



TIMBER CAMPUS COL-DES-ROCHES (CH - FR)
A cross-border platform for leisure and learning

SUMMARY

1. INTRODUCTION

/

Jura as a cross-border territory

2. TERRITORIAL STUDY

/

Wood economy: foregrounding endemic resources

3. MASTERPLAN PROPOSAL

/

Extension and densification of the grid system

4. SITING STRATEGY

/

An interface articulating a hetergeneous environment

5. ARCHITECTURE

/

A typology for production and leisure

SUMMARY

1. INTRODUCTION

/

Jura as a cross-border territory

2. TERRITORIAL STUDY

/

Wood economy: foregrounding endemic resources

3. MASTERPLAN PROPOSAL

/

Extension and densification of the grid system

4. SITING STRATEGY

/

An interface articulating a heterogeneous landscape

5. ARCHITECTURE

/

A typology for production and leisure



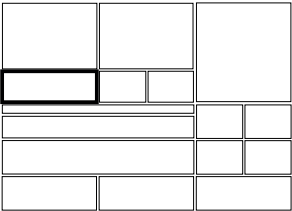
Jura As A Cross-Border Territory

Enoncé Théorique

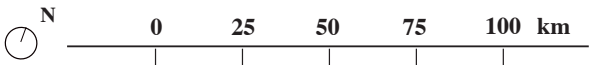


Jura As A Cross-Border Territory

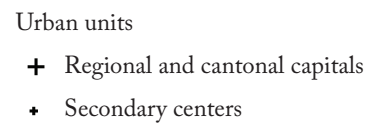
Satellite View



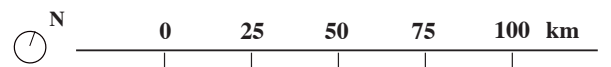
- Urban units
- + Regional and cantonal capitals
 - Secondary centers



A 10x10 grid with a 3x3 subgrid highlighted in the top-left corner. The subgrid is defined by the first three rows and the first three columns. The cells within this subgrid are shaded gray, while the remaining cells in the grid are white.

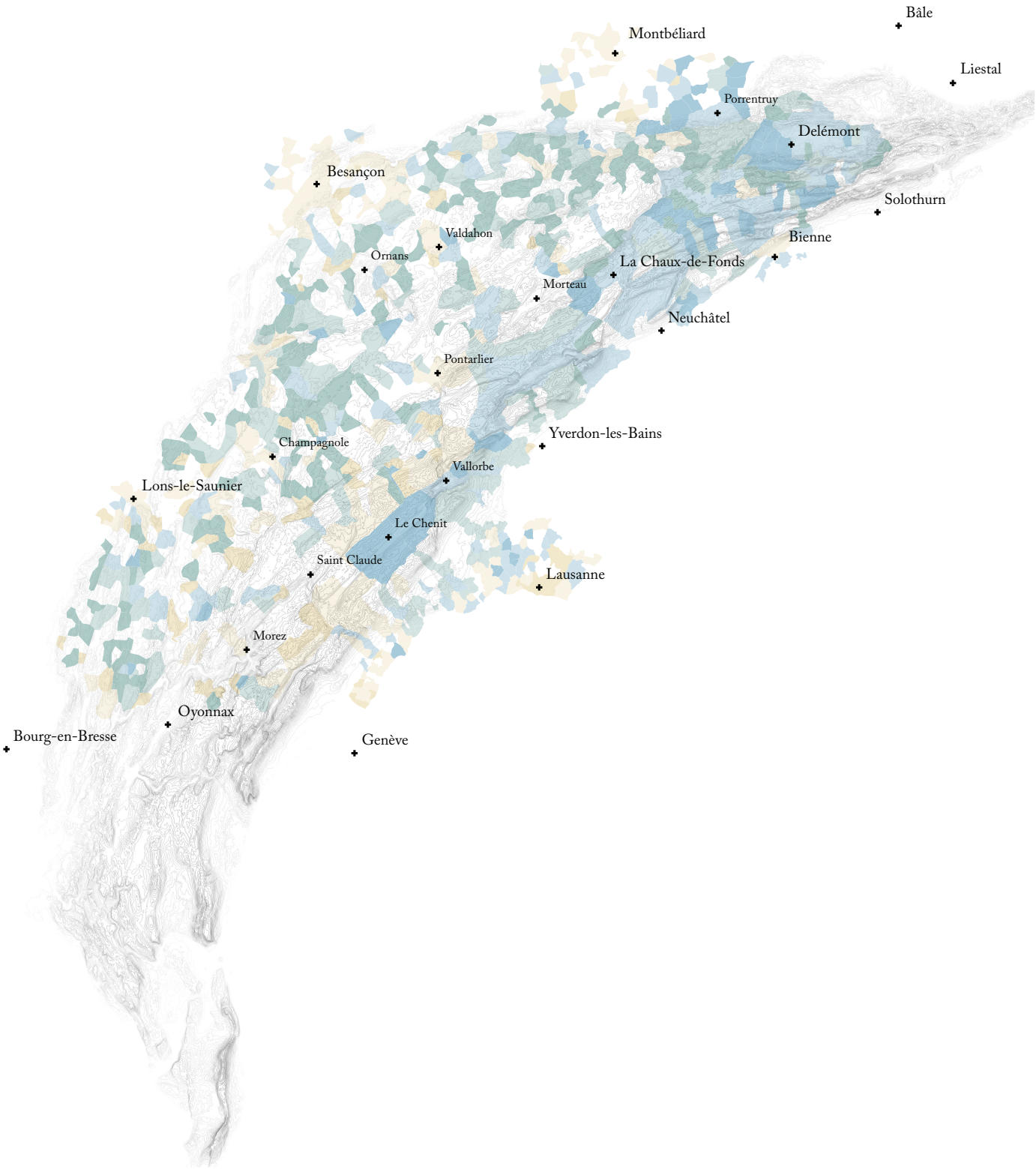


- Economic chambers
- ⚡ University hospitals
- 🏠 University



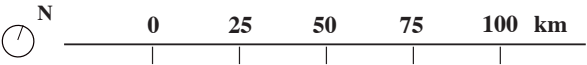
Jura As A Cross-Border Territory

Main economical orientations



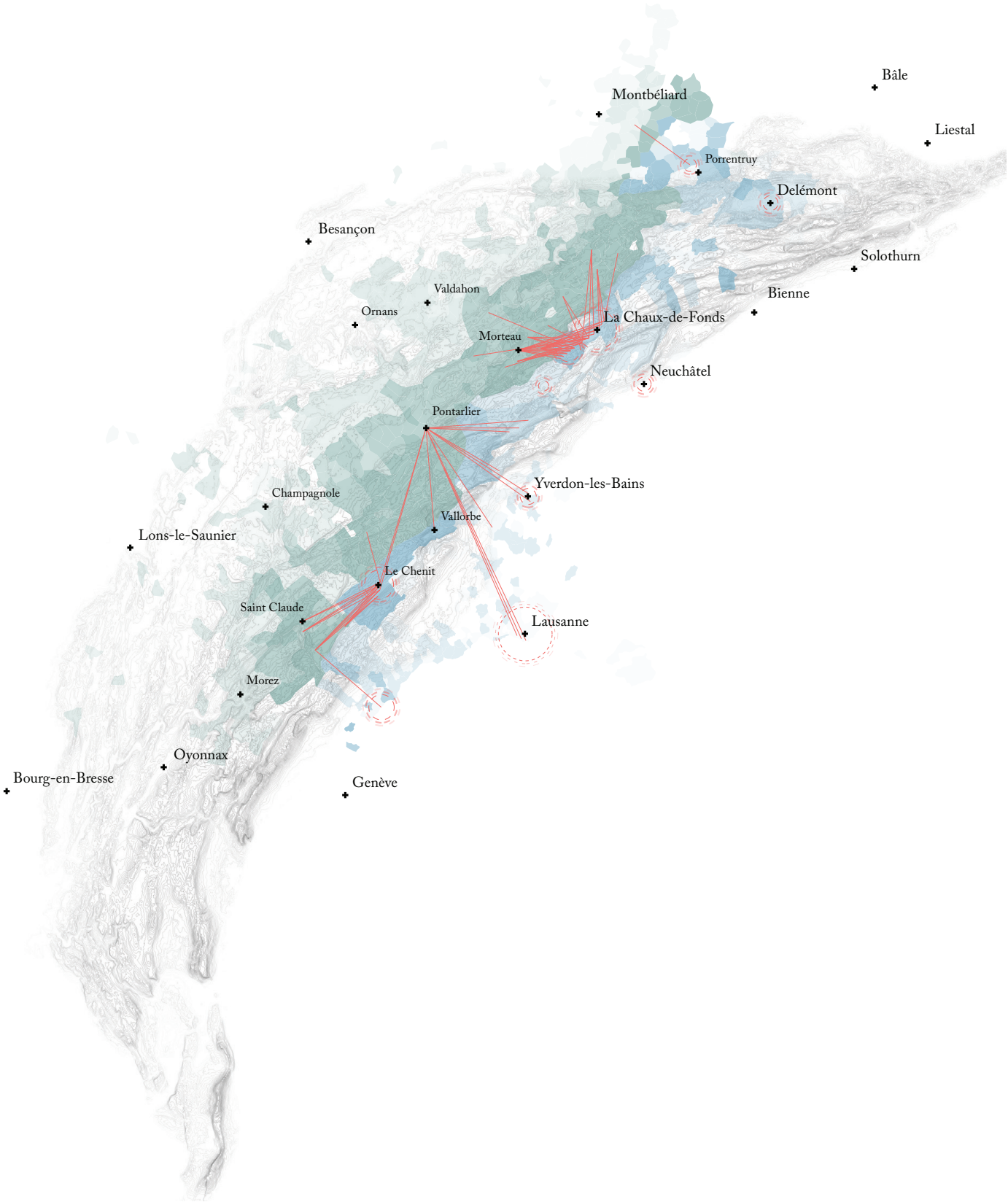
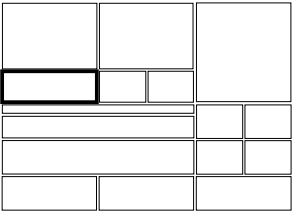
Main economical sectors (% of the working population) :

Primaire	> 50%	Secondaire	> 50%	Tertiaire	> 90%
	> 25%		> 25%		> 75%



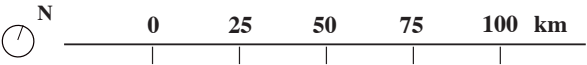
Jura As A Cross-Border Territory

Pendular migration of workers



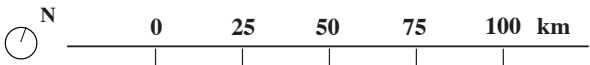
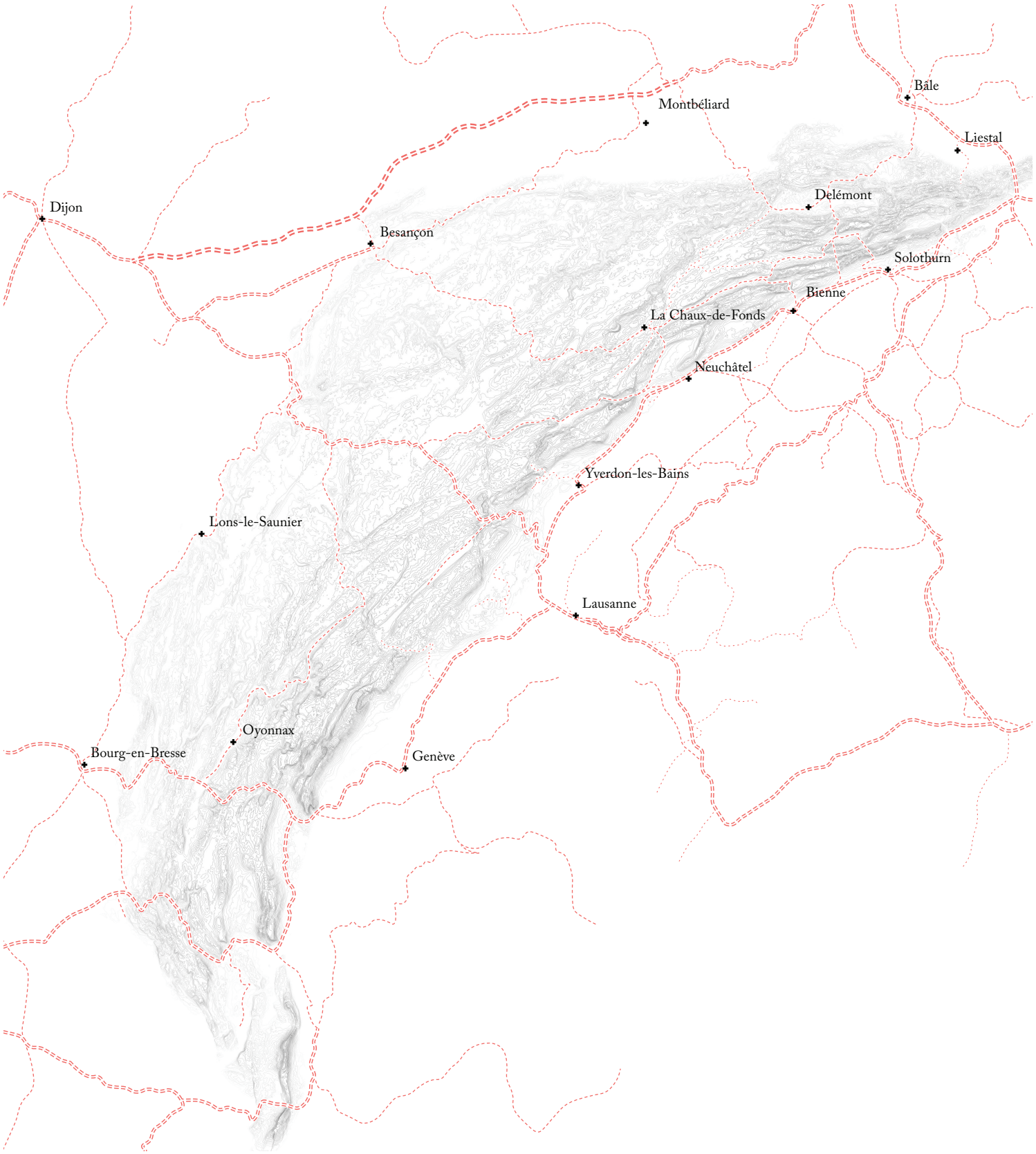
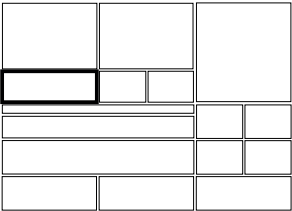
- Urban units
- + Main cities
 - 200 pendular workers per day
 - Main employment centers

- Proportion of french cross-border
- | | | | |
|----|-------|----|-------|
| FR | > 30% | CH | > 30% |
| | > 20% | | > 20% |
| | > 10% | | > 10% |



