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# Public (transport) space

*towards an open public transport hub*





# Contents

## Introduction

Bringing people together

## Research

Defining an open public transport hub

## Analysis

An investigation of Méndez Álvaro

## Strategy and Design

Creating an open public transport hub



1

Introduction

**Bringing people  
together**



## MADRID

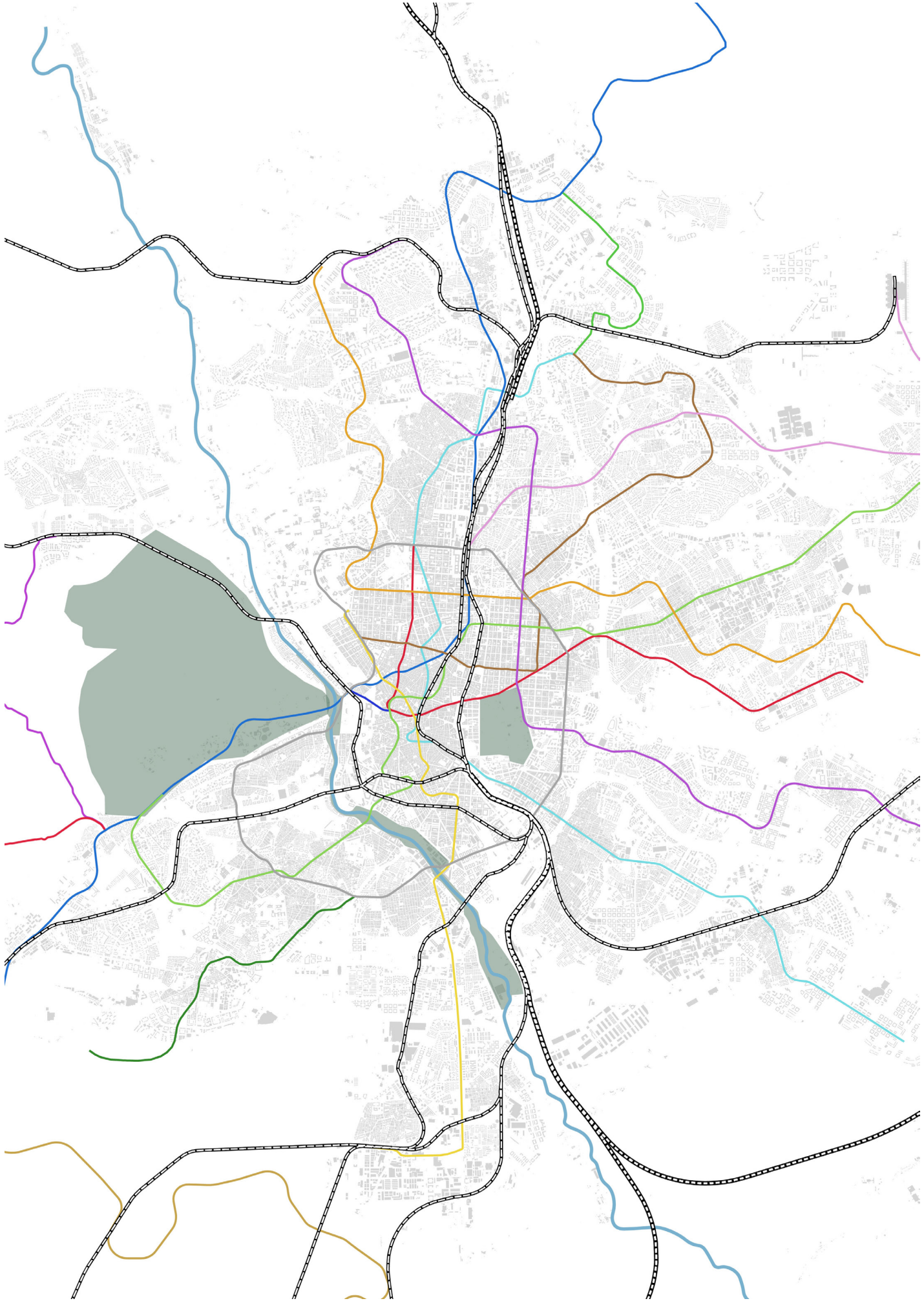




## MADRID | EXPANDED CITY

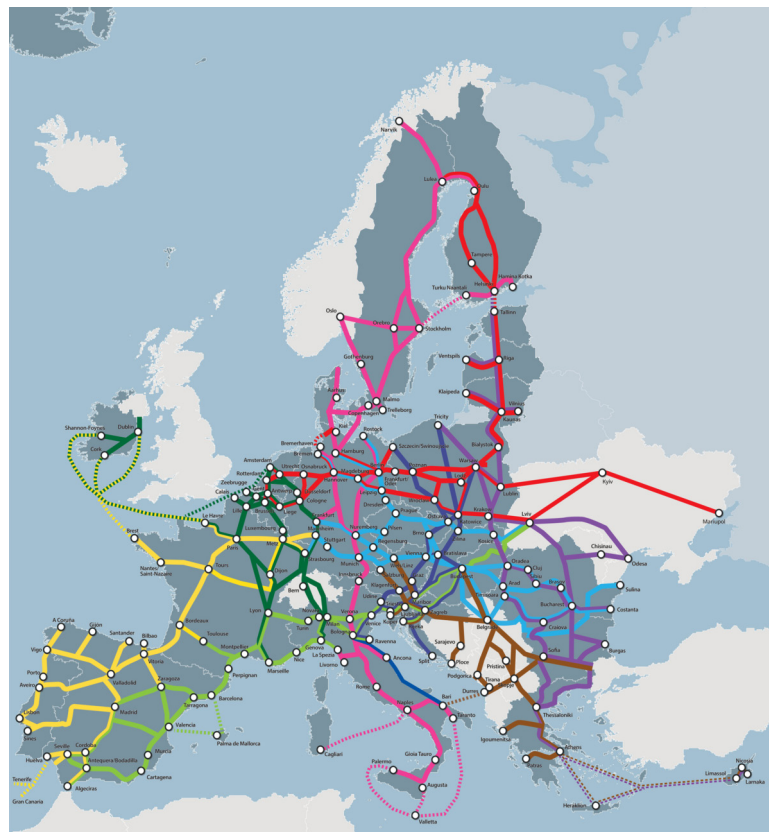








# Public transportation connects throughout different scales



TEN-T, Trans European Transport Network

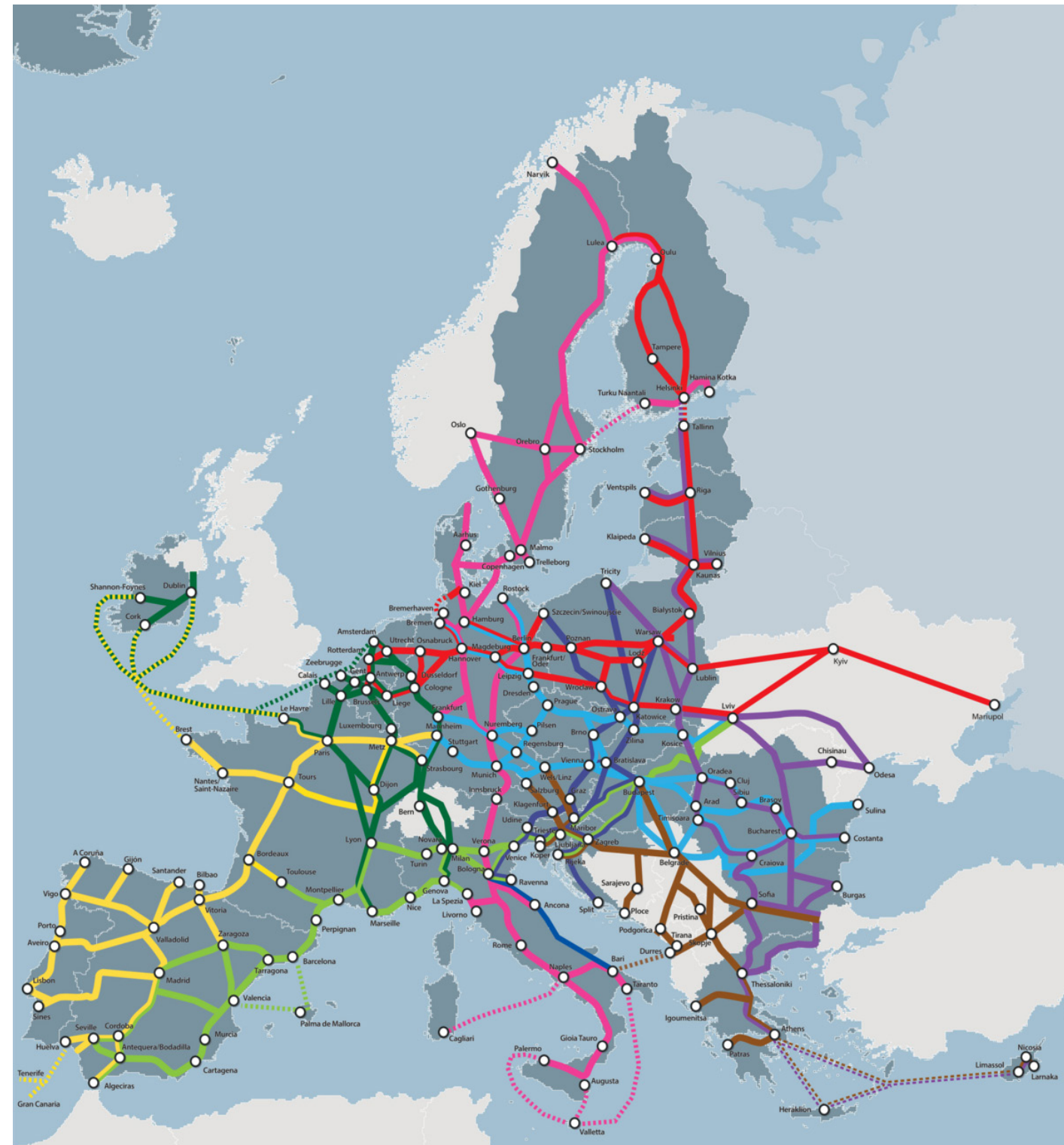
*From the integration of  
Europe to boarding a metro*



