



**HERITAGE & ARCHITECTURE – MARITIME HERITAGE STUDIO**

## **Social Tides In Post-Industrial Cultural Landscapes**

**A Water-Environment Art Destination & Local-beneficial Complex In Waterdriehoek**

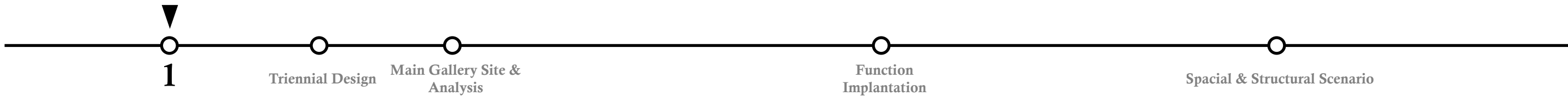
Boyang Shen

01/16/2025 P5

# Basic Research

1. Water Heritage & Art Tourism

2. Existing Cases & Modes In Art Tourism





# WATER(-RELATED) HERITAGE

In lowlands and mountains, wetlands and deserts, agricultural landscapes, urban networks, and on urban waterfronts; includes maritime cultural landscapes, canals, harbors, and waterfronts as well as local knowledge and skills and regional traditions in water engineering.

—— The Netherlands Ministry of Foreign Affairs

**Wadden Sea**



**Dutch Water Defence Lines**



**Amsterdam's Canal Ring**



**Kinderdijk Windmills**



# HERITAGE TOURISM

Heritage tourism consists of visits to places that **embody the past** or/and to places related to **intangible heritage manifestations**.

—— Encyclopedia of Archaeology (Second Edition), 2024

## ECONOMIC BENEFITS

Injection of additional money into the economy.

Boost to businesses and tax revenues.

The creation of new jobs helping to diversify the local economy.

Promotion of active preservation and the protection of important local resources.

Helping to build vital relationships among and within local communities.

## SOCIAL BENEFITS

Promotion of local traditions, customs, and culture.

Improvement of the community's image and pride.

Boost of local investments in heritage resources and amenities that support tourism services.

## ENVIRONMENTAL BENEFITS

Encouragement of a culture of preservation in a community.

Boost in the awareness of the area's significance, resulting in local residents.

Visitors being mindful about their impact on the natural and built environment.



## “MICE” TOURISM

MICE tourism is a type of tourism where **large groups of people** come together in a **particular place** and for a **particular reason**, such as a mutual interest.

—— The Netherlands Ministry of Foreign Affairs

**M (Meetings)**

**I (Incentives)**

**C (Conferences)**

**E (Exhibitions)**

## ART TOURISM

Artistic initiatives and interventions create **new interest** in **historical destinations** that might have otherwise been overlooked, forgotten or underfunded.

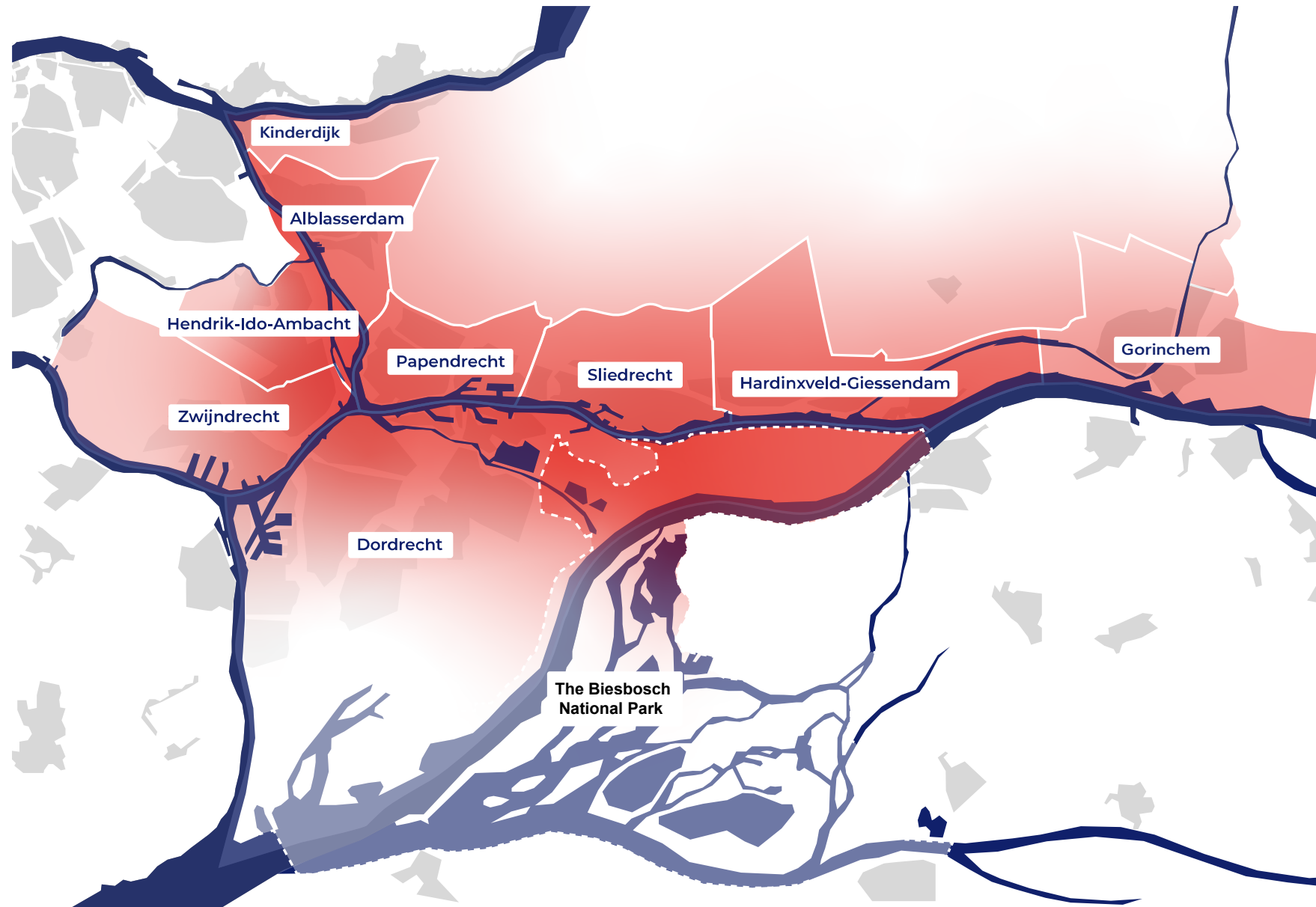
The central idea which underpins **contemporary art** commissioning in **heritage sites** is that the art will somehow offer a **new way of thinking** about the site and its contents.





SITE

# WATERDRIEHOEK HERITAGE AREA



## RESEARCH QUESTION

**What an arts tourism that fits Waterdriehoek's heritage and local community could be like?**





# ON-SITE SURVEY: WHAT IS THE IDEAL ART ACTIVITIES

The image shows a side-by-side comparison of a survey form. On the left is a desktop version, and on the right is a mobile version. Both versions contain the following text:

Hallo!

Dit is een online enquête over **Industrieel Erfgoed & Kunsttoerisme** rondom de Drechtsteden.

Er zijn 10-14 vragen, waarbij het exacte aantal varieert afhankelijk van de opties die je voor bepaalde vragen kiest.

At the bottom of each form is a blue button with a white right-pointing arrow. The mobile version also includes a status bar at the top showing the time 12:29 and a 'Powered by Qualtrics' logo at the bottom.



**Permanent Asset-heavy**



**Permanent Asset-light**



**Short-cycled Non-permanent**



**Long-cycled Non-permanent**

SURVEY RESULT - PEOPLE’S NEED





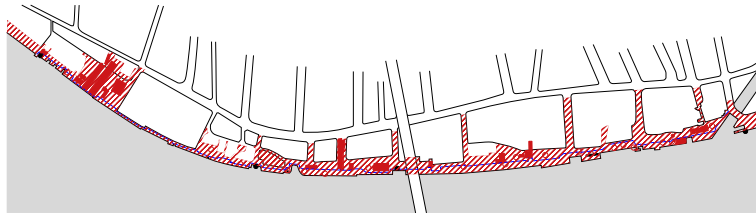
## **SURVEY RESULT - PEOPLE'S NEED**

**To maintain an appropriate distance from community life**

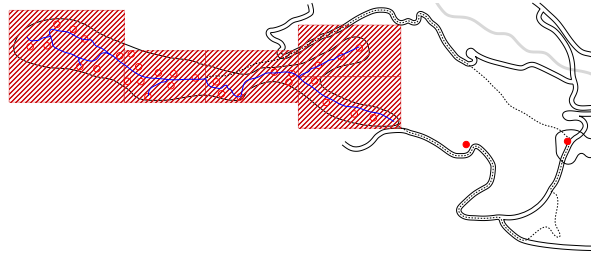
**Ensure that tourism infrastructure benefits local residents**

## CYCLICAL NON-PERMANENT ART ACTIVITIES

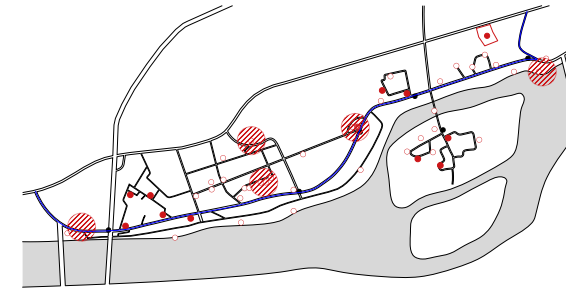
**Shanghai Urban Space Art Season 2019**



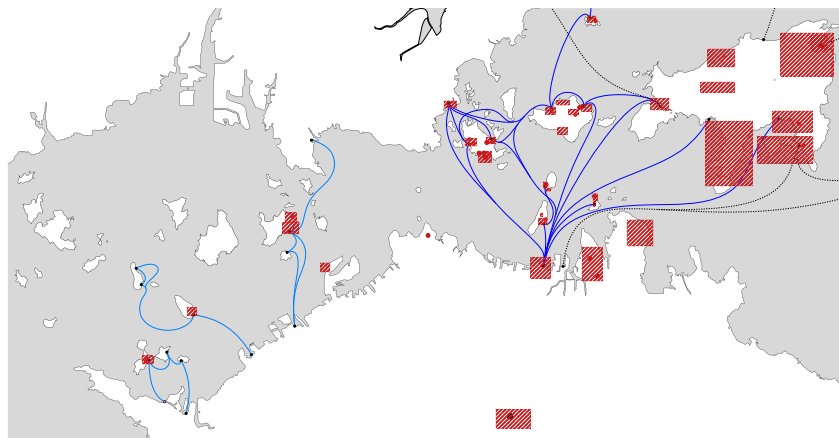
**SMACH Art Biennale**



**Hu Shi Guang Art Eco Site**



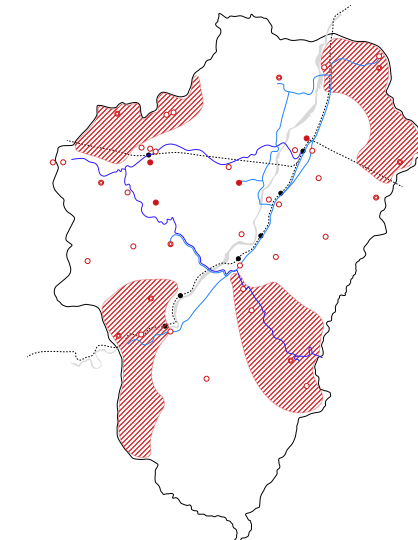
**Setouchi Triennial**



**Venice Biennale**



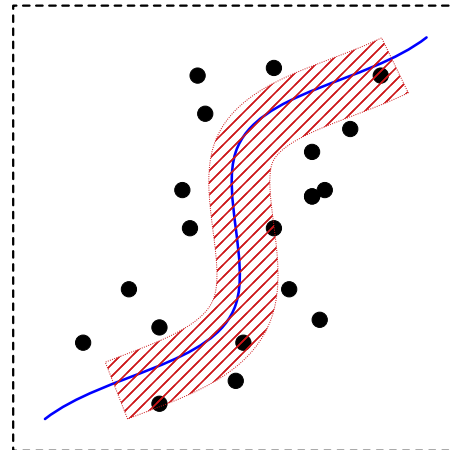
**Echigo-Tsumari Art Triennial**



## CONCLUSION

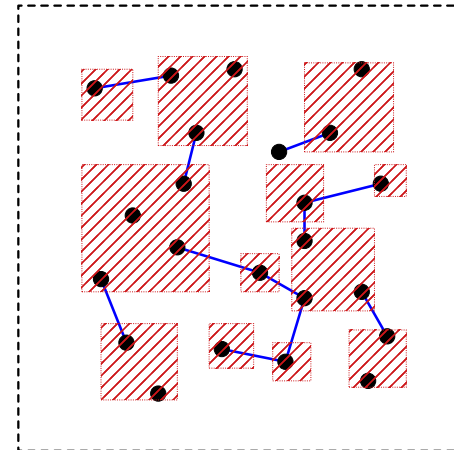
### Types of Cyclical Non-permanent Arts Activities

S



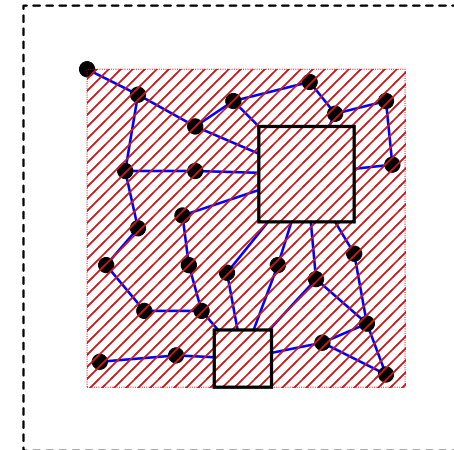
**Path-centered pattern**

L



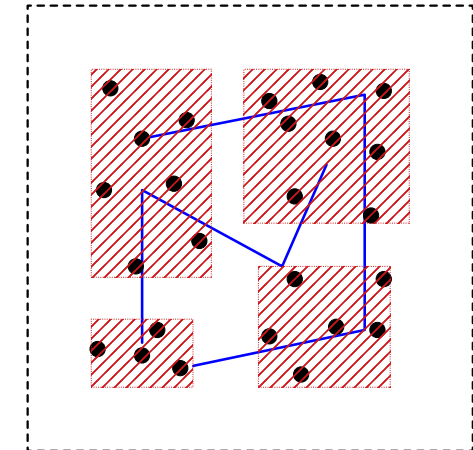
**Scattered pattern**

S & M



**‘Core + Scatter’:  
dualistic pattern**

L



**‘Region + Path + Scatter’:  
composite pattern**

# TRIENNIAL DESIGN

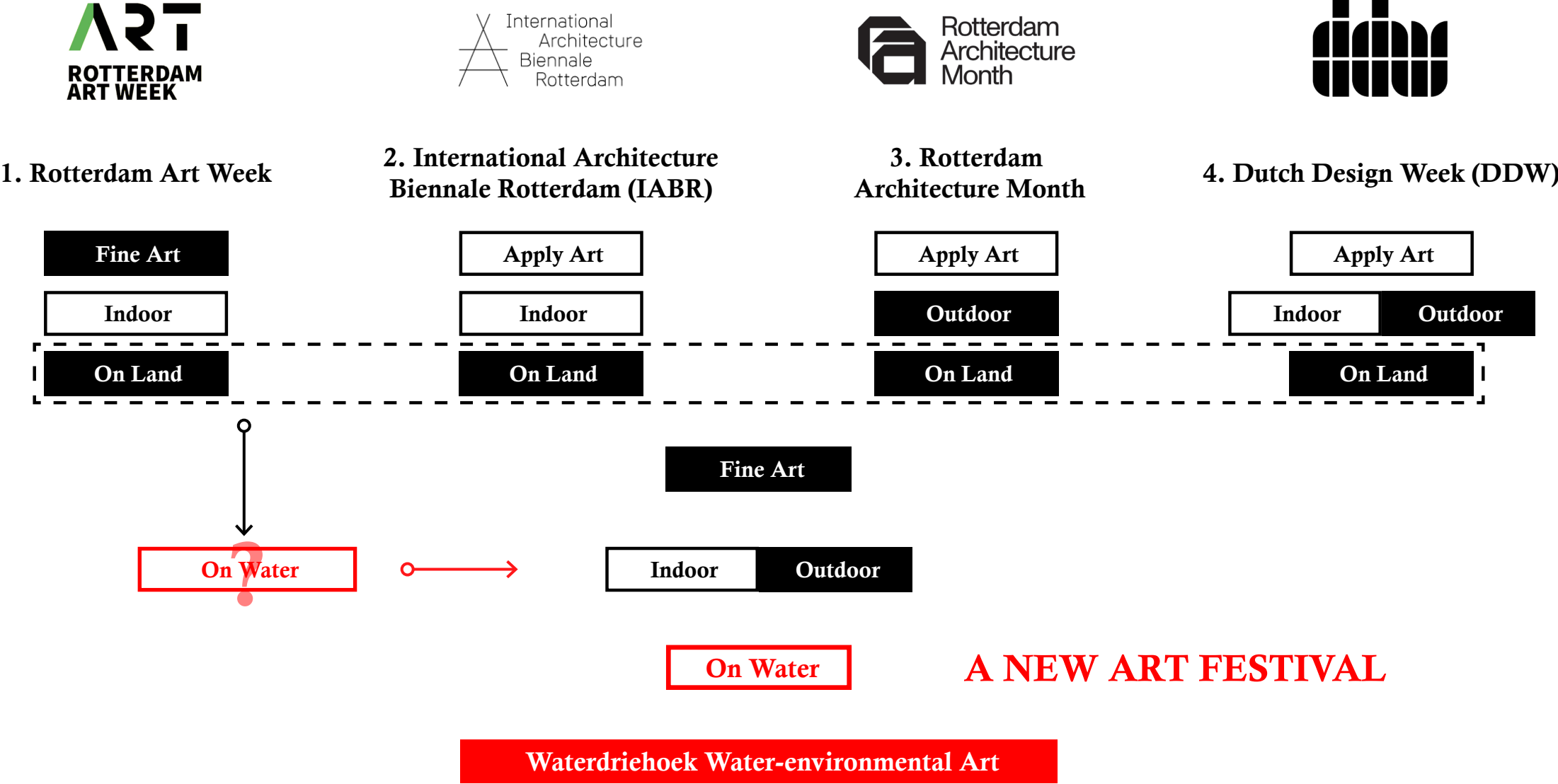
**1. Character & Theme Of Art Tourism In Waterdriehoek**

**2. Potential heritage Resources & Type & Spot**

**3. Feasibility Triennial Planning And Routes**

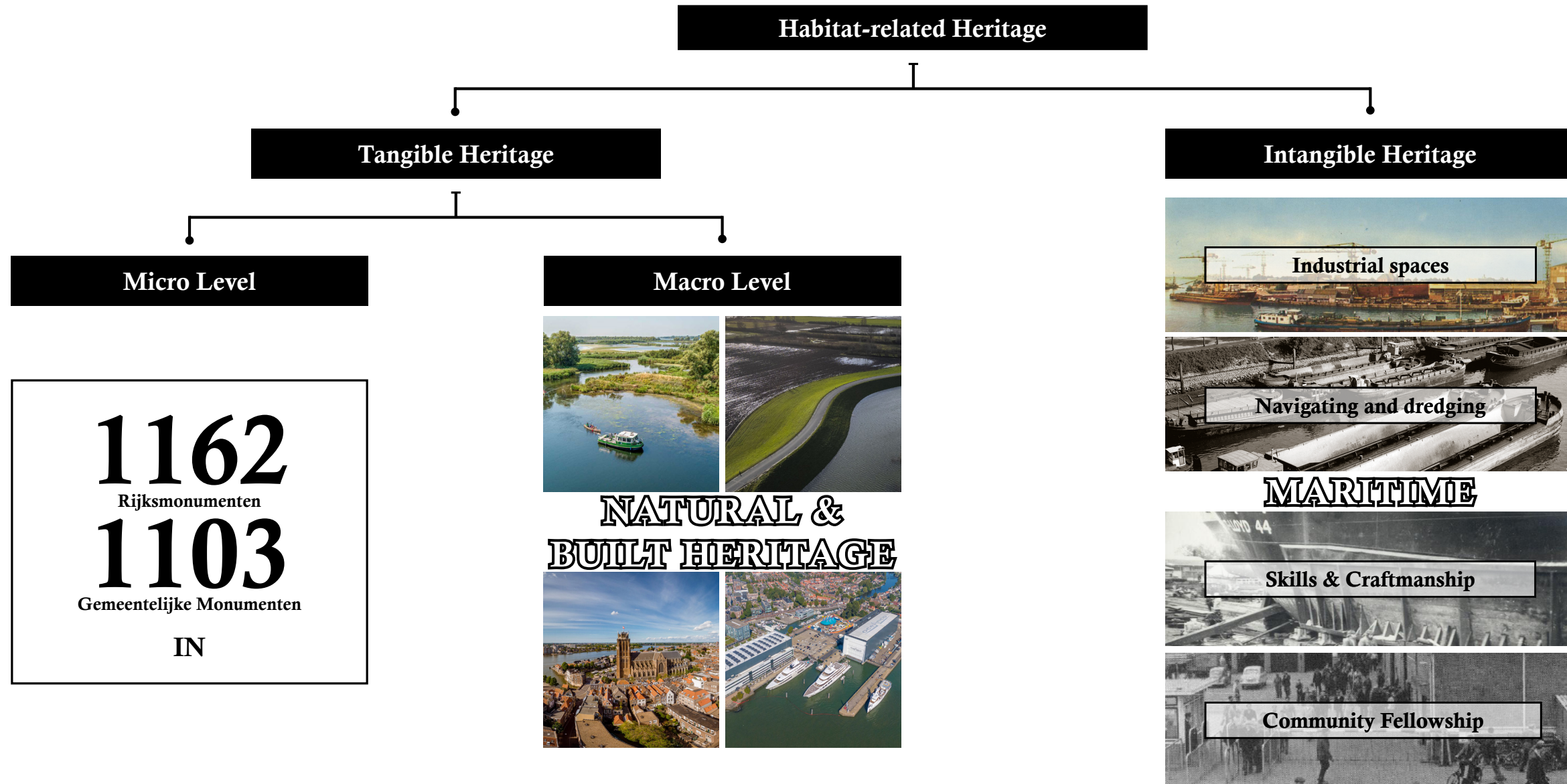


# FROM IN & OUT ZUID-HOLLAND TO A NEW CHARACTER





# HABITAT-RELATED HERITAGE CATEGORIES IN WATERDRIEHOEK

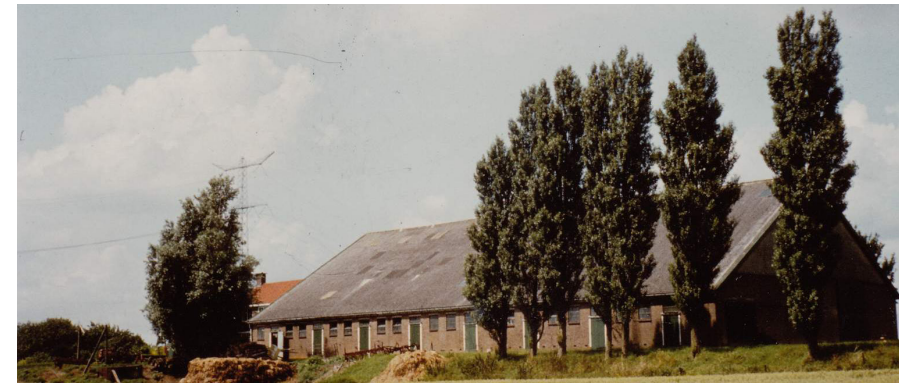


## PROBLEMS & WEAKNESS OF TOURISM

**Industrial heritage abandoned when unused.**



**Heritage buildings with reuse potential neglected.**



**Mediocre renewal of maritime communities.**

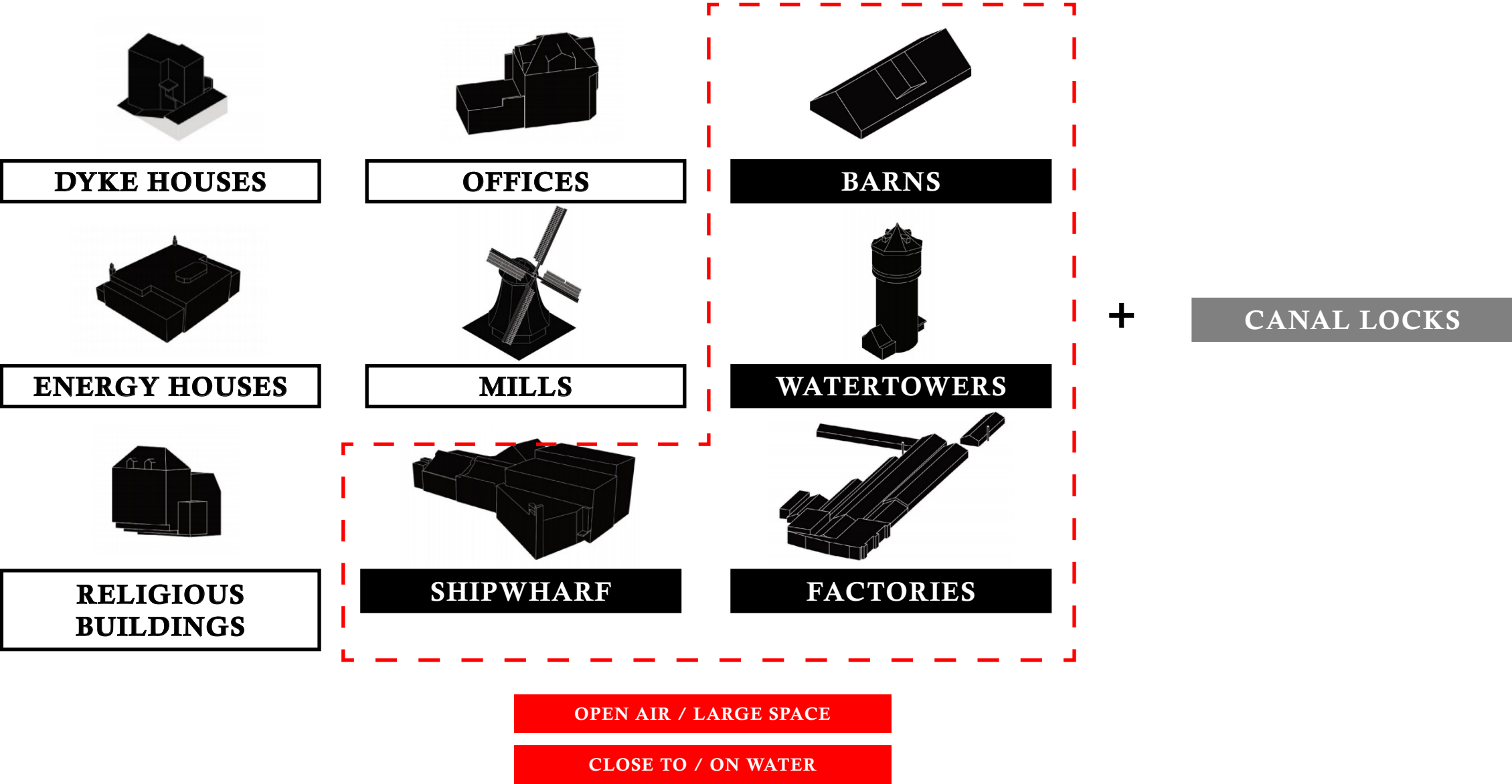


**Tourism approach appears outdated and lacking in consolidation.**

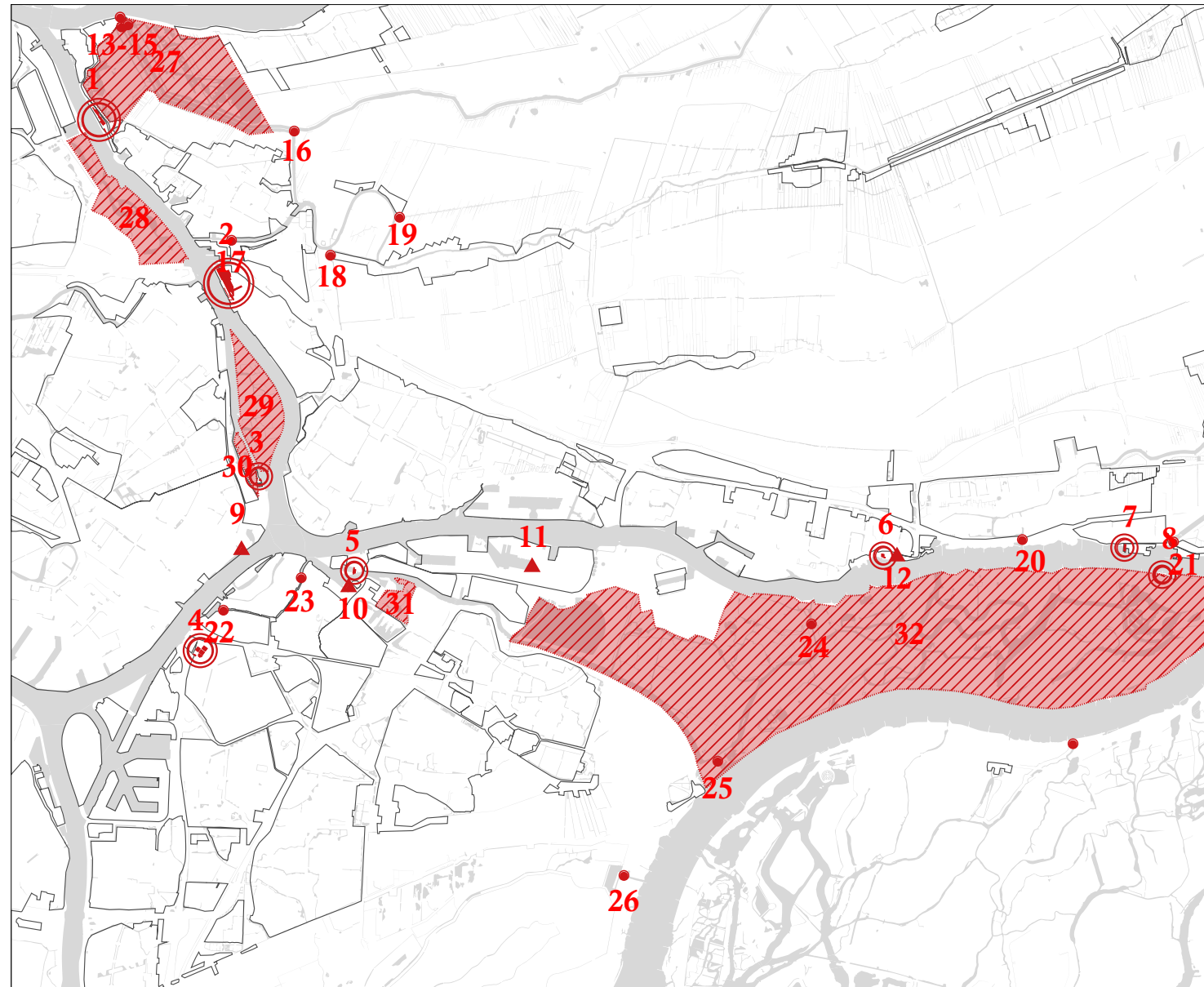




RELATIVE HERITAGE SPOTS FROM BUILDING TYPOLOGY RSEARCH



# HERITAGE SPOTS



## Abandoned Factories & Shipwharfs

- 01 Mercon Kloos, Alblasserdam
- 02 FN Steel, Alblasserdam
- 03 Niessen B.V. Shipyard, Zwijndrecht
- 04 Papegat, Dordrecht
- 05 Former Shipyard de Biesbosch, Dordrecht
- 06 De Zaai Shipyard, Sliedrecht
- 07 Dalm Metals Industrial Hall, Hardinxveld-Giessendam

## Barns

- 08 Barn on the Aart Eloyenbosch Polder

## Watertowers

- 09 Watertoren Zwijndrecht
- 10 Watertoren Dordrecht
- 11 Watertoren Dordrecht DuPont
- 12 Watertoren Sliedrecht

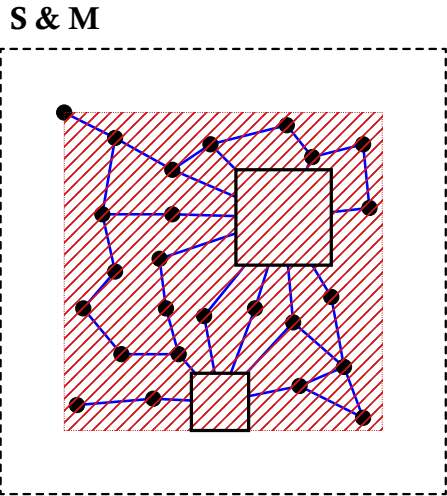
## Canal Locks

- 13-15 Canal locks of Kinderdijk, Alblasserdam
- 16 J.C. Smitsluis, Alblasserdam
- 17 Le Barrage Restaurant, Alblasserdam
- 18 Vinkenvolderweg 35a, Alblasserdam
- 19 Kooiwijk 3a, Oud-Alblas
- 20 De Peulensluis, Hardinxveld-Giessendam
- 21 Mr. Dr. G. Kolff gemaal, Hardinxveld-Giessendam
- 22 Prinsenstraat lock, Dordrecht
- 23 Noordendijk lock, Dordrecht
- 24 Helsluis, Dordrecht
- 25 Rijkswaterstaat, Dordrecht
- 26 Hevel & Overtoom, Dordrecht

## Natural & Artificial Wetlands

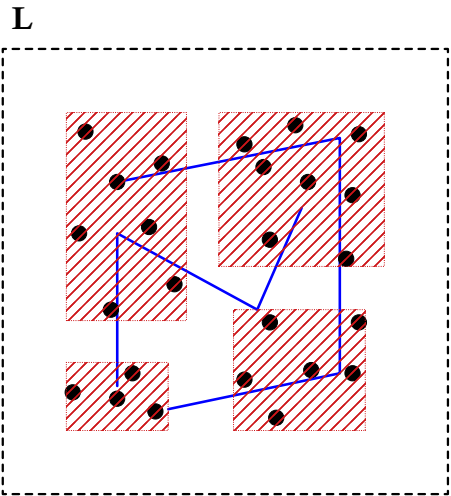
- 27 Boezems Kinderdijk
- 28 Crezéepolder
- 29 Natuureiland Sophiapolder
- 30 Galgeplaat
- 31 Speeltuin Wantijpark
- 32 Merwelanden

# WAT PATTERNS OF SPATIAL ORGANIZATION

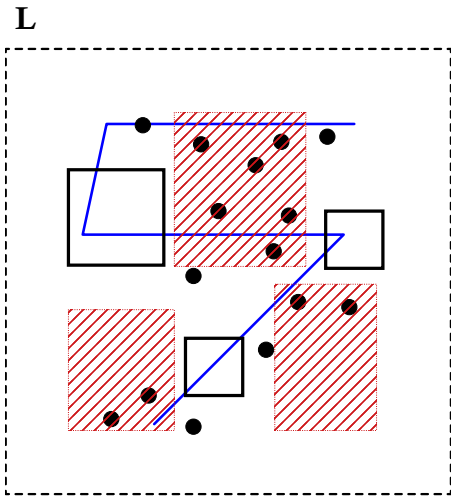


‘Core + Scatter’:  
dualistic pattern

+



‘Region + Path + Scatter’:  
composite pattern

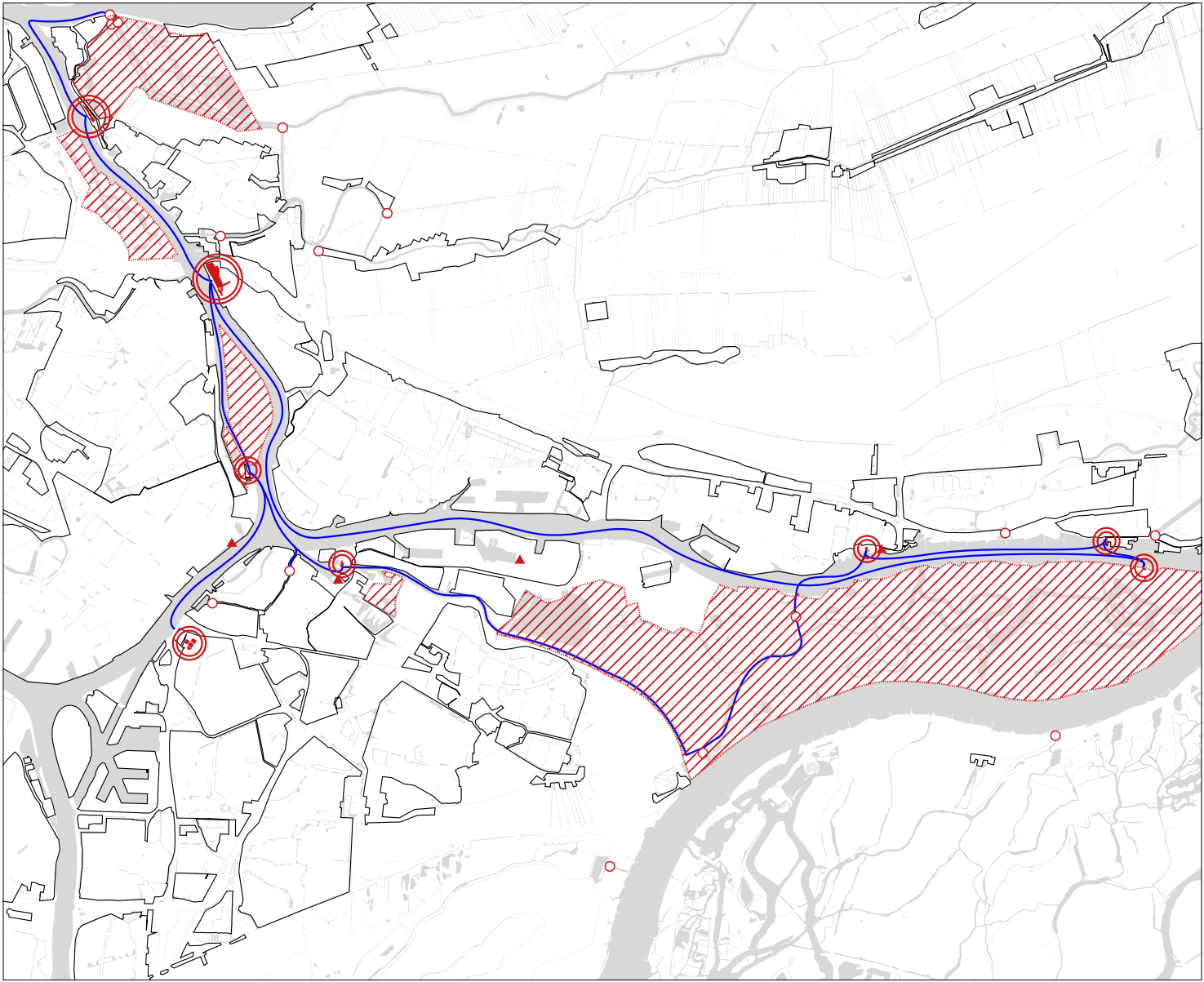


WAT pattern

Main Exhibition Areas
FN Steel, Mercon Kloos, Papegat
Art Regions
6 natural heritage wetlands
Art Spots
12 canal locks + 4 watertowers
Tourism Routes
6 water routes, stop on industrial heritage buildings

