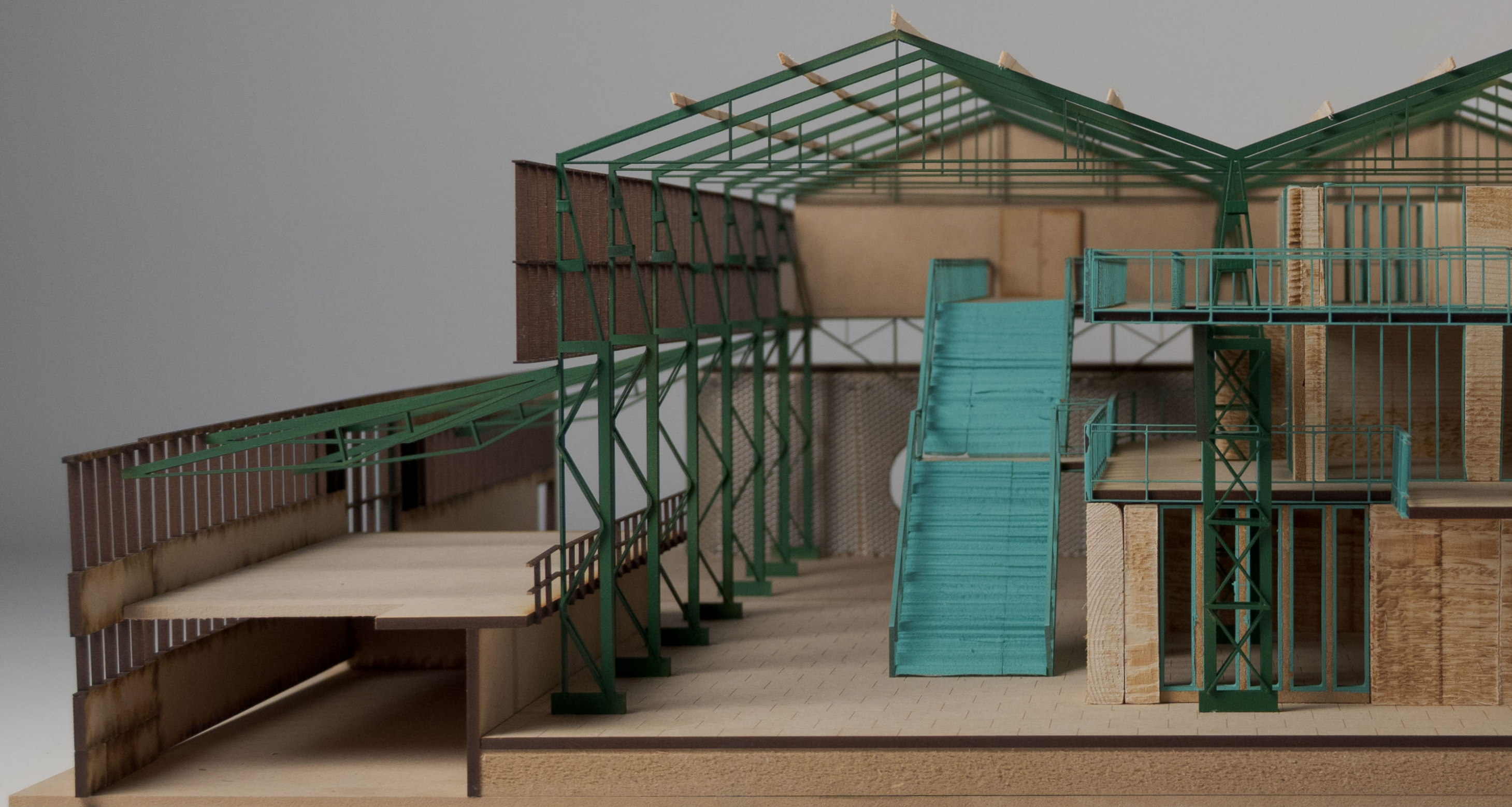


DISCOVERING THE GENIUS LOCI OF DE BIESBOSCHHAL

Preserving the identity of a building with a
Genius Loci based adaptive reuse approach

AR3AH115 Revitalising Maritime Heritage
Nino van Dijk 5861667
Academic year 2024-2025



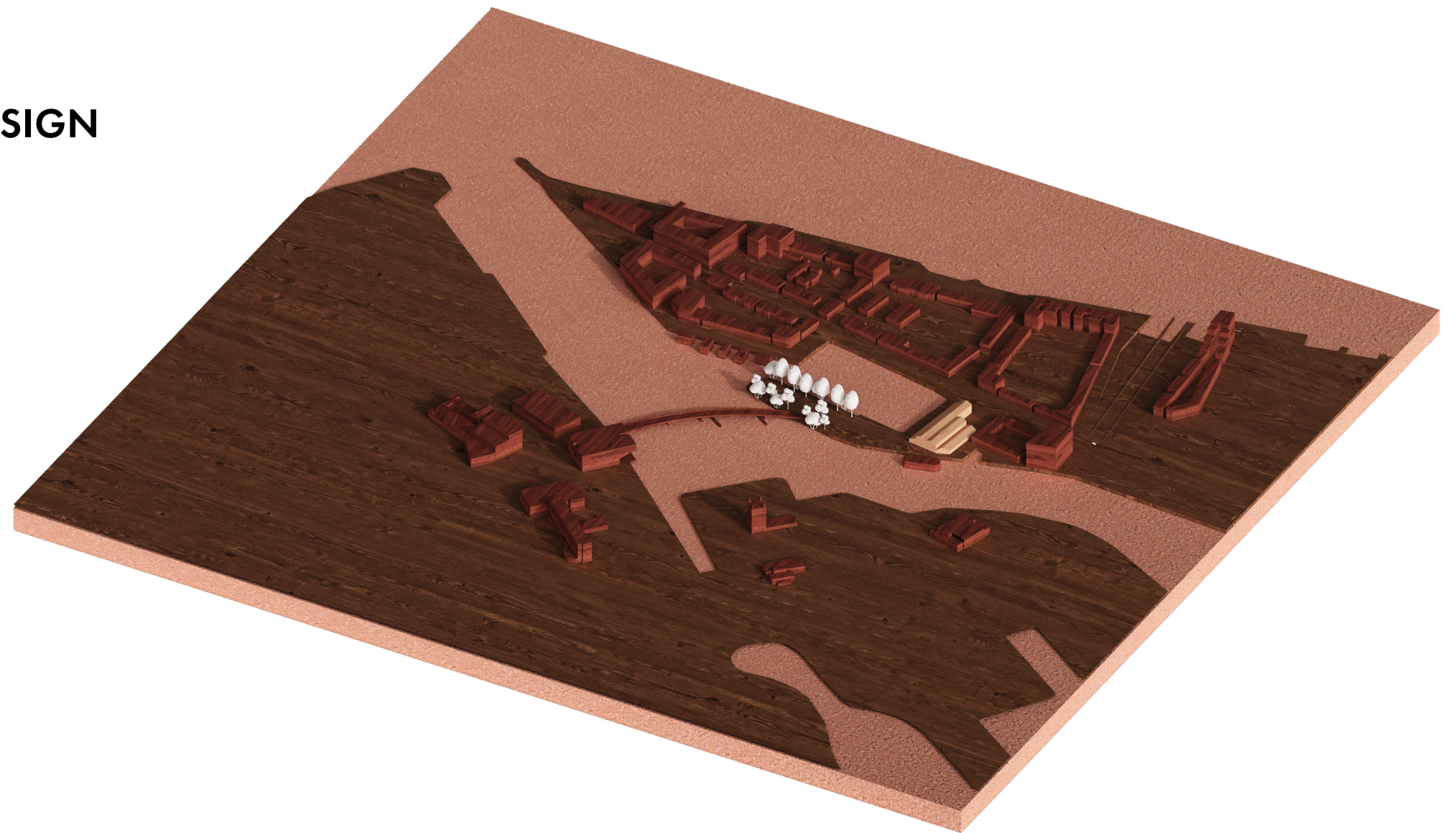
1 ANALYSIS

2 RESEARCH

3 URBAN MASTERPLAN

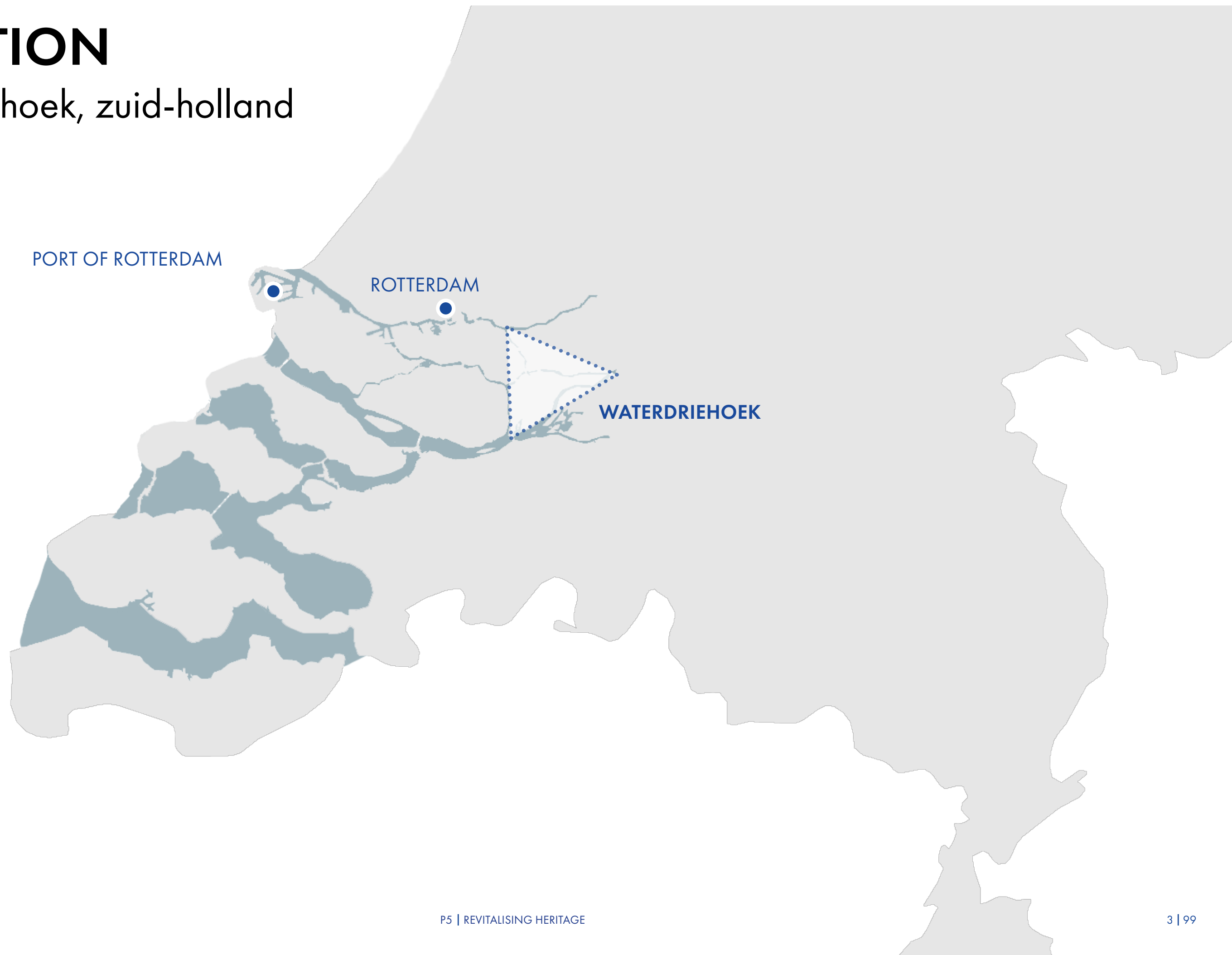
4 BUILDING DESIGN

5 TECHNICAL ELABORATION



LOCATION

waterdriehoek, zuid-holland



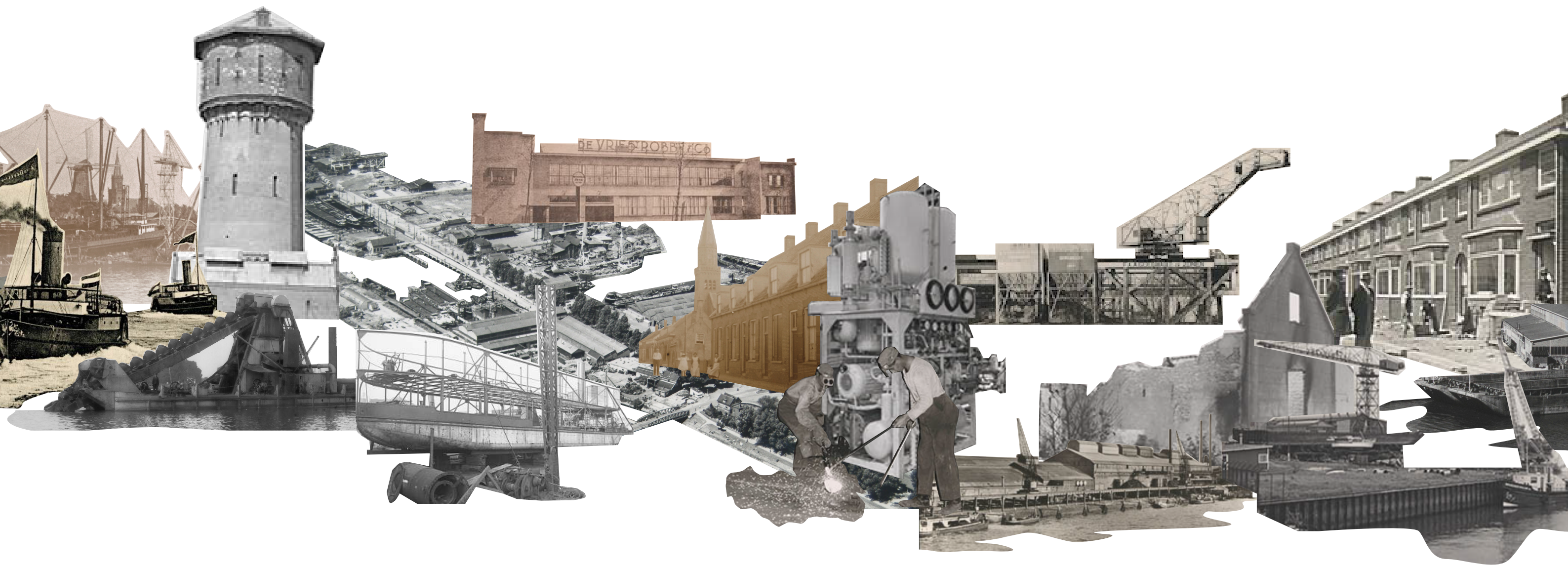
LOCATION

waterdriehoek, zuid holland



WATERDRIEHOEK

industrial past and present



WATERDRIEHOEK

vacancy and loss of identity



MERCON KLOOS, ALBLASSERDAM
(own work)



NEDSTAAL, ALBLASSERDAM
(own work)



BIESBOSCHHAL, DORDRECHT
(own work)

LOCATION

waterdriehoek, zuid holland

de staart

PROJECT SITE

de staart, dordrecht



BIESBOSCHHAL







DE BIESSCH









Toilets →

WELKOM
E STAART?!

PROJECT SITE

identity of de staart

SLOPE OF SHIPWHARF DE BIESBOSCH, 1930
(Regionaal Archief Dordrecht)



CHARACTERISTIC VIEW INBETWEEN PRODUCTION HALLS,
BIESBOSCHHAL INBETWEEN BUILDINGS IN THE BACK, 2000
(Regionaal Archief Dordrecht)



PRESENCE OF SHIPWHARF IN NEIGHBOURHOOD, 1928
(Regionaal Archief Dordrecht)

PROJECT SITE

identity of De Bieboschhal



source: Archief Museum De Binnenvaart

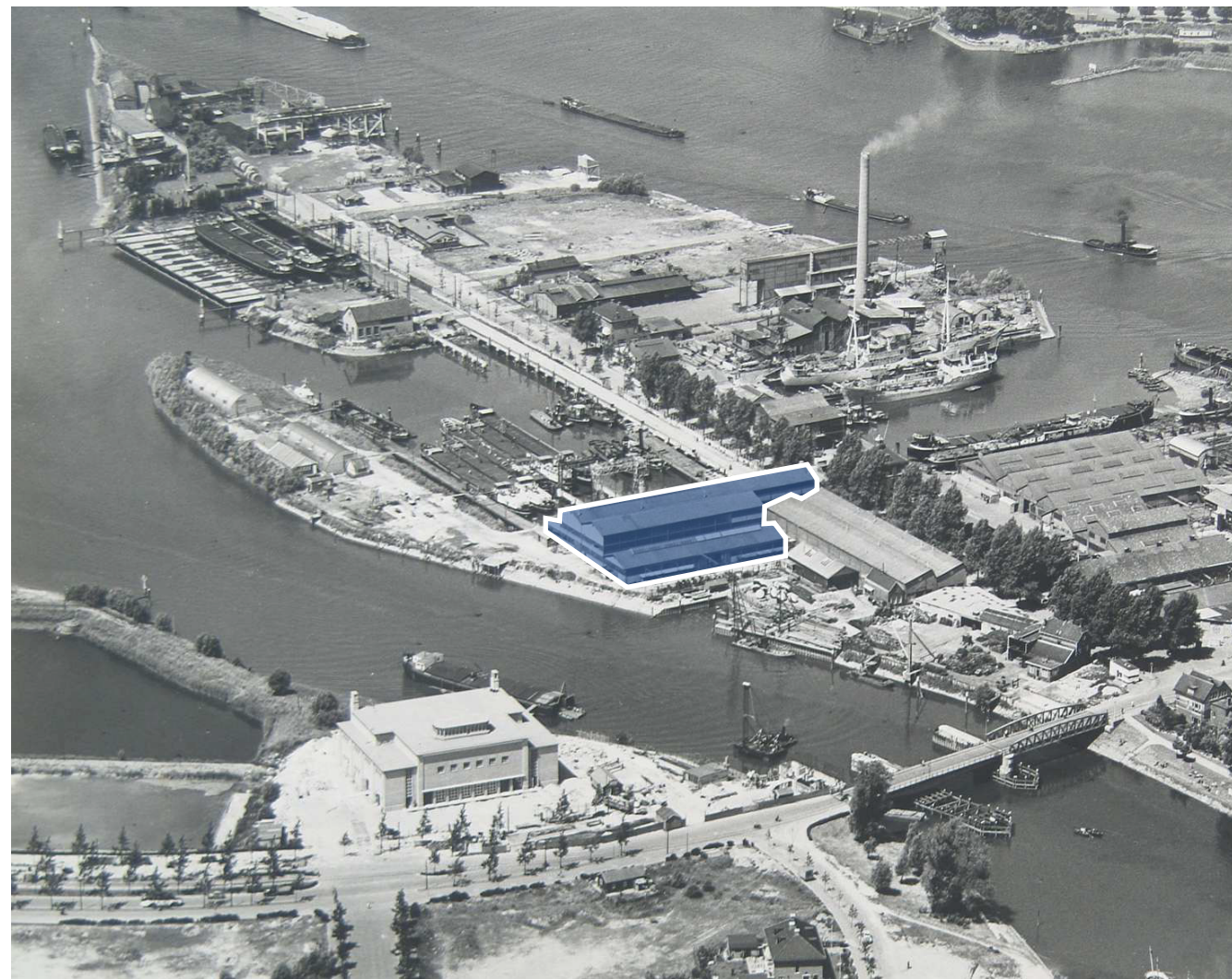


source: Archief Museum De Binnenvaart

PROJECT SITE

remains of wharves

then



SHIPWHARVES ON DE STAART, 1952
(Regionaal Archief Dordrecht)

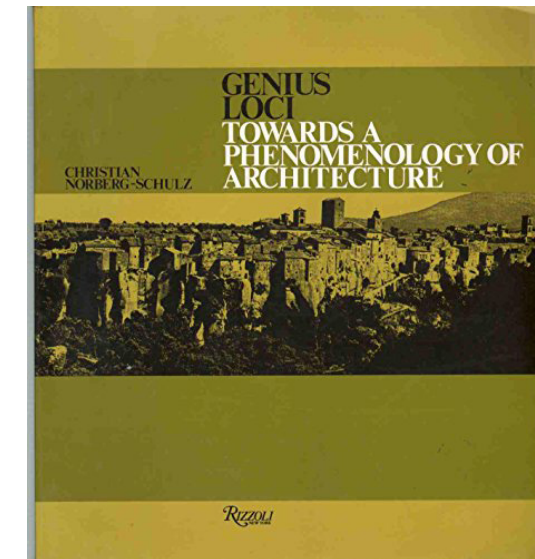
now



NEW DEVELOPMENT ON DE STAART
(wonenindordrecht.nl)

GENIUS LOCI

Genius Loci Design principles



GENIUS LOCI DESIGN PRINCIPLES

SPIRIT OF PLACE

LOCATION (NATURAL PLACE)

localities in which project
is rooted

correspondence between
natural conditions and settlement
morphology

SPATIAL CONFIGURATION (MAN-MADE PLACE)

presencing of boundaries

standing and/or rising
of a building

silhouette against surroundings,
ground and sky

horizontal elements vs.
vertical elements

CHARACTERIZING ARTICULATION

solidity vs. transparency

light transmittance

inside/outside concretisation

structural clarity

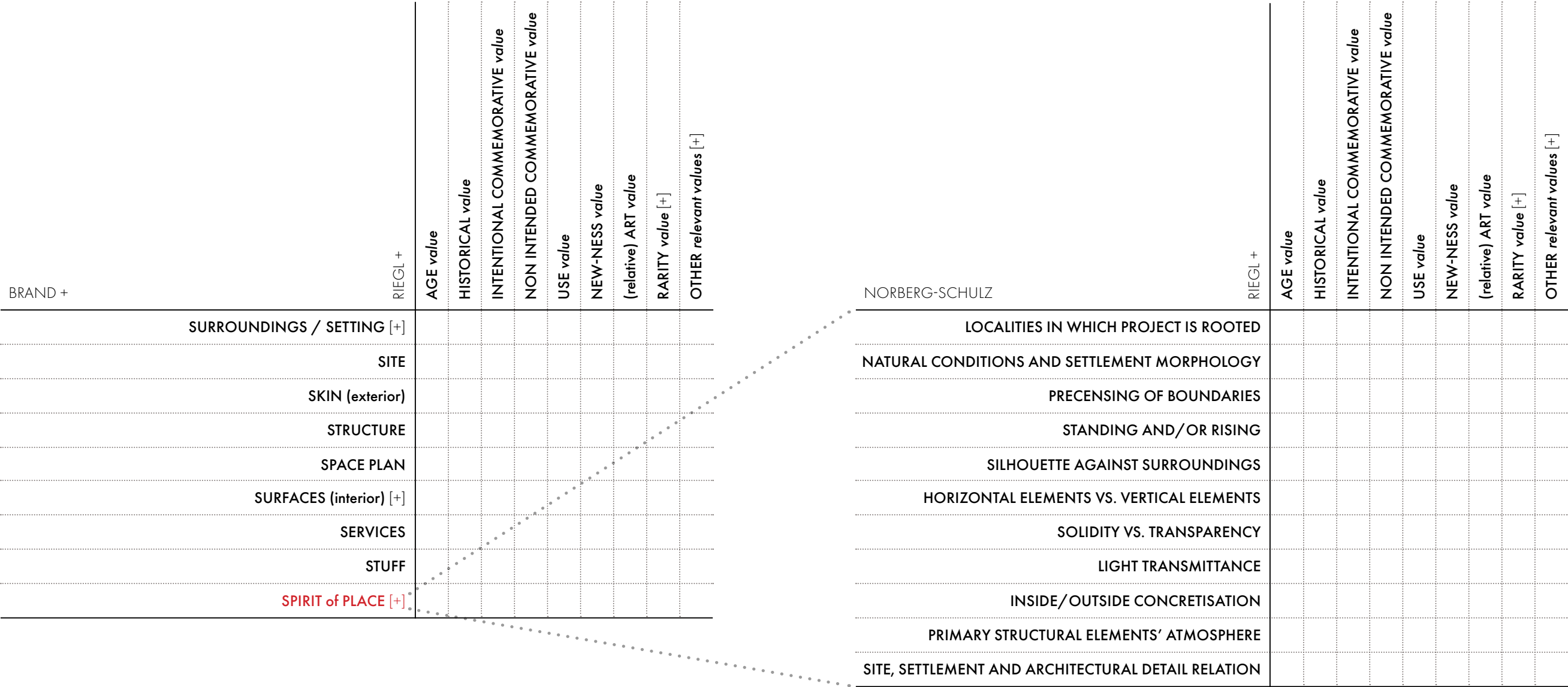
primary structural elements
retain atmosphere

relation between site, settlement and
architectural detail

Genius Loci Design Principles (author's own work)

GENIUS LOCI

Norberg-Schulz/Riegl value matrix



Brand/Riegl matrix from *Designing From Heritage* (Kuipers, 2017) (left) and proposed matrix based on the Genius Loci Design Principles (right) (author’s own work)

LocHal

Braaksma & Roos
Tilburg, NL



Primary construction presence LocHal
(author's own work)



Architectural detail LocHal
(author's own work)

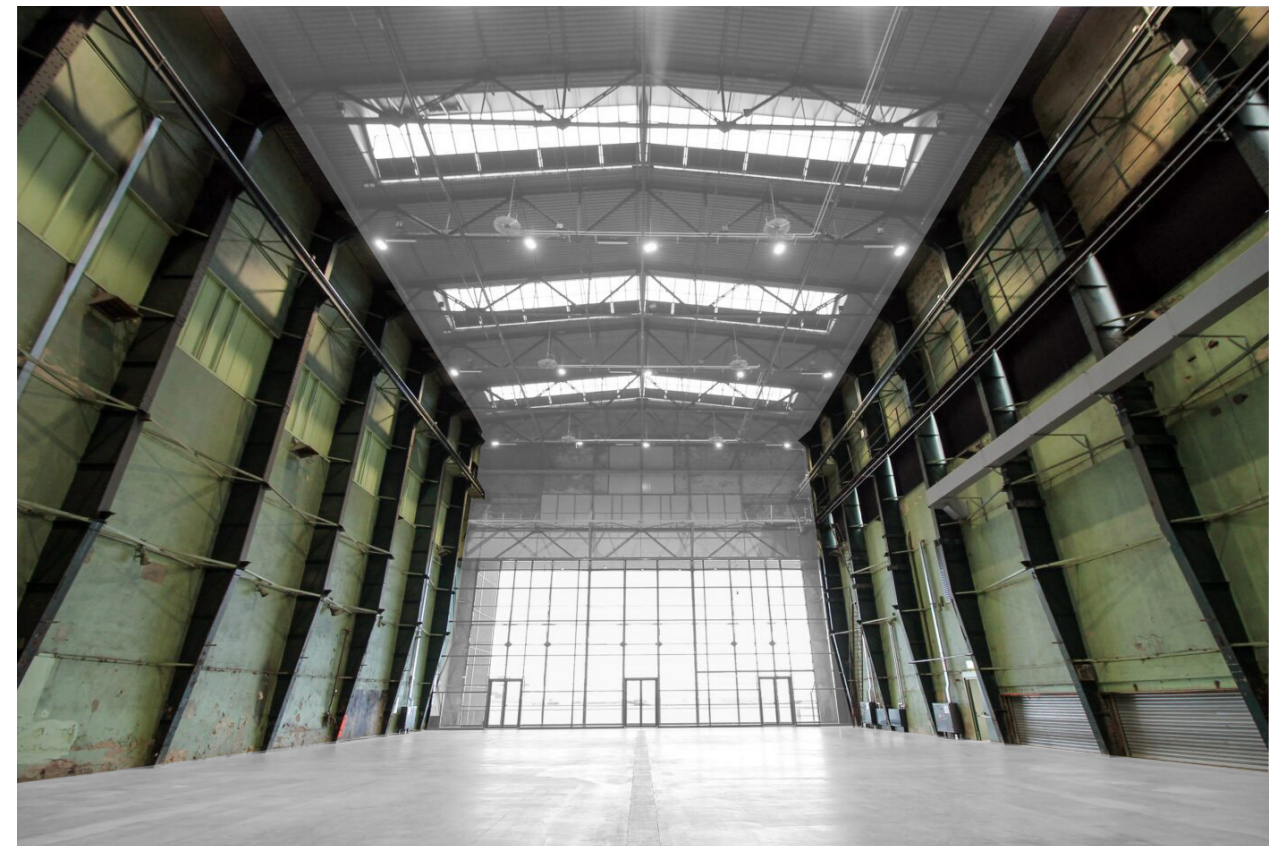
Onderzeebootloods

Marge Architecten

Rotterdam, NL



Rising character of assembly hall
(Stadsarchief Rotterdam)



Horizontal building elements let the building 'rise'
(bouwwereld.nl)

Mastenloods

Office Winhov & Van Hoogevest Architecten
Den Helder, NL



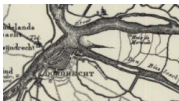
former supervisor's house (winhov.nl)



translated architectural detail of supervisor's house (winhov.nl)

VALUE ASSESSMENT

Norberg-Schulz/Riegl value matrix

	AGE	HISTORICAL	INTENDED COMMEMORATIVE	NON-INTENDED COMMEMORATIVE	USE	NEW-NESS	ART	OTHER
LOCALITIES IN WHICH PROJECT IS ROOTED								
NATURAL CONDITIONS AND SETTLEMENT MORPHOLOGY								
PRECENSING OF BOUNDARIES								
STANDING AND/OR RISING								
SILHOUETTE AGAINST SURROUNDINGS								
HORIZONTAL ELEMENTS VS. VERTICAL ELEMENTS								
SOLIDITY VS. TRANSPARENCY								
LIGHT TRANSMITTANCE								
INSIDE/OUTSIDE CONCRETISATION								
PRIMARY STRUCTURAL ELEMENTS/ ATMOSPHERE								
SITE, SETTLEMENT AND ARCHITECTU- RAL DETAIL RELATION								

HIGH VALUE

MEDIUM VALUE

LOW VALUE

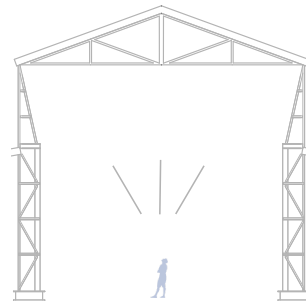
VALUE ASSESSMENT

starting points



1.

connect building to
historic context

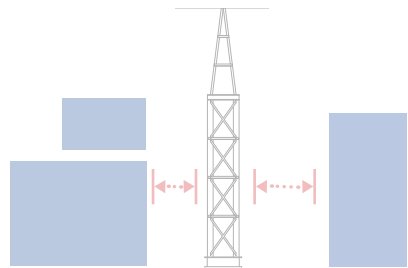


2.

preserve 'rising' character
of interior space



BIESBOSCHHAL SEEN FROM ACROSS DE WANTIJ, 1952
(Regionaal Archief Dordrecht)



3.

preserve presence of
primary structural elements



4.

continue architectural detail
connected to the place



ORIGINAL GREEN SPACE OF DE STAART, 2024
(authors own work)

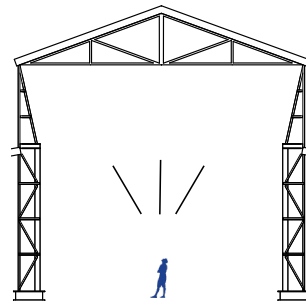
VALUE ASSESSMENT

starting points



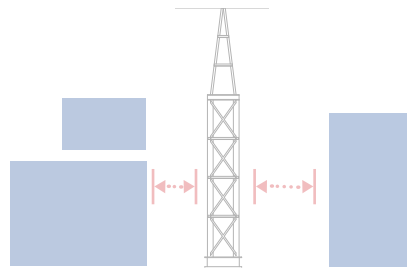
1.

connect building to
historic context



2.

preserve 'rising' character
of interior space



3.

preserve presence of
primary structural elements



4.

continue architectural detail
connected to the place



'RISING' CHARACTER BIESBOSCHHAL
(authors own work)

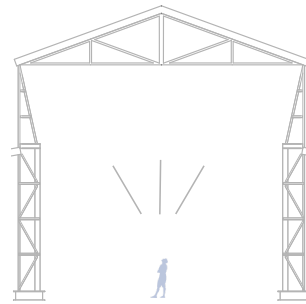
VALUE ASSESSMENT

starting points



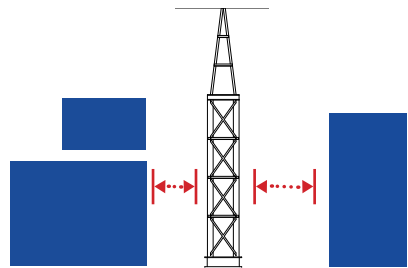
1.

connect building to
historic context



2.

preserve 'rising' character
of interior space



3.

preserve presence of
primary structural elements



4.

continue architectural detail
connected to the place



PRESENCE OF PRIMARY STRUCTURAL ELEMENTS
(authors own work)

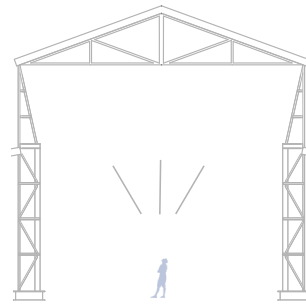
VALUE ASSESSMENT

starting points



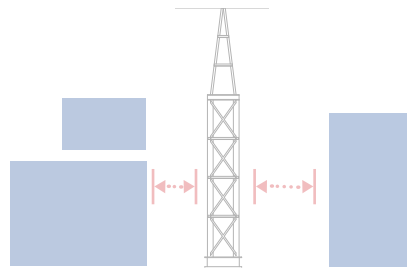
1.

connect building to
historic context



2.

preserve 'rising' character
of interior space



3.

preserve presence of
primary structural elements



4.