Jura As A Cross-Border Territory

Railway Network



Jura As A Cross-Border Territory

Project's guidelines

A Fragile & Mono-Oriented
Industrial Economy

/

Developping alternative
sectors of production

Lack of places of social spaces
at the cross border scale

/

Providing public infrastructures
adressing the young population

An underexploited public
transport network

/

Valorizing fallow lands
surrounding railways

SUMMARY

1. INTRODUCTION

/

Jura as a cross-border territory

2. TERRITORIAL STUDY

/

Wood economy: foregrounding endemic resources

3. MASTERPLAN PROPOSAL

/

Extension and densification of the grid system

4. SITING STRATEGY

/

An interface articulating a heterogeneous landscape

5. ARCHITECTURE

/

A typology for production and leisure

Wood Economy: Foregrounding Endemic Resources

A Cultural Landscape in common

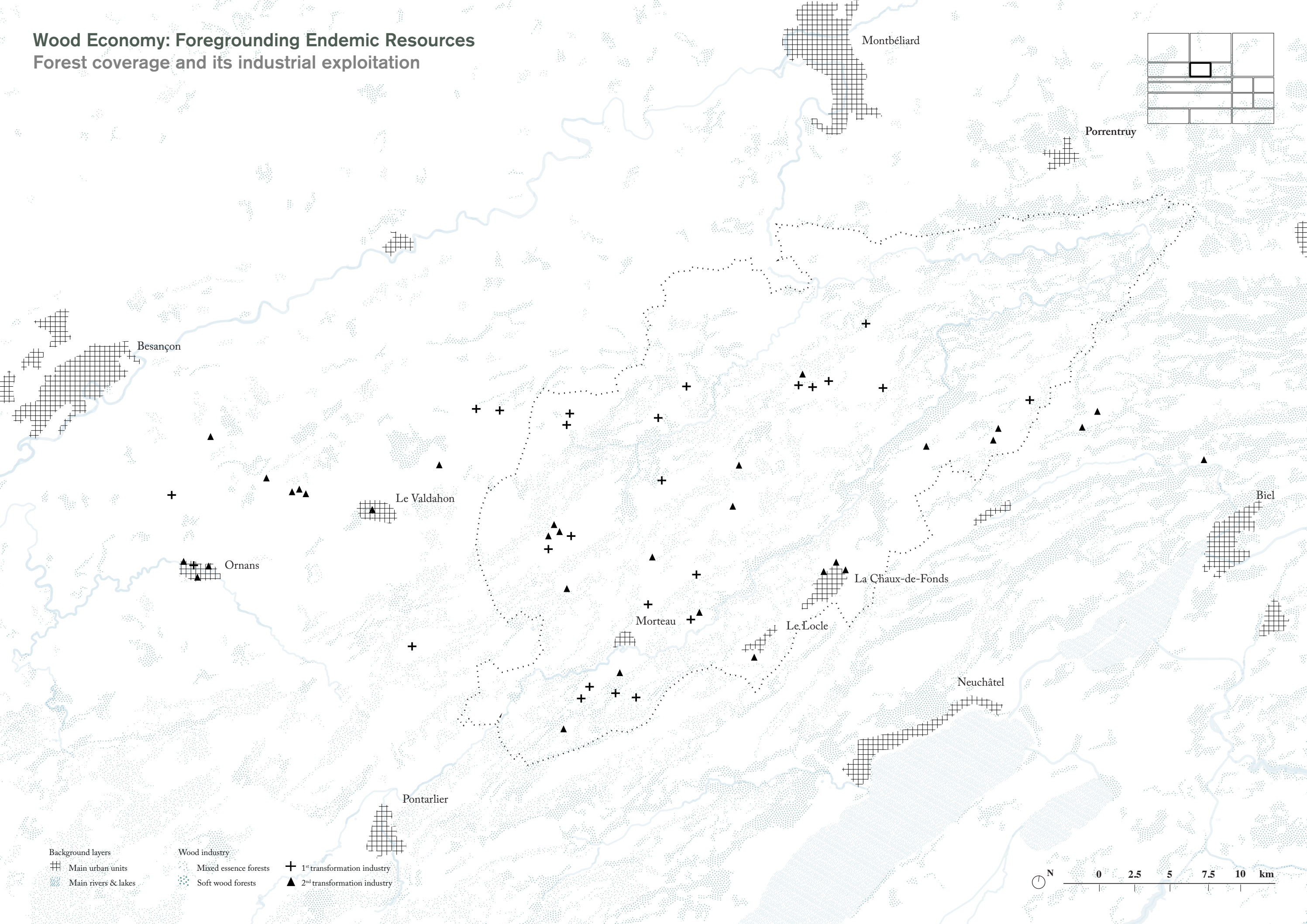


Wood Economy: Foregrounding Endemic Resources
A Productive Landscape in common



Wood Economy: Foregrounding Endemic Resources

Forest coverage and its industrial exploitation



Background layers

- Main urban units
- Main rivers & lakes

Wood industry

- Mixed essence forests
- Soft wood forests

- 1st transformation industry
- 2nd transformation industry

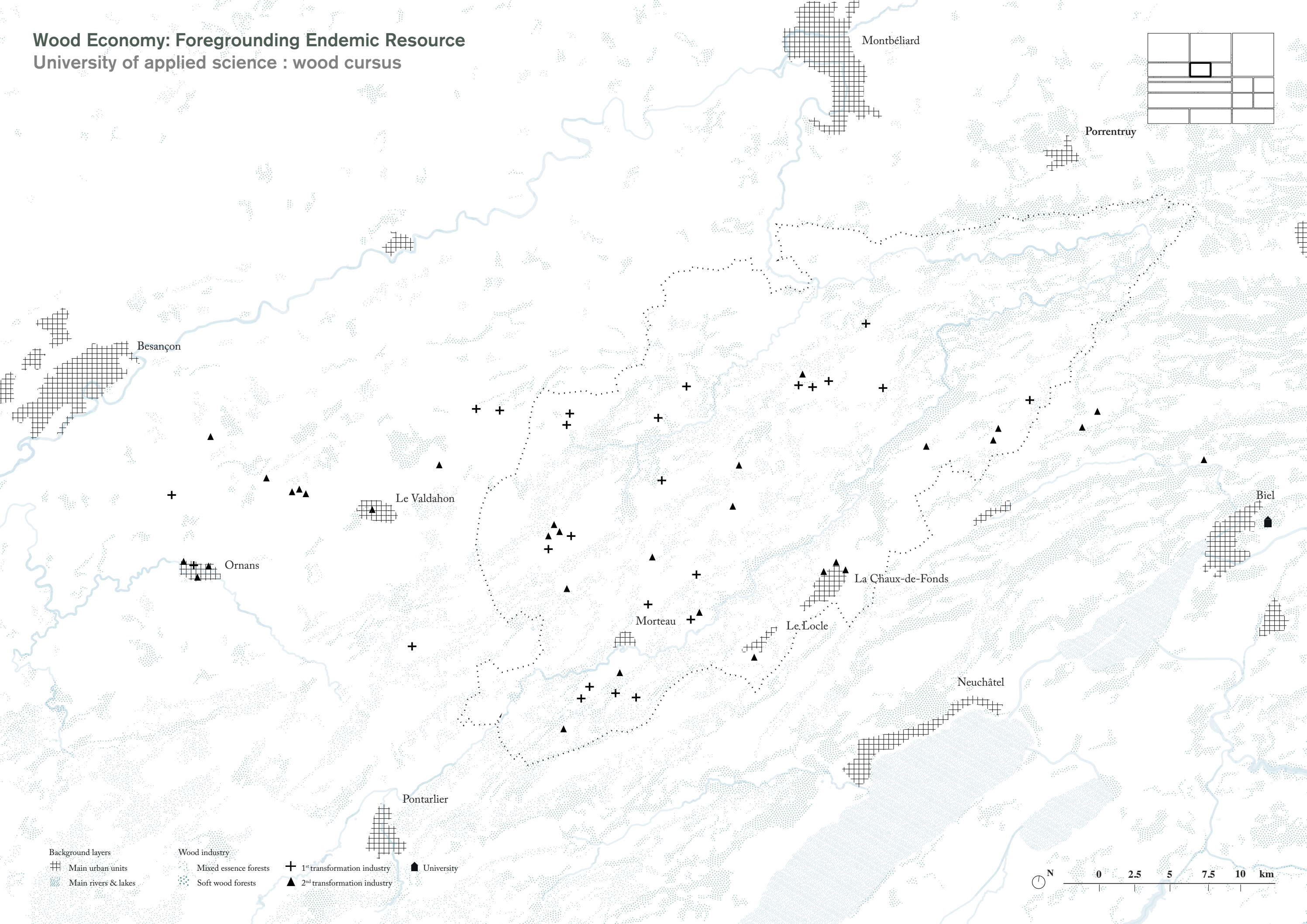
N

0 2.5 5 7.5 10 km

Wood Economy: Foregrounding Endemic Resources
A fragile small-scale economy



Wood Economy: Foregrounding Endemic Resource
University of applied science : wood cursus



Background layers

- Main urban units
- Main rivers & lakes

Wood industry

- Mixed essence forests
- Soft wood forests

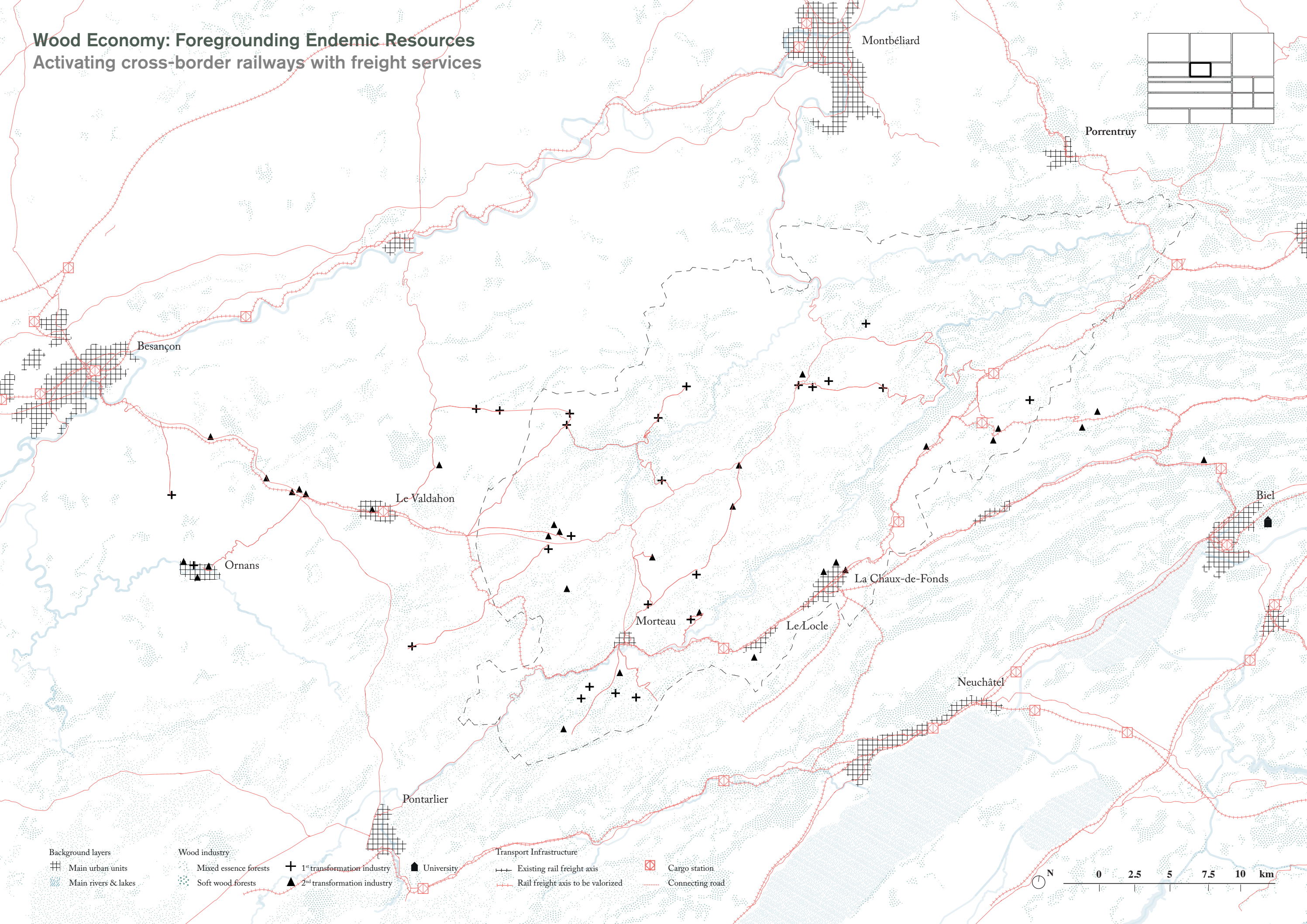
- 1st transformation industry
- 2nd transformation industry

- University

N

0 2.5 5 7.5 10 km

Wood Economy: Foregrounding Endemic Resources
Activating cross-border railways with freight services



Background layers

- Main urban units
- Main rivers & lakes

Wood industry

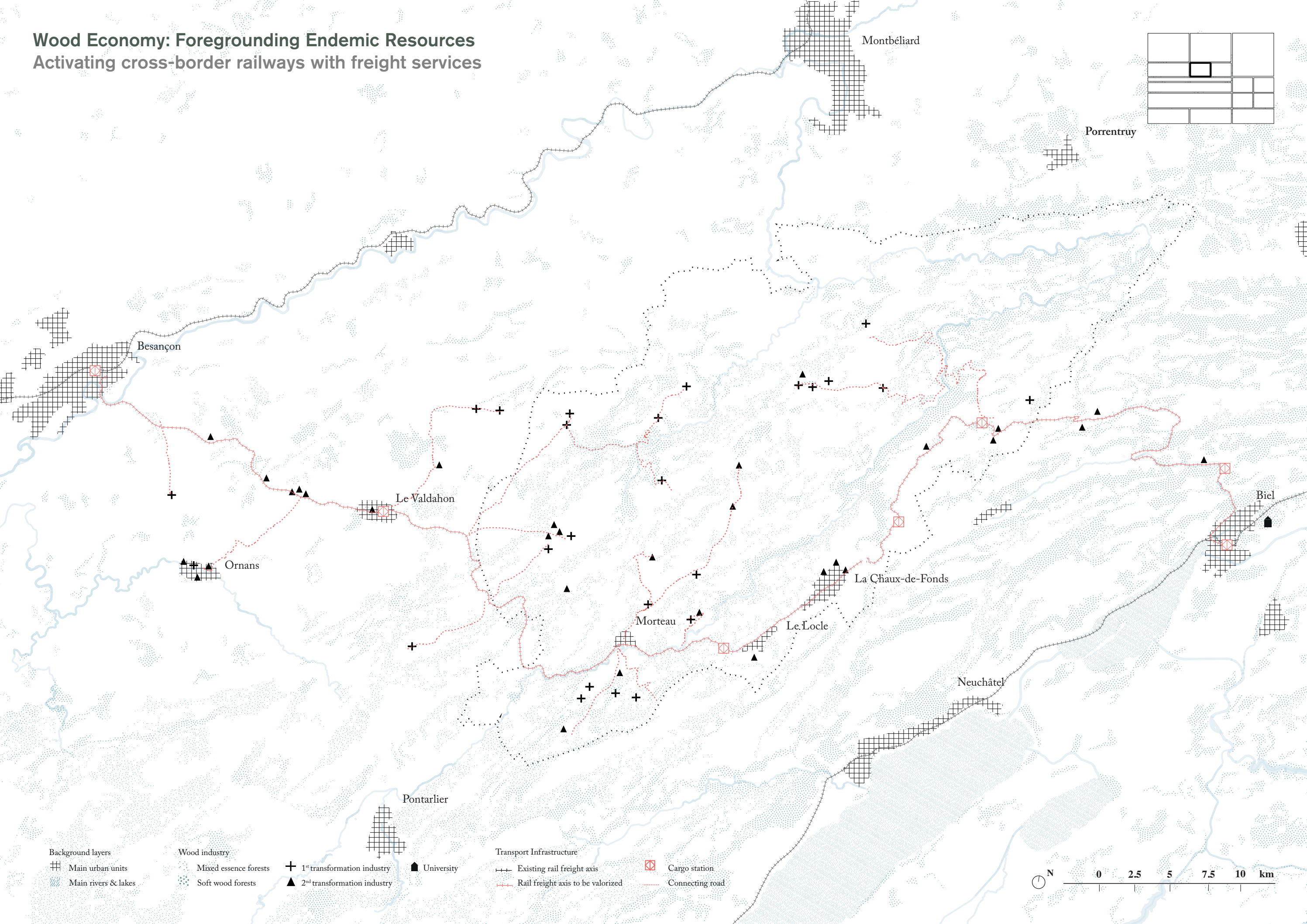
- Mixed essence forests
- Soft wood forests
- 1st transformation industry
- 2nd transformation industry

Transport Infrastructure

- Existing rail freight axis
- Rail freight axis to be valorized
- Cargo station
- Connecting road

0 2.5 5 7.5 10 km

Wood Economy: Foregrounding Endemic Resources
Activating cross-border railways with freight services



Background layers

- Main urban units
- Main rivers & lakes

Wood industry

- Mixed essence forests
- Soft wood forests

- 1st transformation industry
- 2nd transformation industry

- University

Transport Infrastructure

- Existing rail freight axis
- Rail freight axis to be valorized
- Cargo station
- Connecting road



Wood Economy: Foregrounding Endemic Resources
Le Locle, Col des Roches Cargo Area