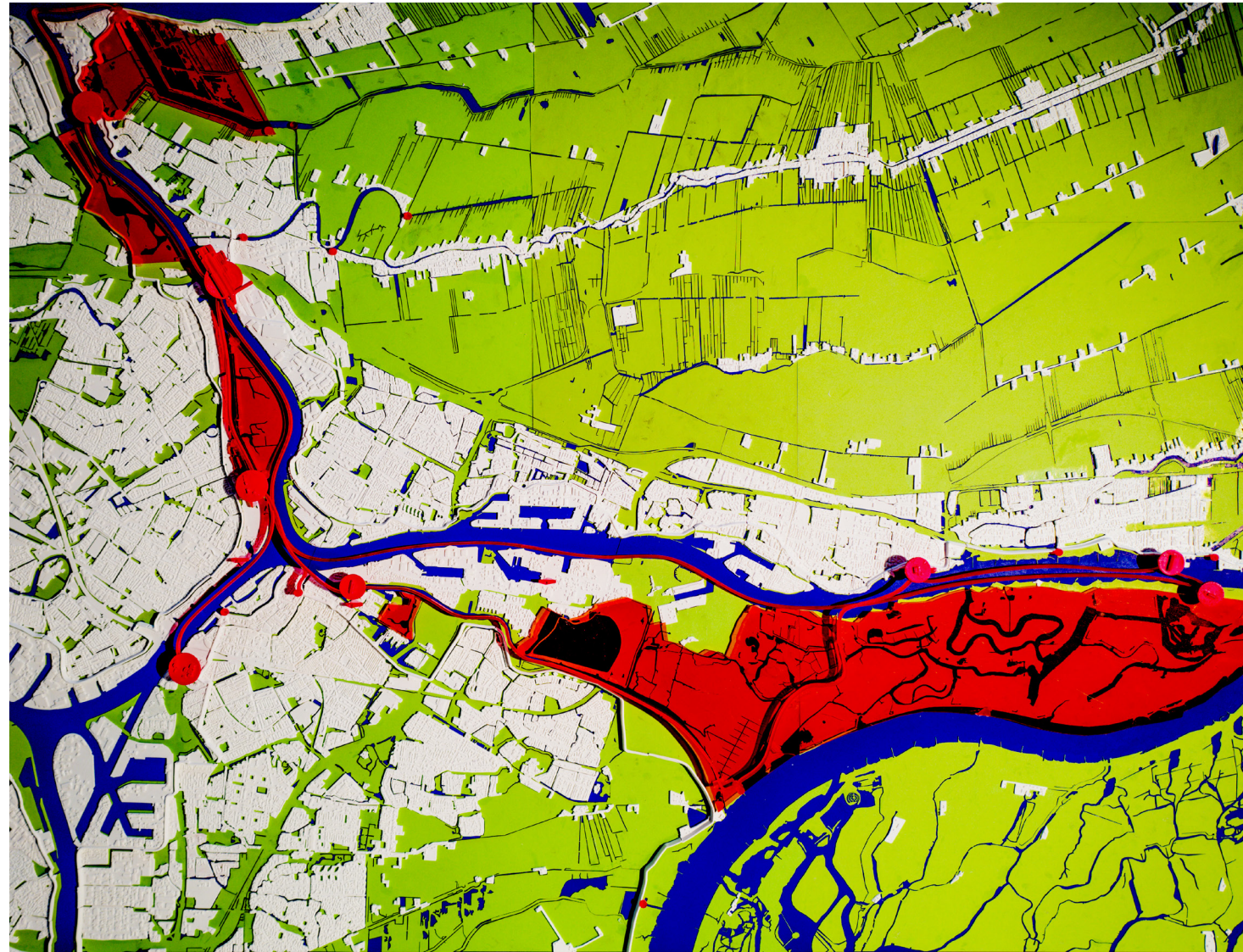


# ART TRIENNIAL ROUTES



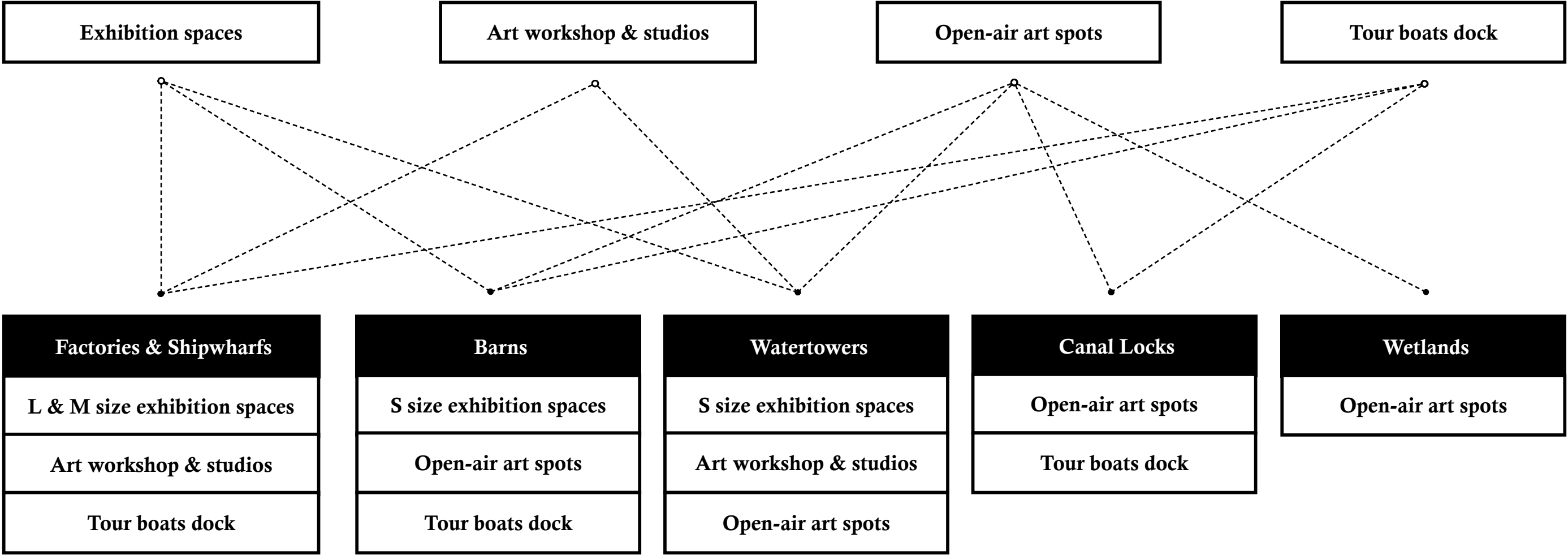
- LEGEND**
- Industrial Heritage Reuse
  - Art Spot at Watertower
  - Art Spot on Watergate
  - Art Activity Area
  - Tourism Route

## ART TRIENNIAL ROUTES: MODEL





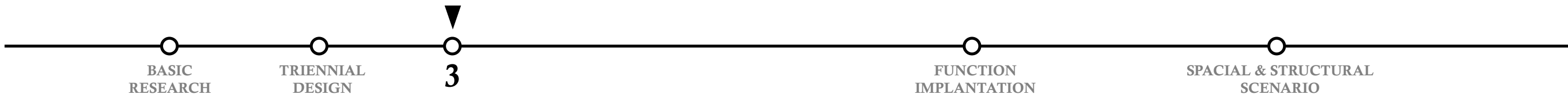
COLLECTIVE HERITAGE SPOTS & FIELDS: POTENTIAL ROLES



# M<sub>AIN</sub> G<sub>ALLERY</sub> S<sub>ITE</sub> & A<sub>NALYSIS</sub>

1. Site Choice & History & Area

2. Value Assessment & Design Principle



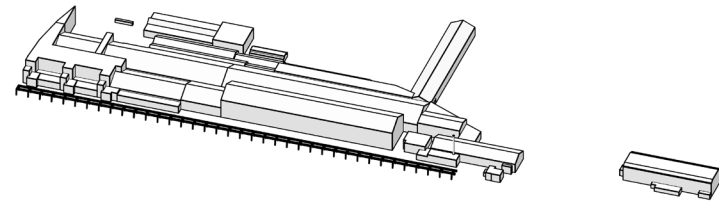
# FN STEEL FACTORY BUILDINGS IN HISTORY: SINCE 1961



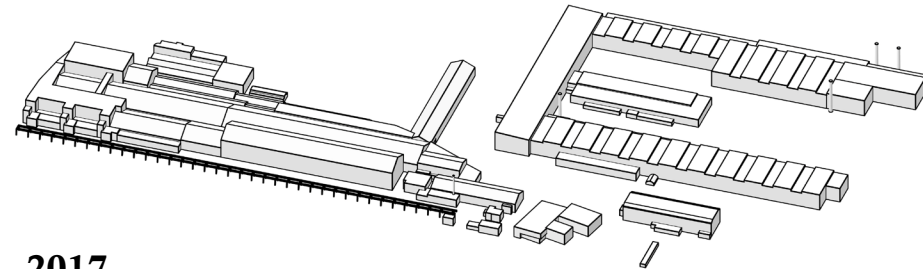
Belongs to Nedstaal BV from 1938 to 2017



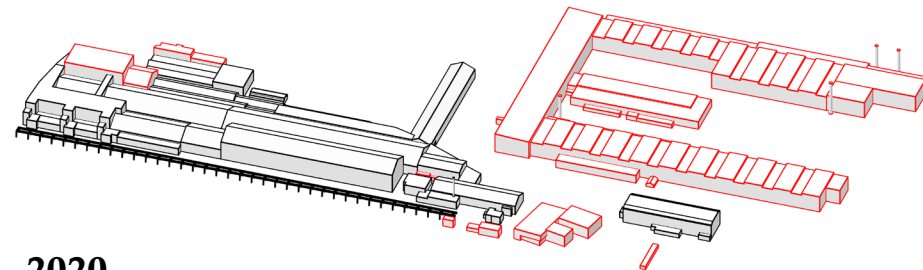
# THE CHANGE OF FN STEEL FACTORY OVER TIME



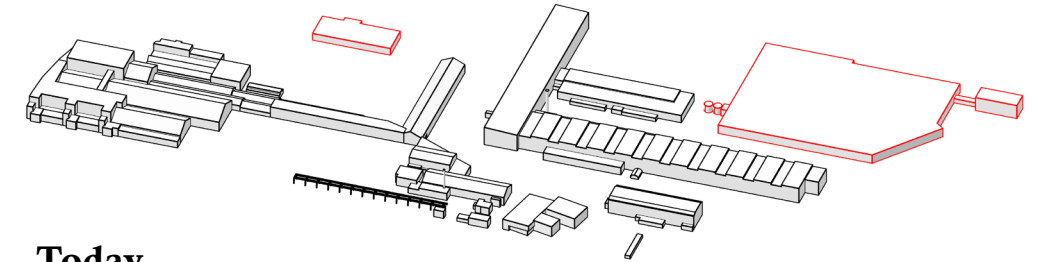
2007



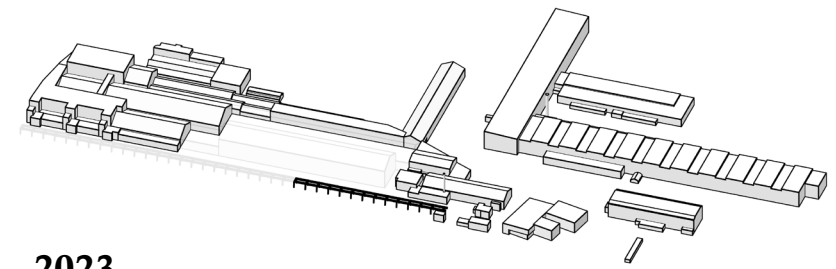
2017



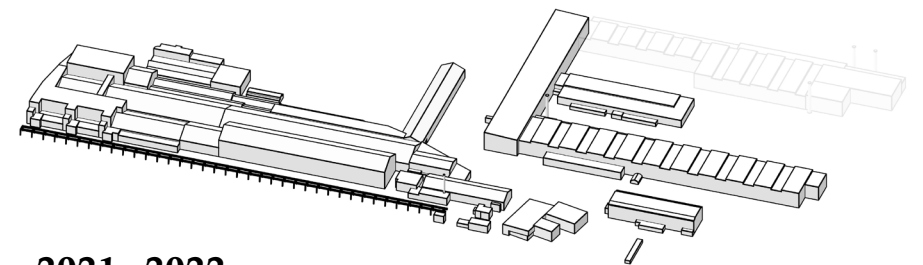
2020



Today

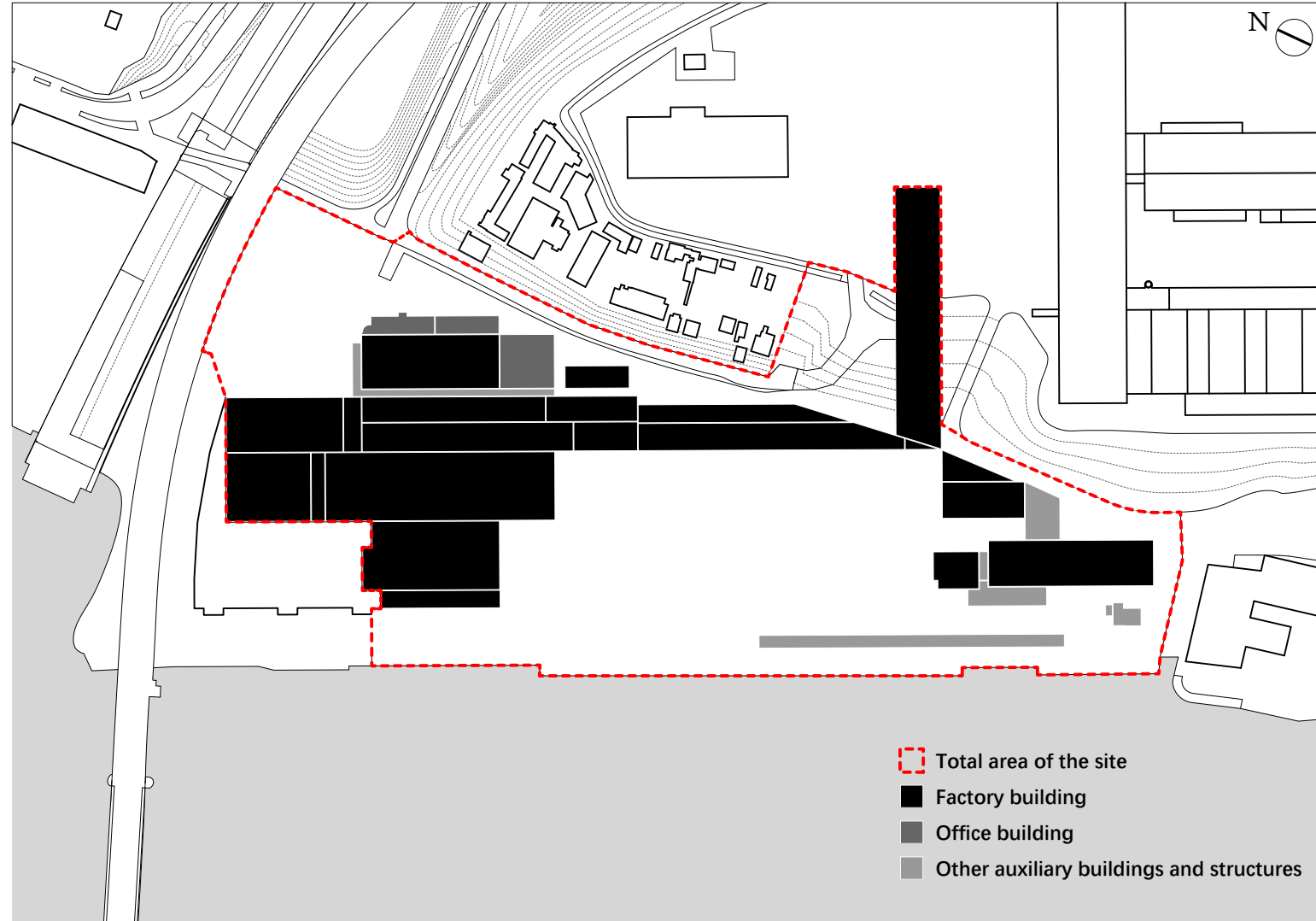


2023

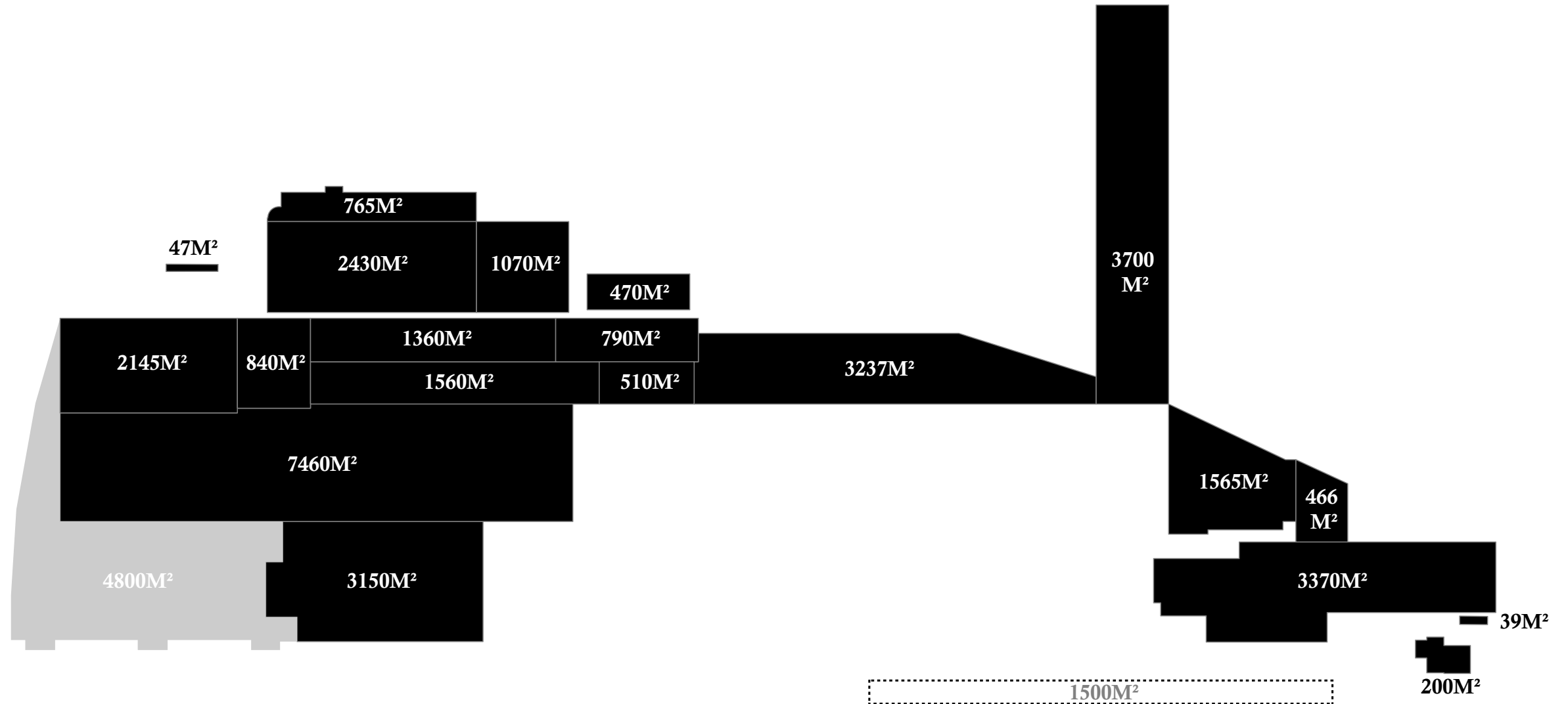


2021~2022

# FN STEEL EXISTING VOLUME TYPOLOGY



## BREAKDOWN OF EXISTING FOOTPRINT AREAS



## VALUE ASSESSMENT IN TOTAL

### **Main Structure: +++++**

**Has irreplaceable value in terms of historical significance, spatial uniqueness, and structural aesthetics, and should be fully preserved and improved**

### **Order Of Volume Combinations: +++**

**Has time cascading value and responds to industrial logic, but the dismantling that has occurred has compromised integrity**

### **Material & Surface: ++**

**The color and texture combinations of the iron columns and brick walls are representative, but the cluttered tin facades and roofs are of low value**

## PRINCIPLE: TRANSFORMABLE

**THE OLD: STRUCTURES STILL, ENVELOP CHANGE**

**Transformable Shell For Transformable Sence Of Space**

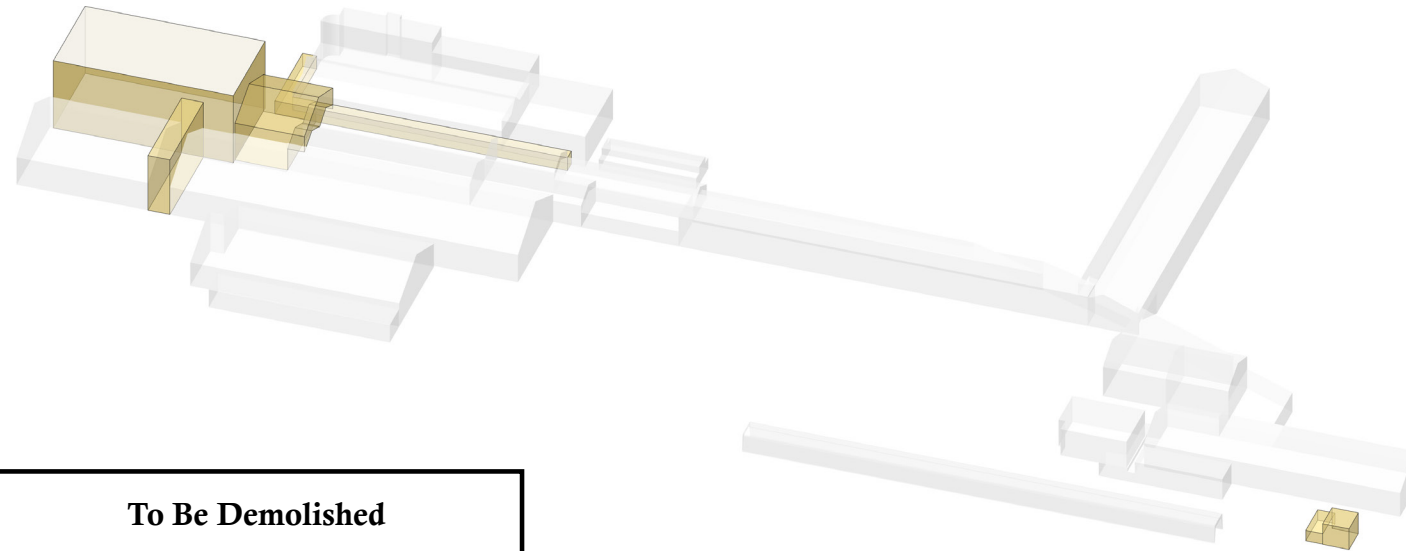
**+**

**THE NEW: INTERCHANGEABLE CONSTRUCTION, MOVABLE SPACE**

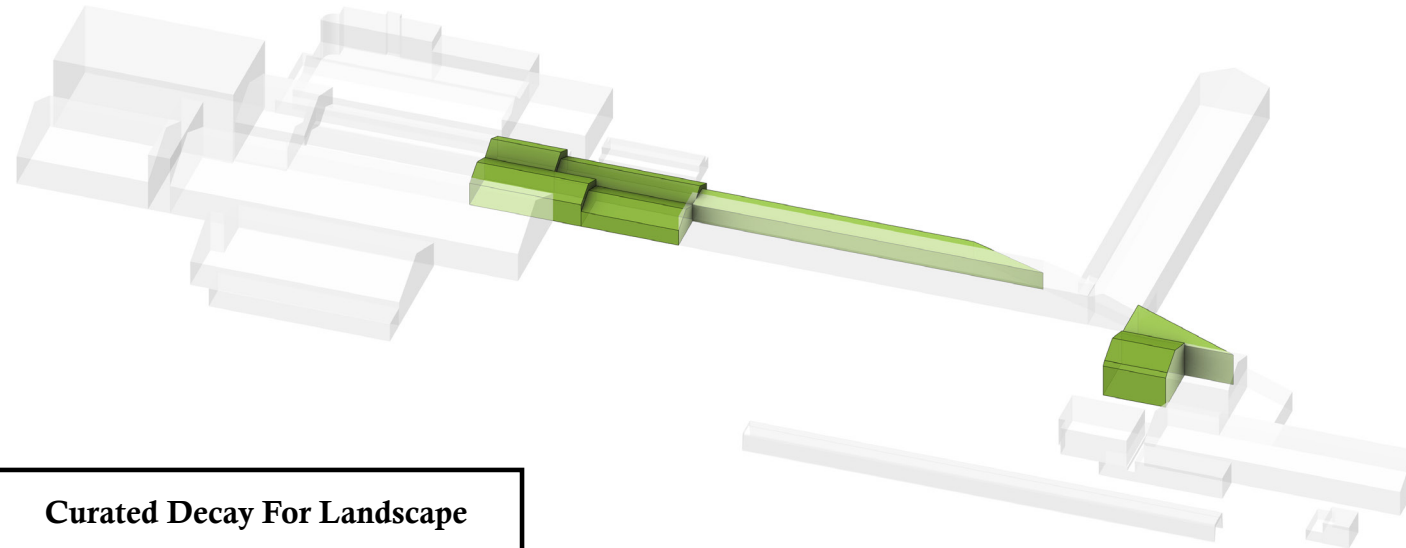
**Transformable Structure For Transformable Function**



## CONCLUSION & TREATMENT



To Be Demolished



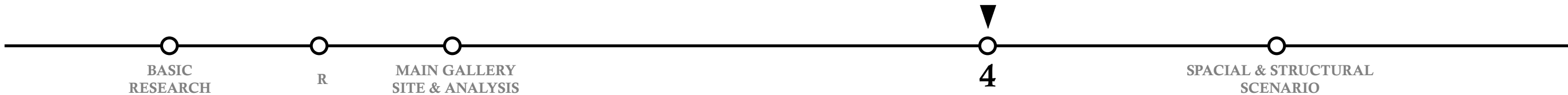
Curated Decay For Landscape

# FUNCTION IMPLANTATION

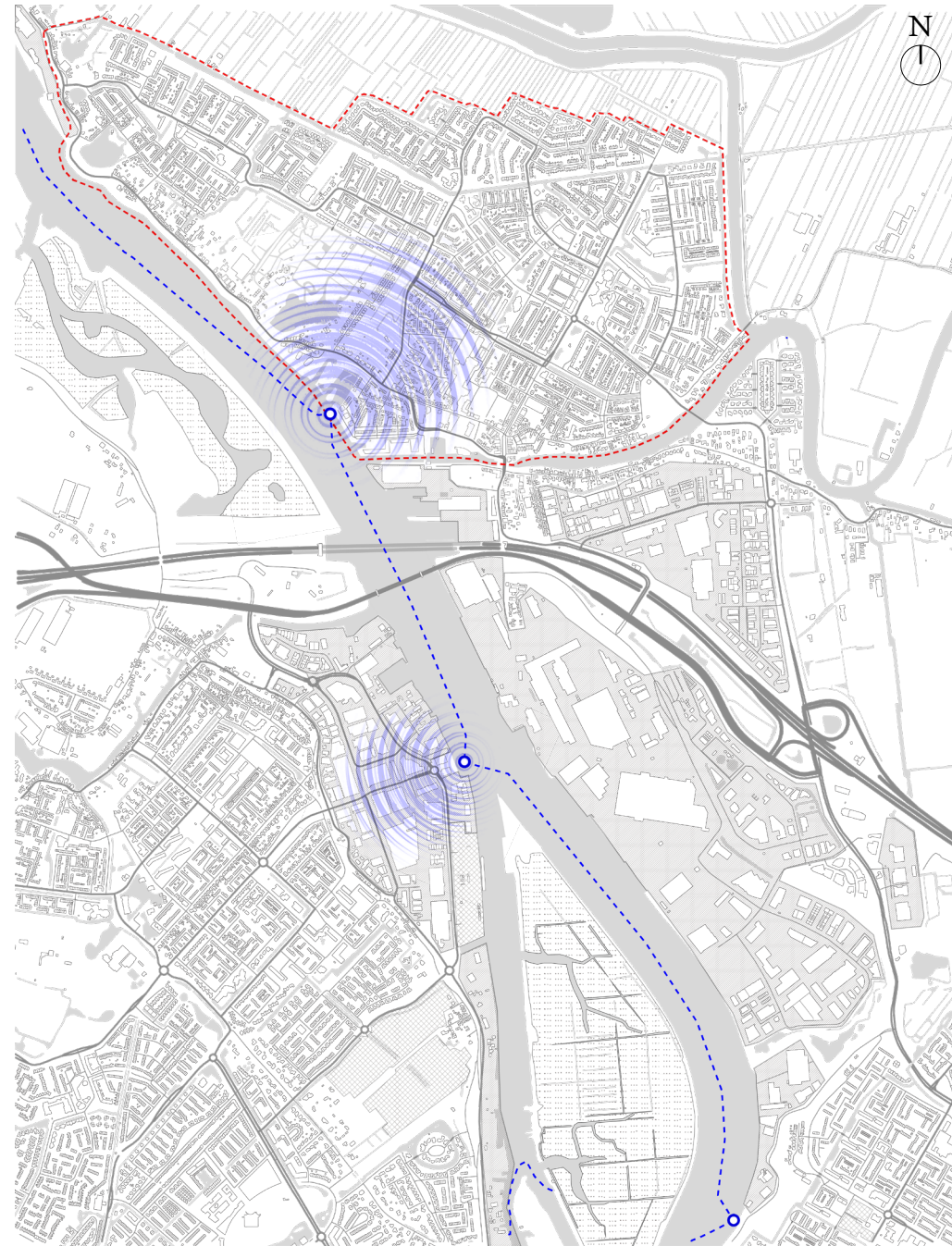
1. Infrastructure Role In The Urban Environment

2. Function Research

3. Program On Site

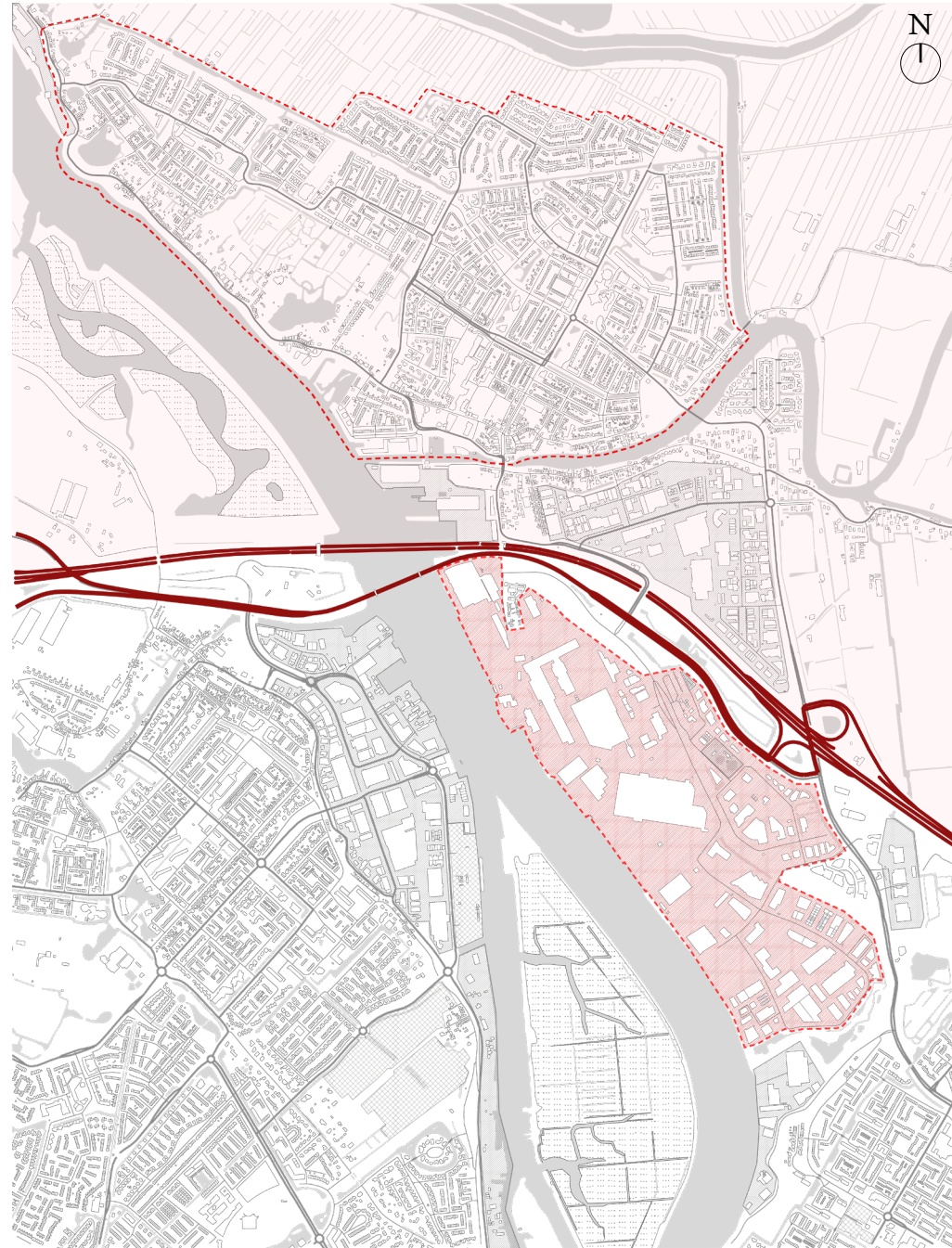


# EXISTING WATER TRANSPORTATION

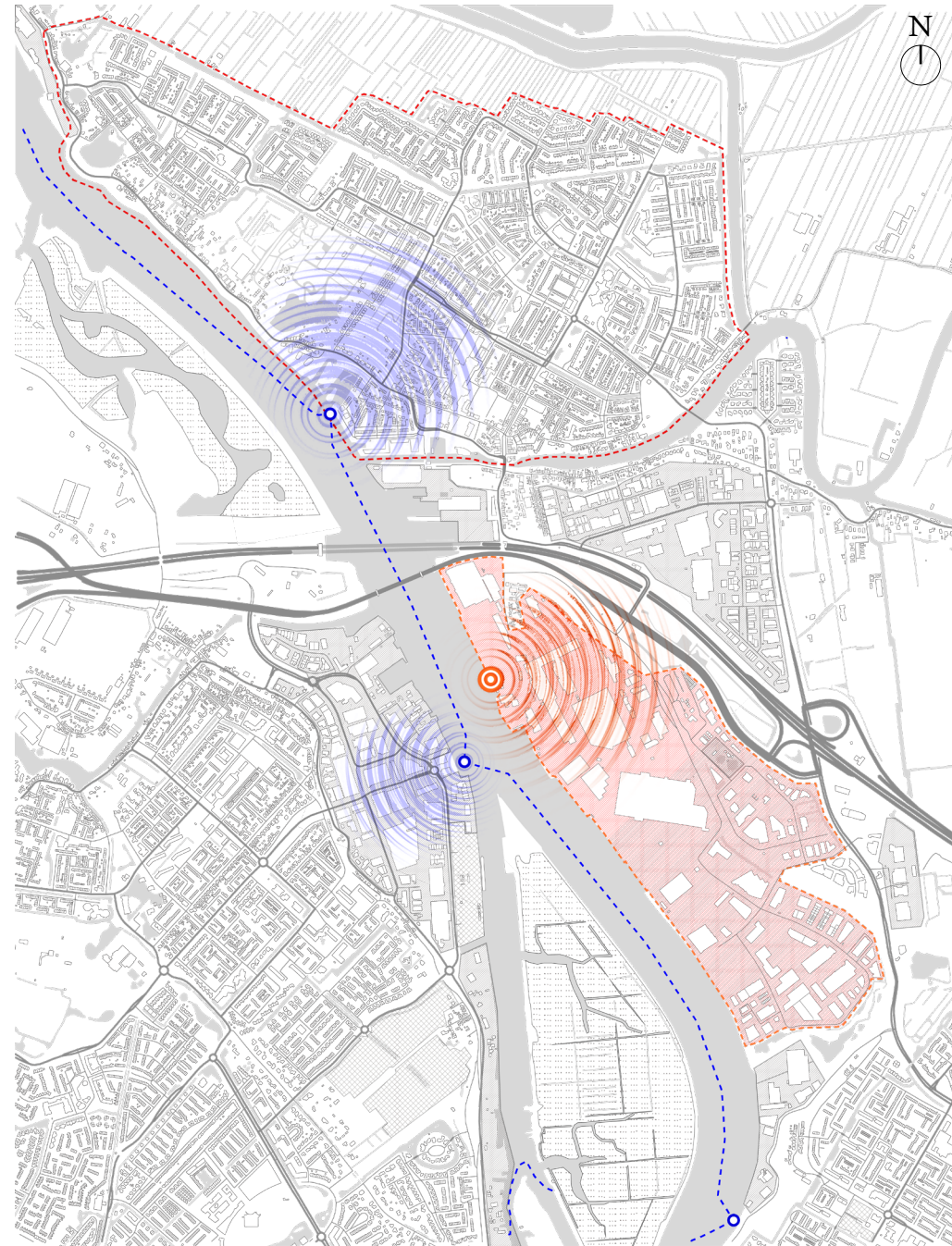




# URBAN SEGREGATION & REGENERATION

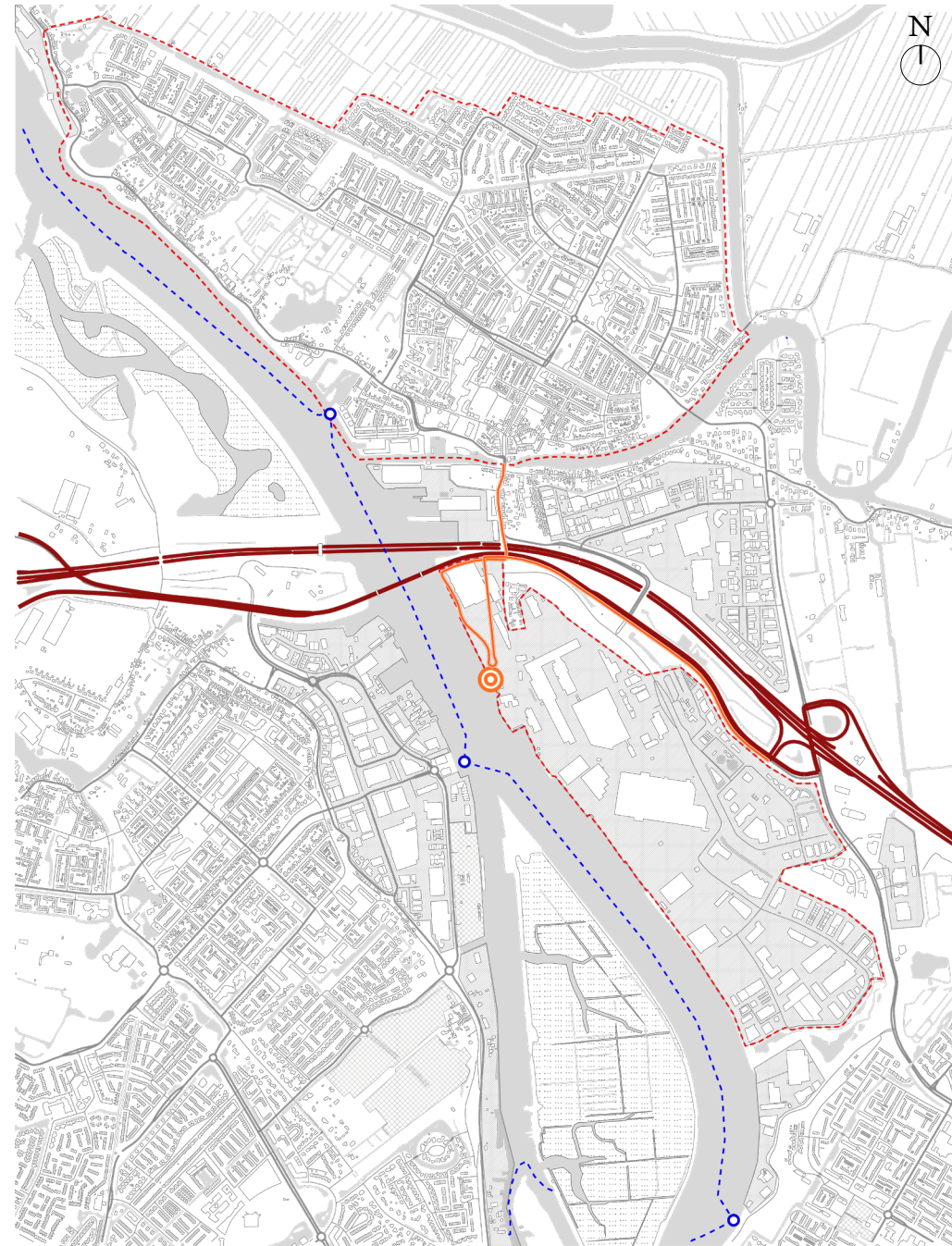


# A WATER BUS STOP TO SERVE NEW NEIGHBORHOODS





# ELEVATED BIKE LANES: RAPID CONNECTIVITY & COMMUTING



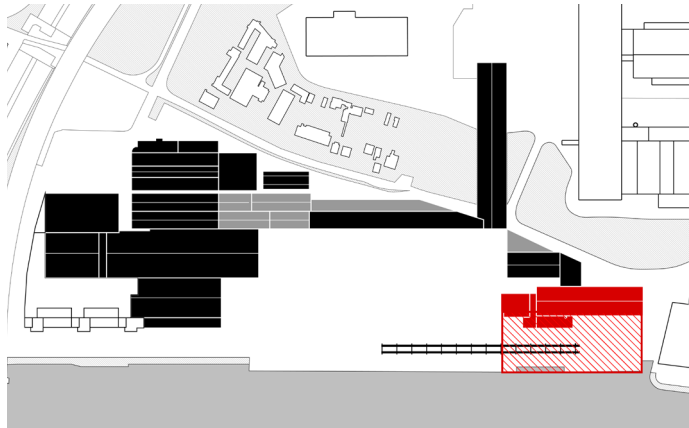
# THE DUAL PURPOSE OF THE WATER BUS STOP



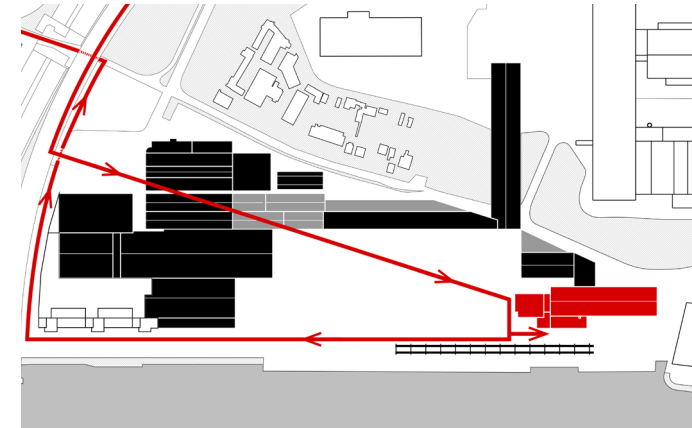


## INFRASTRUCTURAL REQUIREMENTS

To convert the most water-neighboring blocks and racks into water terminals for water bus and tour ferry