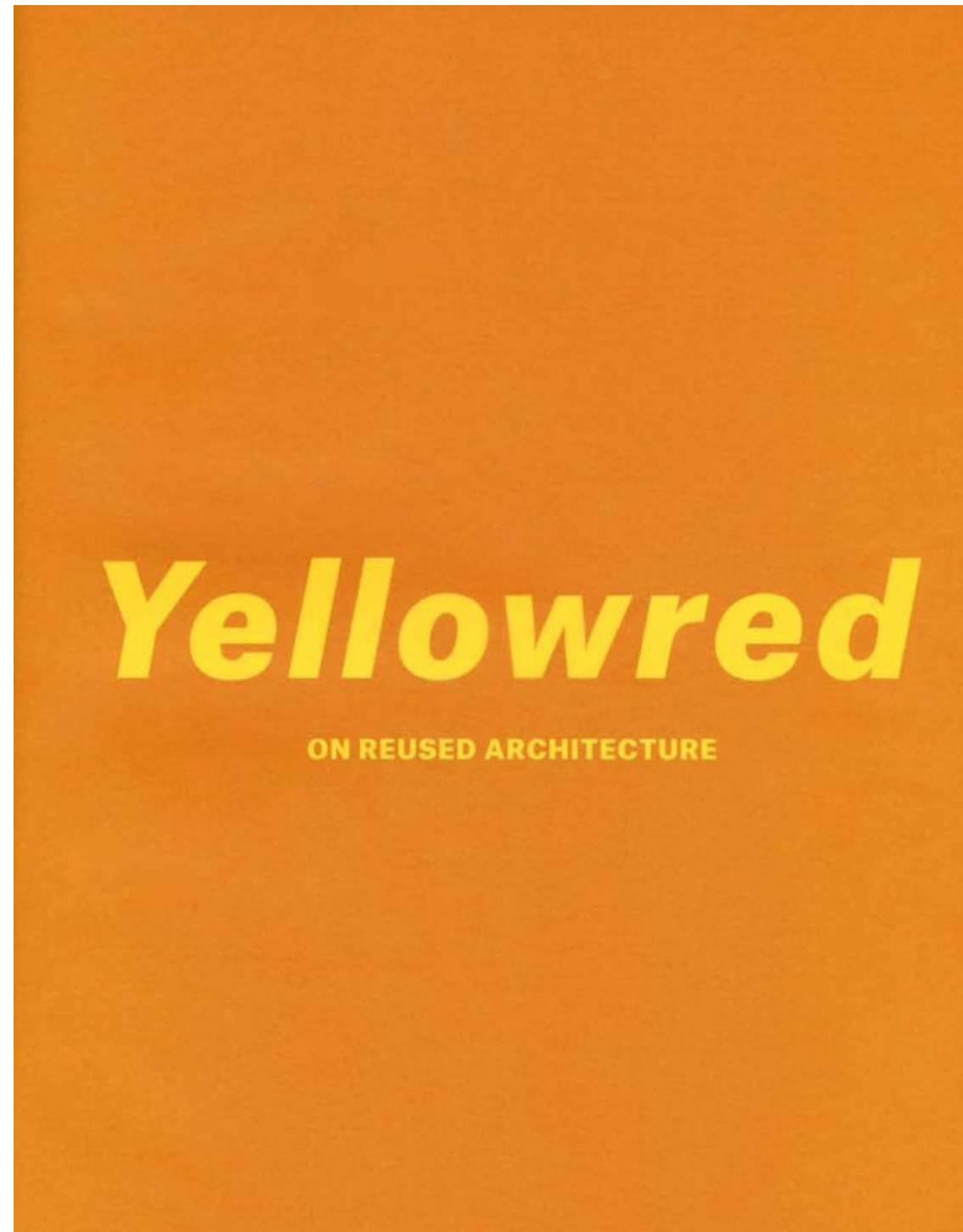
continue architectural detail
connected to the place



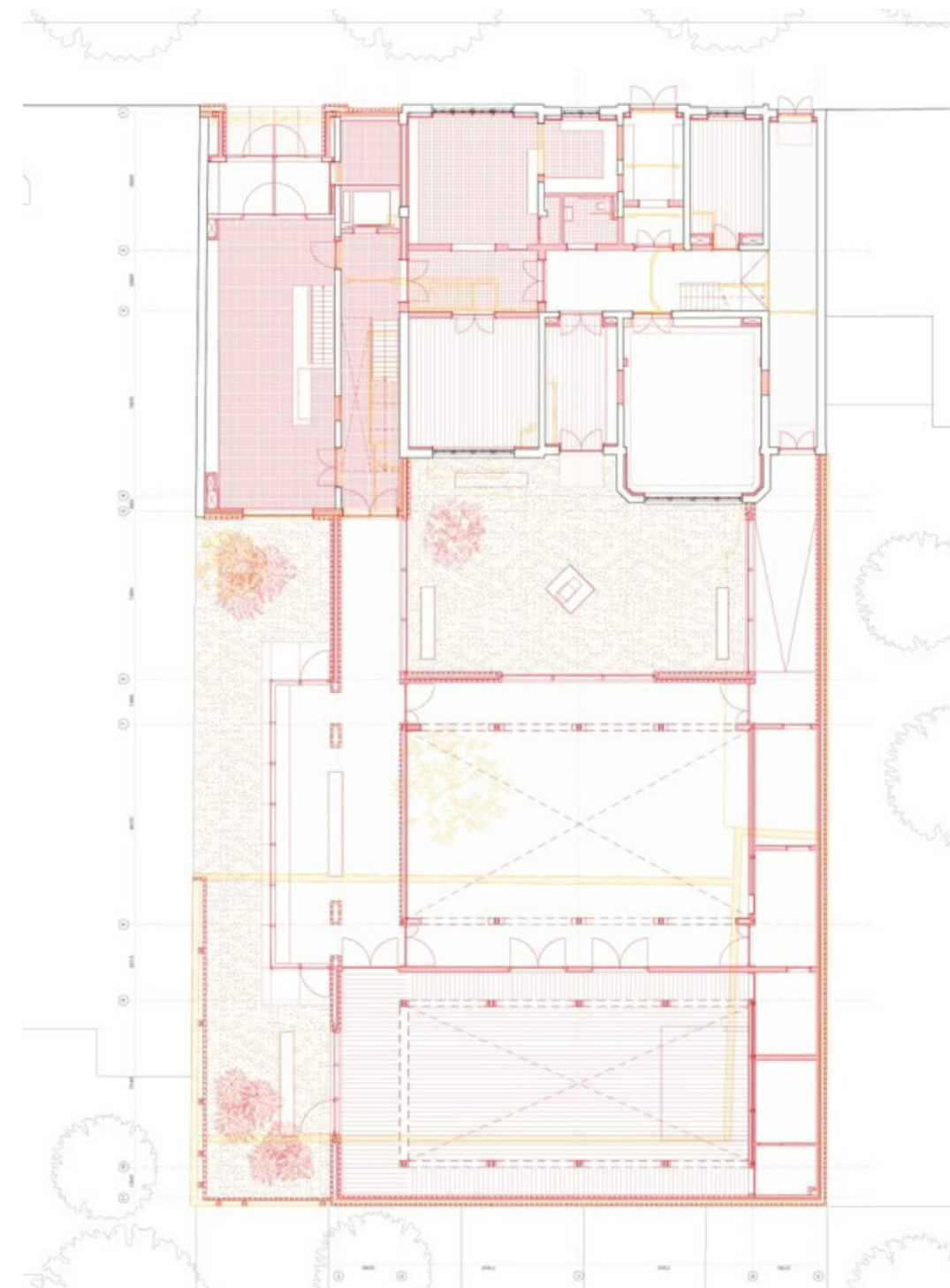
ORIGINAL 'BAZENKANTOOR' IN DE BIESBOSCHHAL
(authors own work)