Méndez Álvaro public transport hub



# Integrating...



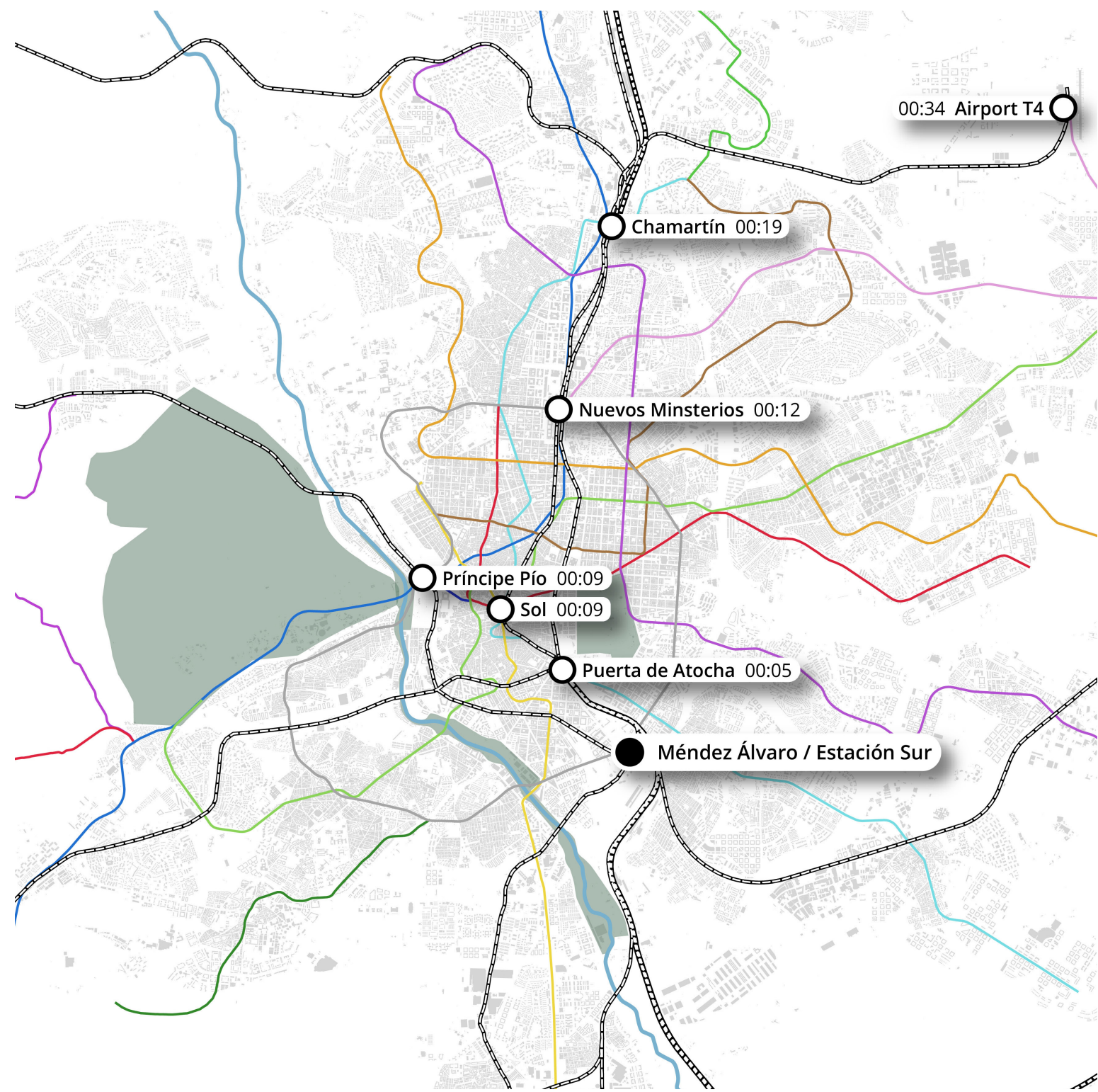
# ...Europe







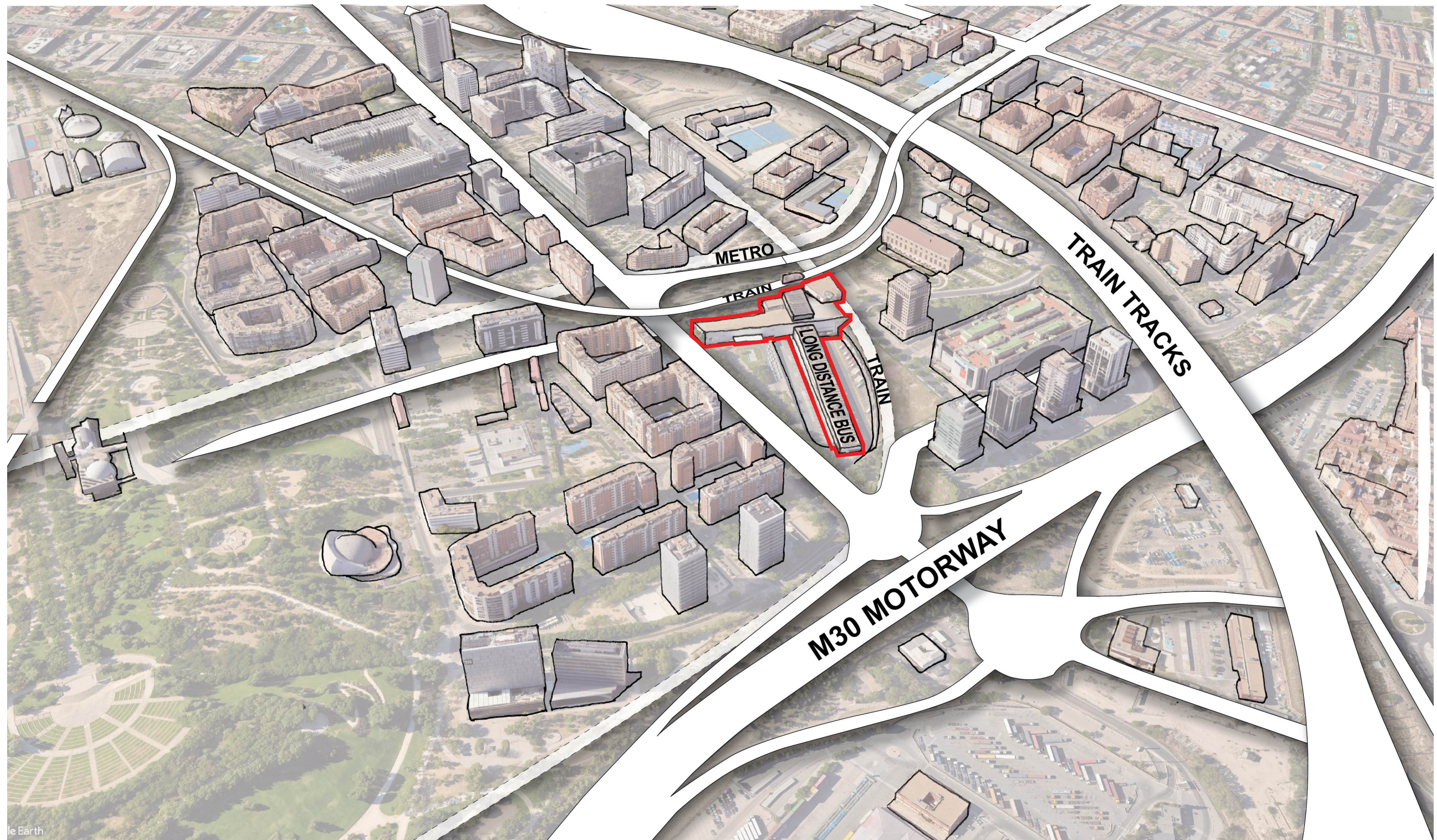
Connecting...



...Madrid



# Seperating...



# ...Districts



# Dividing...



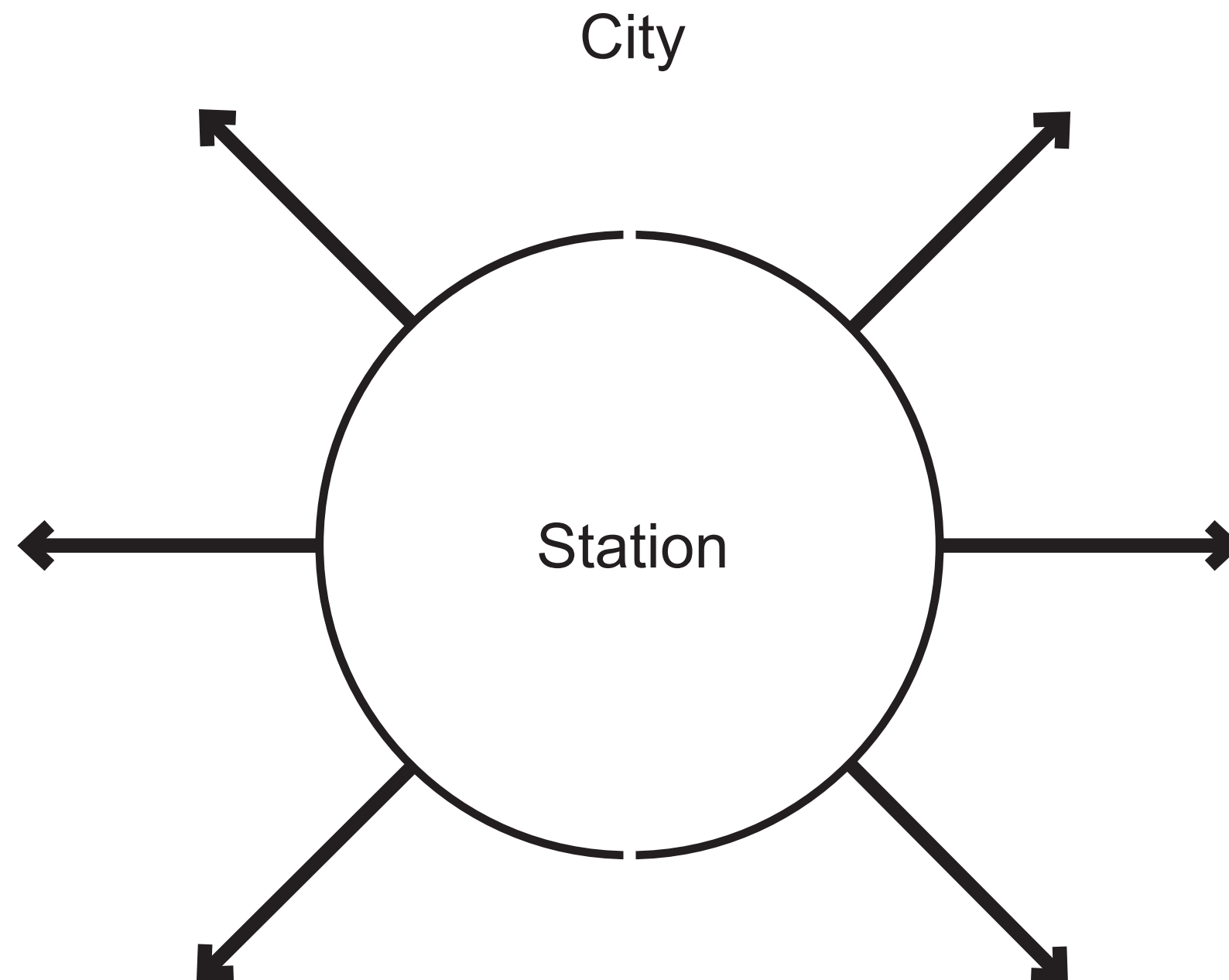
# ...People



## Problem statement

*Growing importance of **public transport hubs** in our mobility patterns elevates their role as **public spaces**. Furthermore, city dynamics, changing use of stations and the gradual built up of mobility infrastructures has created transport hubs that are **poorly navigable** and surrounded by **boundaries**. This separates the station from the city around it, preventing public transport hubs from becoming **open and accessible public spaces**.*







## Research question

*How can public transport hubs mitigate boundaries created by mobility infrastructure and become open public spaces?*