A skybridge bikeway should be installed using the existing approach bridge to bring the neighborhoods on both sides of the barrier to the terminals



# SEASONAL CHANGE OF FUNCTIONS & SPACES

## Retained Elements (shell)



## Triennial Exhibition Period



Art Tourism

Local Benefit

## Non-exhibition Period



Art Tourism

Local Benefit

1. WAF Permanent Exhibition Space
2. WAF Temporary Exhibition Space
3. WAF Water Art Manufacturing Workshop
4. WAF Exhibition Boat Dock

5. Small Boat Sale and Repair and Maintenance Center
6. Water Sports And Equipment Shop
7. Watercraft Driving & Maritime School
8. Community Cultural Clubs & Associations Center

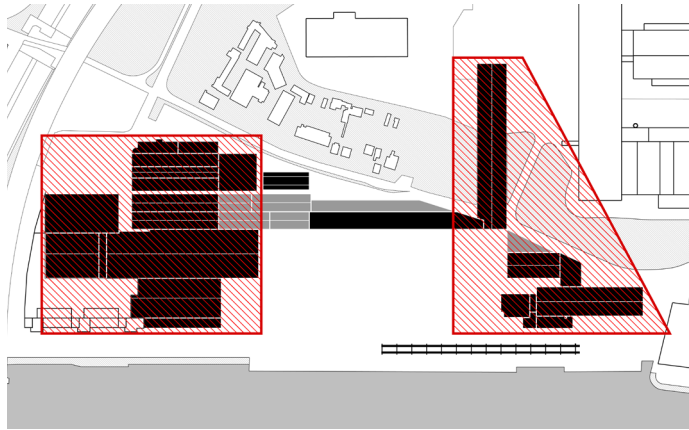
## PROGRAM BAR & RELATION SCHEME

EXHIBITION SPACE
ART STUDIO
ART SHOP
FERRY STATION & BOAT PARKING
GASTRONOMY
MARITIME SCHOOL
CLUB & CULTURAL CENTER
REPAIR & MARITIME SHOP

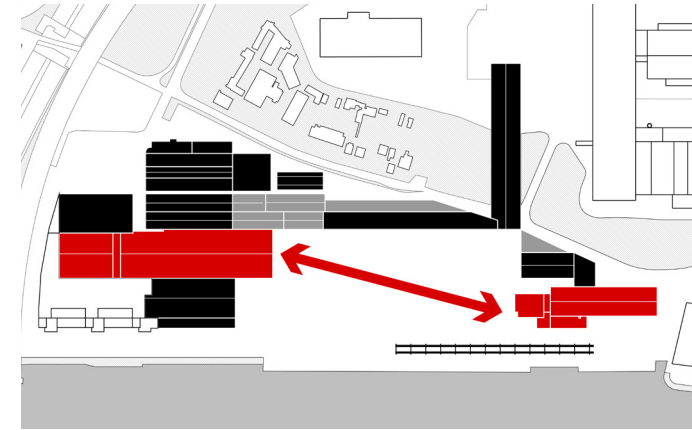
ACCESSIBLE LANDSCAPE
INACCESSIBLE LANDSCAPE
LOBBY & RELAX SPACE
VERTICAL CIRCULATION
CORRIDOR & RELAX SPACE
FACILITIES
SERVICE
ADMINISTRATION
PARKING & BASEMENT

# FUNCTIONAL DESIGN REQUERMENTS

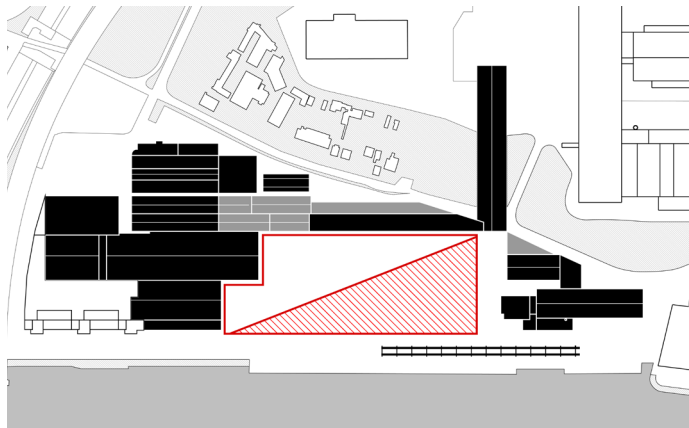
The two groups of volumes should be relatively independent during non-exhibition period



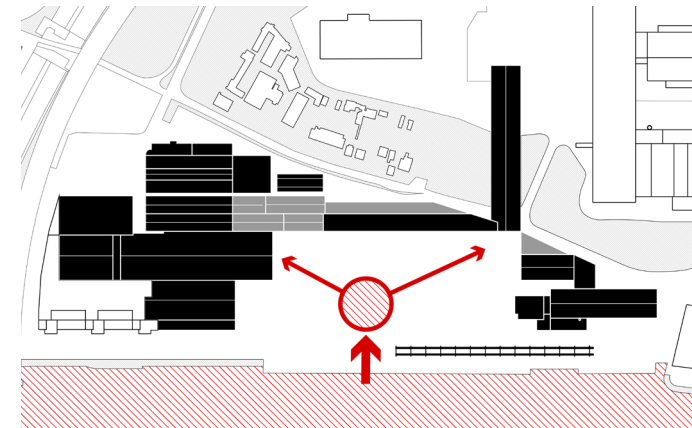
The axis of the main exhibition halls should be directly connected to the cruise pier during the exhibition period



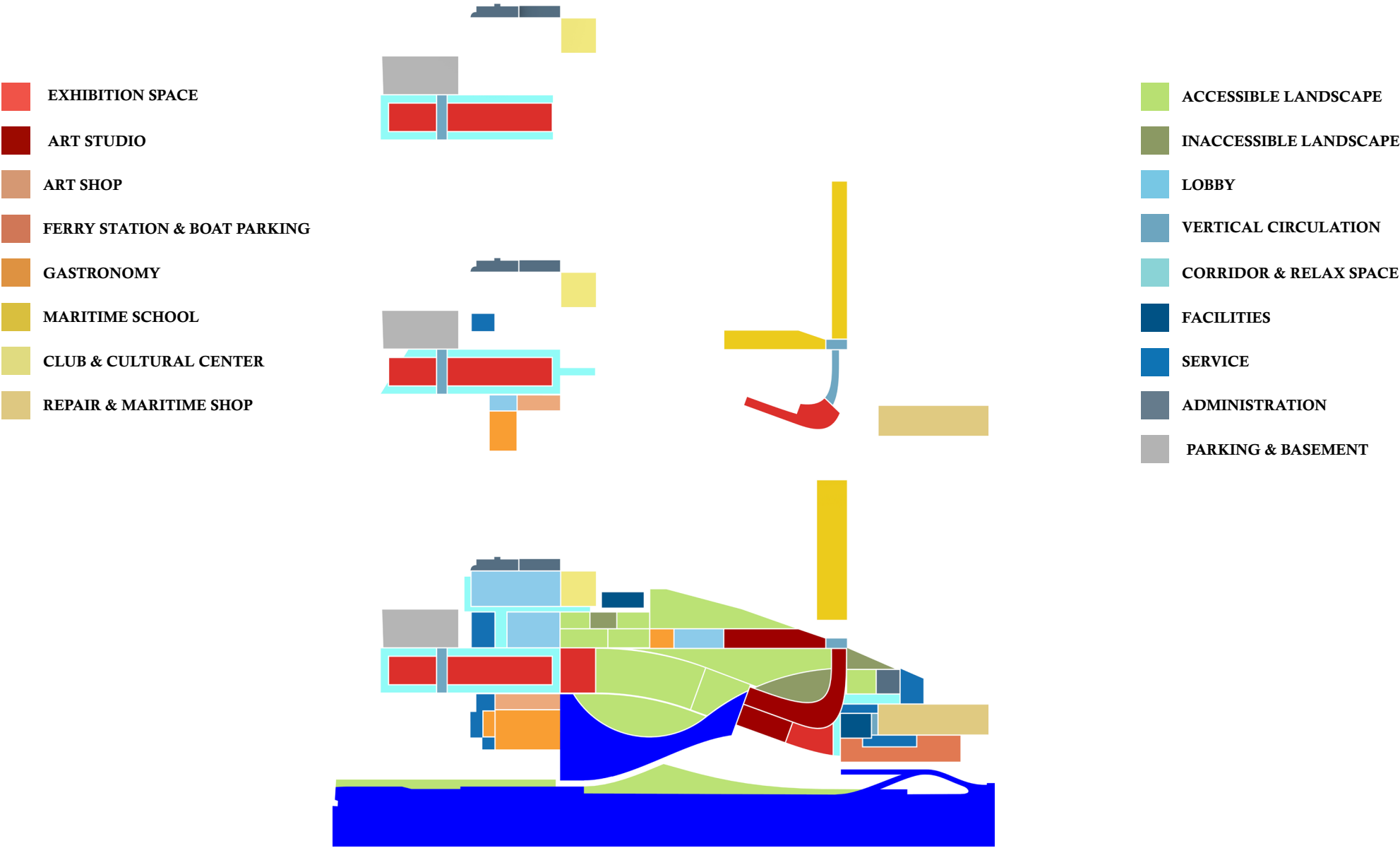
The open space after demolishment on the site should be bisected into two parts, landscape and waterscape



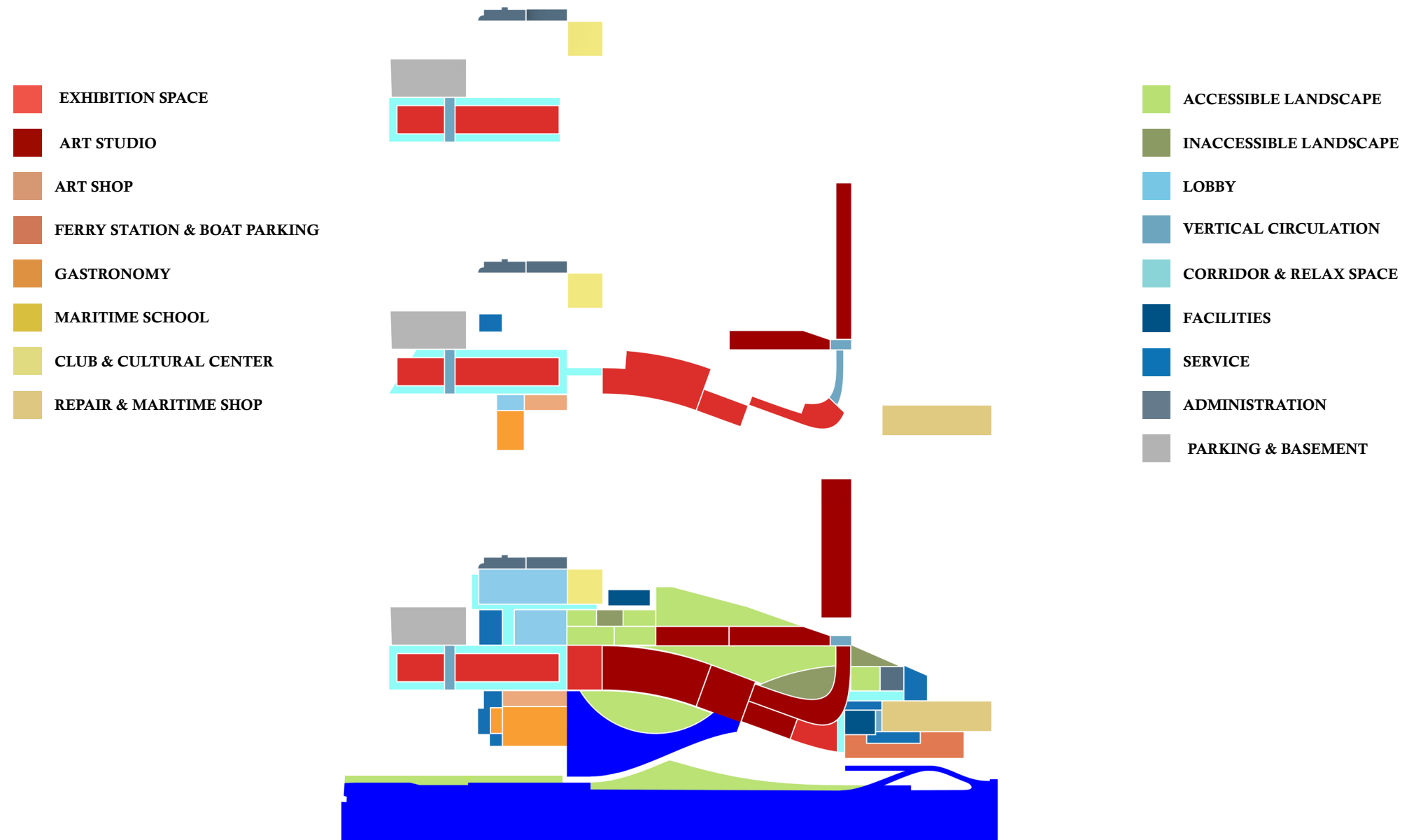
The waterscape of the open space should both connect the river and introduce into the main exhibition halls and workshop halls



NON-TRIENNAL PERIOD FUNCTIONAL PLAN



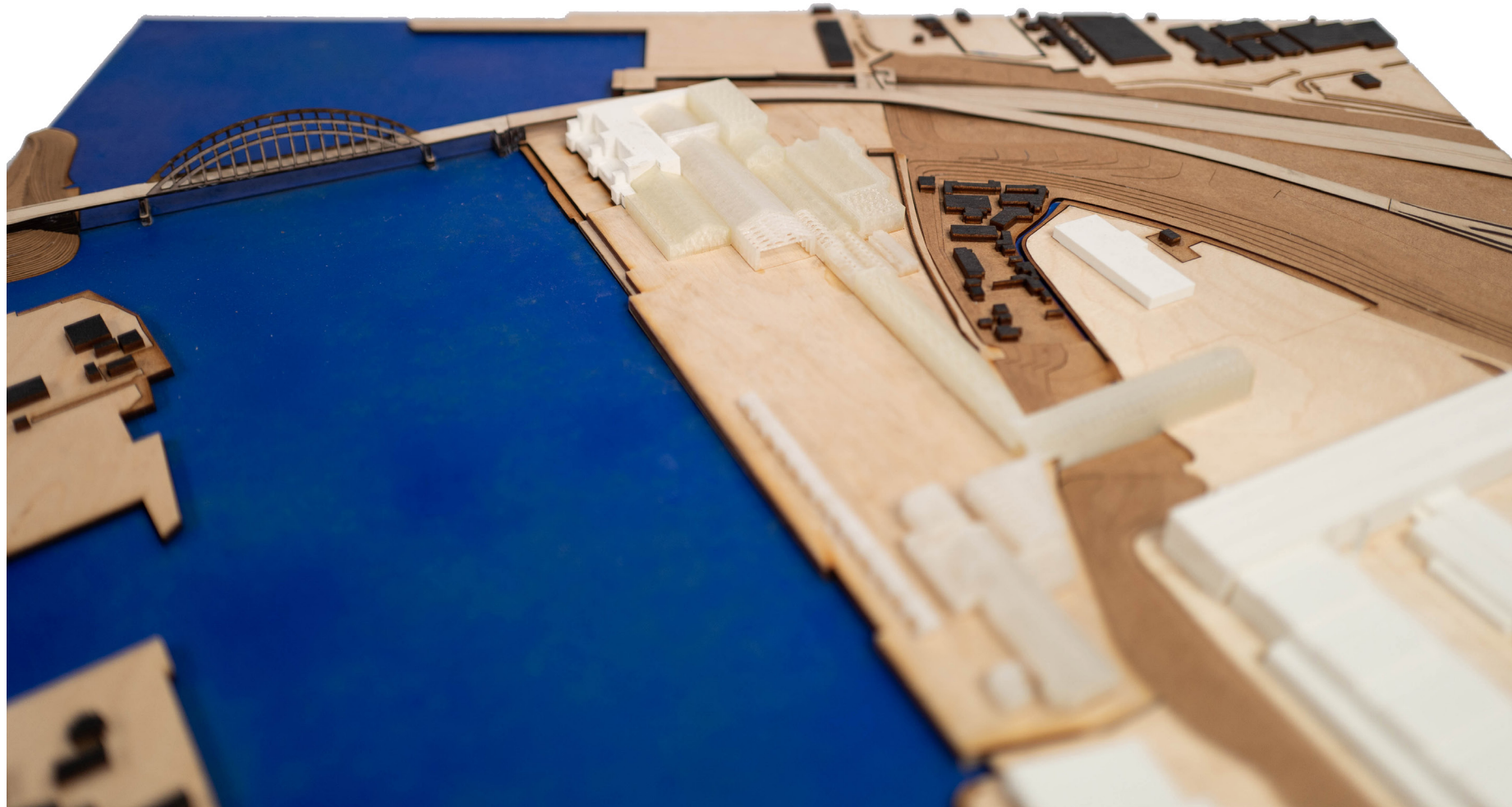
# TRIENNIAL PERIOD FUNCTIONAL PLAN





PROGRAM ON SITE

## FUNCTIONAL MODEL: ORIGINAL



PROGRAM ON SITE

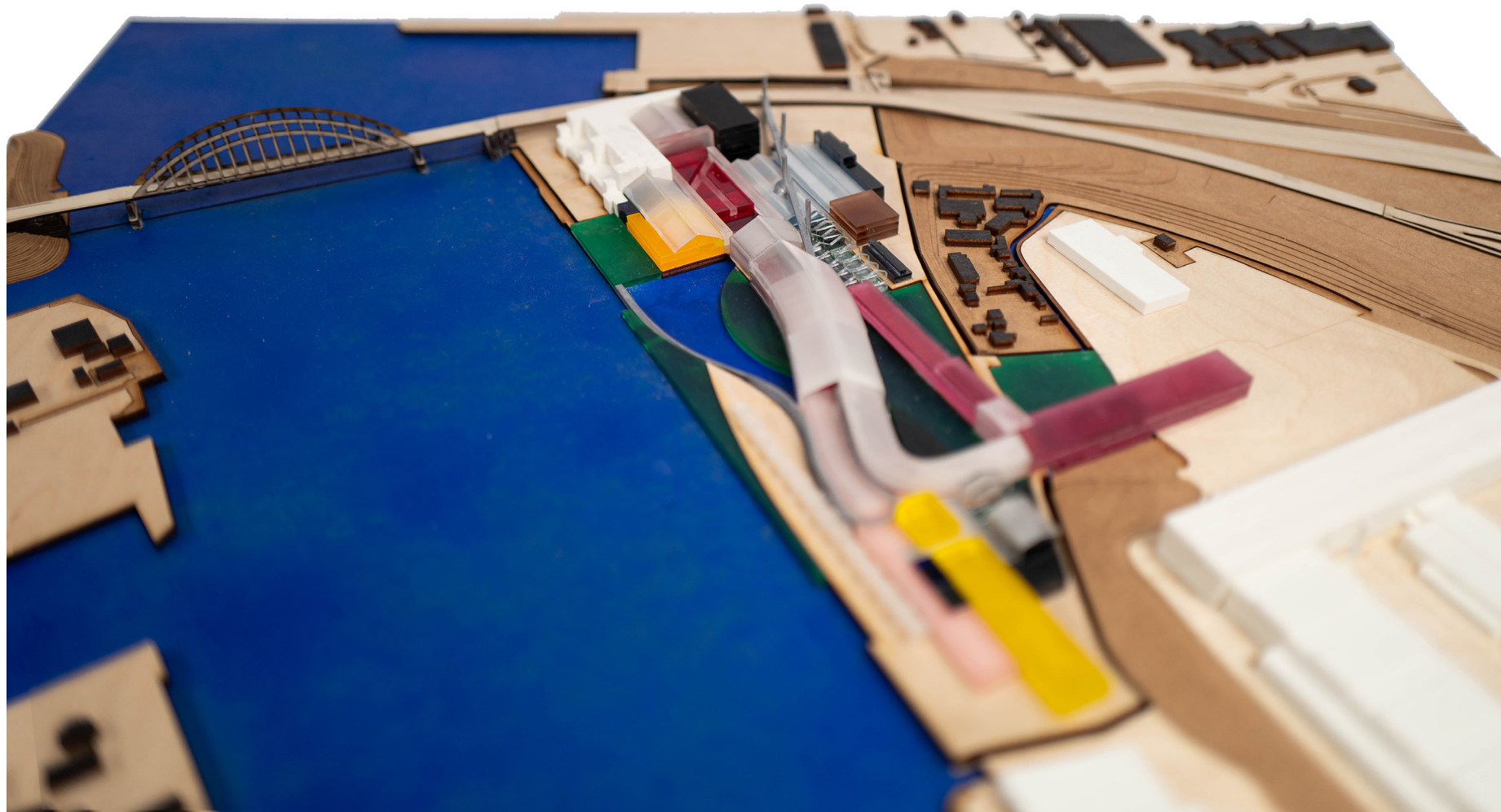
## FUNCTIONAL MODEL: NON-TRIENNIAL PERIOD





PROGRAM ON SITE

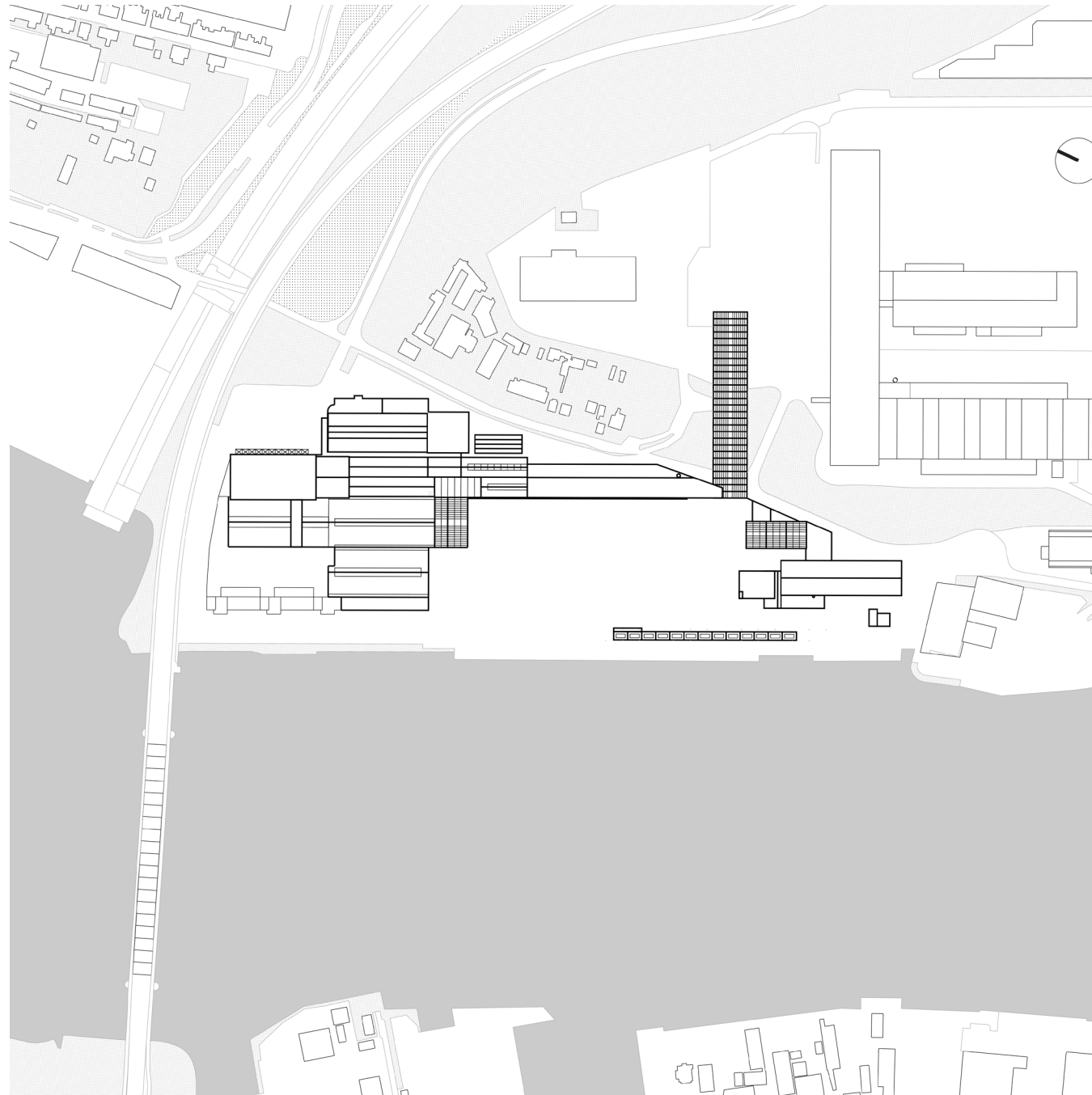
## FUNCTIONAL MODEL: TRIENNIAL PERIOD



# **A**rchitectural **D**esign & **S**pacial **S**cenario

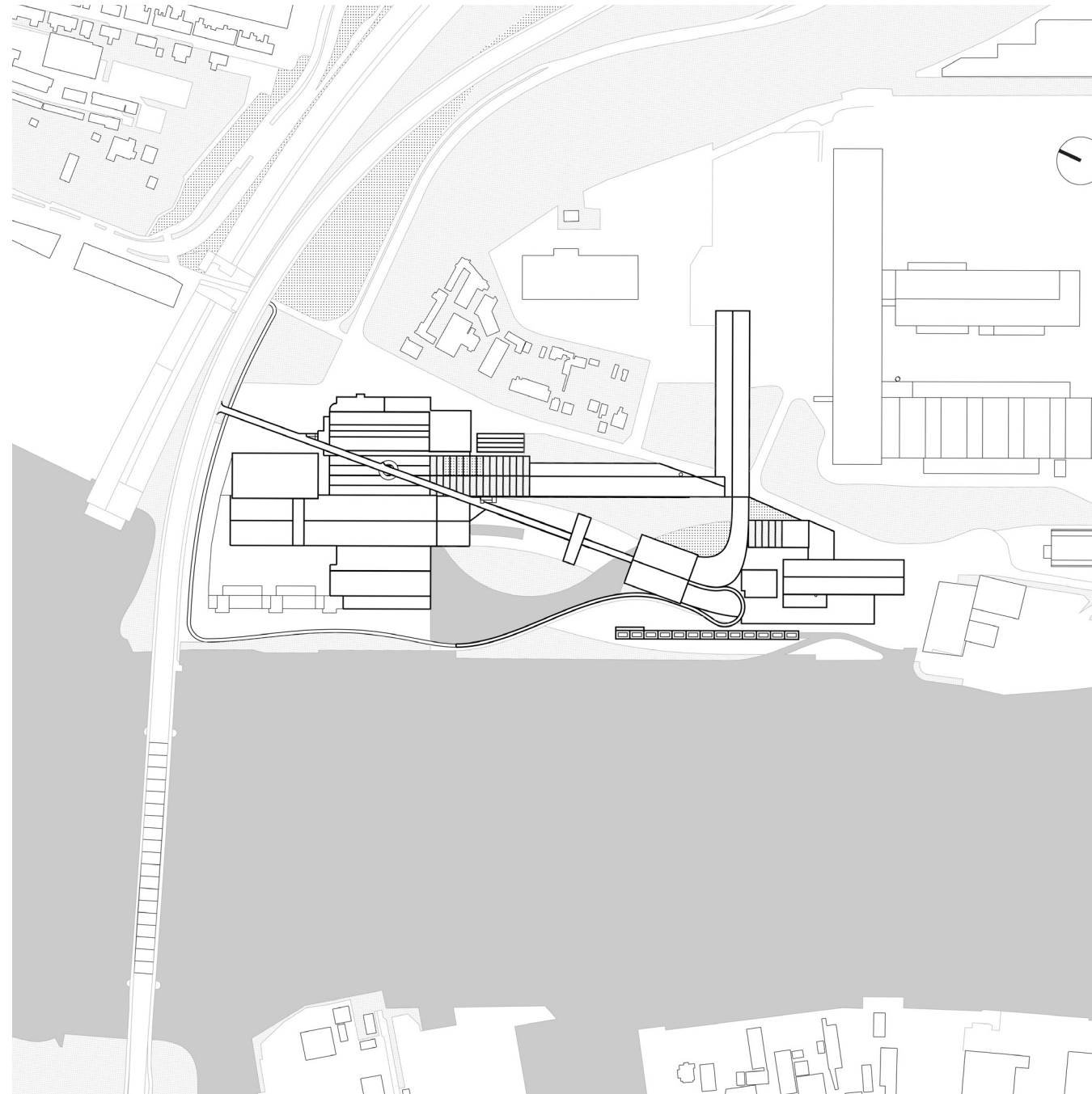
- 1. Architectural Design Overview**
- 2. Space Use & Function Scenario**

# ORIGINAL SITE MASTERPLAN

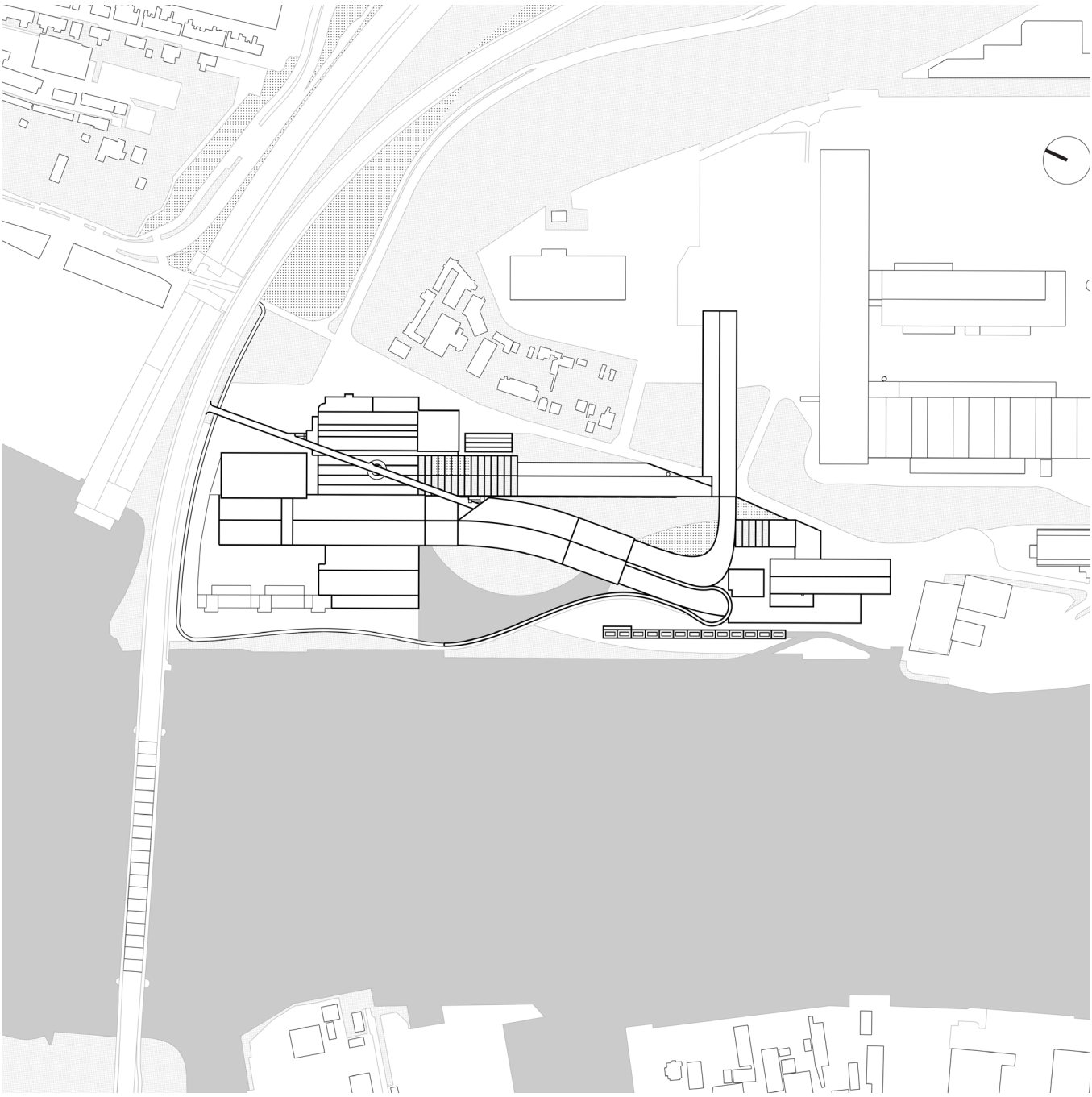




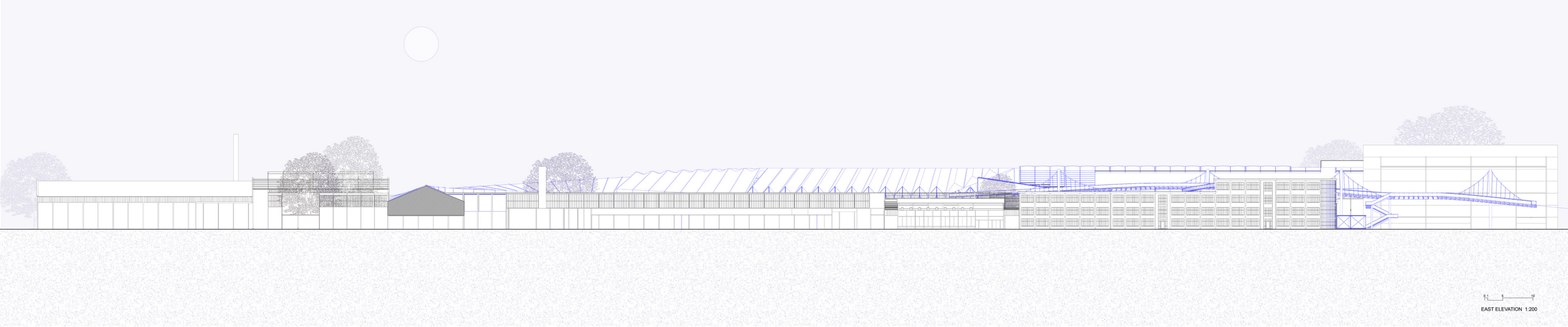
# NEW SITE MASTERPLAN FOR NON-EXHIBITION PERIOD



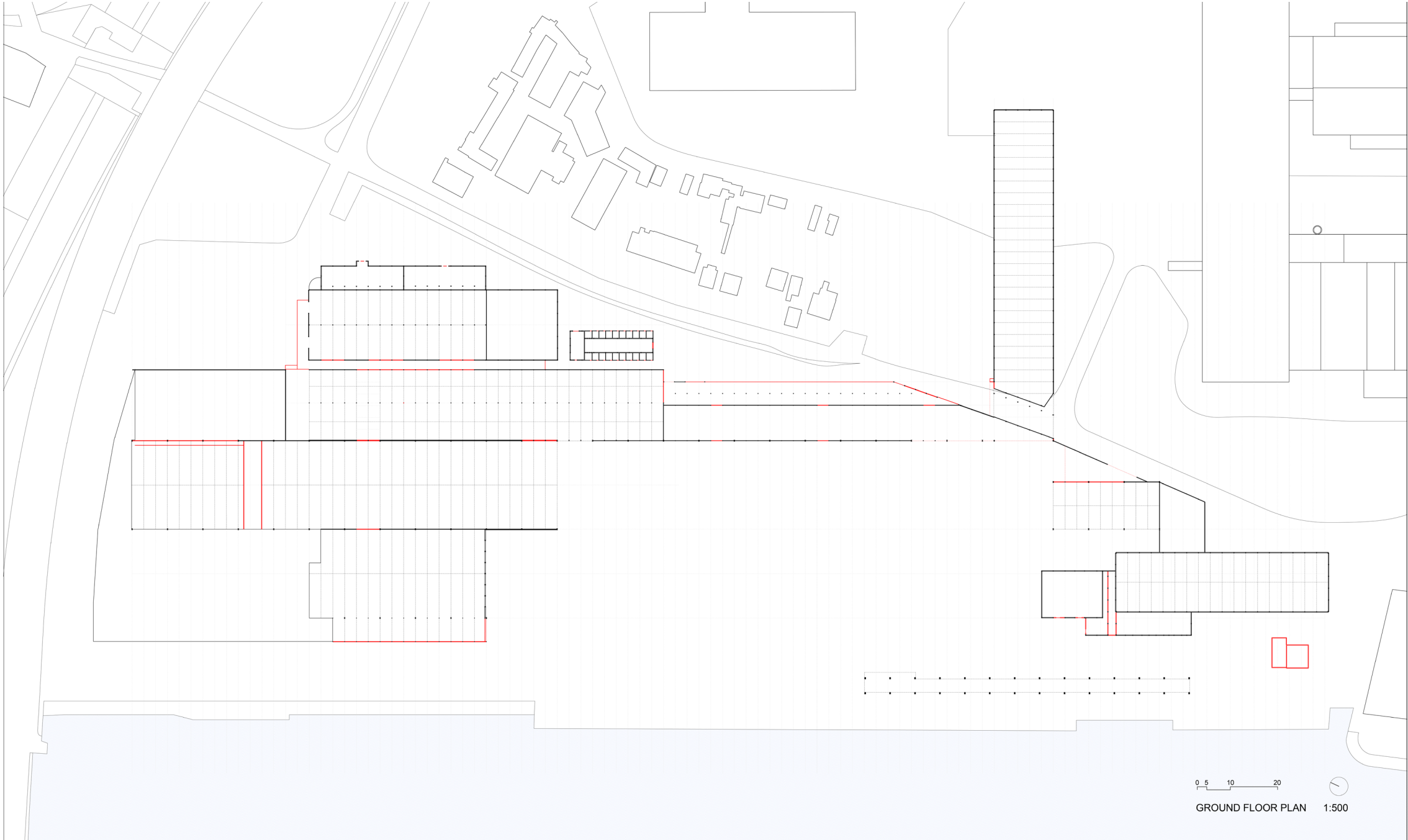
NEW SITE MASTERPLAN FOR EXHIBITION PERIOD