RESEARCH

DRAWING TECHNIQUE YELLOWRED



YELLOWRED, ON REUSED ARCHITECTURE
Martin Boesch



Office Winhov
Nationaal Holocaust Museum, Amsterdam, NL

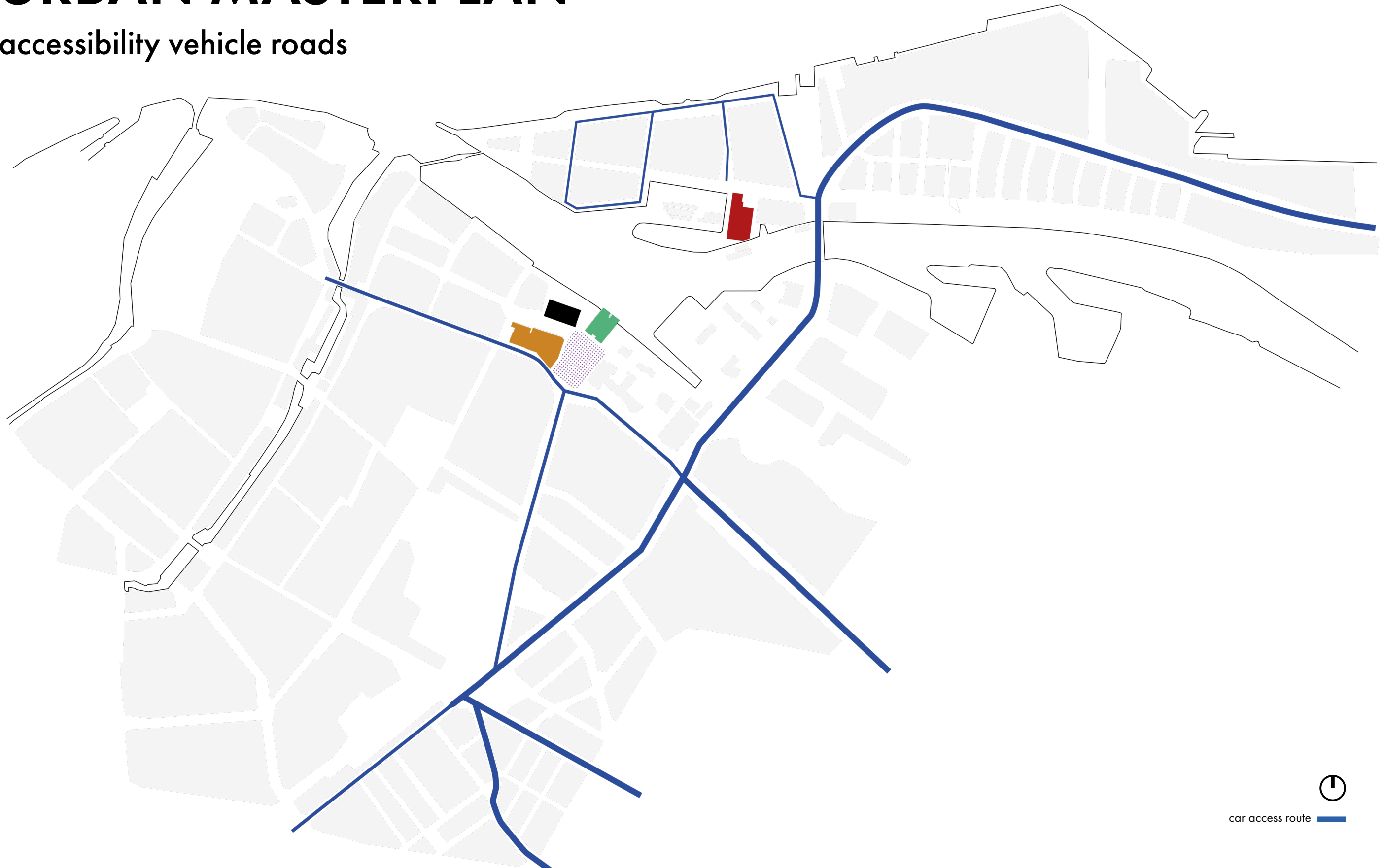
URBAN MASTERPLAN

public place radiation



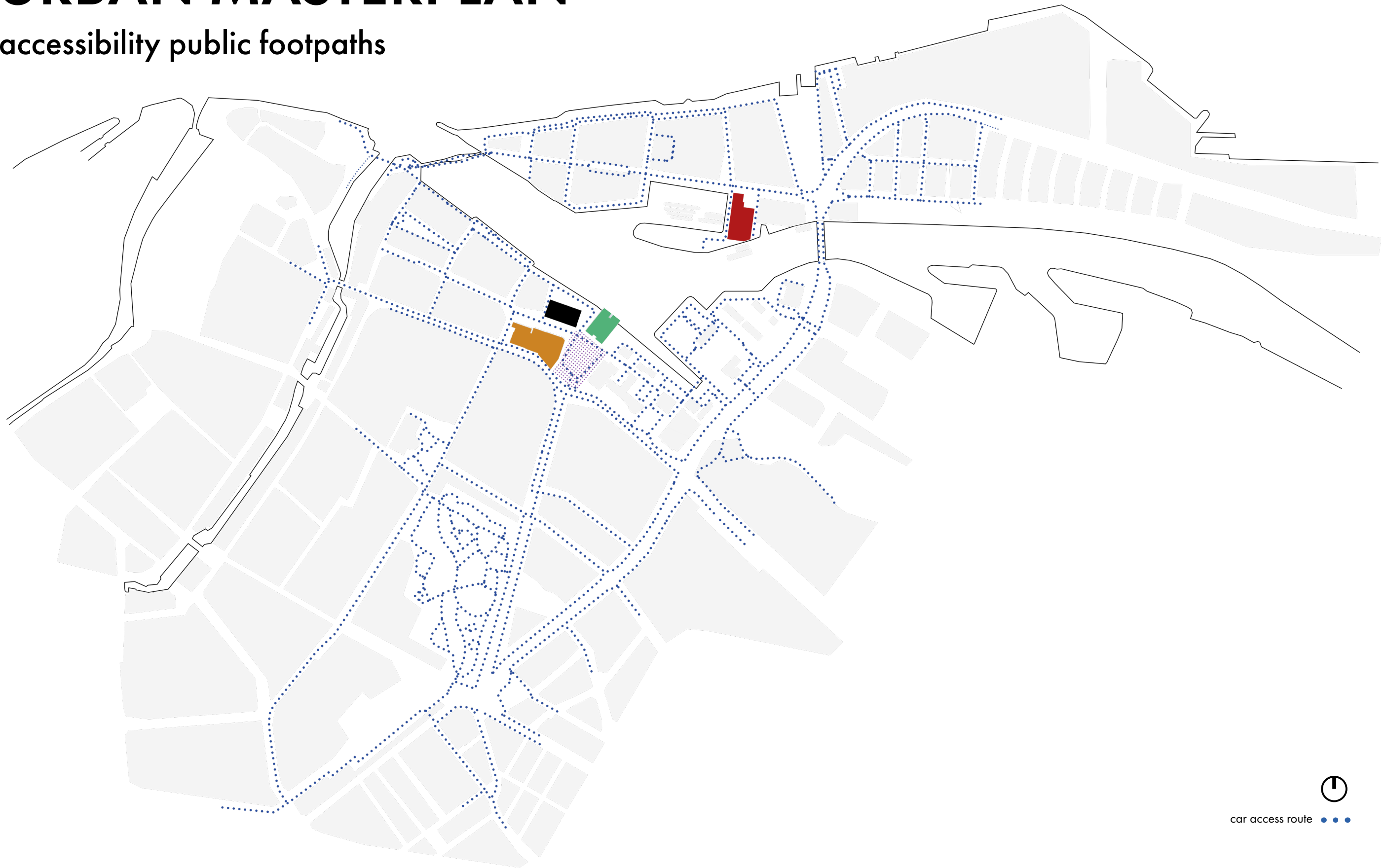
URBAN MASTERPLAN

accessibility vehicle roads



URBAN MASTERPLAN

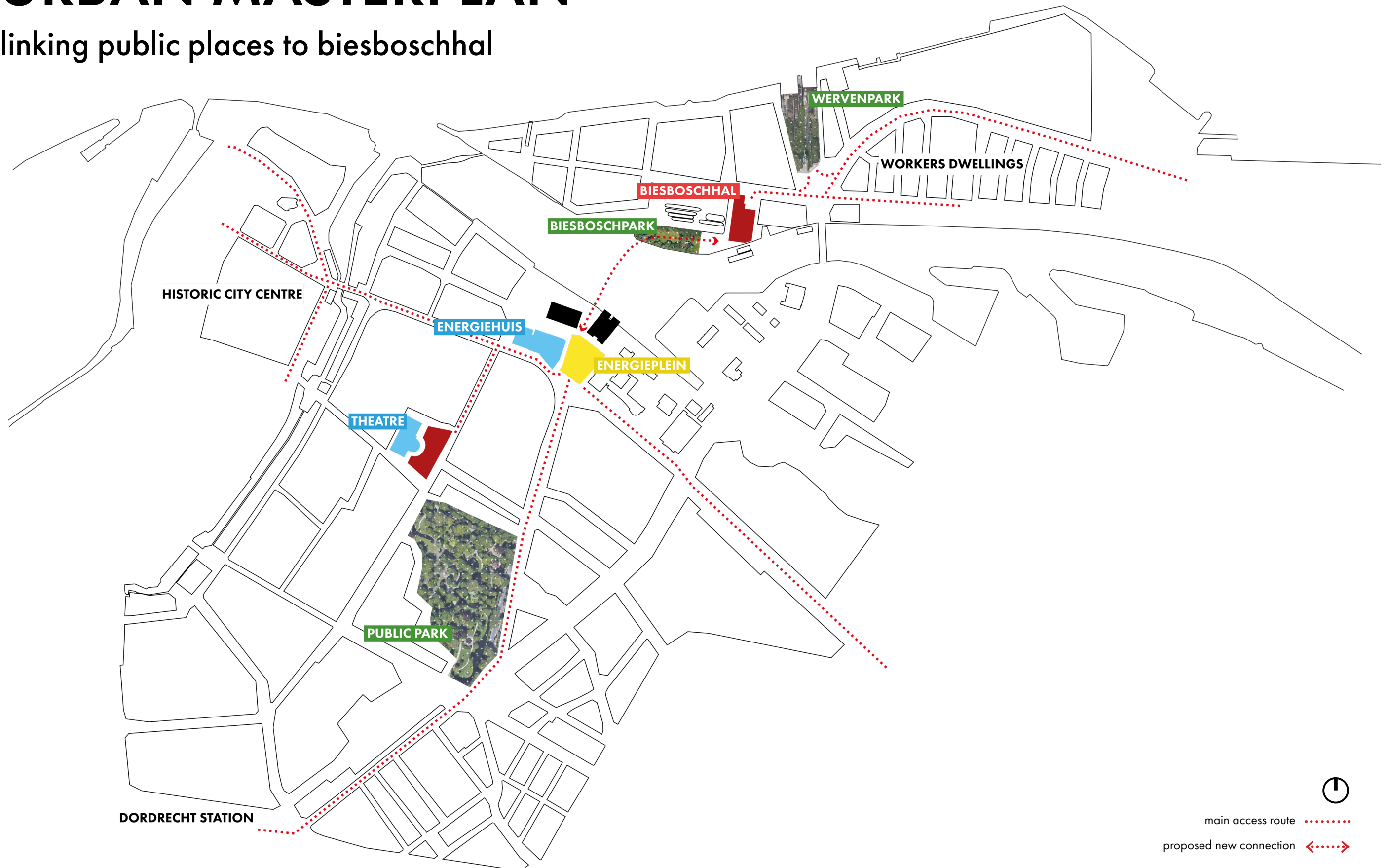
accessibility public footpaths



car access route ● ● ●

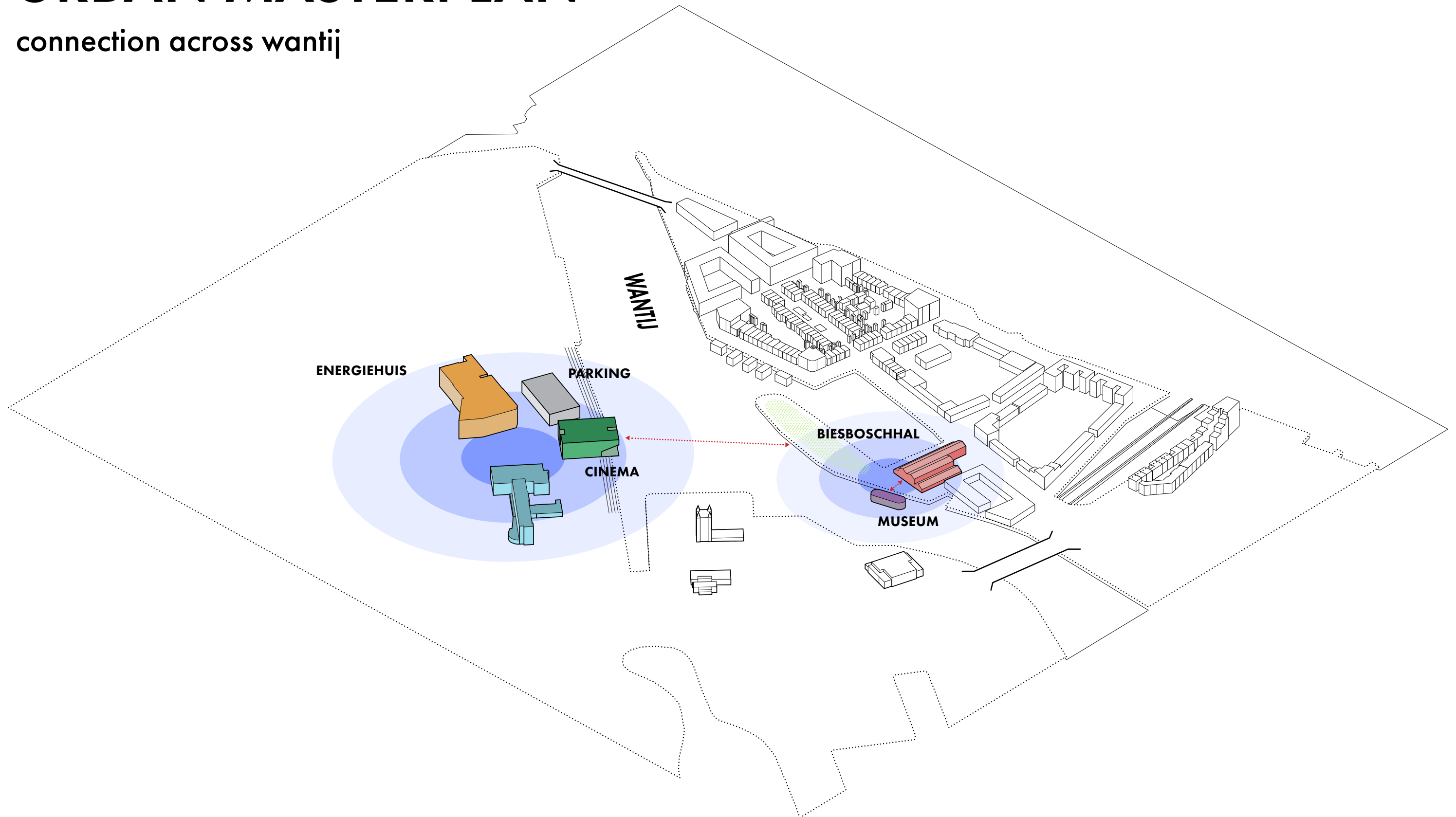
URBAN MASTERPLAN

linking public places to biesboschhal



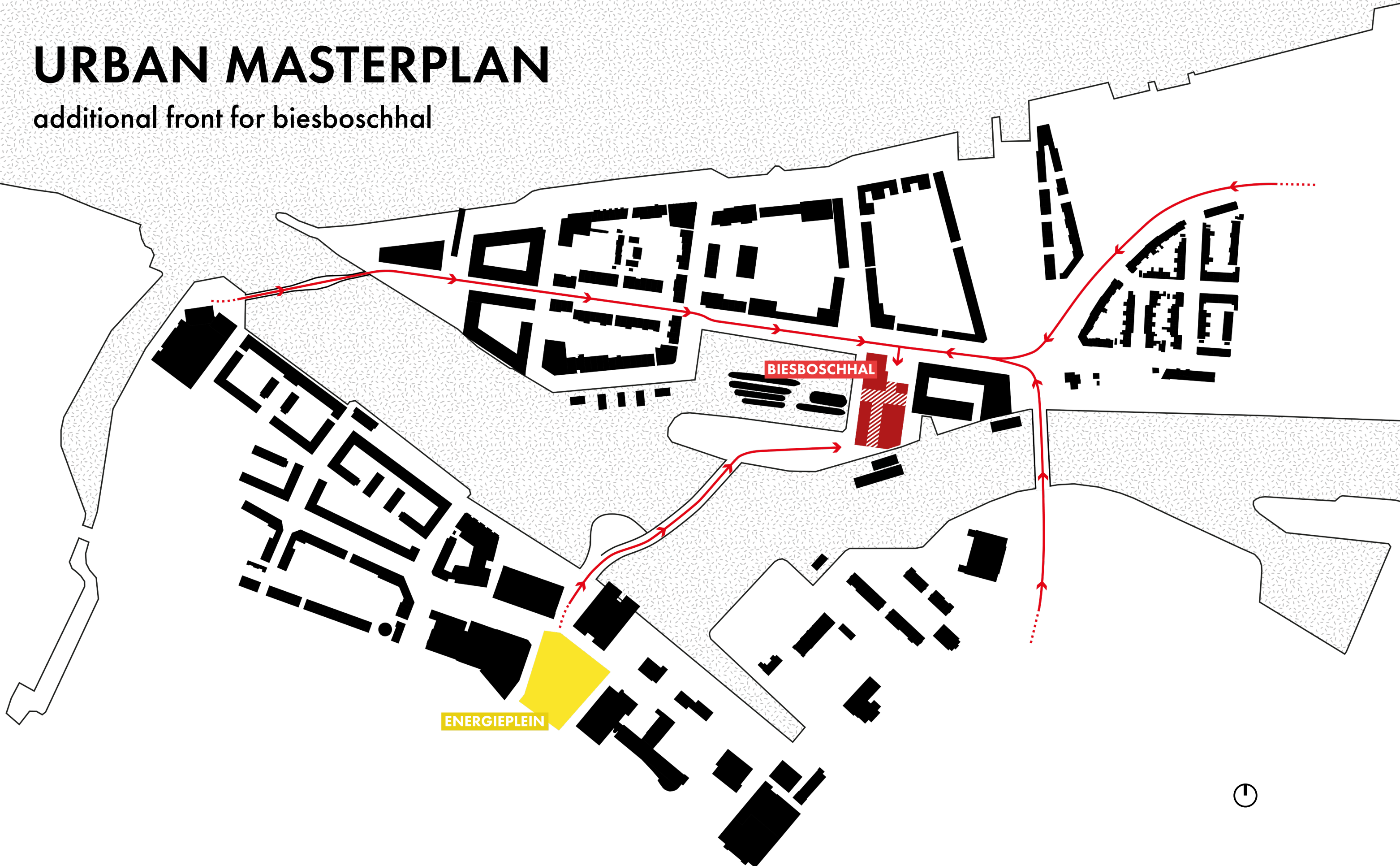
URBAN MASTERPLAN

connection across wantij



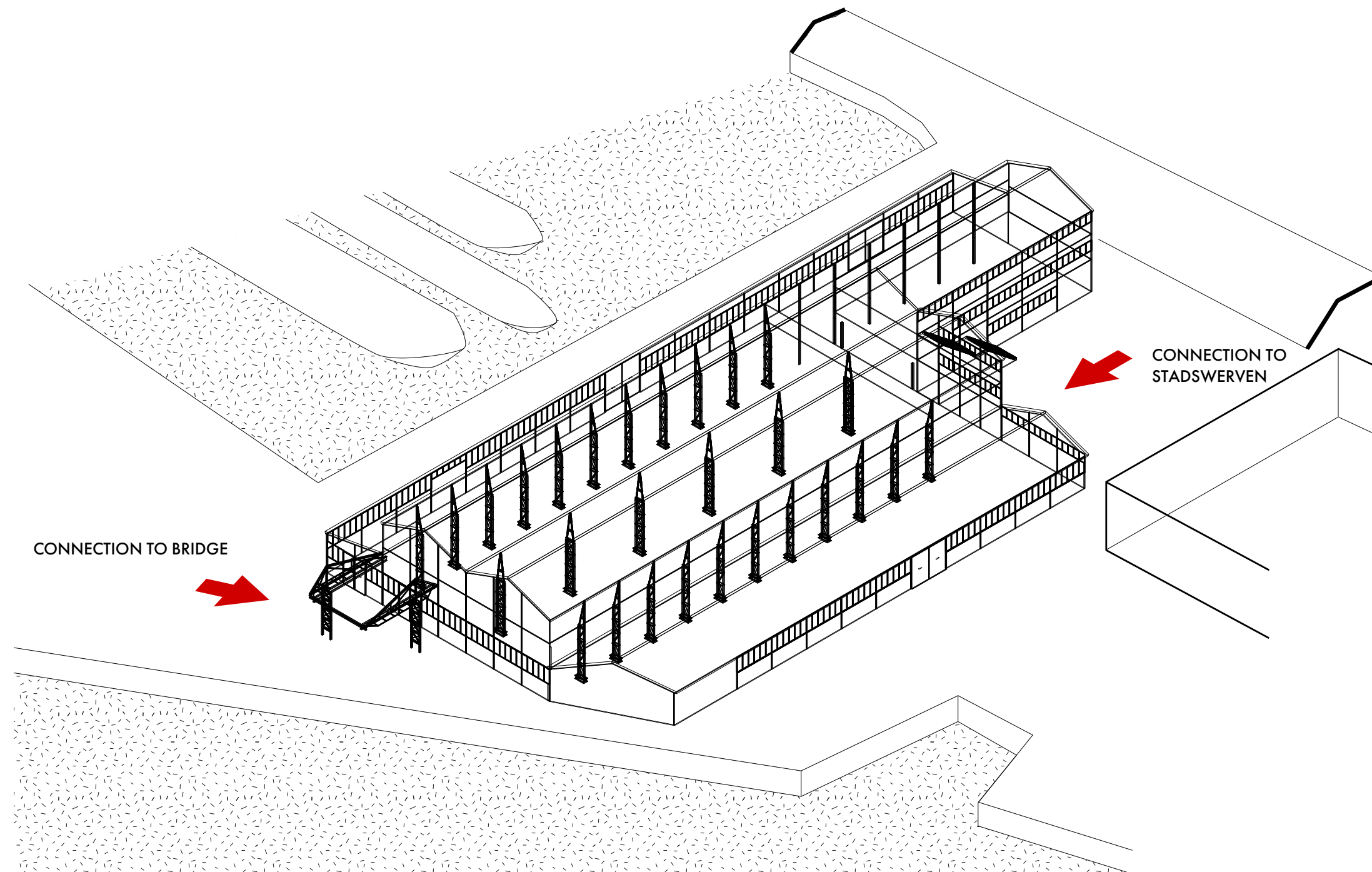
URBAN MASTERPLAN

additional front for biesboschhal



DESIGN

context connection

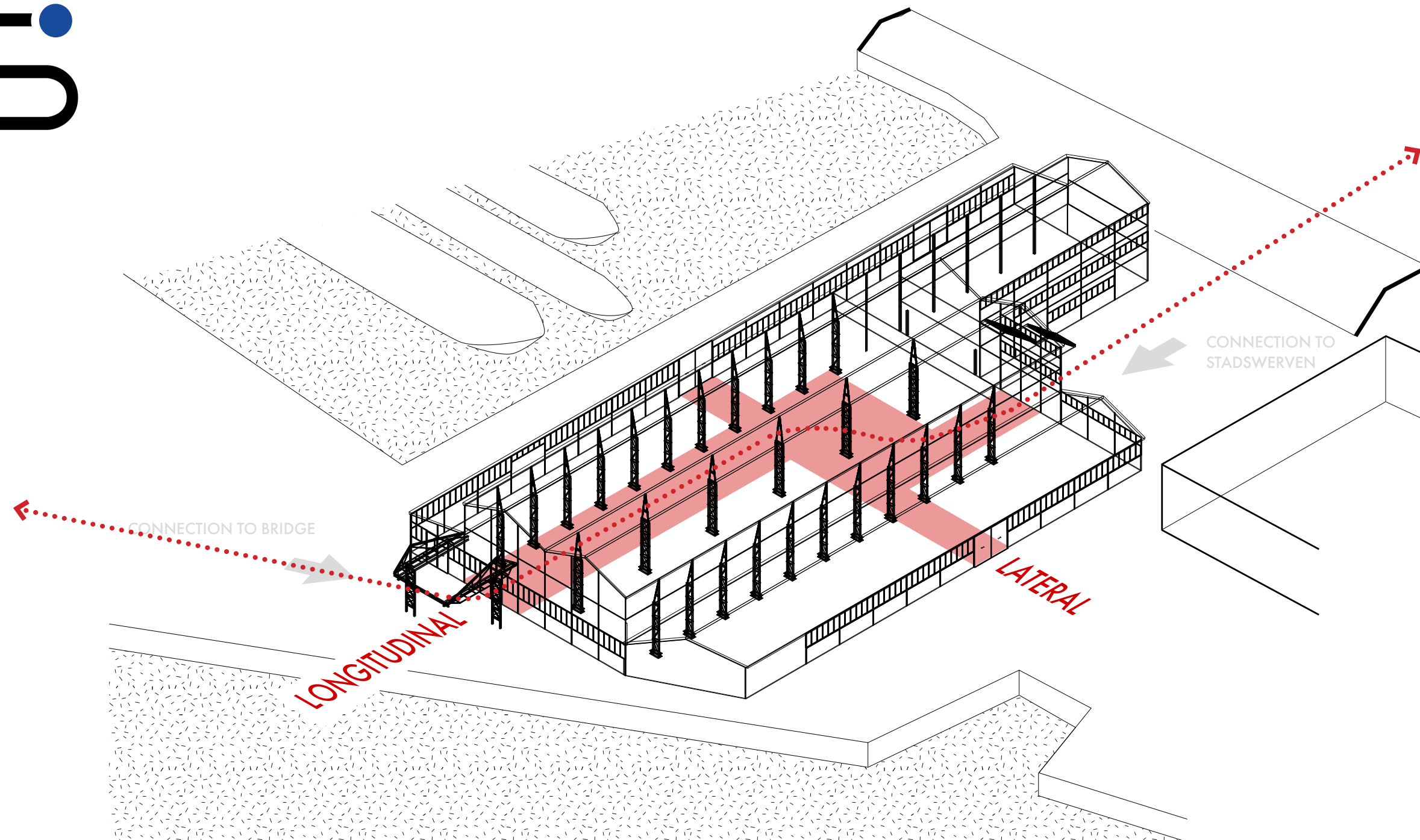


1.

CONNECTION TO CONTEXT

DESIGN

context connection



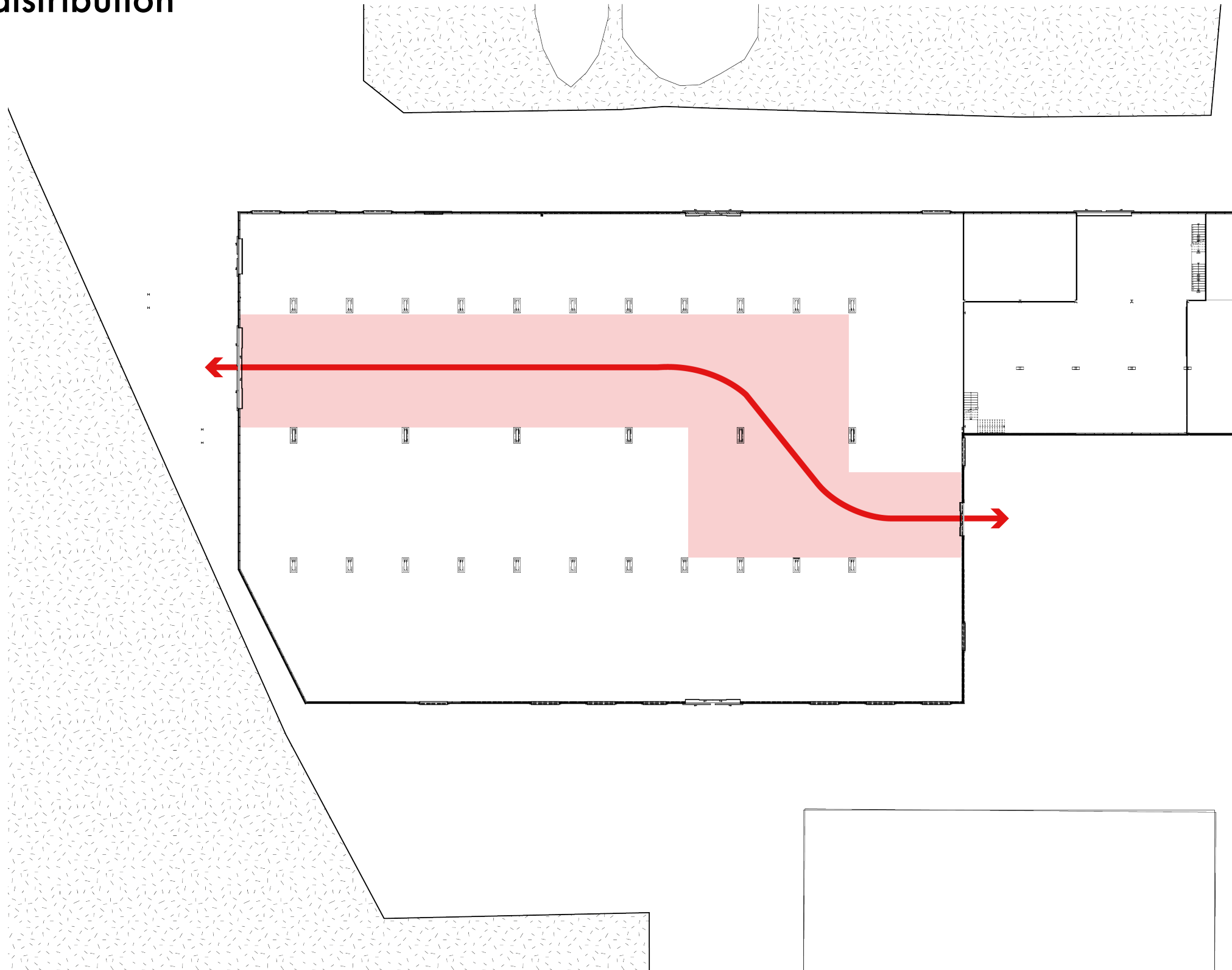
2.

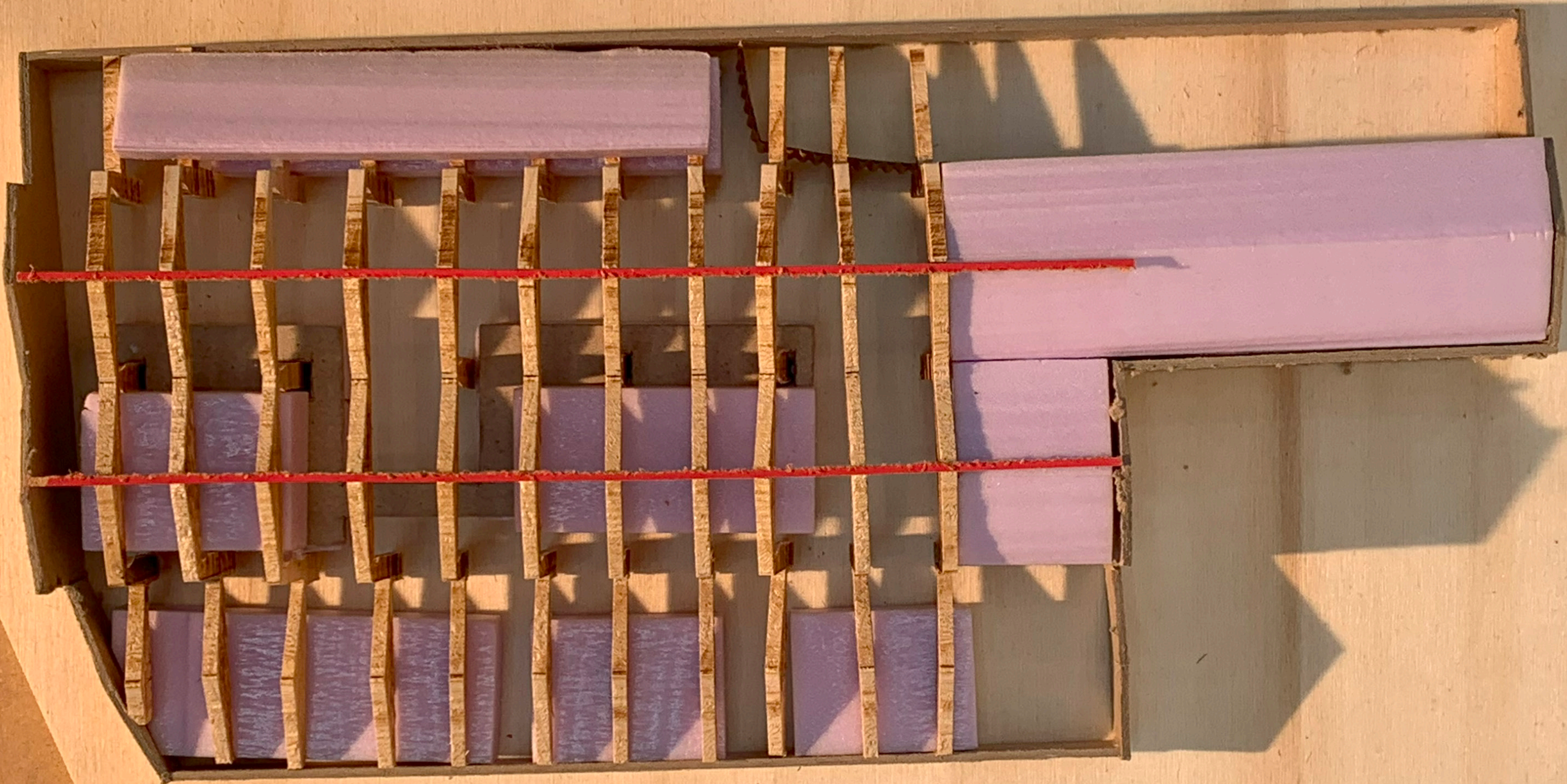
MAIN ROUTING TO CONNECT BUILDING TO
CONTEXT

