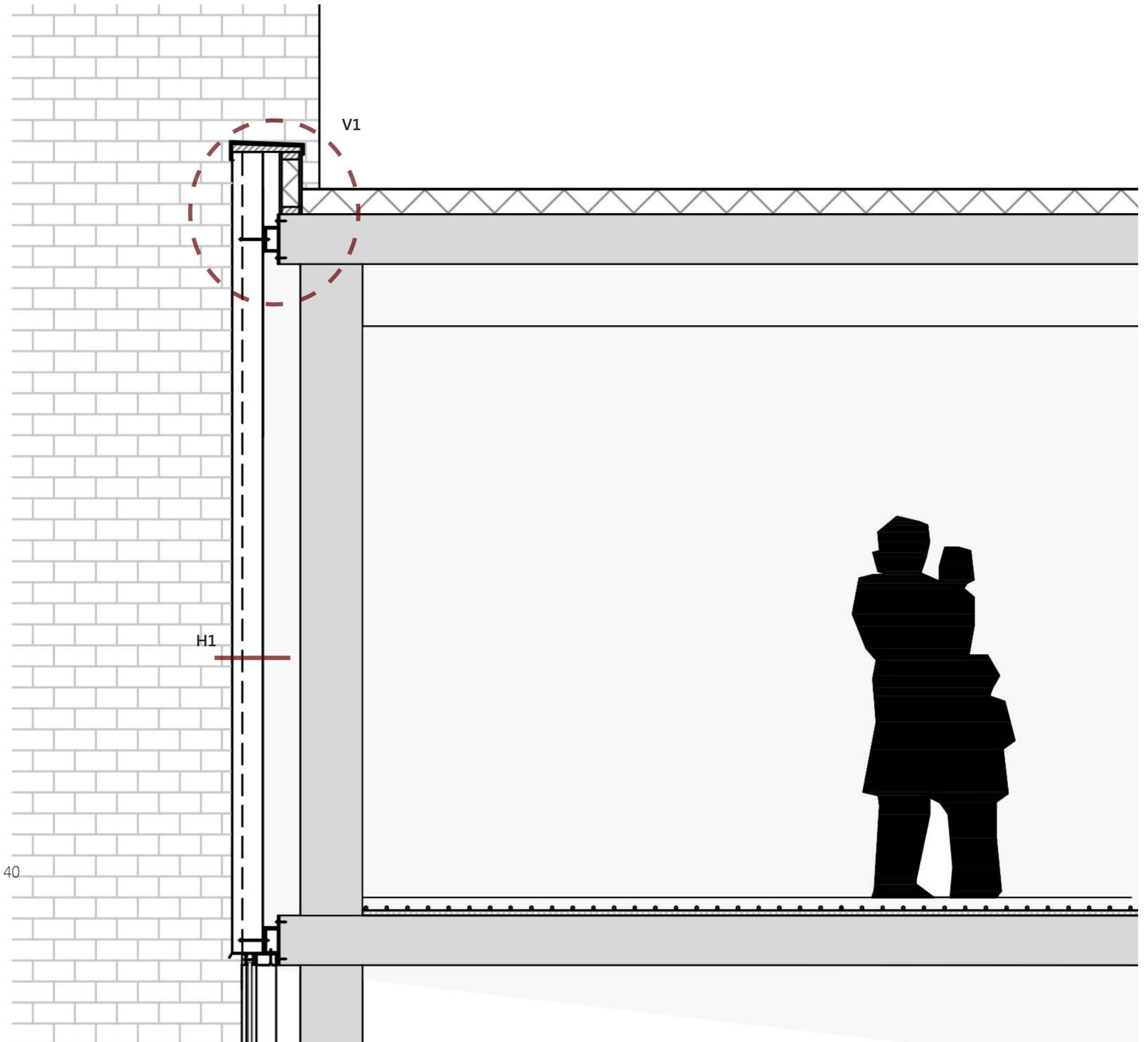
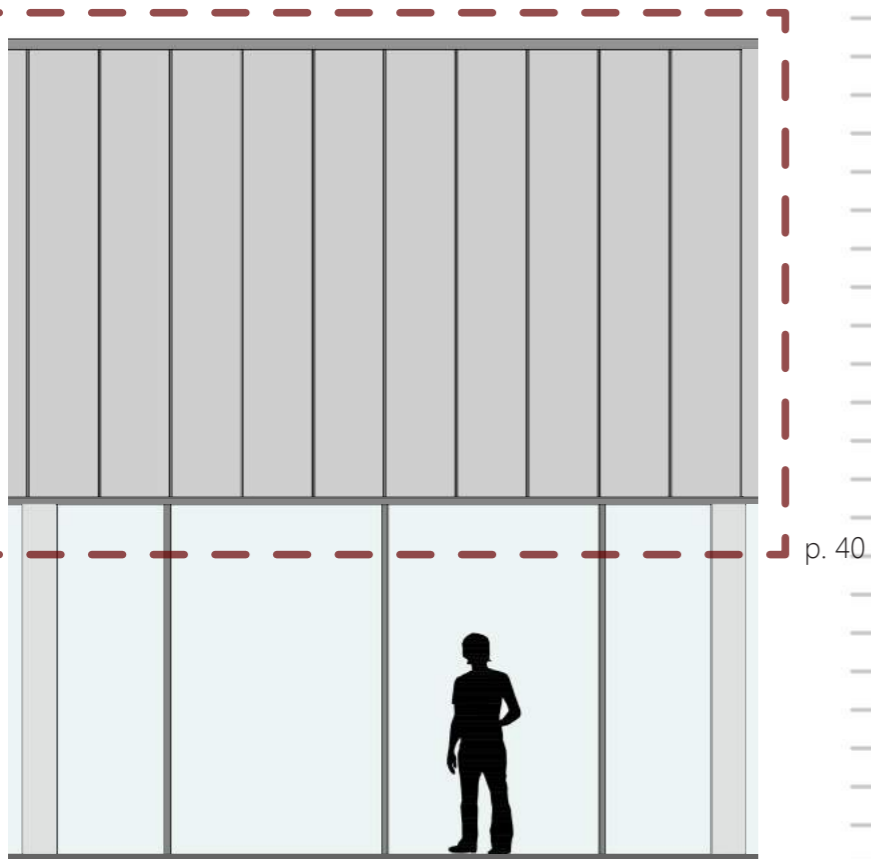
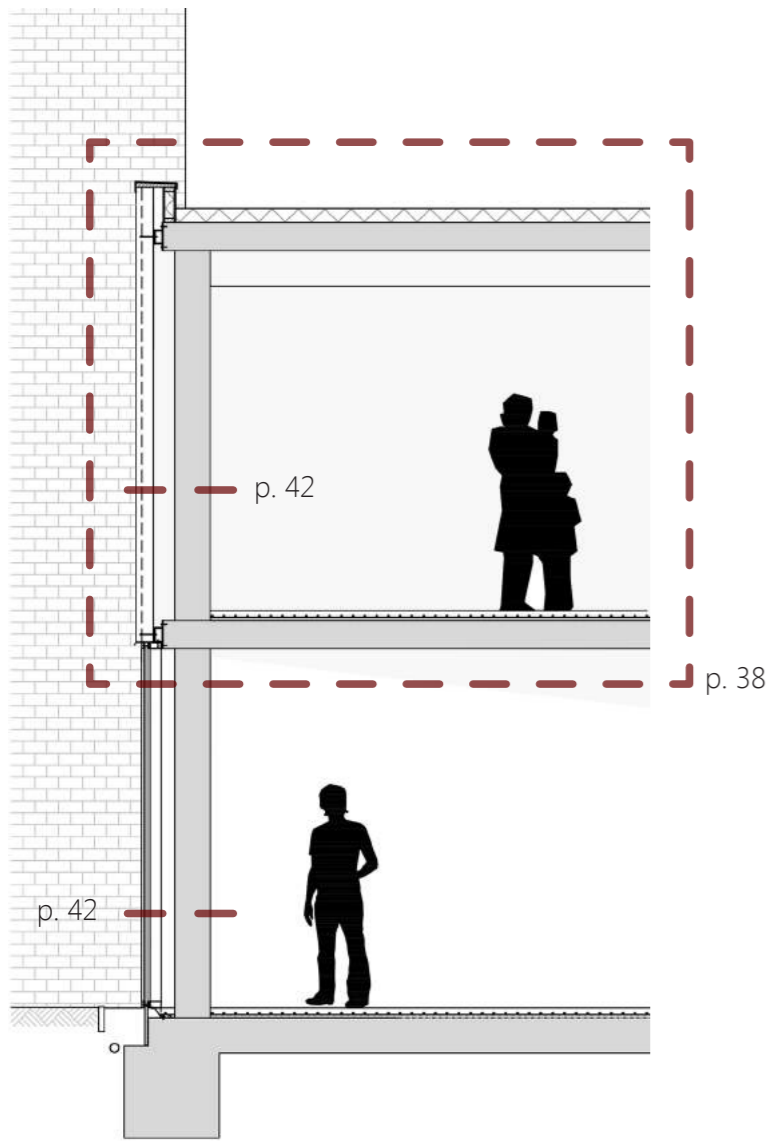
DESIGN