Wood Economy: Foregrounding Endemic Resources

Project's guidelines

Developping alternative
sectors of production

/

Valorizing the wood economy
through a cooperative system

Providing public infrastructures
adressing the young population

/

Creation of a new campus for
timber engineering

Valorizing fallow lands
surrounding railways

/

Activating the Col-des-
Roches station

SUMMARY

1. INTRODUCTION

/

Jura as a cross-border territory

2. TERRITORIAL STUDY

/

Wood economy: foregrounding endemic resources

3. MASTERPLAN PROPOSAL

/

Extension and densification of the grid system

4. SITING STRATEGY

/

An interface articulating a heterogeneous landscape

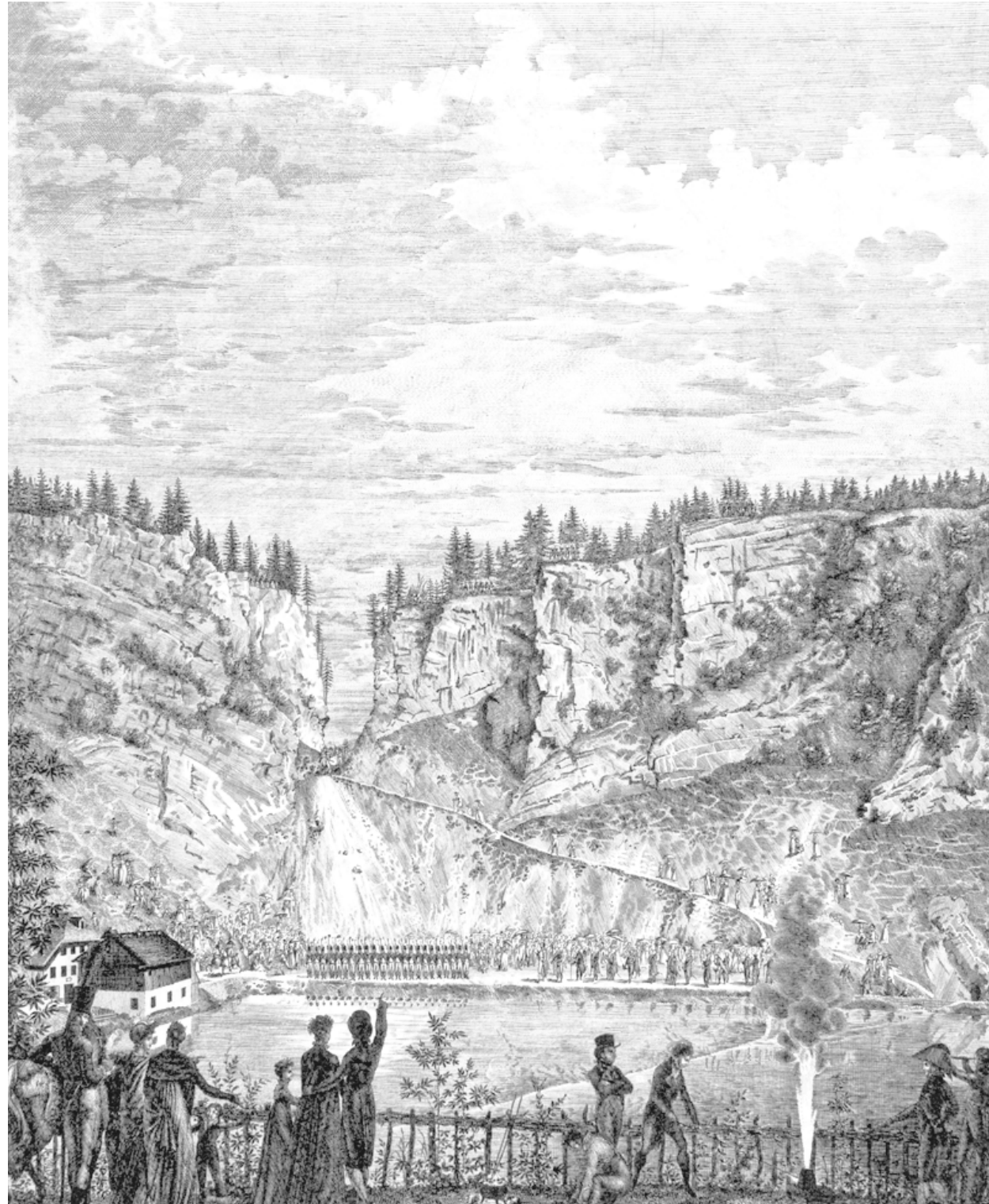
5. ARCHITECTURE

/

A typology for production and leisure

Extension And Densification Of The Grid System

Digging of the Col des Roches, XVIIIth century



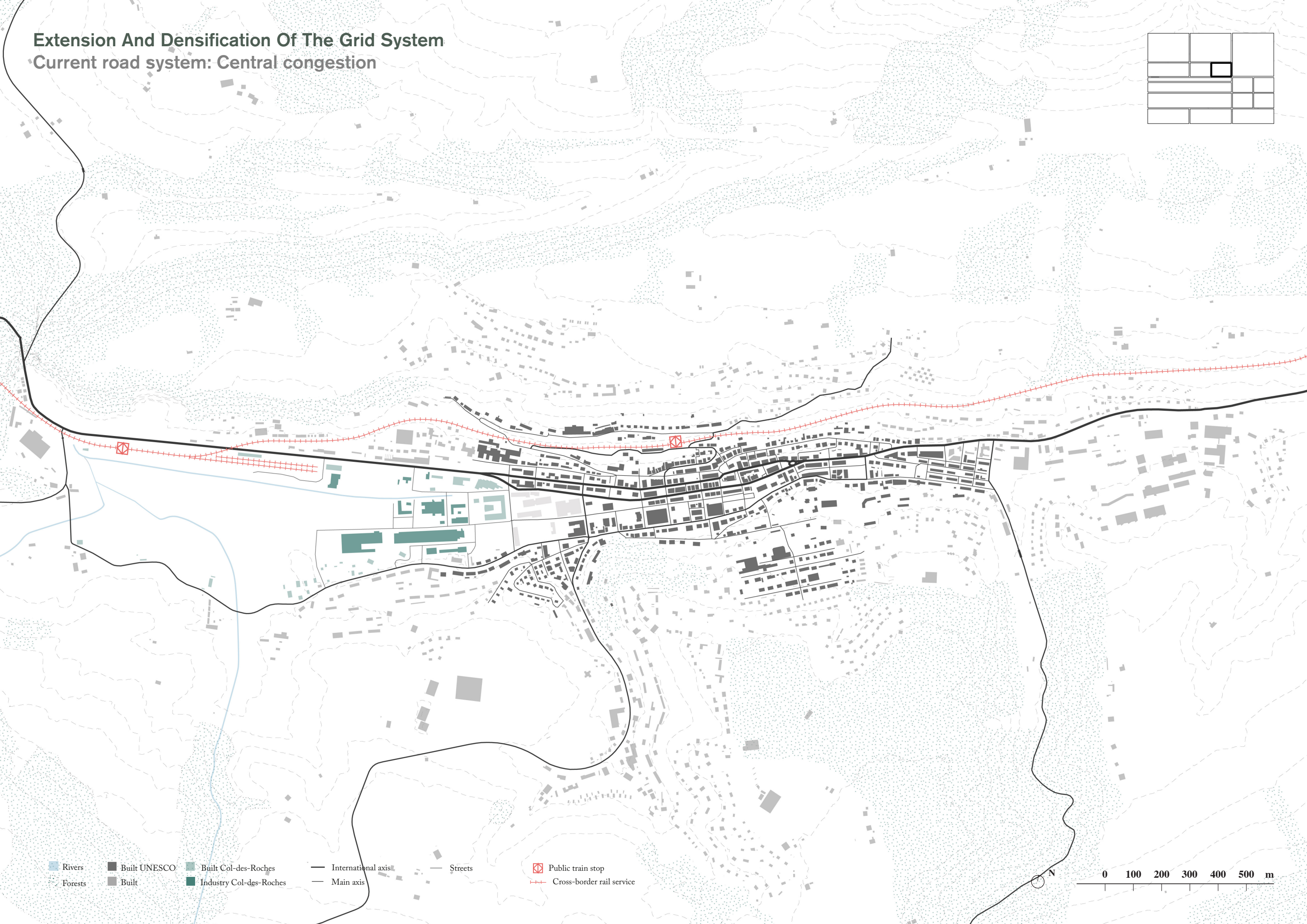
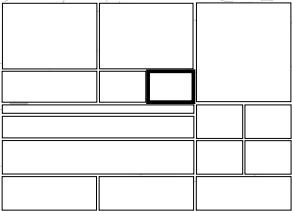
Extension And Densification Of The Grid System

Aerial view of Le Locle, 1997



Extension And Densification Of The Grid System

Current road system: Central congestion



- Rivers
- Forests
- Built UNESCO
- Built
- Built Col-des-Roches
- Industry Col-des-Roches

- International axis
- Main axis

Streets

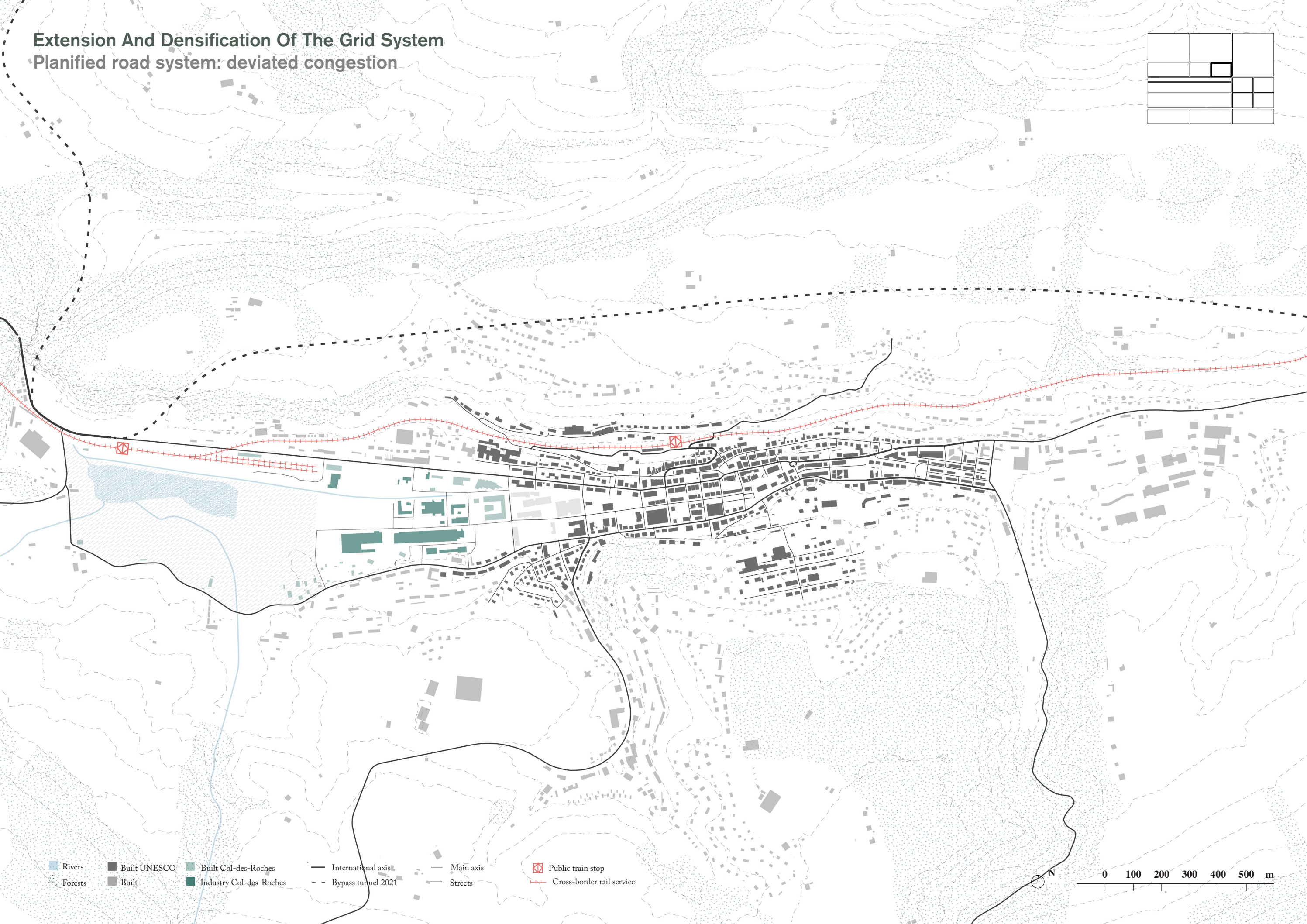
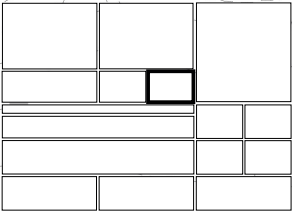
- Public train stop
- Cross-border rail service



0 100 200 300 400 500 m

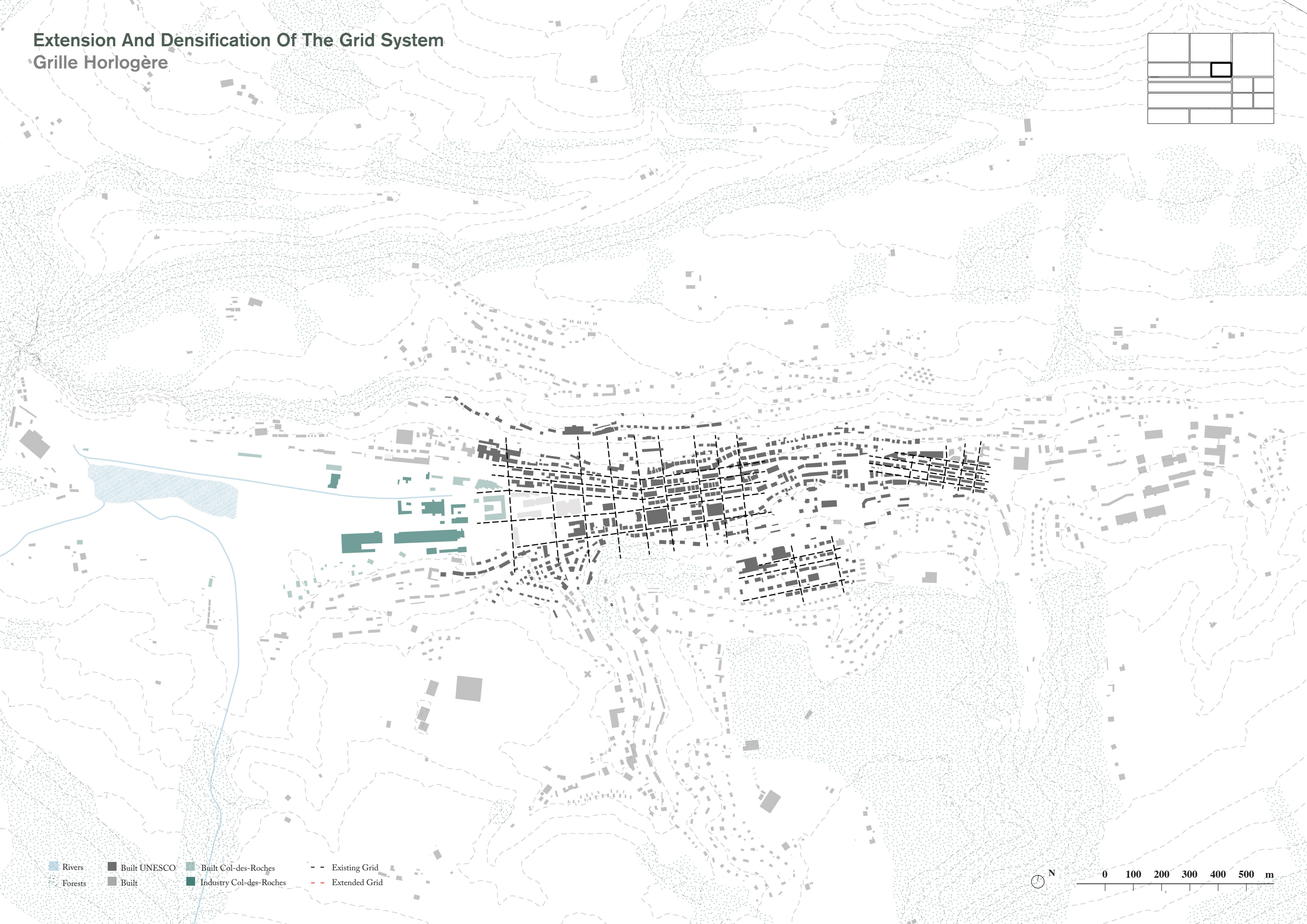
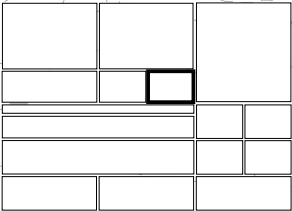
Extension And Densification Of The Grid System

Planified road system: deviated congestion

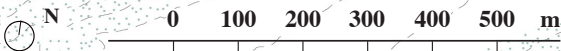


- Rivers
- Forests
- Built UNESCO
- Built
- Built Col-des-Roches
- Industry Col-des-Roches
- International axis
- Bypass tunnel 2021
- Main axis
- Streets
- Public train stop
- Cross-border rail service