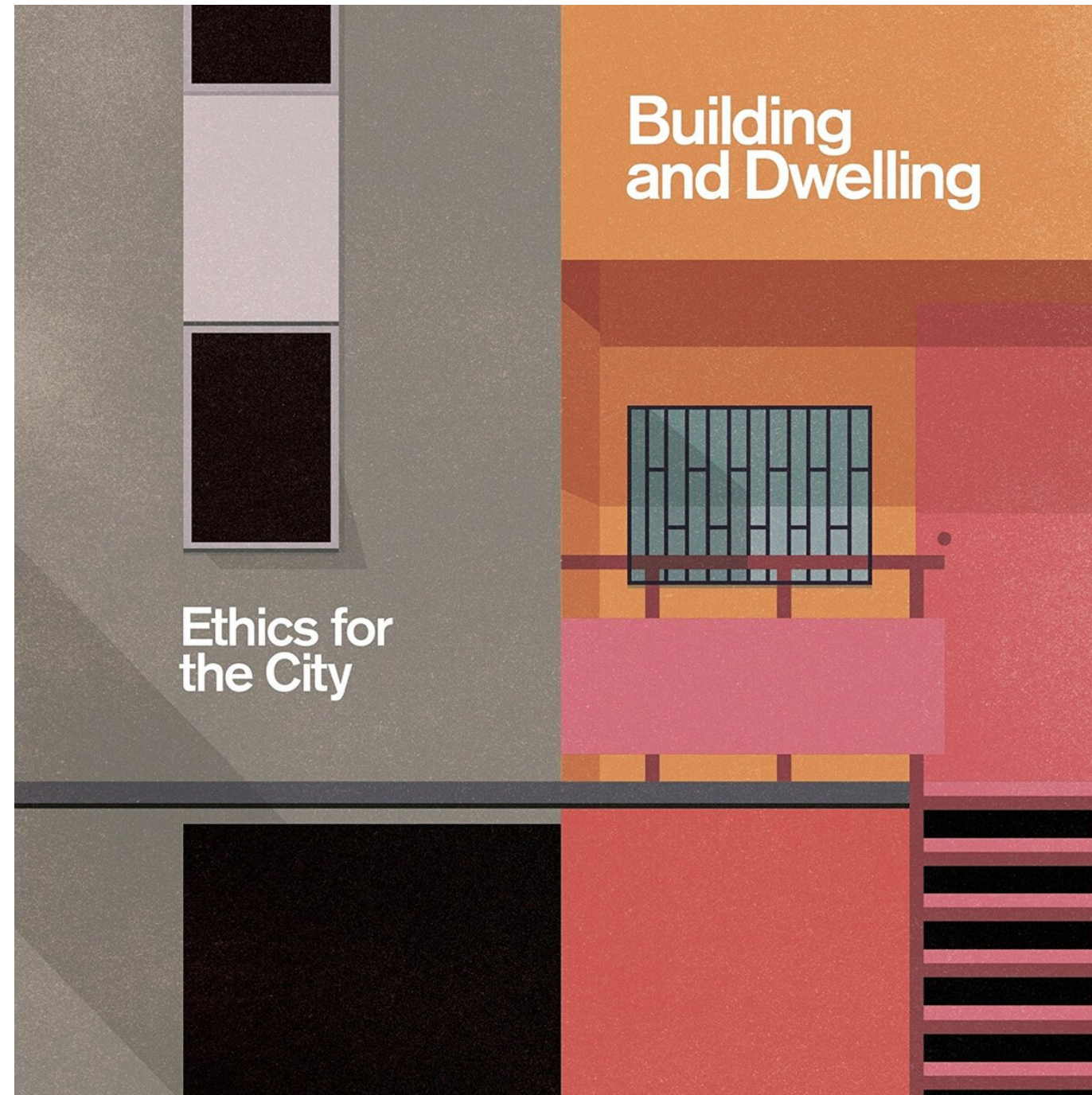
# 2

Research

## Defining an open public transport hub



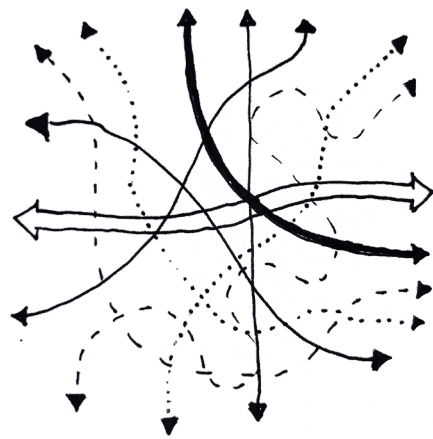
# The open city



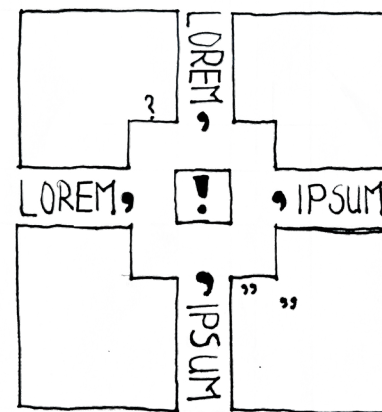


# Five open forms

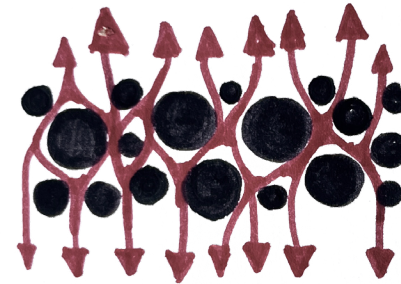
**Synchronous**



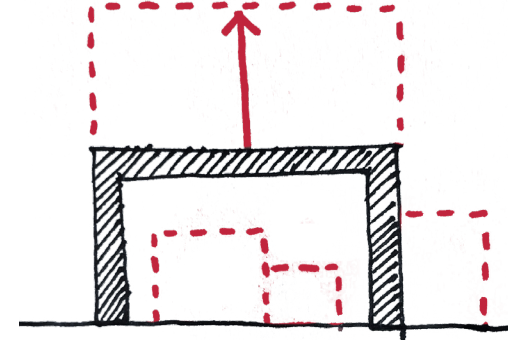
**Punctuated**



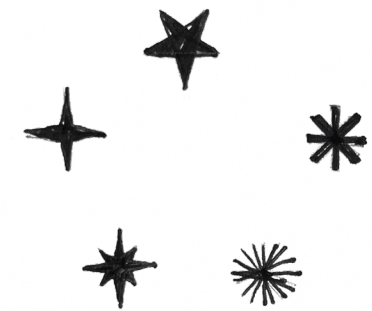
**Porous**



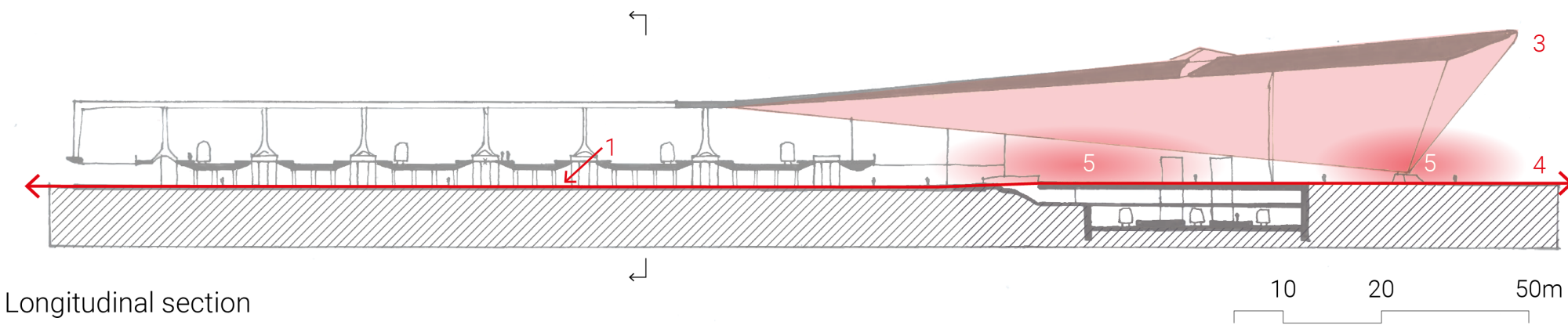
**Incomplete form**



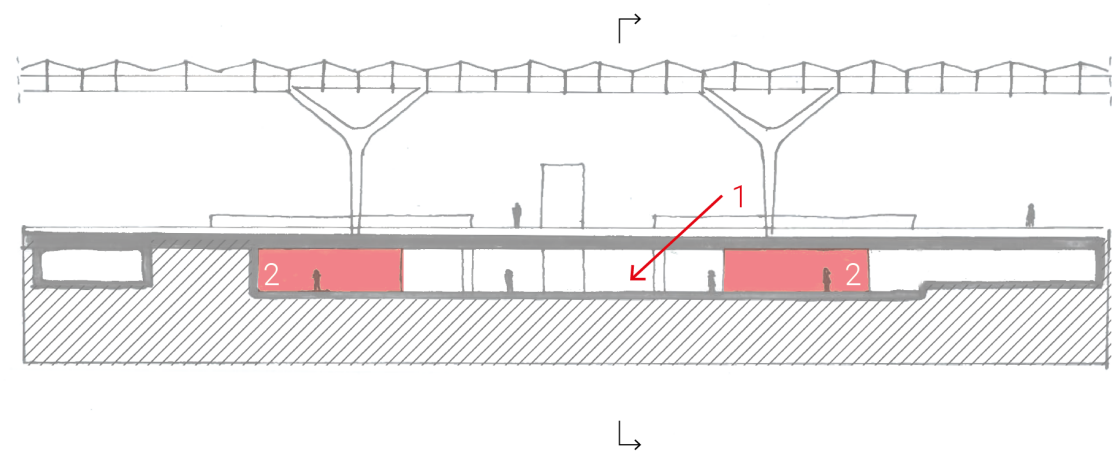
**Multiple**





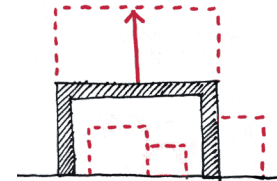
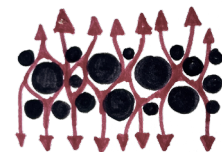
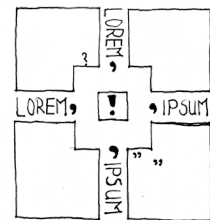
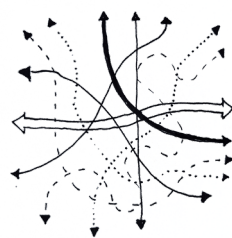