IMPRESSIONS



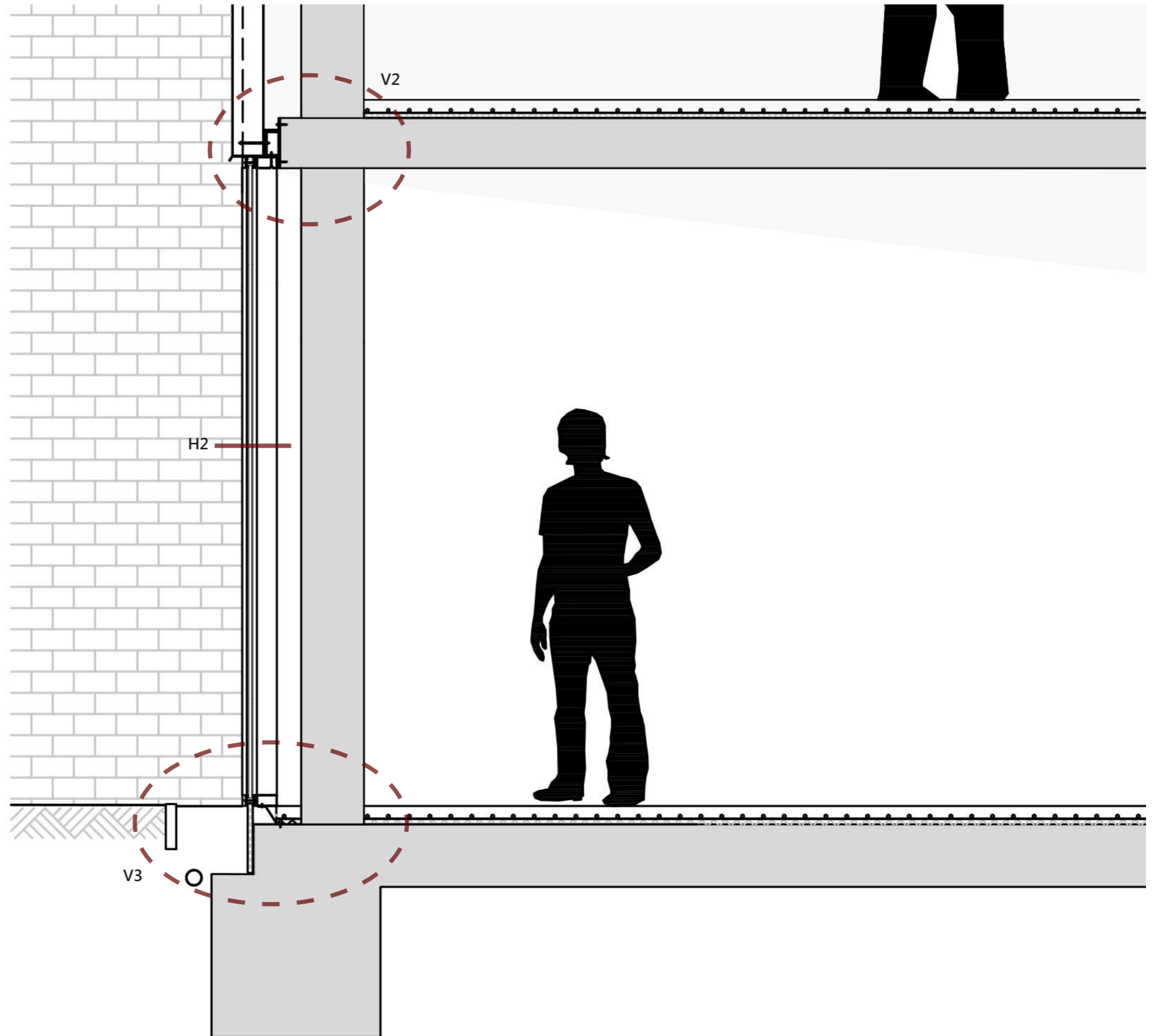
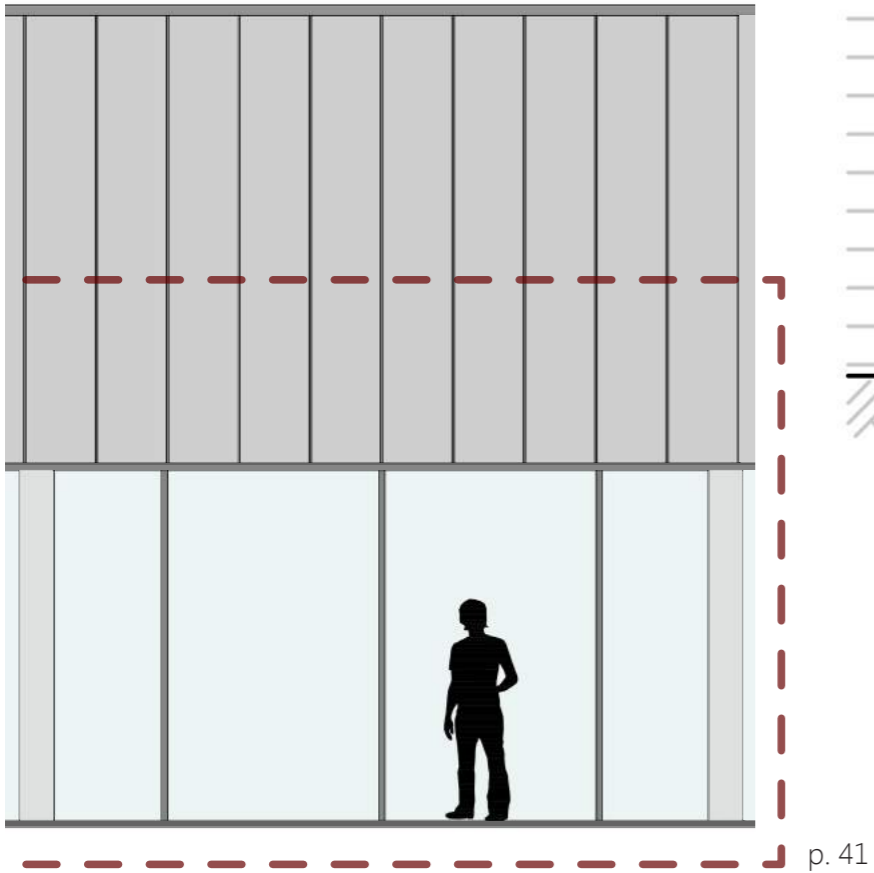
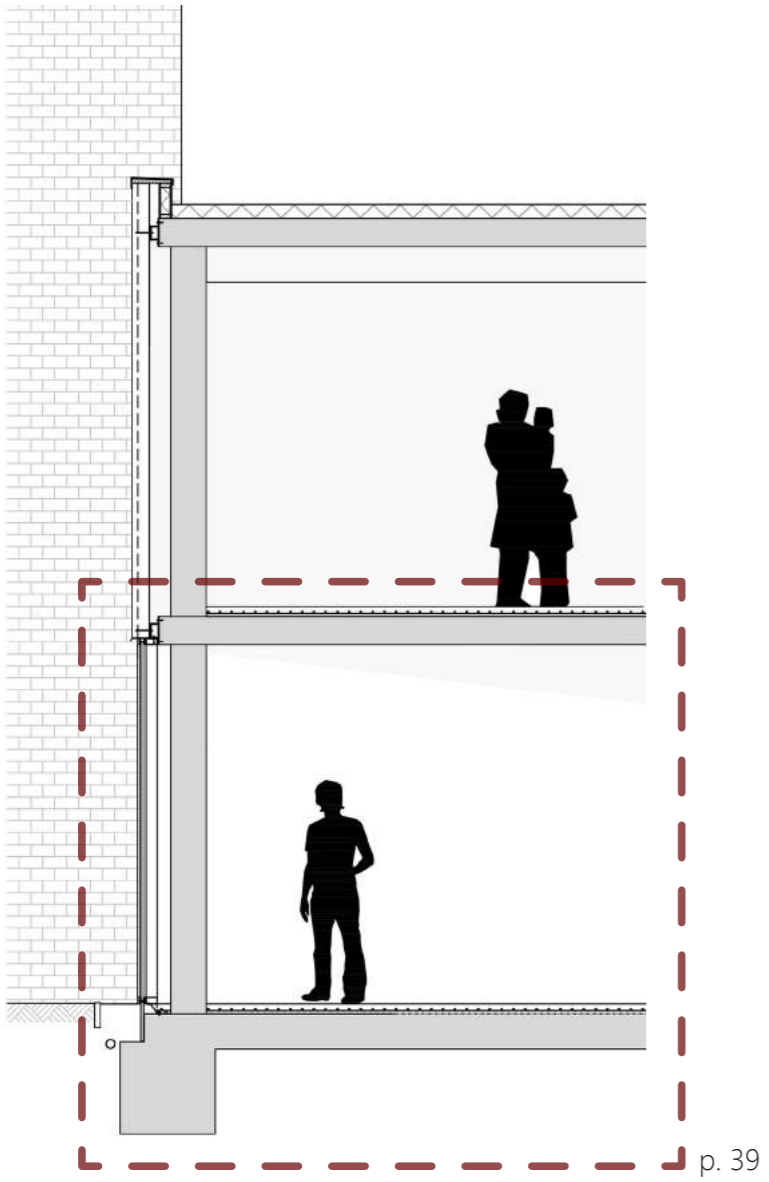
DESIGN