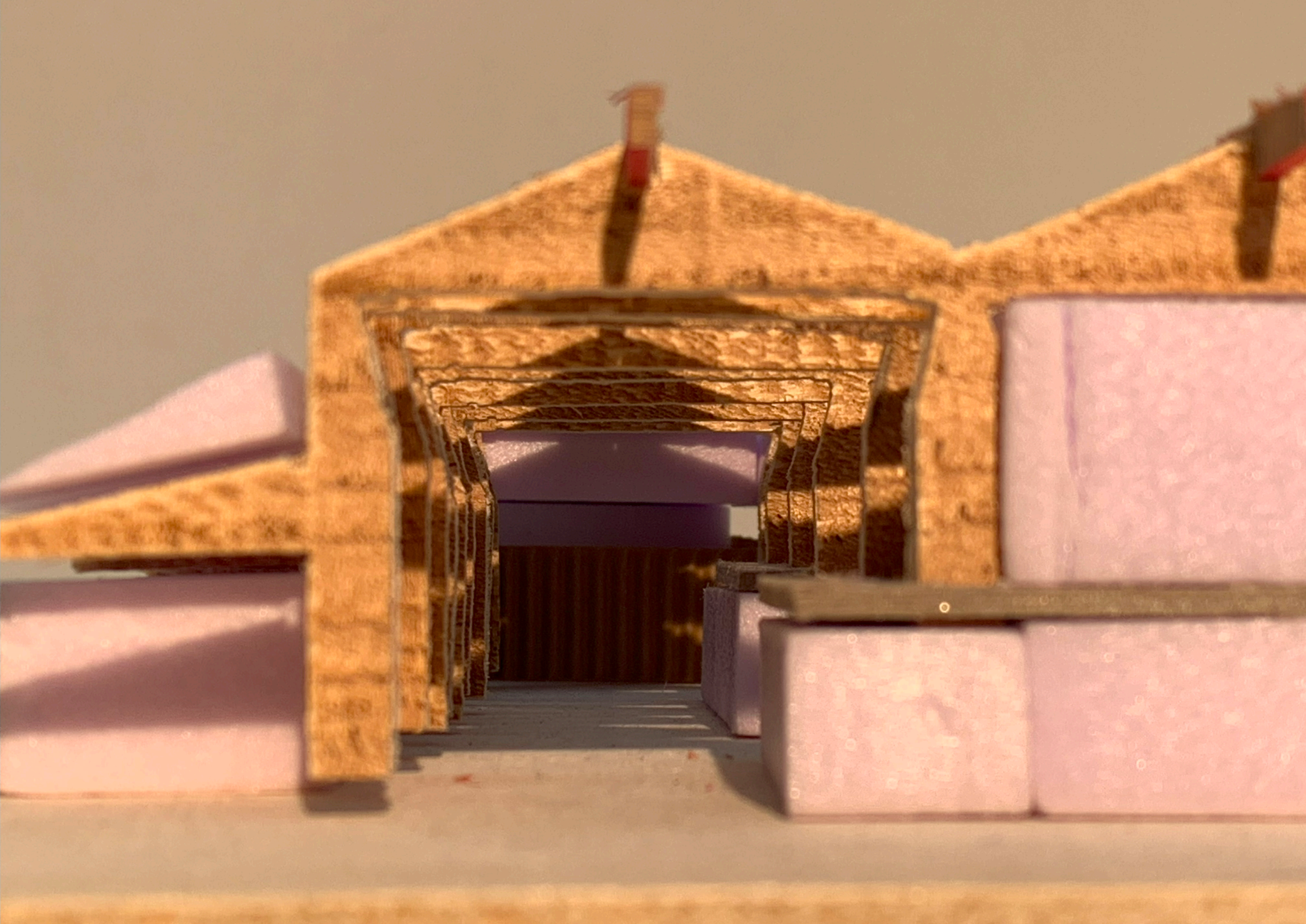


DESIGN

program distribution

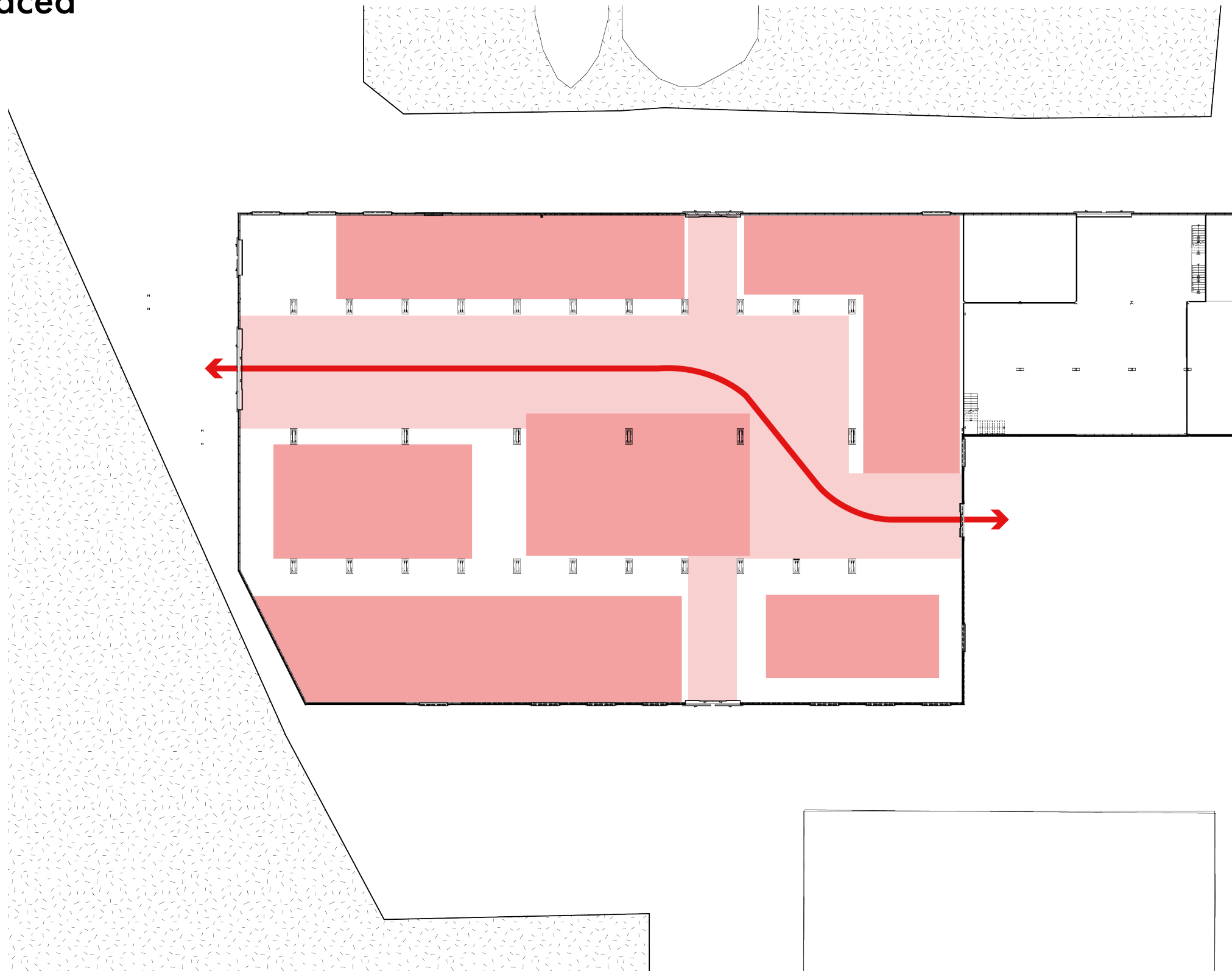






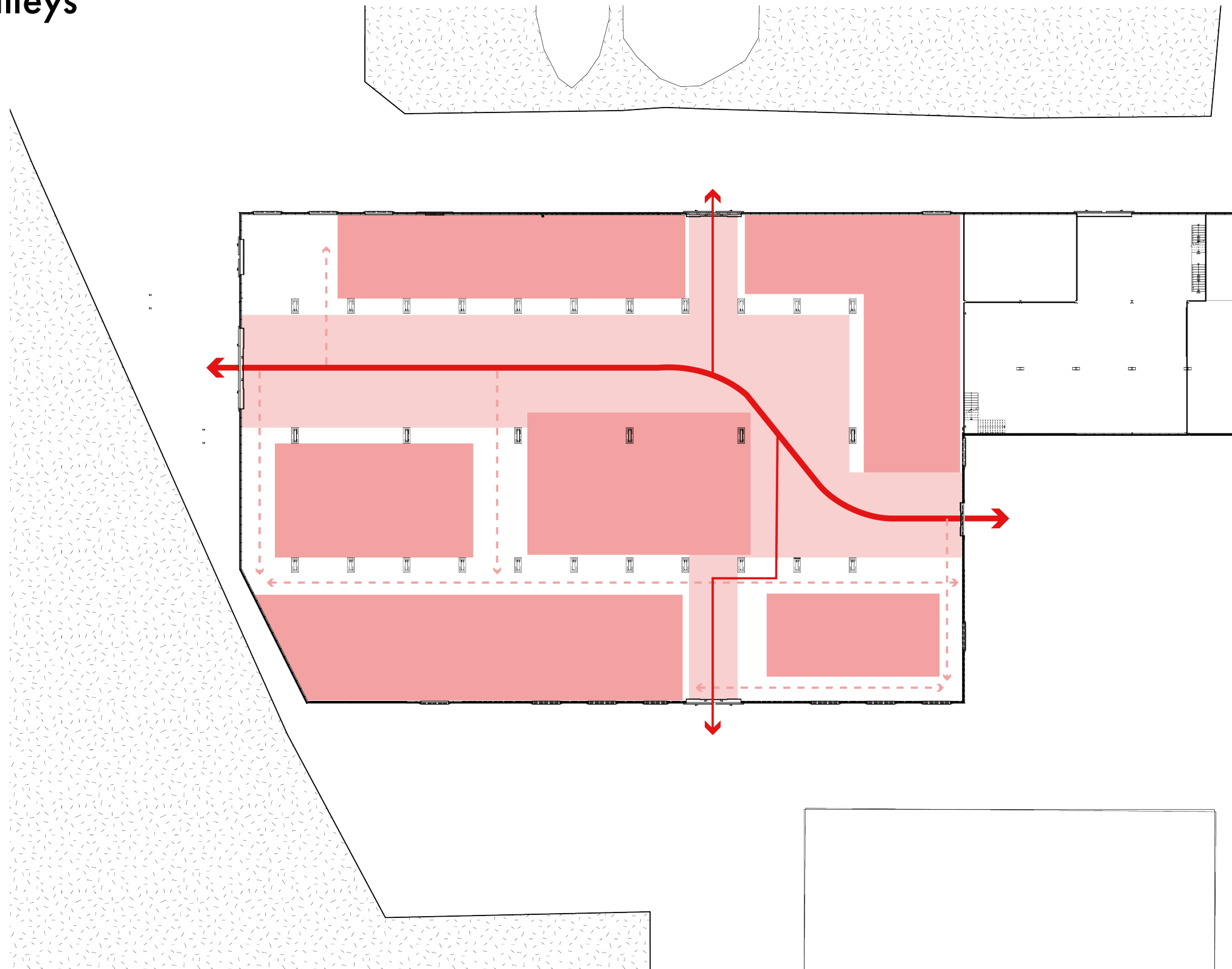
DESIGN

masses placed



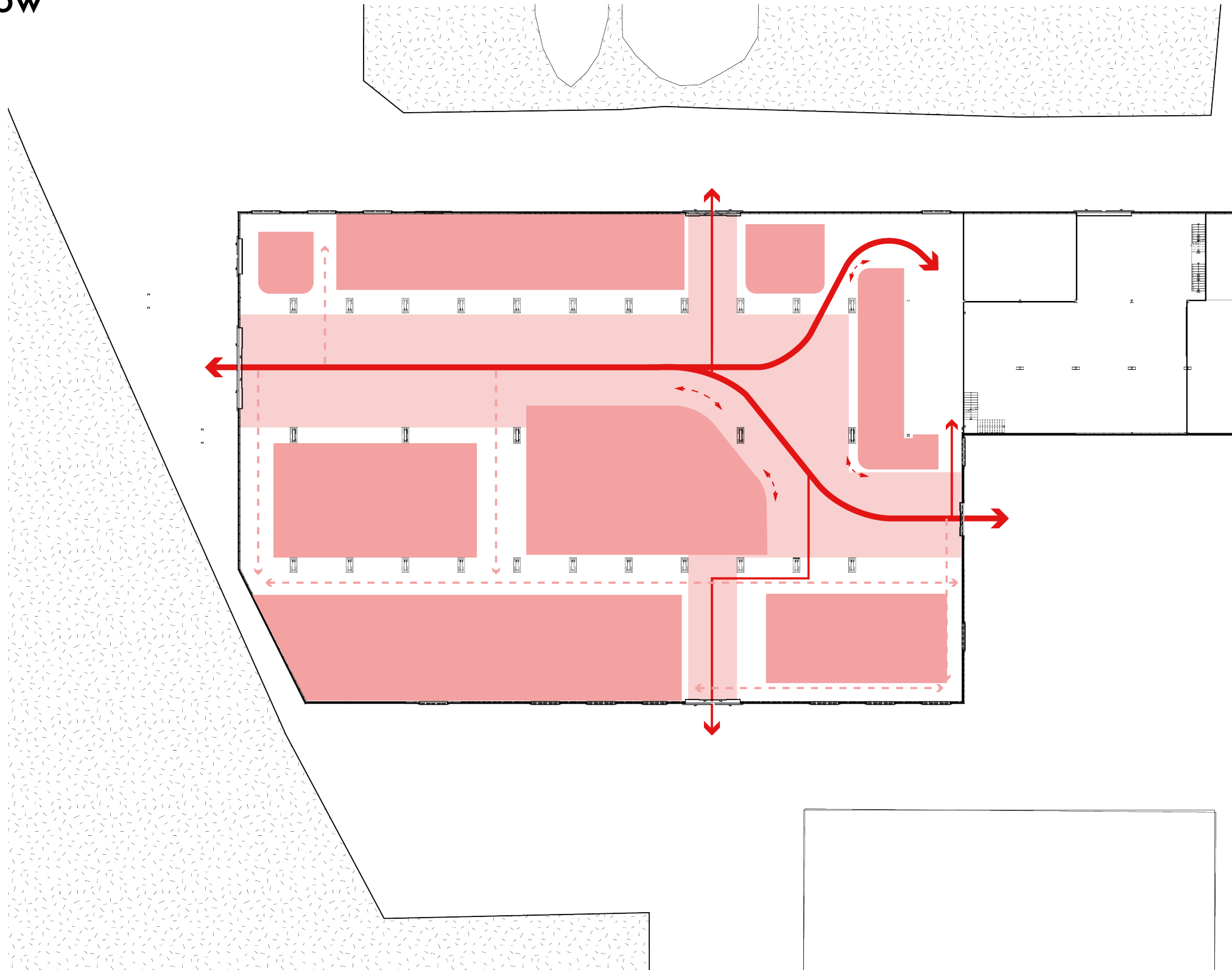
DESIGN

creating alleys



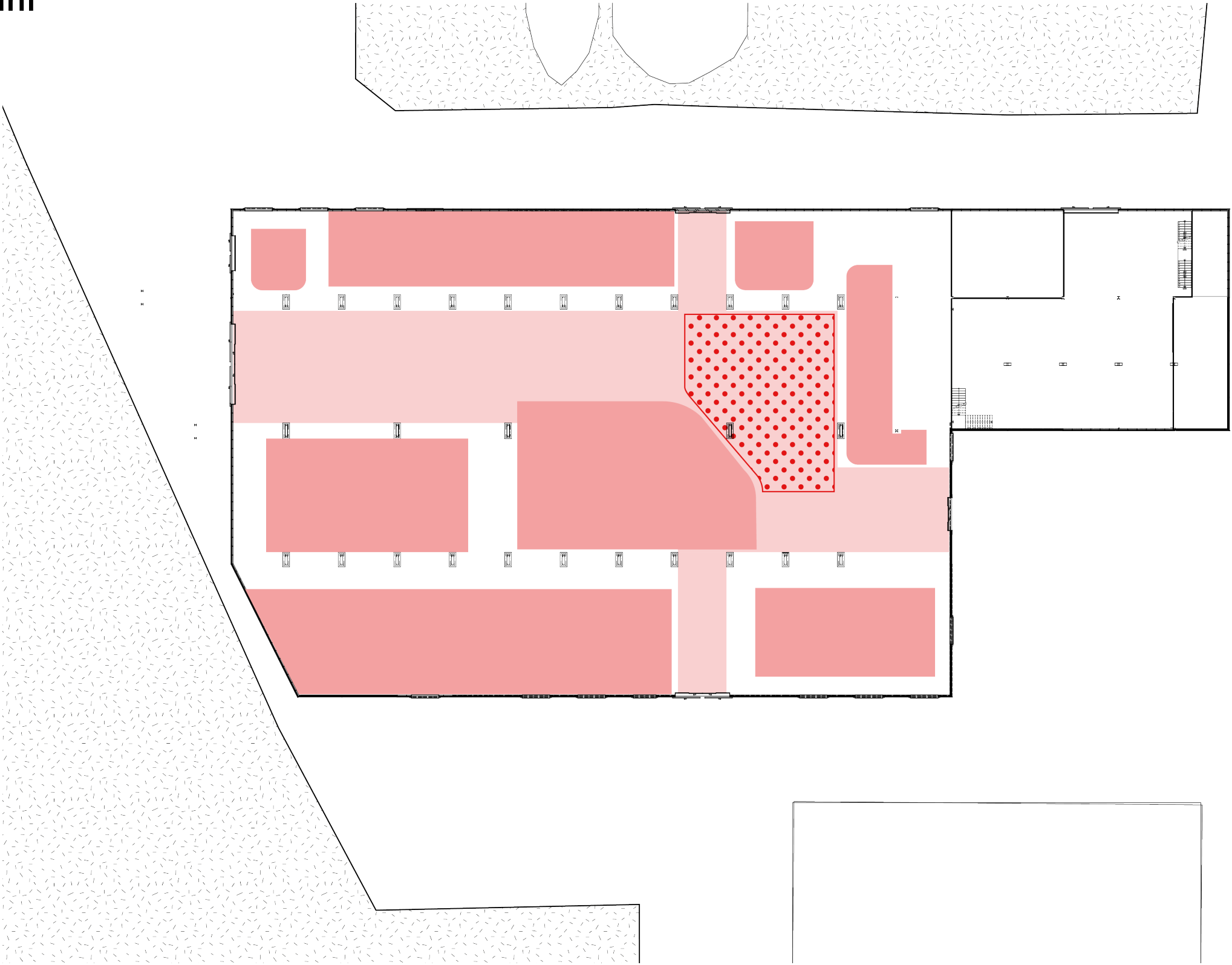
DESIGN

intuitive flow



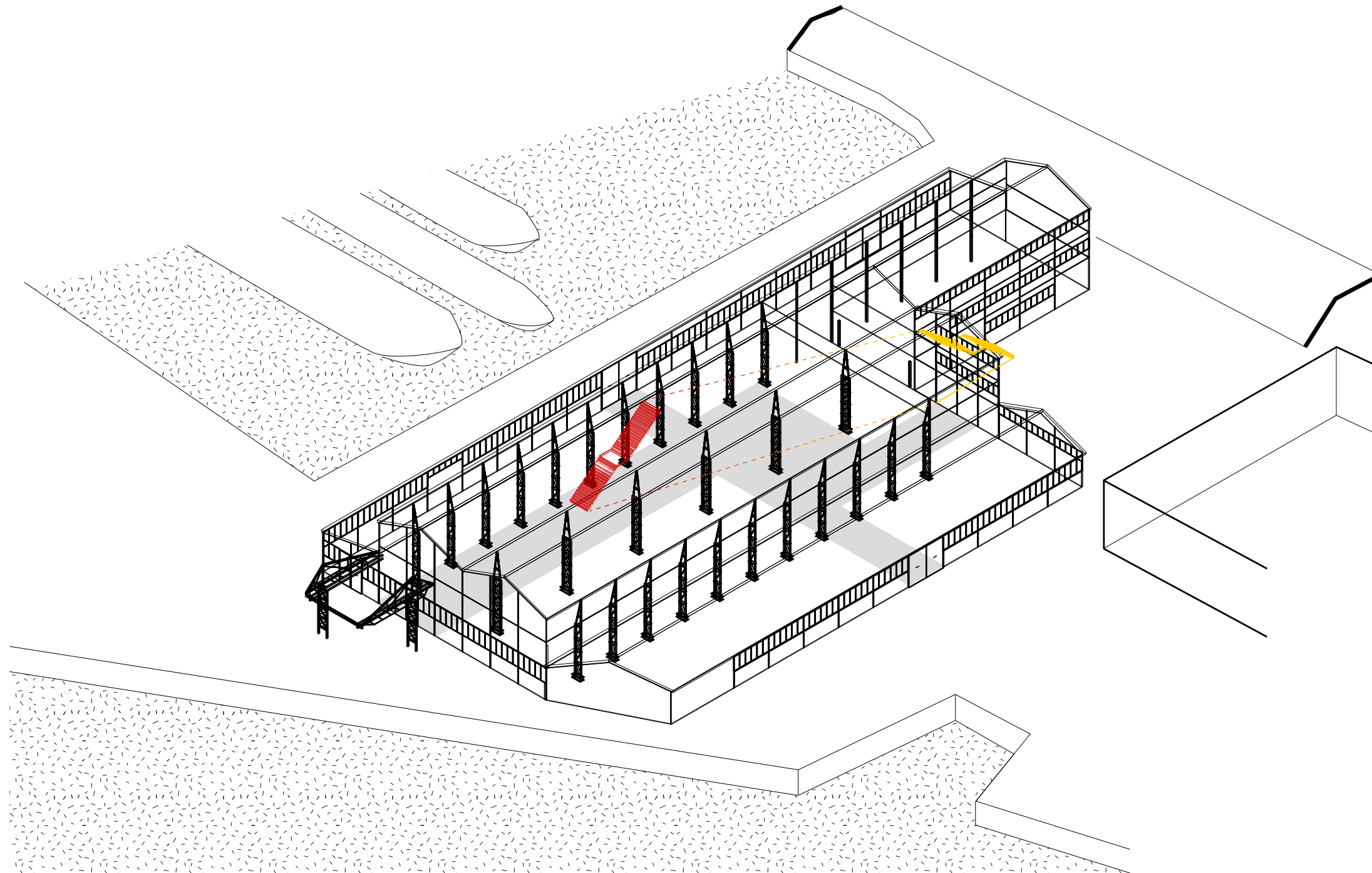
DESIGN

central point



DESIGN

context connection



3.

RELOCATING STAIRS



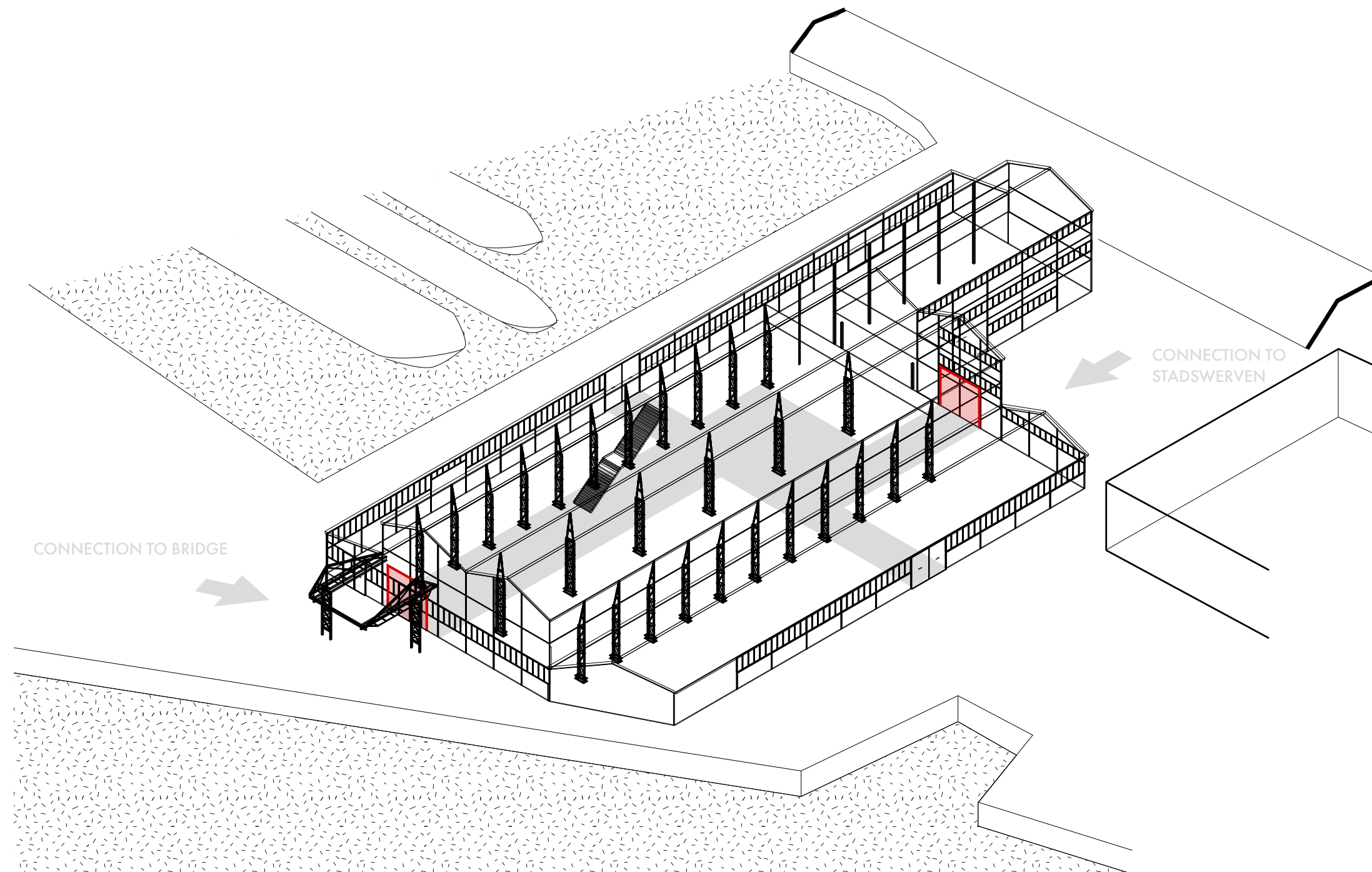
IN DE BIES

DG INFRA BV



DESIGN

context connection



4.

ENTRANCE GESTURE AT BOTH ENDS
OF MAIN STREET



R. Siegfried

Strasbourg

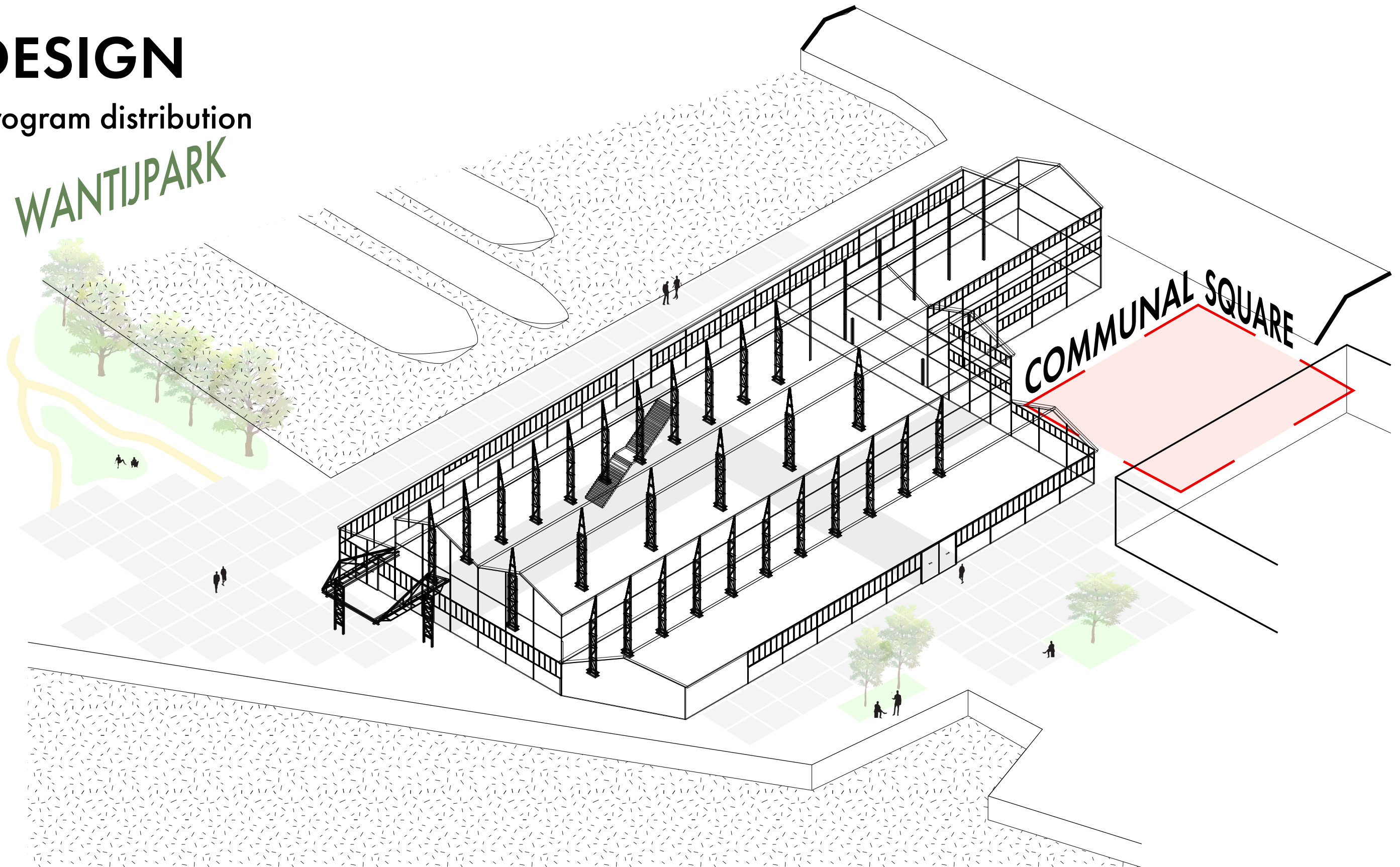


WELKOM
BIJ DE TENTONSTELLING
KLAAR VOOR DE START?

DESIGN

program distribution

WANTIJPARK



5.

PROGRAM AT MAIN
ENTRANCES

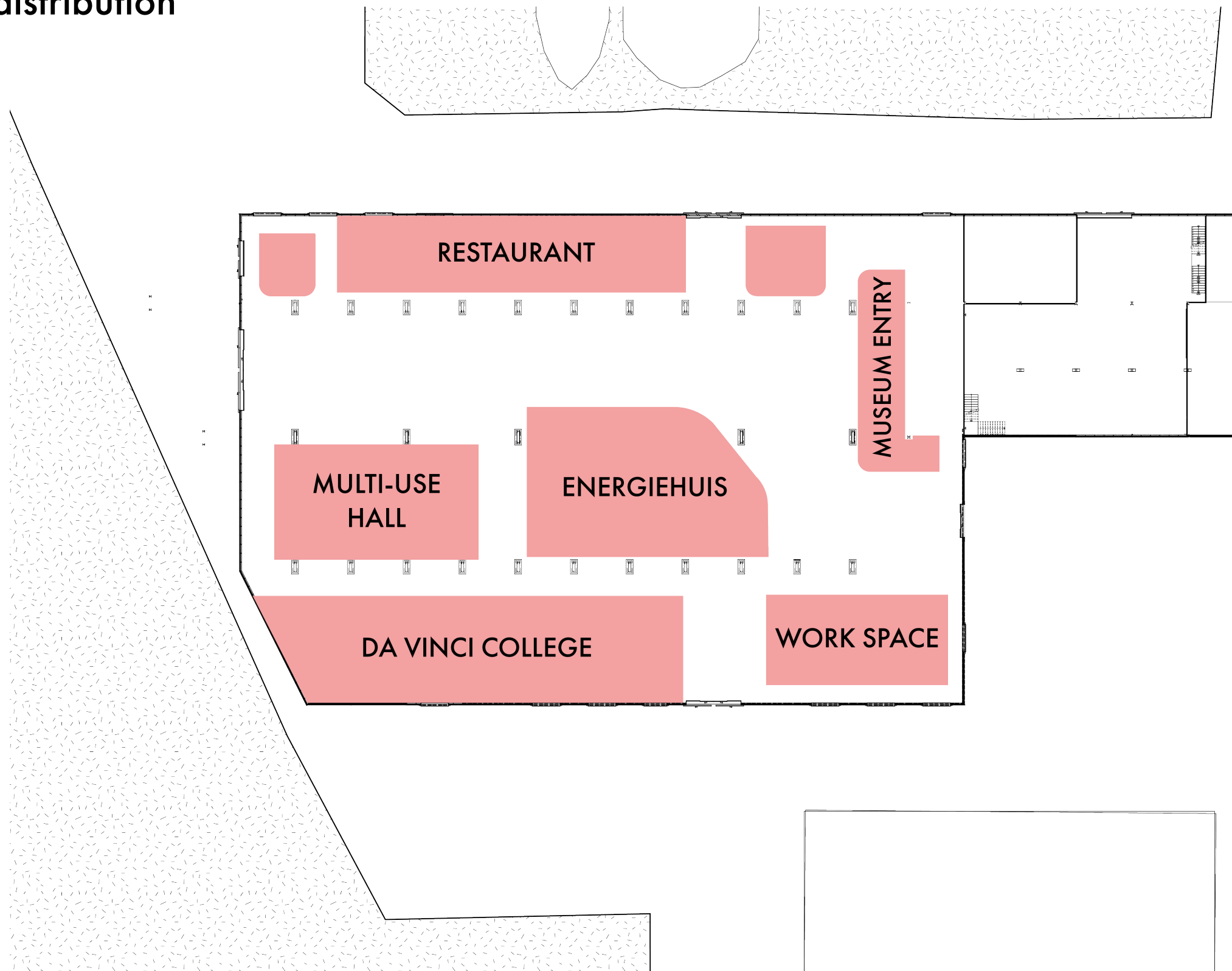






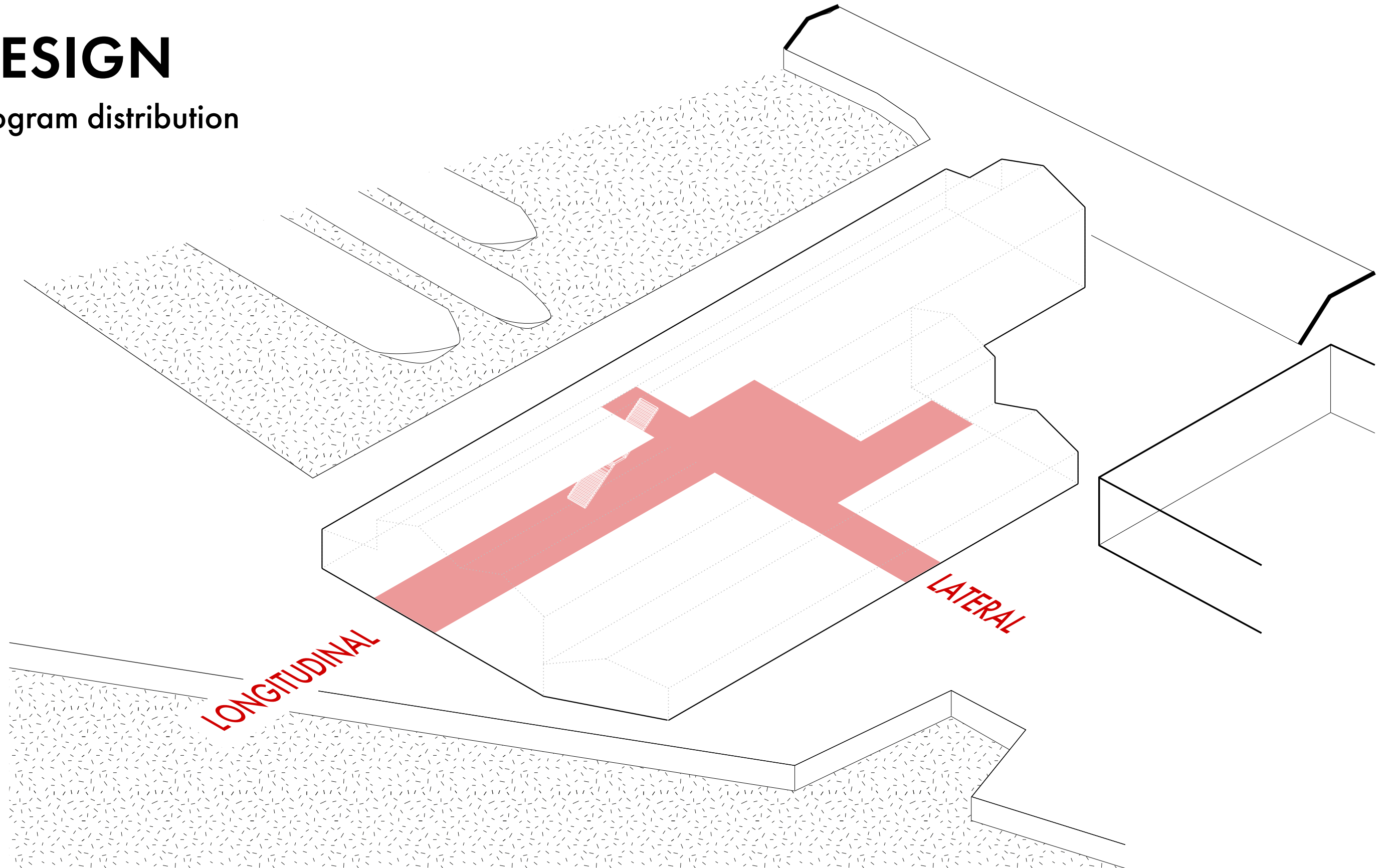
DESIGN

program distribution



DESIGN

program distribution

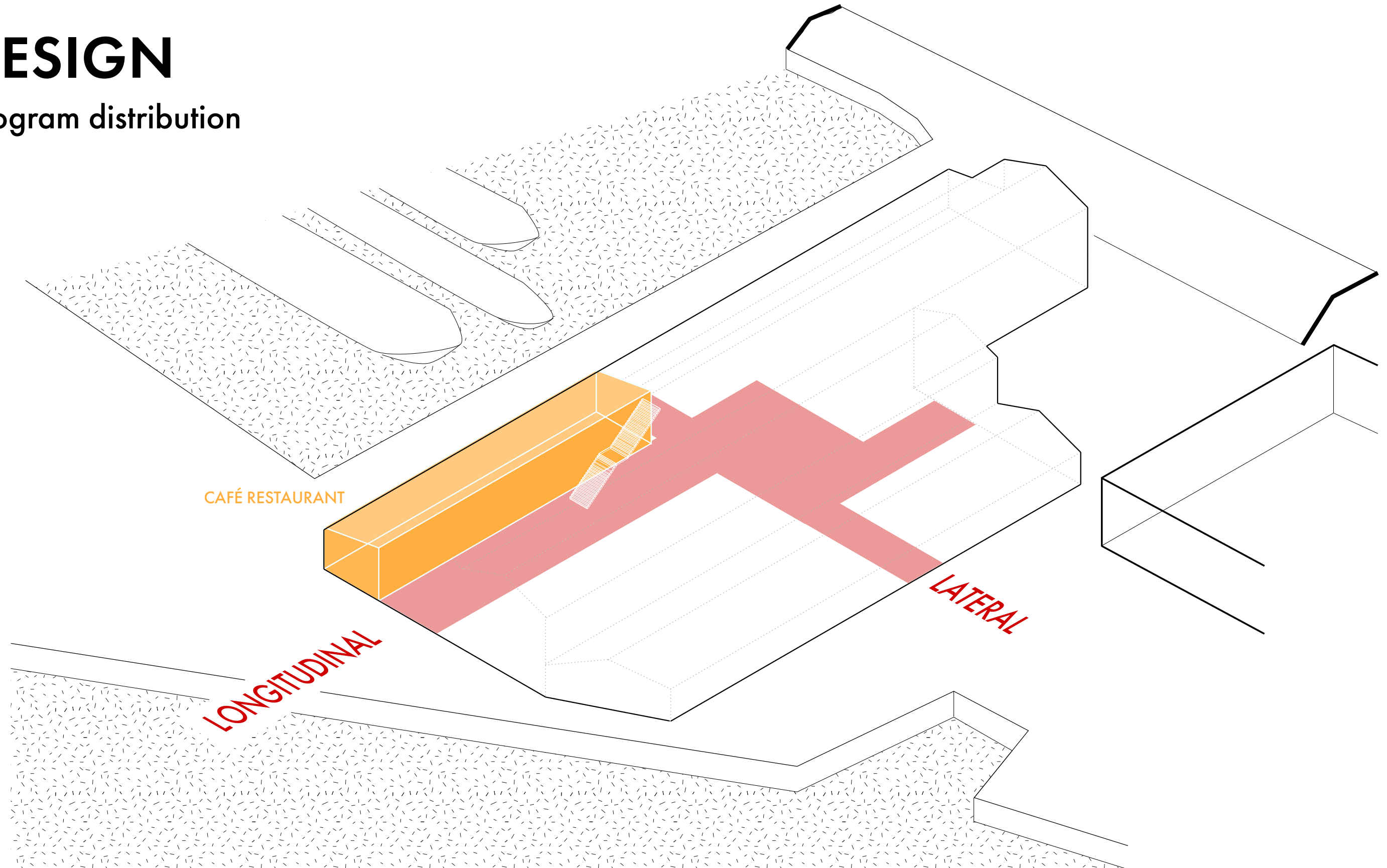


6.