EAST ELEVATION: SURFACE OF OLD AND NEW

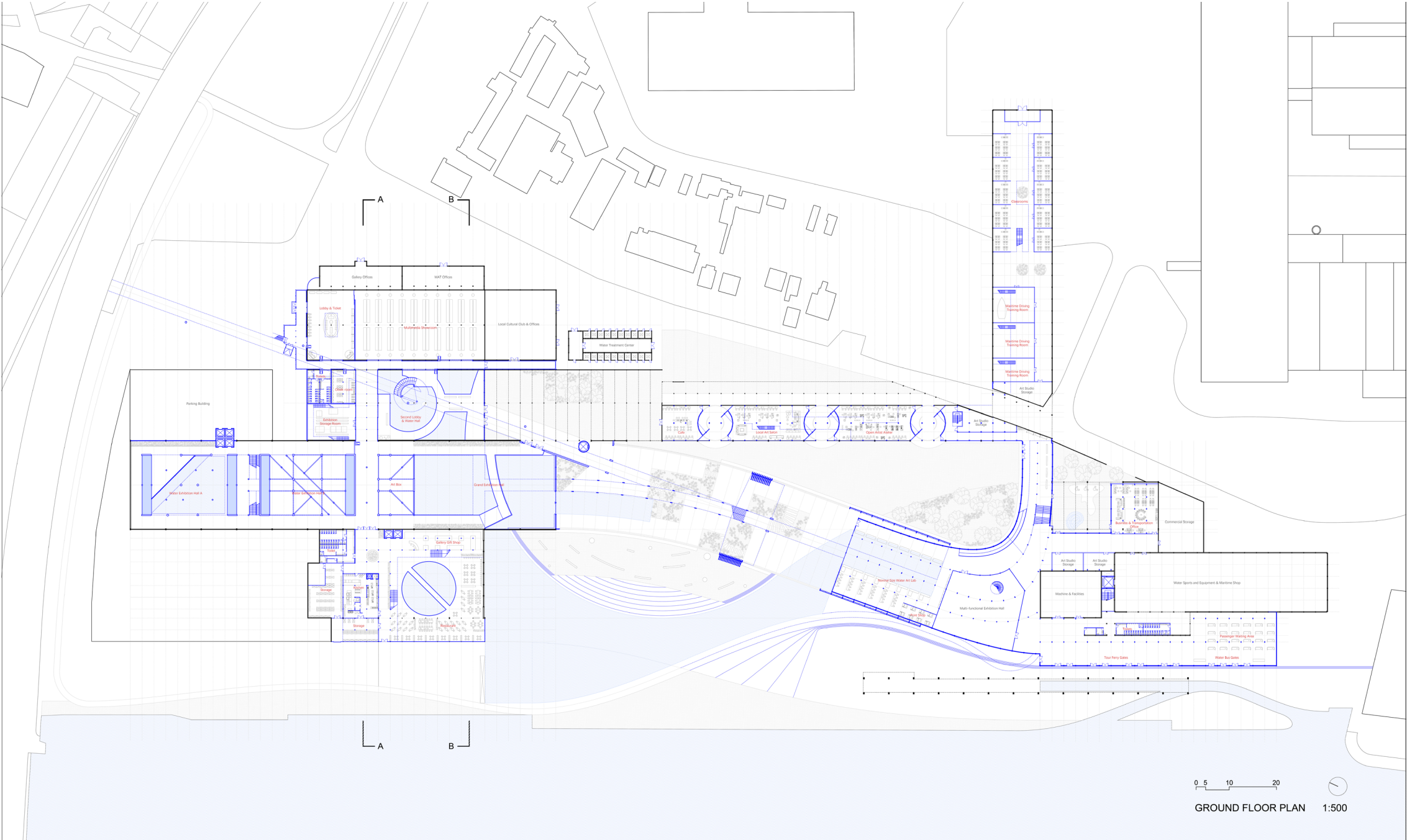


ORIGINAL GROUND FLOOR PLAN





NON-TRIENNIAL PERIOD GROUND FLOOR PLAN

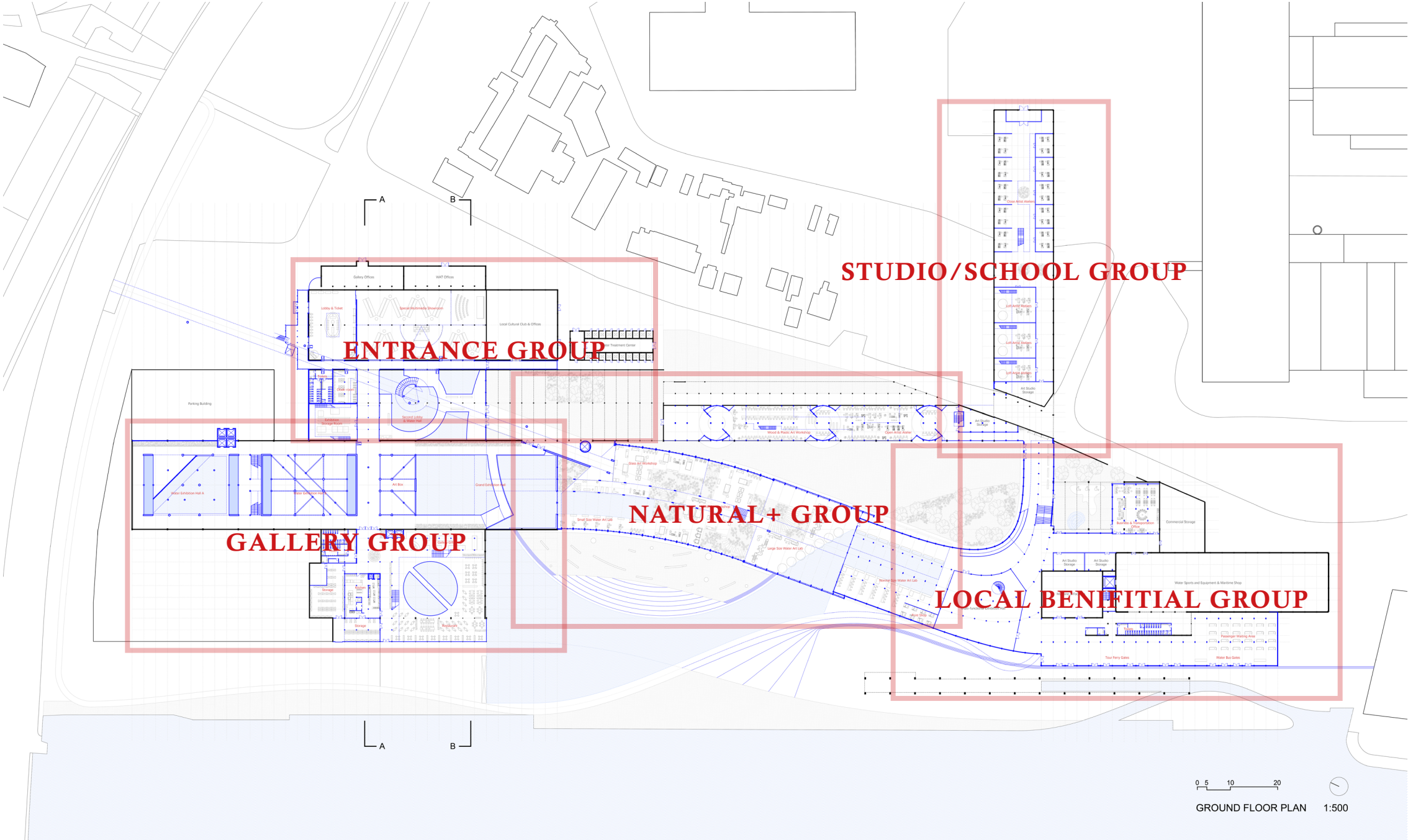




## TRIENNIAL PERIOD GROUND FLOOR PLAN



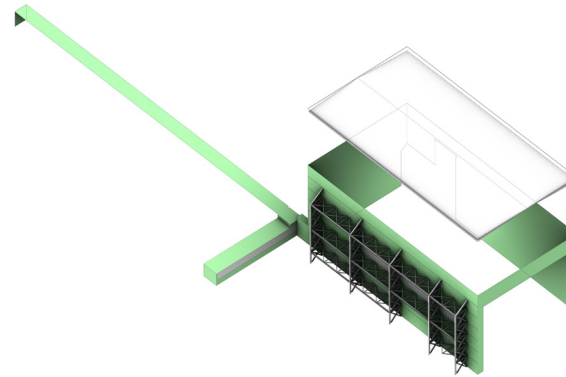
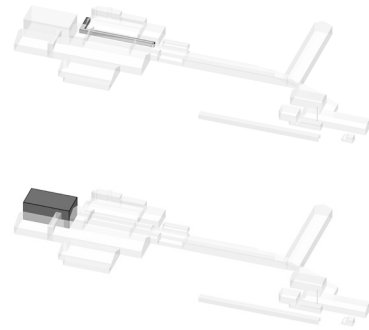
ZOOM IN FLOOR PLANS (VALUE ASSESSMENT RESPOND)





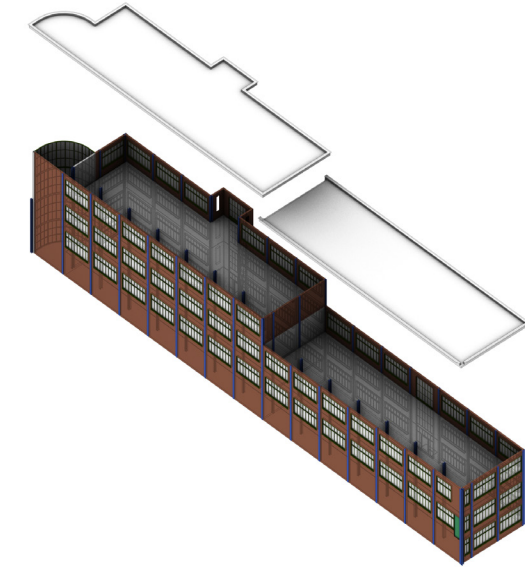
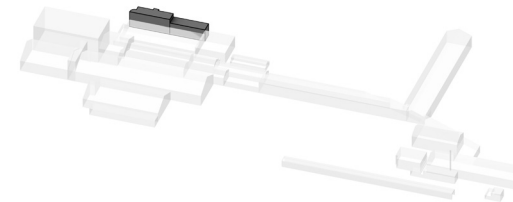
# ENTRANCE GROUP VALUE ASSESSMENT

AUXILIARY BUILDING 04 06



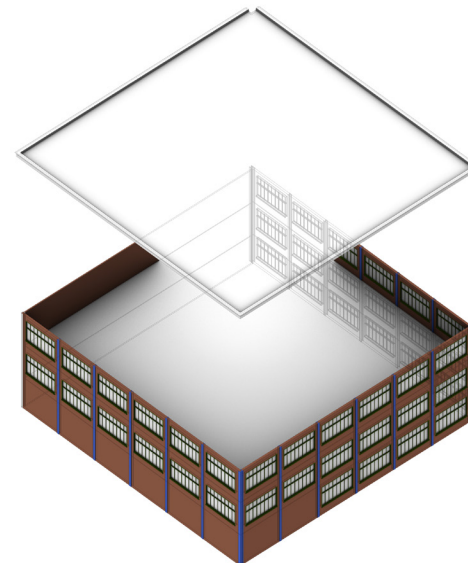
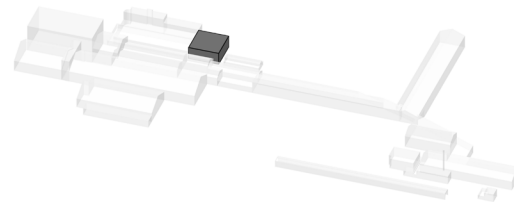
Historical Commemorative Value	+
Spatial Spiritual Value	++
Structural Heritage Value	+
Material & Interface Value	++++
Functional Reuse Value	++++

OFFICE BUILDING 01



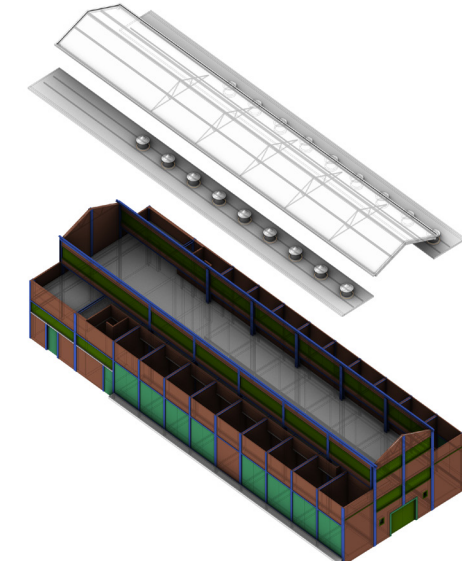
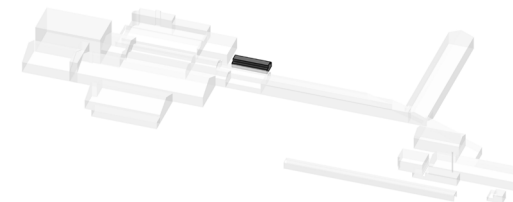
Historical Commemorative Value	+++
Spatial Spiritual Value	++
Structural Heritage Value	++++
Material & Interface Value	++++
Functional Reuse Value	+++++

OFFICE BUILDING 02



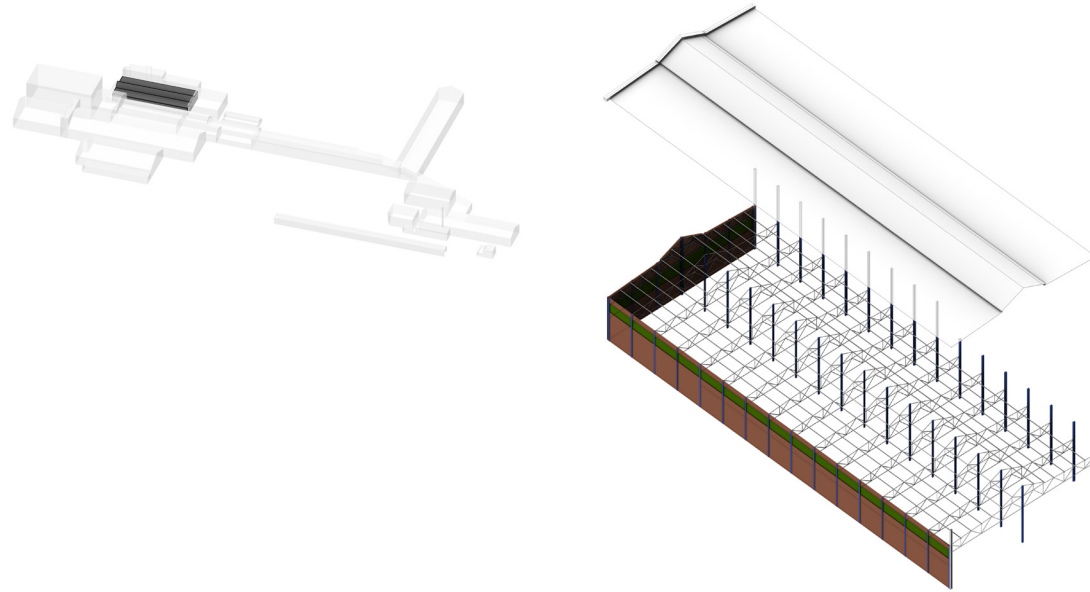
Historical Commemorative Value	+++
Spatial Spiritual Value	++
Structural Heritage Value	++++
Material & Interface Value	++++
Functional Reuse Value	+++++

FACTORY BUILDING 05

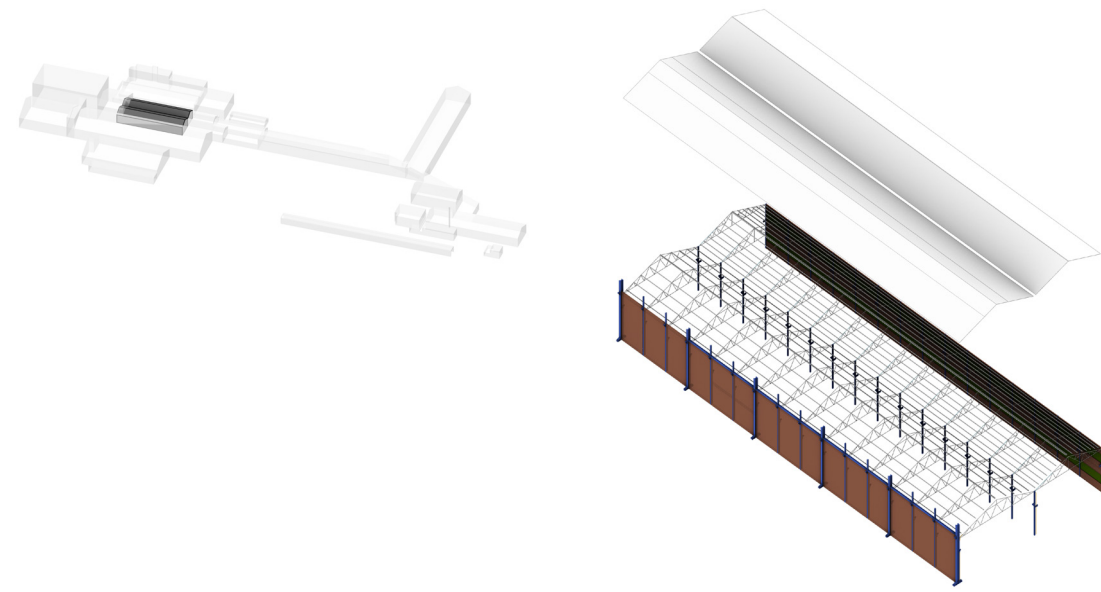


Historical Commemorative Value	++++
Spatial Spiritual Value	+++
Structural Heritage Value	+++++
Material & Interface Value	+++++
Functional Reuse Value	+++++

# ENTRANCE GROUP VALUE ASSESSMENT

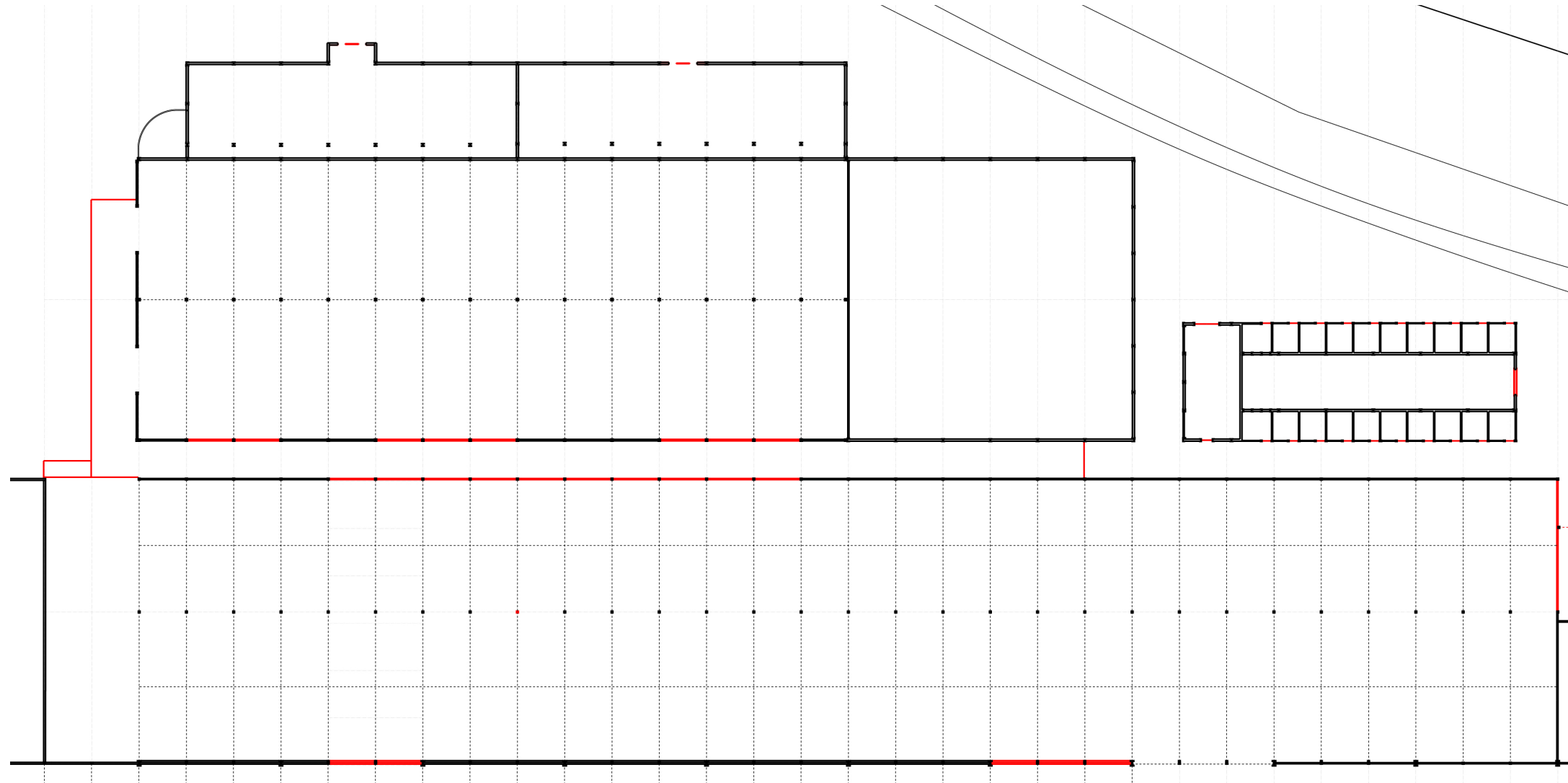
**FACTORY BUILDING 03**

Historical Commemorative Value	+++++
Spatial Spiritual Value	++++
Structural Heritage Value	+++++
Material & Interface Value	+++++
Functional Reuse Value	+++++

**FACTORY BUILDING 08**

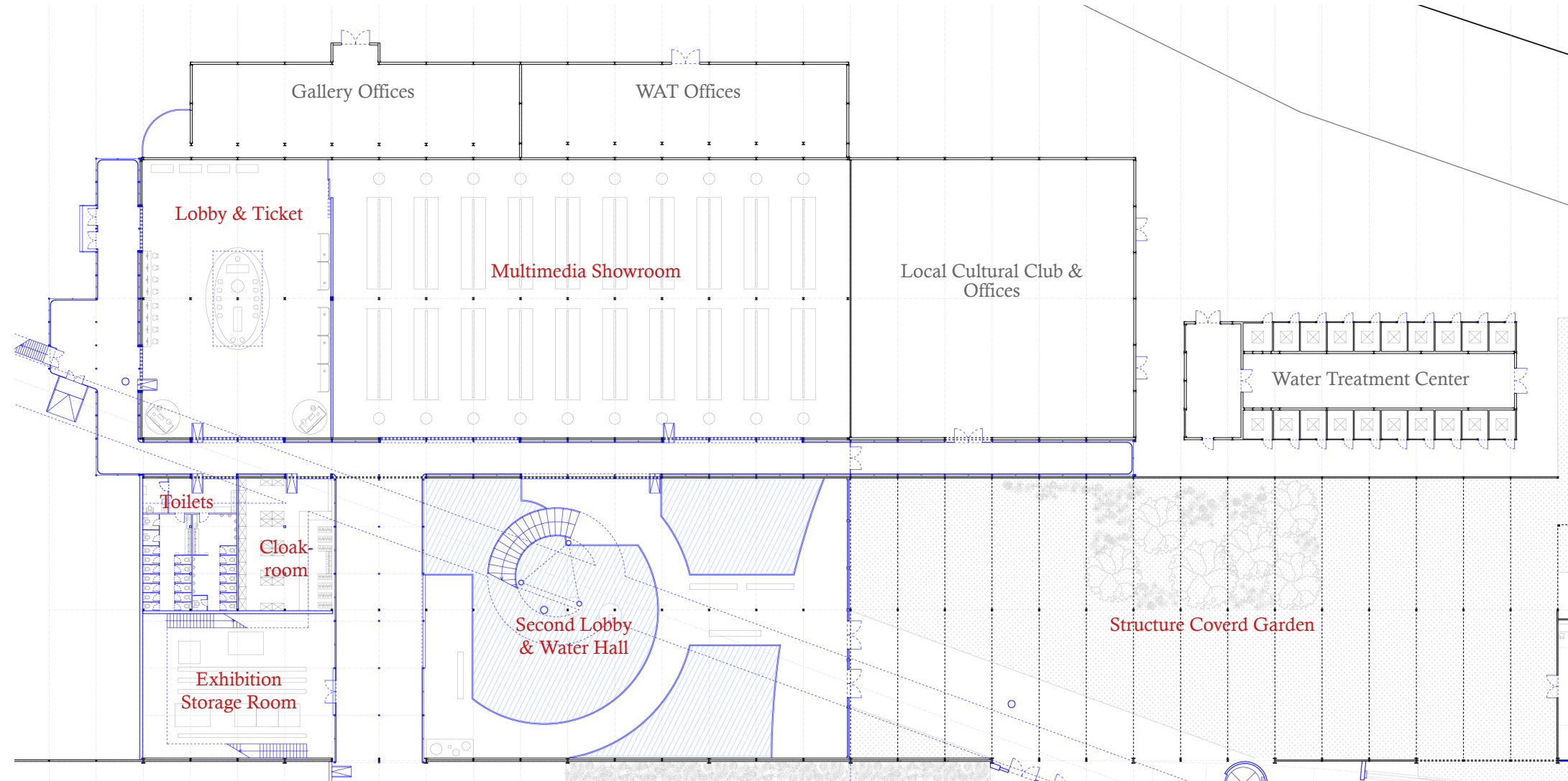
Historical Commemorative Value	+++++
Spatial Spiritual Value	+++++
Structural Heritage Value	+++++
Material & Interface Value	+++++
Functional Reuse Value	+++++

## ZOOM IN FLOOR PLANS: ENTRANCE GROUP

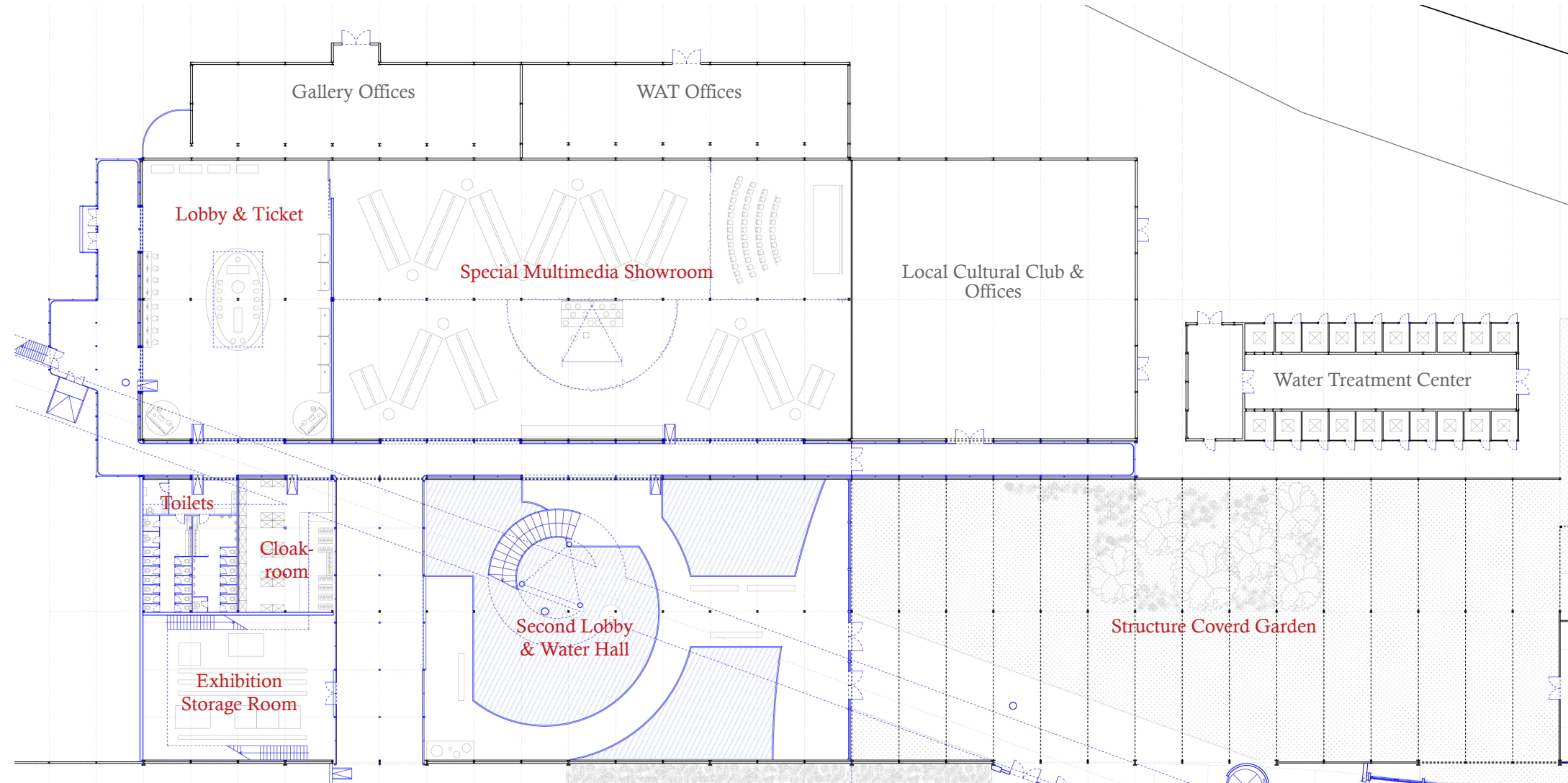




## ZOOM IN FLOOR PLANS: ENTRANCE GROUP

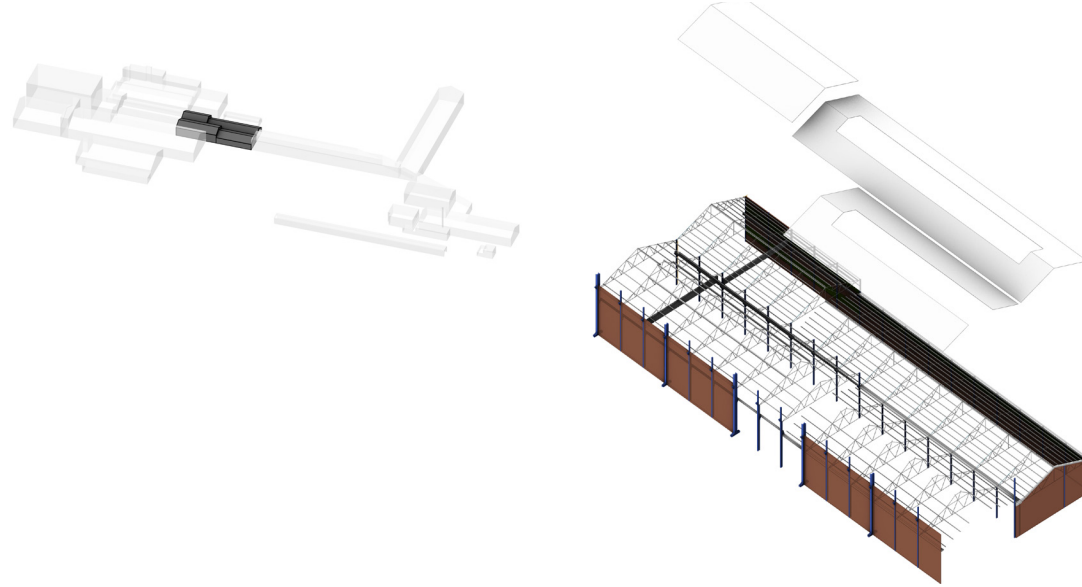


## ZOOM IN FLOOR PLANS: ENTRANCE GROUP



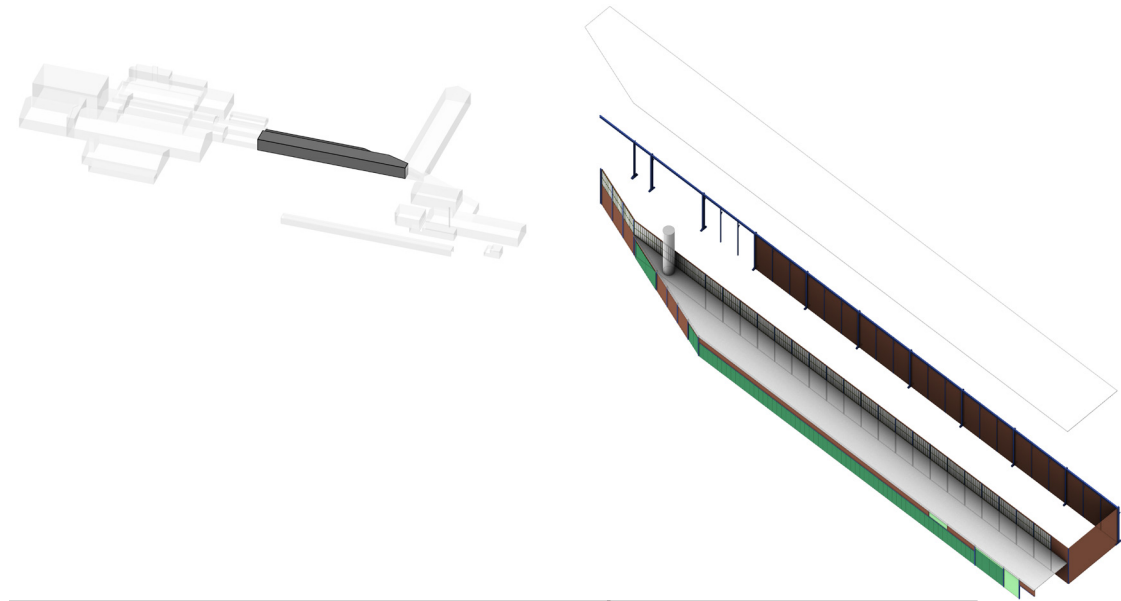
# NATURAL+ GROUP VALUE ASSESSMENT

FACTORY BUILDING 09



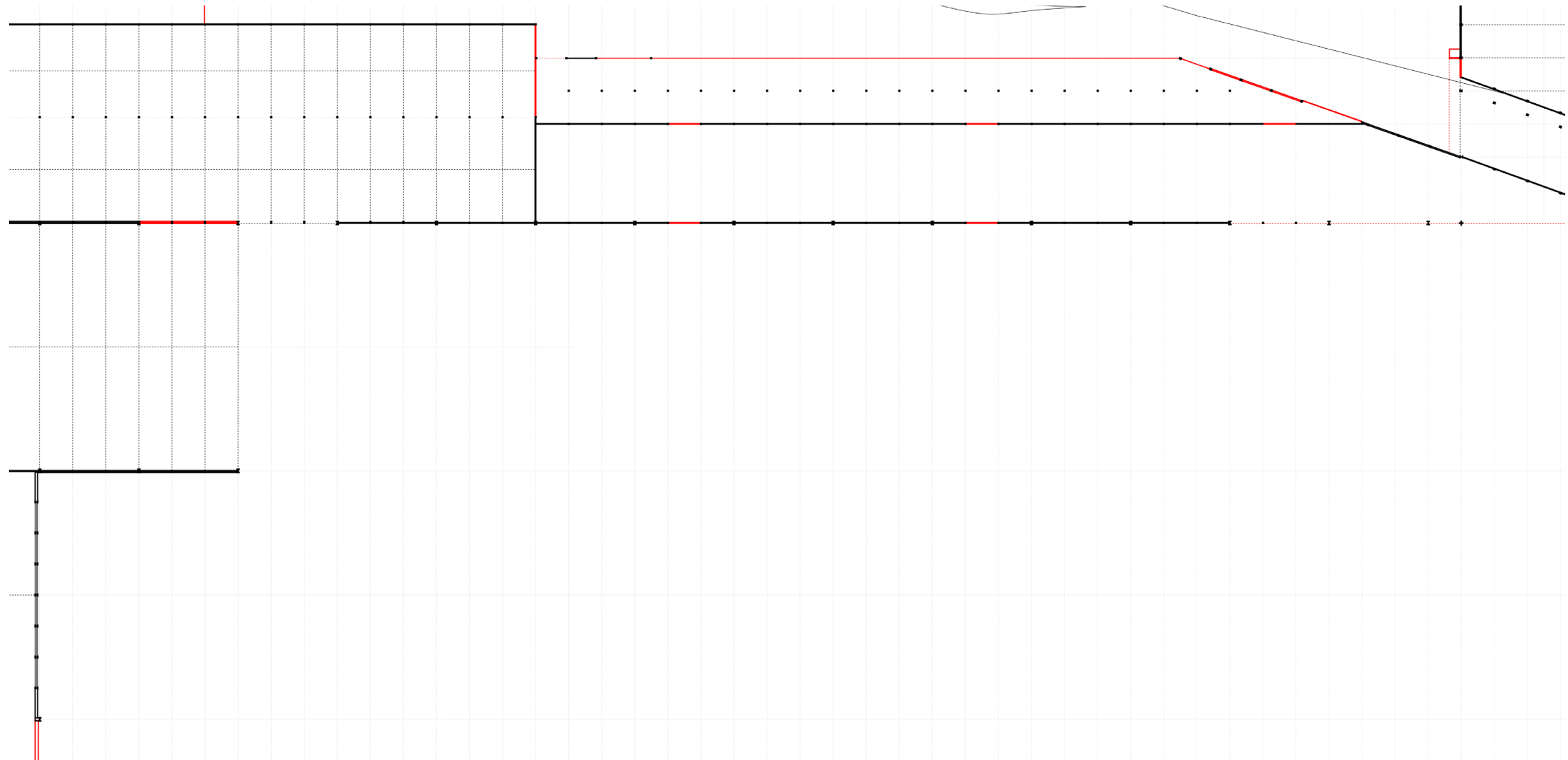
Historical Commemorative Value	+++++
Spatial Spiritual Value	+++++
Structural Heritage Value	+++
Material & Interface Value	++++
FunctionaI Reuse Value	++++

FACTORY BUILDING 10



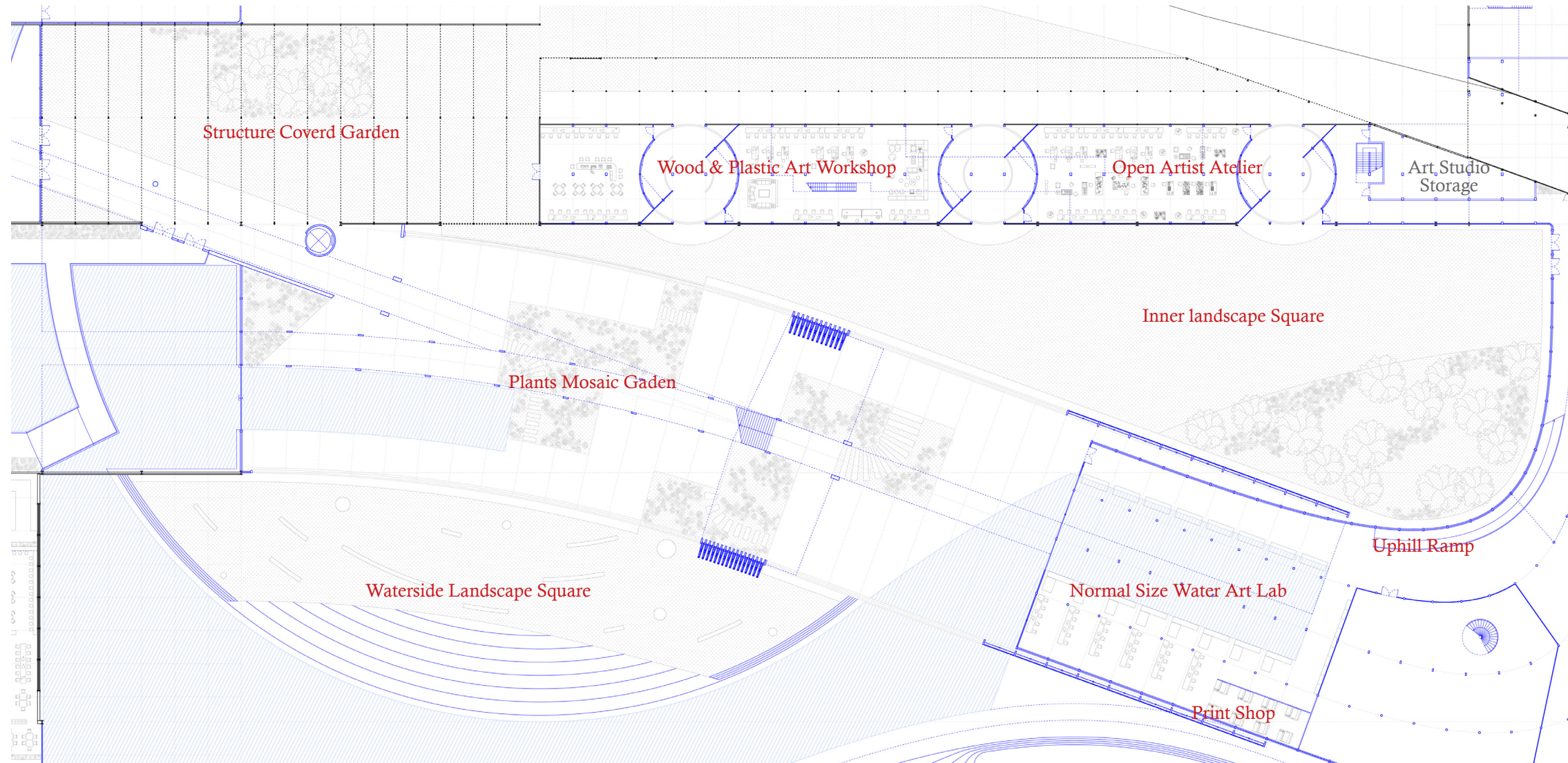
Historical Commemorative Value	++++
Spatial Spiritual Value	+++++
Structural Heritage Value	+++++
Material & Interface Value	+++++
FunctionaI Reuse Value	+++++