VERTICAL SECTION 1 : 20



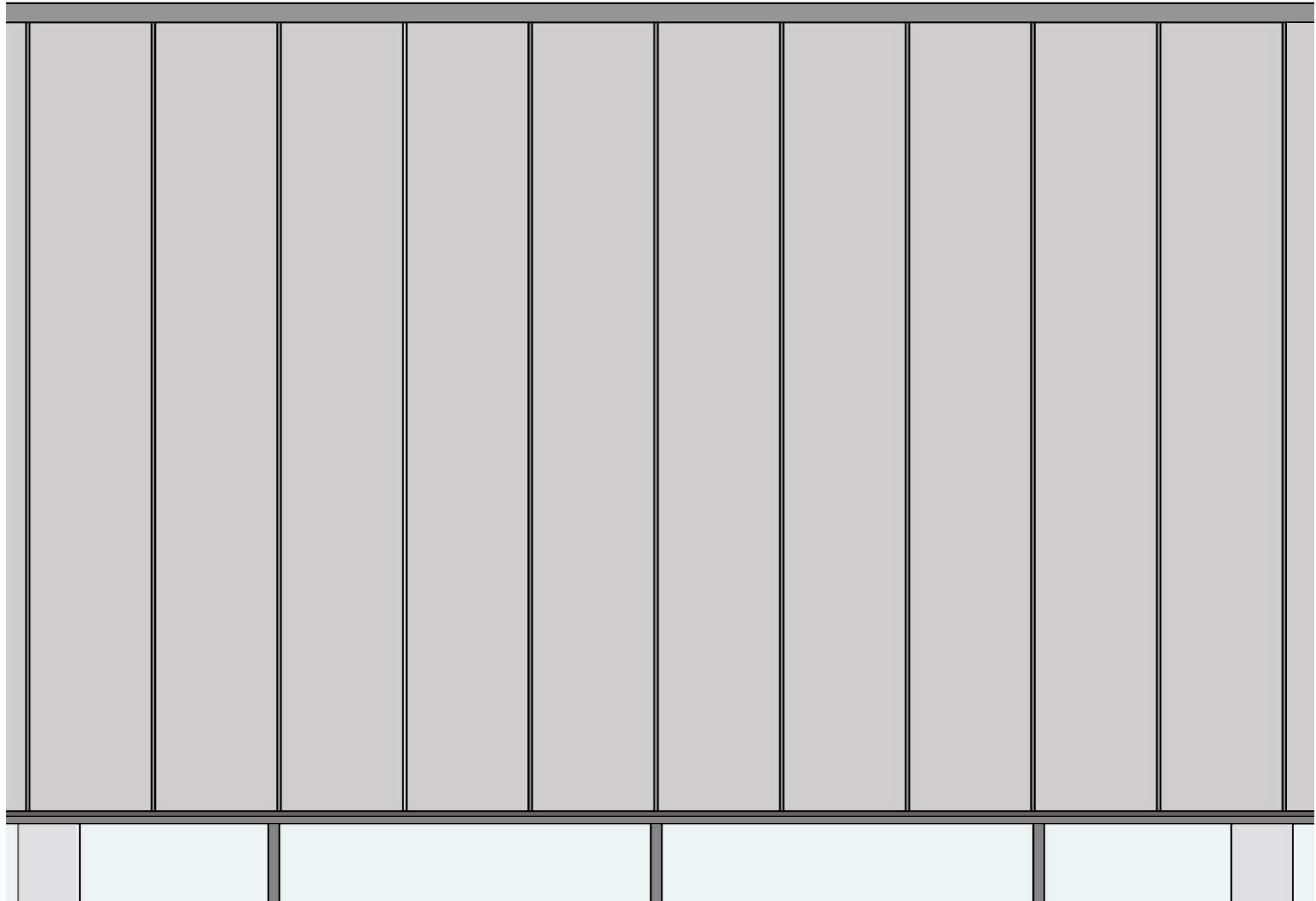
DESIGN

VERTICAL SECTION 1 : 20



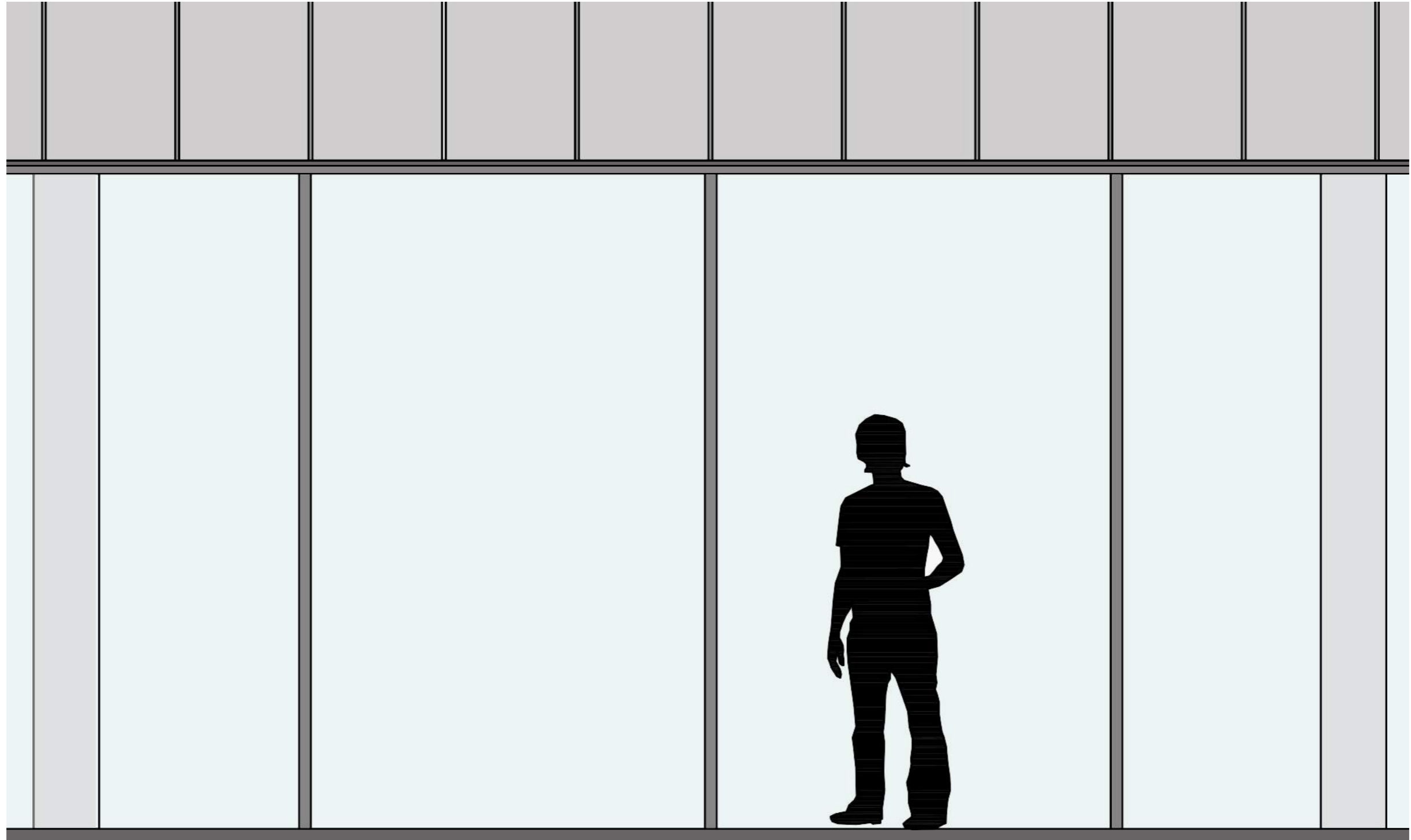
DESIGN

FACADE 1 : 20



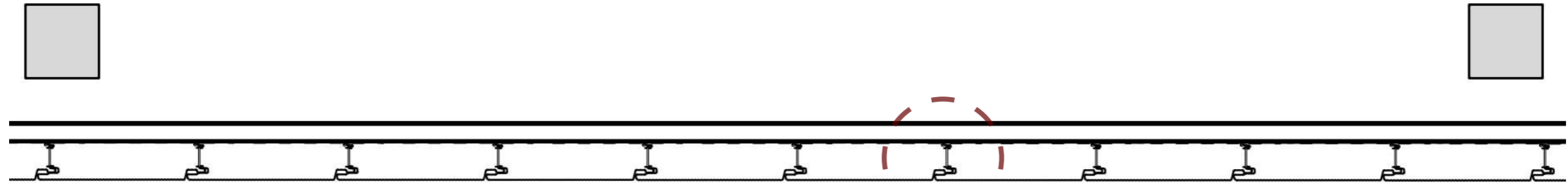
DESIGN

FACADE 1 : 20