DISTRIBUTING PROGRAM

DESIGN

program distribution



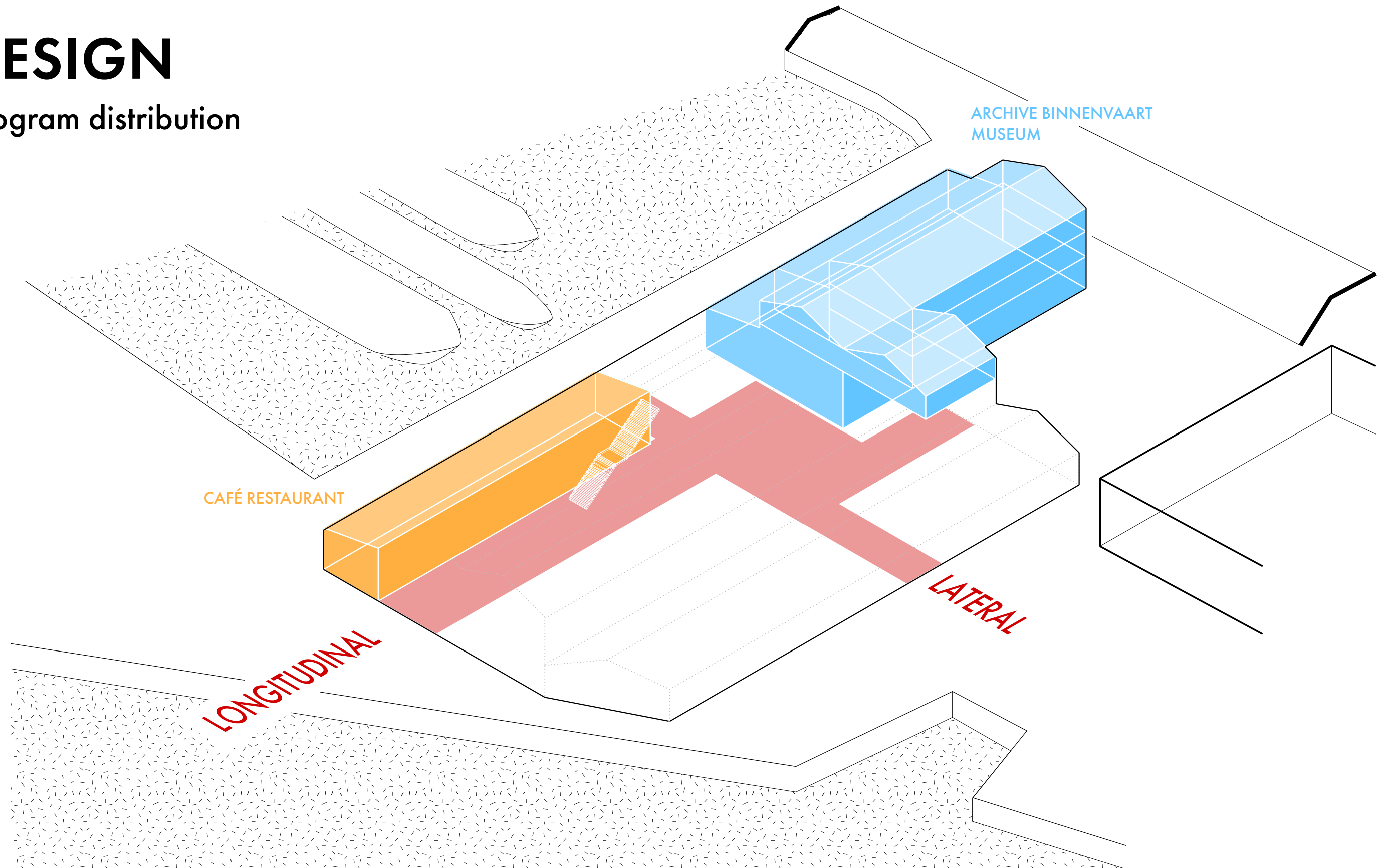
6.

DISTRIBUTING PROGRAM



DESIGN

program distribution



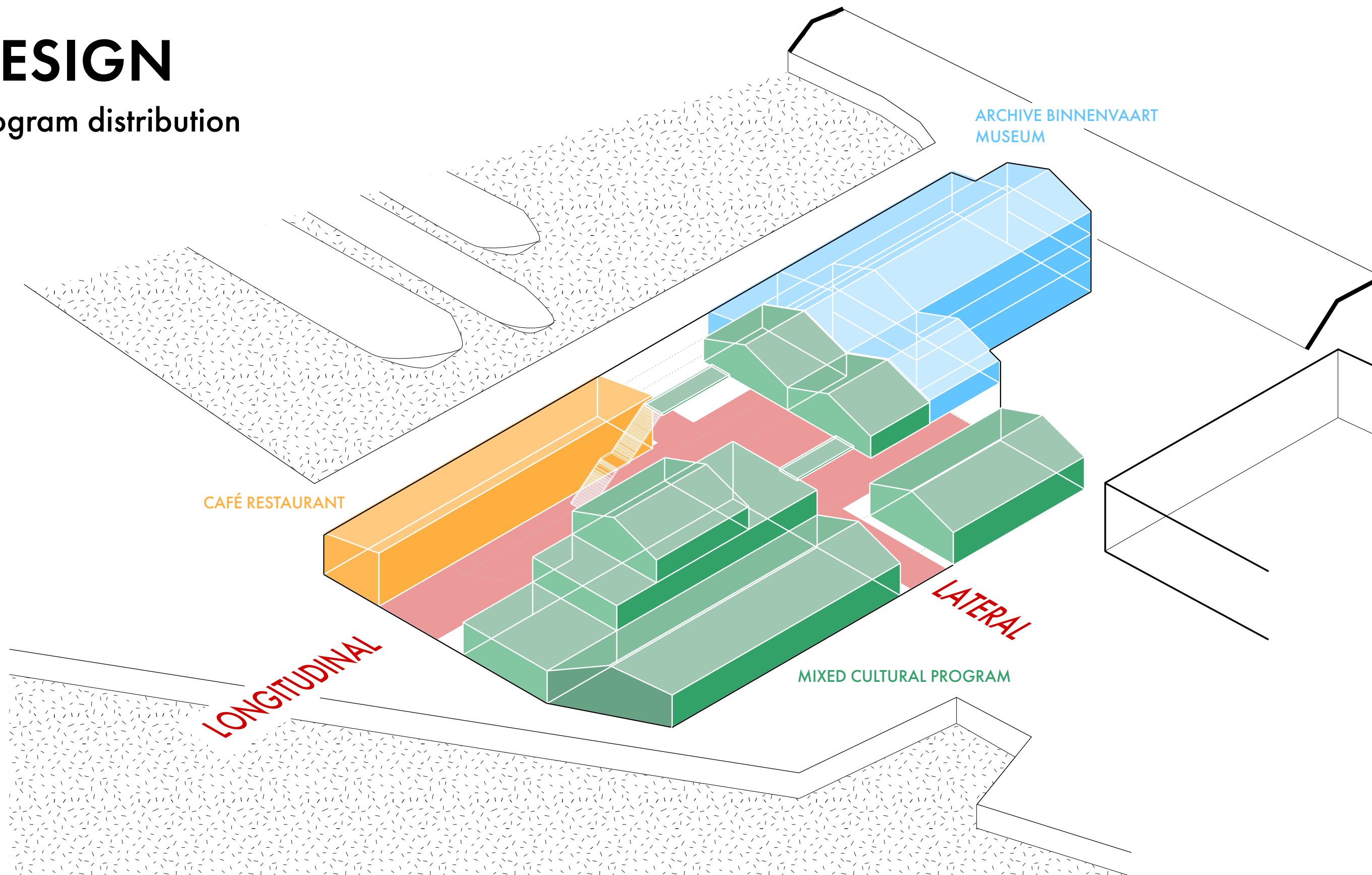
6.

DISTRIBUTING PROGRAM



DESIGN

program distribution

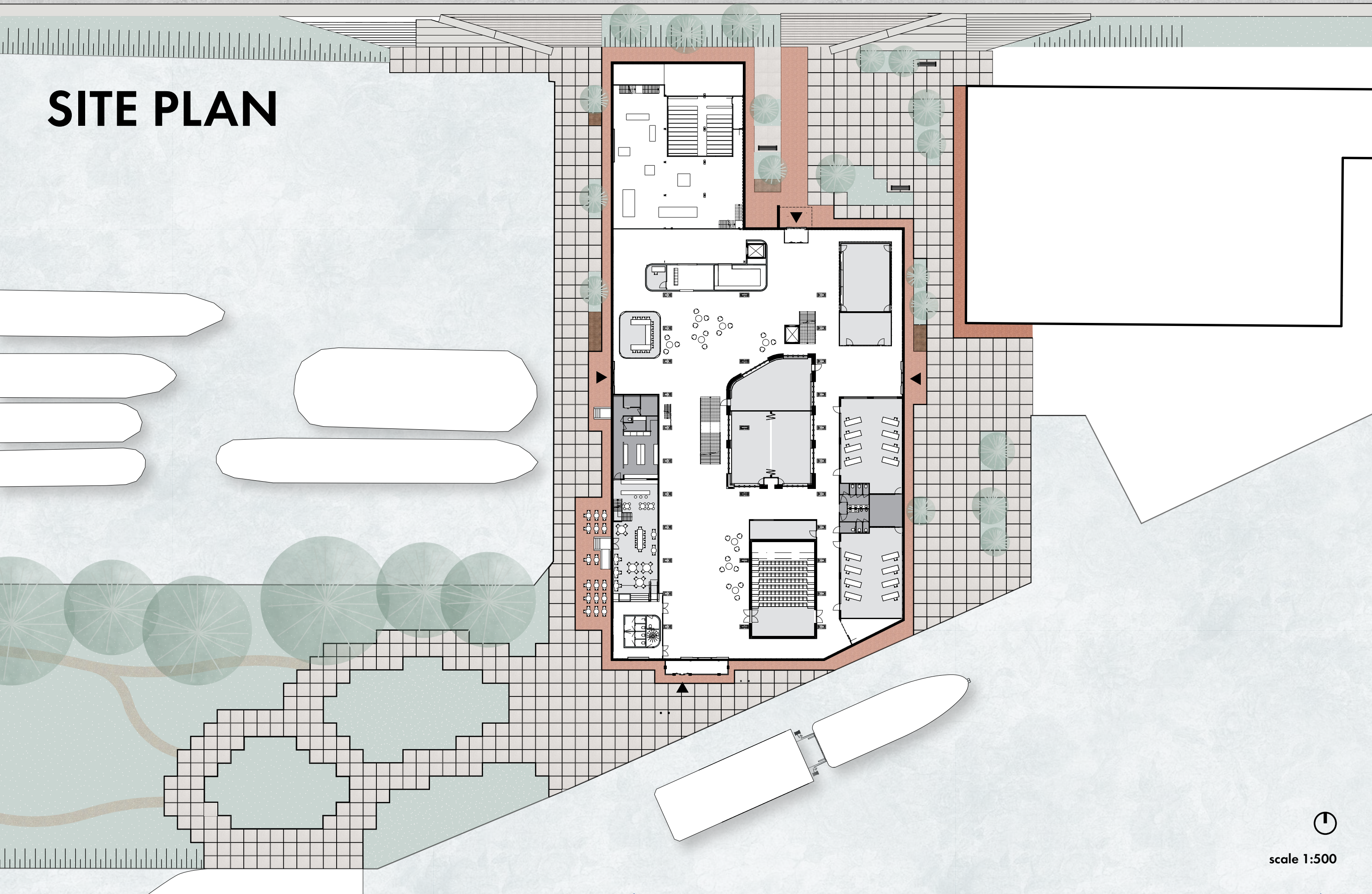


6.

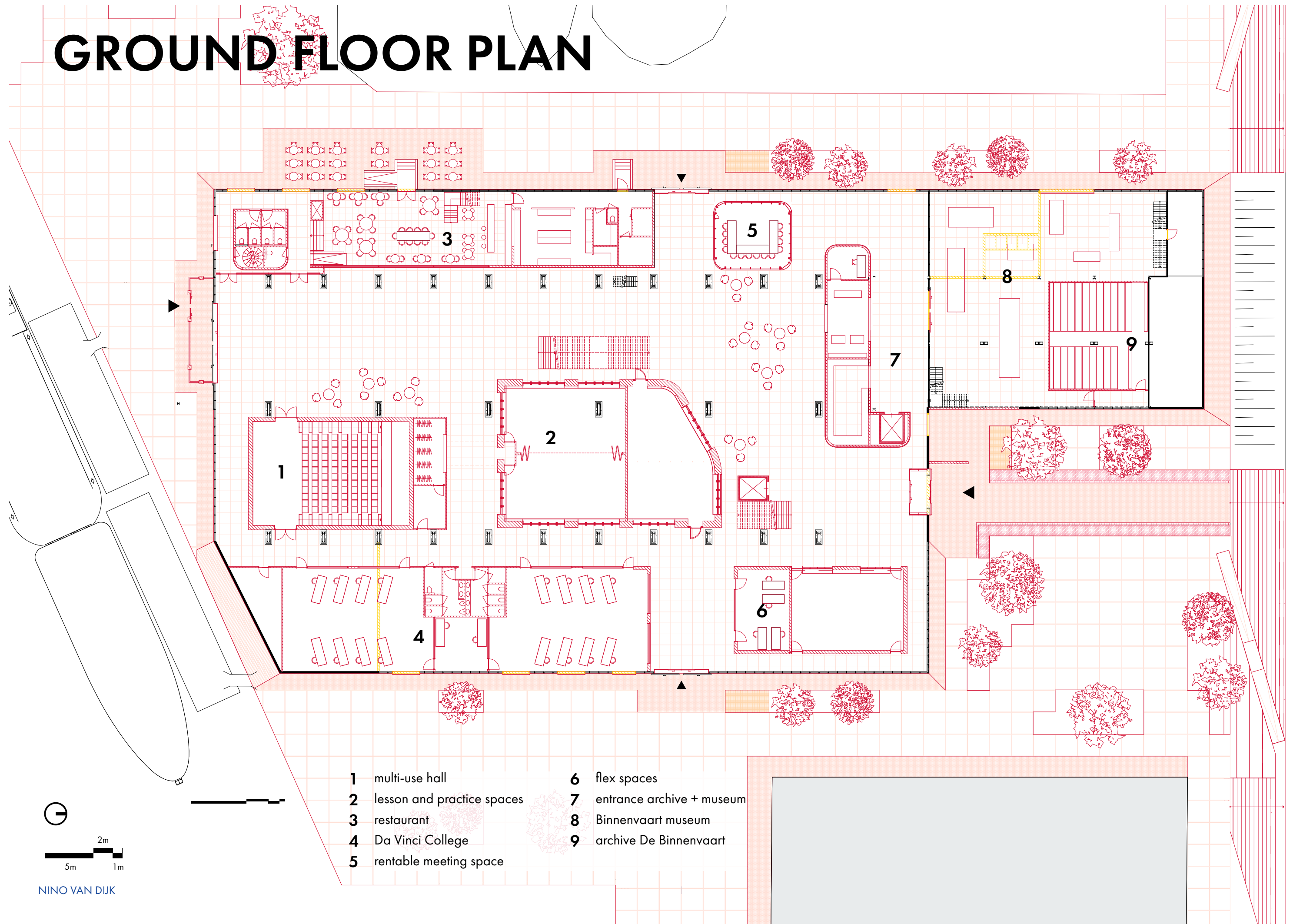
DISTRIBUTING PROGRAM



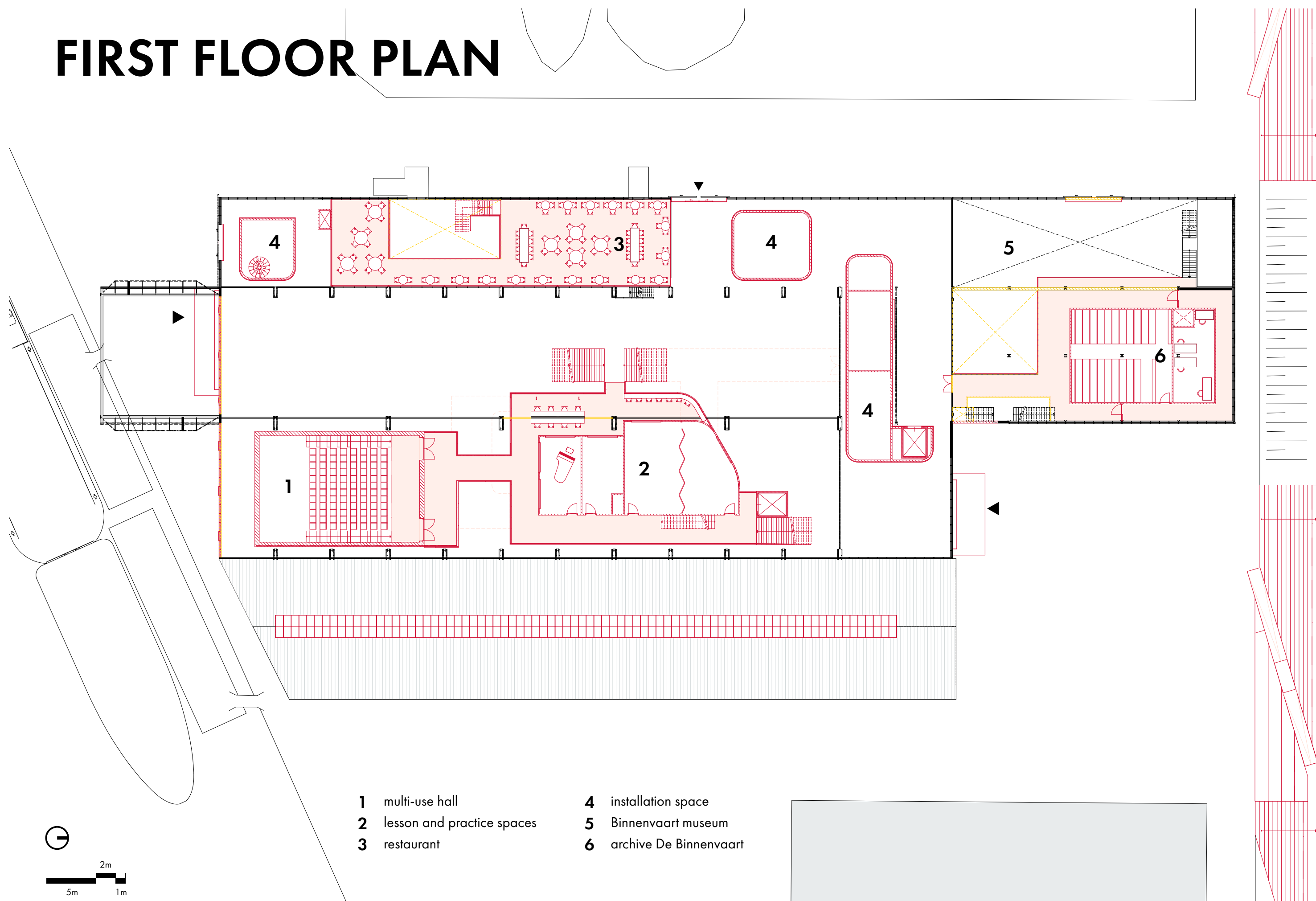
SITE PLAN



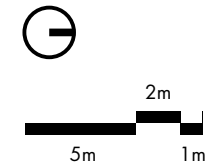
GROUND FLOOR PLAN



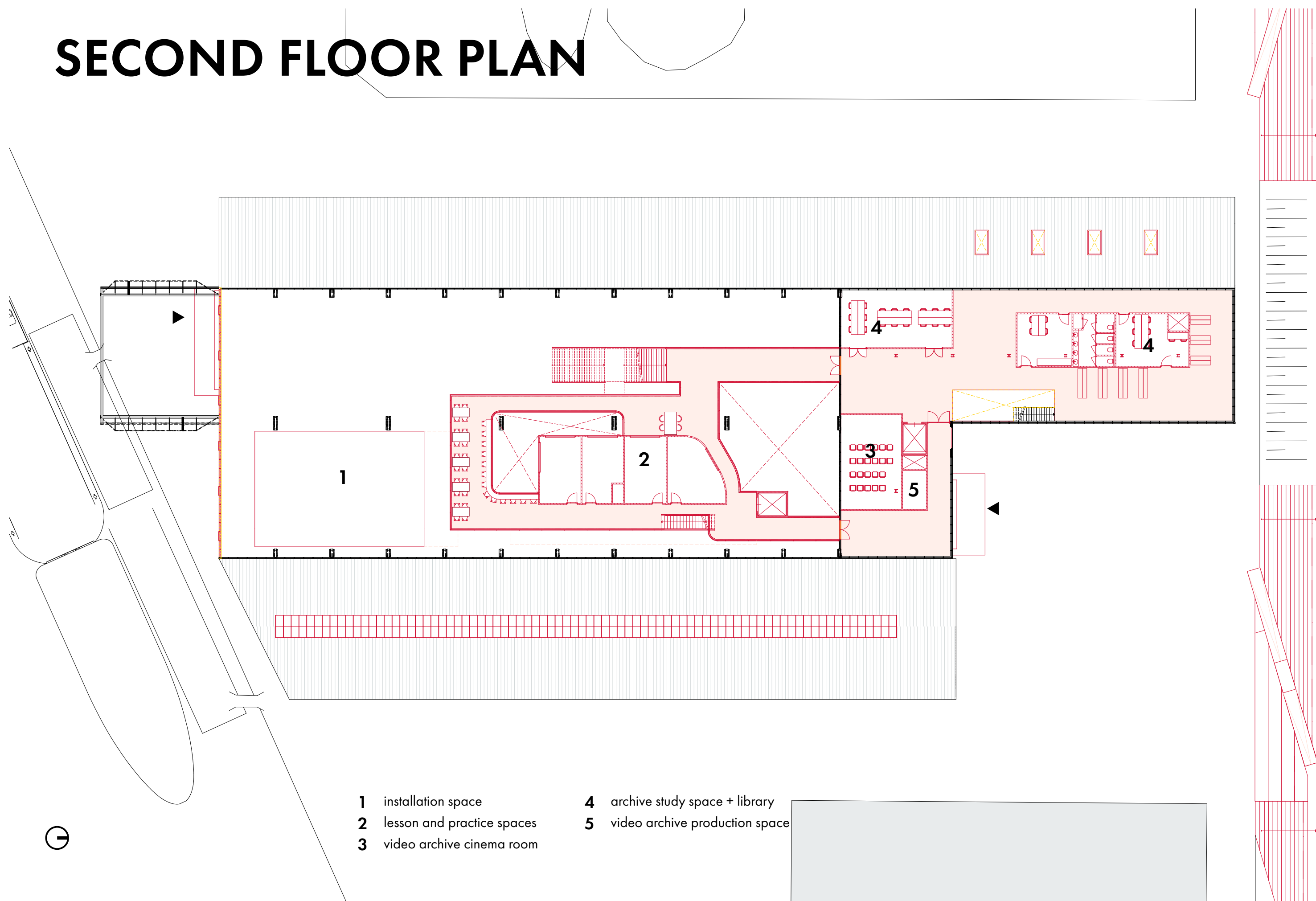
FIRST FLOOR PLAN



- 1 multi-use hall
- 2 lesson and practice spaces
- 3 restaurant
- 4 installation space
- 5 Binnenvaart museum
- 6 archive De Binnenvaart



SECOND FLOOR PLAN



- 1 installation space
- 2 lesson and practice spaces
- 3 video archive cinema room
- 4 archive study space + library
- 5 video archive production space