## ZOOM IN FLOOR PLANS: NATURAL+ GROUP



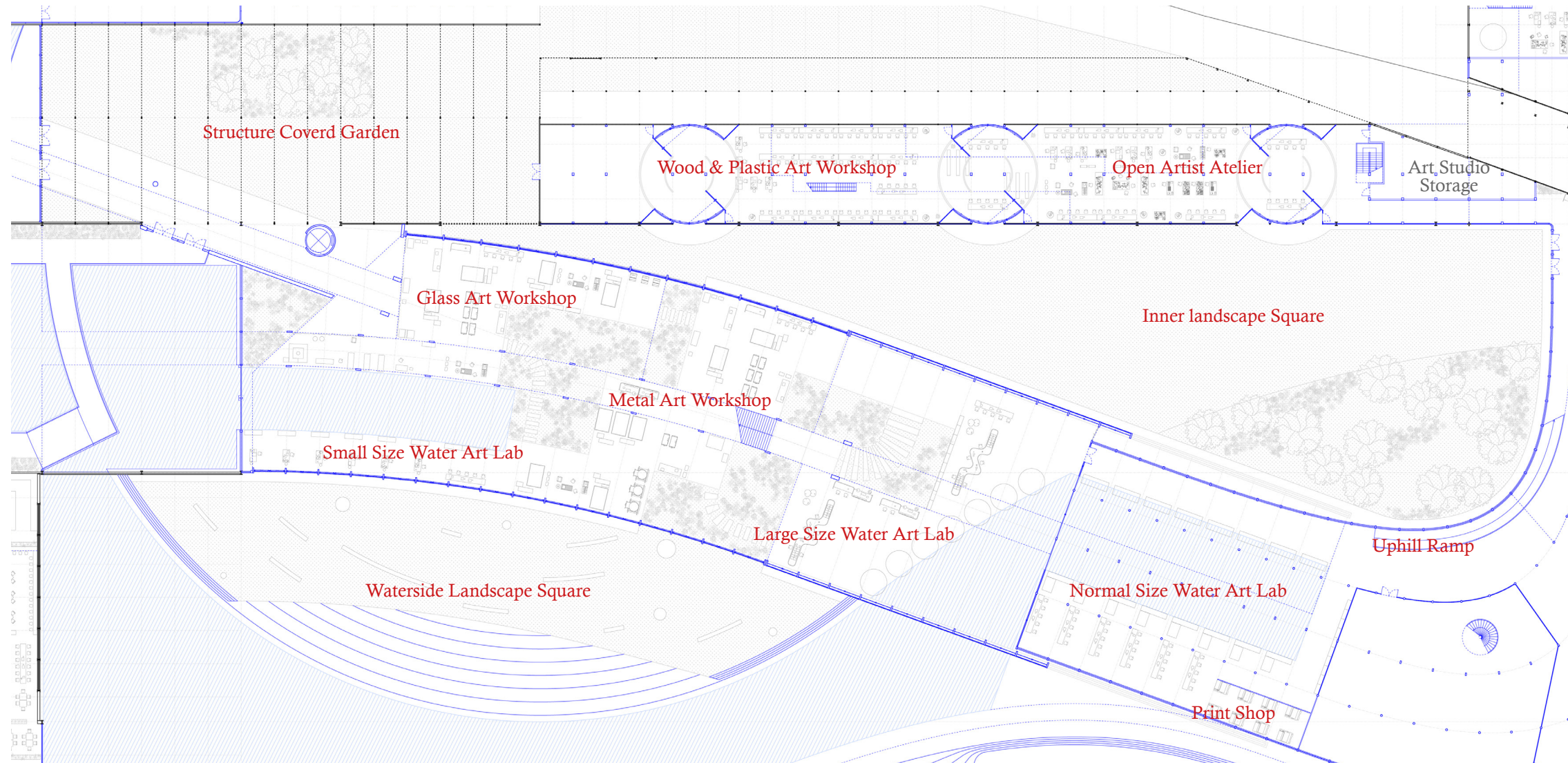


## ZOOM IN FLOOR PLANS: NATURAL+ GROUP

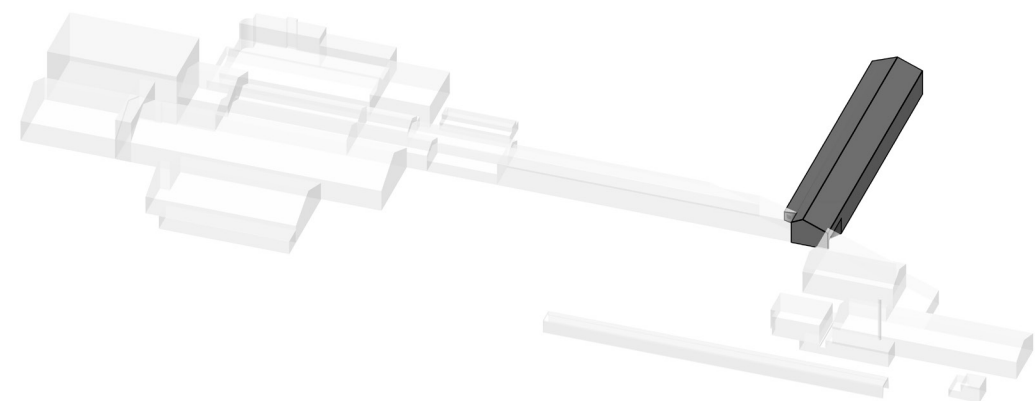




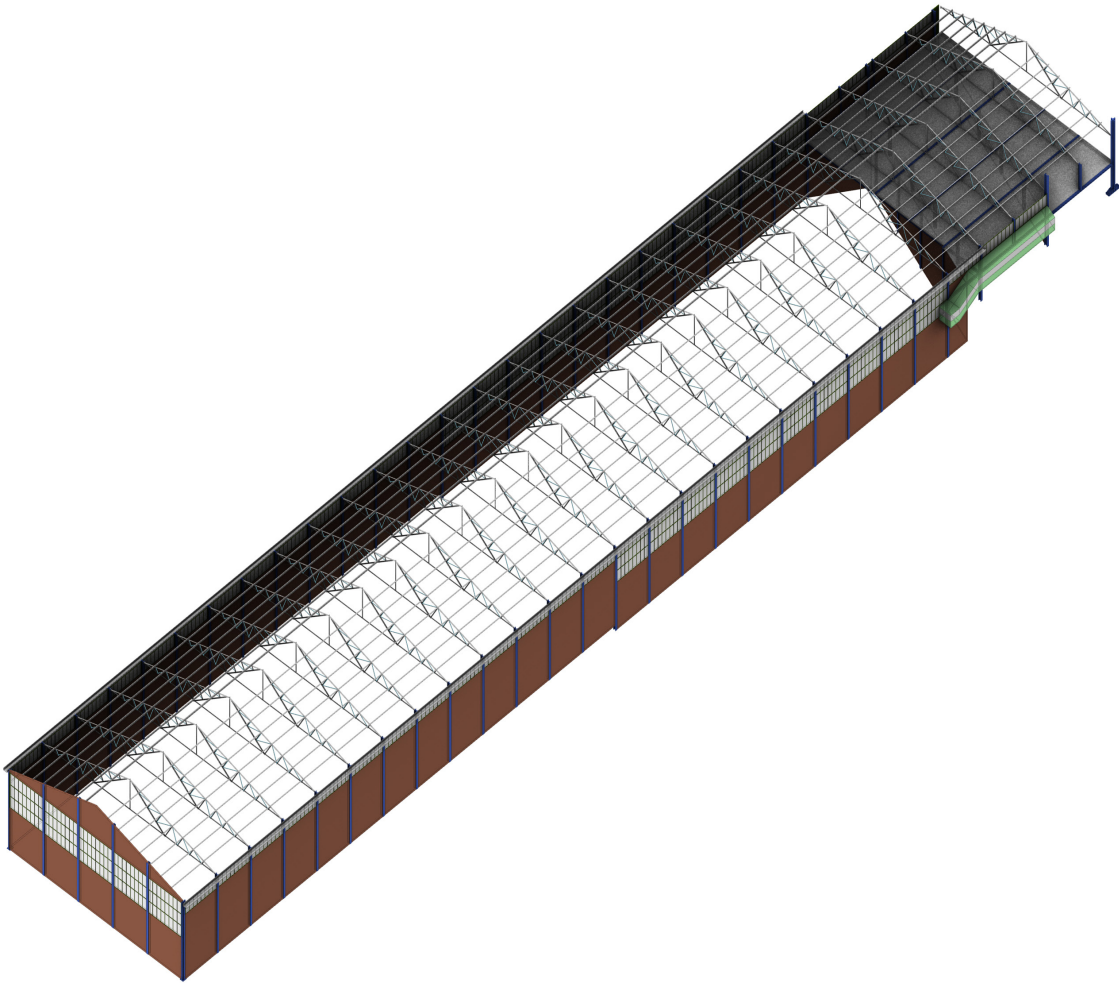
## ZOOM IN FLOOR PLANS: NATURAL+ GROUP



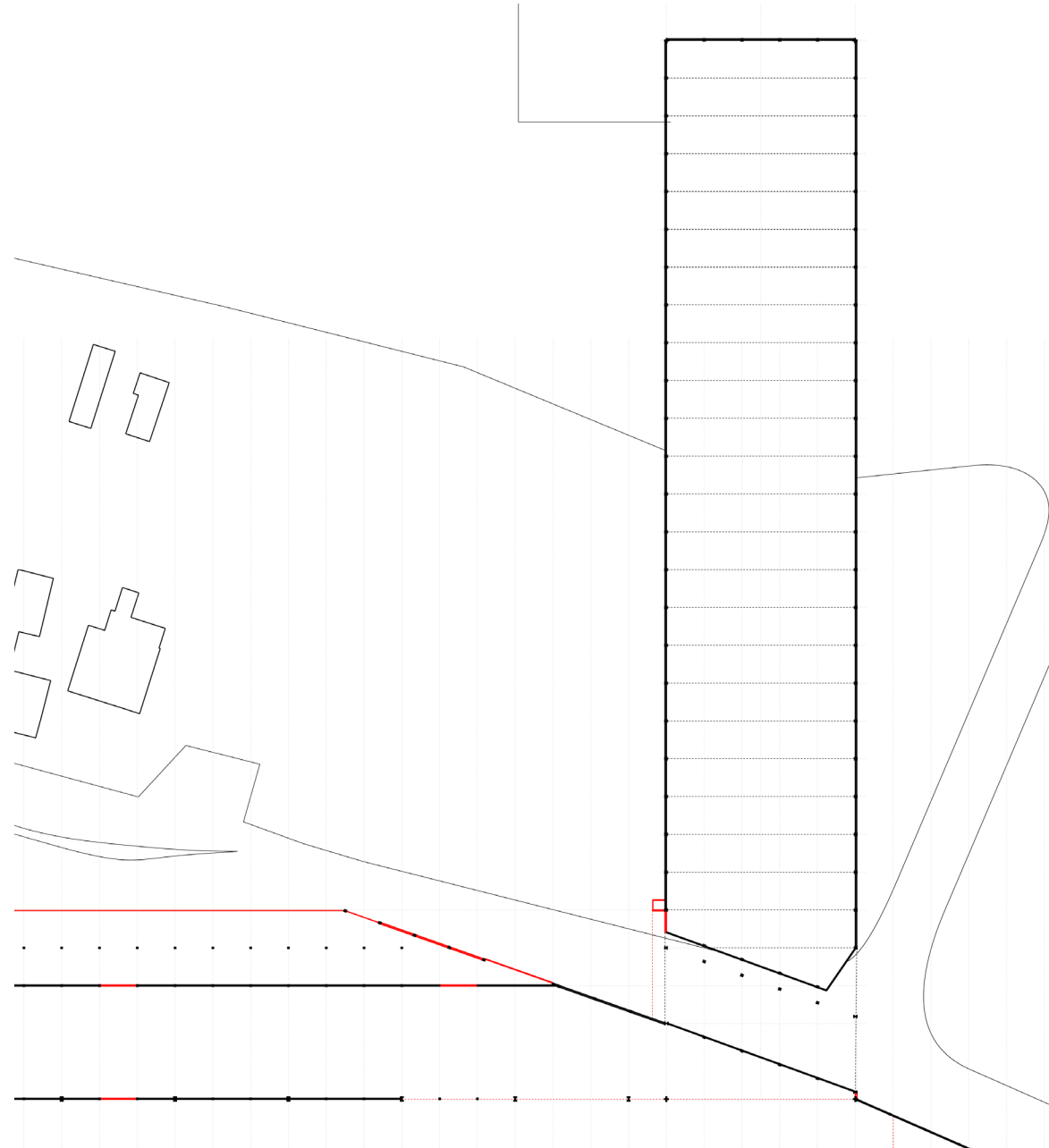
STUDIO/SCHOOL GROUP VALUE ASSESSMENT: FACTORY BUILDING 11



Historical Commemorative Value	+++++
Spatial Spiritual Value	+++++
Structural Heritage Value	++++
Material & Interface Value	++++
Functiona1 Reuse Value	+++++

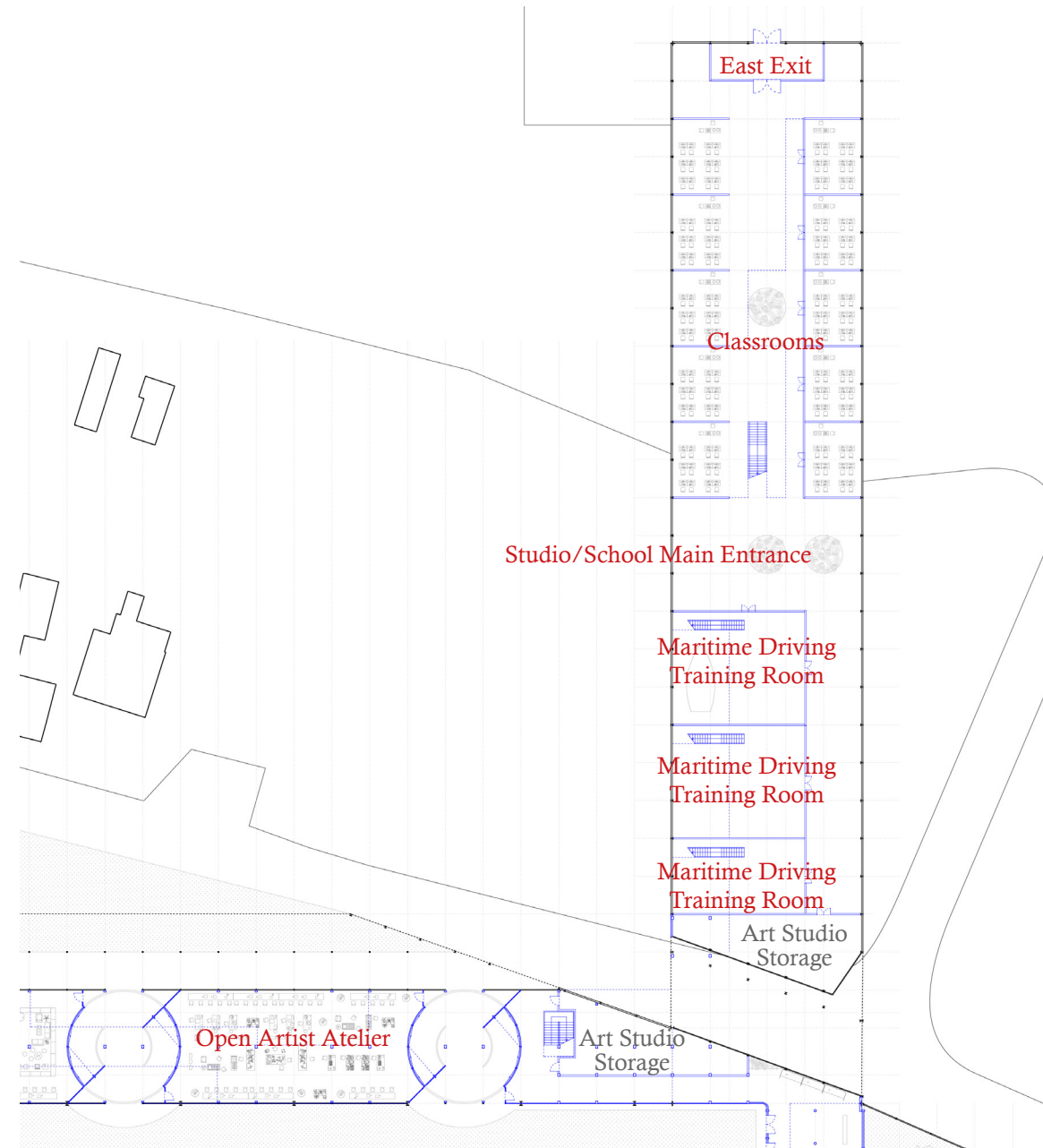


# ZOOM IN FLOOR PLANS: STUDIO/SCHOOL GROUP

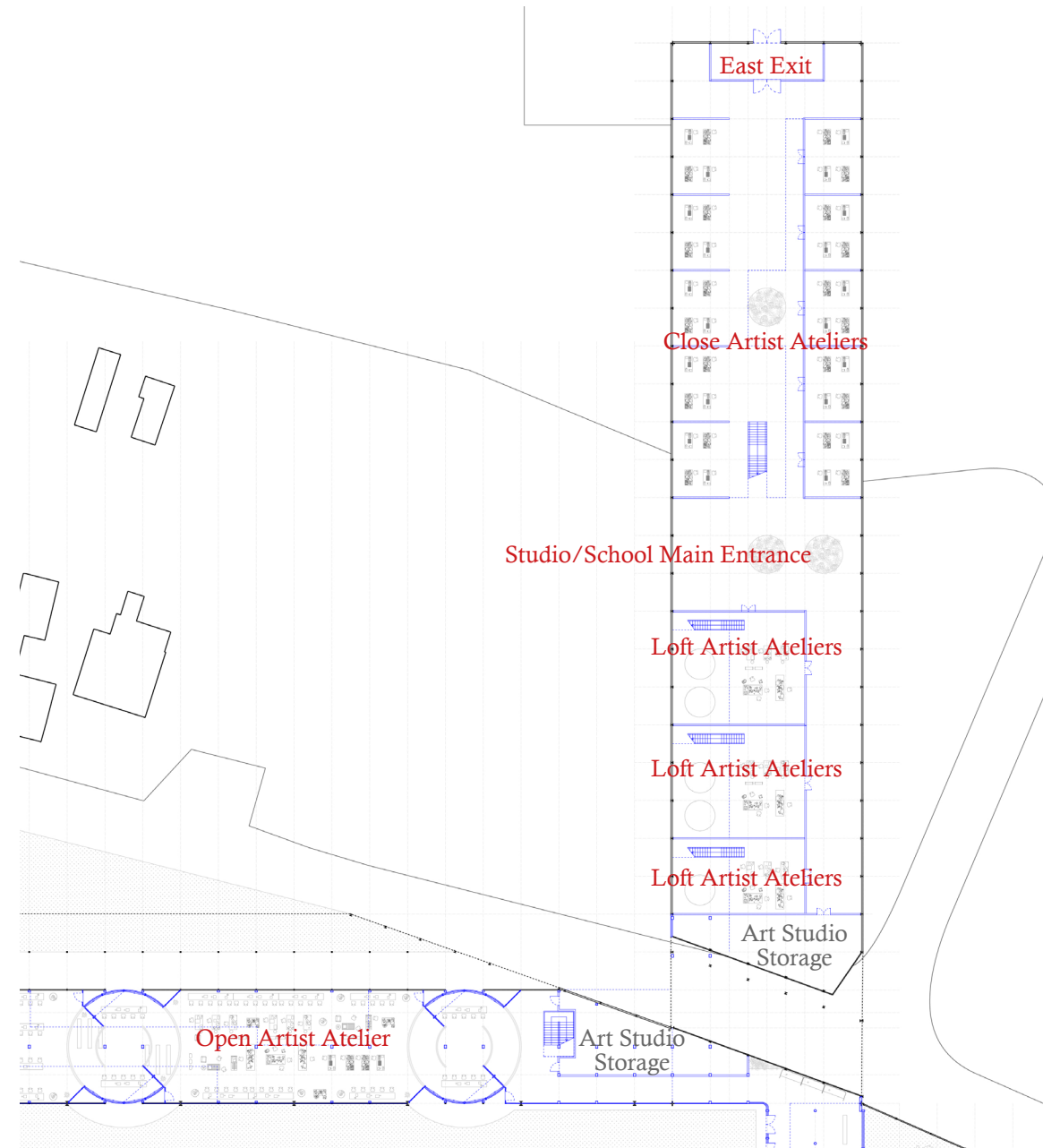




# ZOOM IN FLOOR PLANS: STUDIO/SCHOOL GROUP

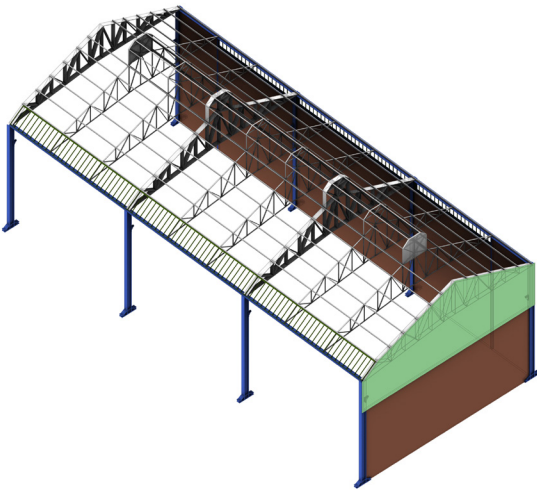
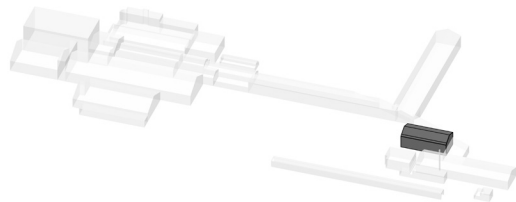


# ZOOM IN FLOOR PLANS: STUDIO/SCHOOL GROUP



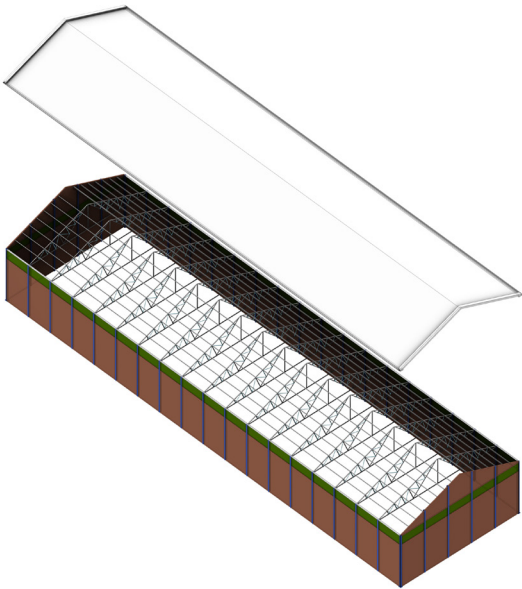
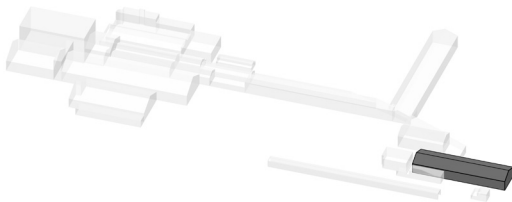
LOCAL BENIFITIAL GROUP VALUE ASSESSMENT

FACTORY BUILDING 17



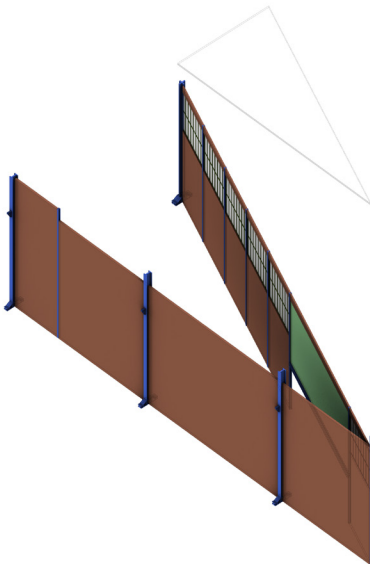
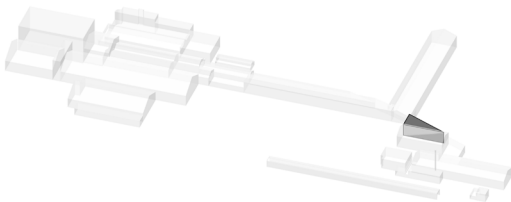
Historical Commemorative Value	+++++
Spatial Spiritual Value	+++++
Structural Heritage Value	+++
Material & Interface Value	+++
Functionnal Reuse Value	++++

OFFICE BUILDING 19



Historical Commemorative Value	+++++
Spatial Spiritual Value	+++++
Structural Heritage Value	+++++
Material & Interface Value	+++++
Functionnal Reuse Value	+++++

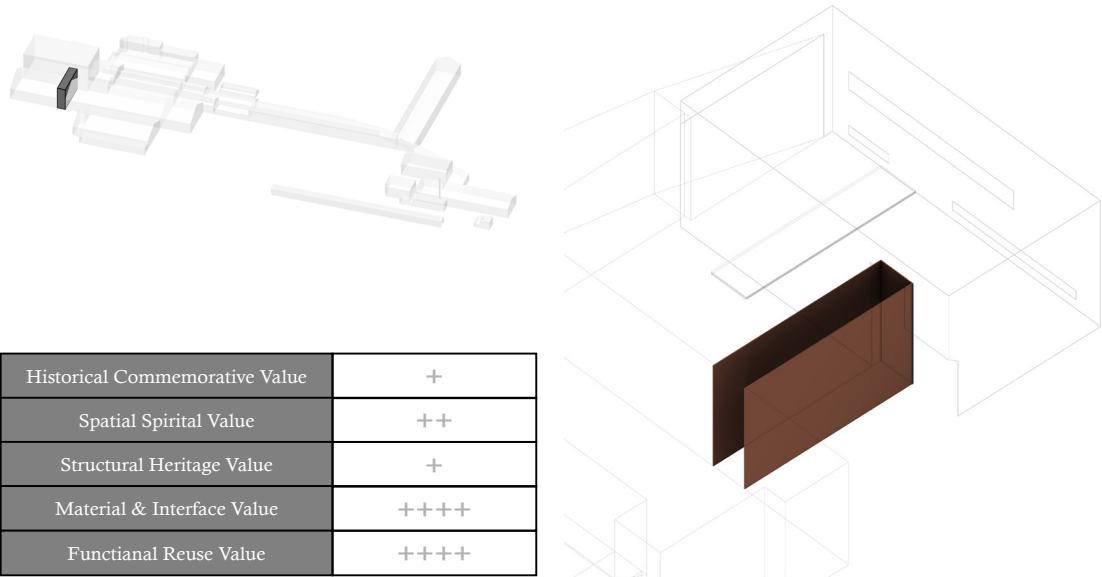
AUXILIARY BUILDING 16



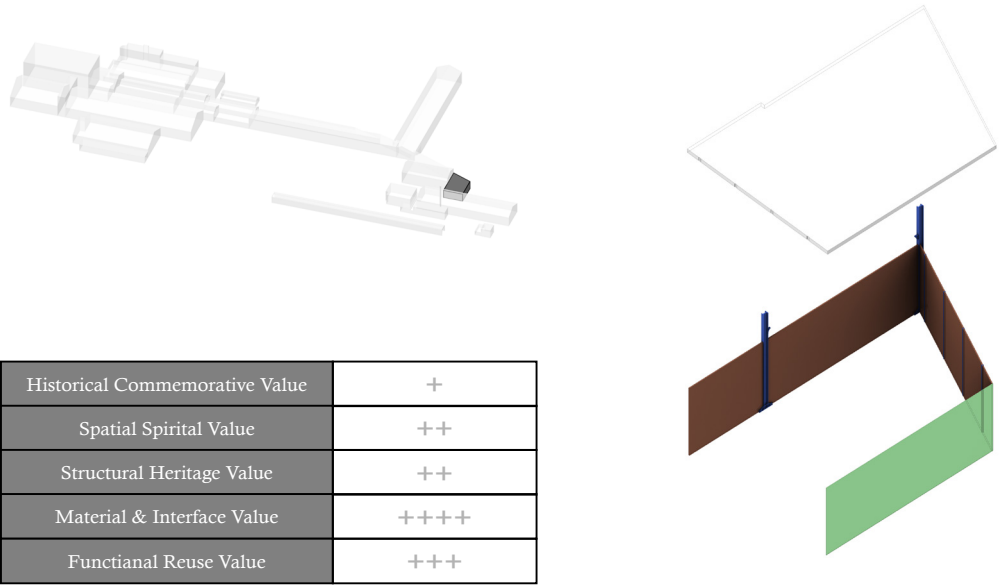
Historical Commemorative Value	++
Spatial Spiritual Value	++++
Structural Heritage Value	++++
Material & Interface Value	+
Functionnal Reuse Value	++

LOCAL BENIFITIAL GROUP VALUE ASSESSMENT

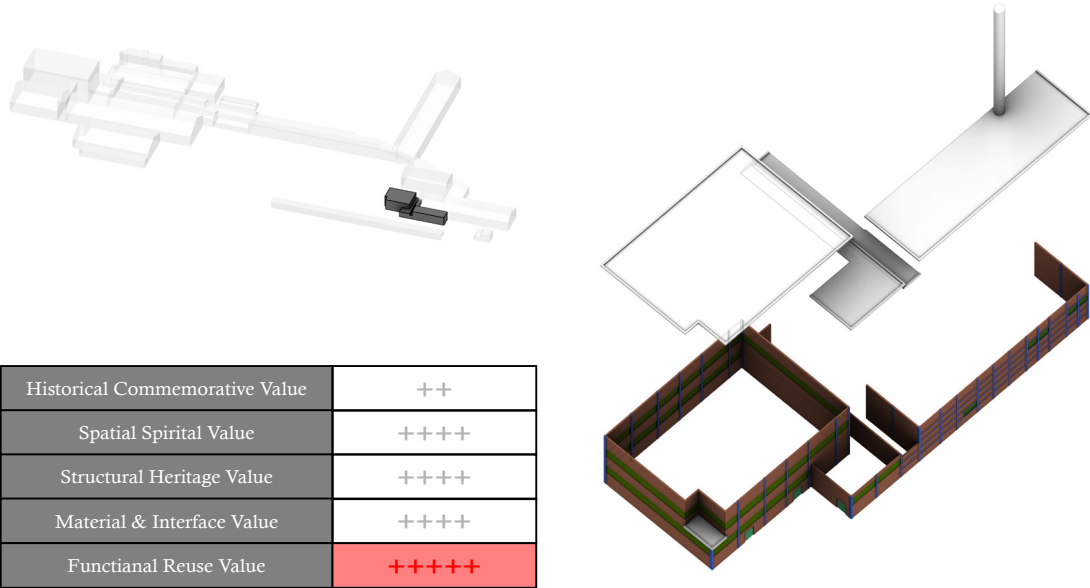
AUXILIARY BUILDING 13



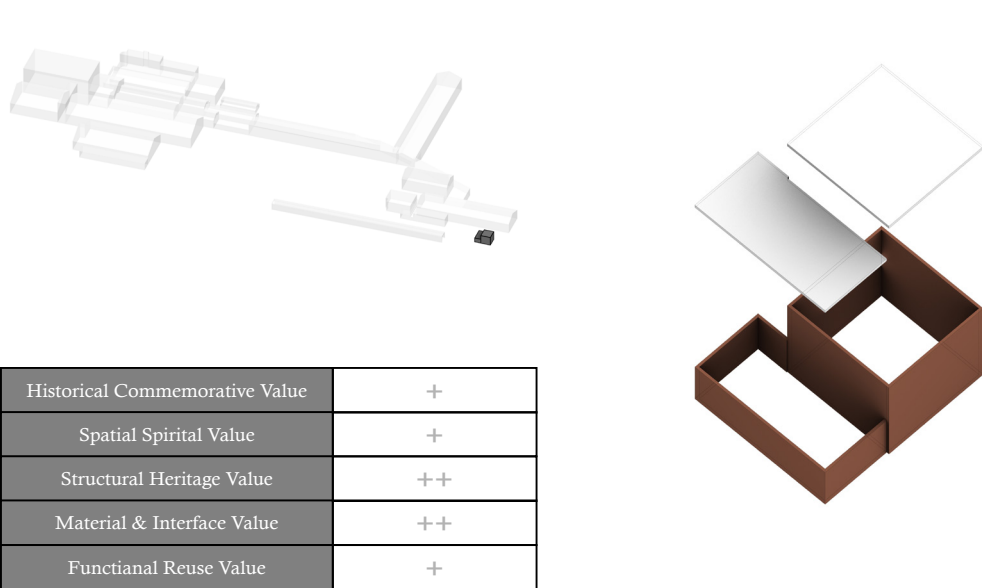
AUXILIARY BUILDING 18



AUXILIARY BUILDING 20

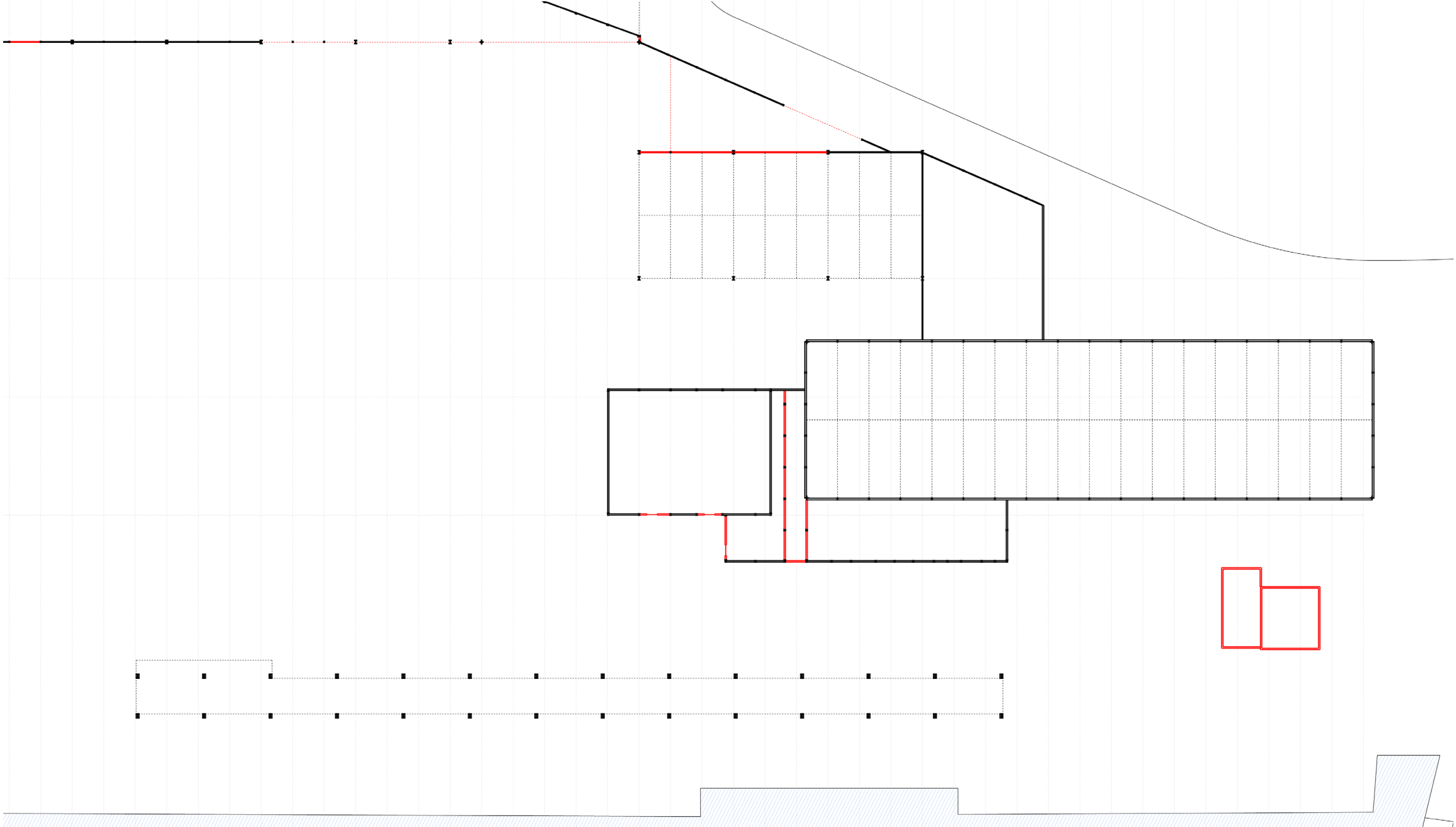


AUXILIARY BUILDING 21

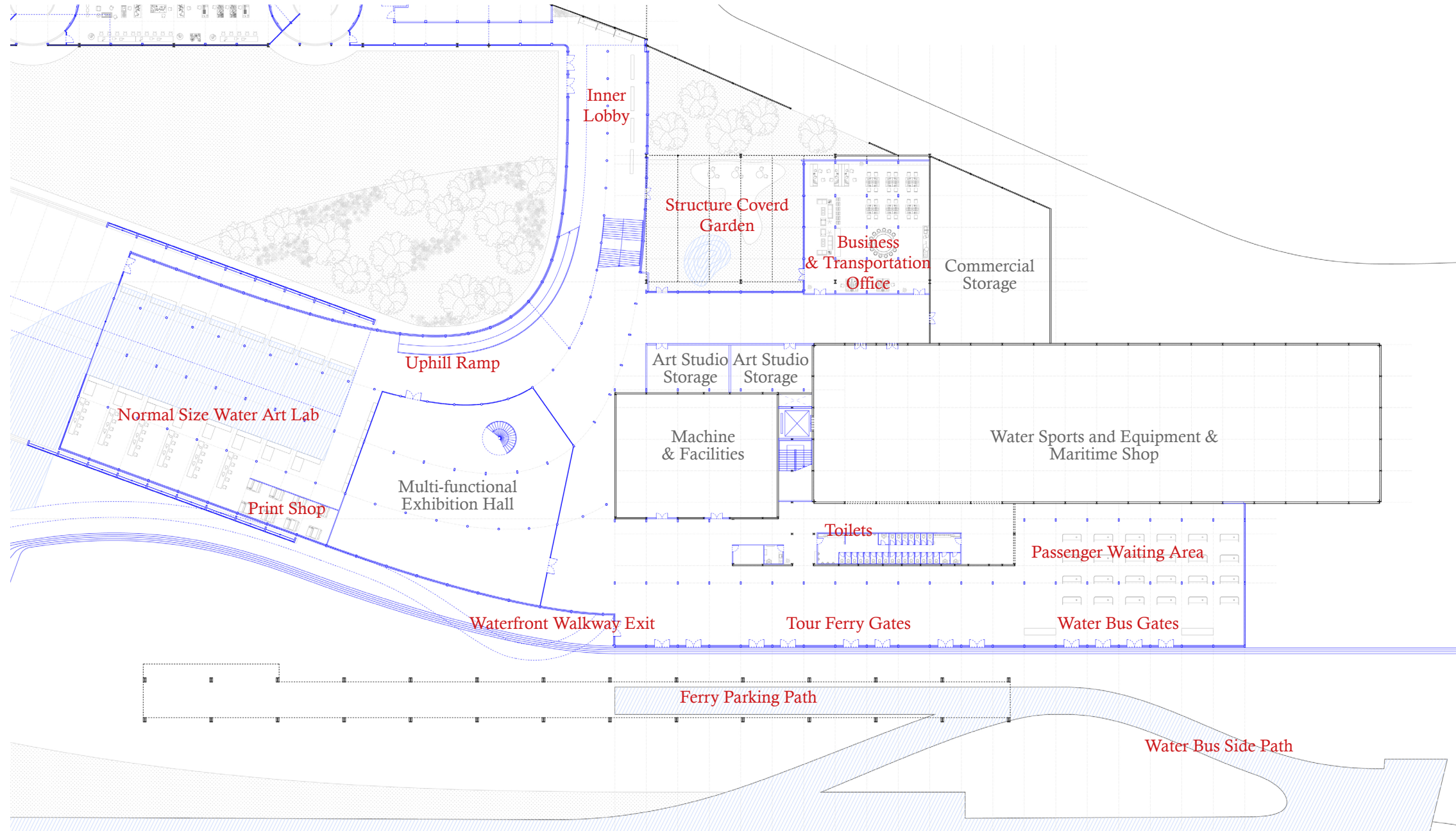




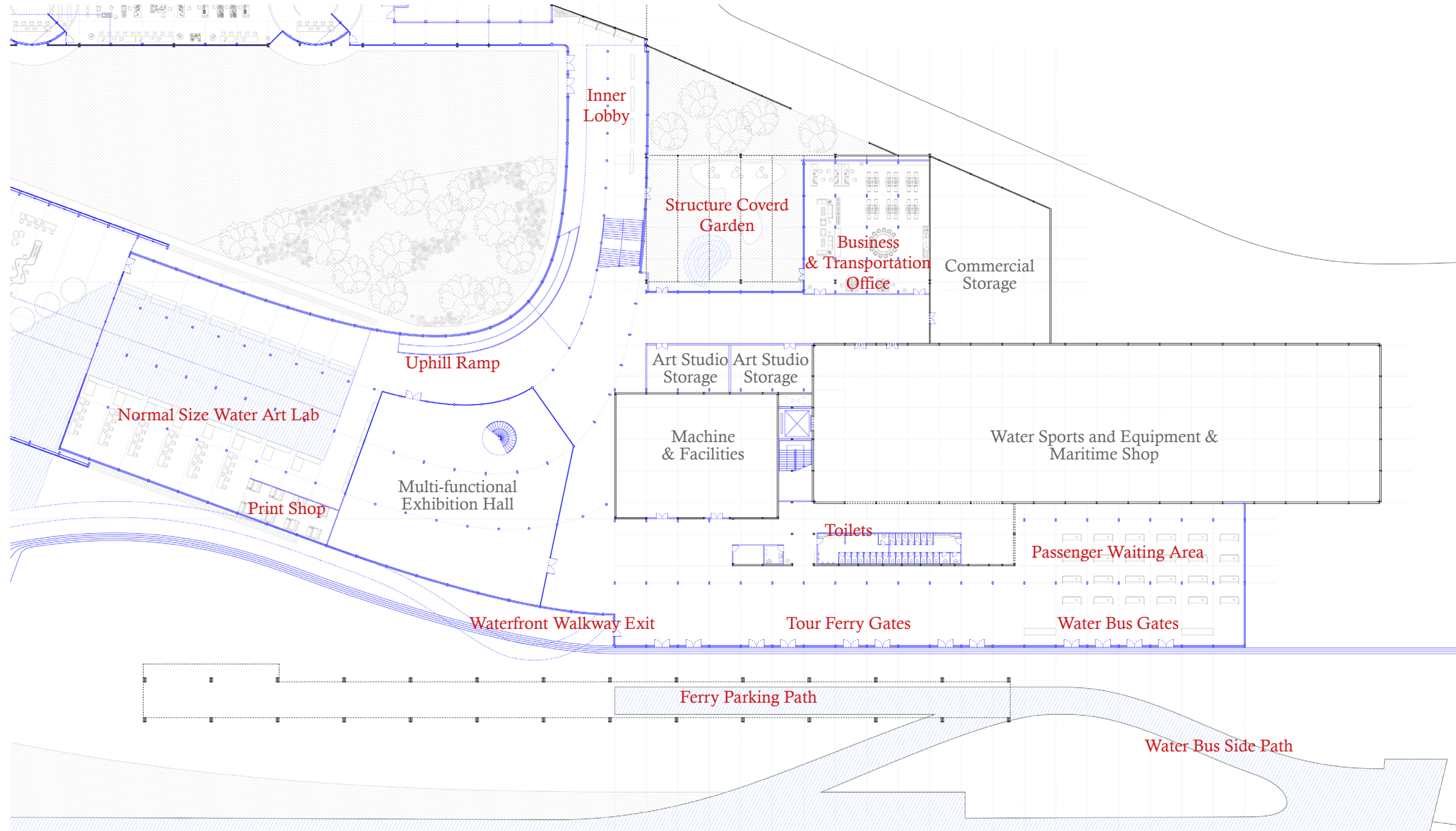
## ZOOM IN FLOOR PLANS: LOCAL BENEFITIAL GROUP