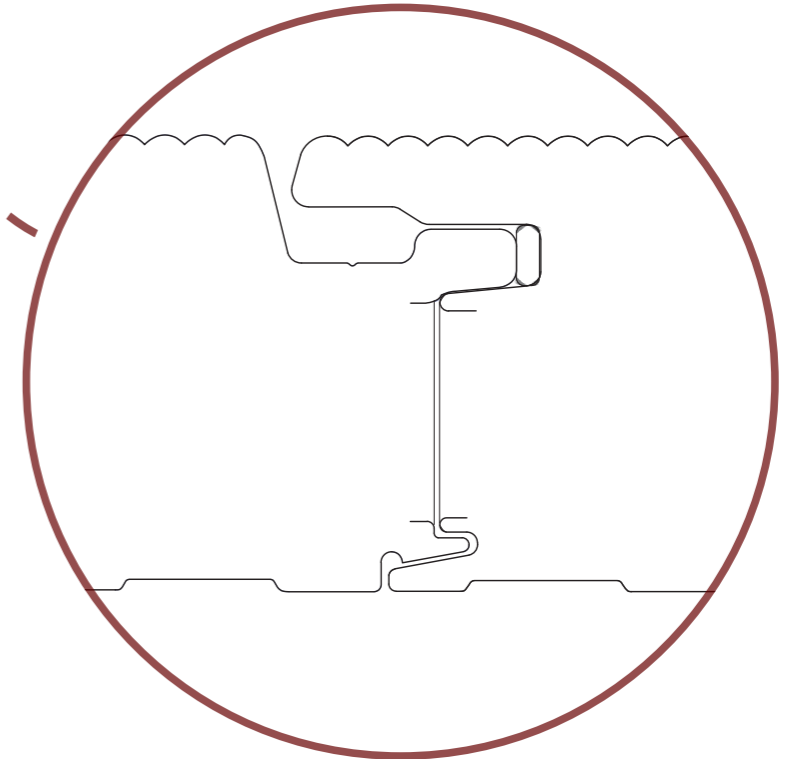


DESIGN

HORIZONTAL SECTION 1 : 20

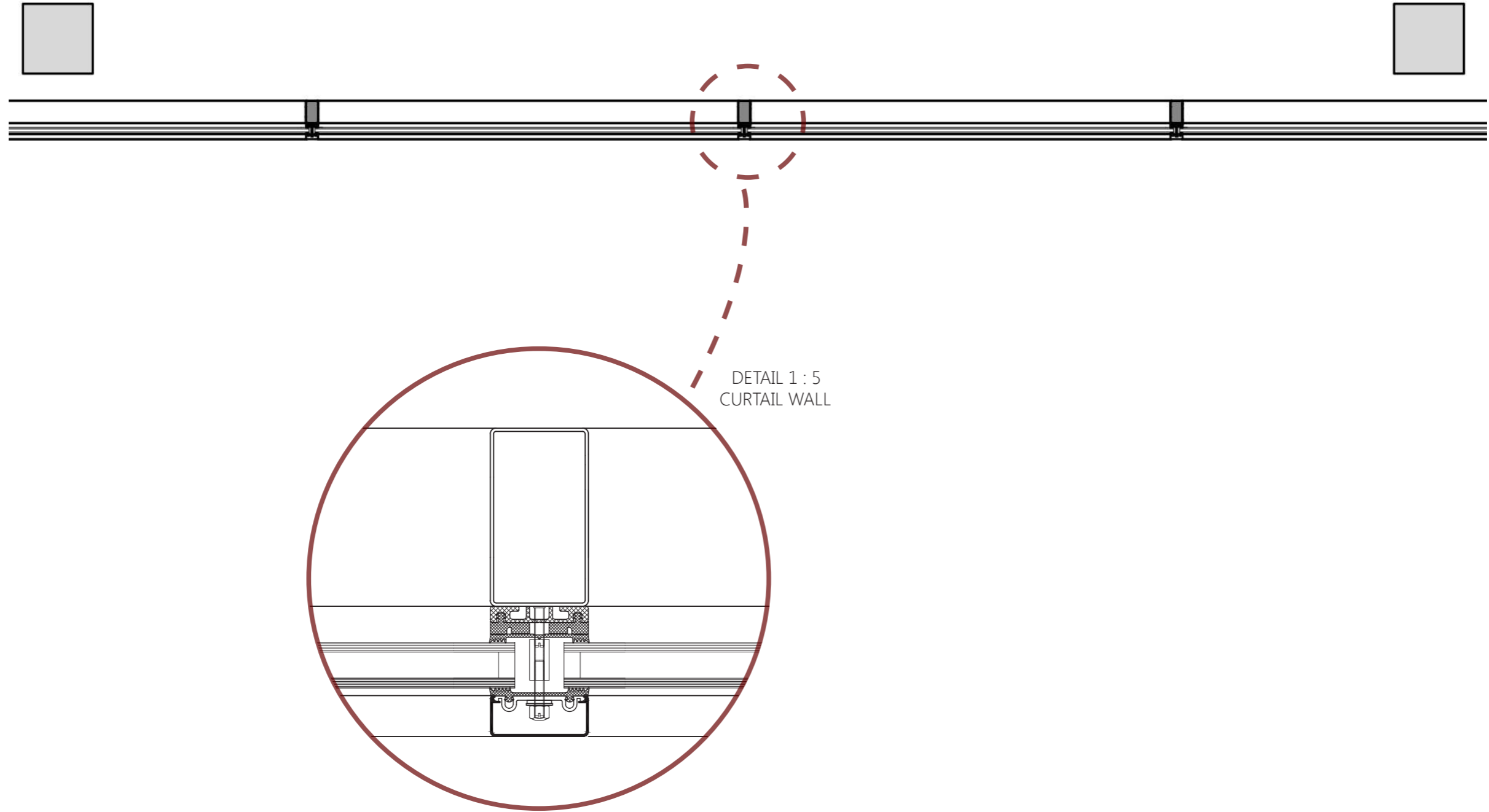


DETAIL 1 : 5
KINGSPAN PANELS



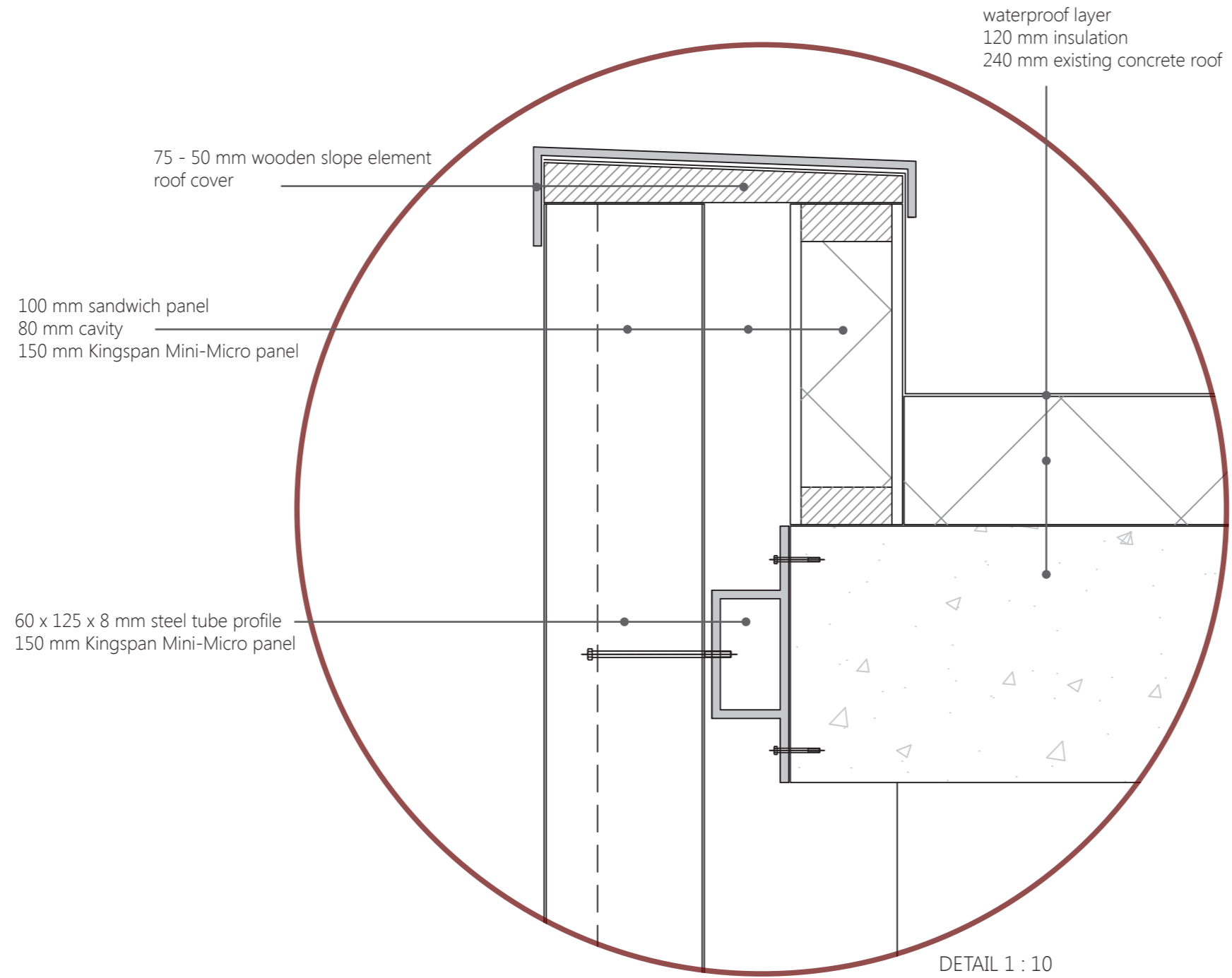
DESIGN

HORIZONTAL SECTION 1 : 20



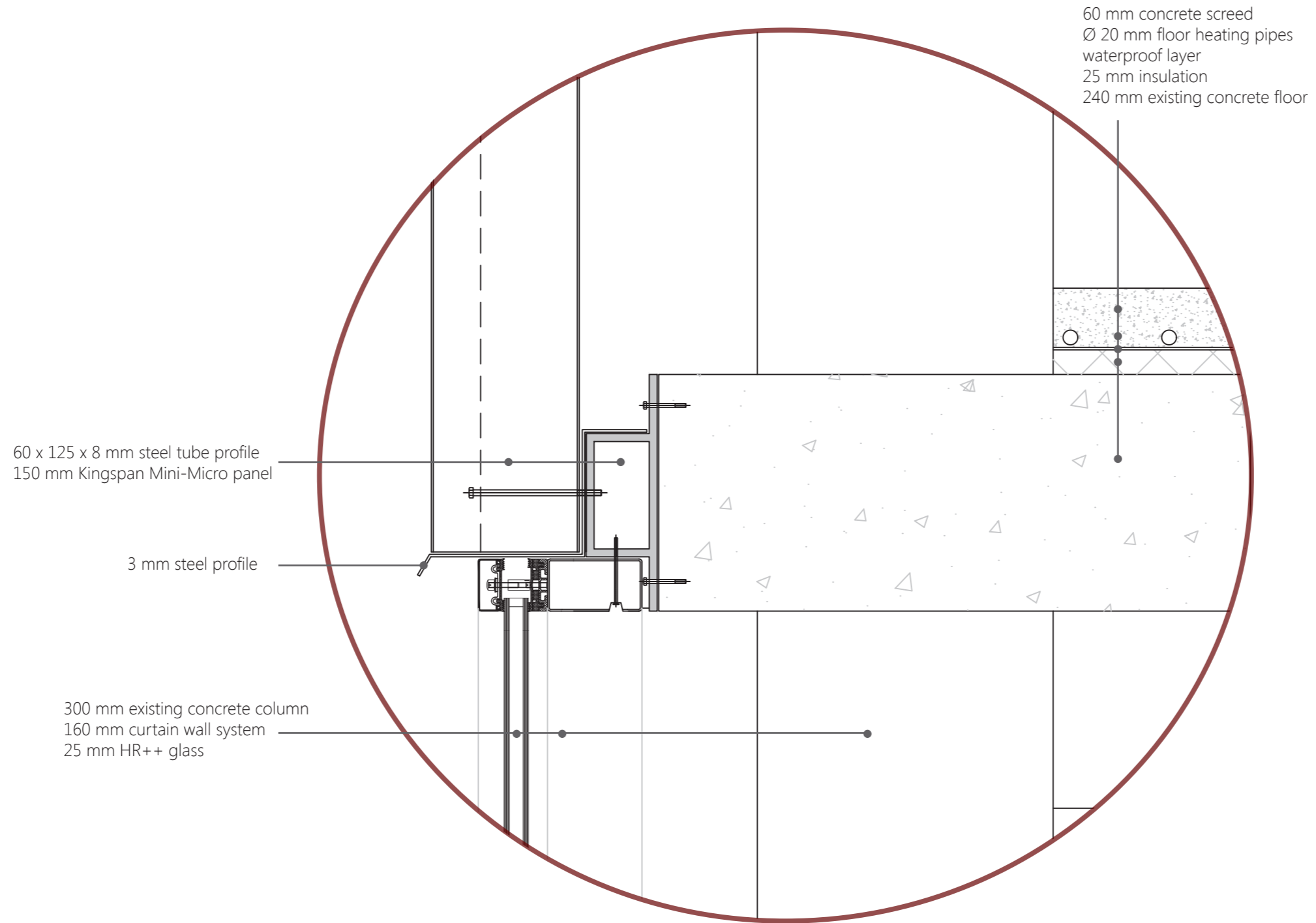