Longitudinal section



Cross section

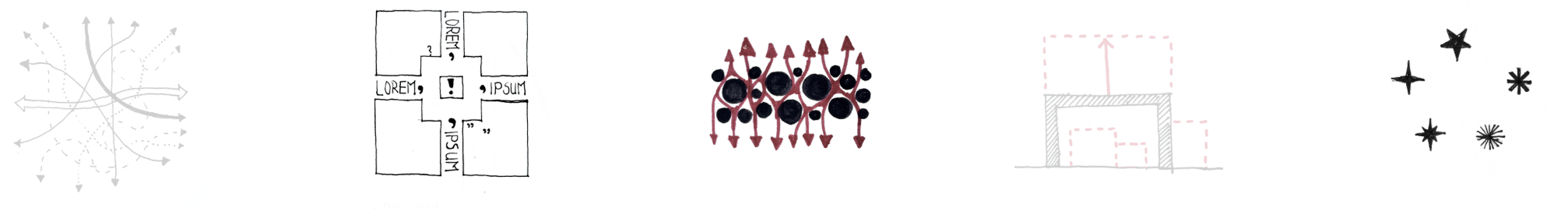
Section of Rotterdam Centraal







South entrance of Rotterdam Centraal

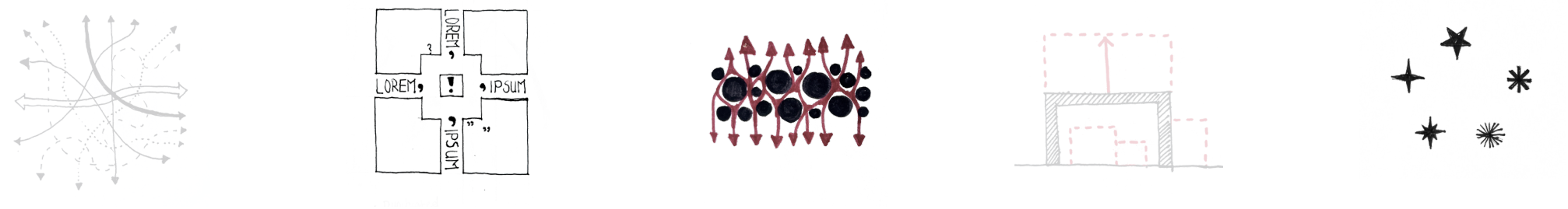


© The Architect





North entrance of Rotterdam Centraal

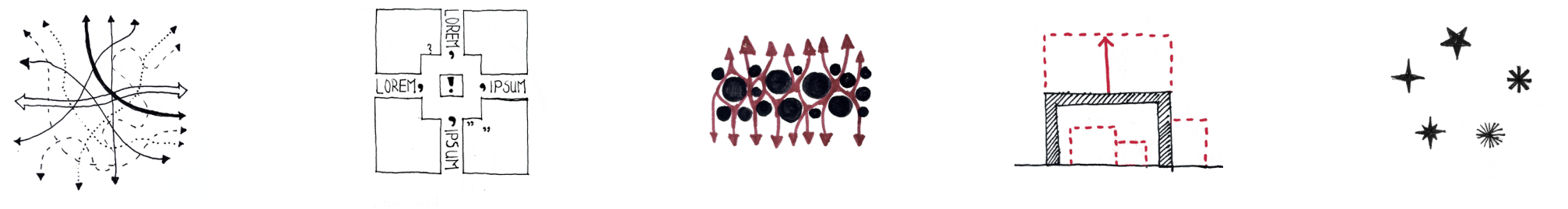


© 2010-2011



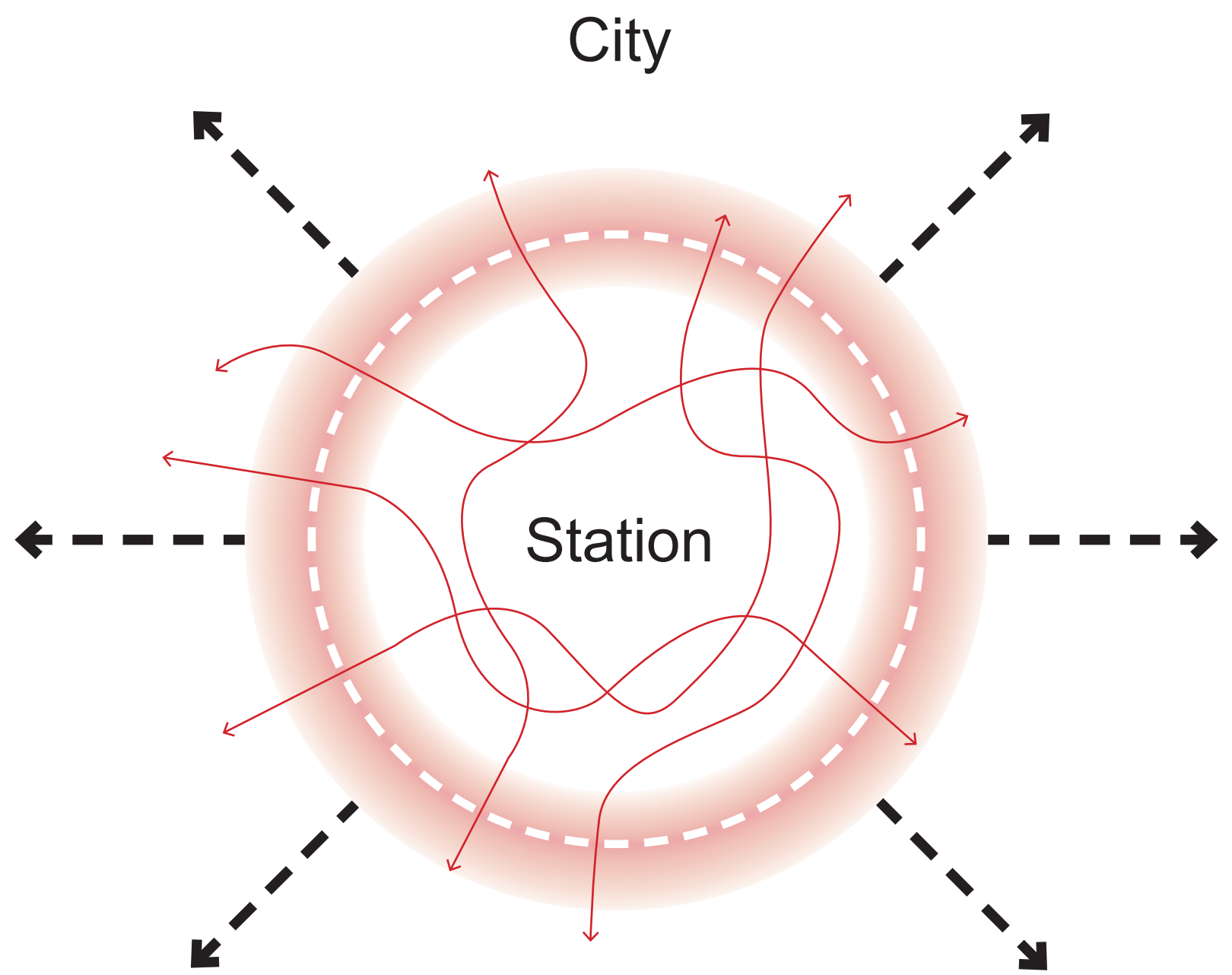


Main vestibule of Rotterdam Centraal



© 2014-2015







# 3

Analysis

## An investigation of Méndez Álvaro

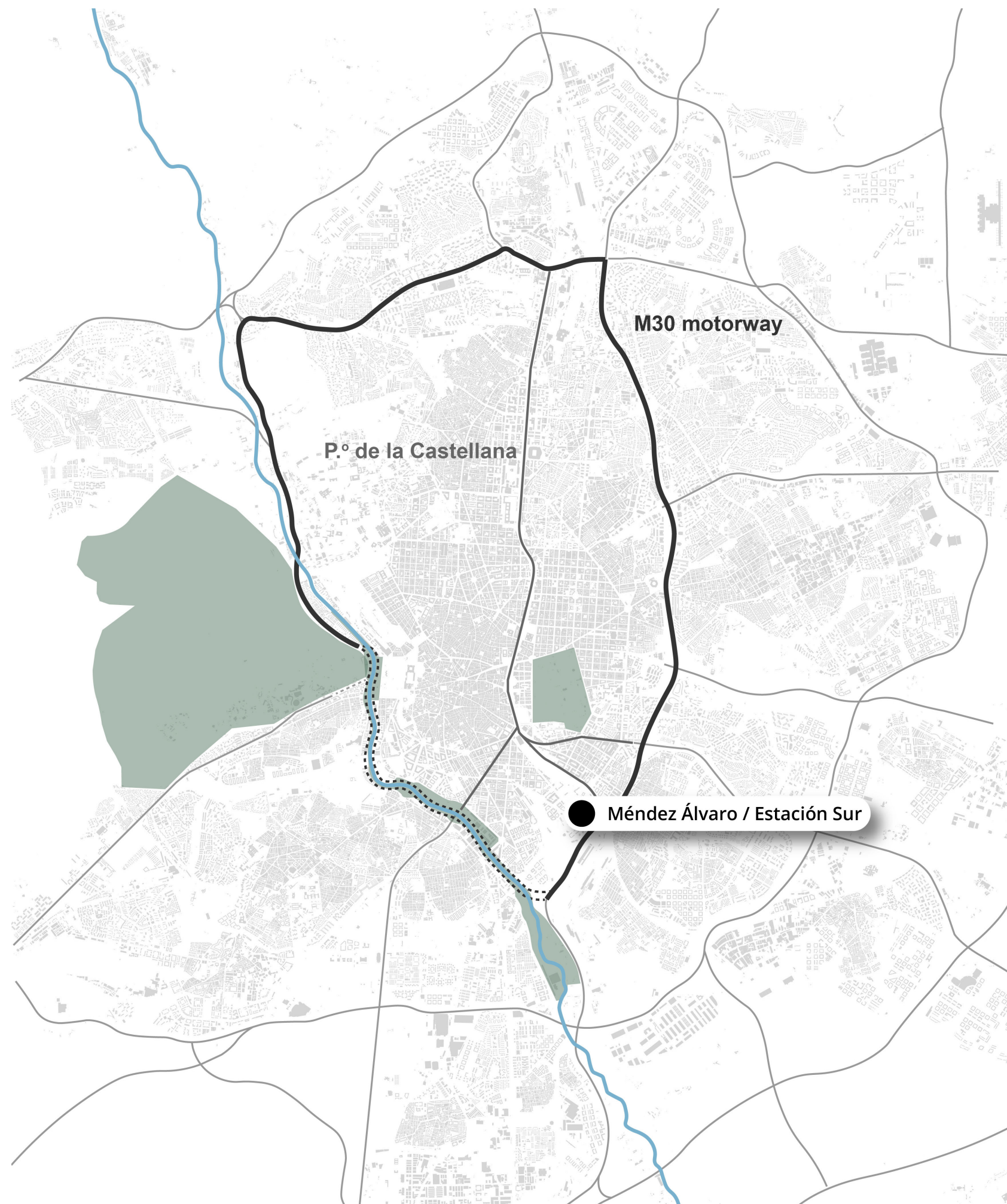




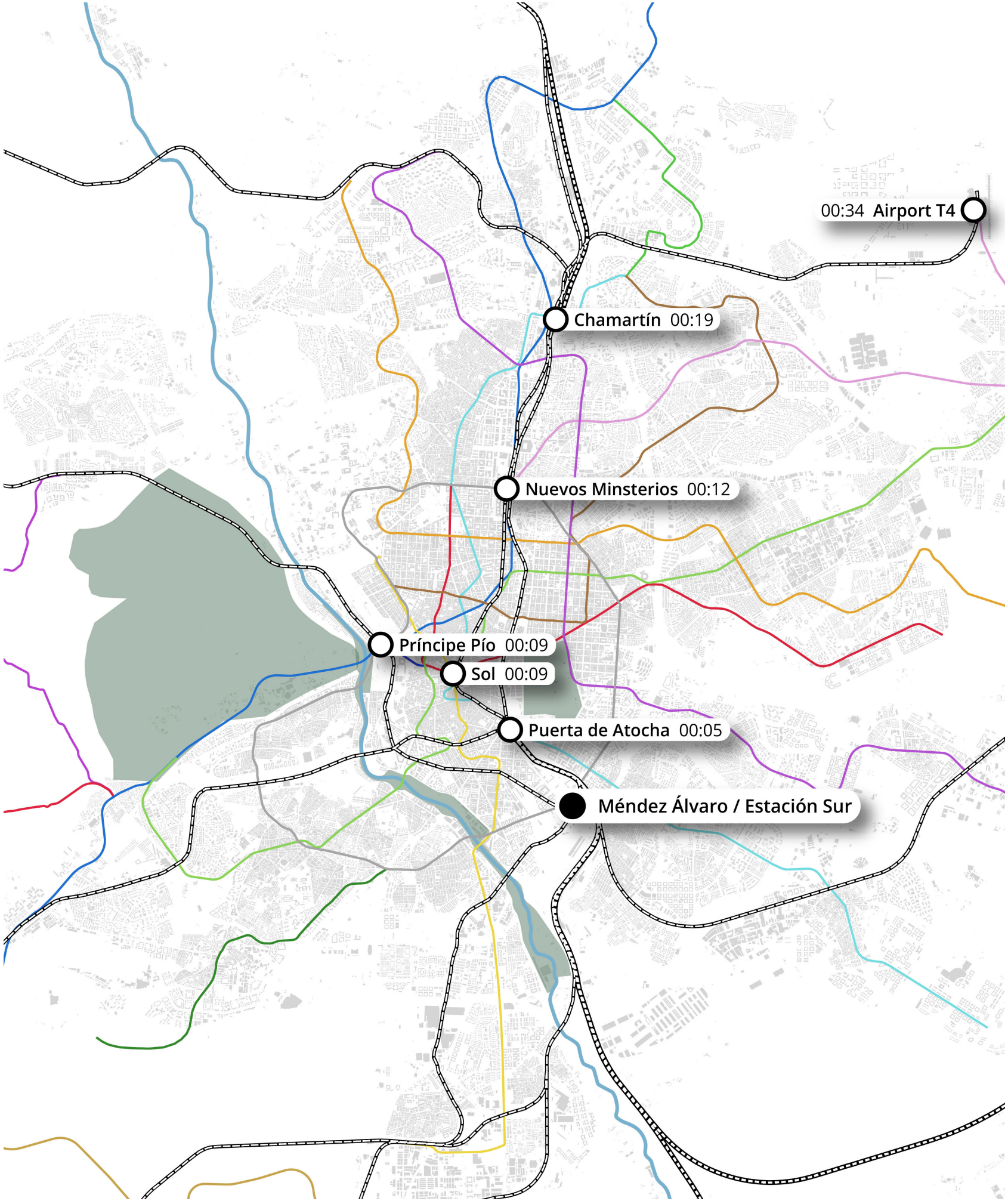
## MÉNDEZ ÁLVARO WITHIN EUROPE



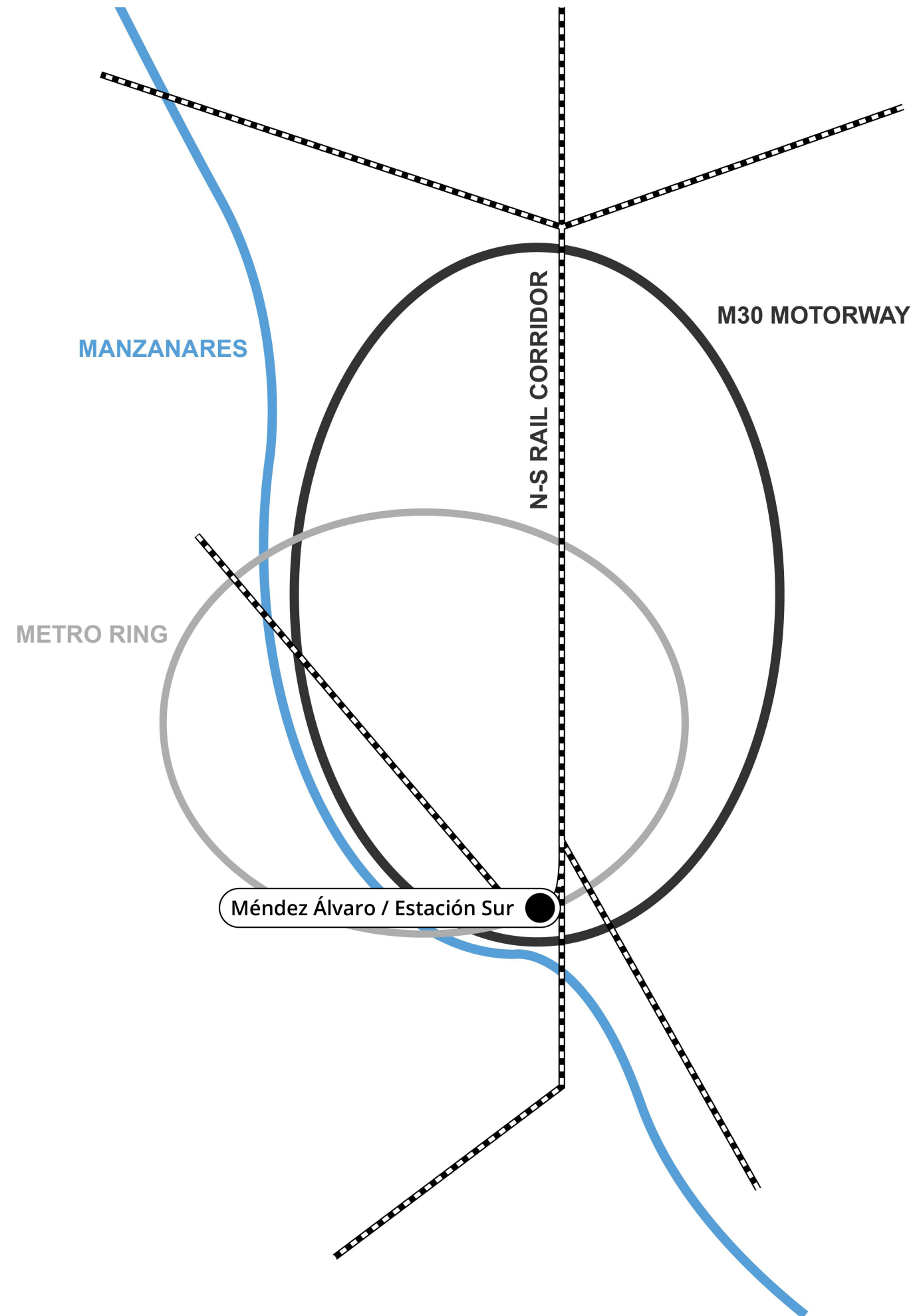




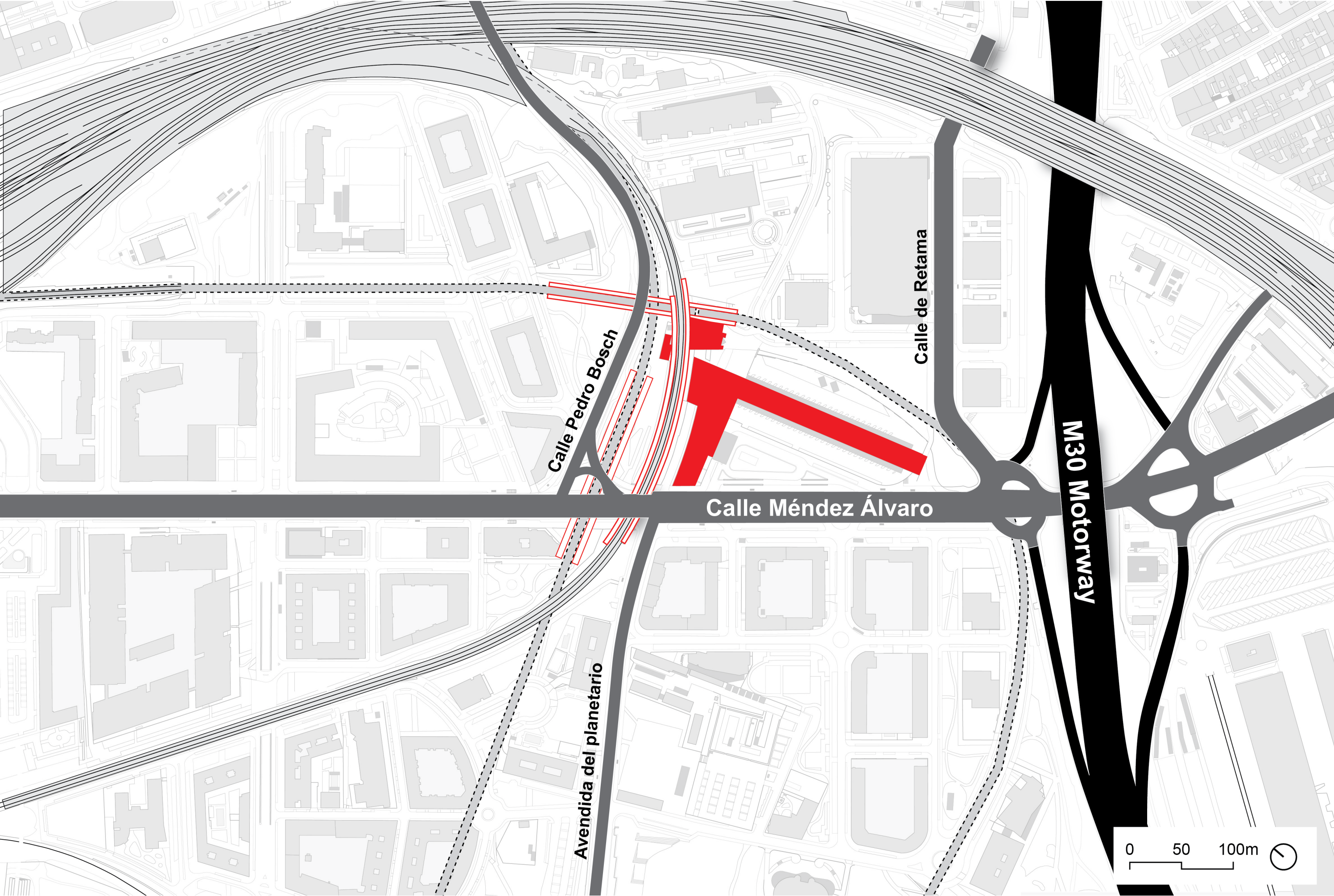








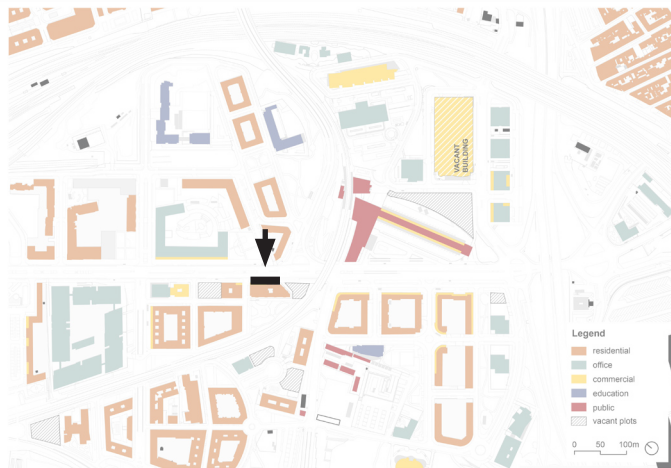








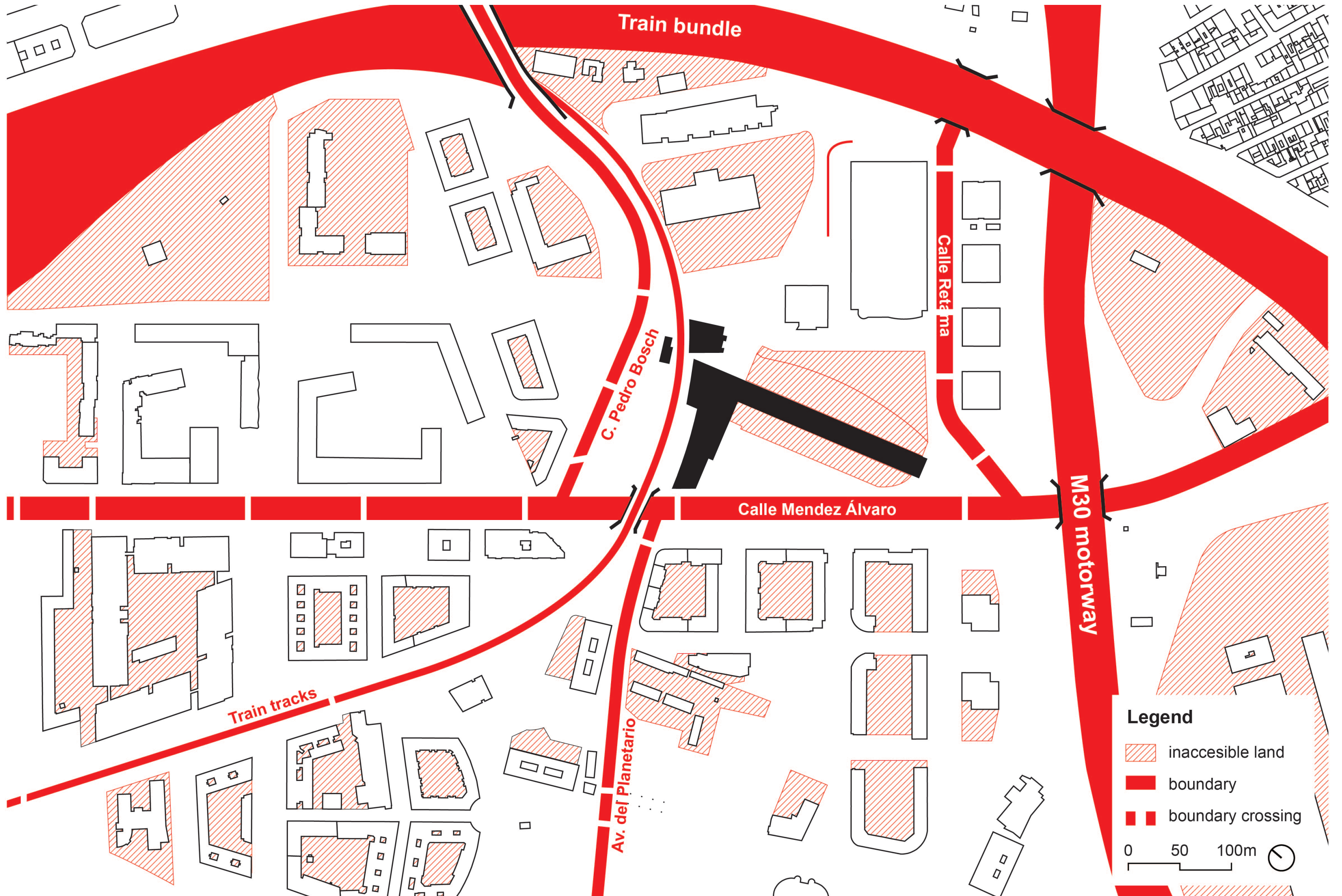




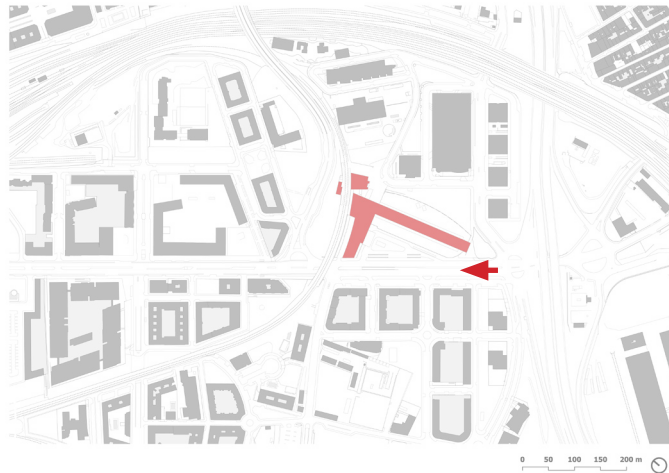