## ZOOM IN FLOOR PLANS: LOCAL BENIFITIAL GROUP

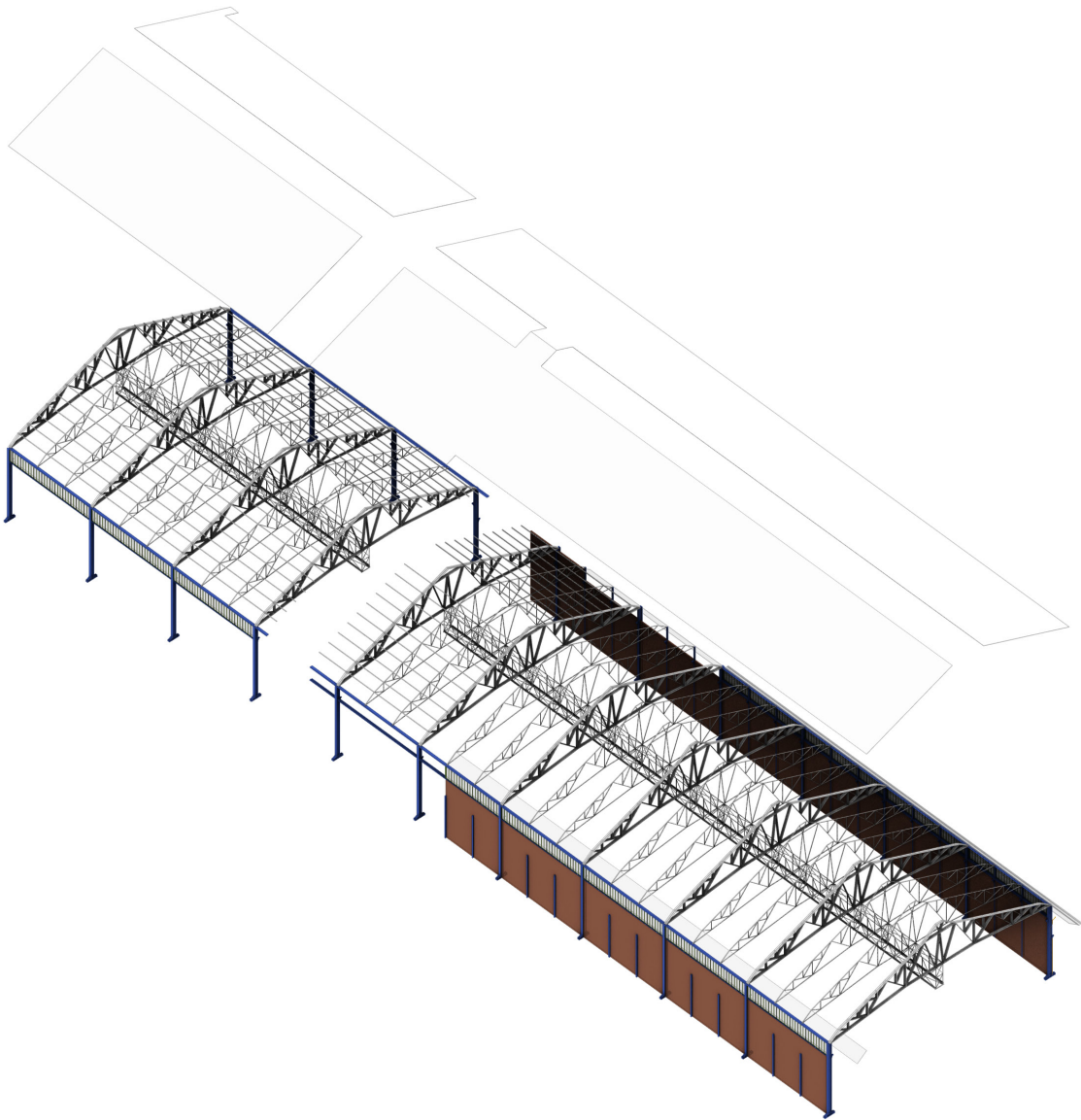
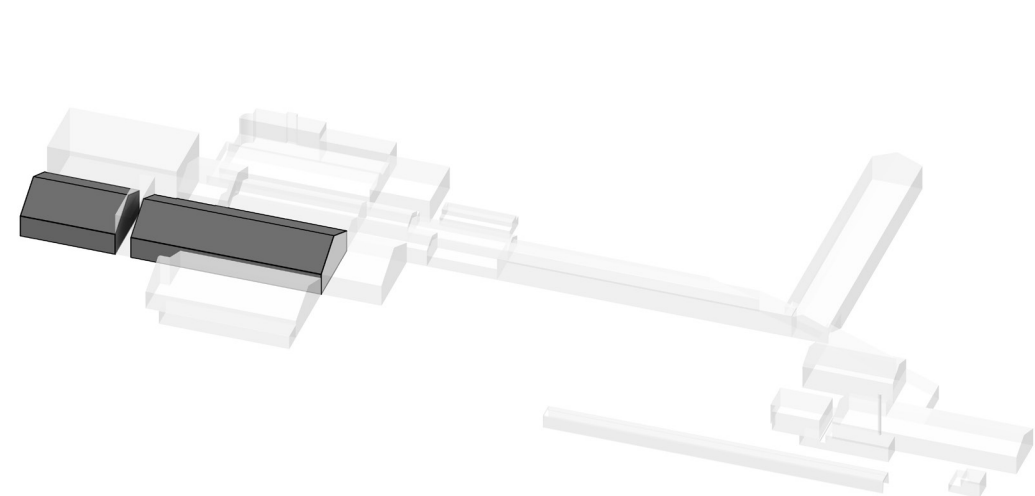


## ZOOM IN FLOOR PLANS: LOCAL BENIFITIAL GROUP





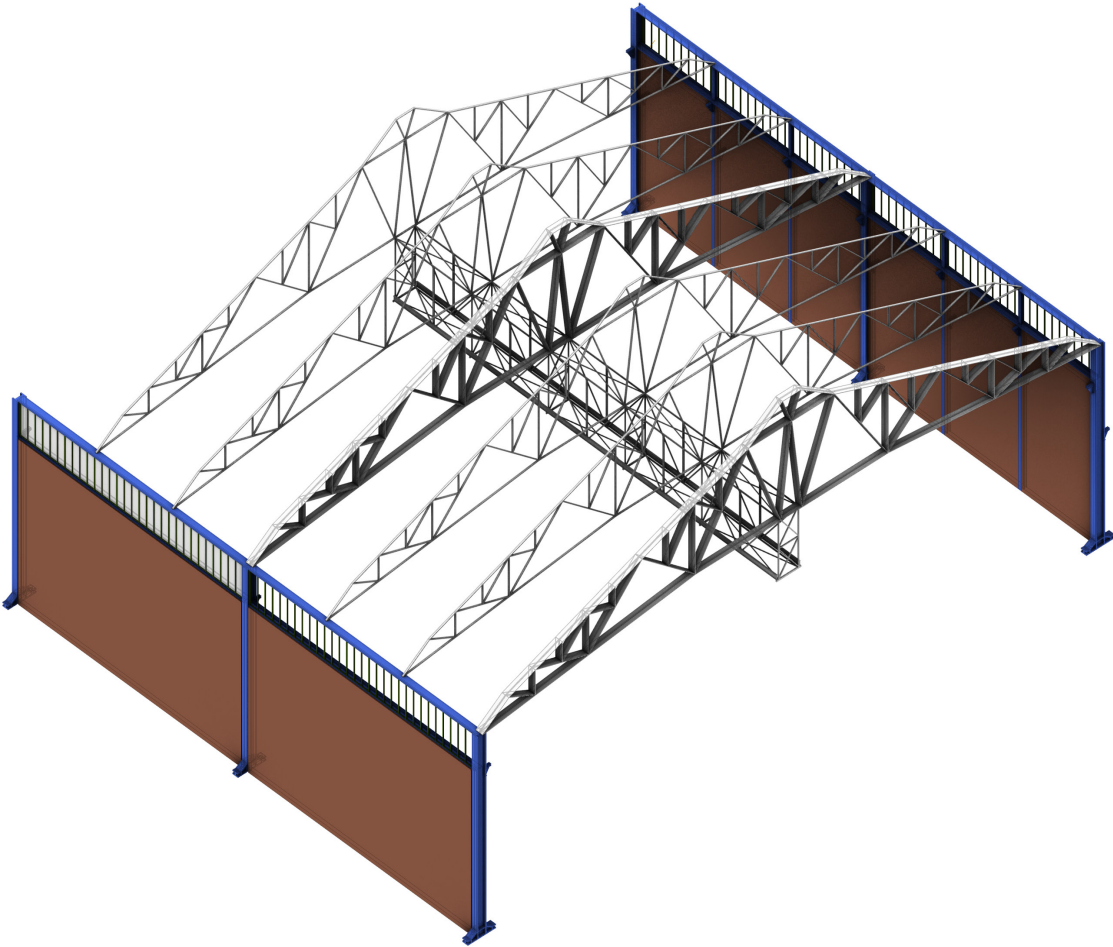
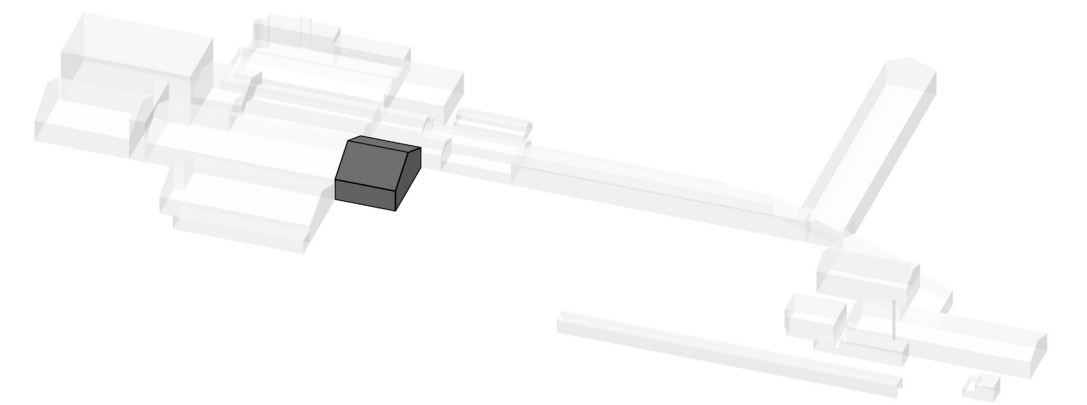
GALLERY GROUP VALUE ASSESSMENT: FACTORY BUILDING 12



Historical Commemorative Value	+++++
Spatial Spirital Value	+++++
Structural Heritage Value	+++++
Material & Interface Value	+++++
Functiona1 Reuse Value	+++++

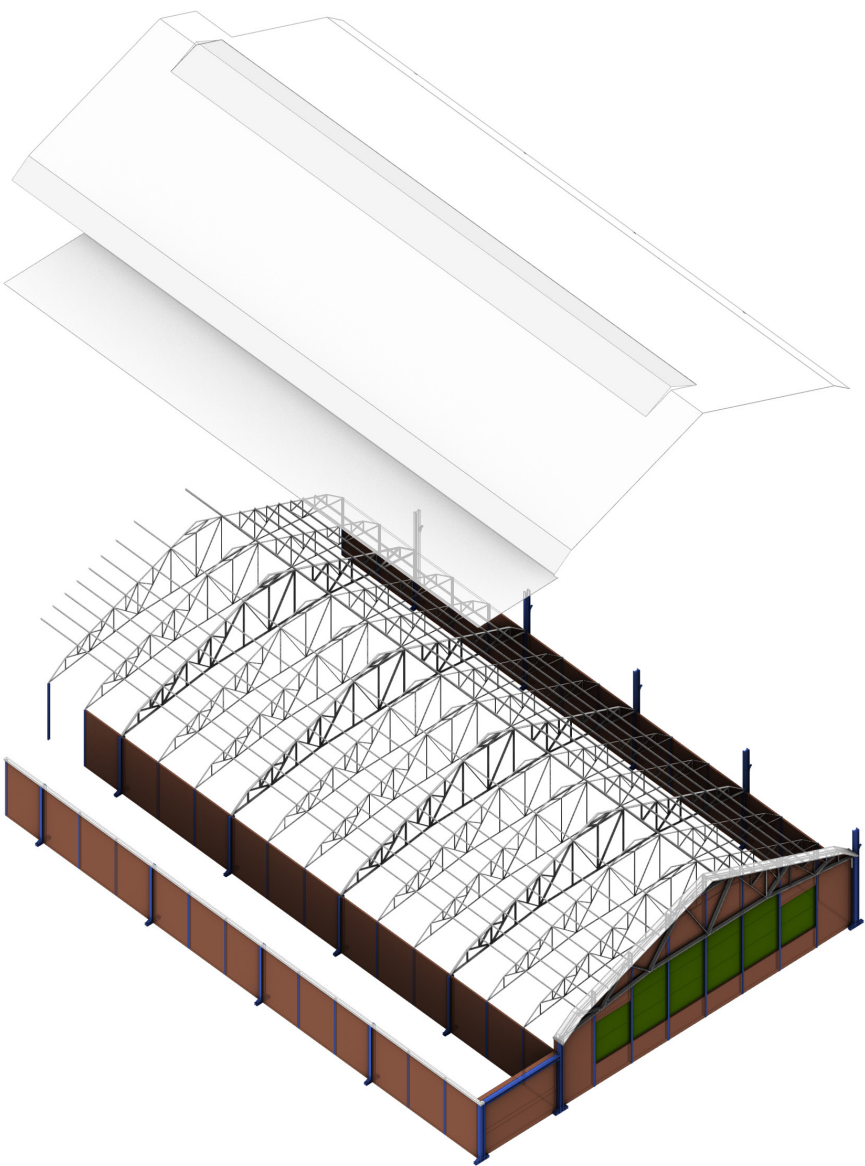
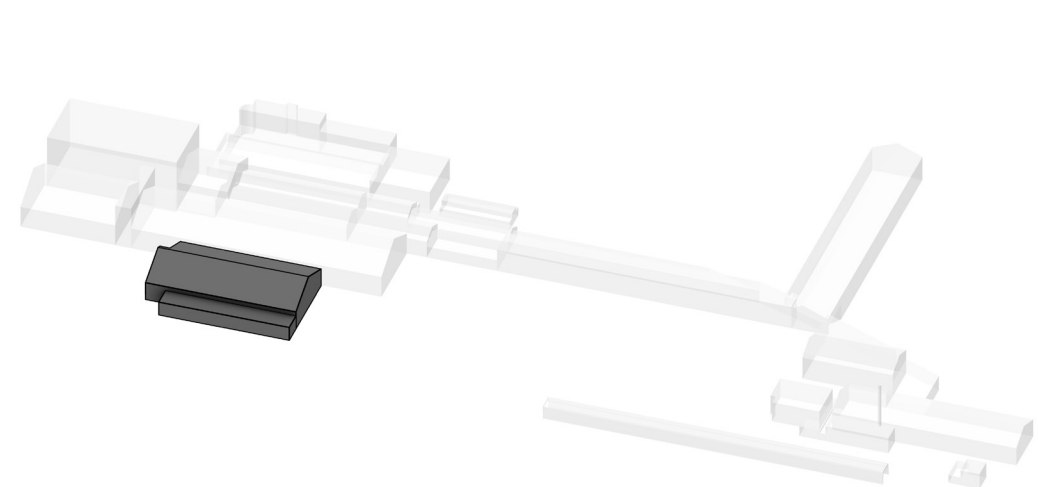


GALLERY GROUP VALUE VALUE ASSESSMENT: FACTORY BUILDING 14



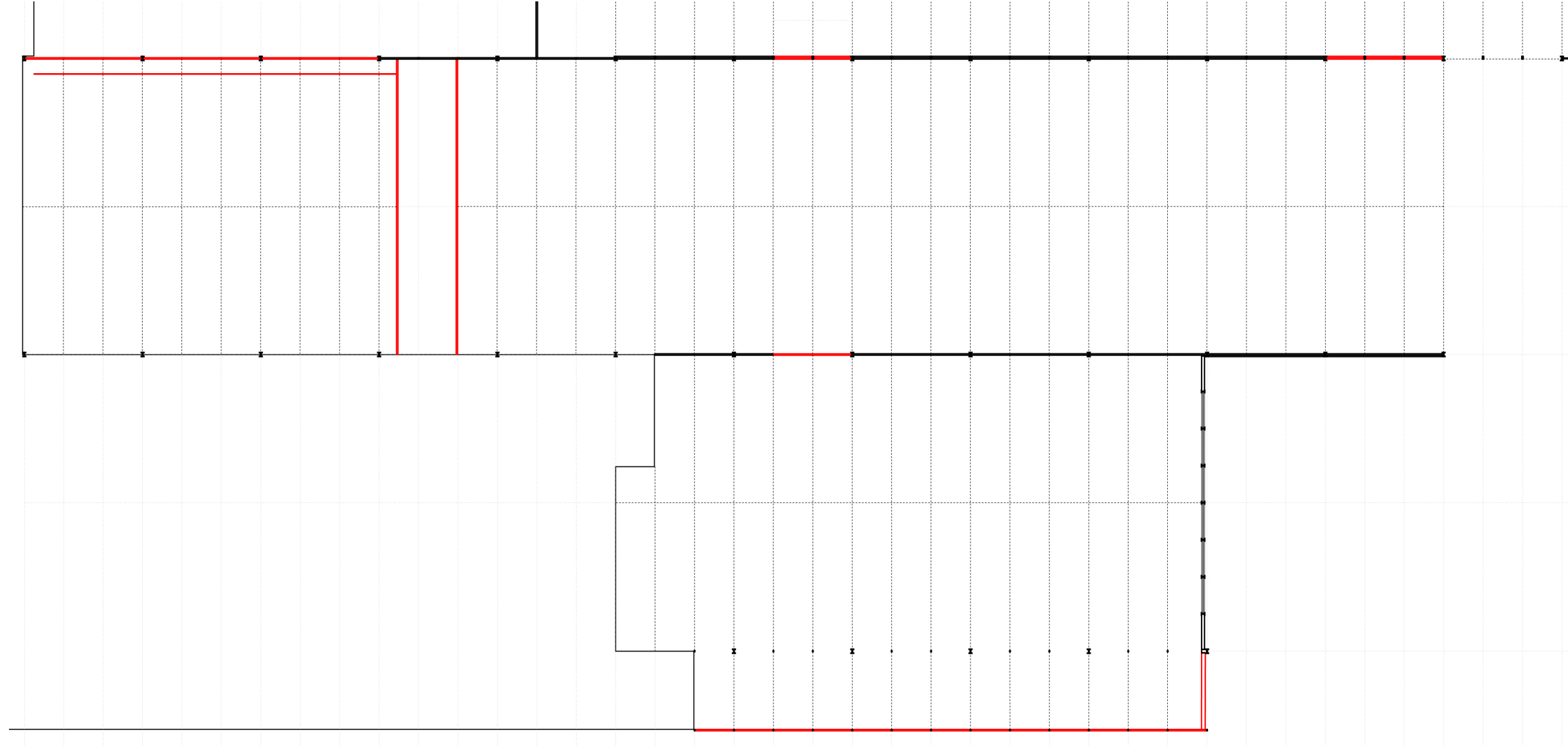
Historical Commemorative Value	+++++
Spatial Spirital Value	+++++
Structural Heritage Value	++++
Material & Interface Value	++++
Functiona1 Reuse Value	+++++

GALLERY GROUP VALUE VALUE ASSESSMENT: FACTORY BUILDING 15

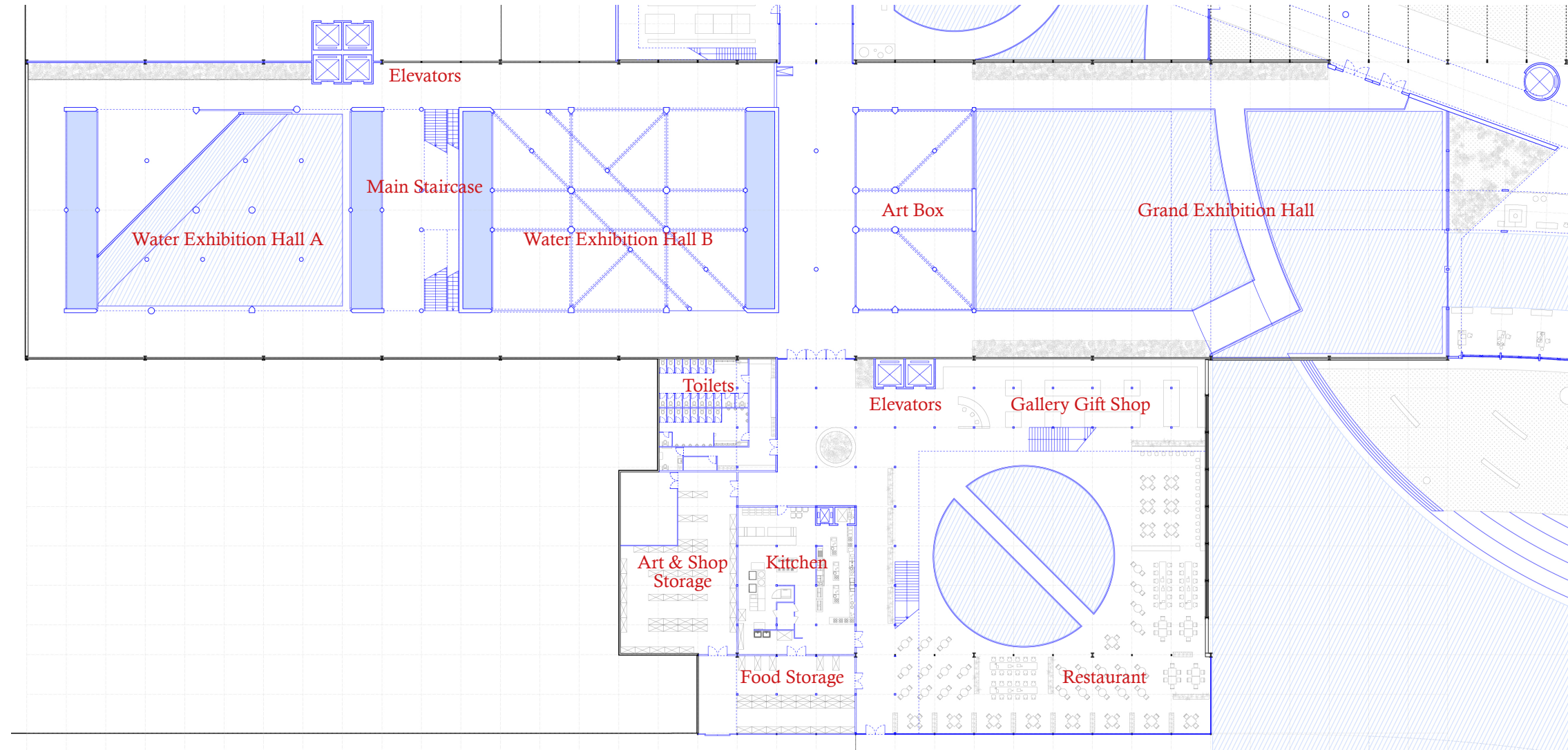


Historical Commemorative Value	+++++
Spatial Spirital Value	+++++
Structural Heritage Value	+++++
Material & Interface Value	+++++
Functiona1 Reuse Value	+++++

## ZOOM IN FLOOR PLANS: GALLERY GROUP

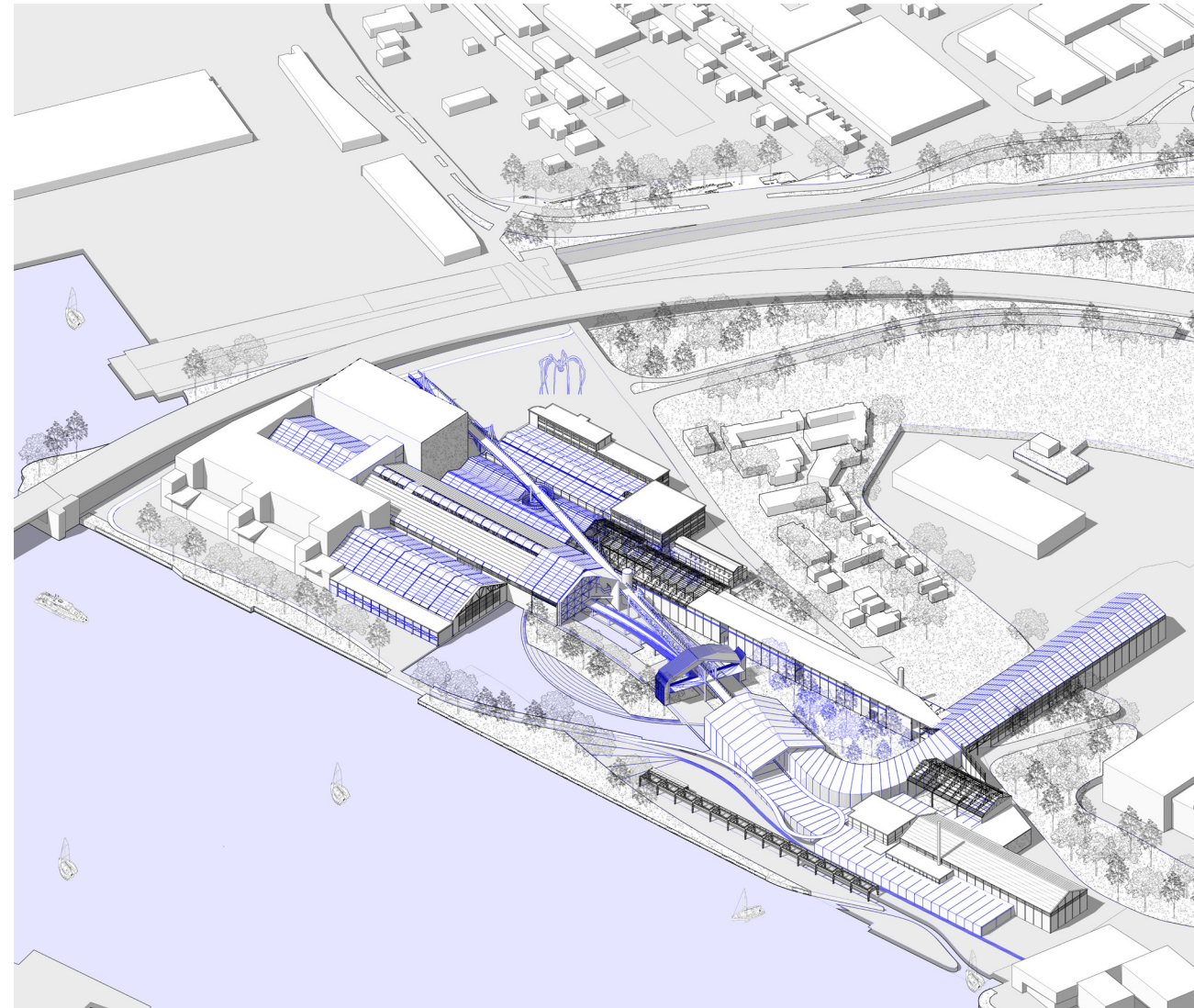


## ZOOM IN FLOOR PLANS: GALLERY GROUP

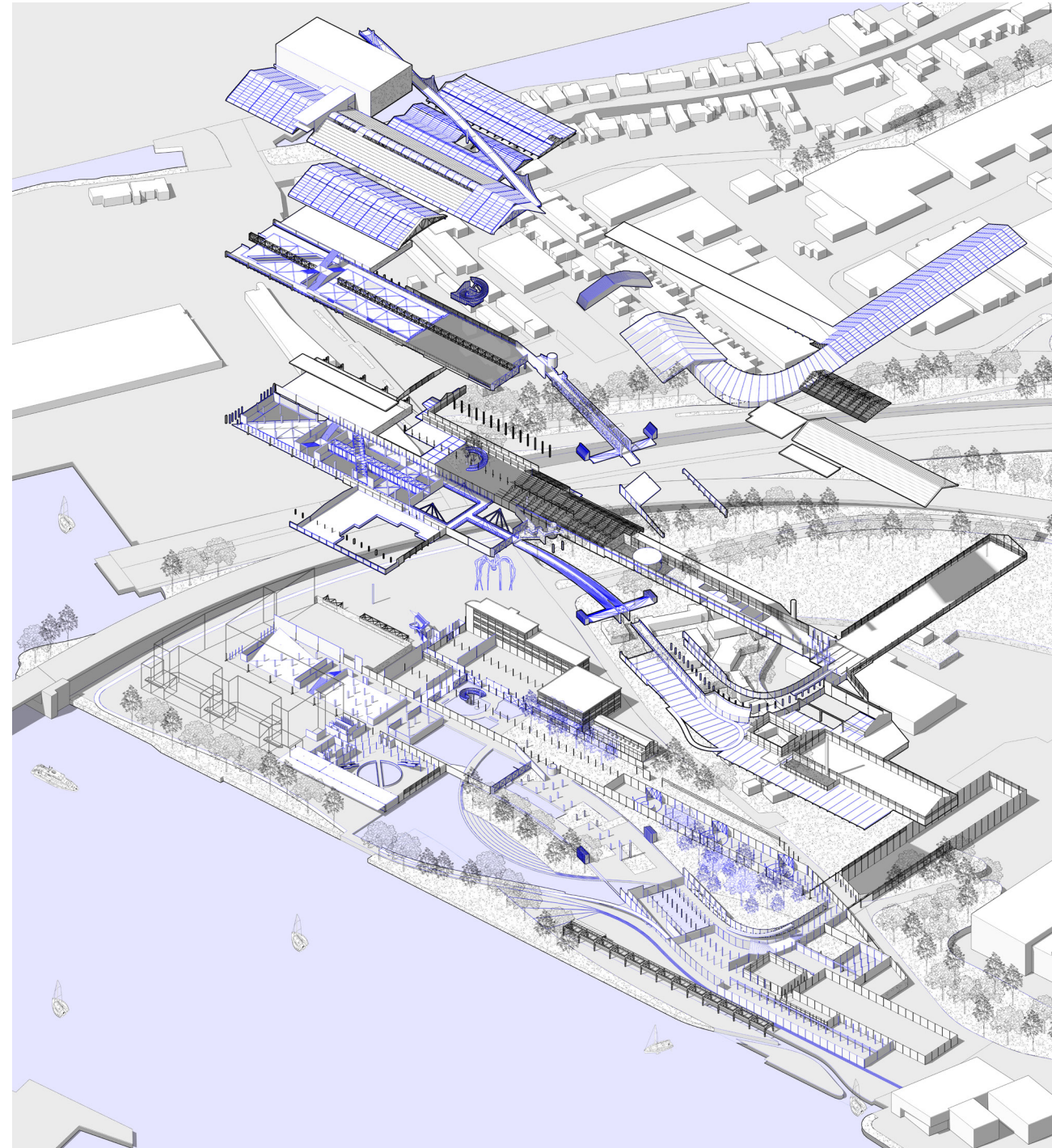




## PANORAMIC BIRD'S-EYE VIEW: NON-TRIENNIAL PERIOD

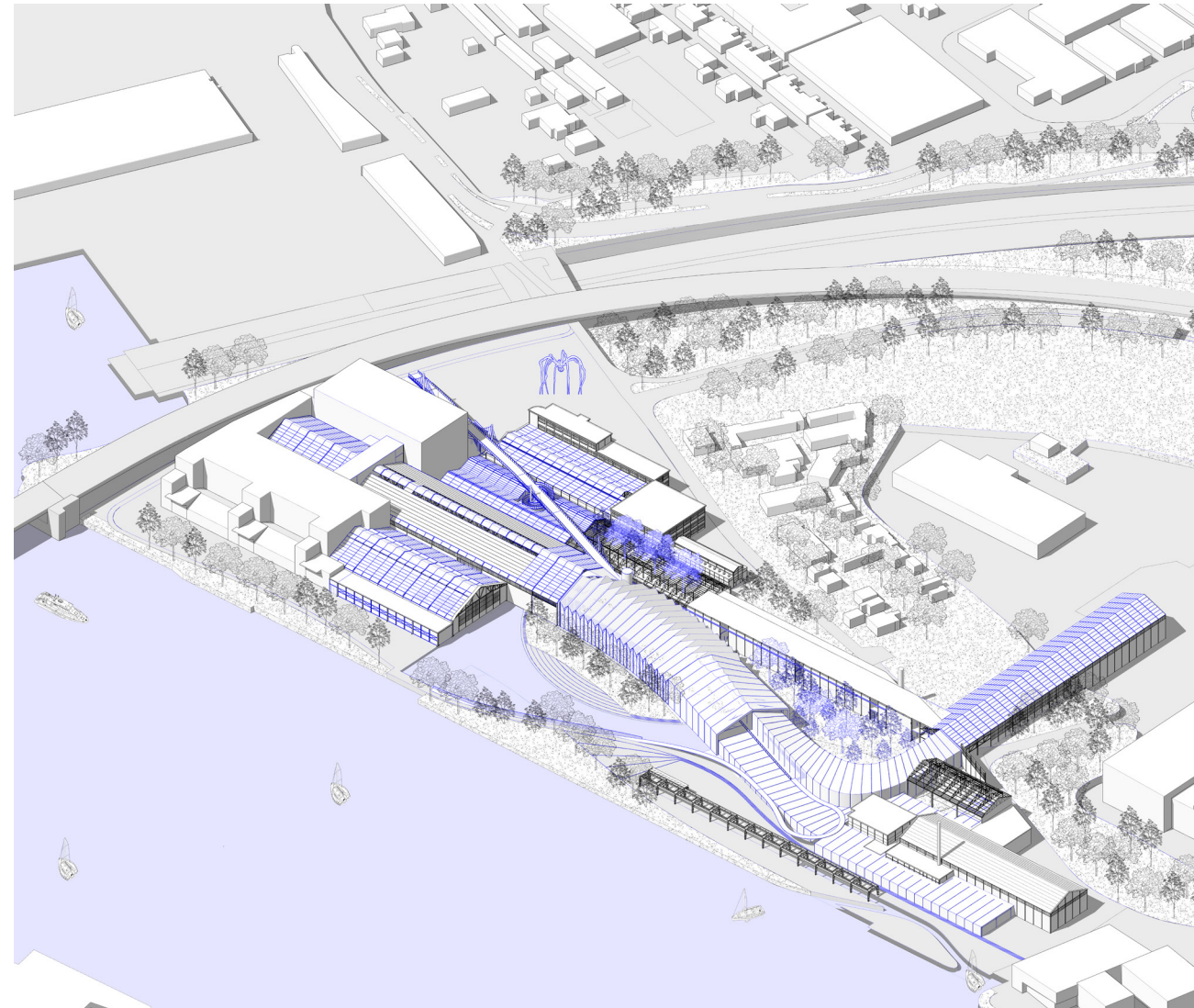


## Space Use & Function Scenario

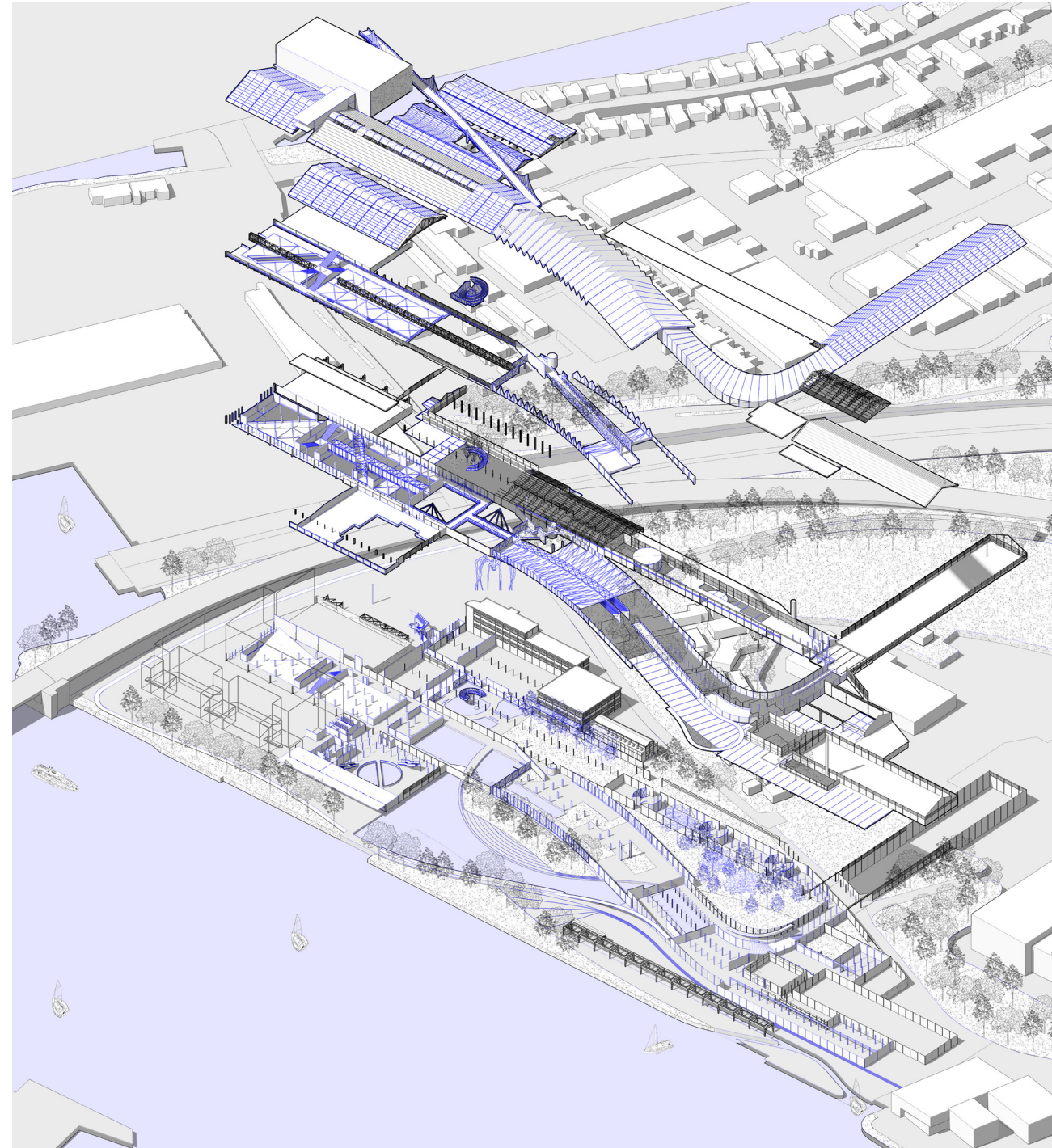




## PANORAMIC BIRD'S-EYE VIEW: TRIENNAL PERIOD



## Space Use & Function Scenario



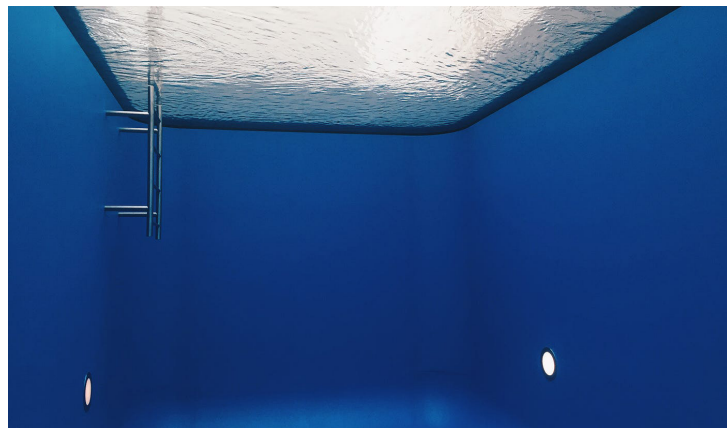
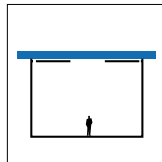
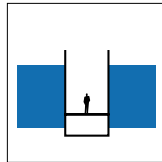
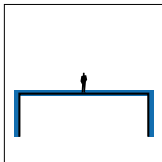
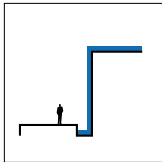
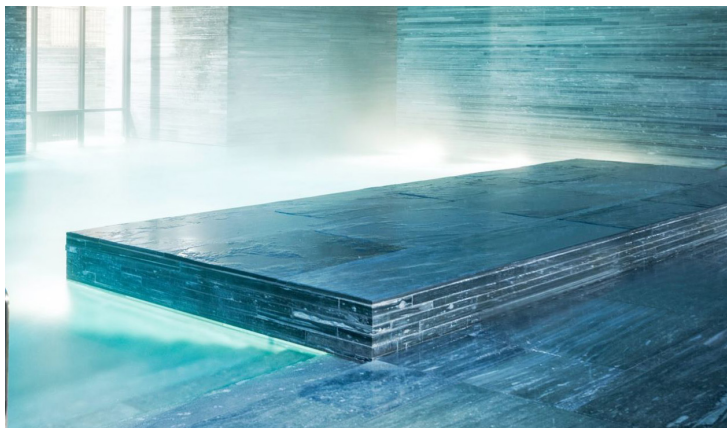
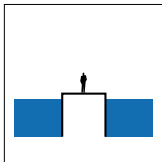
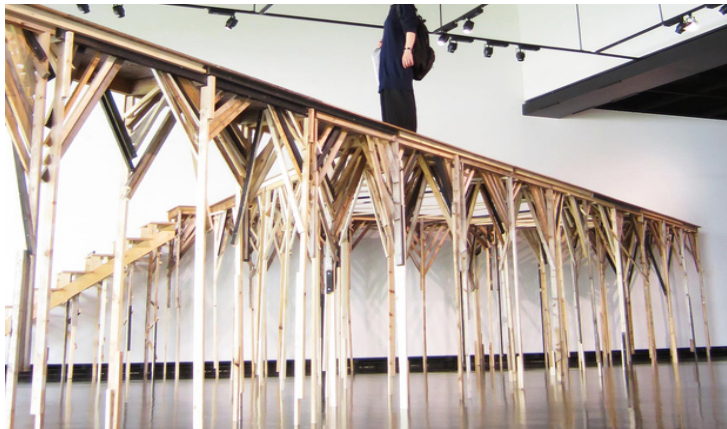
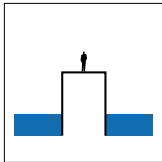