DESIGN

SECTION 1 : 10



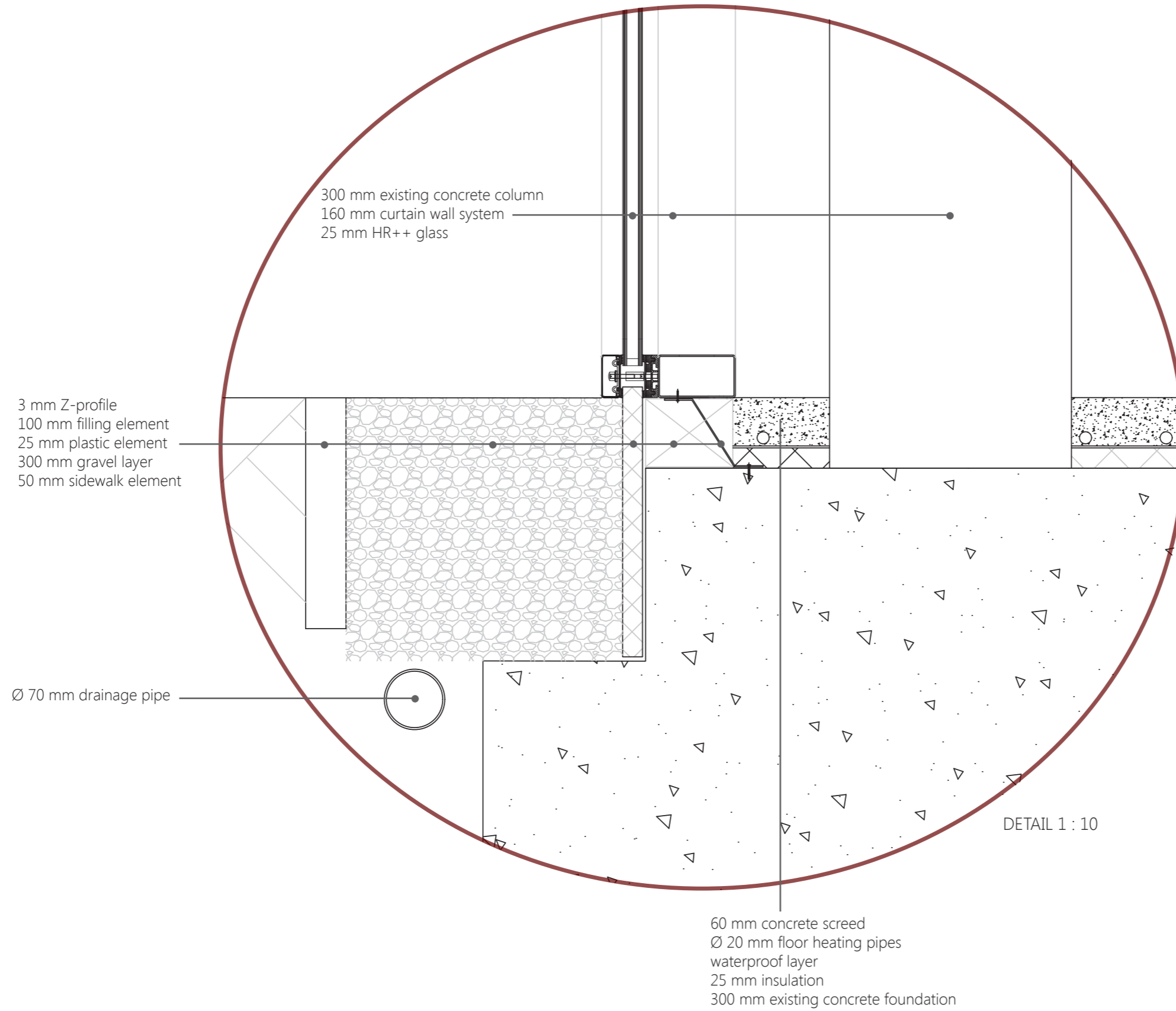
DESIGN

SECTION 1 : 10



DESIGN

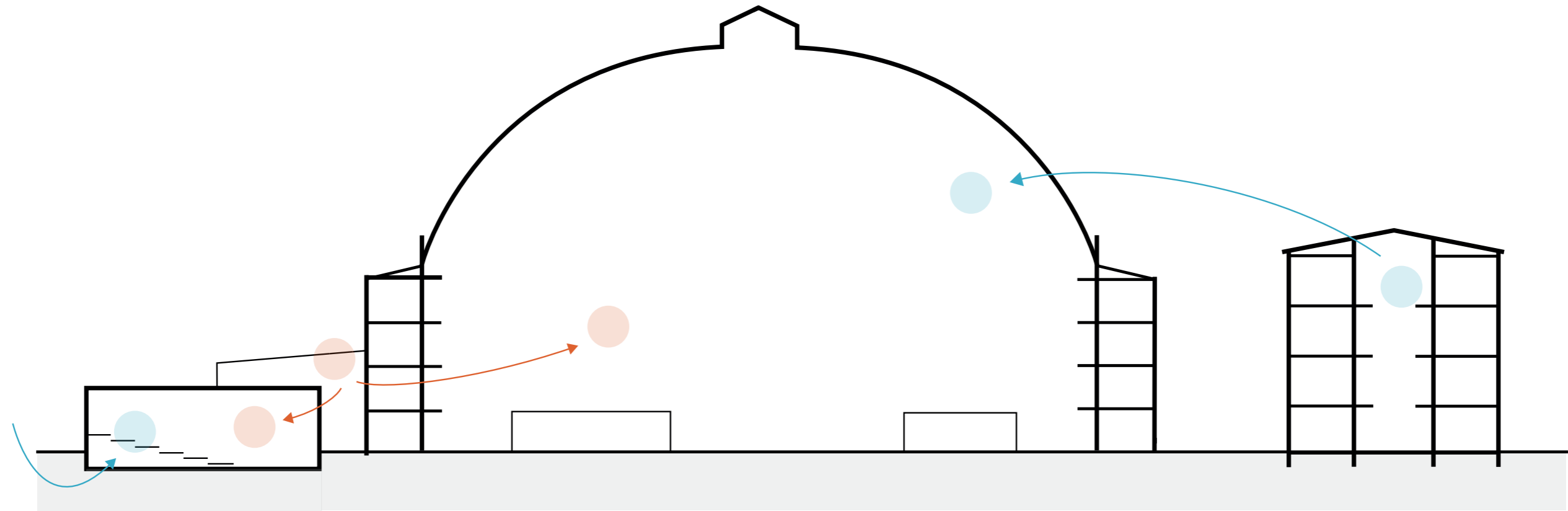
SECTION 1 : 10



BUILDING TECHNOLOGY

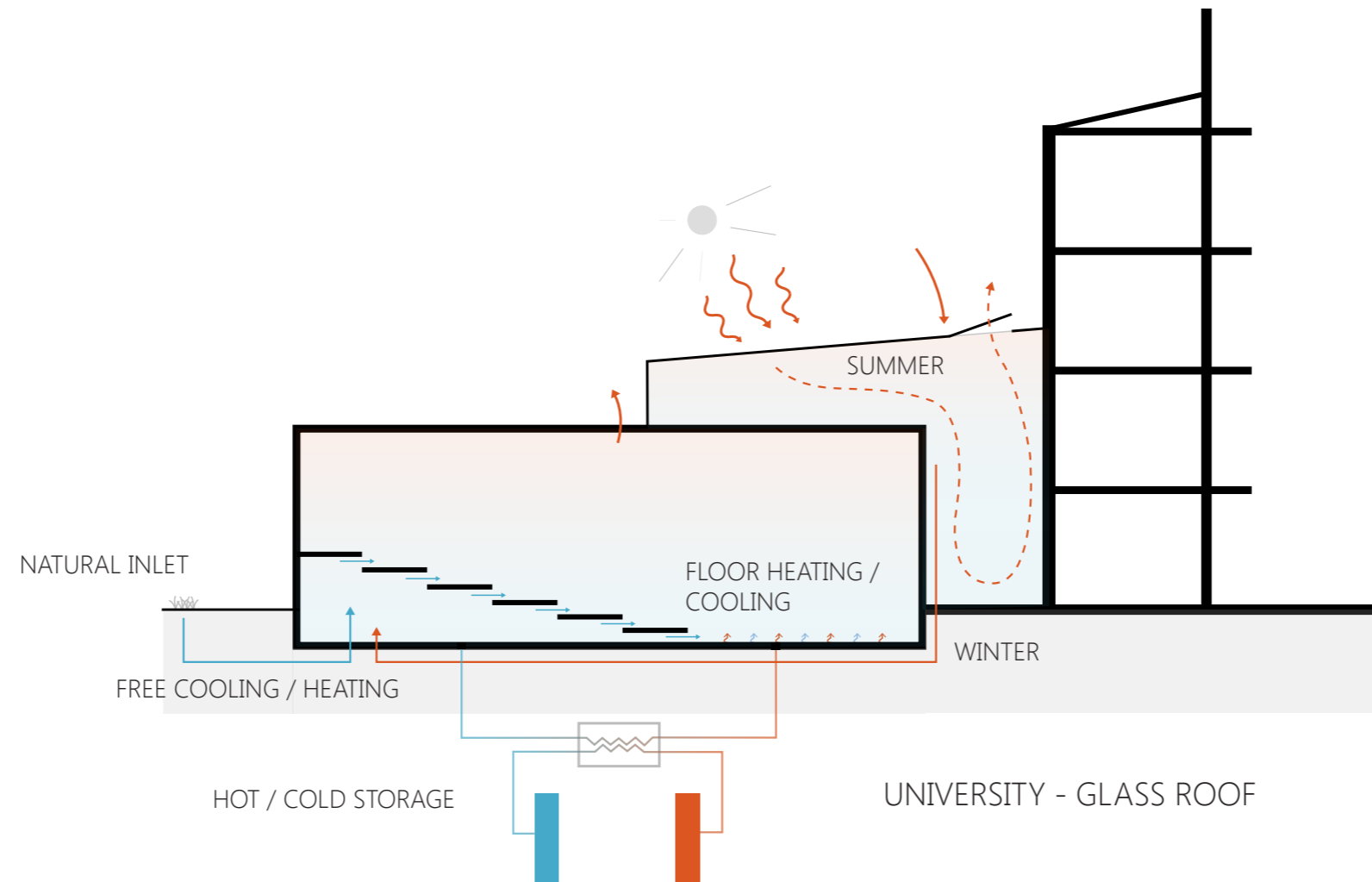
CLIMATE CONCEPT

Combining the energy need in the most natural way. The shortage of heat and cold is supplemented by the surplus out of other building functions. This makes the climate concept a cross-border in the most **sustainable** way.