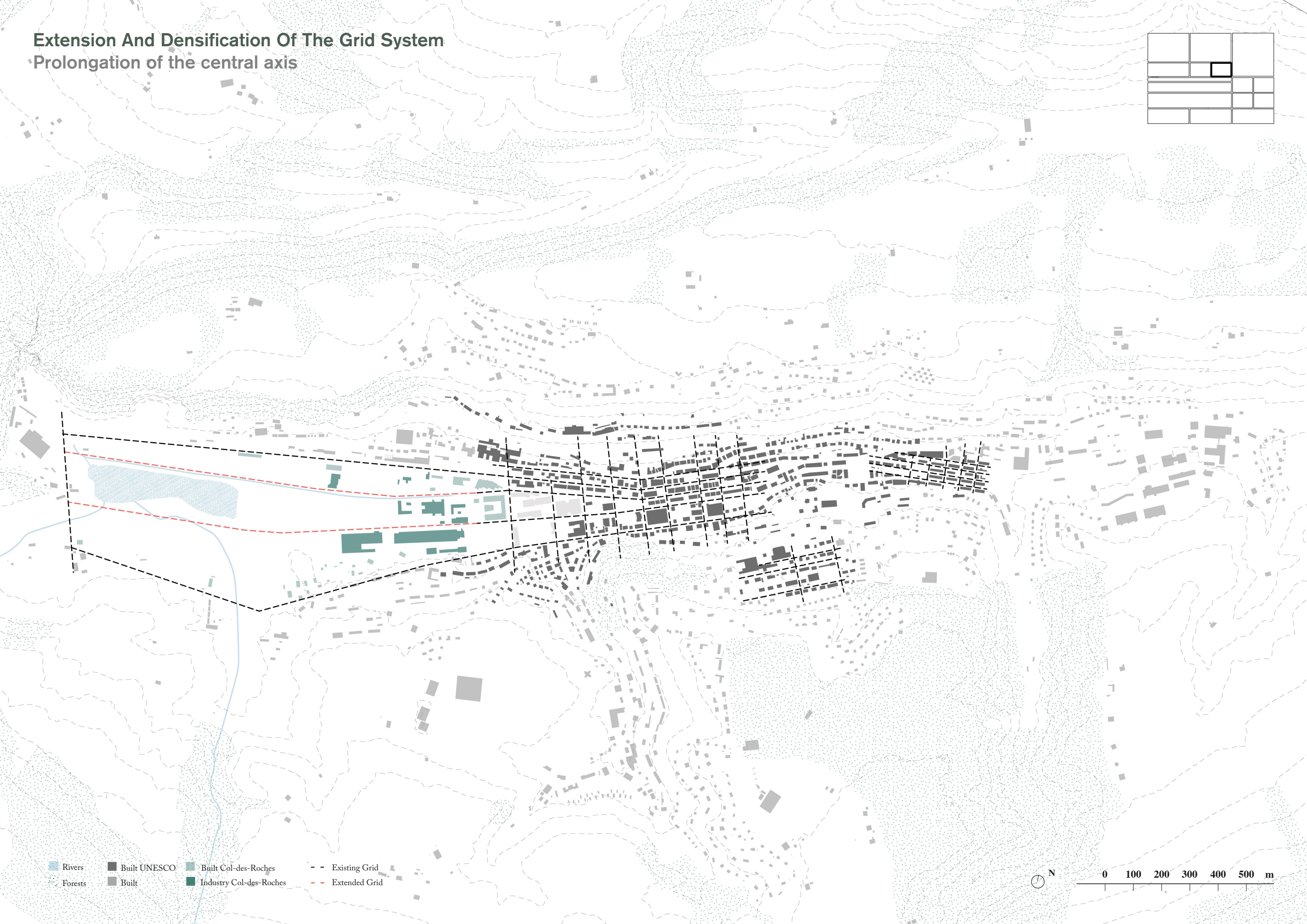
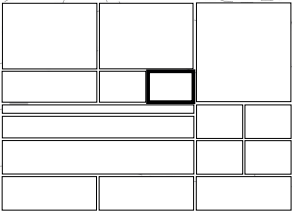
Extension And Densification Of The Grid System
Grille Horlogère



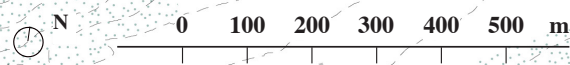
- Rivers
- Forests
- Built UNESCO
- Built
- Built Col-des-Roches
- Industry Col-des-Roches
- Existing Grid
- Extended Grid



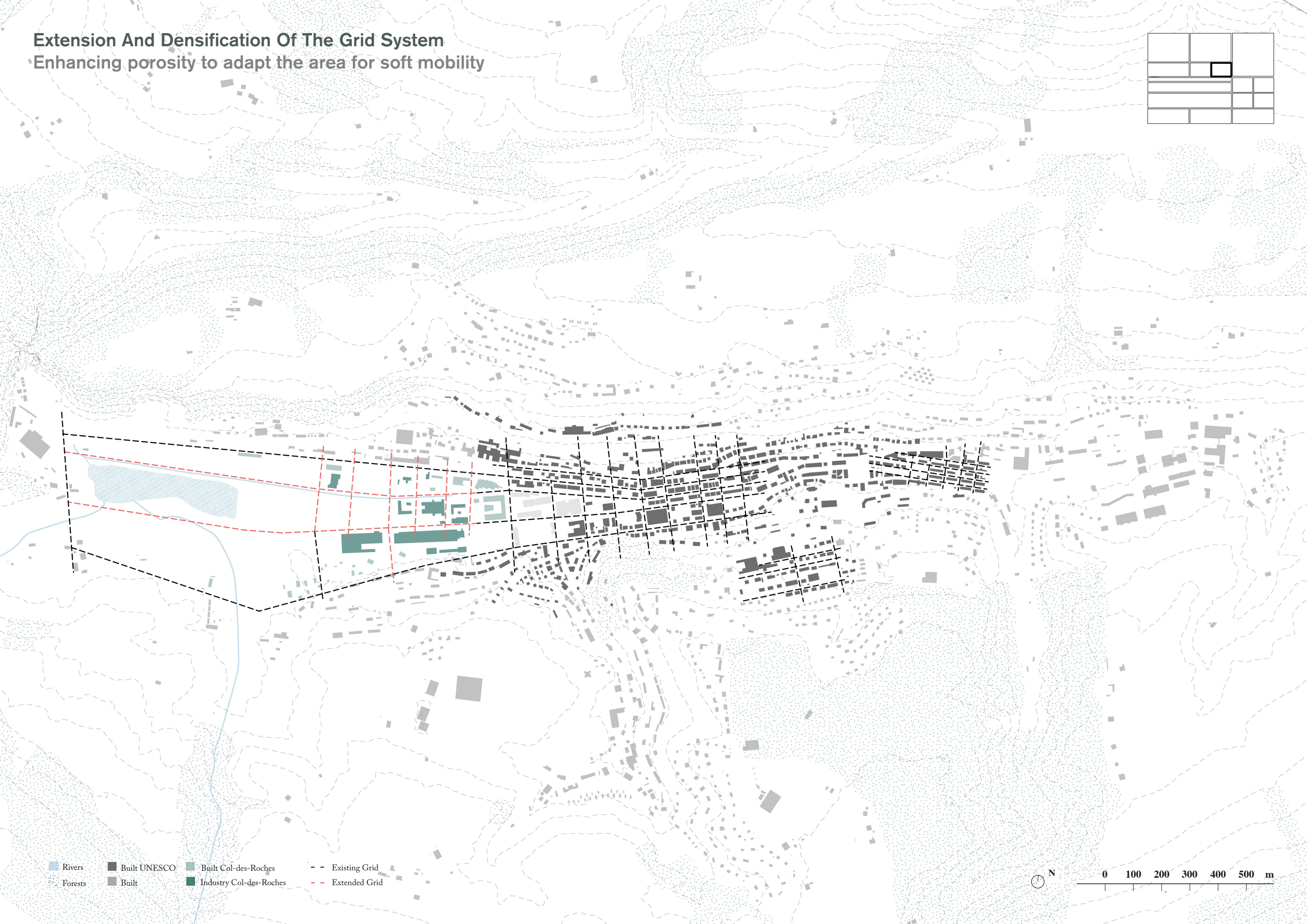
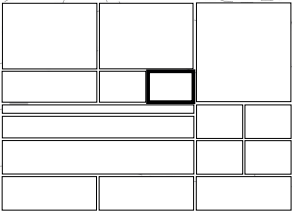
Extension And Densification Of The Grid System
Prolongation of the central axis



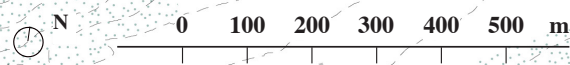
- Rivers
- Forests
- Built UNESCO
- Built
- Built Col-des-Roches
- Industry Col-des-Roches
- Existing Grid
- Extended Grid



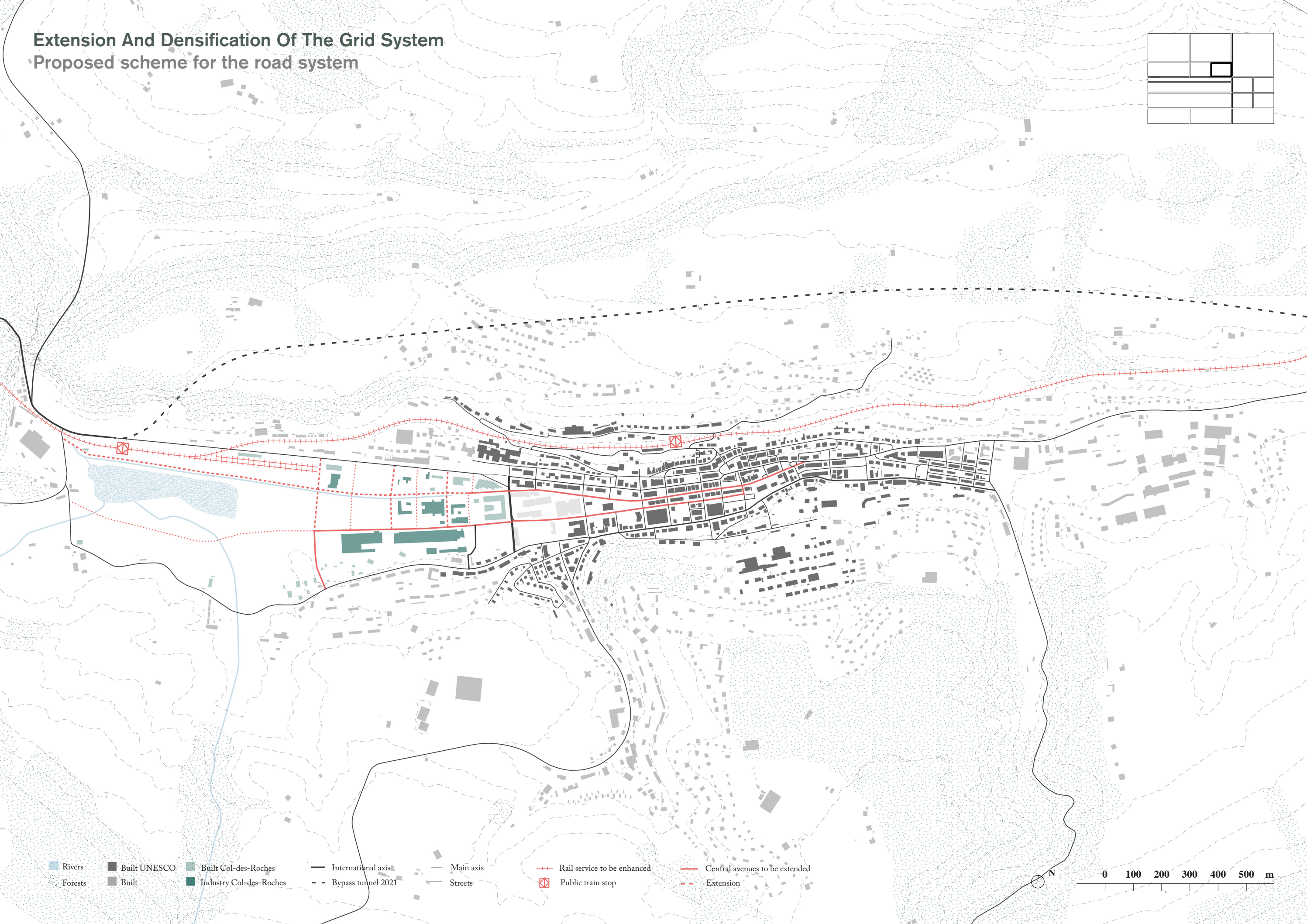
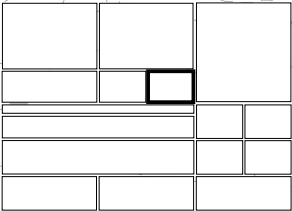
Extension And Densification Of The Grid System
Enhancing porosity to adapt the area for soft mobility



- Rivers
- Forests
- Built UNESCO
- Built
- Built Col-des-Roches
- Industry Col-des-Roches
- Existing Grid
- Extended Grid



Extension And Densification Of The Grid System
Proposed scheme for the road system



-  Rivers

 Forests

 Built UNESCO

 Built

 Built Col-des-Roches

 Industry Col-des-Roches

 International axis

 Bypass tunnel 2021

 Main axis

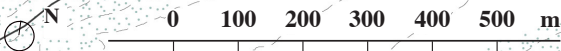
 Streets

 Rail service to be enhanced

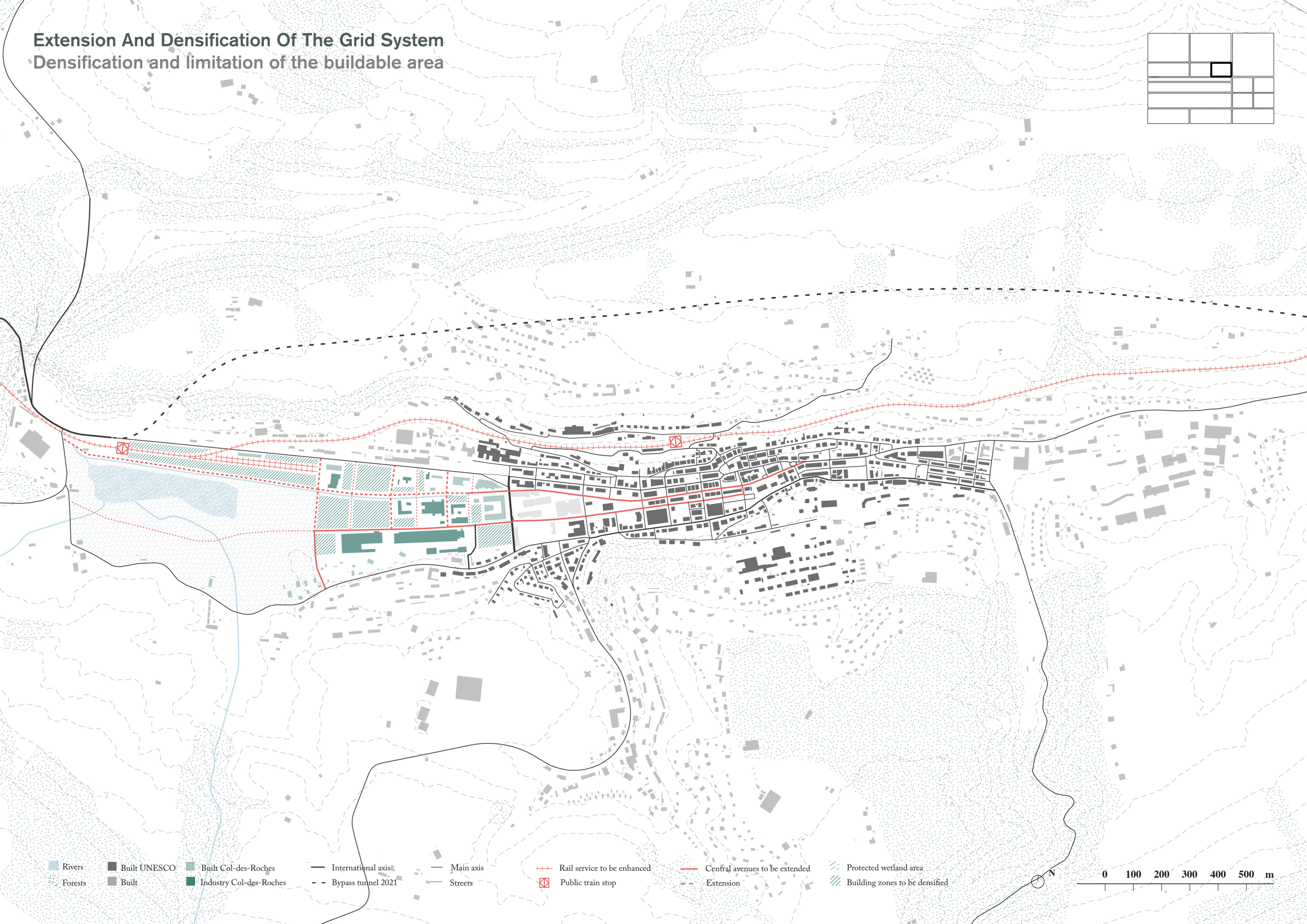
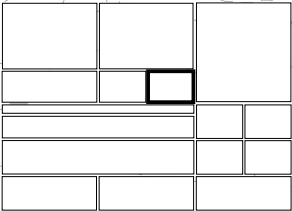
 Public train stop