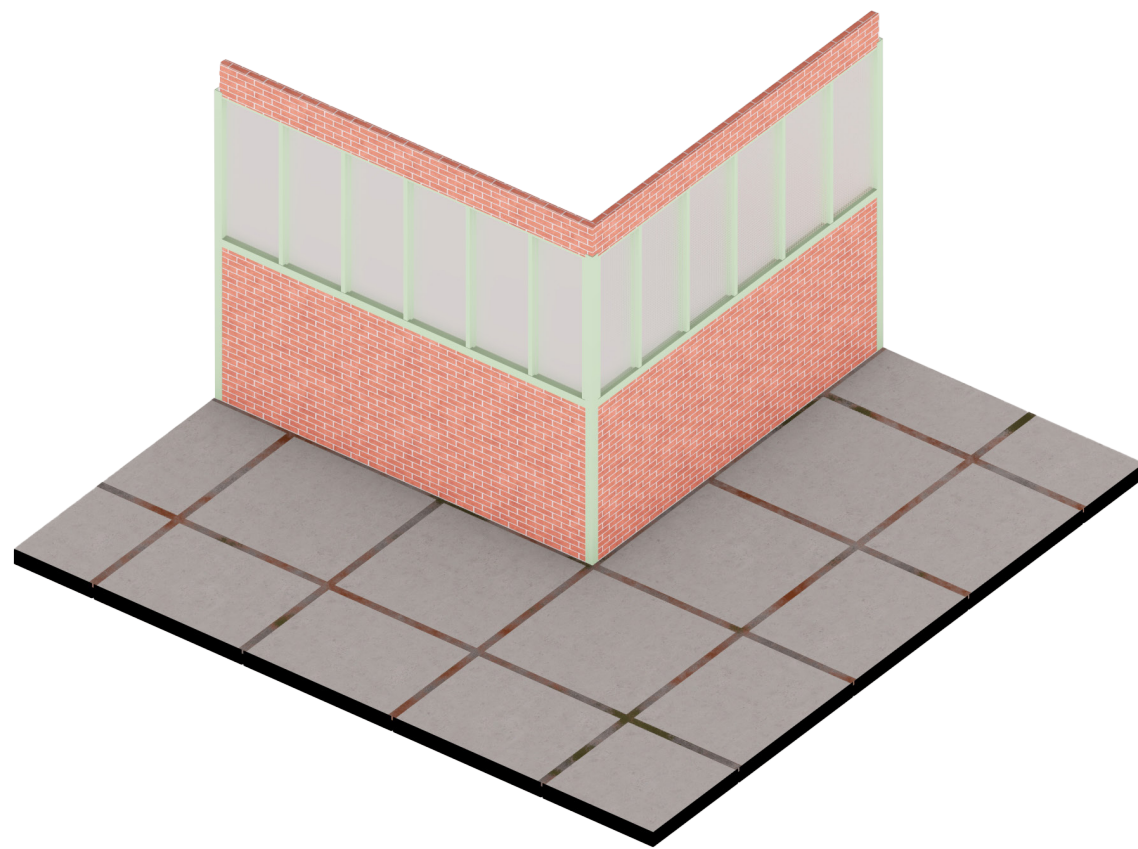
ELEVATIONS



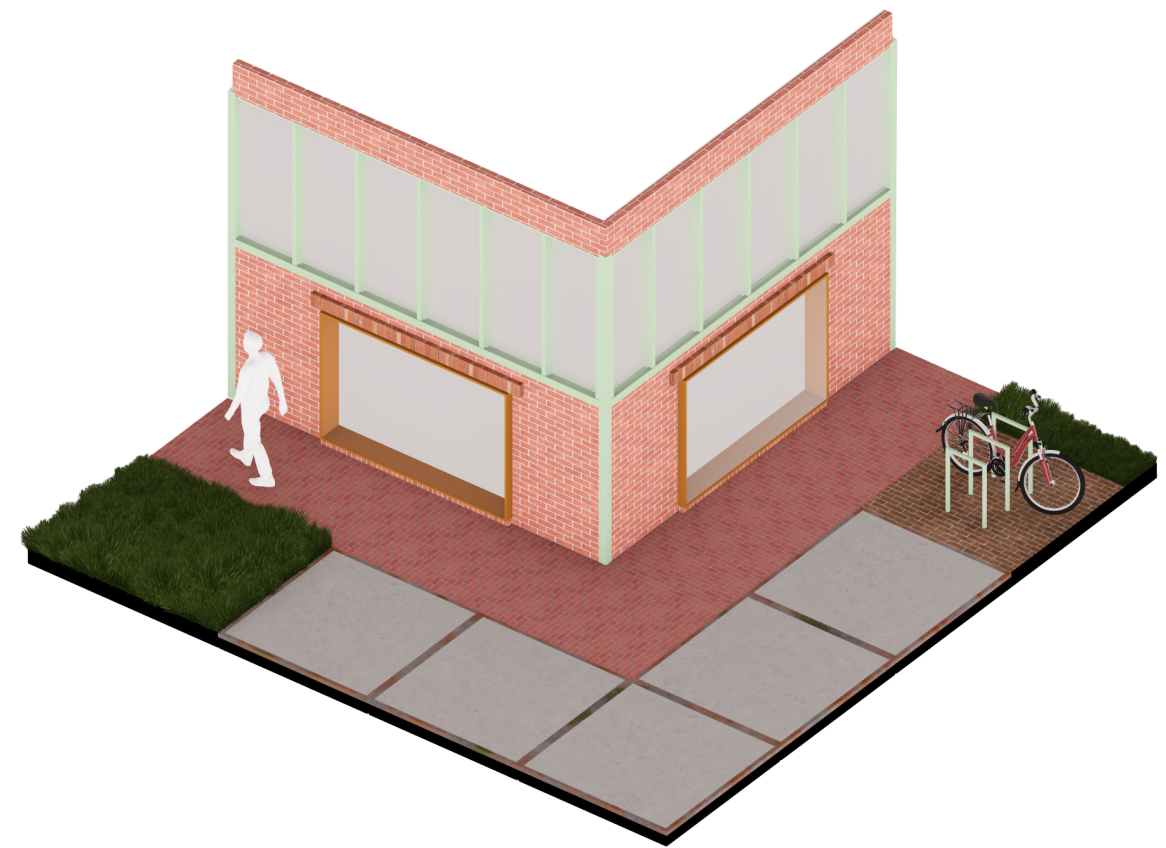
west facade



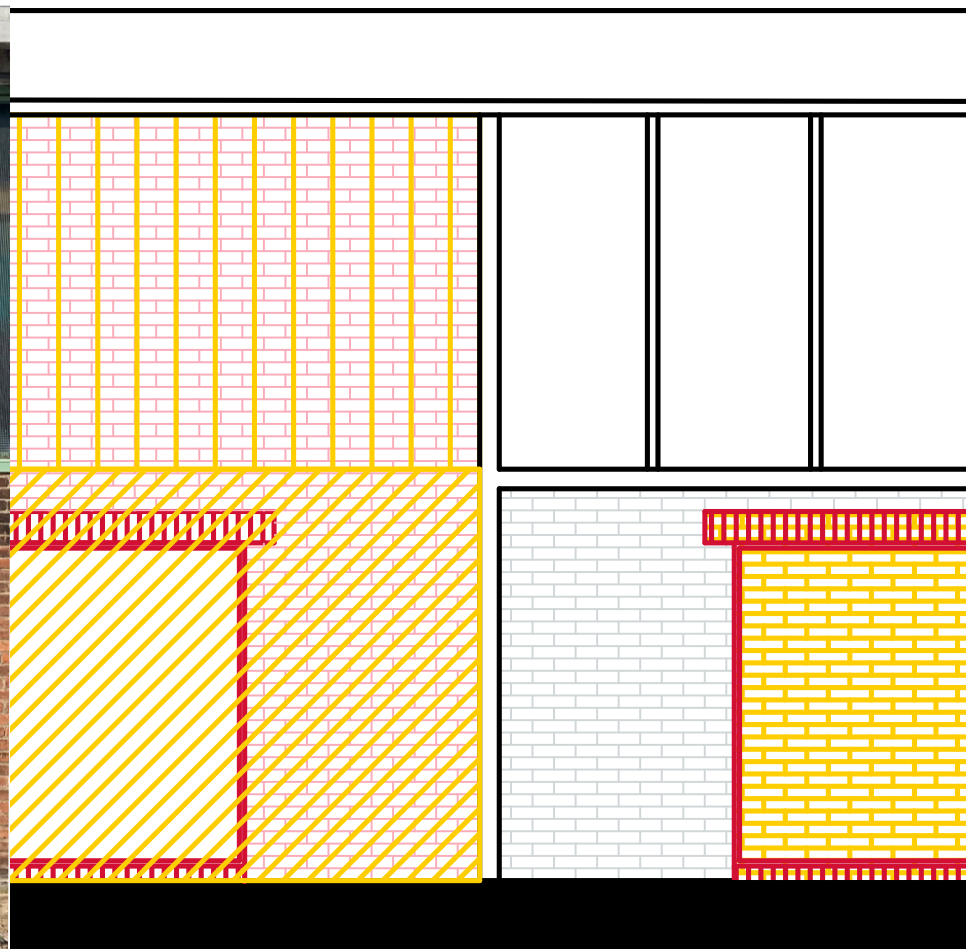
east elevation



ADDING INSIDE/
OUTSIDE INTERACTION



as found



repurposed



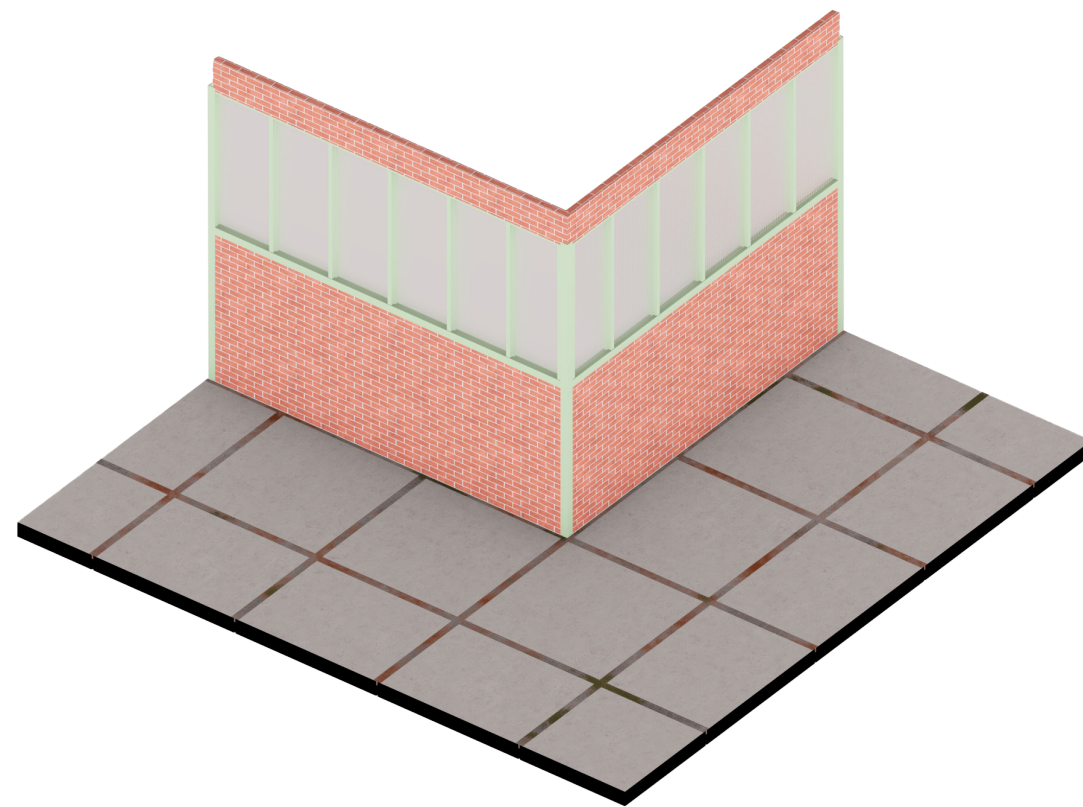
MATERIALS

CONTINUING ARCHITECTURAL DETAIL

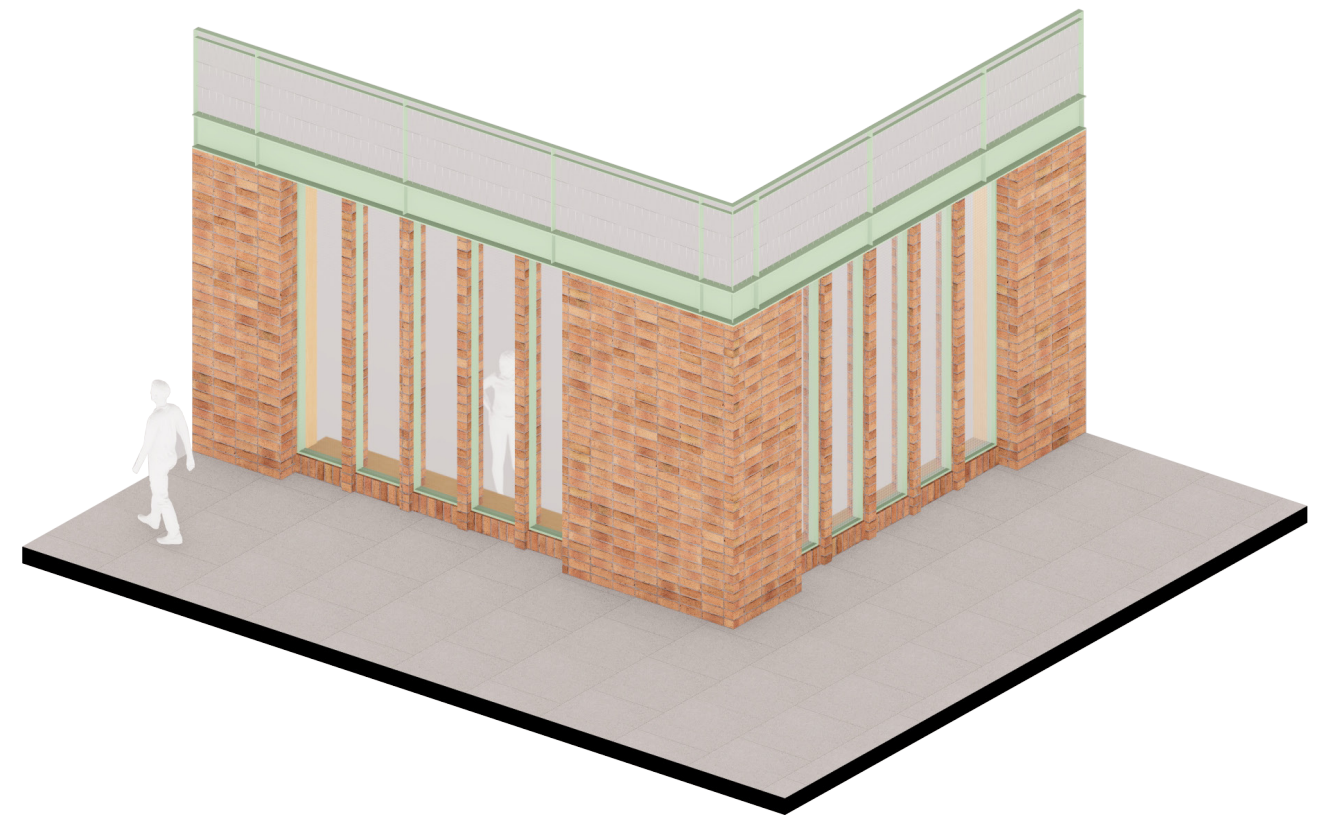


MATERIALS

CONTINUING ARCHITECTURAL DETAIL



EXTERIOR

ABSTRACTION OF
FACADE

INTERIOR

MATERIALS

URBAN TERRAZZO



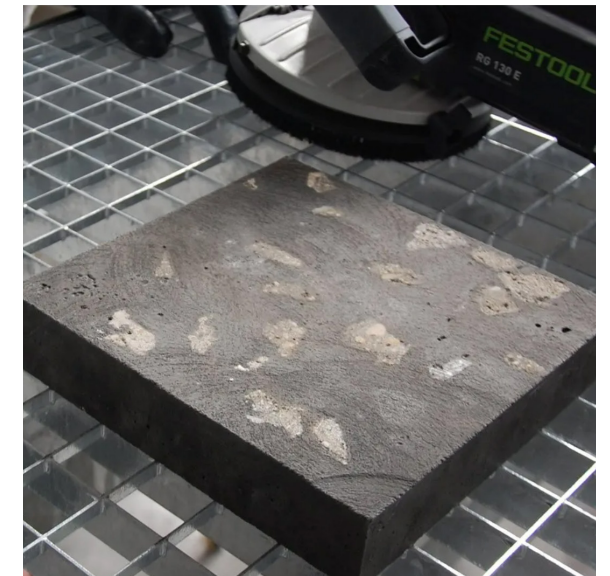
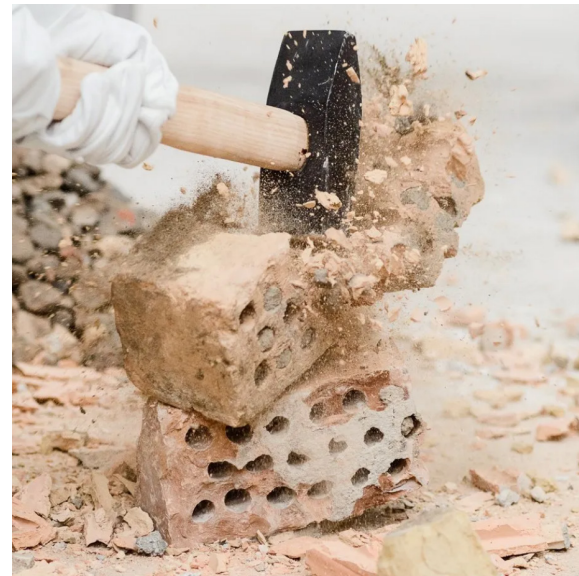
source: Archief Museum De Binnenvaart



source: Archief Museum De Binnenvaart

MATERIALS

URBAN TERRAZZO



source: They Feed Of Buildings (TFOB)

source: own work



MATERIALS

EXPANDED METAL



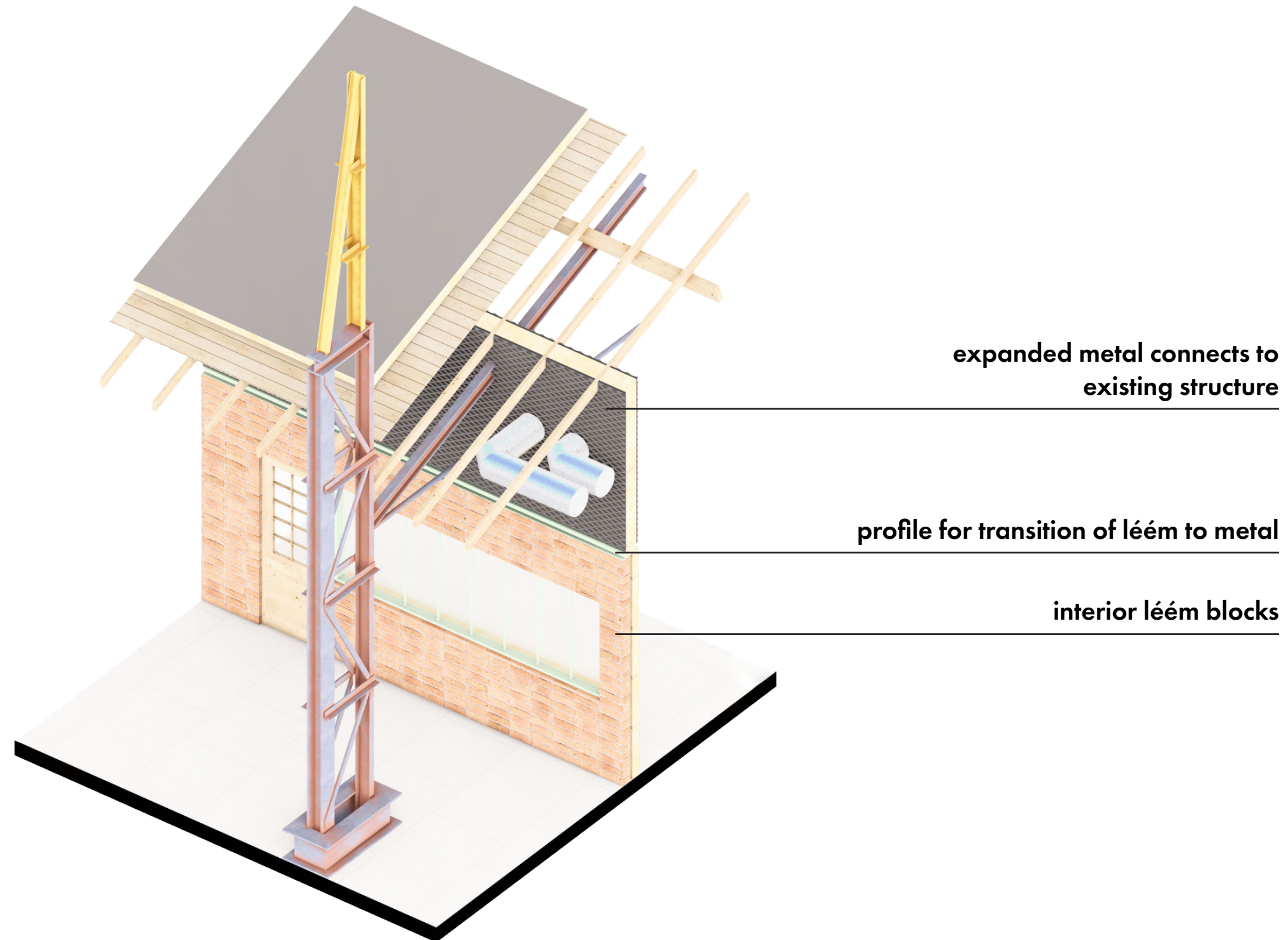
Studio Ninedots
Bovenbouwwerkplaats, Utrecht, NL





MATERIALS

EXPANDED METAL

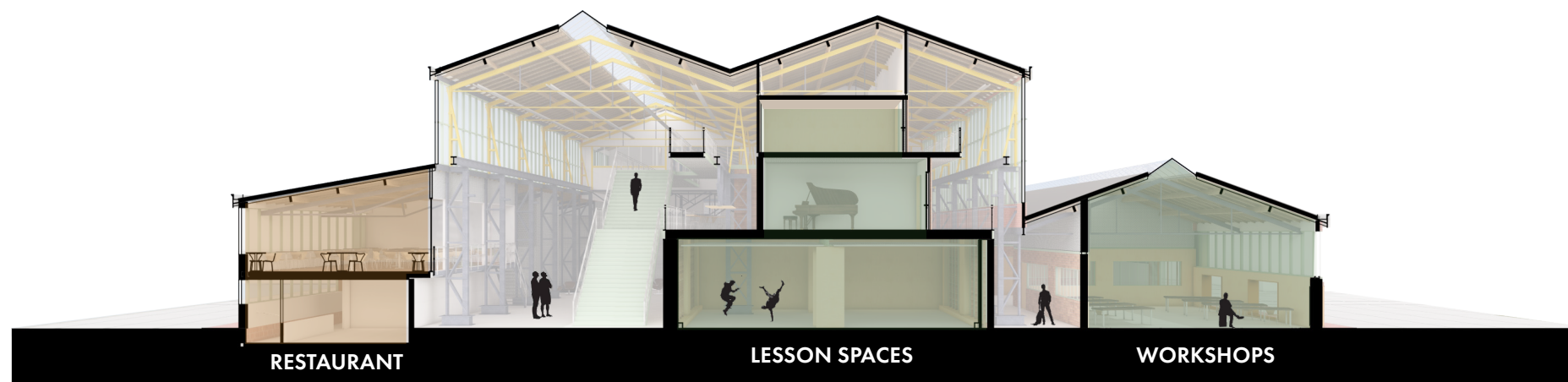


SECTIONS



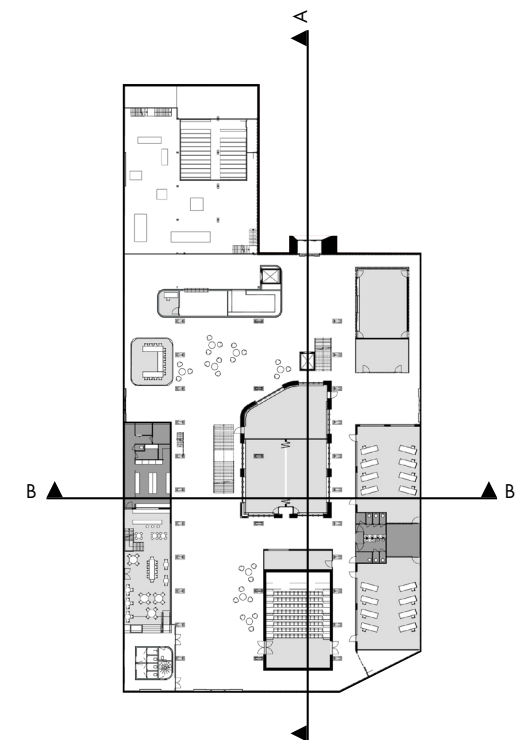
section A-A

Through multi-use hall and lesson spaces
scale 1:200



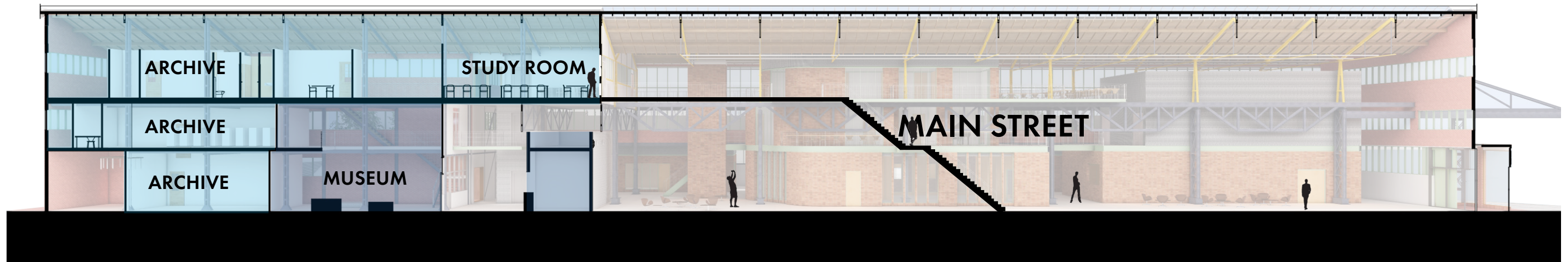
section B-B

Through multi-use hall and lesson spaces
scale 1:200





SECTIONS



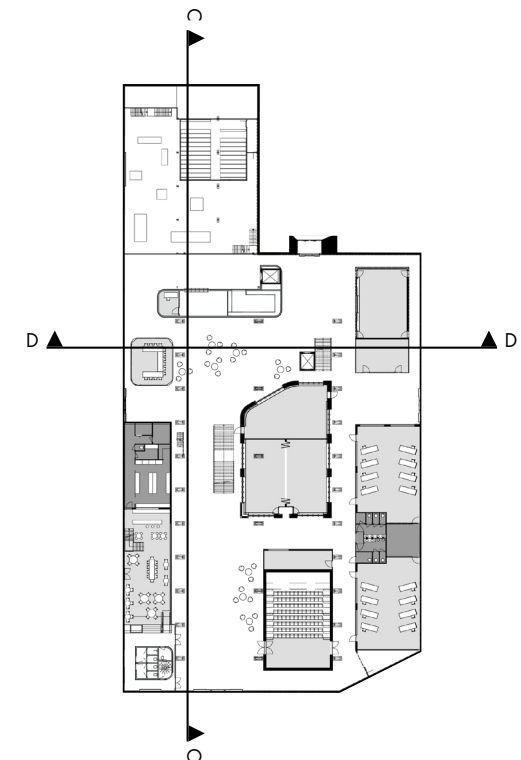
section C-C

Through Museum an Archive De Binnenvaart
scale 1:200



section D-D

Through flex spaces, street and lesson spaces
scale 1:200











LOCKERS

TICKETS

CONSTRUCTIVE OVERVIEW

walkway to archive and studyspaces

steel beams hung on existing roof structure and
resting on existing load bearing structure
from main hall.

first and second floor load bearing walls

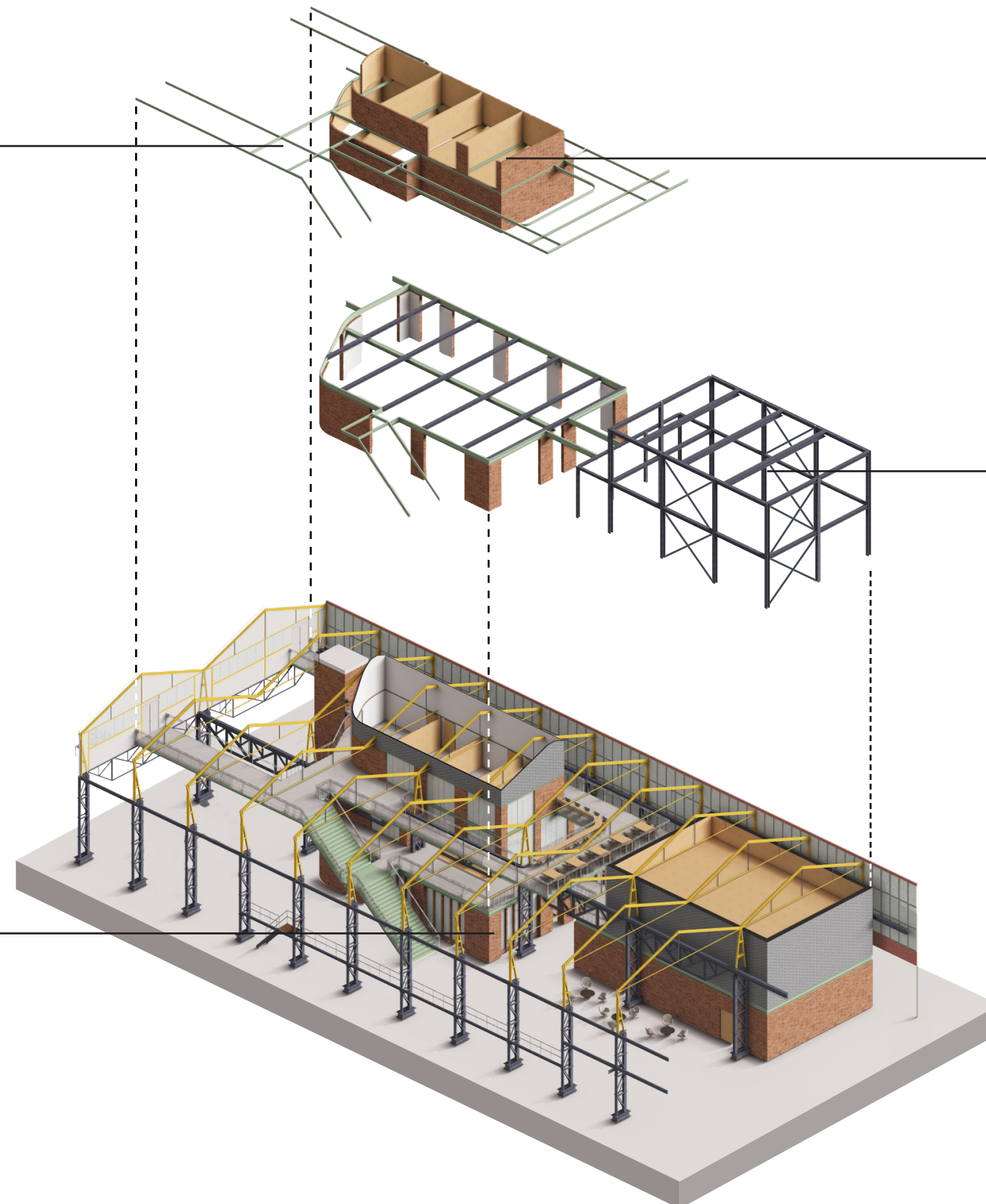
timber structural walls
birch plywood
Léem outside

multi use hall

steel structure
HEA260 beams and columns
stability by steel bracing

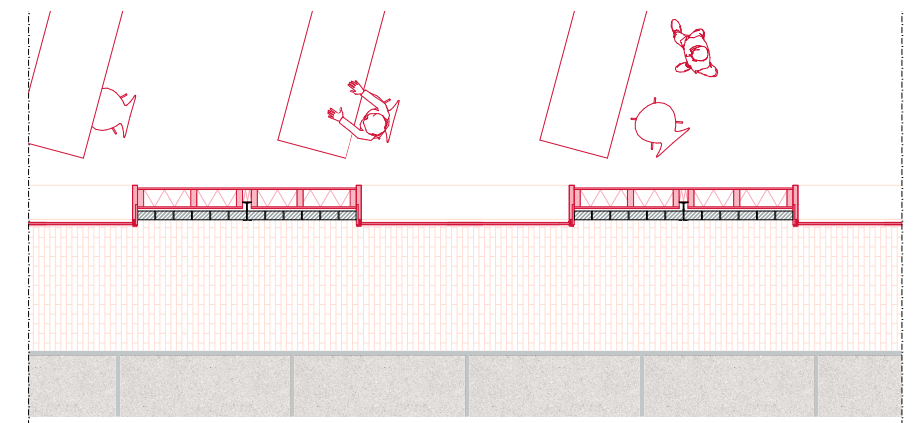
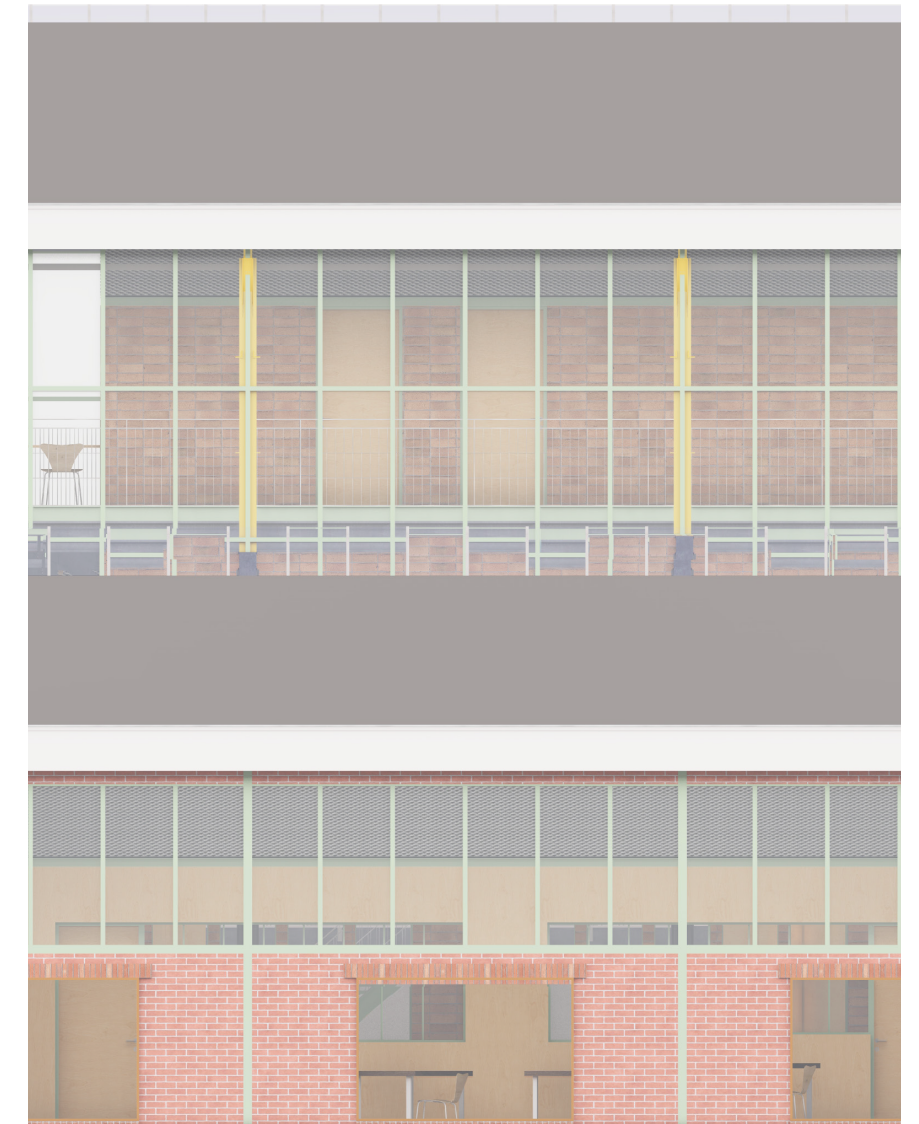
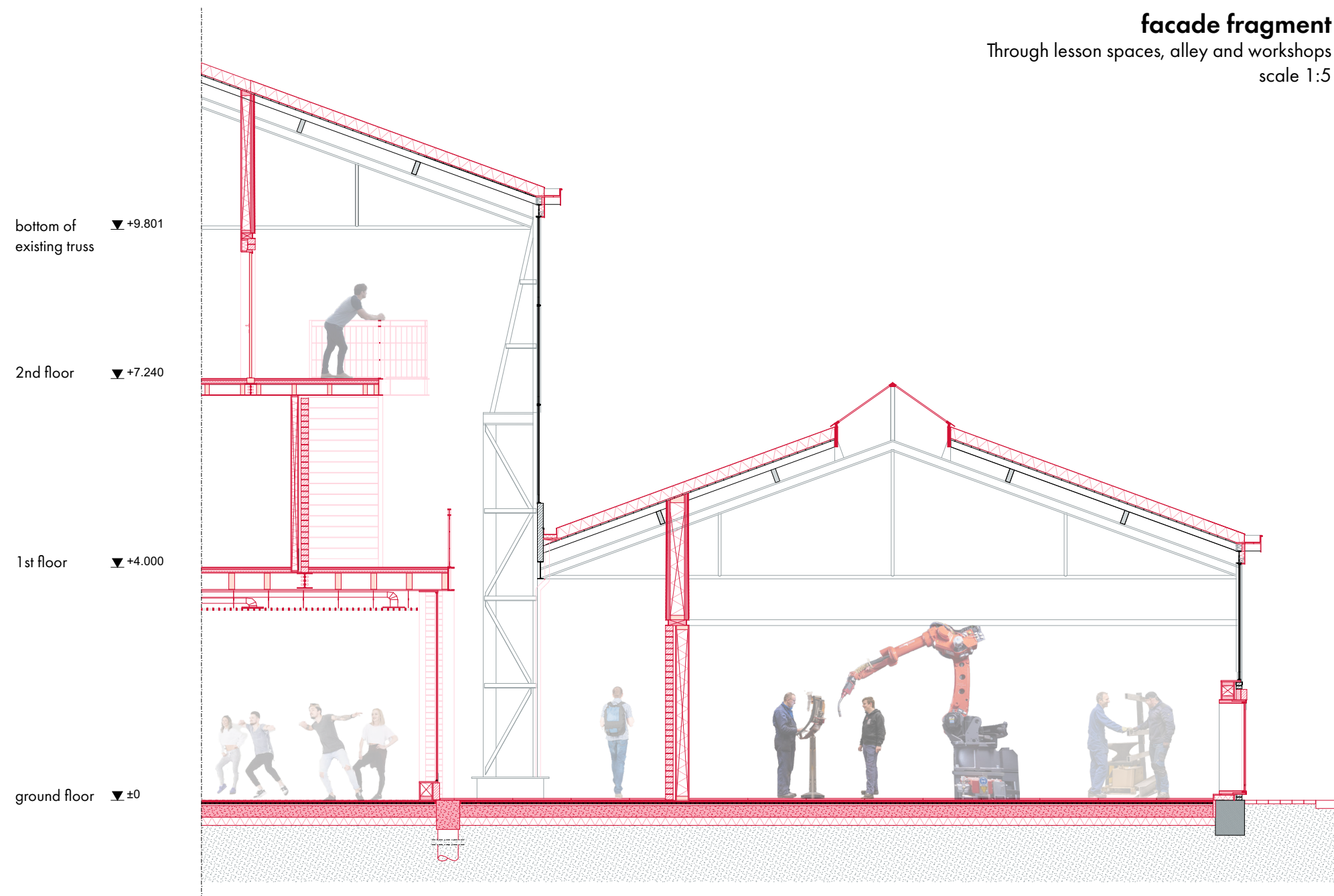
ground floor level load bearing Léem block walls

double layer load bearing Léem blocks
thermal and sound proofing insulation
birch plywood inside finish