# **K<sub>EY</sub> S<sub>PACE</sub> D<sub>EEPENING</sub> D<sub>ESIGN</sub>**

**1. Key Space**

**2. Building Technology & Material**

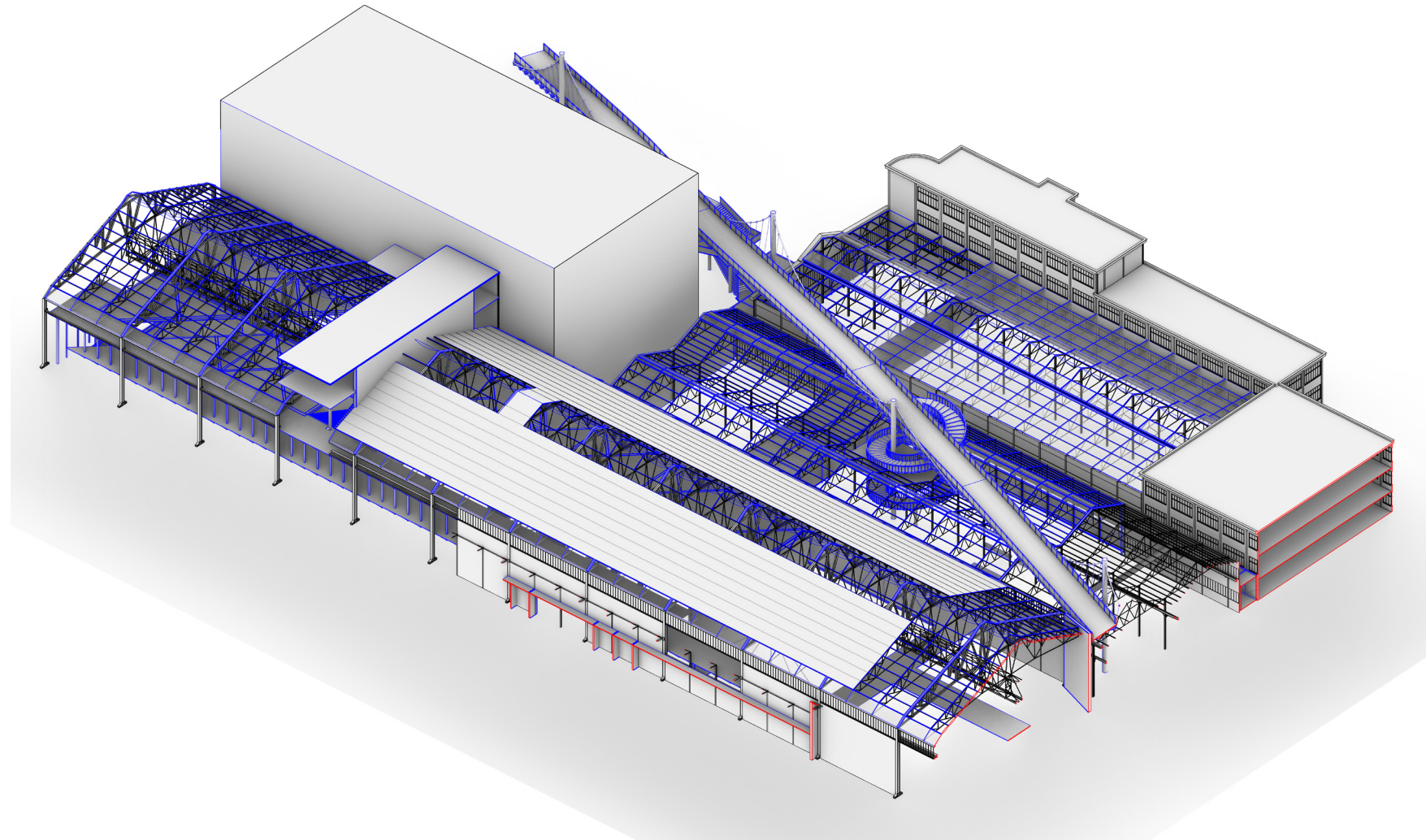
# TYPOLOGY OF WATER-ENVIRONMENT ART EXHIBITION SPACE





KEY SPACE

# WATER-ENVIRONMENT ART EXHIBITION SPACE





KEY SPACE

## WATER-ENVIRONMENT ART EXHIBITION SPACE





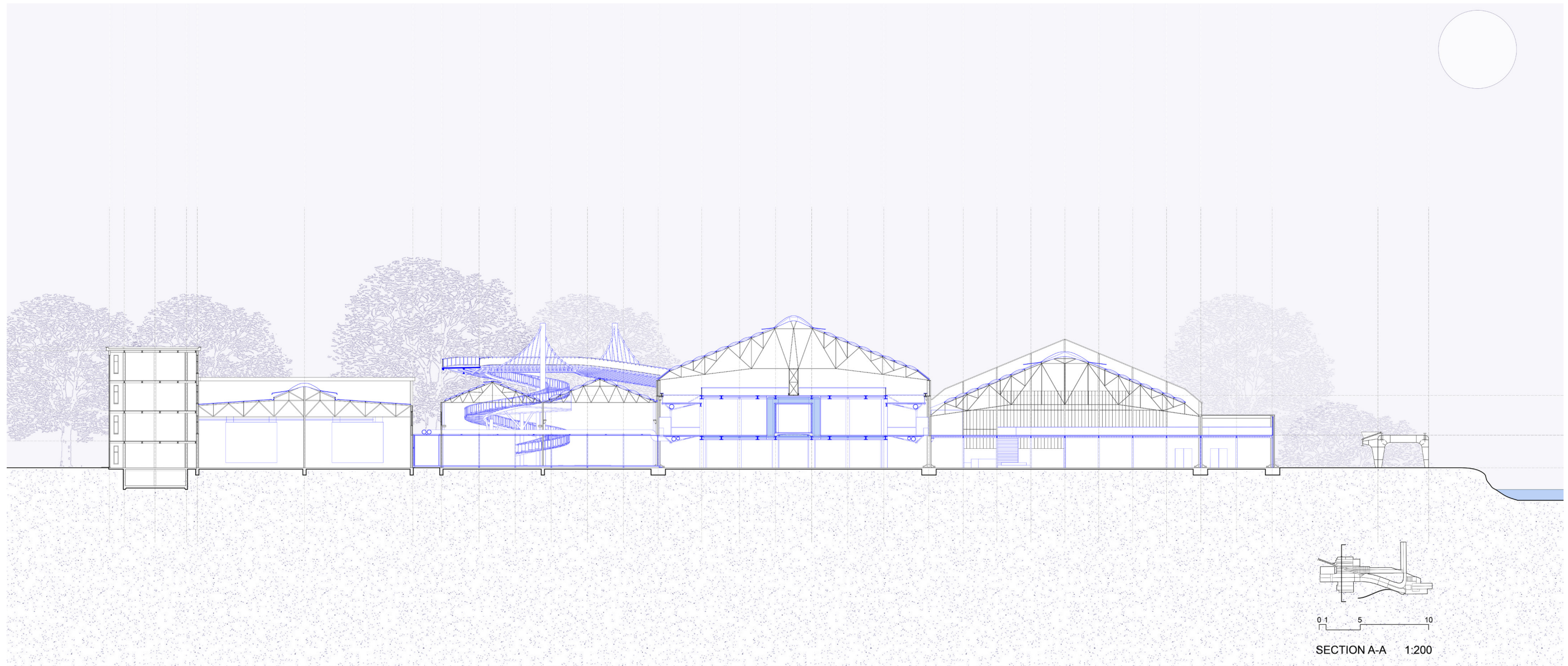
KEY SPACE

# WATER-ENVIRONMENT ART EXHIBITION SPACE

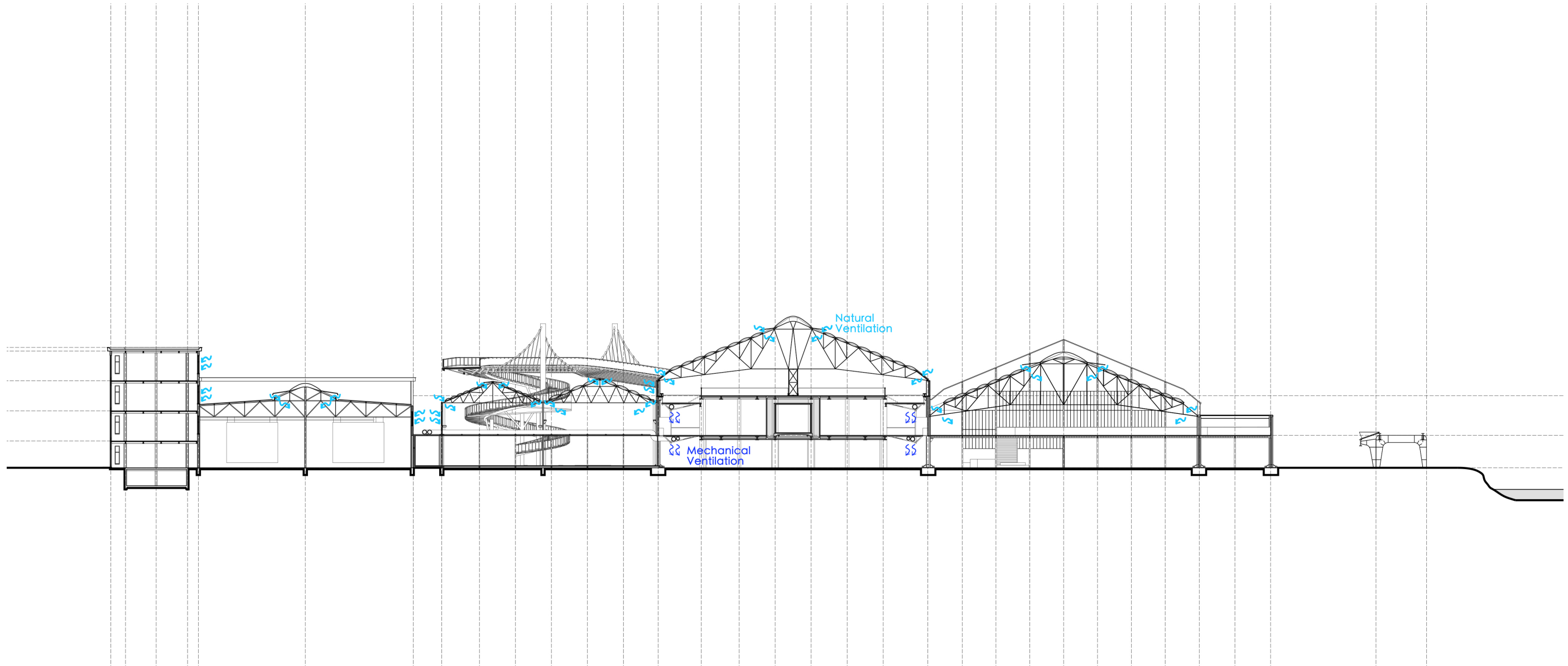




# SECTION A-A

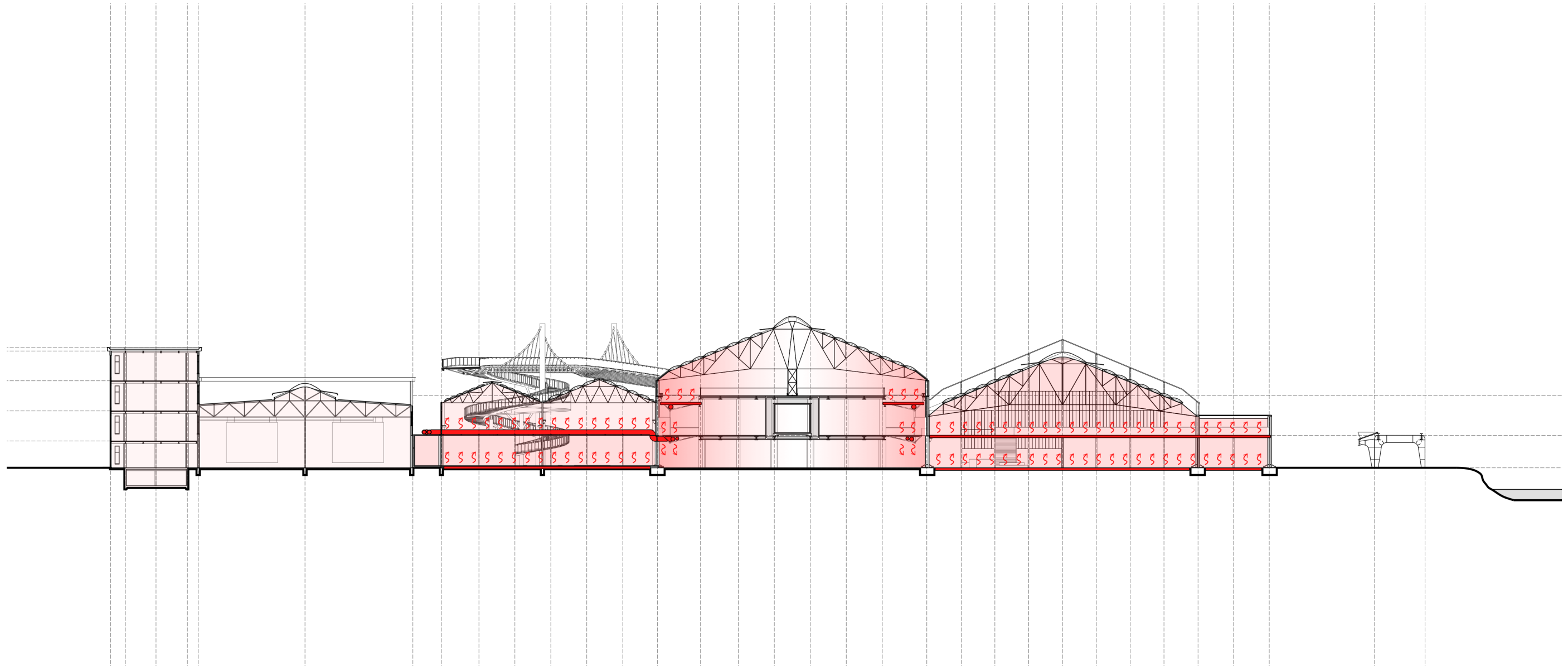


# VENTILATION

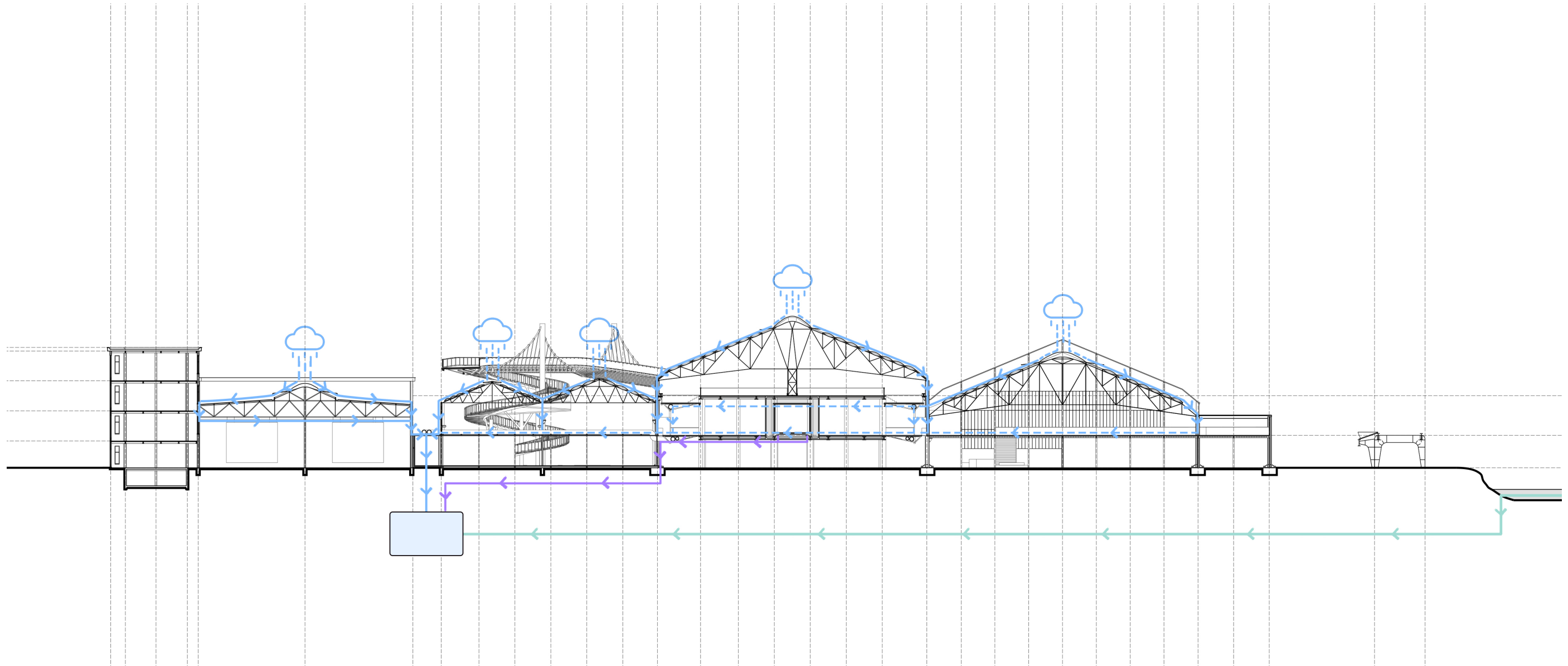




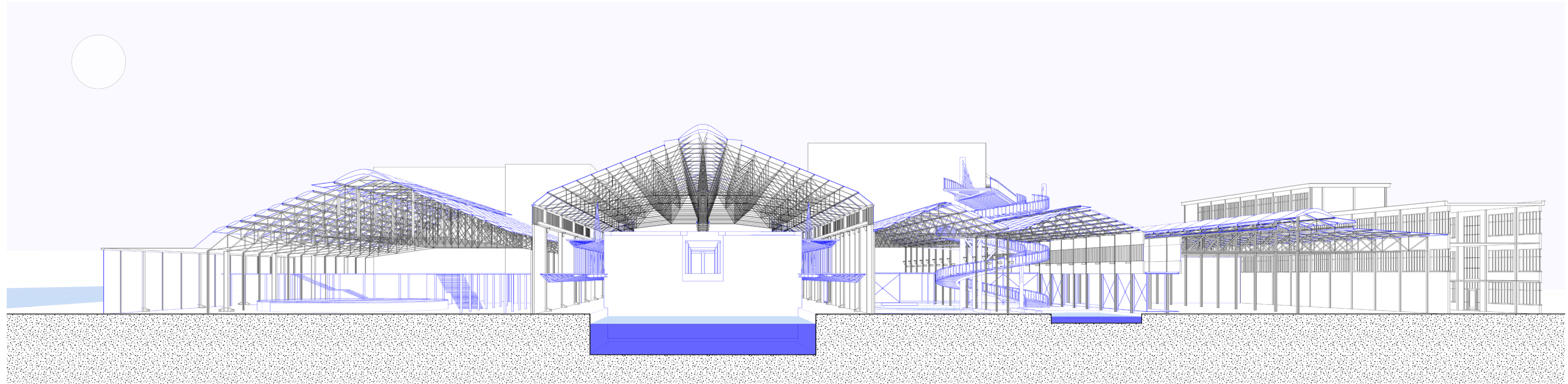
# HEATING & INSULATION



# WATER CYCLE SYSTEM

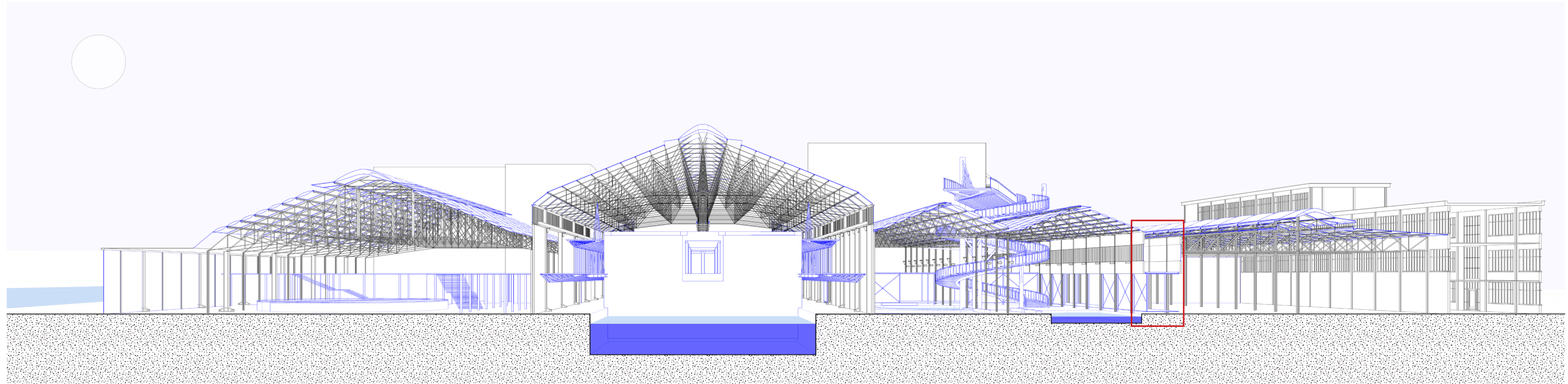


# KEY SPACE SECTION PERSPECTIVE B-B

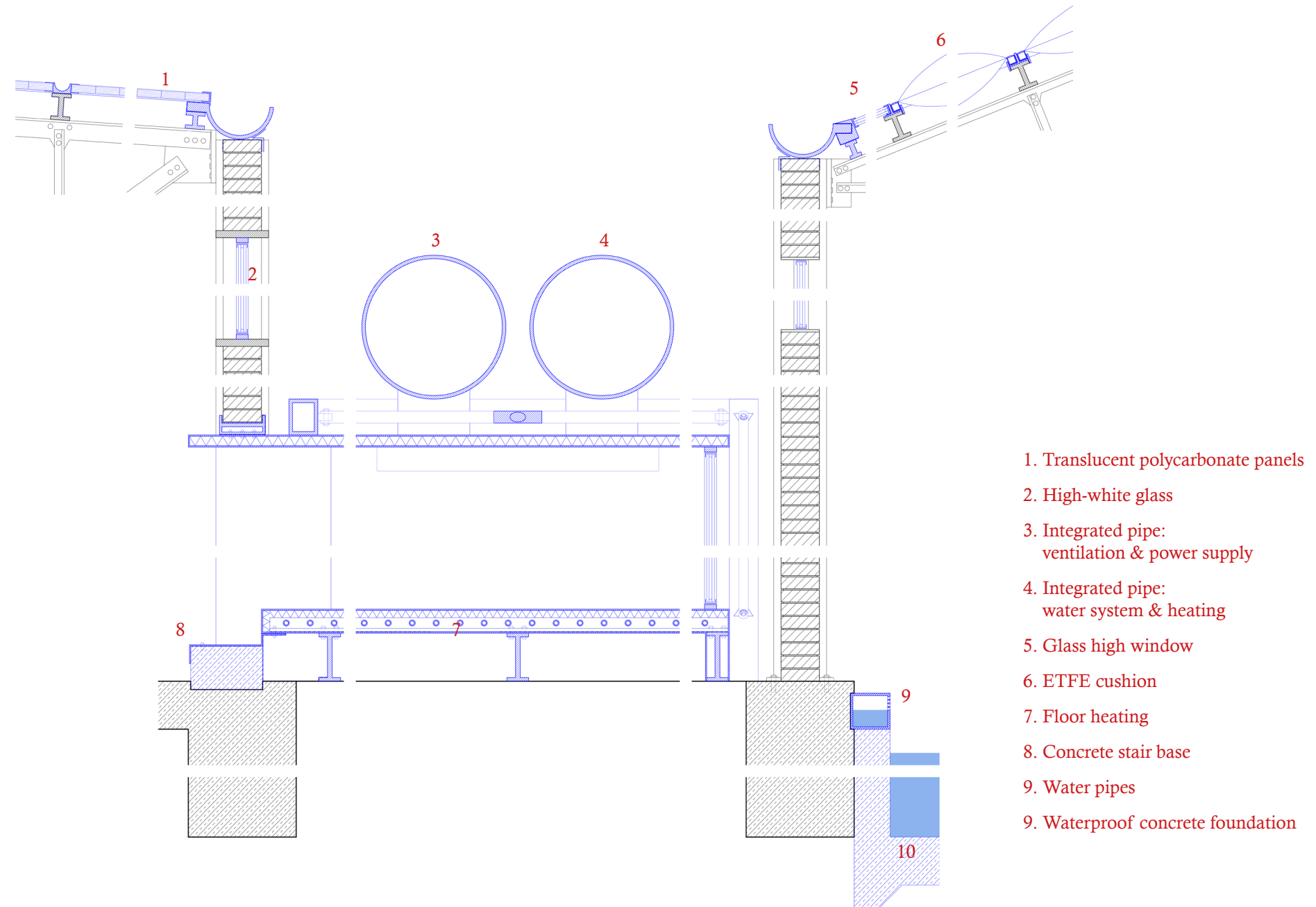




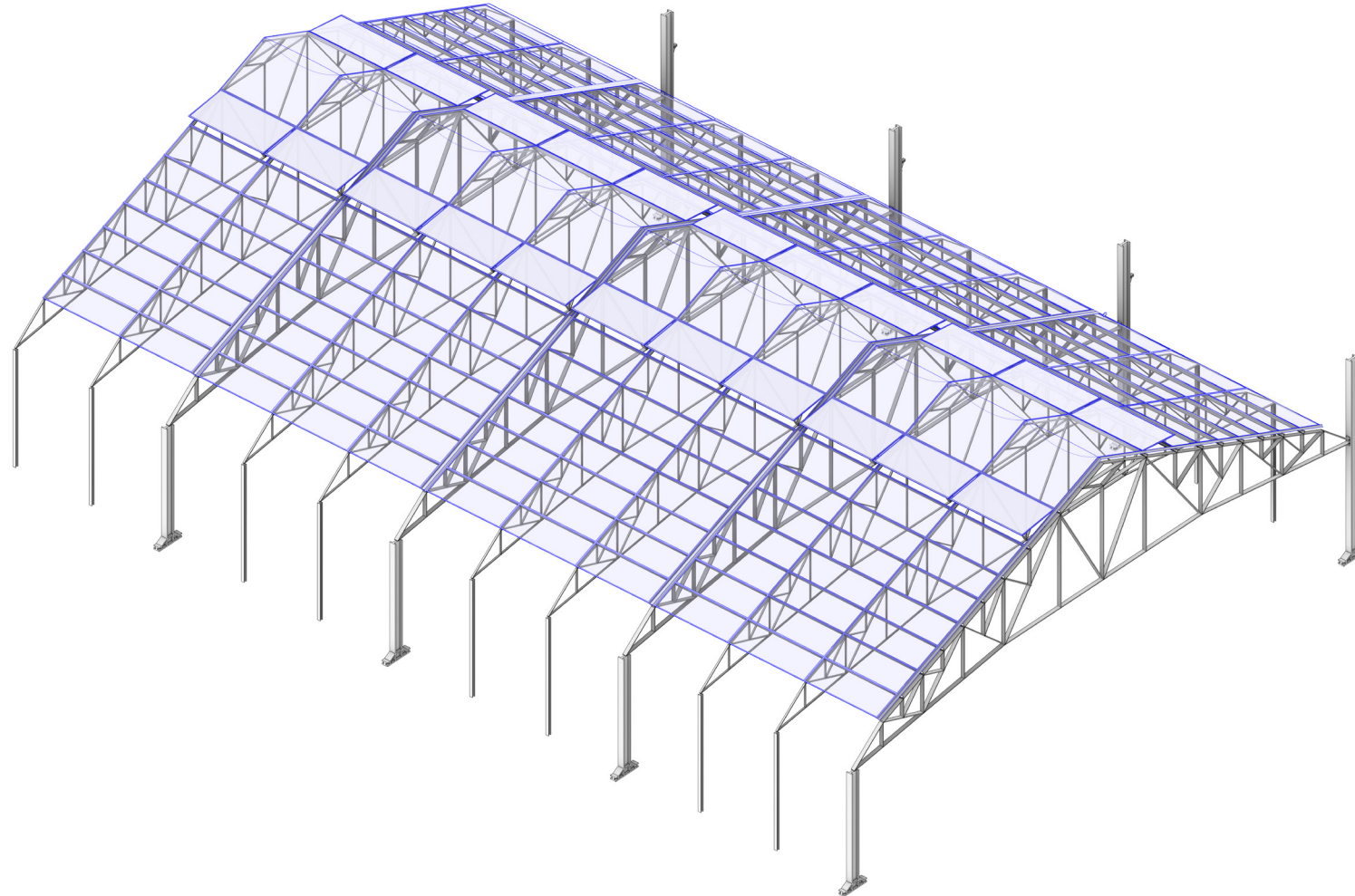
# SECTION PERSPECTIVE & FACADE DETAIL



# FACADE DETAIL

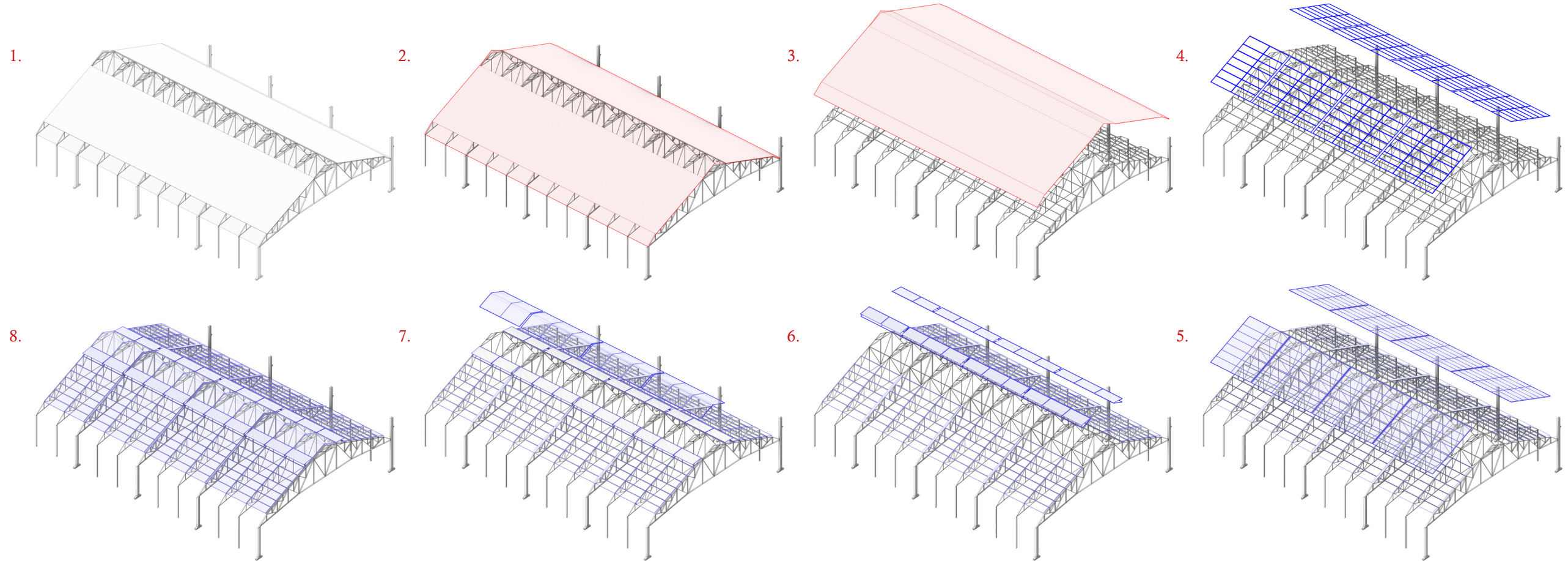


# BIULDING TECHNOLOGY DETAIL - LIGHTWEIGHT ROOF

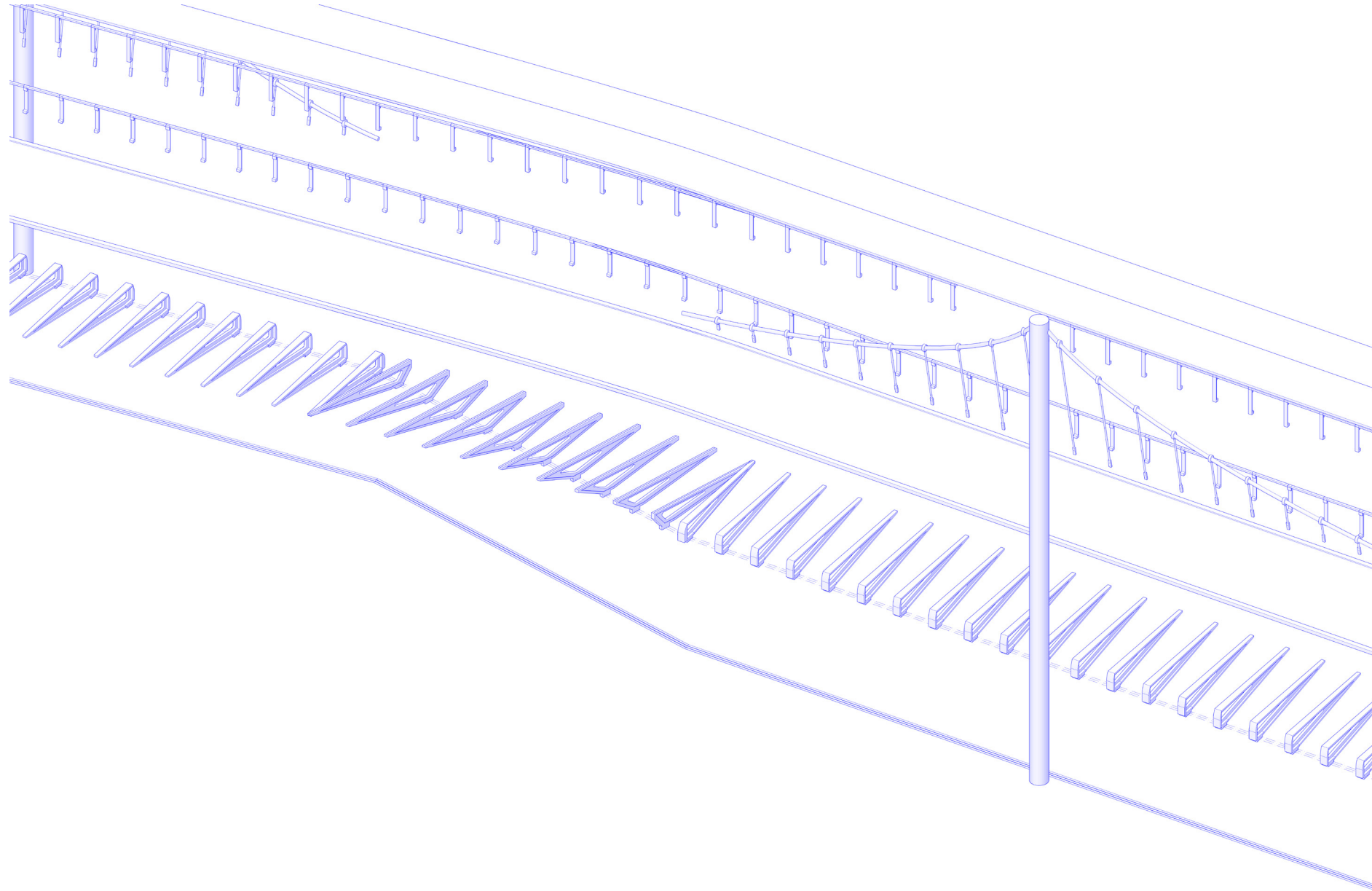




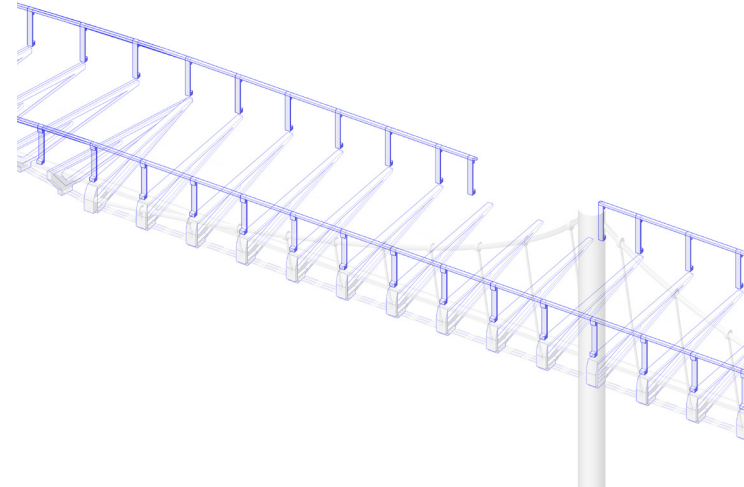
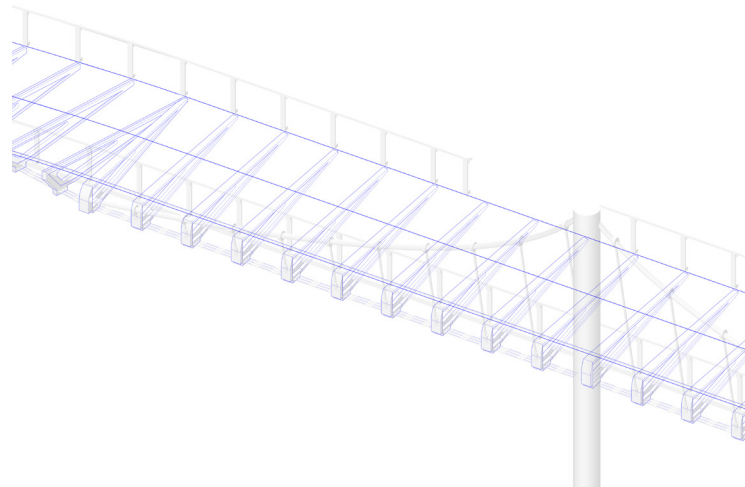
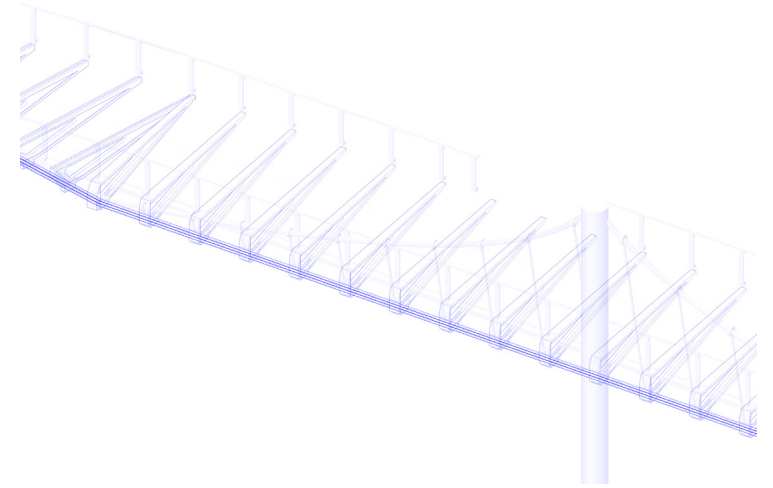
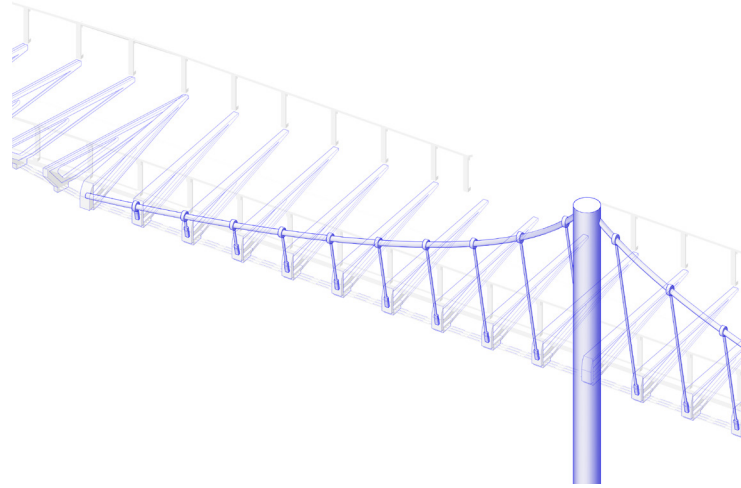
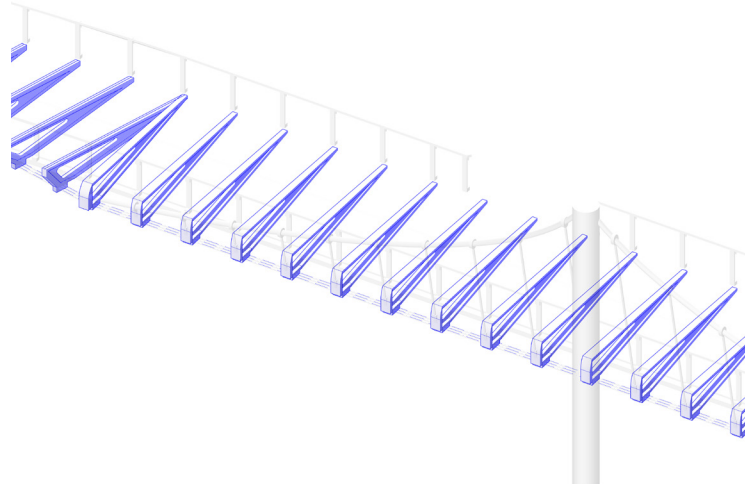
# BIULDING TECHNOLOGY DETAIL - LIGHTWEIGHT ROOF