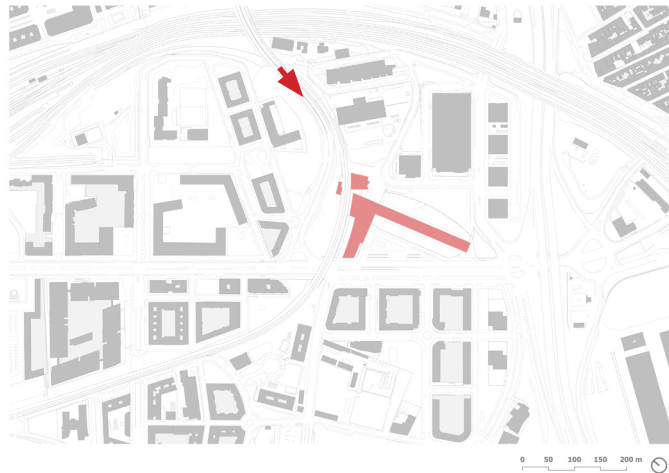






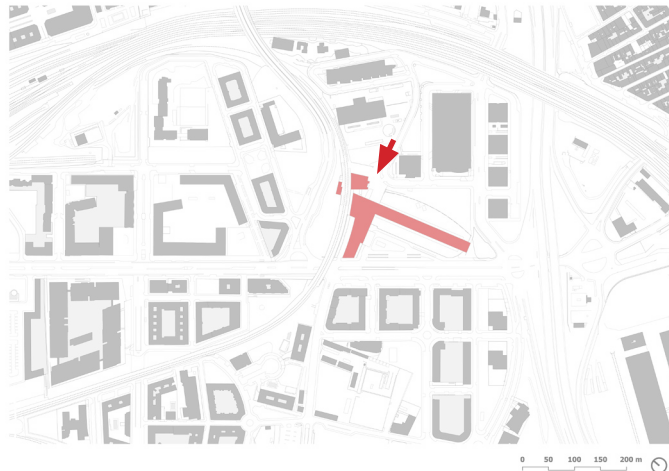
Calle Méndez Álvaro





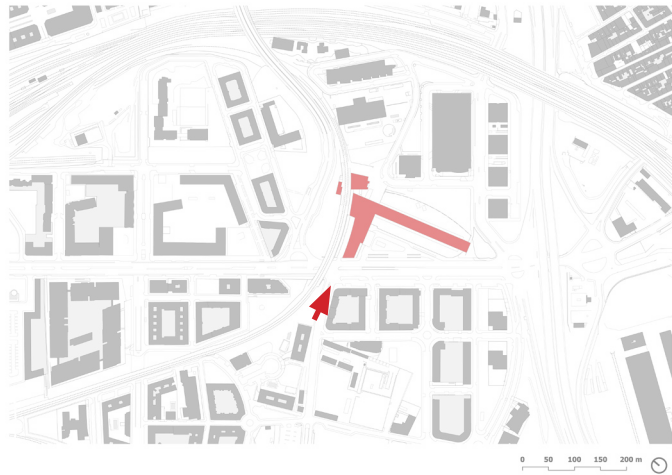
Calle de Pedro Bosch





East entrance Méndez Álvaro / Estación Sur





West entrance Méndez Álvaro / Estación Sur

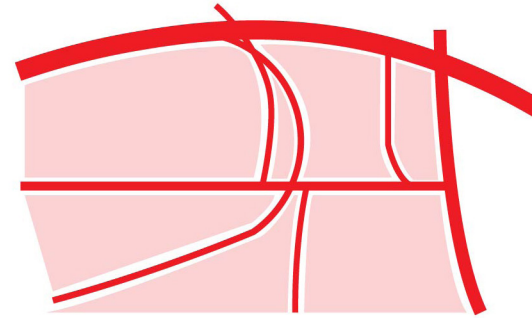




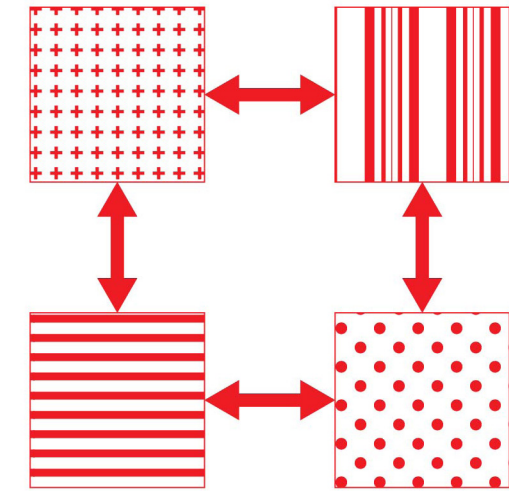
South entrance Méndez Álvaro / Estación Sur



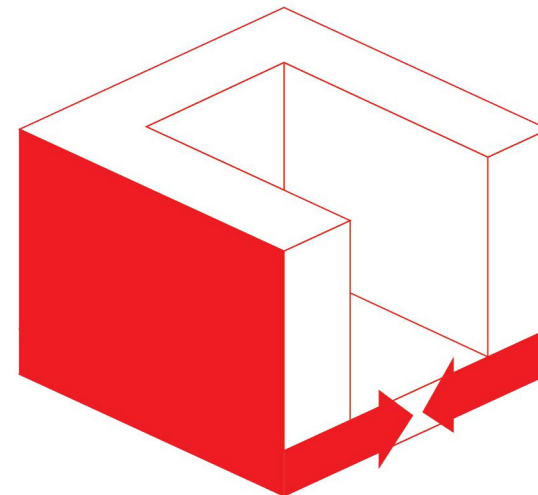
**Fragmented by infrastructure**



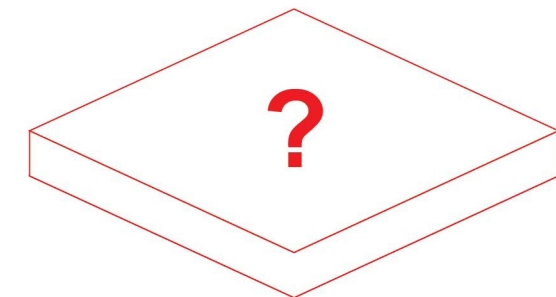
**Functional segregation**



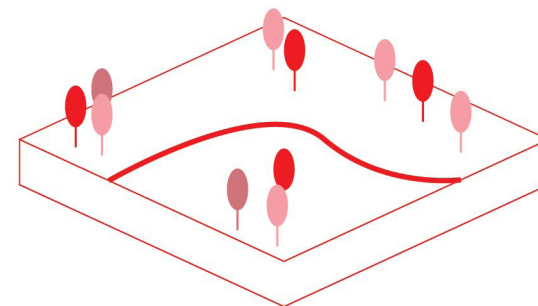
**Introverted buildings**



**Lack of character**



**Undefined public spaces**





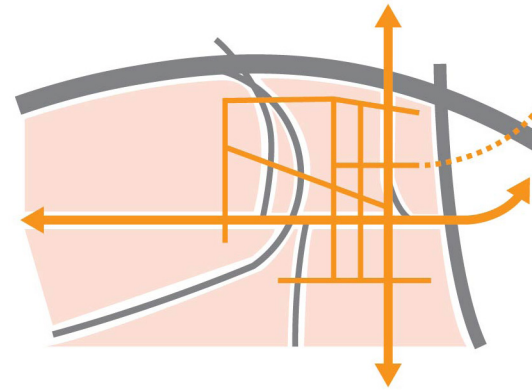
# 4

Strategy & Design

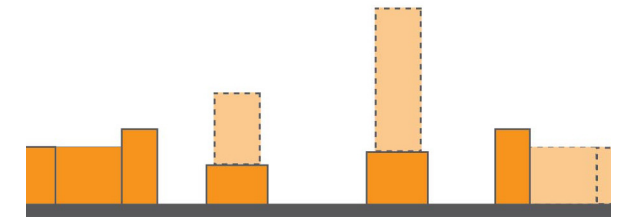
## Creating an open public transport hub