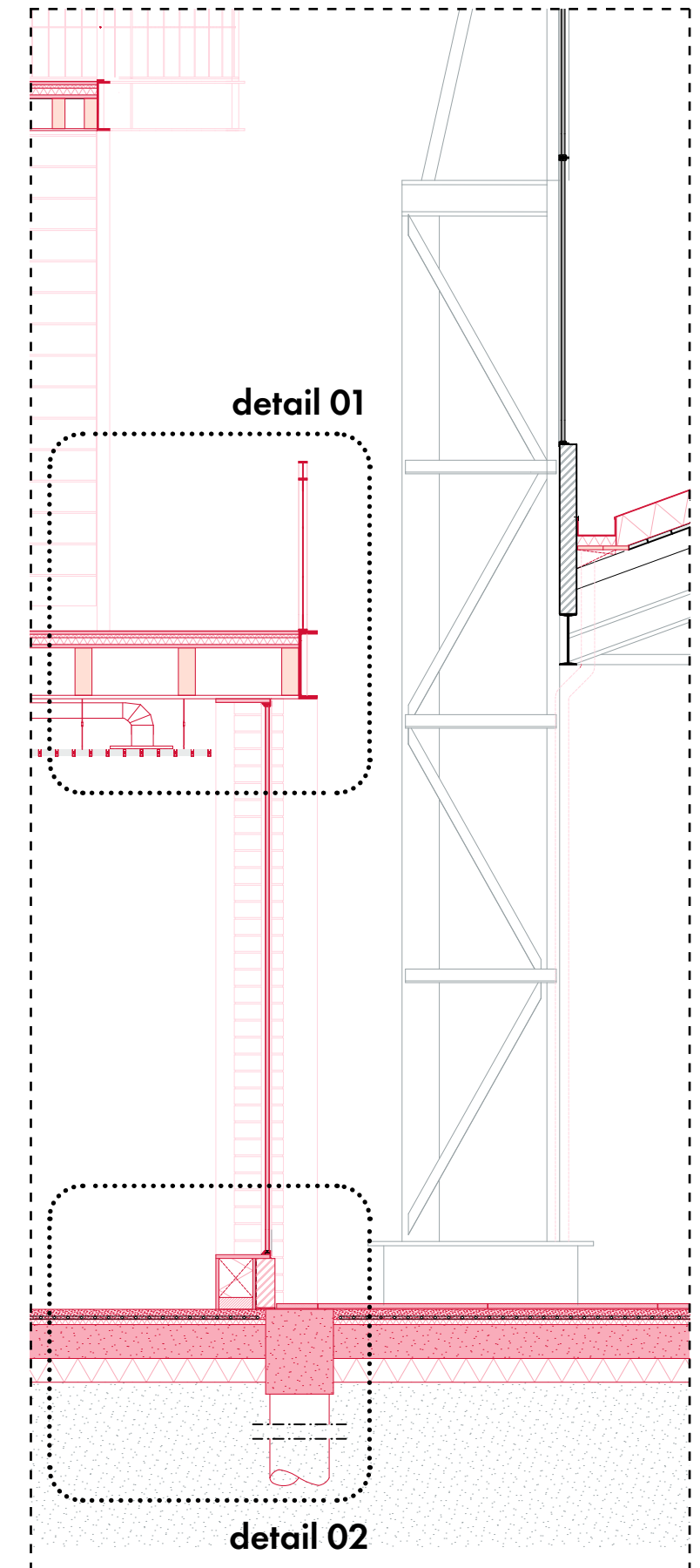
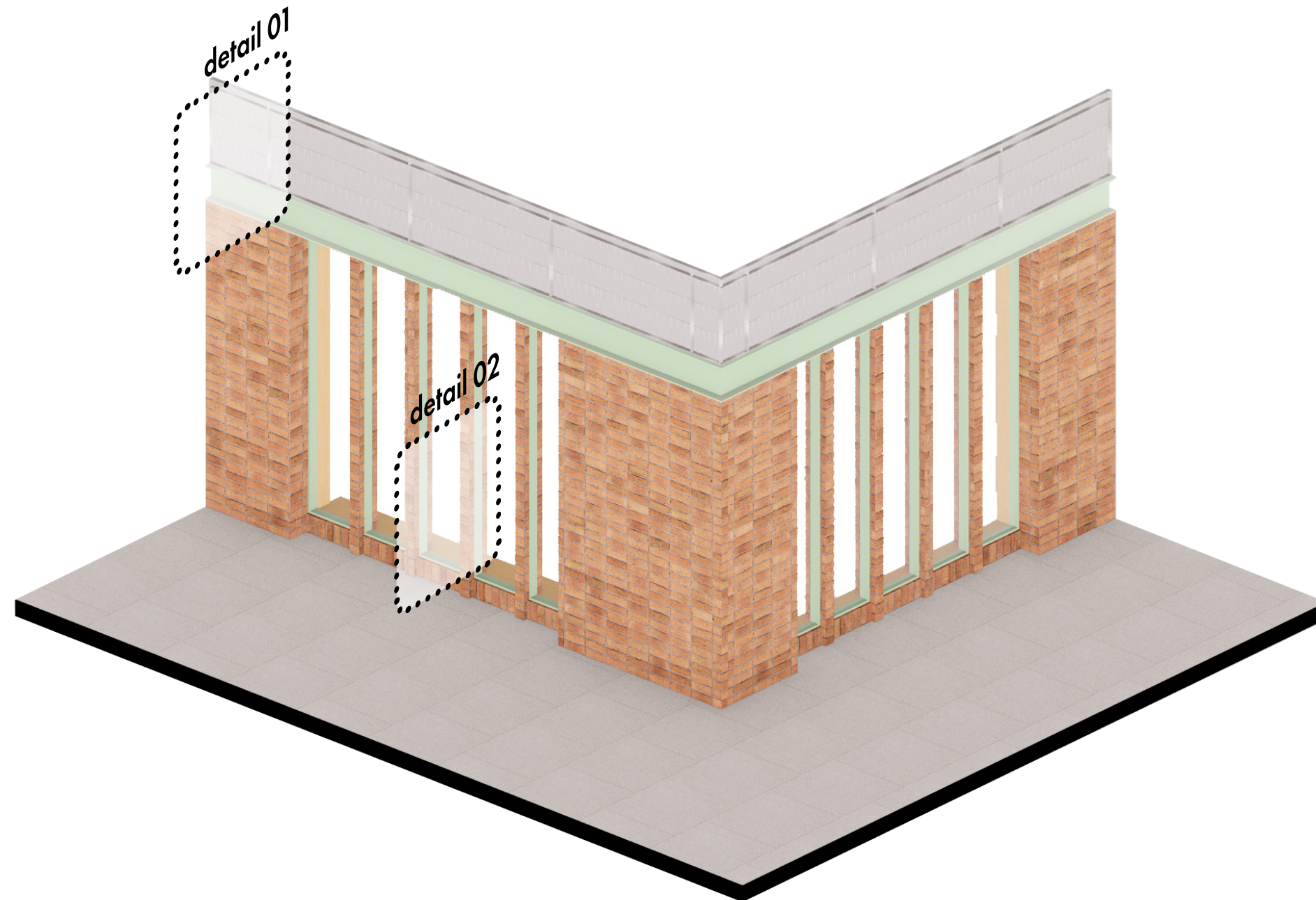
FACADE FRAGMENT

Through lesson spaces, alley and workshops

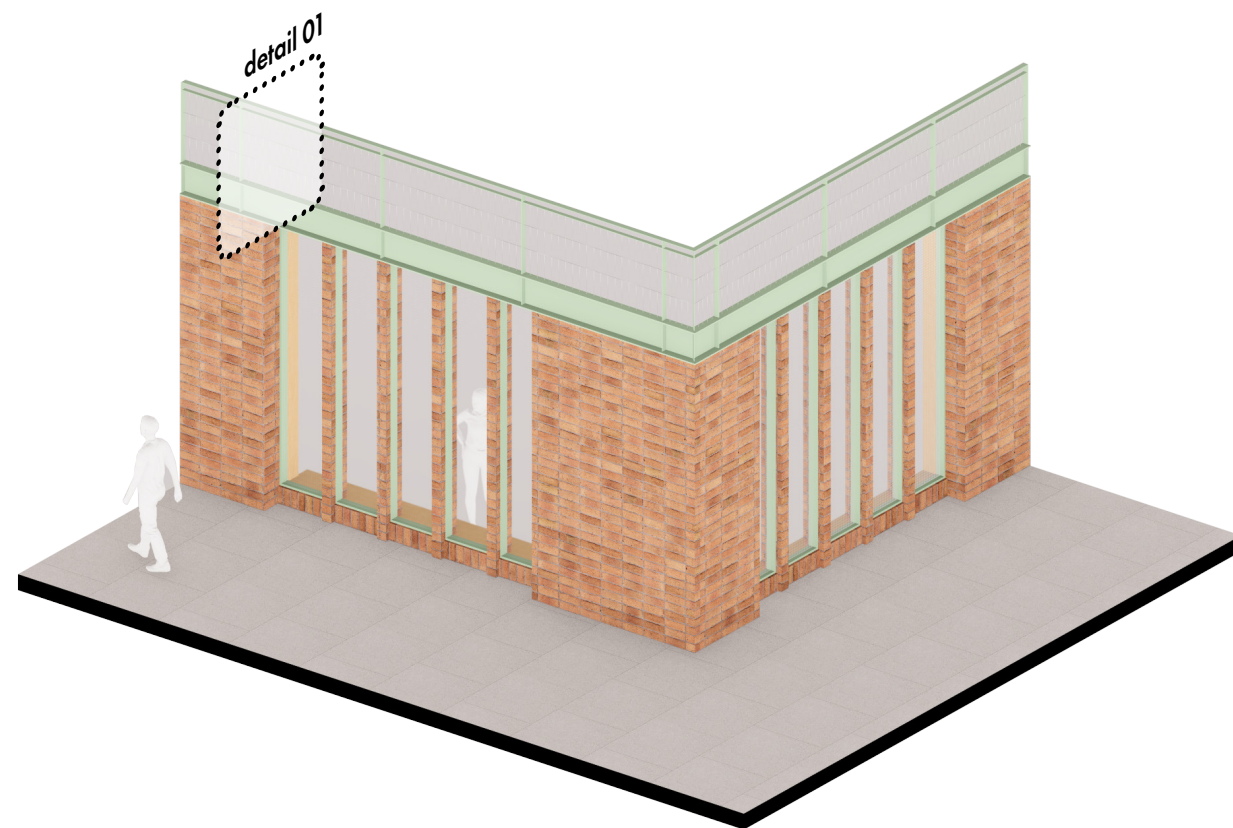


LOAD BEARING LÉÉM

position of details

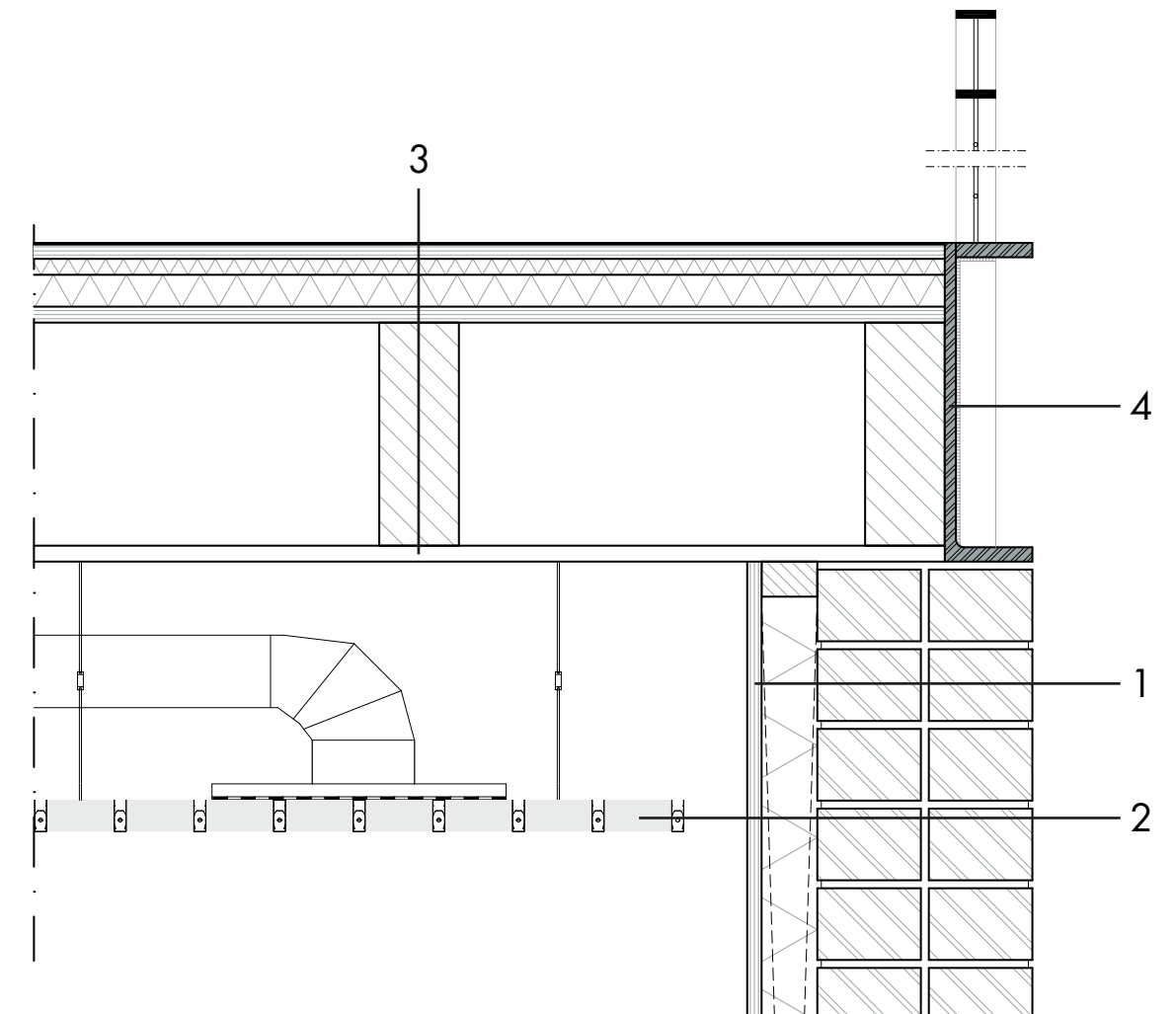


LOAD BEARING LÉÉM



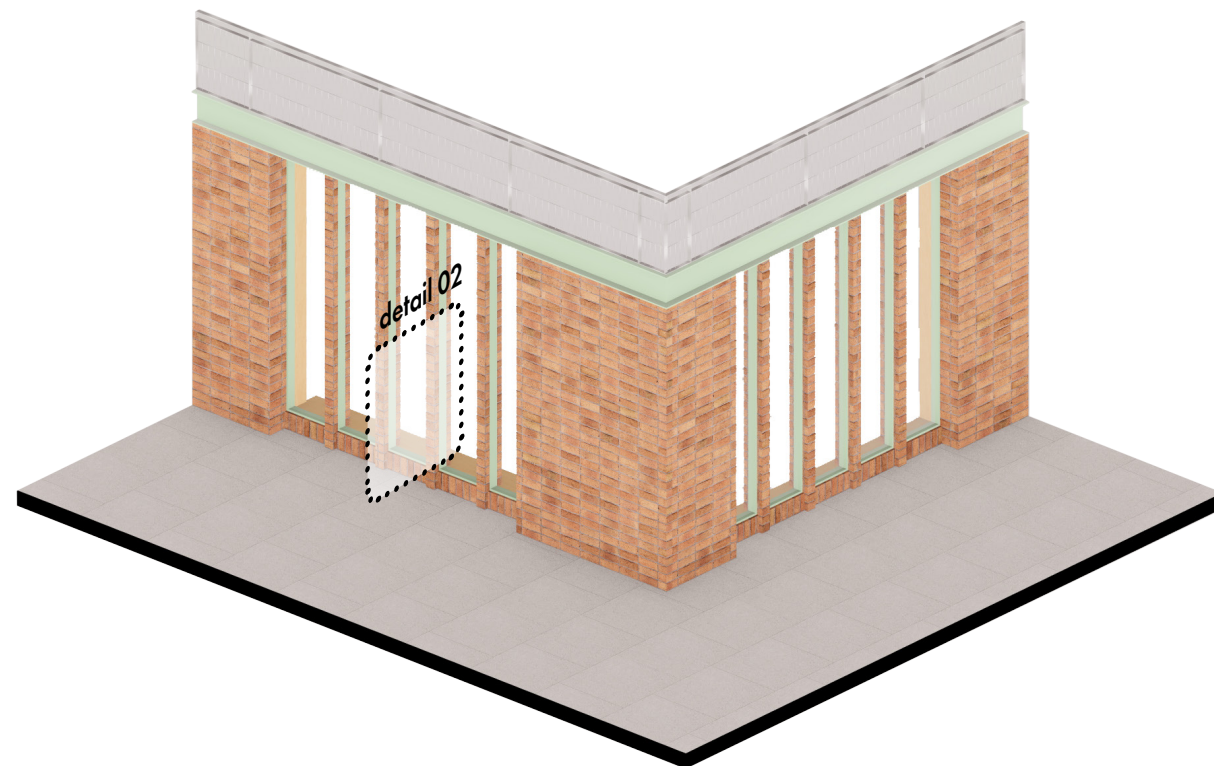
detail 01

Leem Blocks - first floor connection
scale 1:5



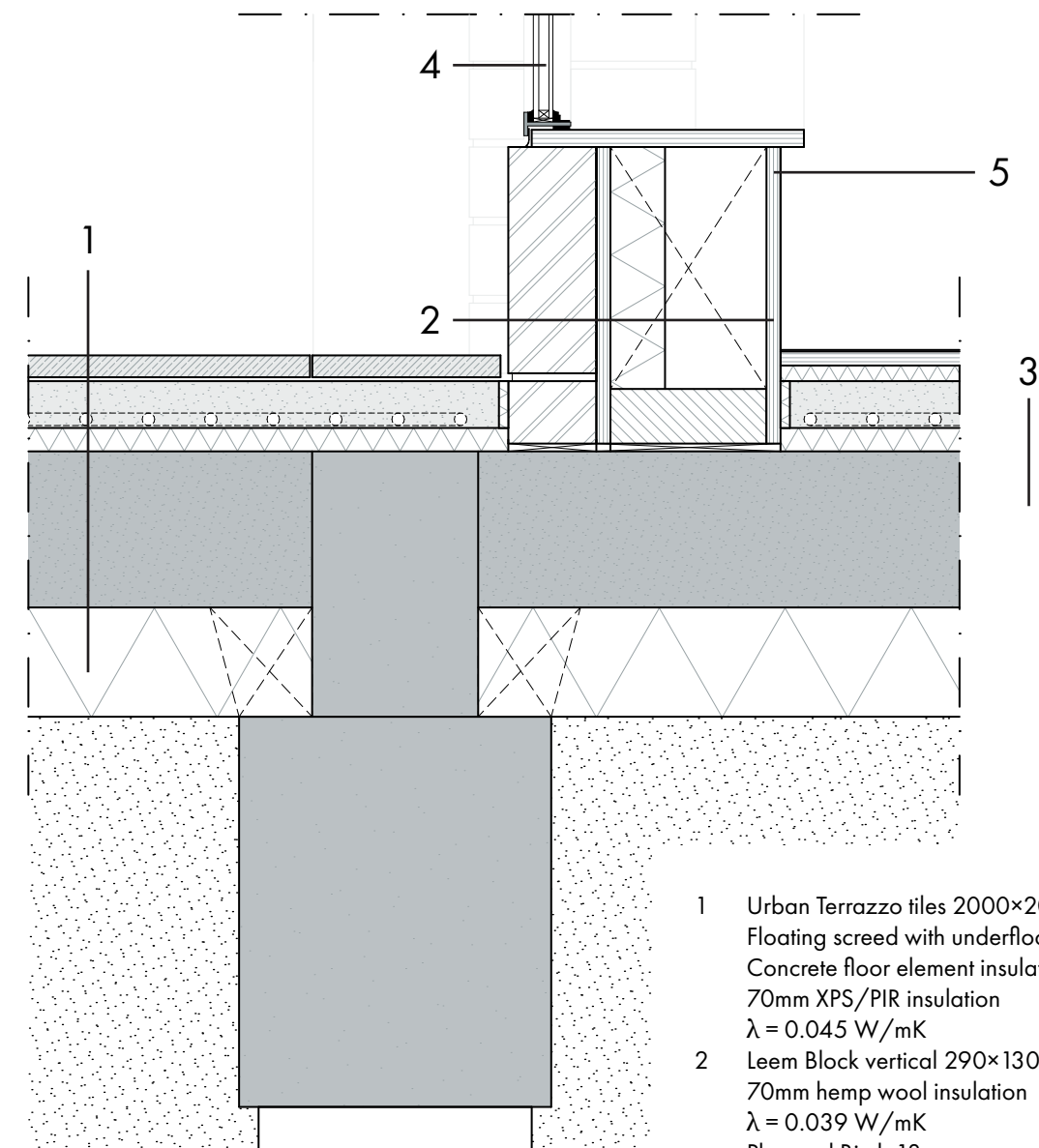
- 1 Leem Blocks 290×130×90
Wooden stud wall
70mm hemp wool insulation
 $\lambda = 0.039 \text{ W/mK}$
Plywood Birch 18mm
- 2 Hunter Douglas Luxalon Cell C40
suspended ceiling
Integrated lighting and ventilation
- 3 Forbo Marmoleum Solid Piano
Manufacturer prescribed underfloor
OSB board 18mm
HEA320 steel beam
- 4 Decorative steel L-profile with welded
on railing

RECESSED WINDOWS



detail 02

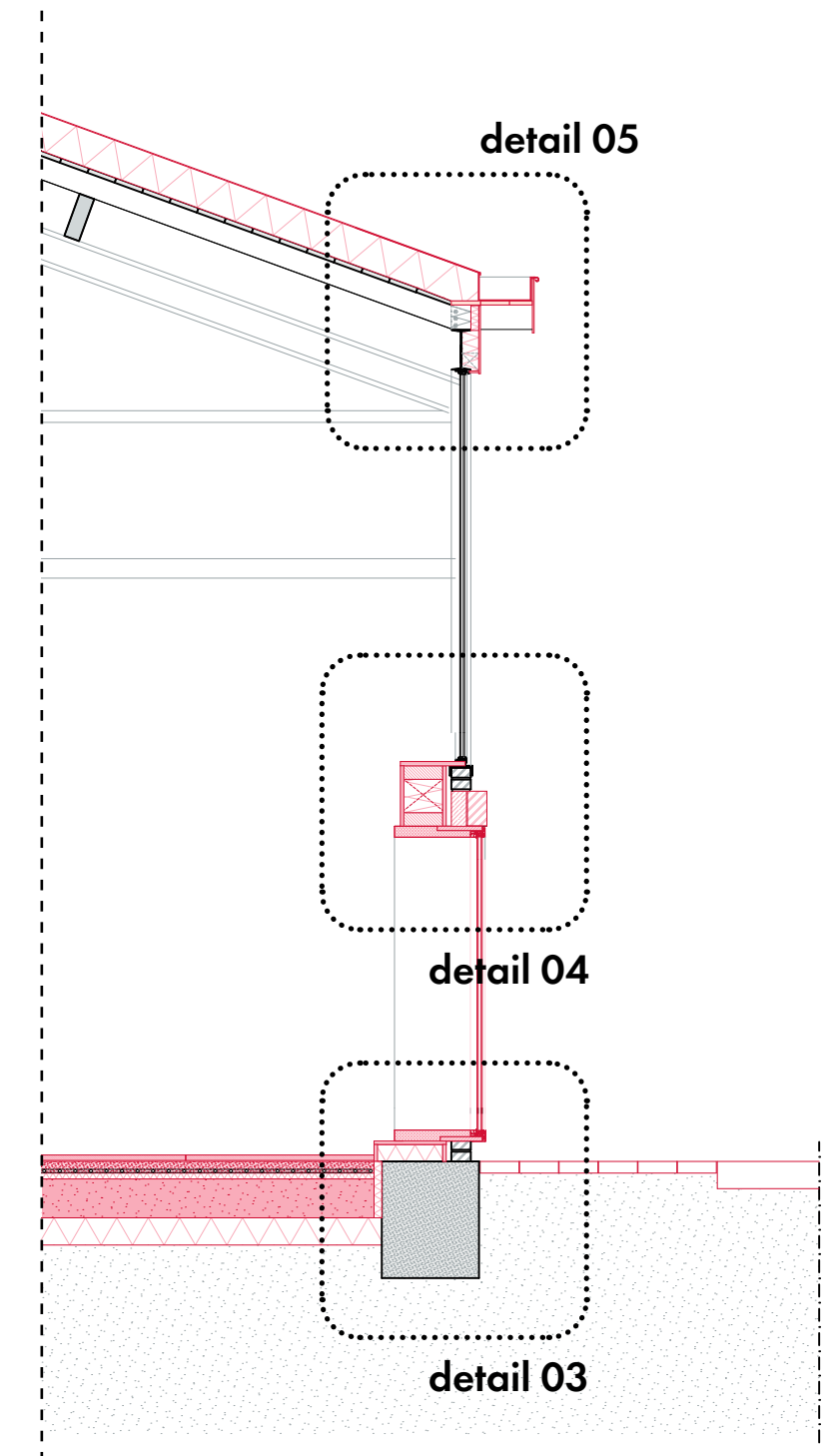
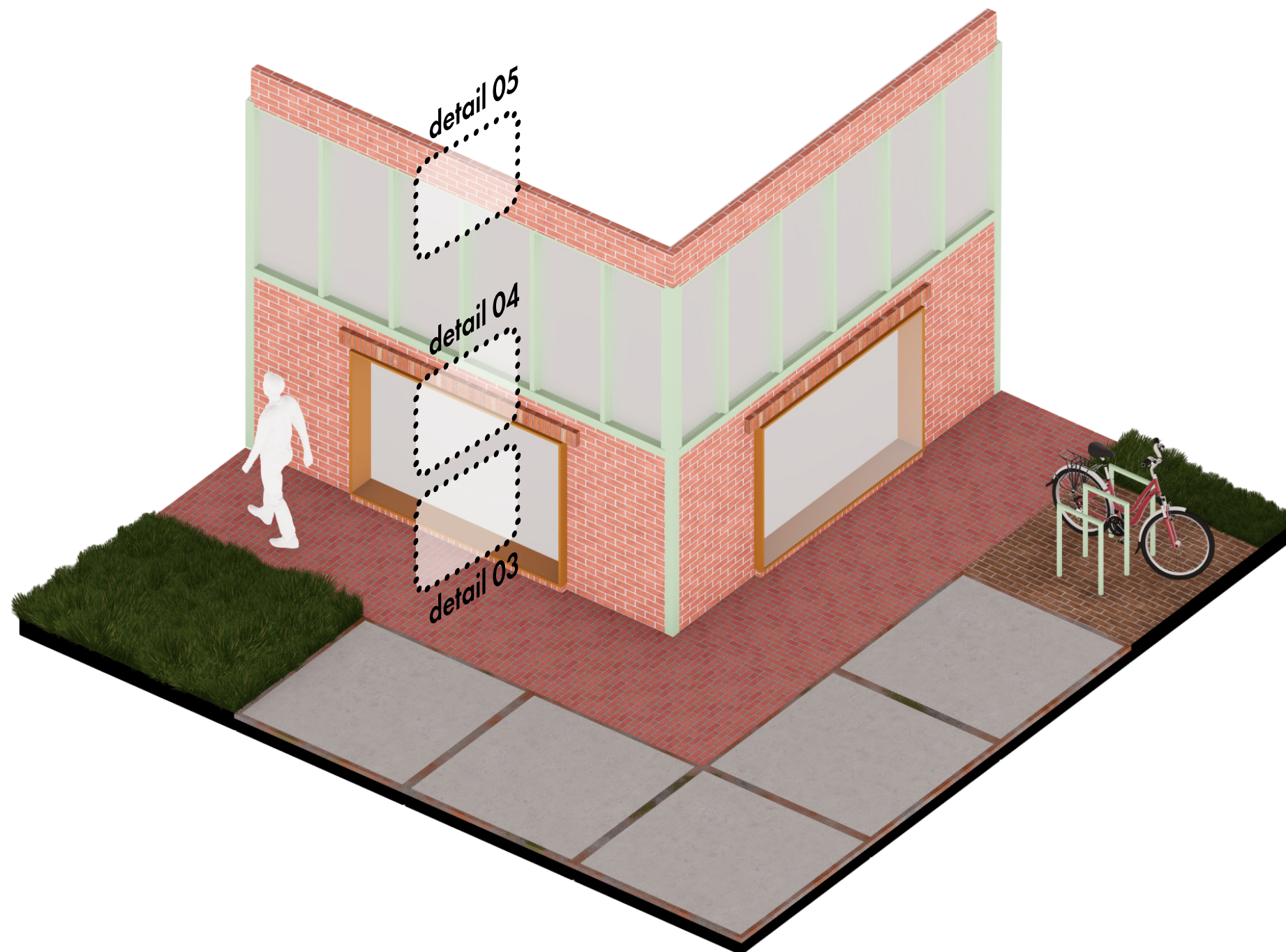
Leem Blocks - ground floor connection
scale 1:5