 Central avenues to be extended

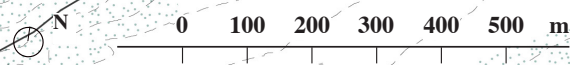
 Extension



Extension And Densification Of The Grid System
Densification and limitation of the buildable area



- | | | | | | | | |
|---------|--------------|-------------------------|--------------------|-----------|-----------------------------|--------------------------------|--------------------------------|
| Rivers | Built UNESCO | Built Col-des-Roches | International axis | Main axis | Rail service to be enhanced | Central avenues to be extended | Protected wetland area |
| Forests | Built | Industry Col-des-Roches | Bypass tunnel 2021 | Streets | Public train stop | Extension | Building zones to be densified |



Extension And Densification Of The Grid System

View towards the fallow lands and southern hills



Extension And Densification Of The Grid System
Masterplan Overview



SUMMARY

1. INTRODUCTION

/

Jura as a cross-border territory

2. TERRITORIAL STUDY

/

Wood economy: foregrounding endemic resources

3. MASTERPLAN PROPOSAL

/

Extension and densification of the grid system

4. SITING STRATEGY

/

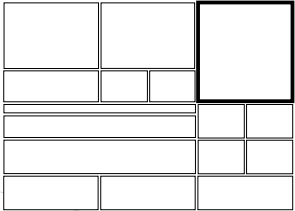
An interface articulating a hetergeneous environment

5. ARCHITECTURE

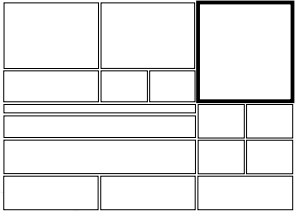
/

A typology for production and leisure

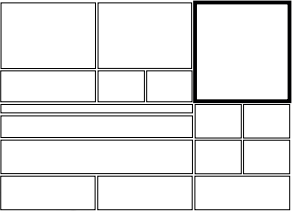
An Interface Articulating A Heterogeneous Environment
Planned site



An Interface Articulating A Heterogeneous Environment
Site's constraints and alignments

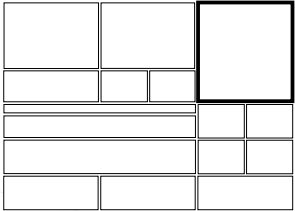


An Interface Articulating A Heterogeneous Environment
Key infrastructures and environmental elements



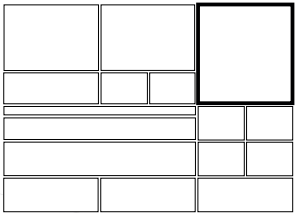
An Interface Articulating A Heterogeneous Environment

Different nature of flows

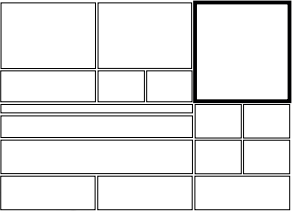


An Interface Articulating A Heterogeneous Environment

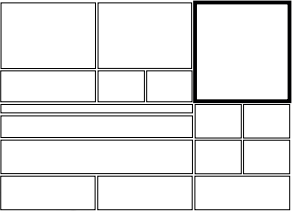
Lack of transversal porosity



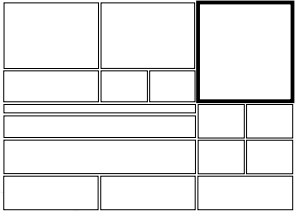
An Interface Articulating A Heterogeneous Environment
Proximity of heavy infrastructural flows and the leisure area



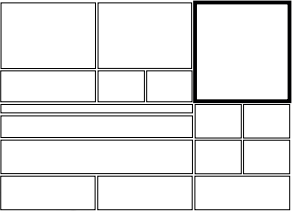
An Interface Articulating A Heterogeneous Environment
Delimitation of the project's area



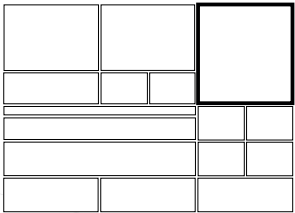
An Interface Articulating A Heterogeneous Landscape
Flows



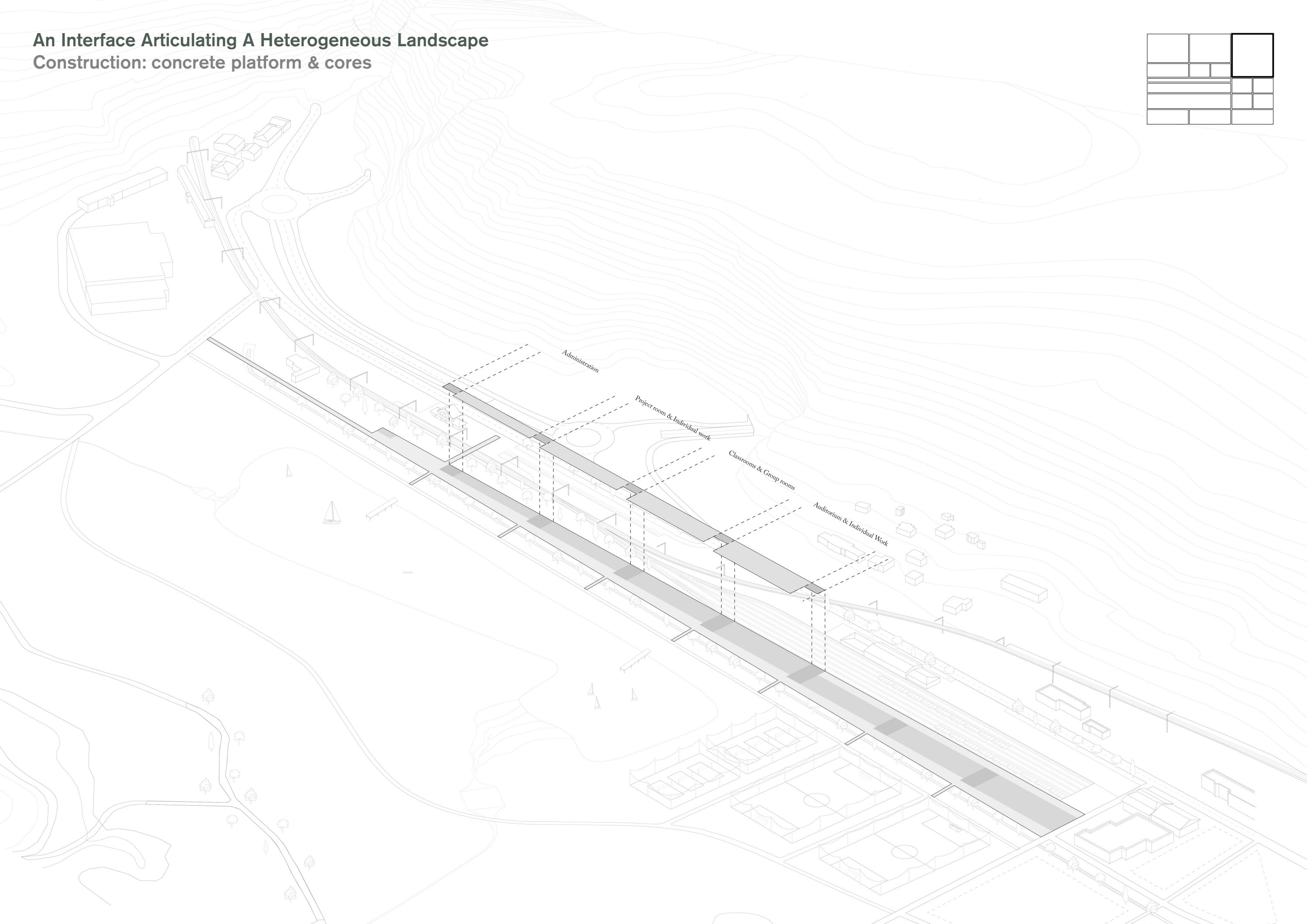
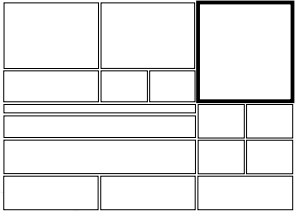
An Interface Articulating A Heterogeneous Landscape
Design principle



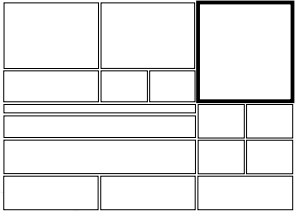
An Interface Articulating A Heterogeneous Landscape



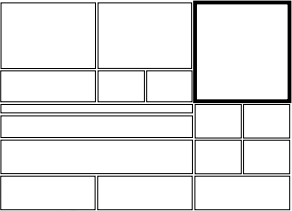
An Interface Articulating A Heterogeneous Landscape
Construction: concrete platform & cores



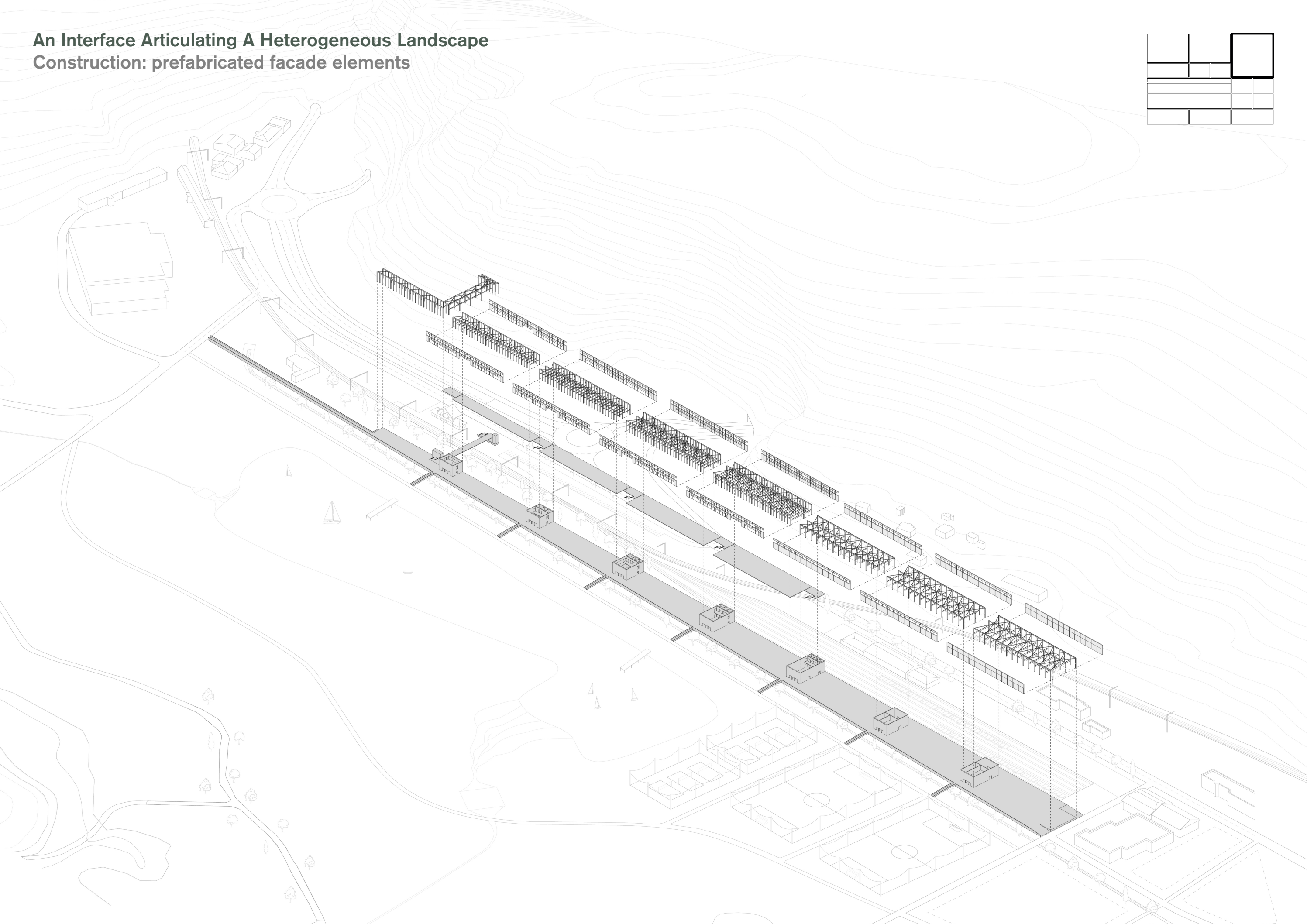
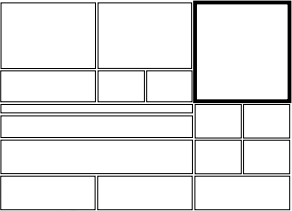
An Interface Articulating A Heterogeneous Landscape
Construction: prefabricated timber structure



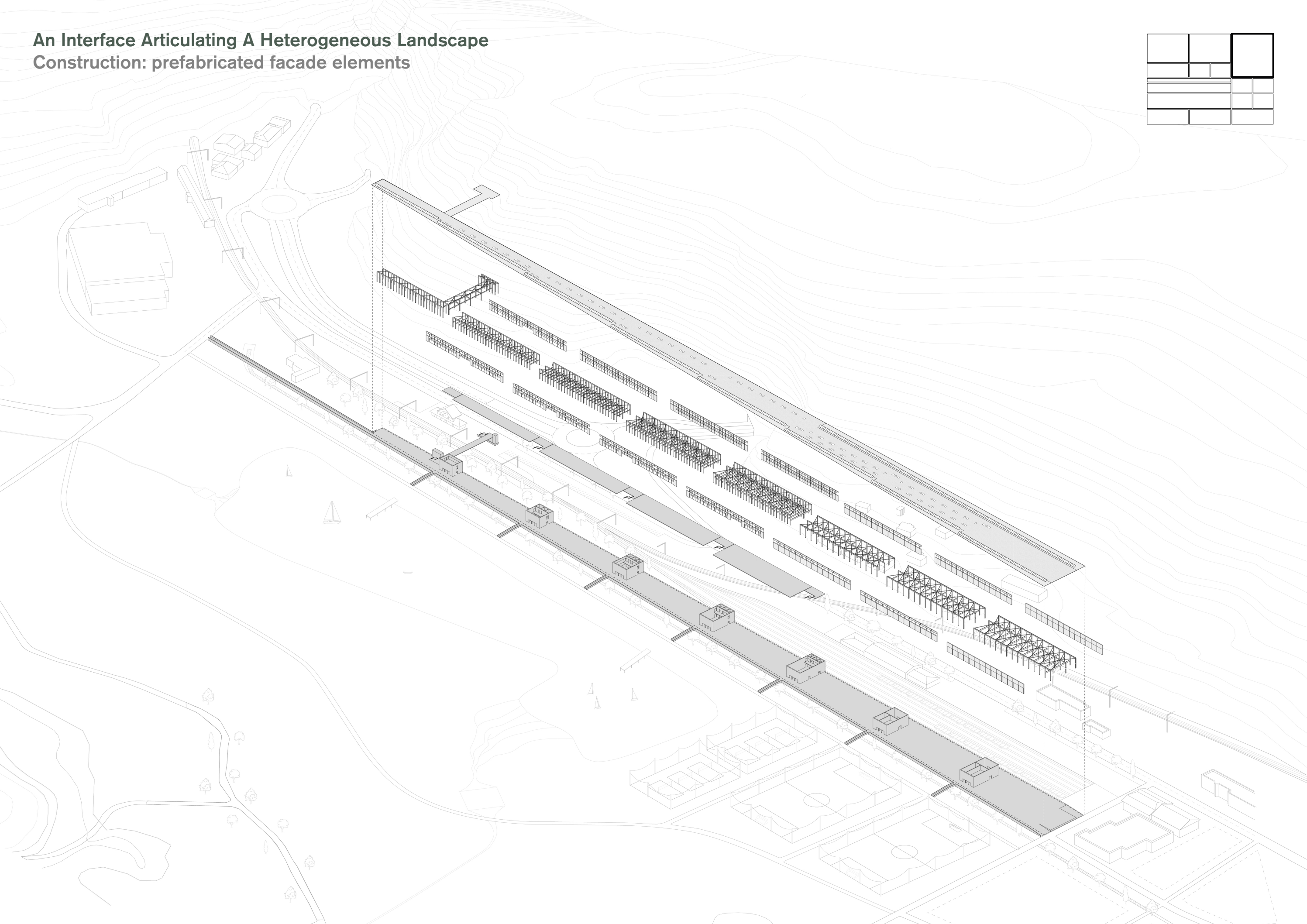
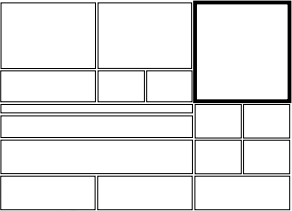
An Interface Articulating A Heterogeneous Landscape
Construction : cantilevered timber roof