# BIULDING TECHNOLOGY DETAIL - SKY BRIDGE

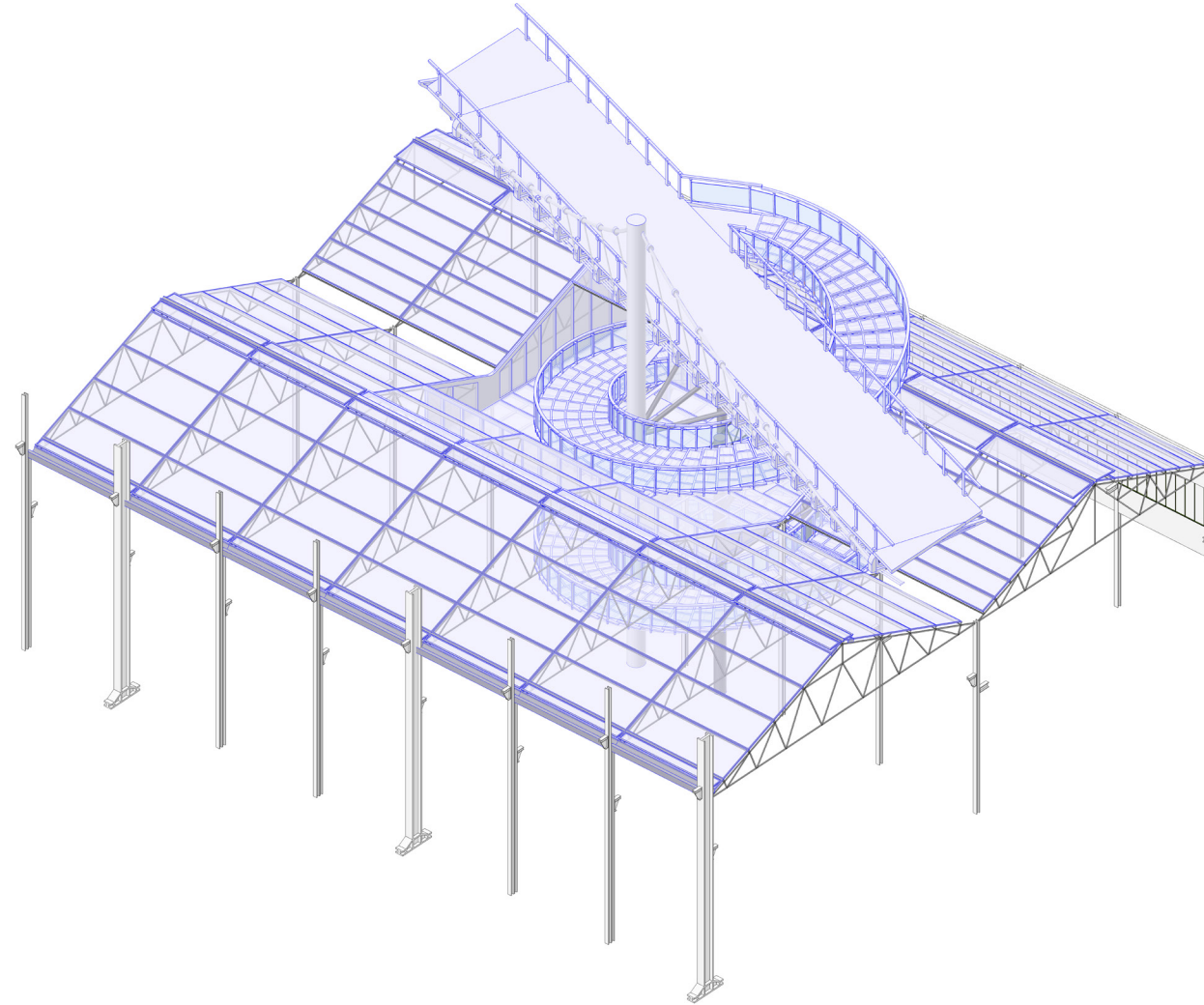


# BIULDING TECHNOLOGY DETAIL - SKY BRIDGE



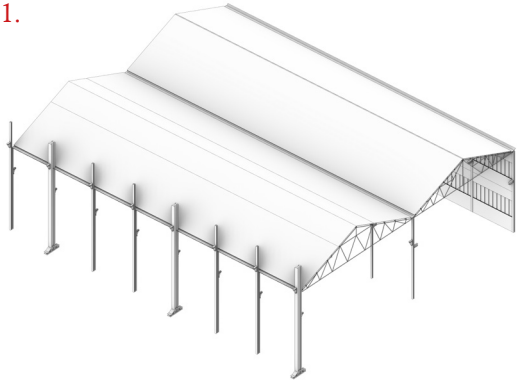


# BUILDING TECHNOLOGY DETAIL - SPIRAL STAIRCASE

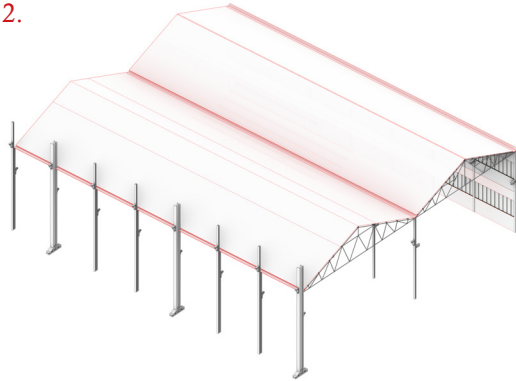


# BUILDING TECHNOLOGY DETAIL - SPIRAL STAIRCASE

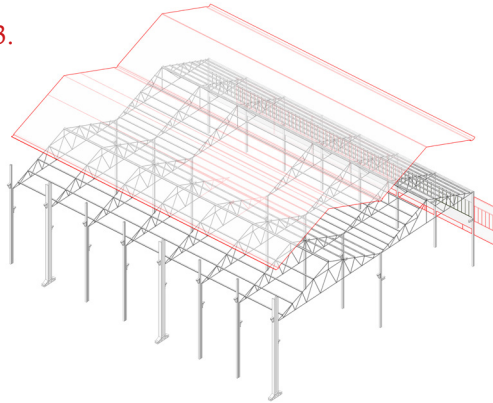
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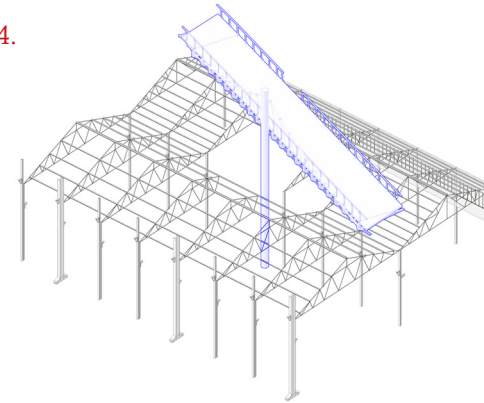
2.



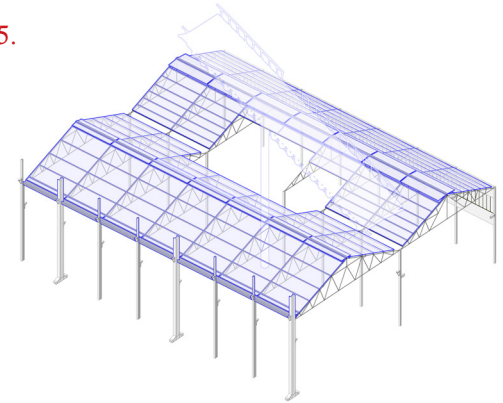
3.



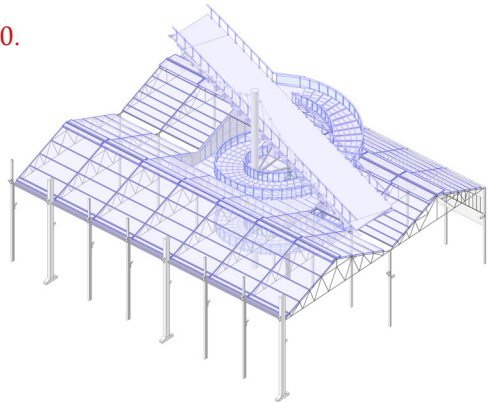
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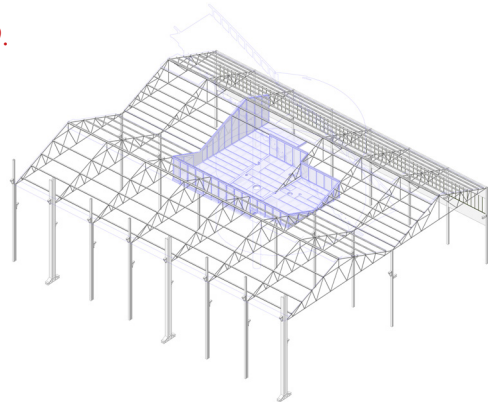
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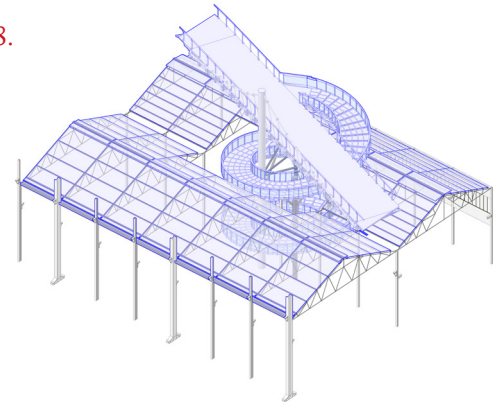
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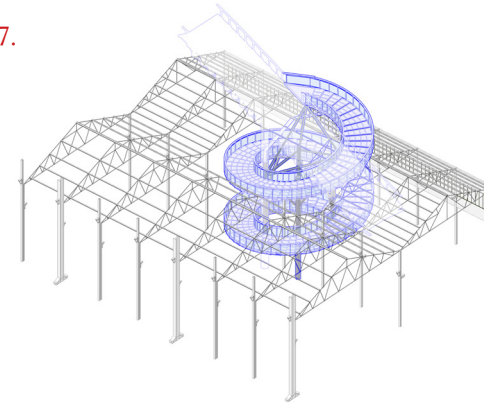
9.



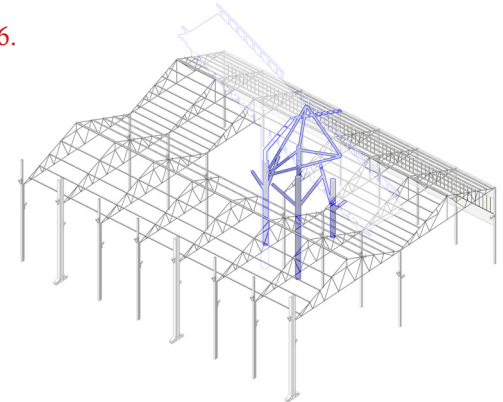
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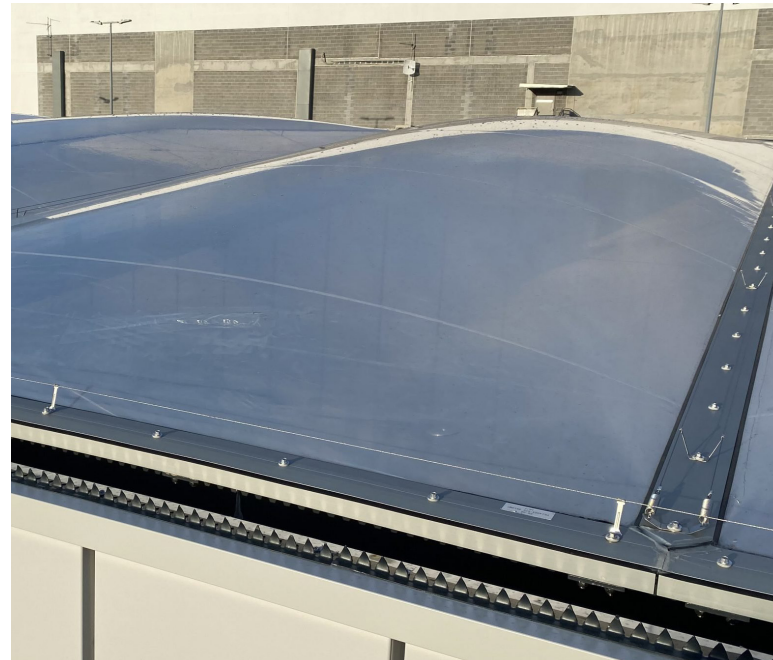


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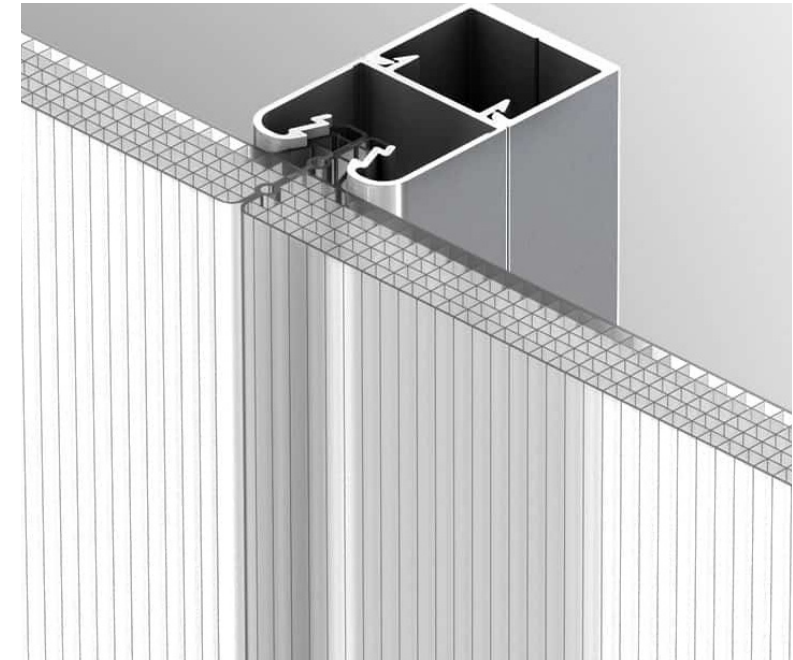
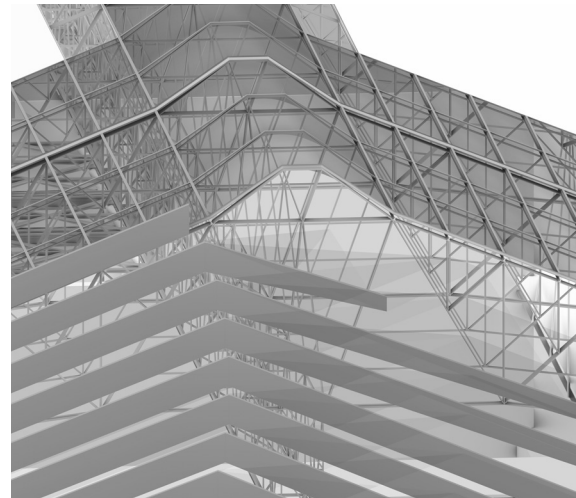


# PRESENTATION OF NEW ADDED MATERIALS

**ETFE CUSHIONS**



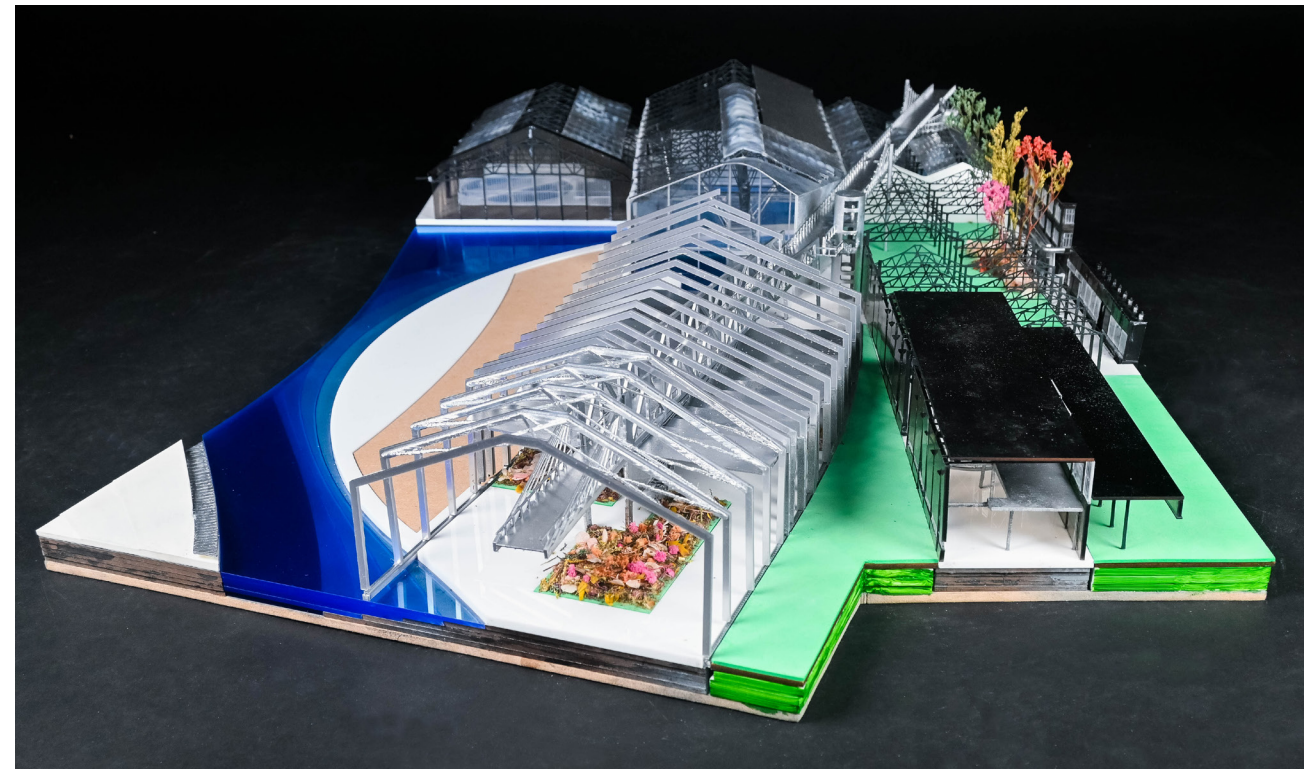
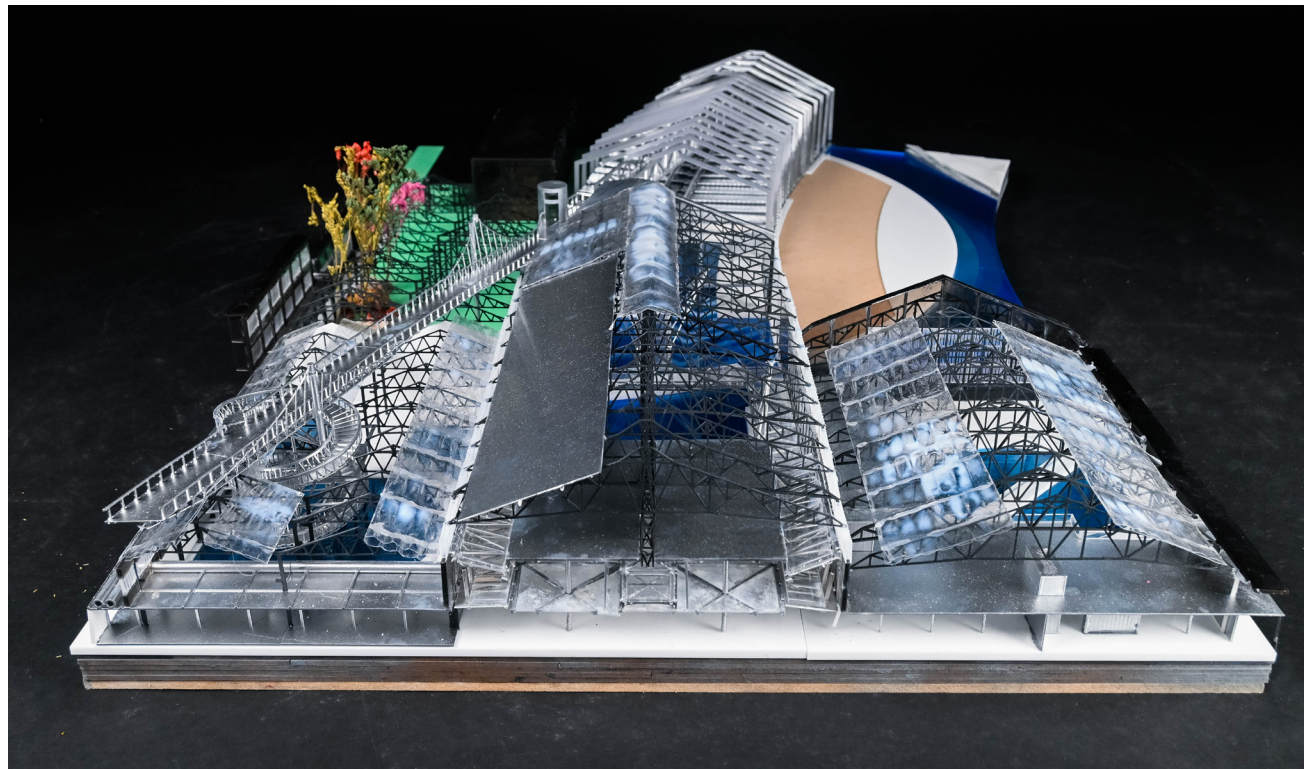
**TRANSLUCENT POLYCARBONATE PANELS**





BUILDING TECHNOLOGY

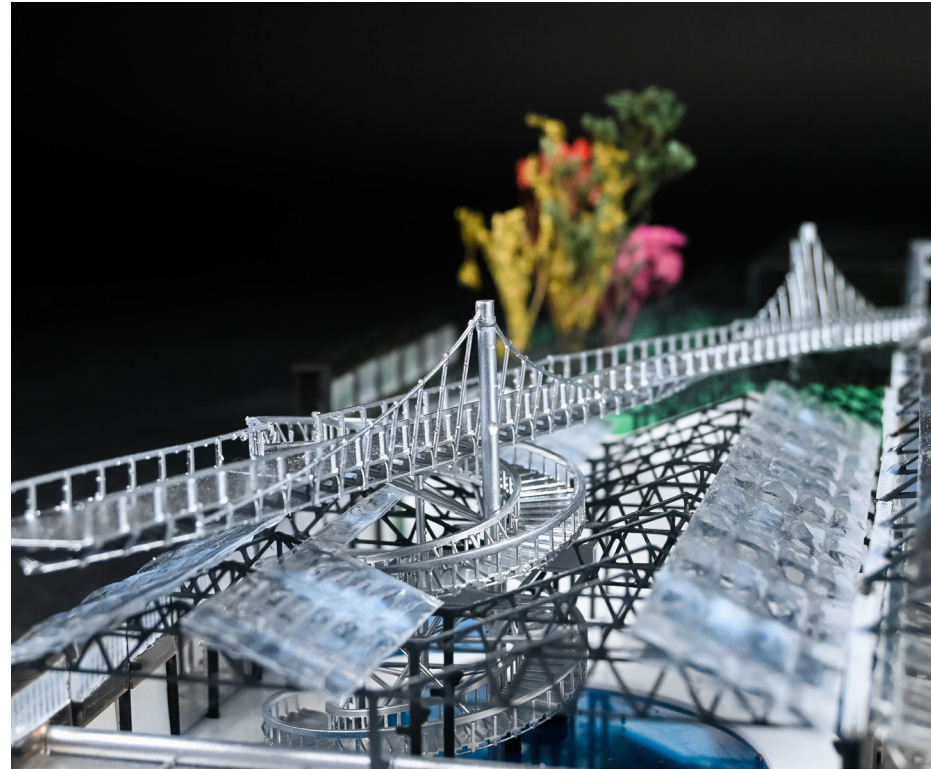
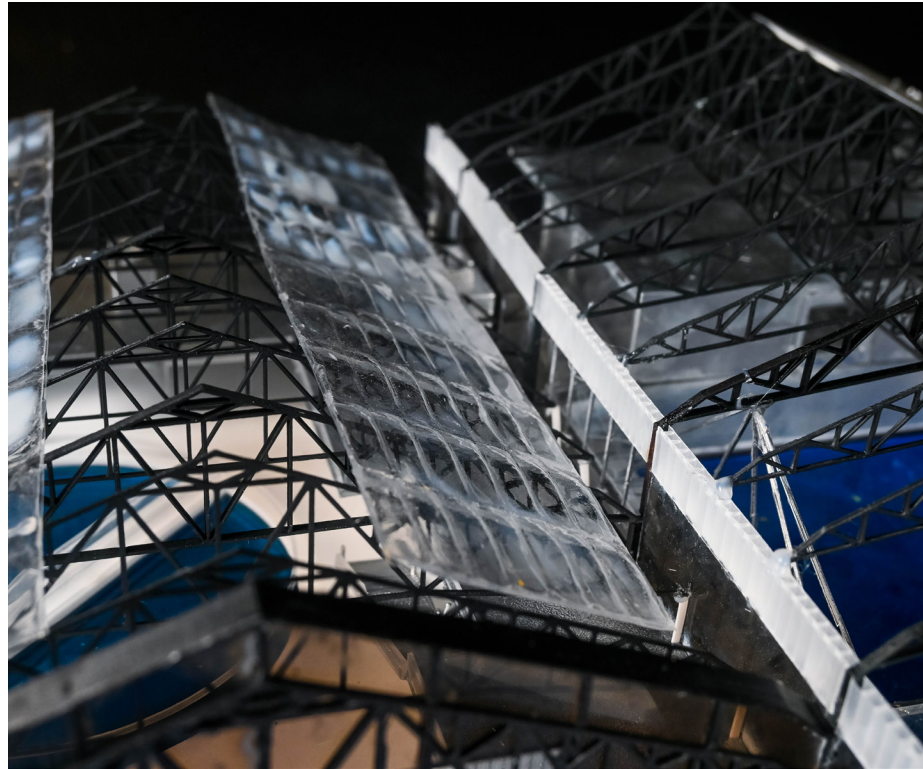
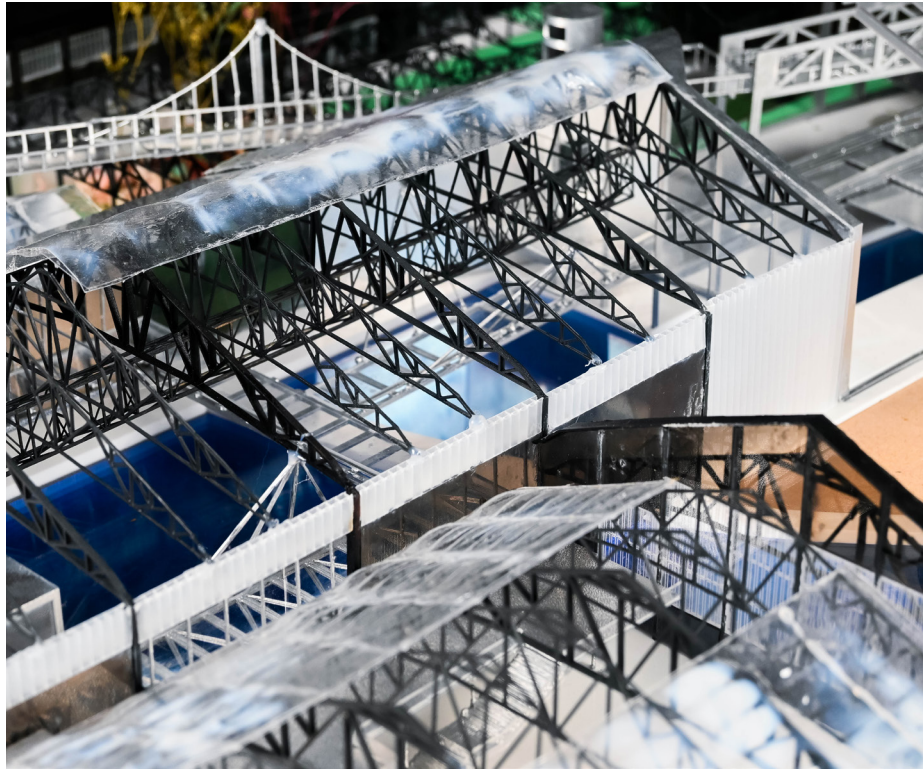
# DETAIL MODEL





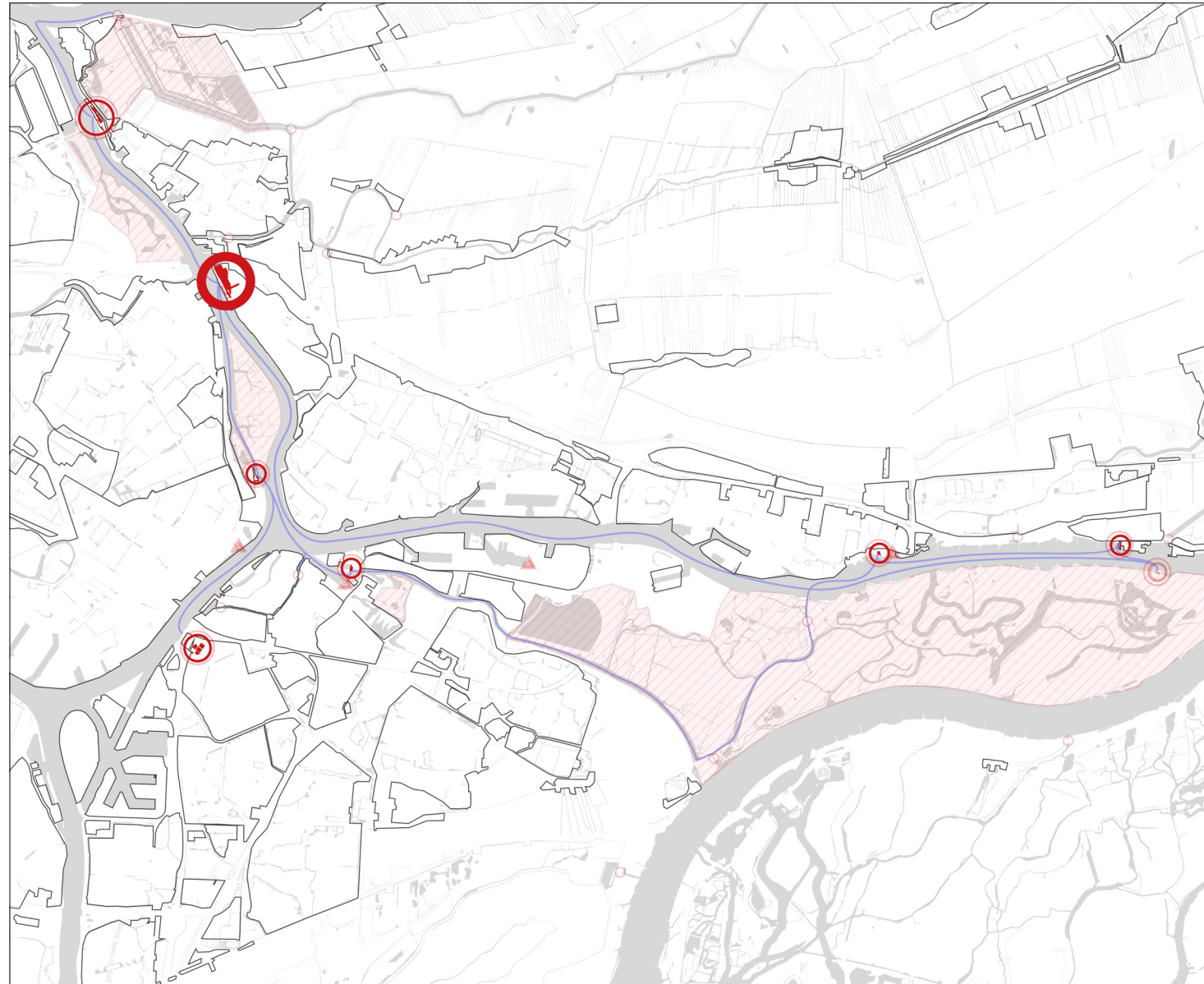
BUILDING TECHNOLOGY

# DETAIL MODEL



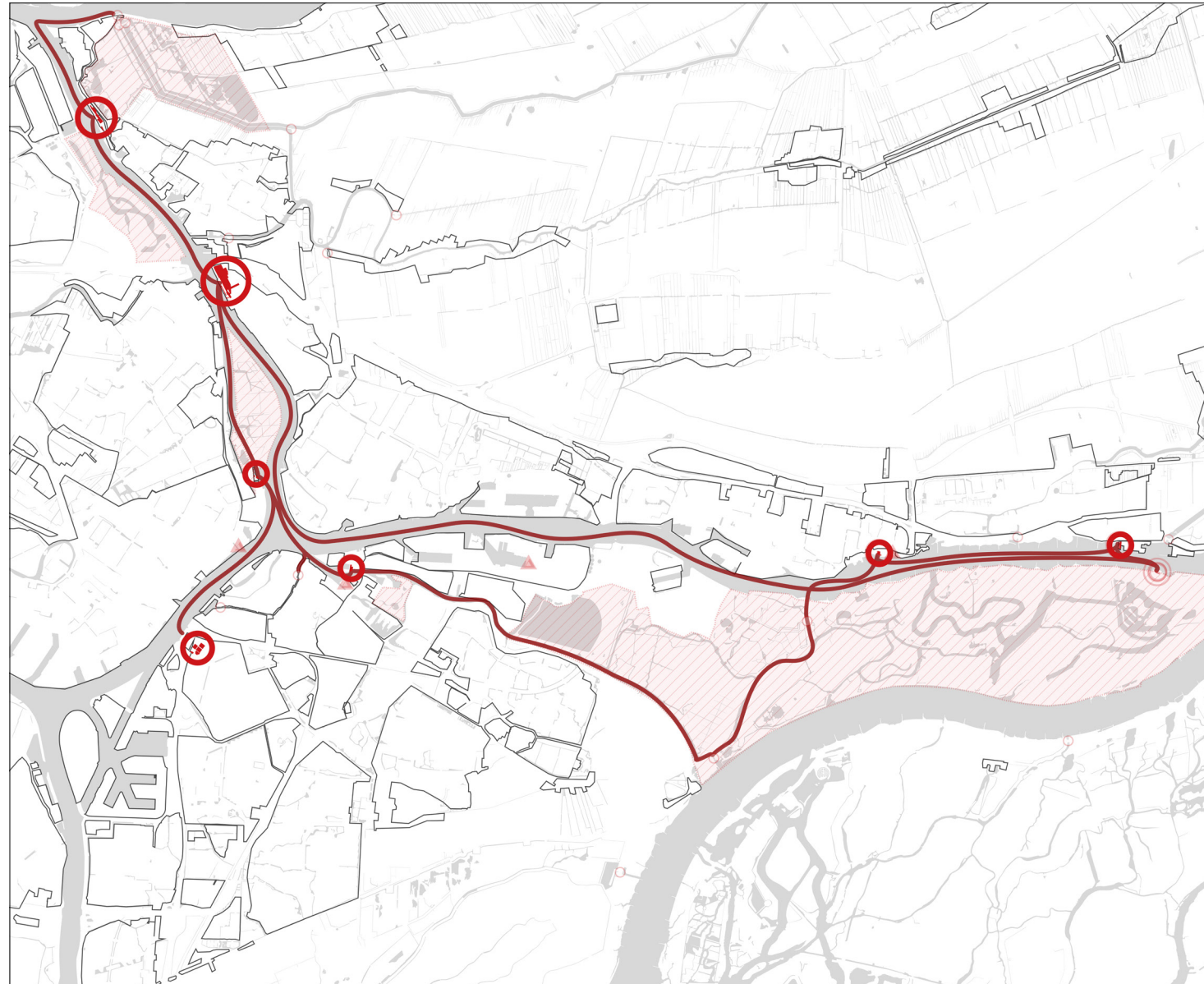


## REASSESSMENT & REPOSITION & MULTI-POSSIBILITIES

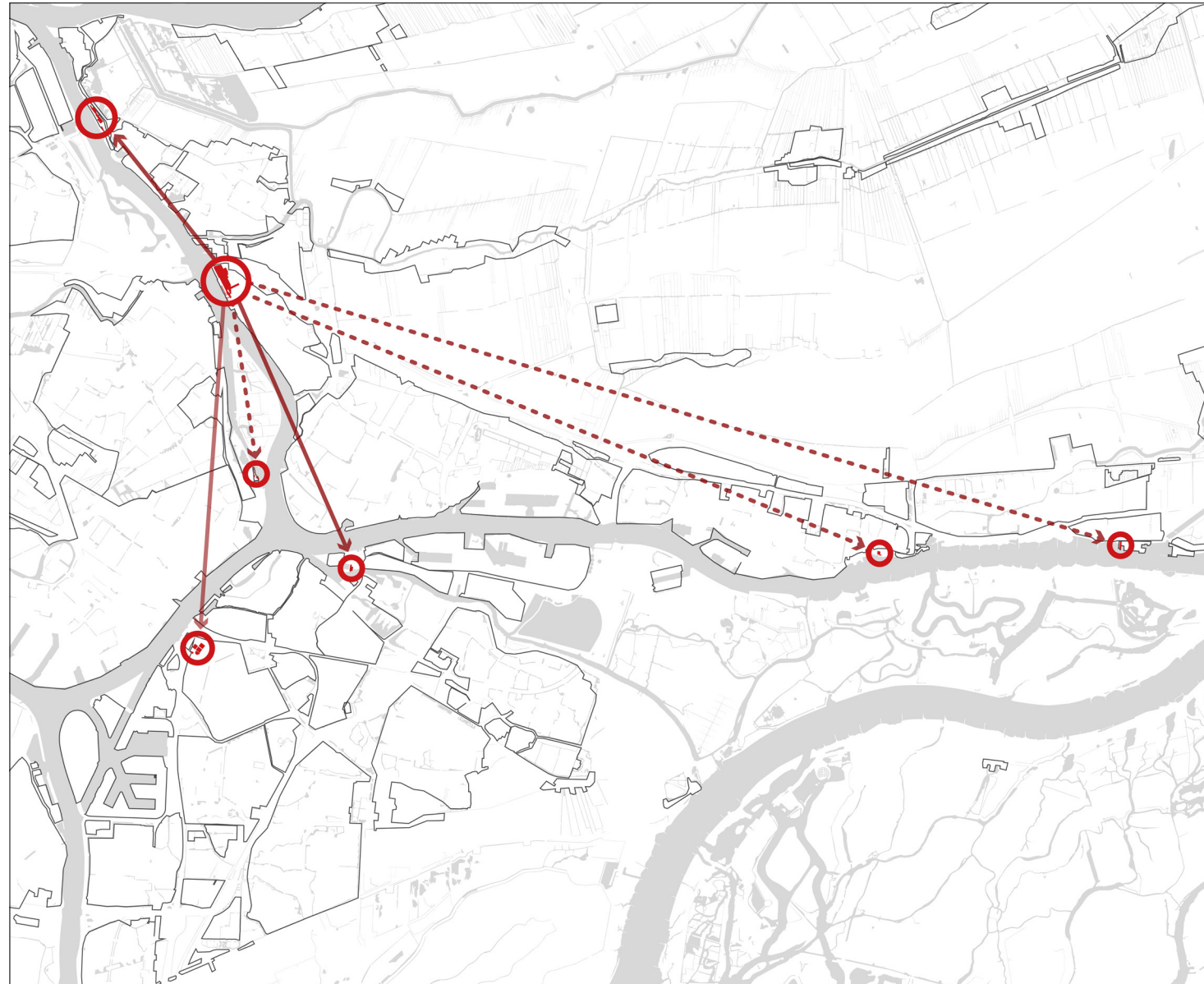




## REASSESSMENT & REPOSITION & MULTI-POSSIBILITIES



## REASSESSMENT & REPOSITION & MULTI-POSSIBILITIES





HERITAGE & ARCHITECTURE – MARITIME HERITAGE STUDIO

# **Social Tides In Post-Industrial Cultural Landscapes**

**A Water-Environment Art Destination & Local-beneficial Complex In Waterdriehoek**

Boyang Shen

01/16/2025 P5