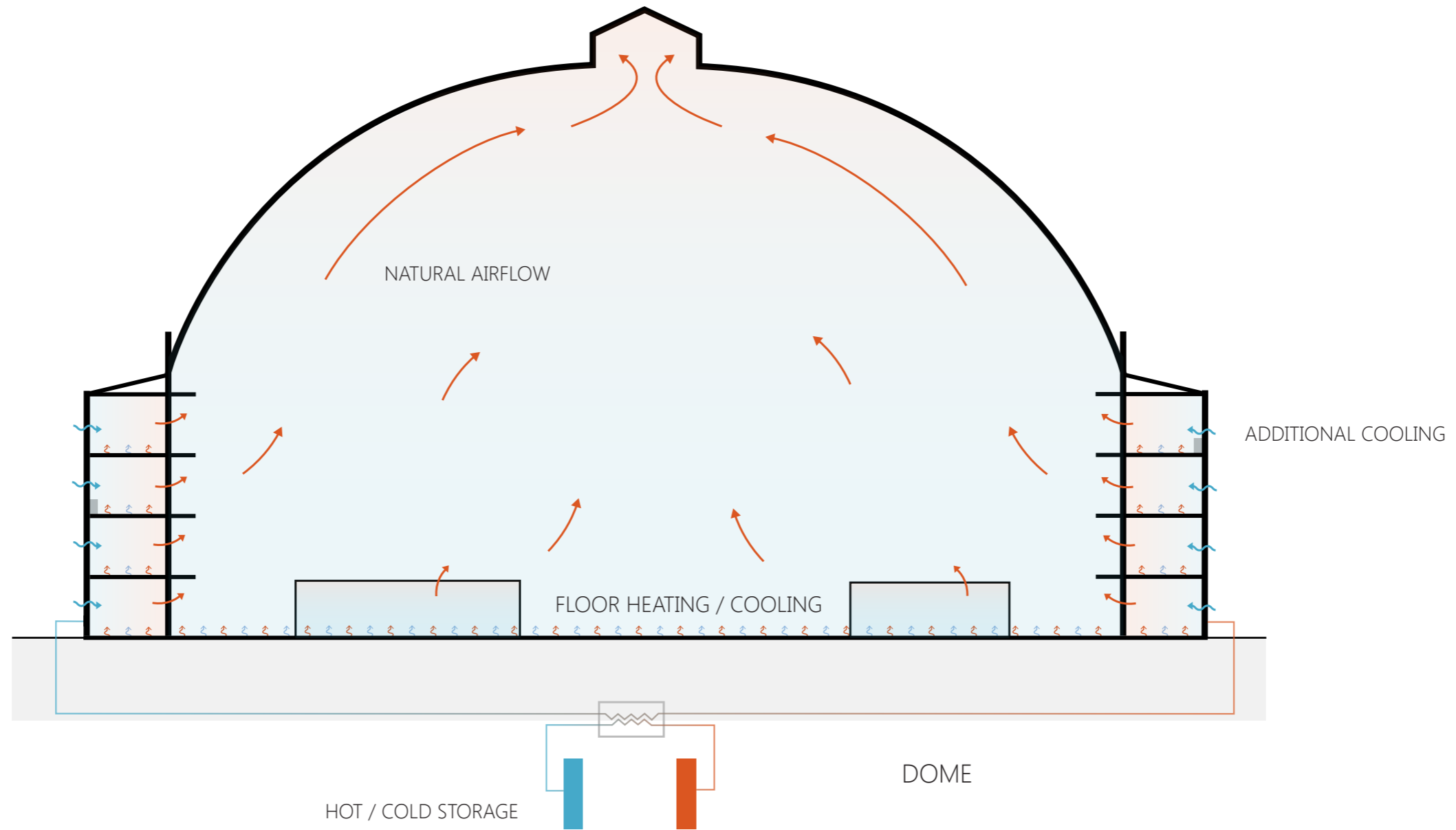
BUILDING TECHNOLOGY

CLIMATE CONCEPT



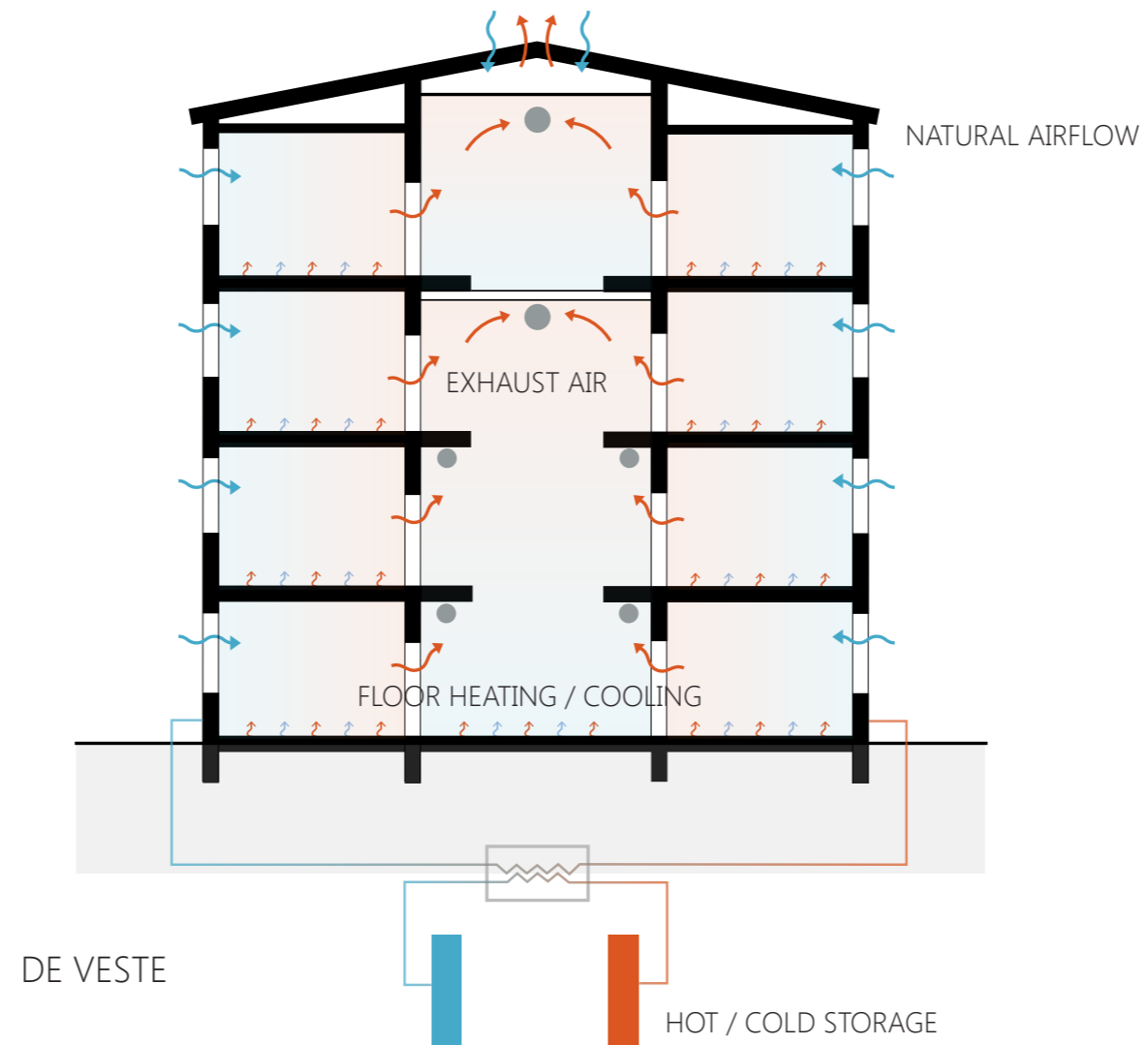
BUILDING TECHNOLOGY

CLIMATE CONCEPT



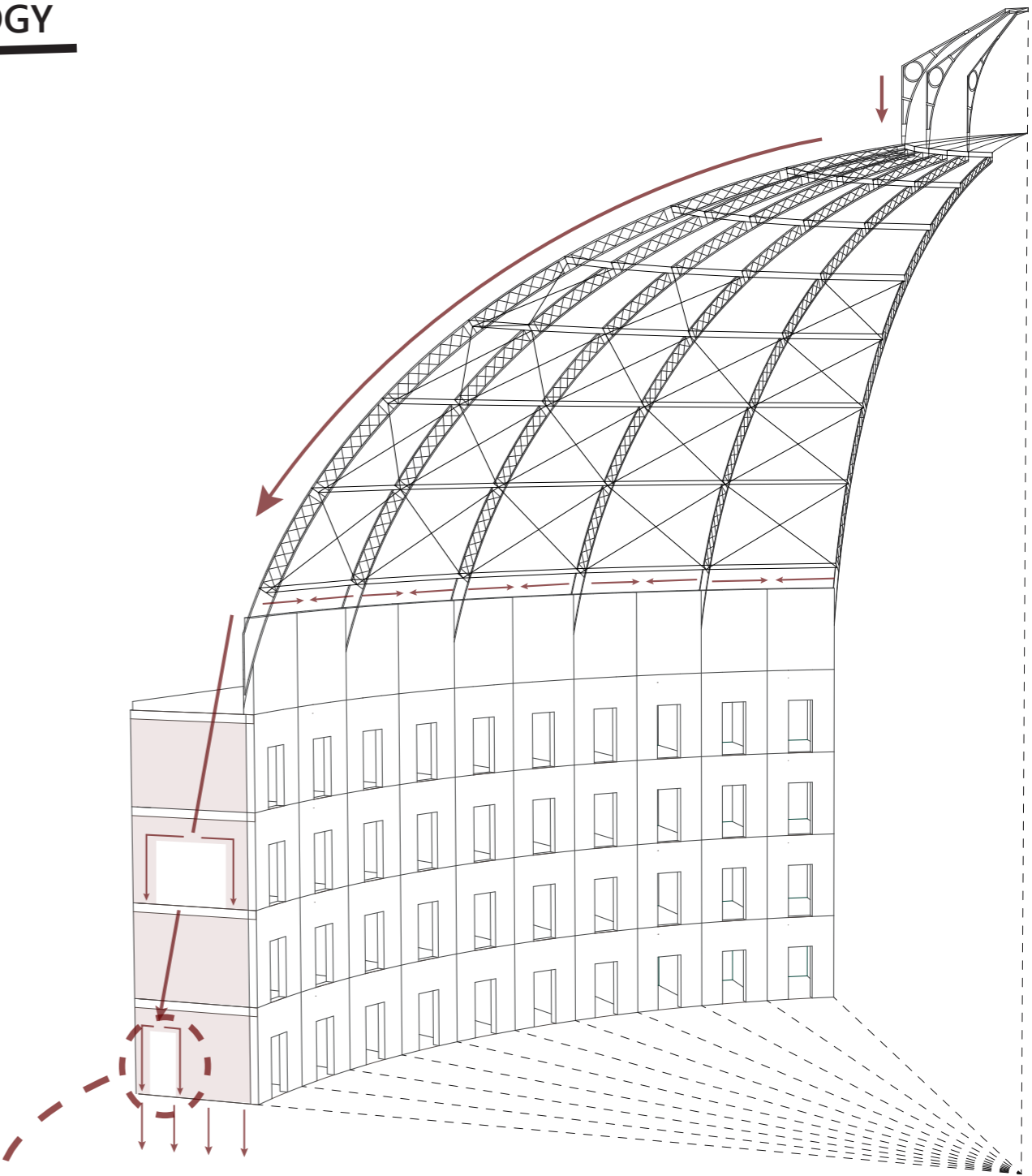
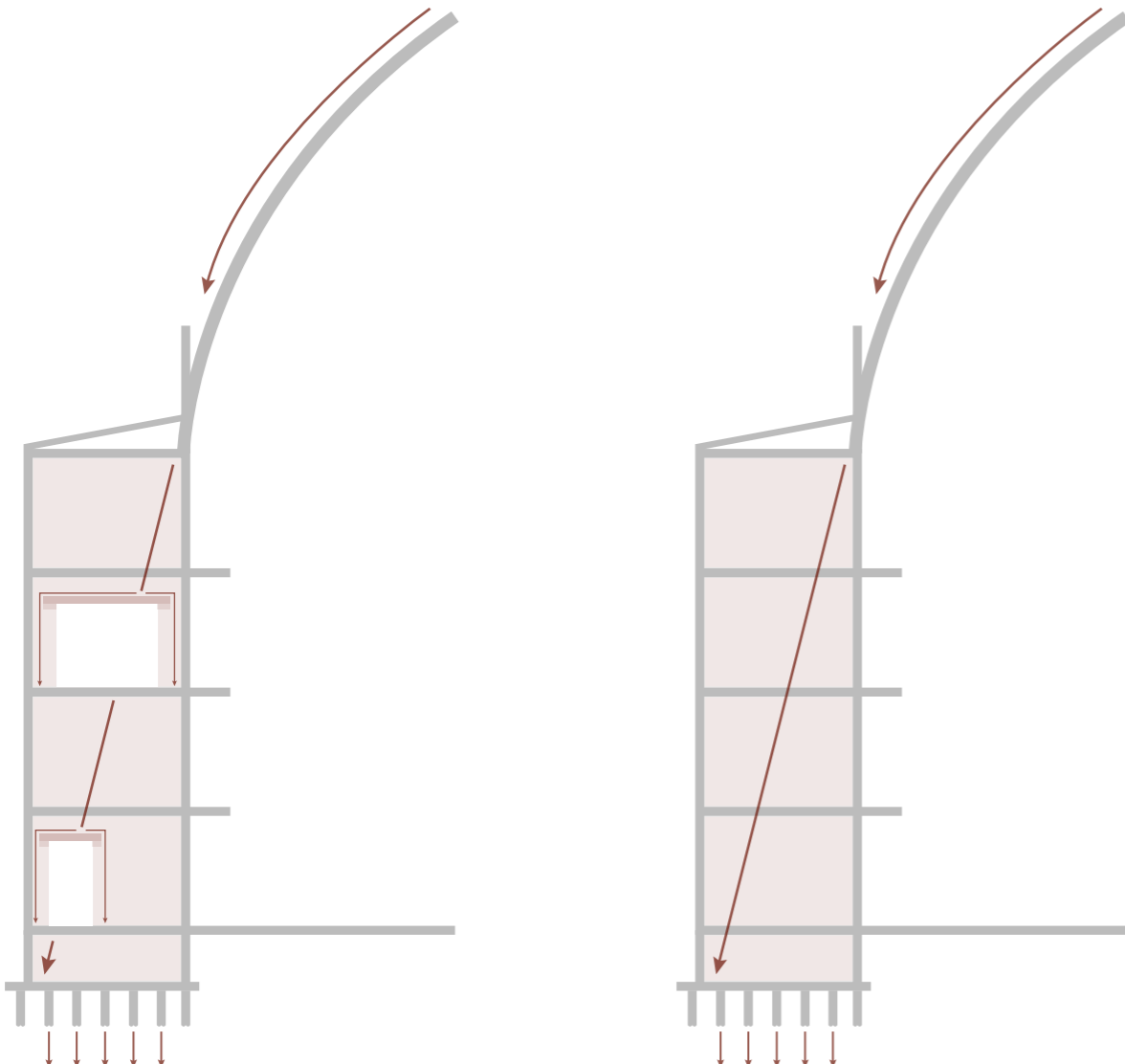
BUILDING TECHNOLOGY

CLIMATE CONCEPT

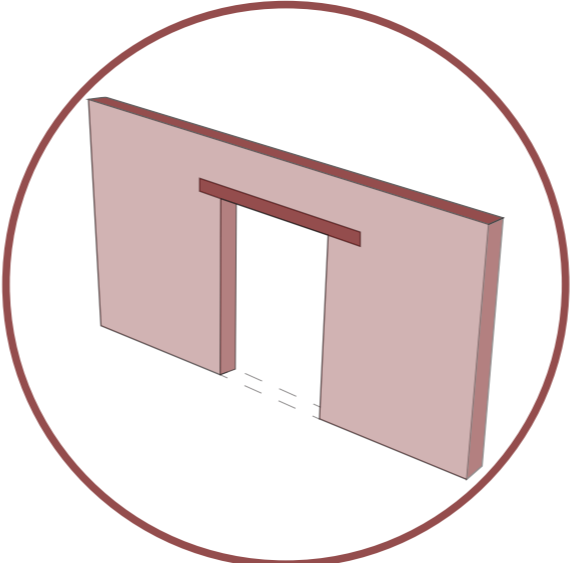


BUILDING TECHNOLOGY

STRUCTURAL CONCEPT



FORCE DISTRIBUTION

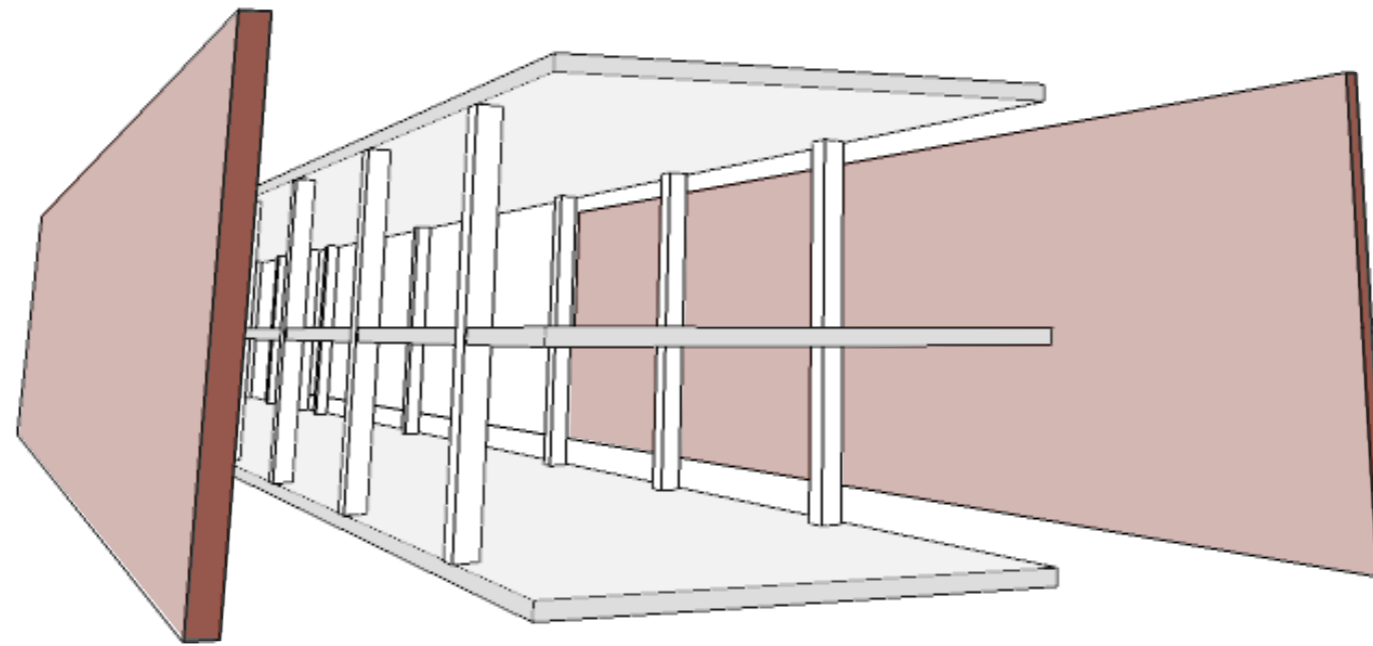


The cupola is currently supported by the walls of the cells To create space and openness cells will be coupled. This results in a problem with the distribution of the force resulting by the mass of the cupola. To distribute the weight in a proper way supporting beams will be added in the opened walls.

BUILDING TECHNOLOGY

STRUCTURAL CONCEPT

While the structural arrangement of the existing concrete buildings will be maintained, facades will be replaced by a new modern concept.



REUSE EXISTING STRUCTURE