An Interface Articulating A Heterogeneous Landscape
Construction: prefabricated facade elements



An Interface Articulating A Heterogeneous Landscape
Construction: prefabricated facade elements



SUMMARY

1. INTRODUCTION

/

Jura as a cross-border territory

2. TERRITORIAL STUDY

/

Wood economy: foregrounding endemic resources

3. MASTERPLAN PROPOSAL

/

Extension and densification of the grid system

4. SITING STRATEGY

/

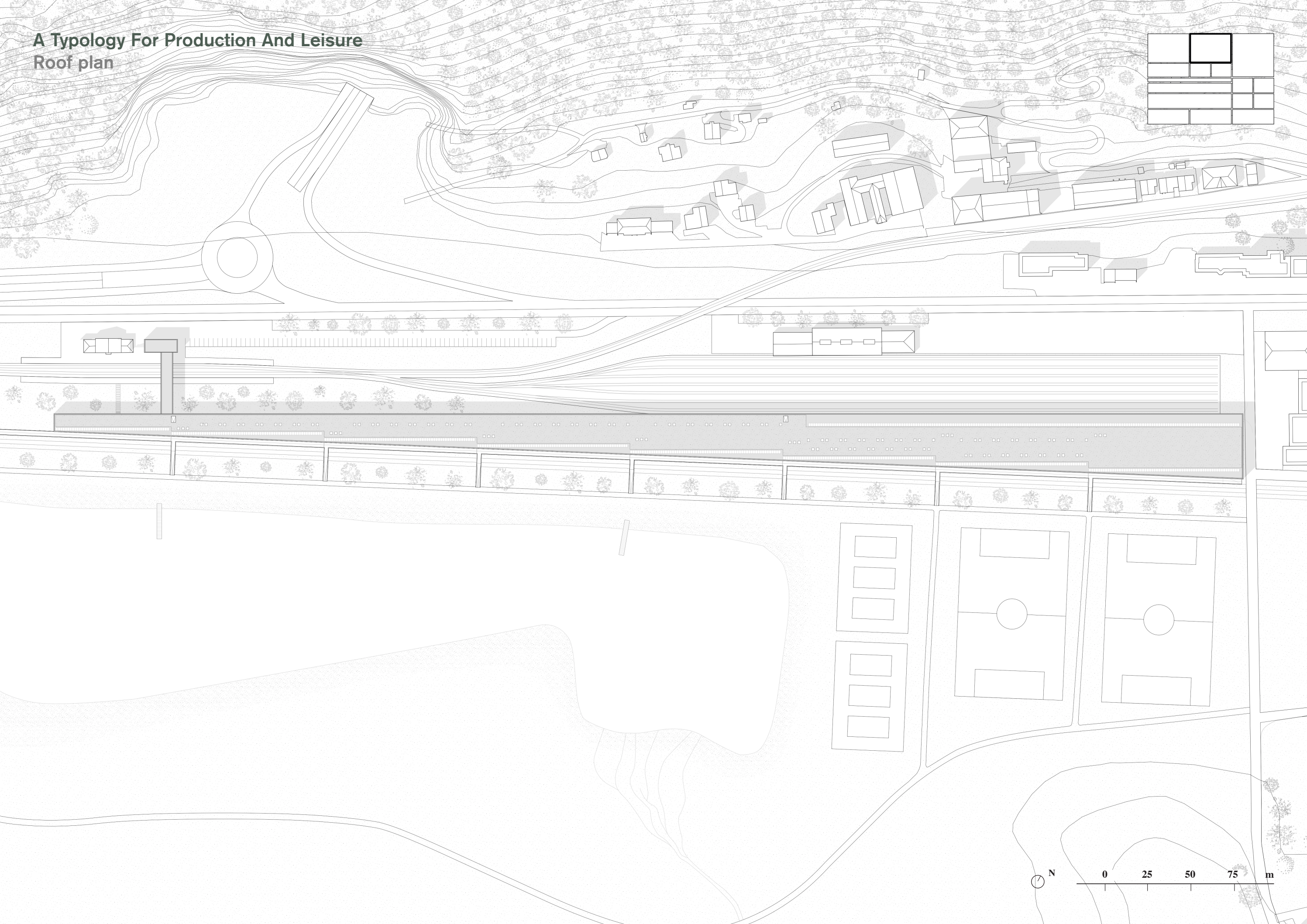
An interface articulating a heterogeneous environment

5. ARCHITECTURE

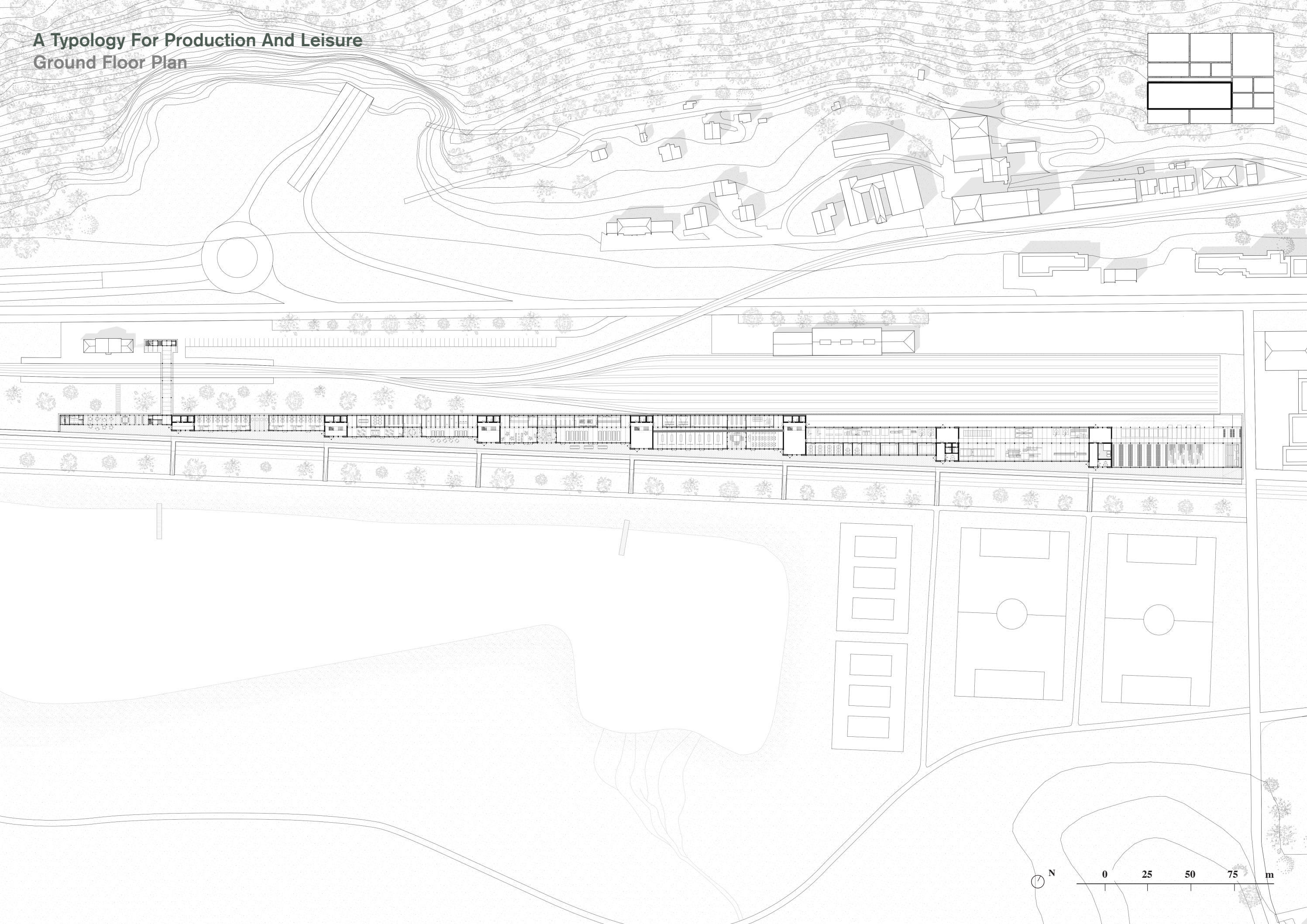
/

A typology for production and leisure

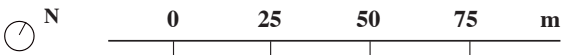
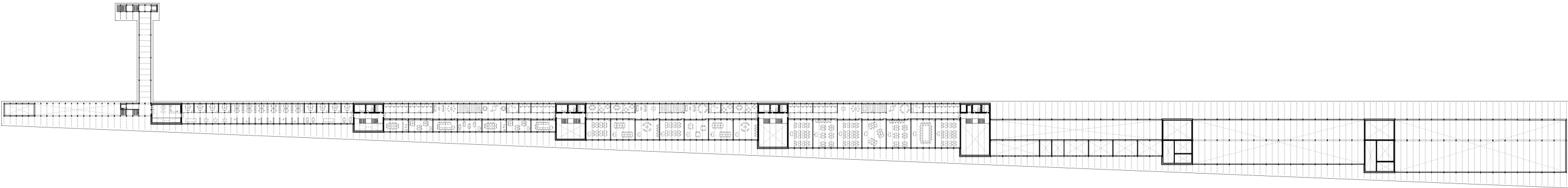
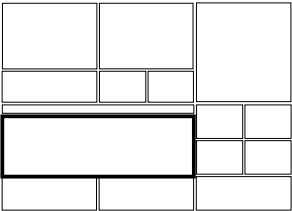
A Typology For Production And Leisure
Roof plan



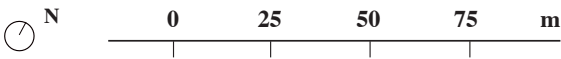
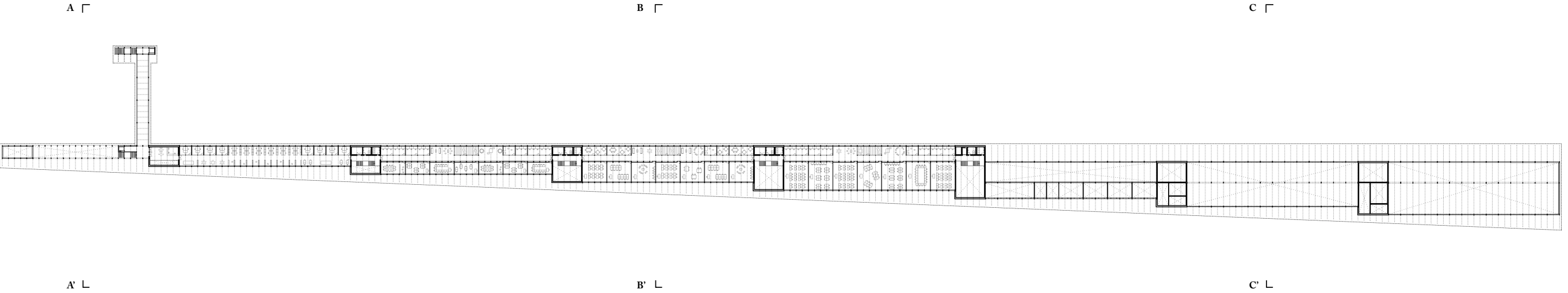
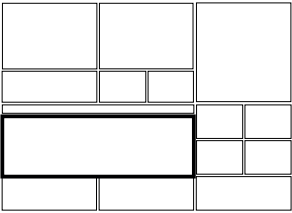
A Typology For Production And Leisure
Ground Floor Plan



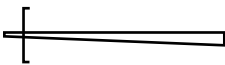
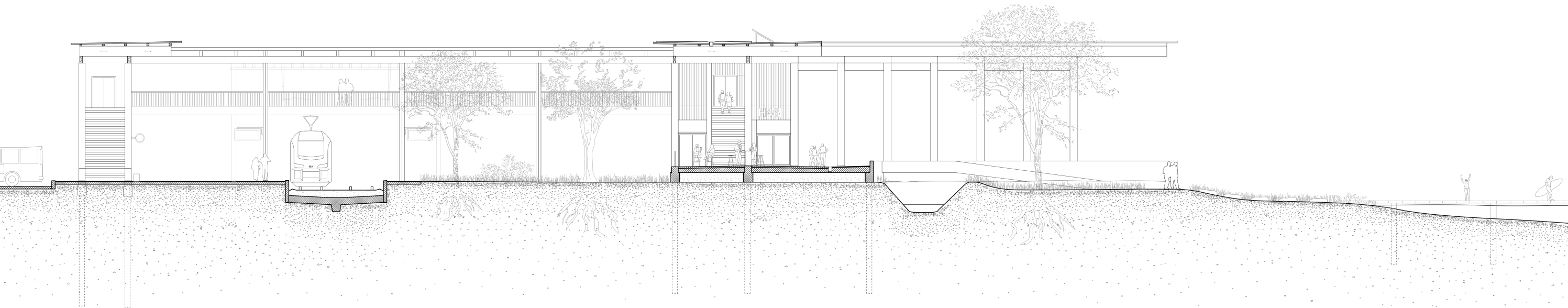
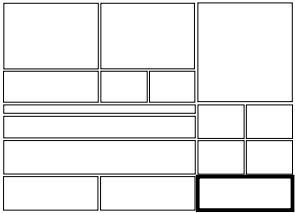
A Typology For Production And Leisure
First Floor Plan



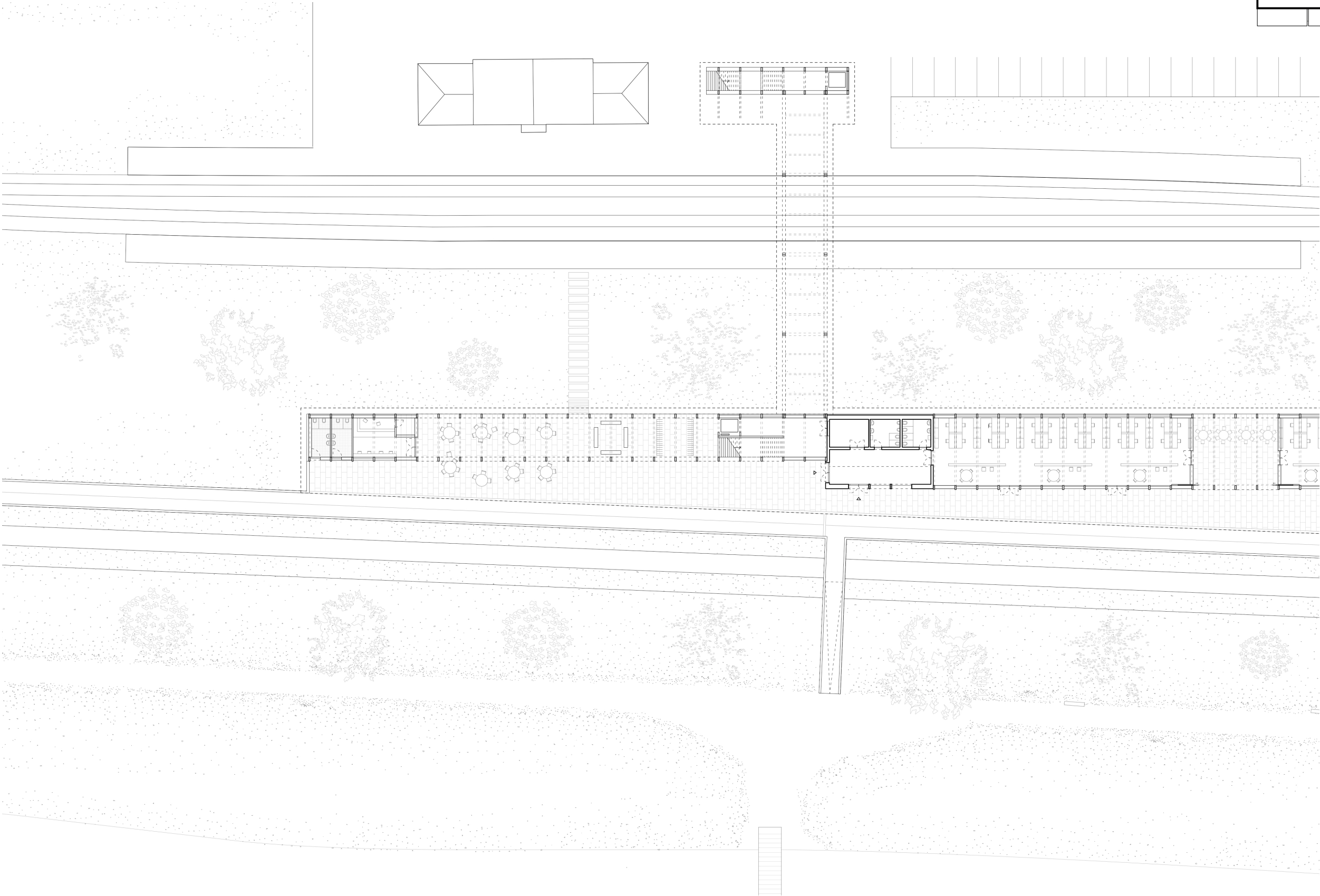
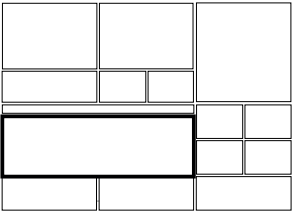
A Typology For Production And Leisure
First Floor Plan