- 1 Urban Terrazzo tiles 2000×2000
Floating screed with underfloor heating
Concrete floor element insulated
70mm XPS/PIR insulation
 $\lambda = 0.045 \text{ W/mK}$
- 2 Leem Block vertical 290×130×90
70mm hemp wool insulation
 $\lambda = 0.039 \text{ W/mK}$
Plywood Birch 18mm
- 3 Forbo Marmoleum Solid Piano
Manufacturer prescribed underfloor
- 4 MHB SL30 window frame
- 5 Plywood Birch

ADDED FACADE OPENINGS

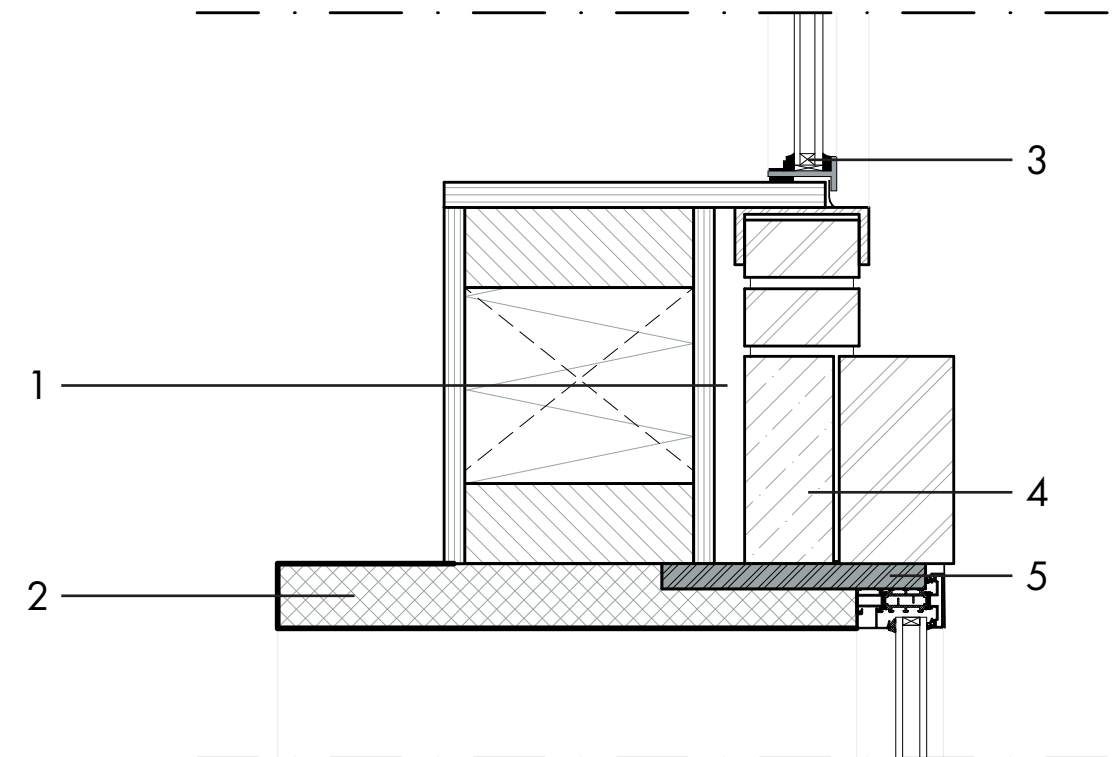
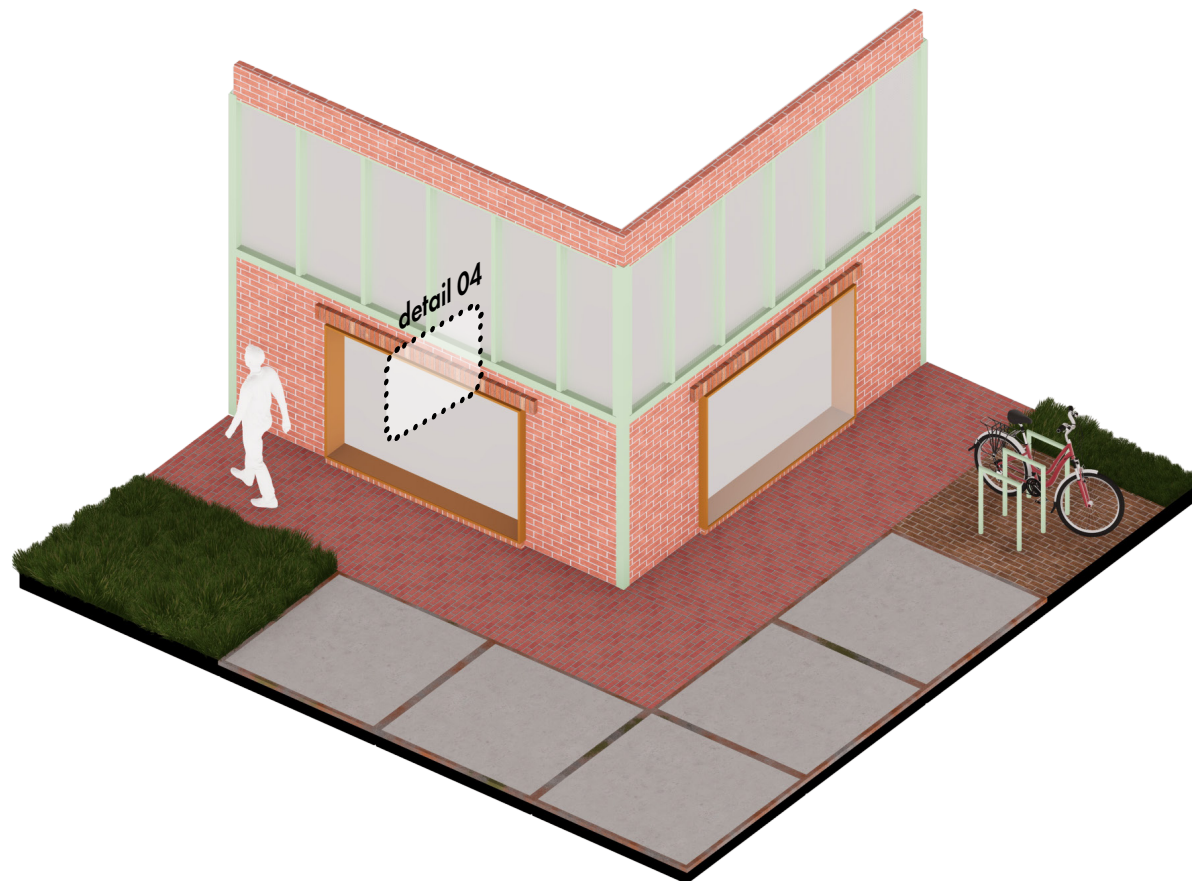
position of details



ADDED FACADE OPENINGS

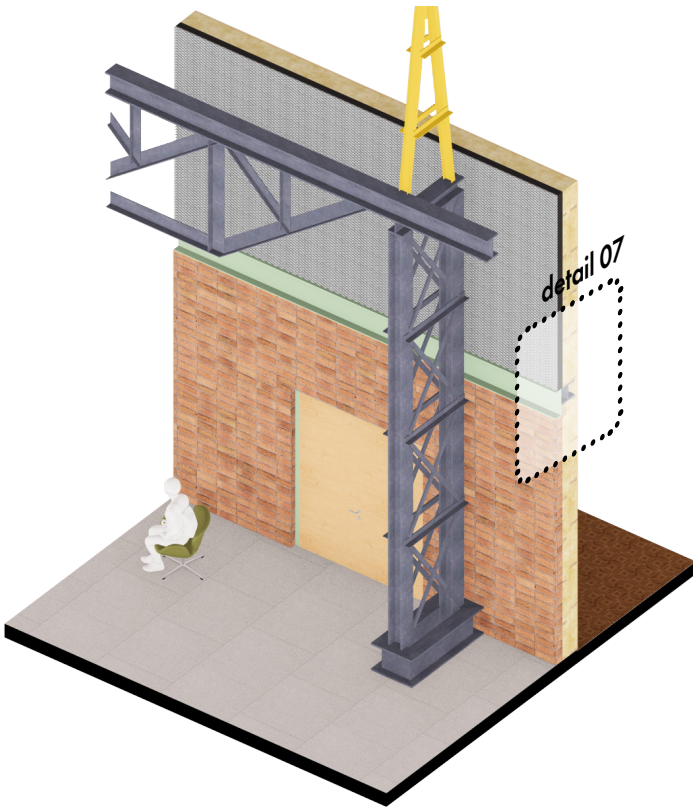
detail 04

New window in existing facade
scale 1:5



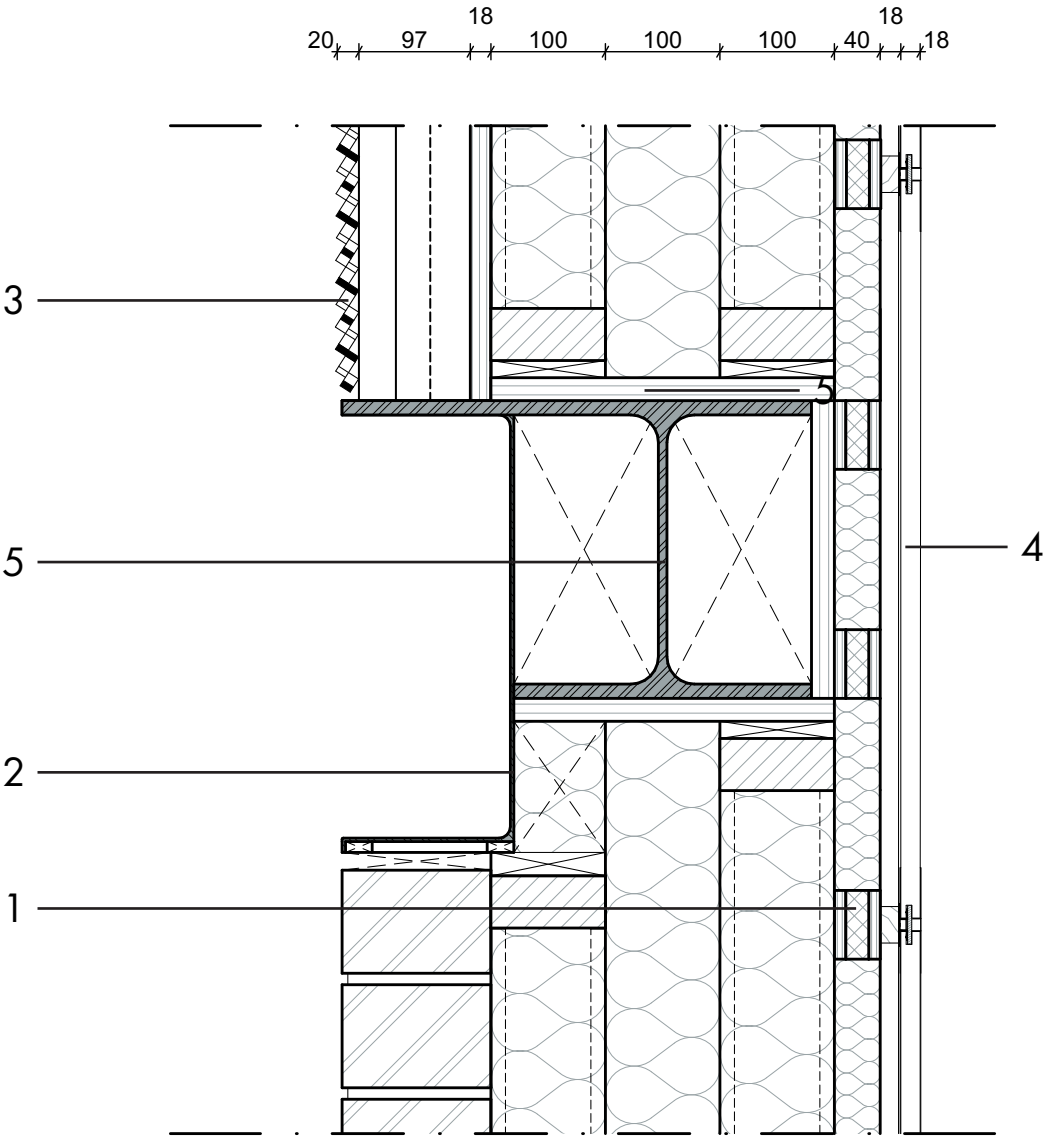
- 1 Cavity 40mm
Wooden stud wall
200mm hemp wool insulation
 $\lambda = 0.039 \text{ W/mK}$
Plywood Birch 18mm
- 2 Aluminum bended sheeting Bronze RAL 8025
- 3 Reynaers SL38 window frame
- 4 Concrete lintel with standing bricks
- 5 Steel profile for window frame fixation

MULTI-USE HALL



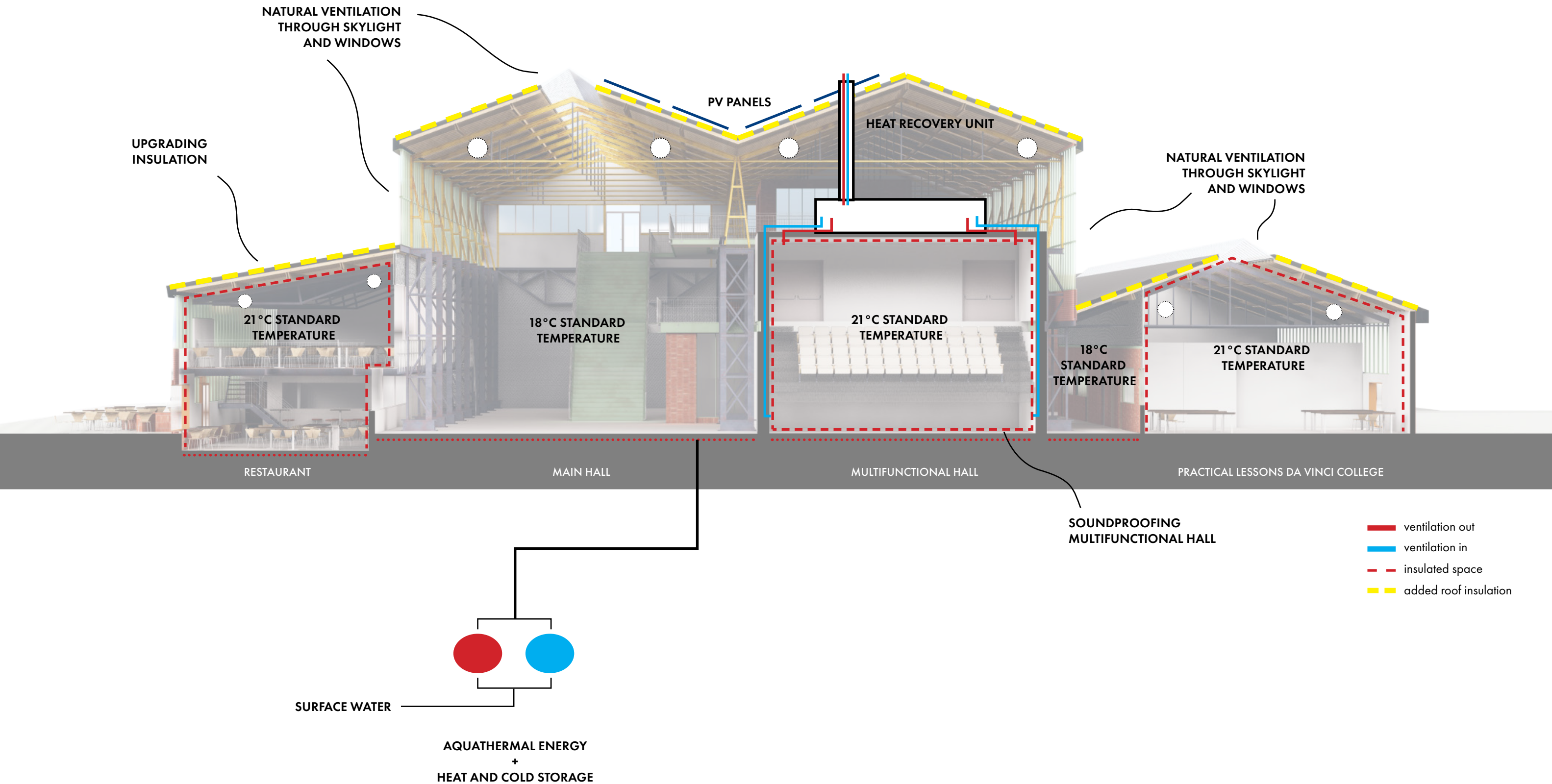
detail 07

Interior wall street - multi use hall
scale 1:5



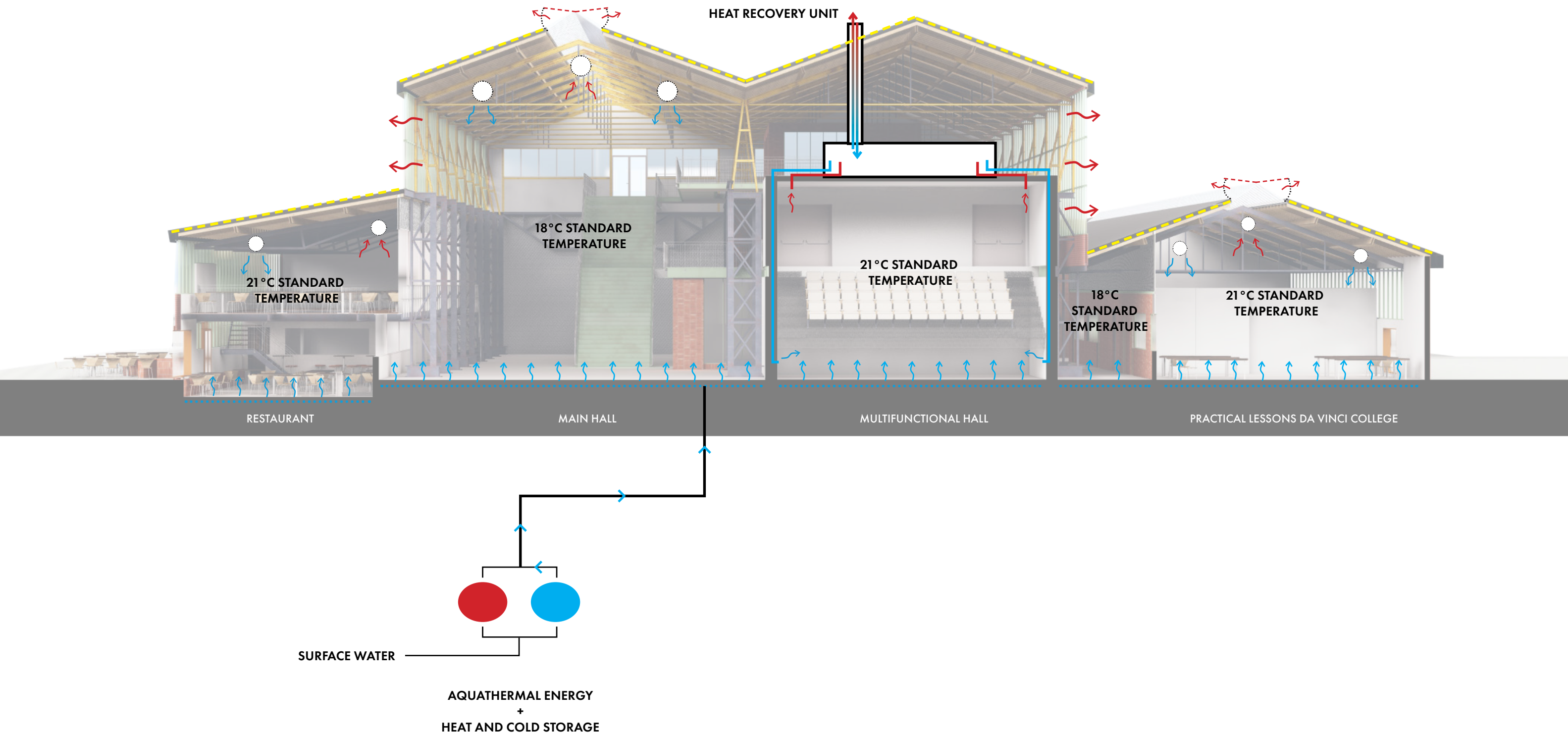
- 1 Leem Blocks 290×130×90
3×100mm disconnected mineral wool insulation
Spring loaded Akoesticon slats
- 2 Decorative bended aluminum
- 3 Metadecor Academy metal mesh
Manufacturer prescribed fixation
- 4 Hunter Douglas Acoustic Veneered Wood Wall Panel
- 5 HEA260 steel beam

CLIMATE CONCEPT



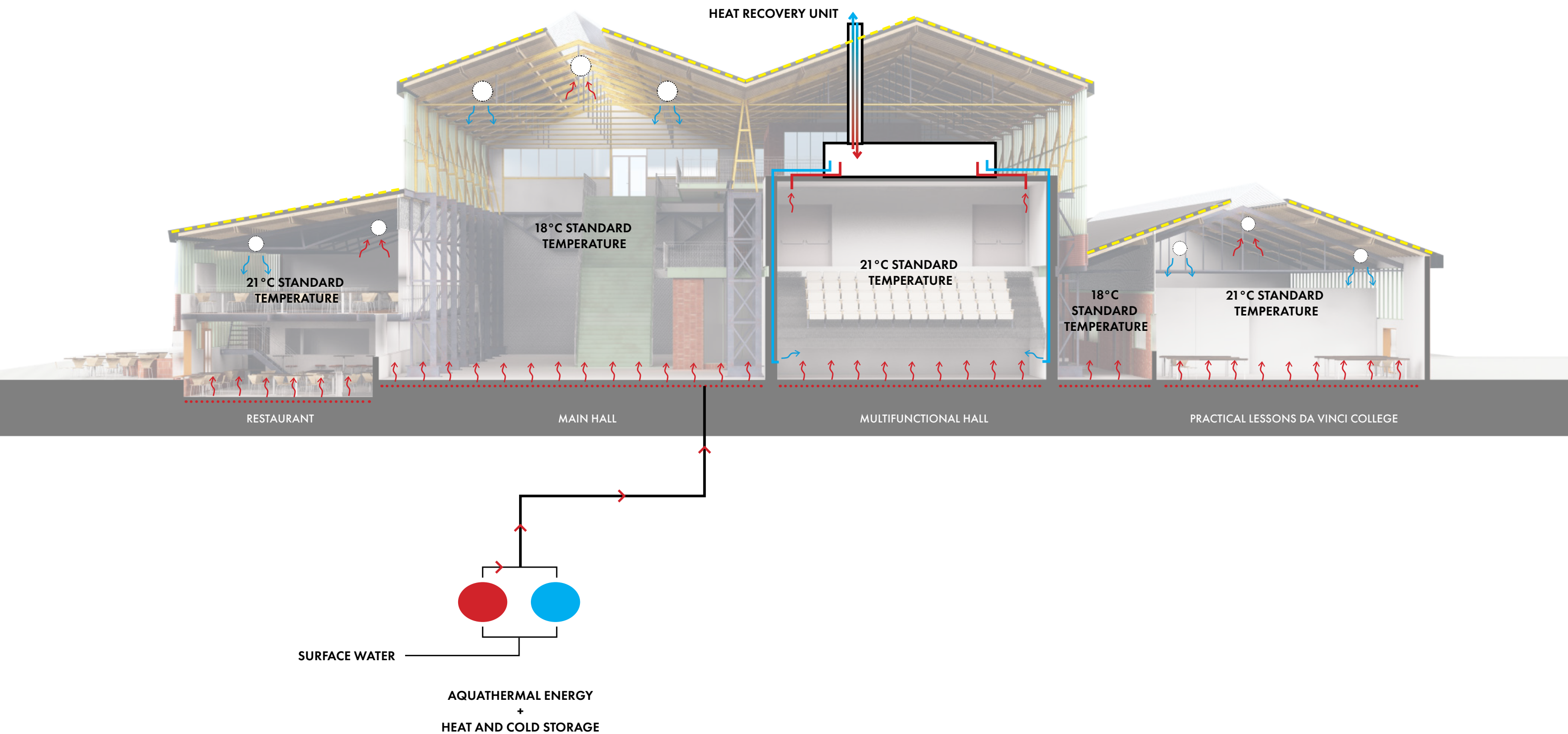
CLIMATE CONCEPT

summer situation



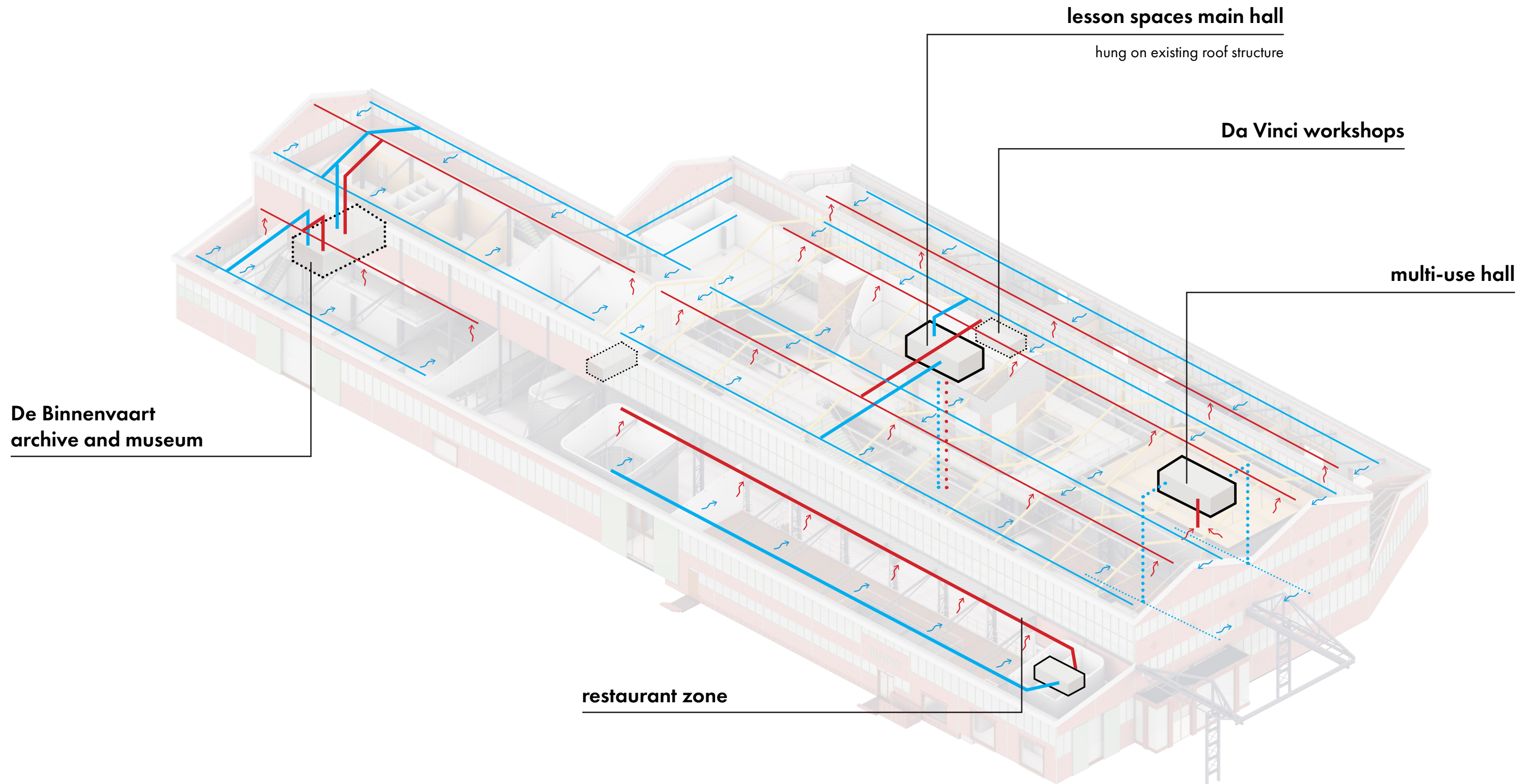
CLIMATE CONCEPT

winter situation



CLIMATE CONCEPT

distribution of ventilation ducts









THANK YOU.