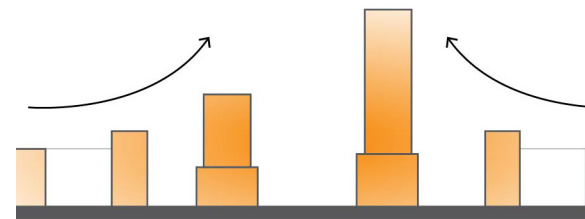
**Mitigating boundaries**



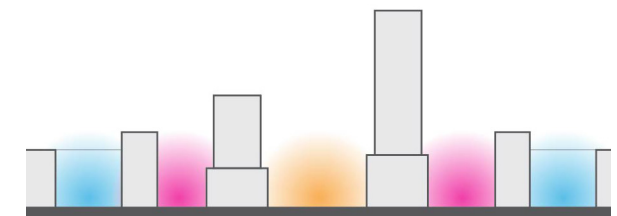
**Densification**



**Urban mix**



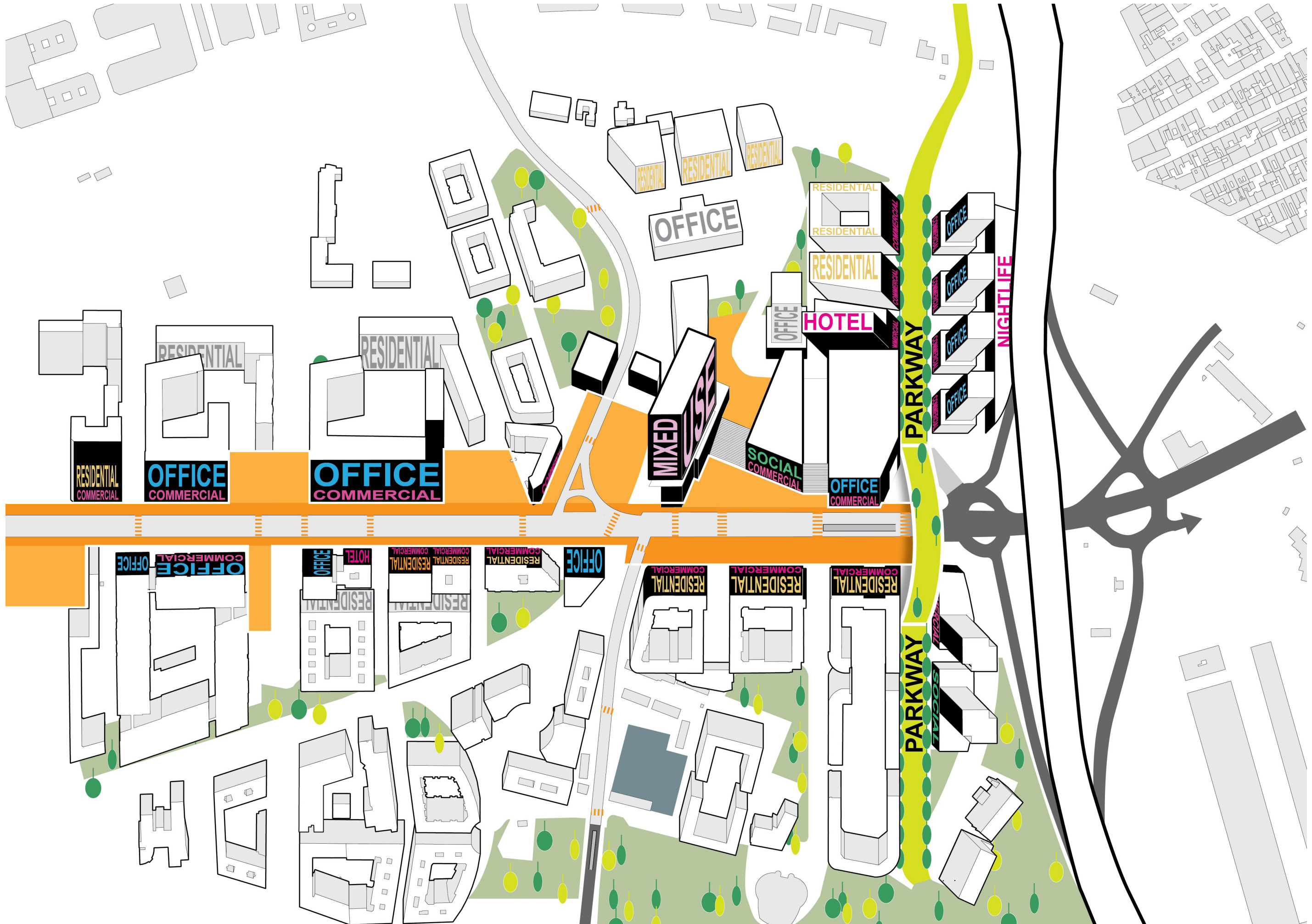
**Distinctive public spaces**



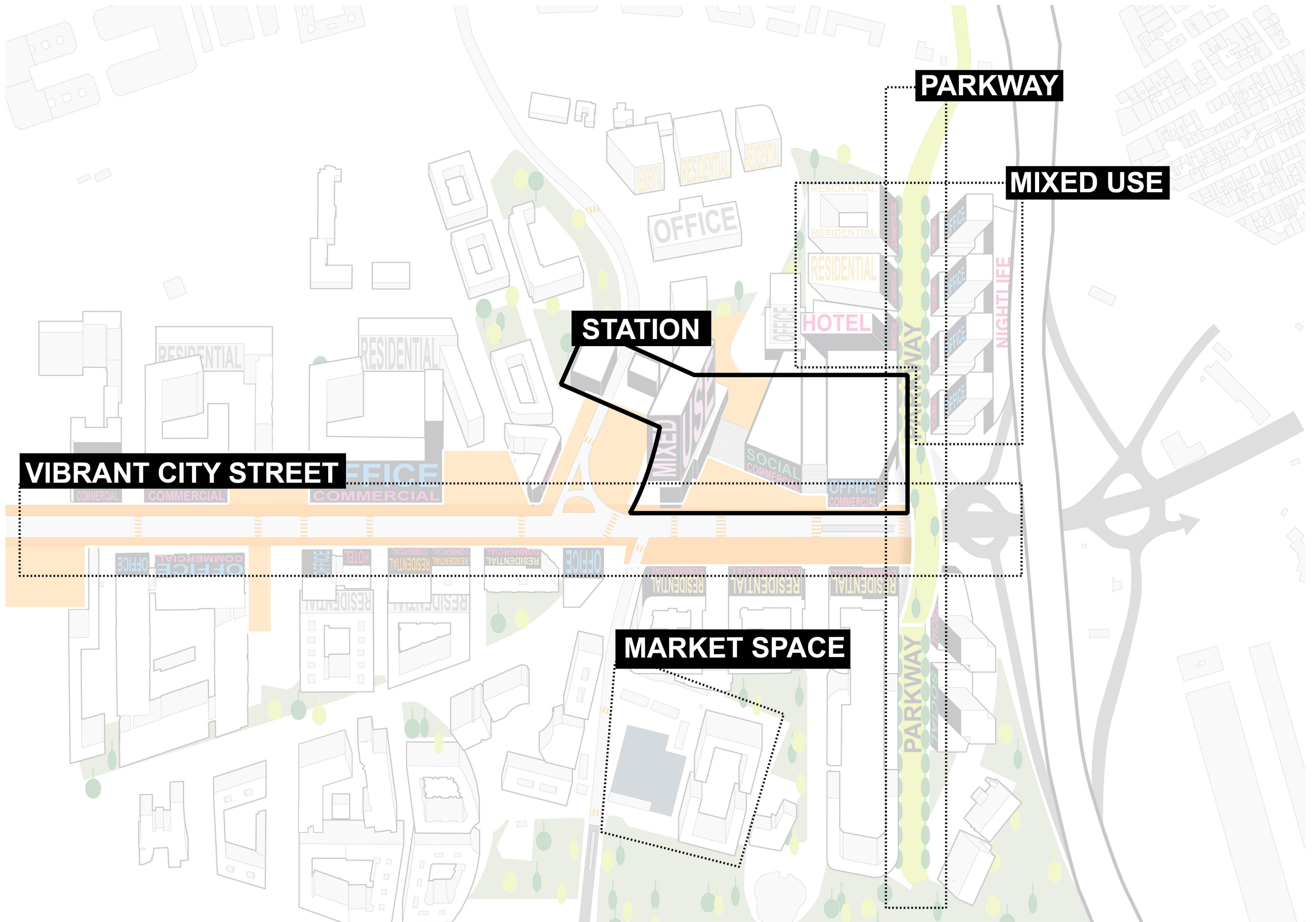