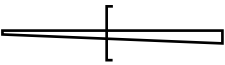
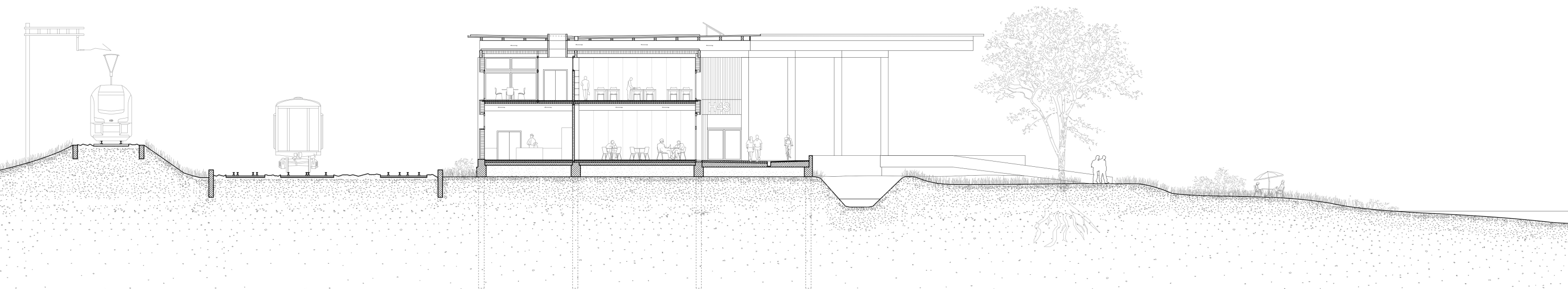
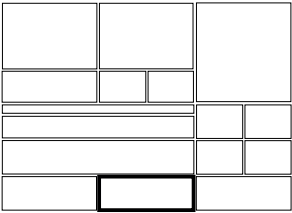
A Typology For Production And Leisure
Extract 1: Passerelle and public square (section AA')



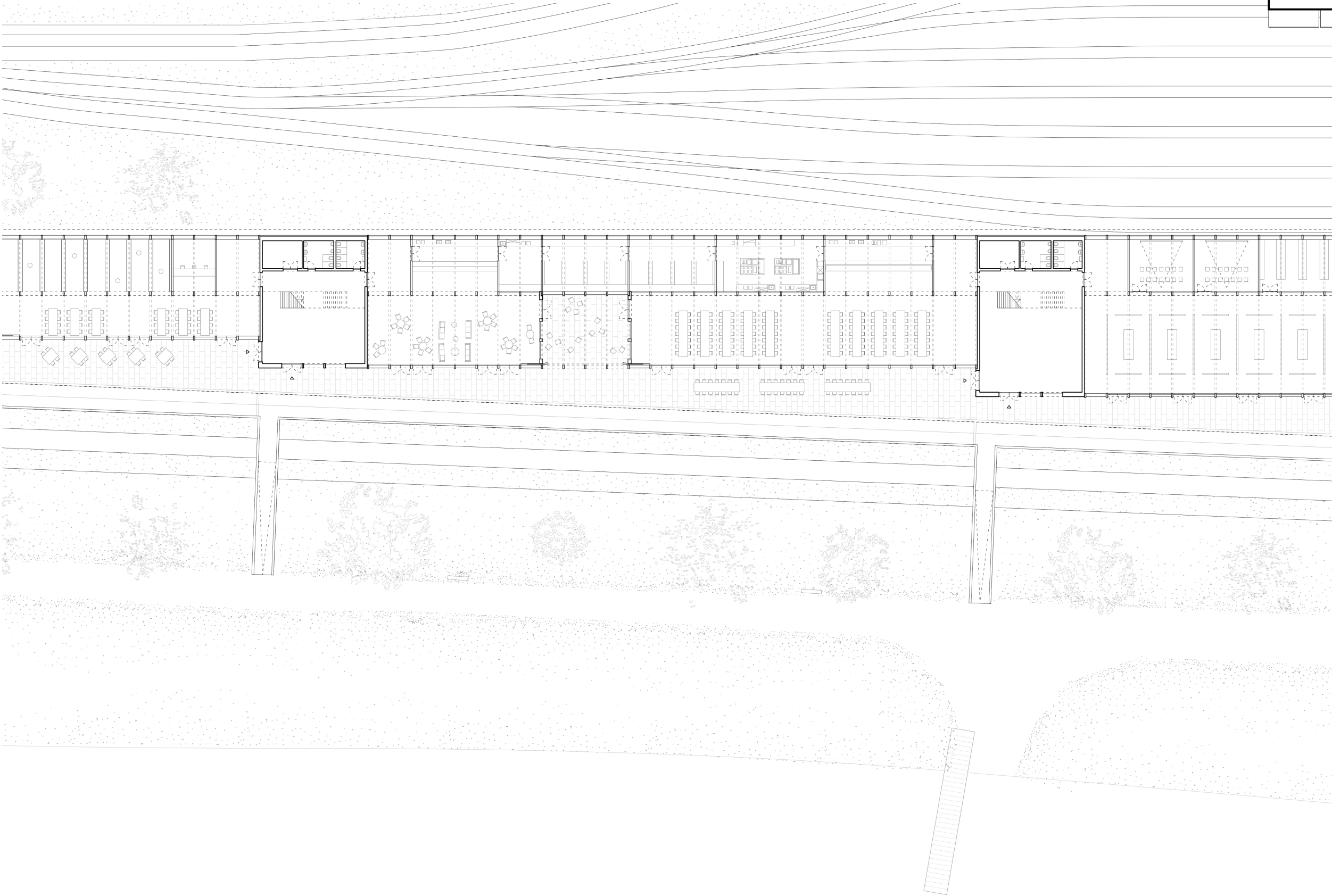
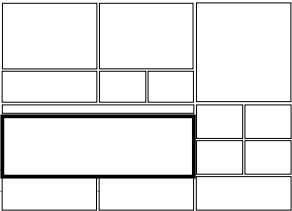
A Typology For Production And Leisure
Extract 1: Passerelle and public square (ground floor)



A Typology For Production And Leisure
Extract 2: Teaching typology (section BB')



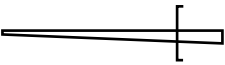
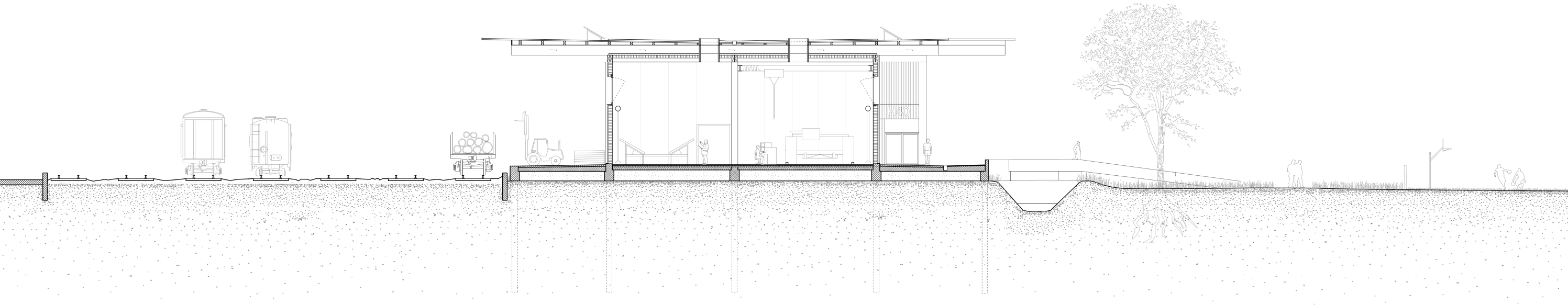
A Typology For Production And Leisure
Extract 2: Teaching typology (groundfloor plan)



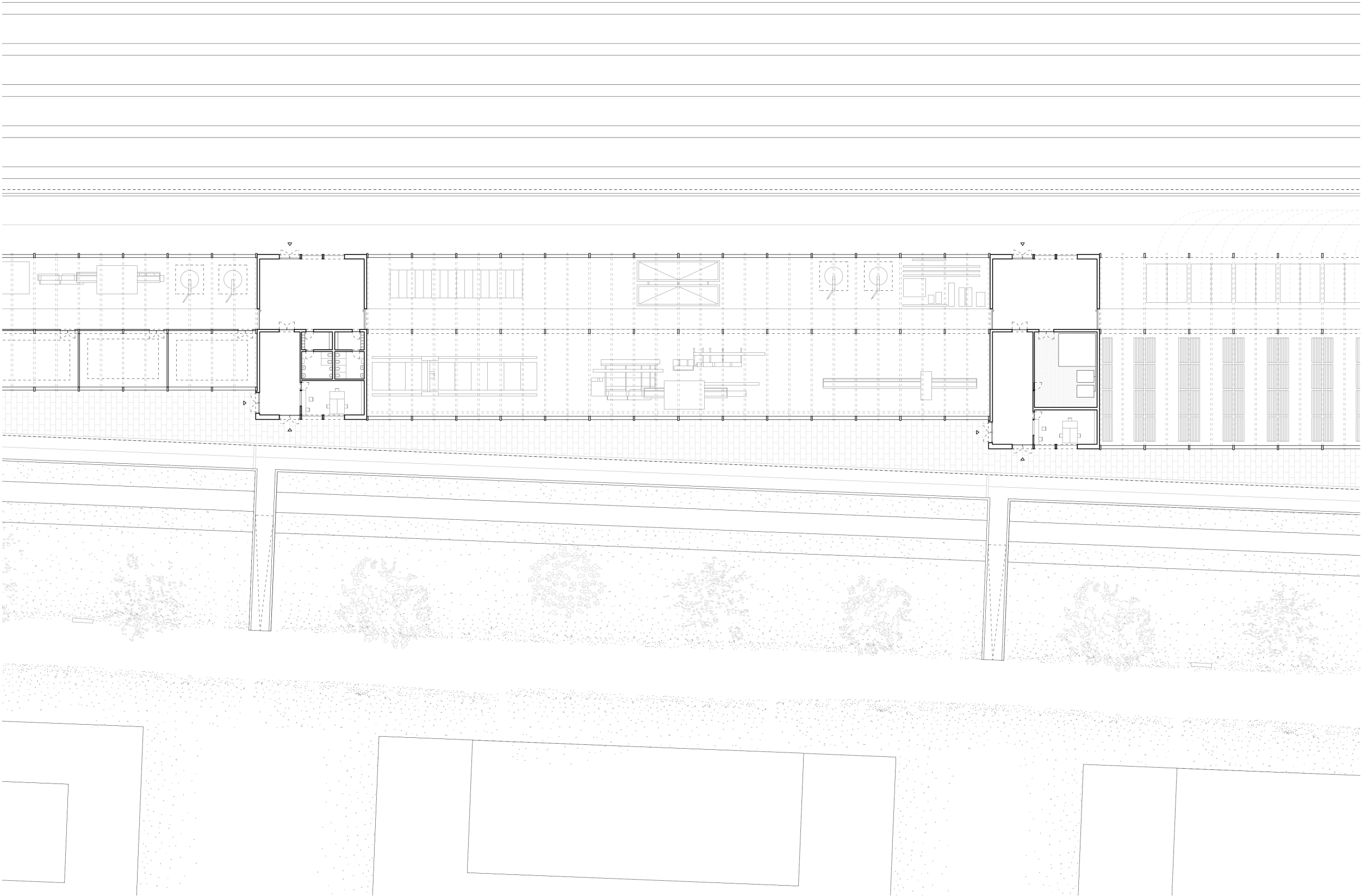
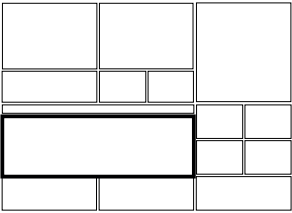




A Typology For Production And Leisure
Extract 3: Industrial typology (section CC)

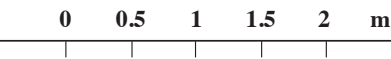
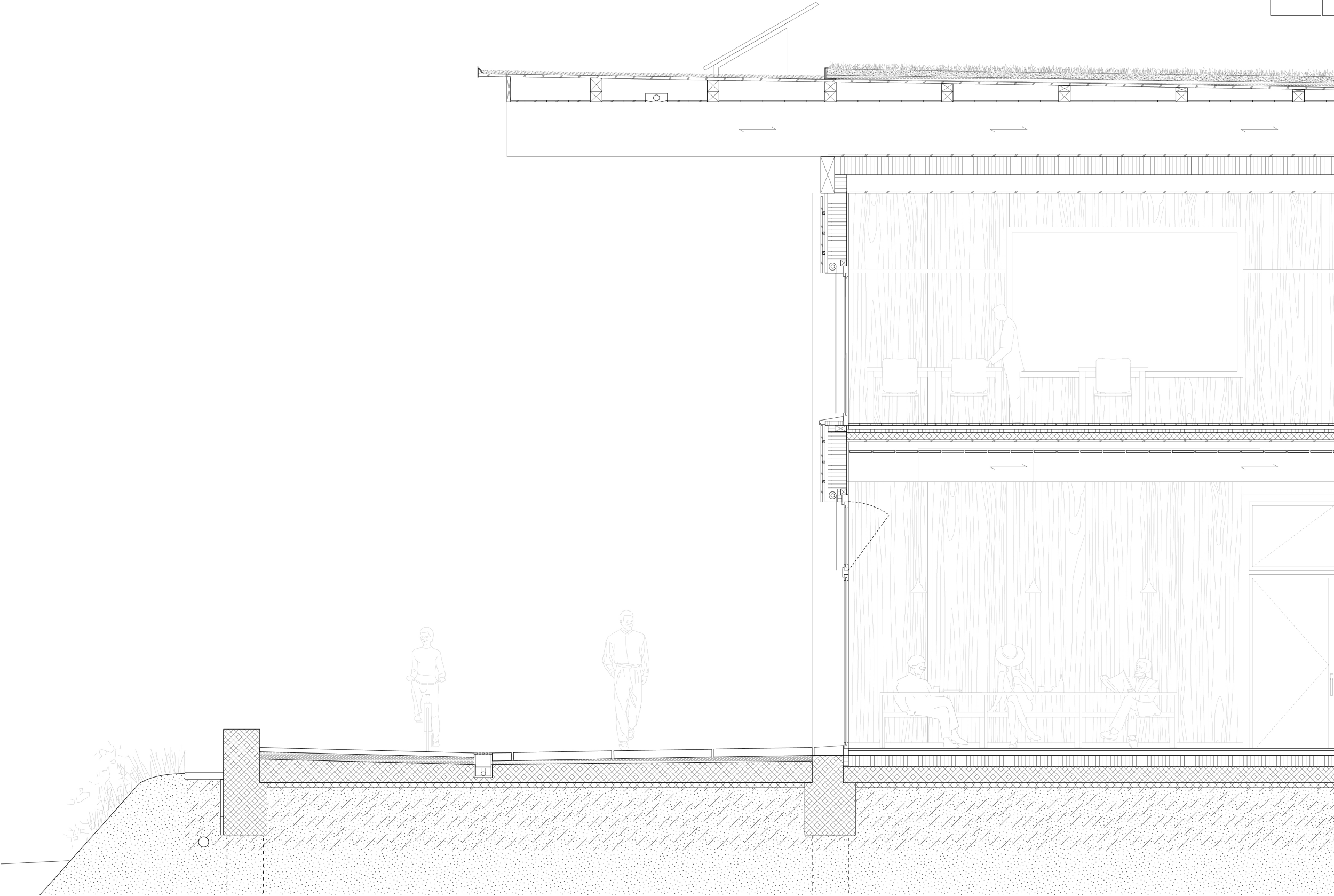
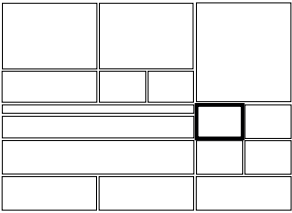


A Typology For Production And Leisure
Extract 3: Industrial typology (groundfloor plan)