**Sustainable mobility**











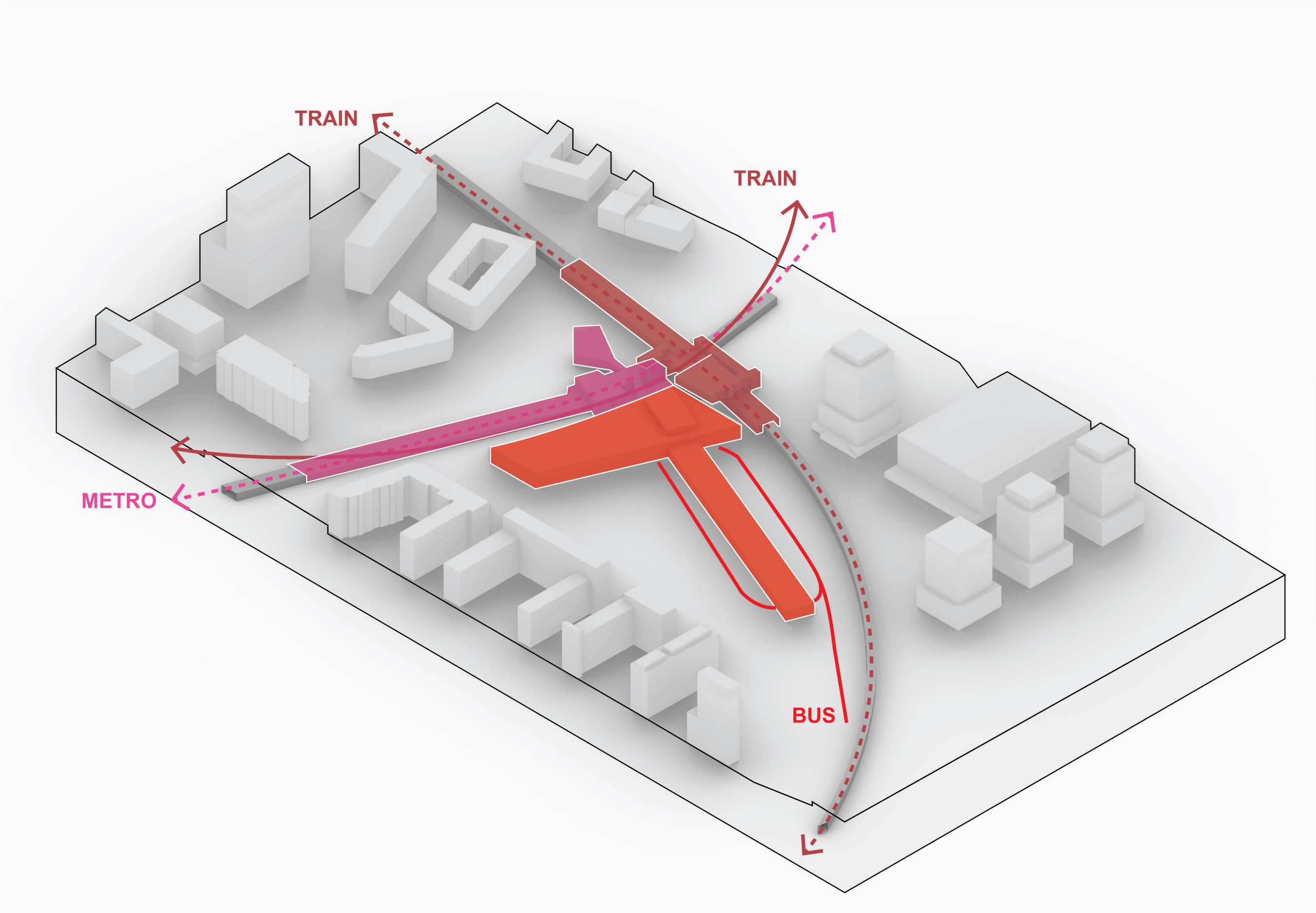




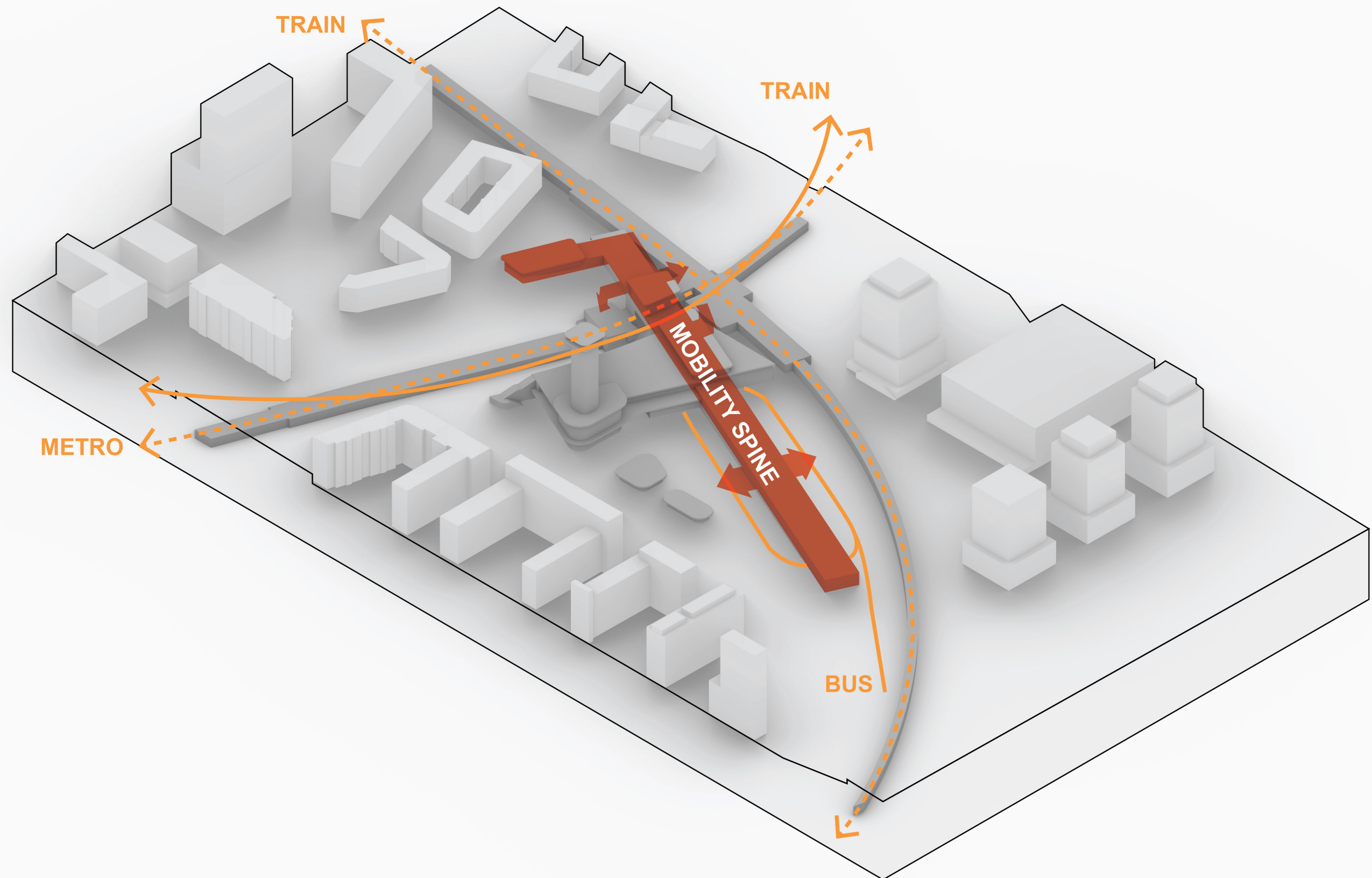




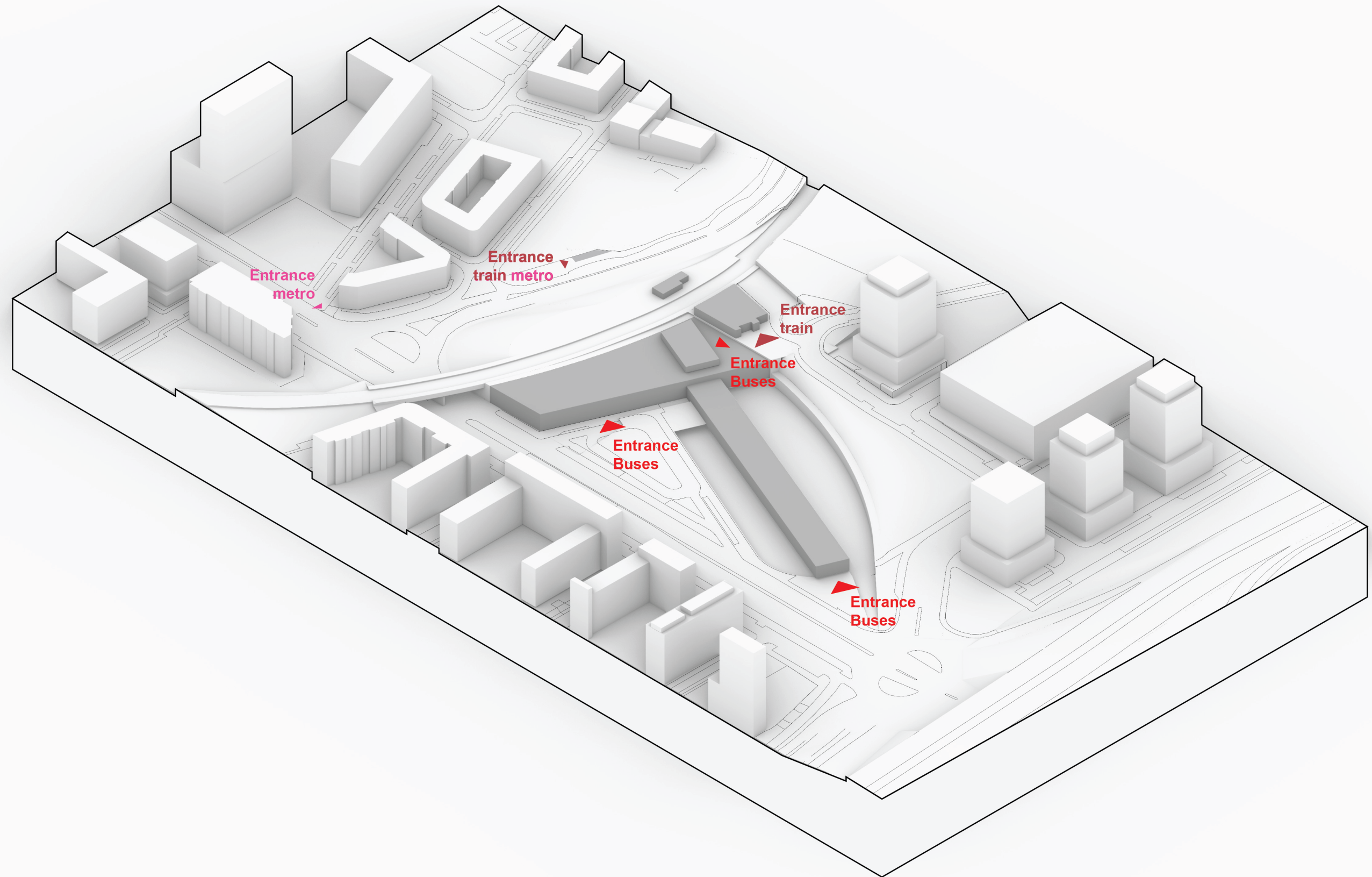




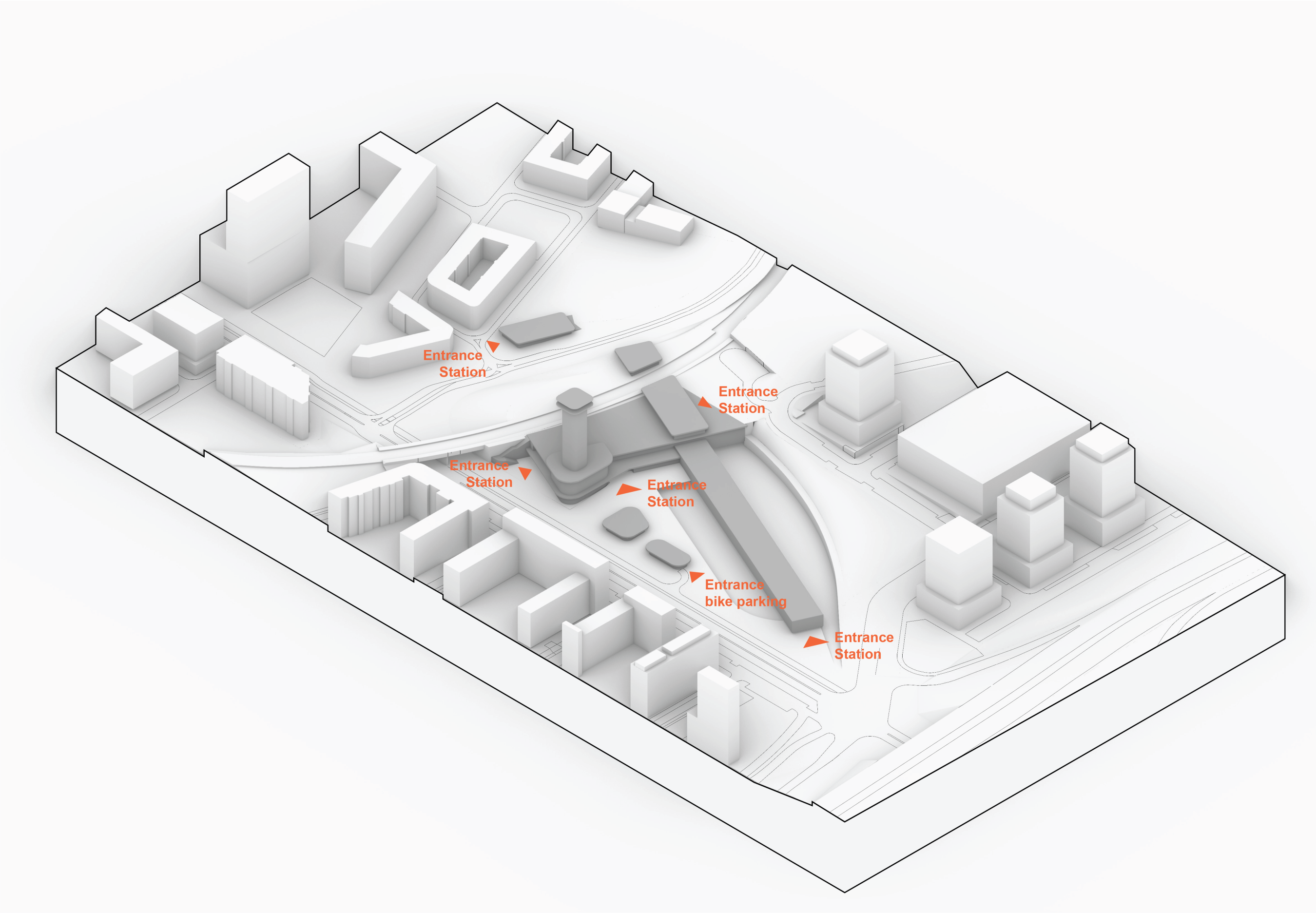