A Typology For Production And Leisure
Constructive section

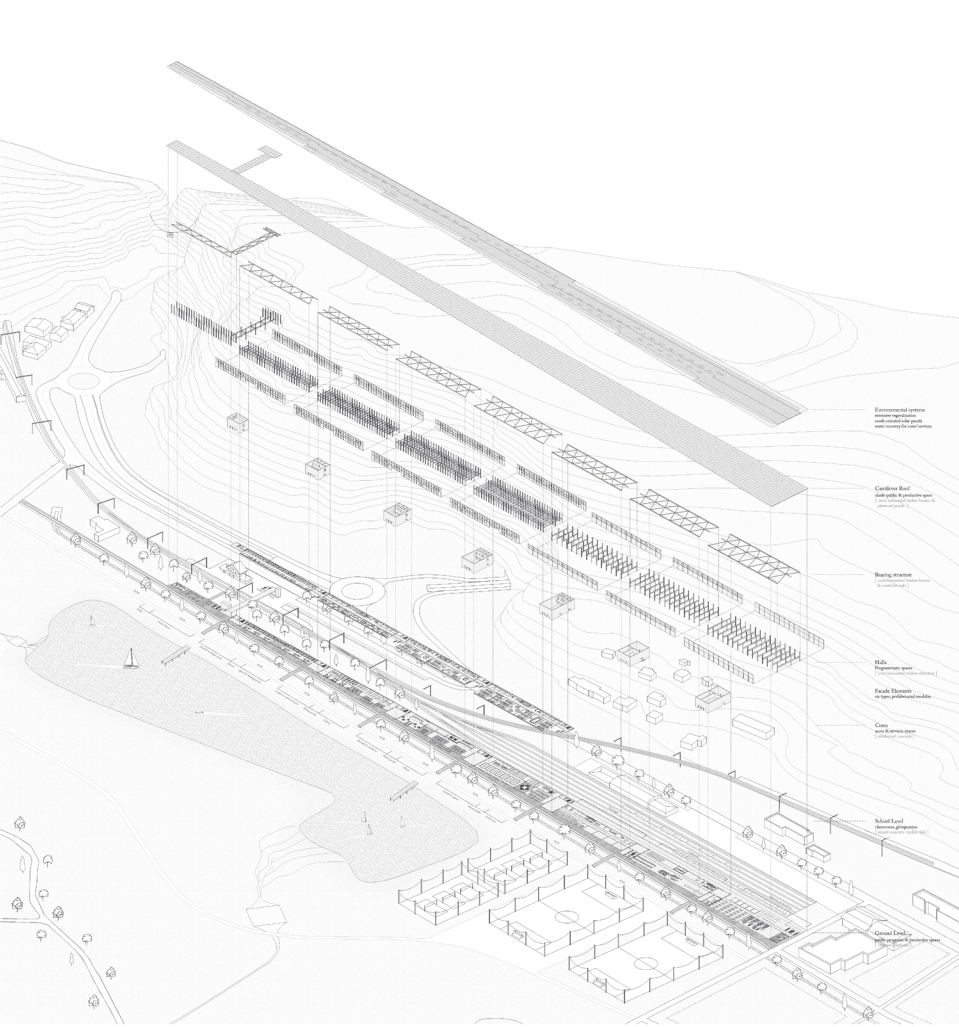




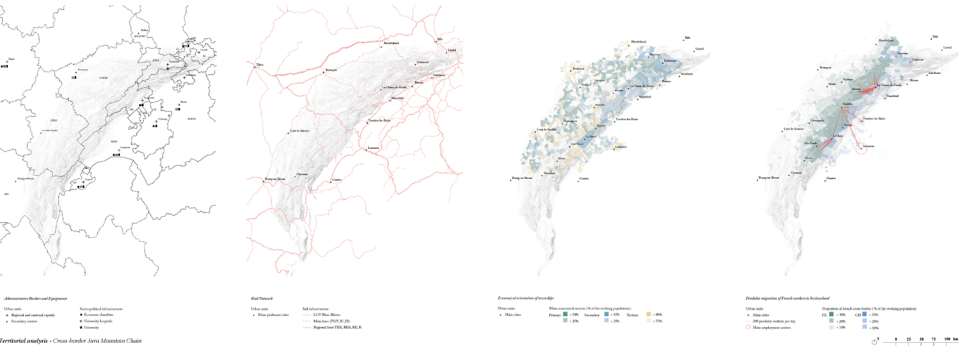
Perspective - corner de l'Hôtel de Ville 44



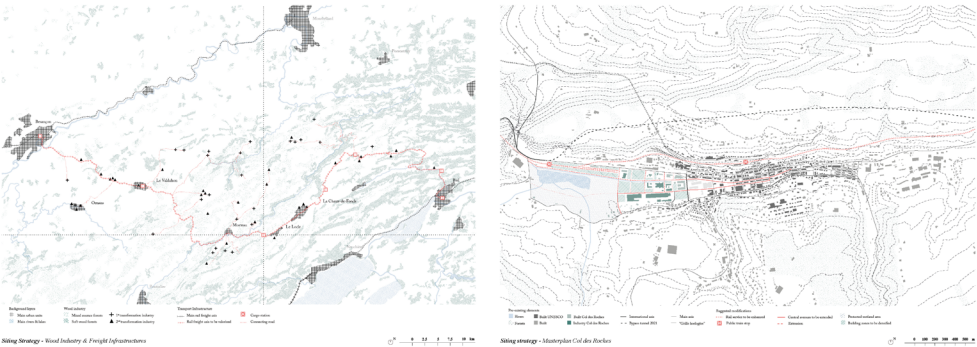
Site Plan - Col des Roches 1/2500



Exploded Axonometry - Program & Construction



Territorial analysis - Cross border Jura Mountain Chain

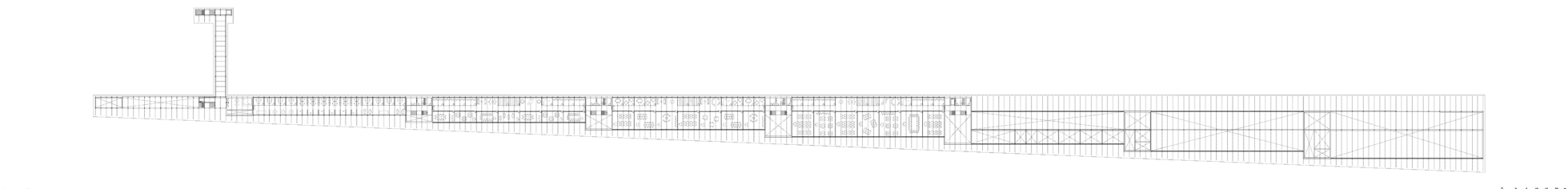


Siting Strategy - Visual Industry & Freight Infrastructure

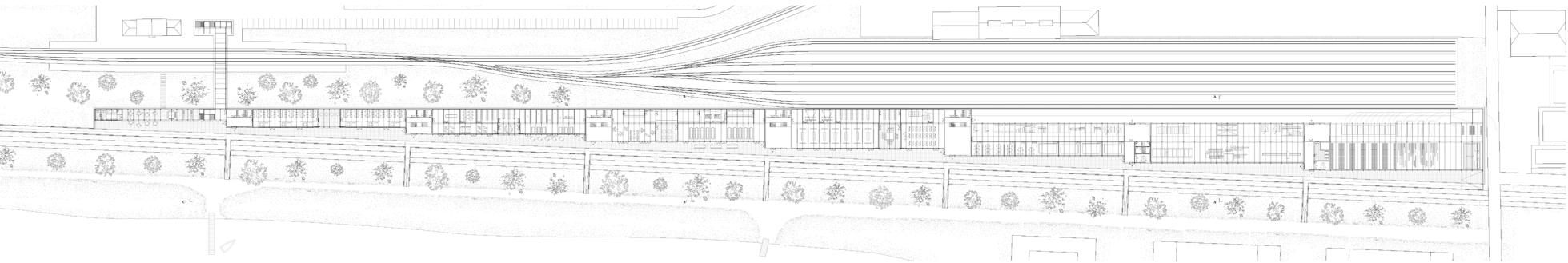
Siting Strategy - Mountain Col des Roches



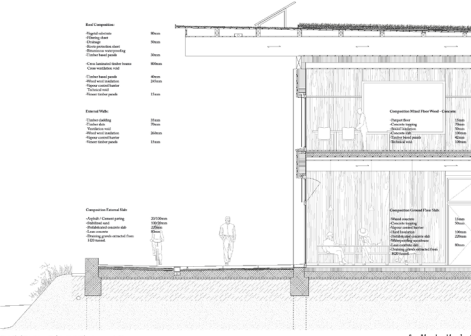
Elevation - Southern Facade 1/500



Plan - First Floor 1/500



Plan - Ground Floor 1/500



Detailed Section - Cafeteria & Classroom 1/30



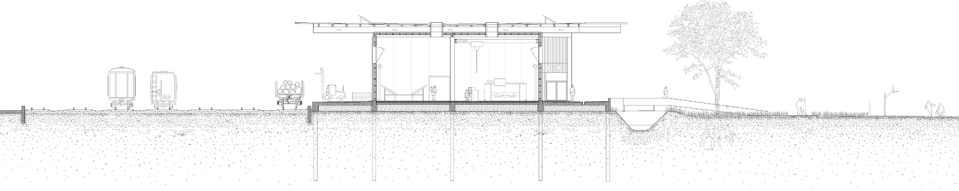
Detailed Section - Cafeteria & Classroom 1/30



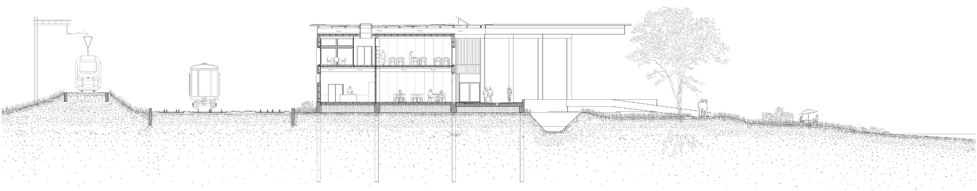
Perspective - View from the freight station towards the cooperative



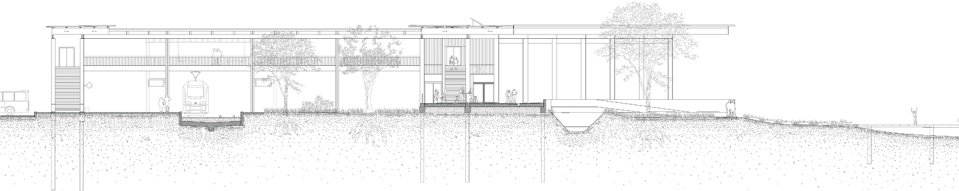
Perspective - View from the cafeteria towards the lake



Cross Section - A-A' 1/250

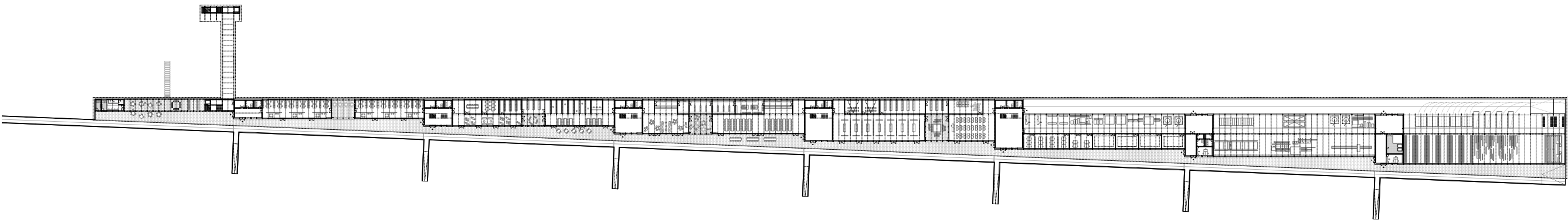


Cross Section - B-B' 1/250

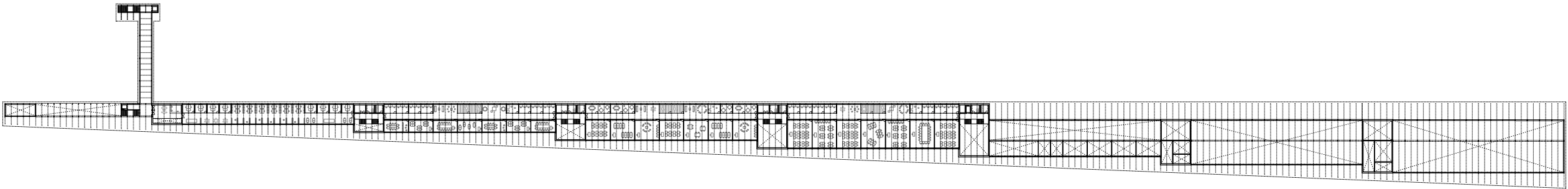


Cross Section - C-C' 1/250

APPENDIX



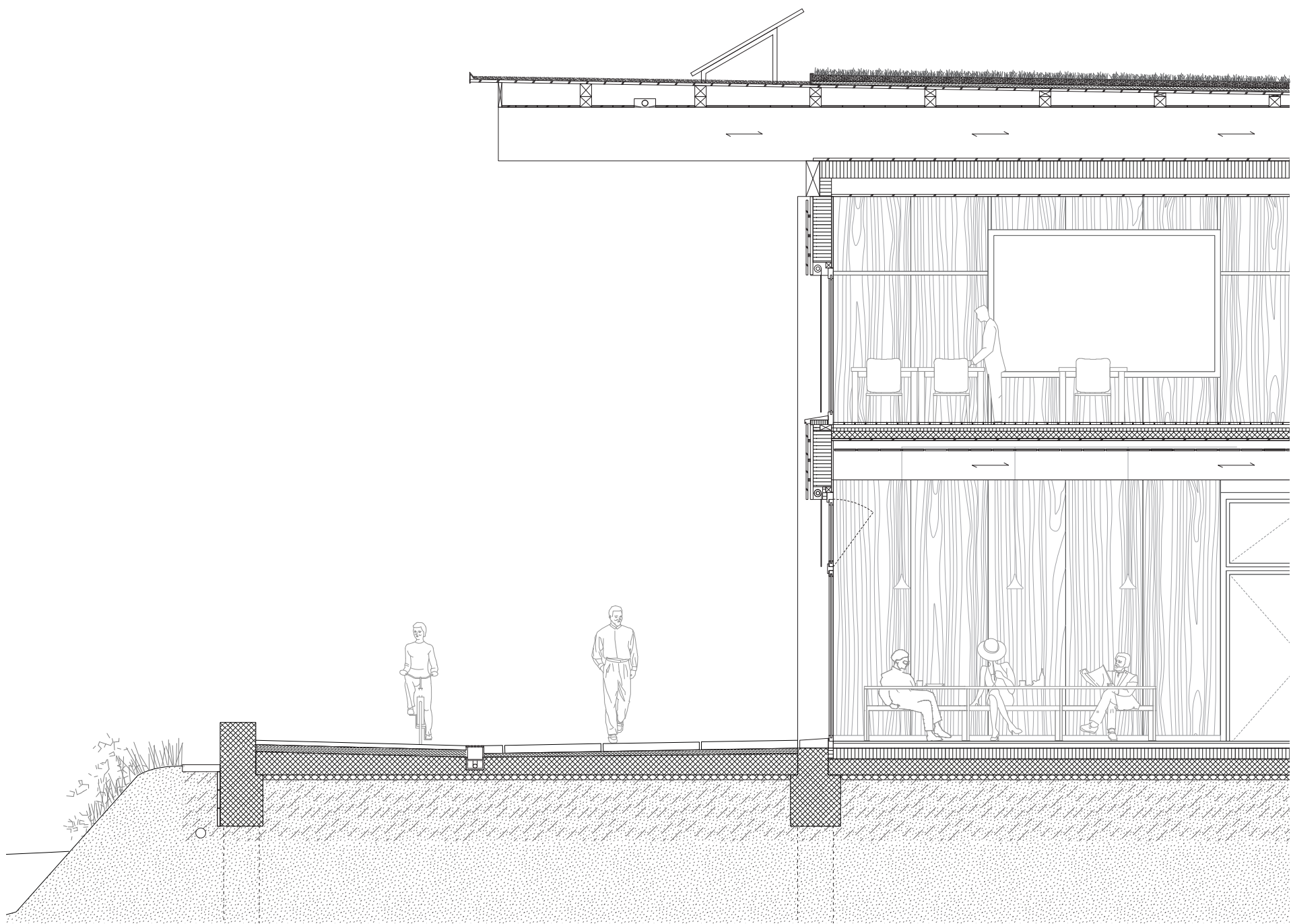
APPENDIX



APPENDIX



APPENDIX



APPENDIX