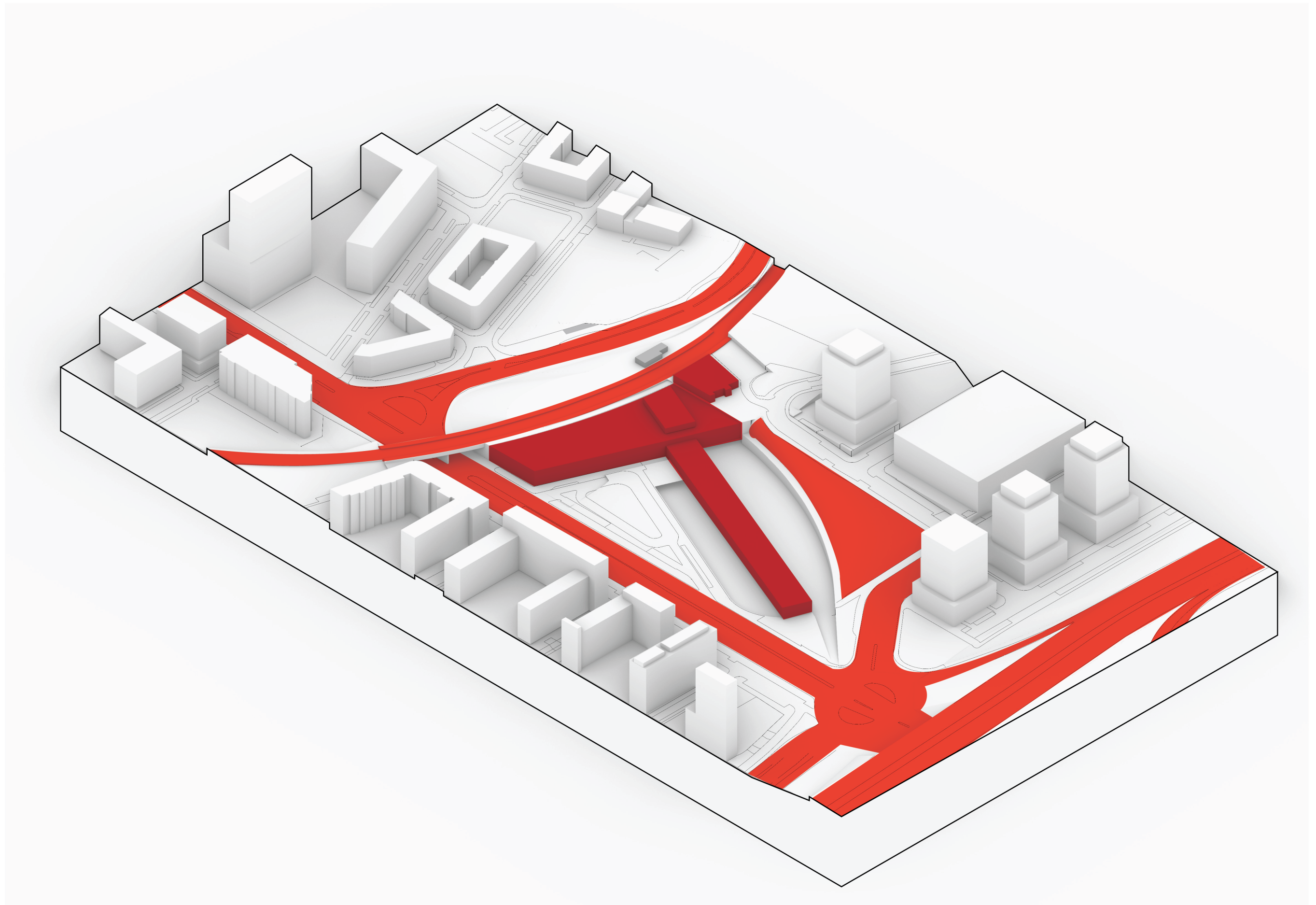




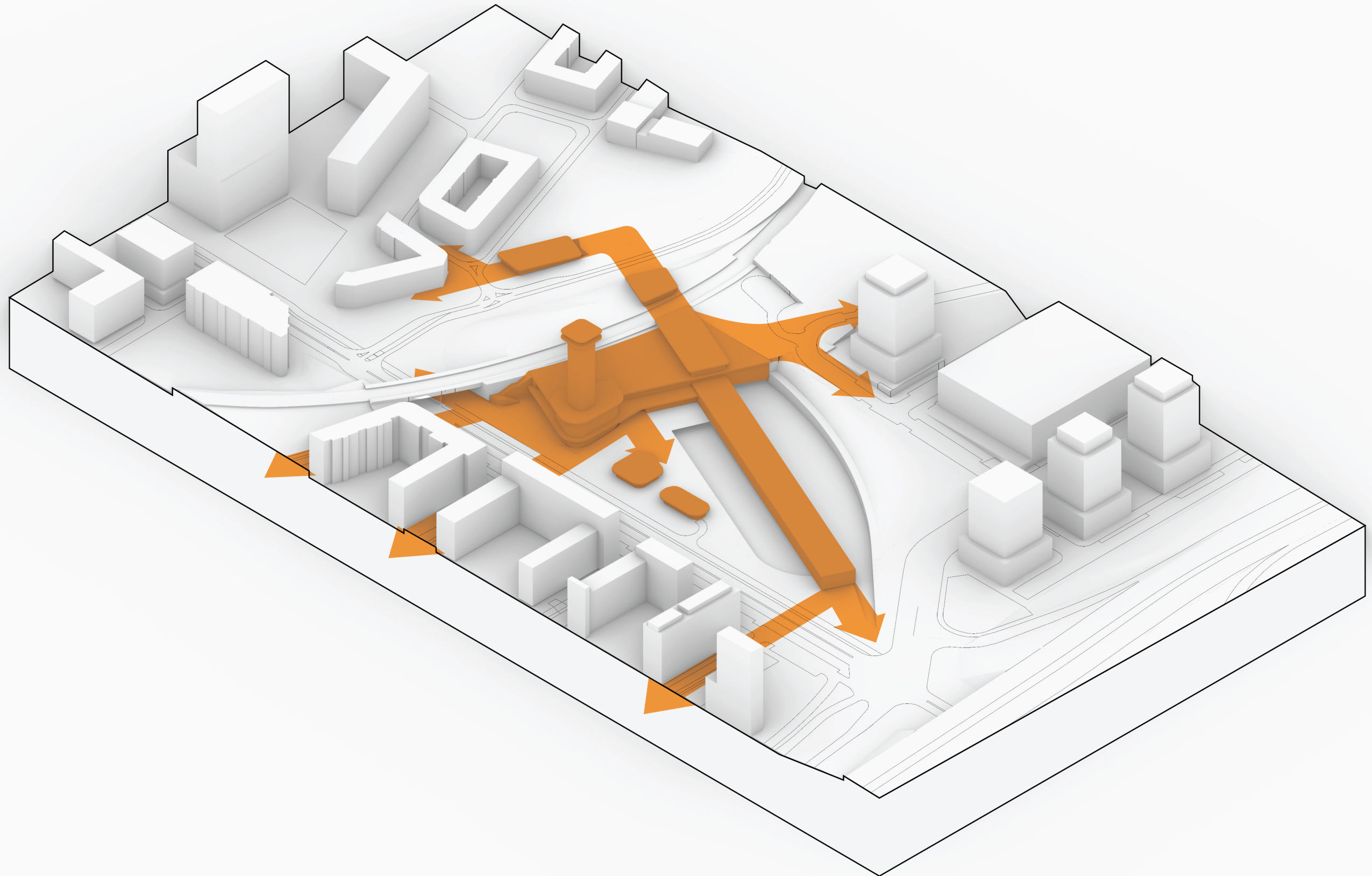




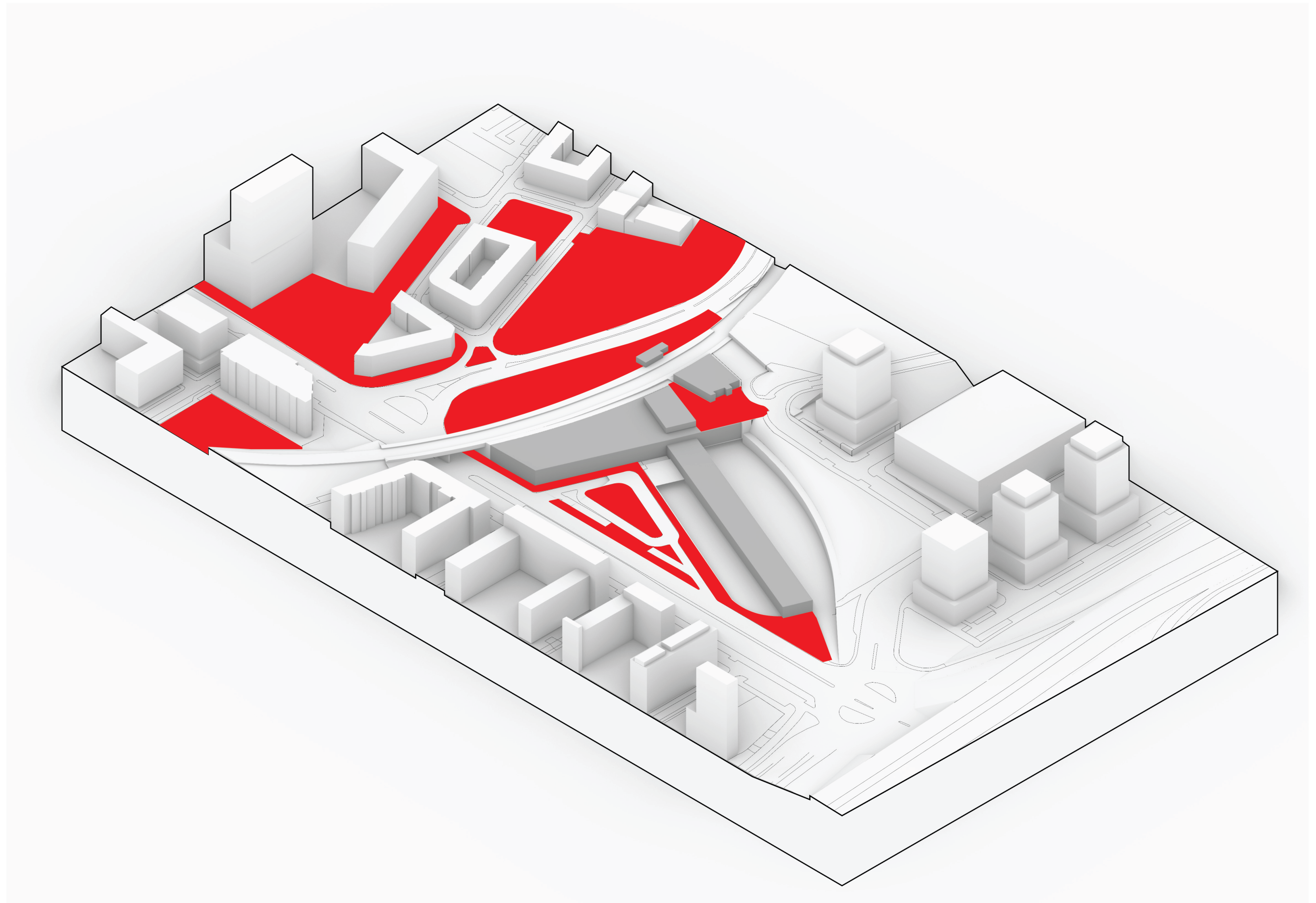




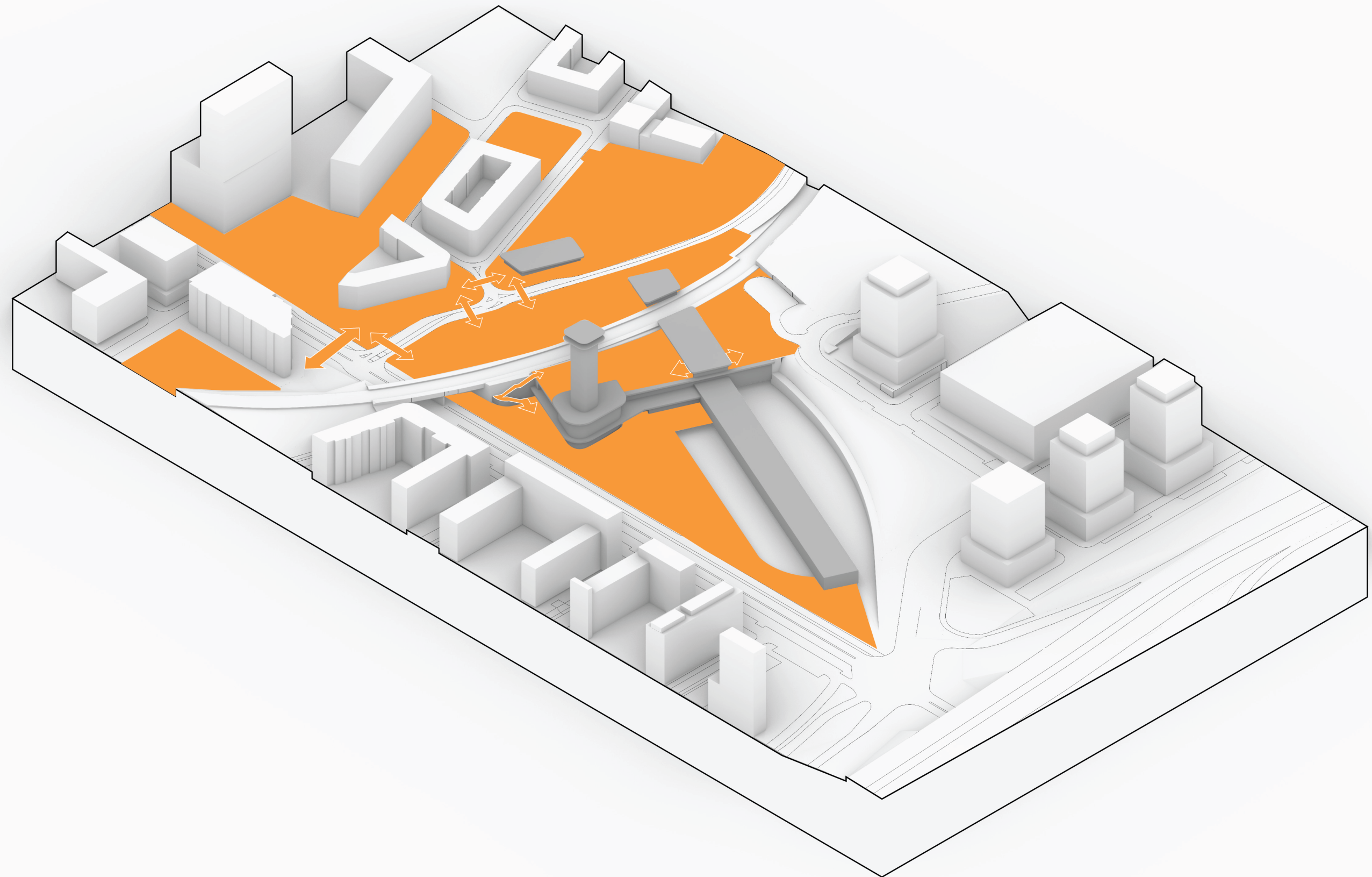




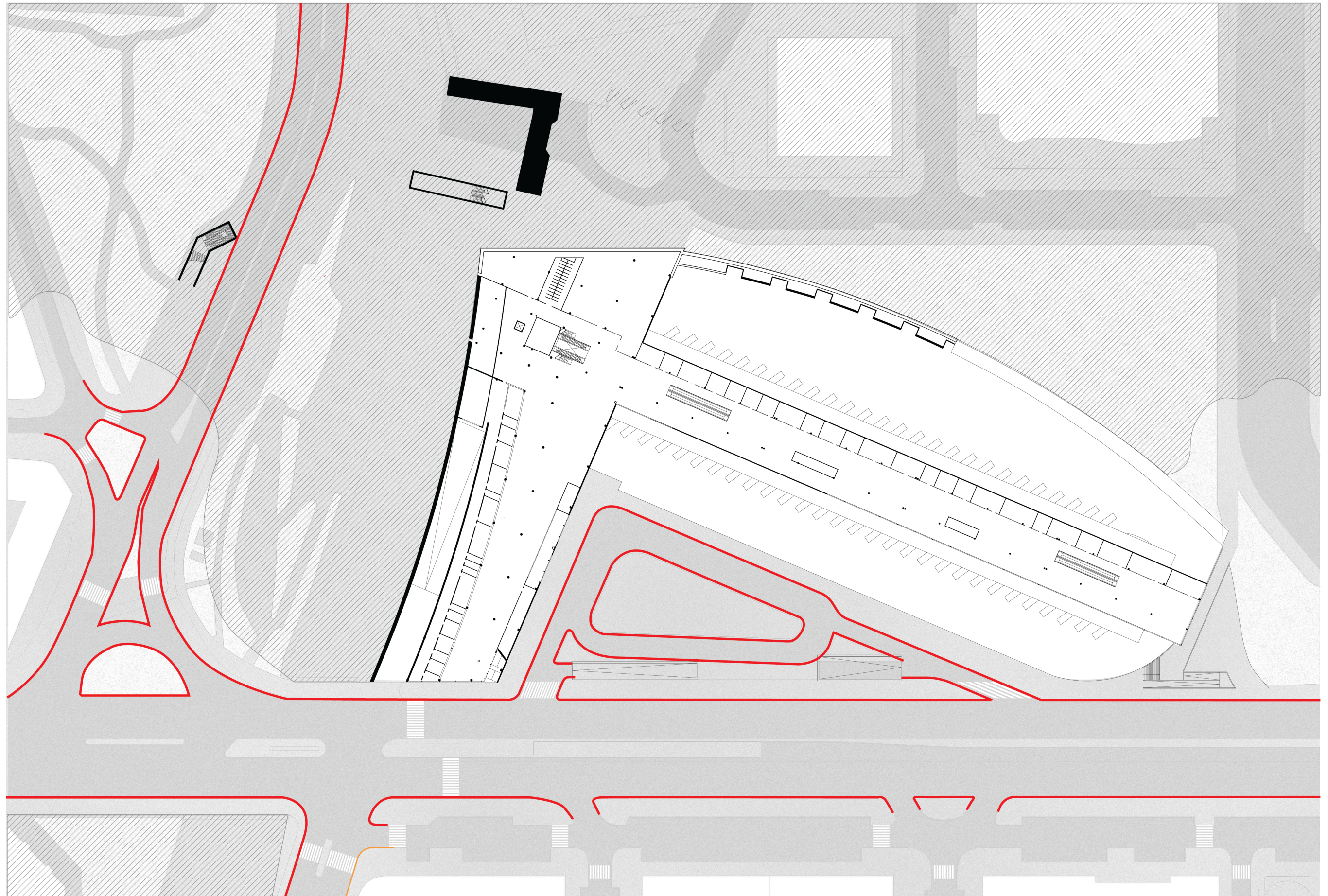








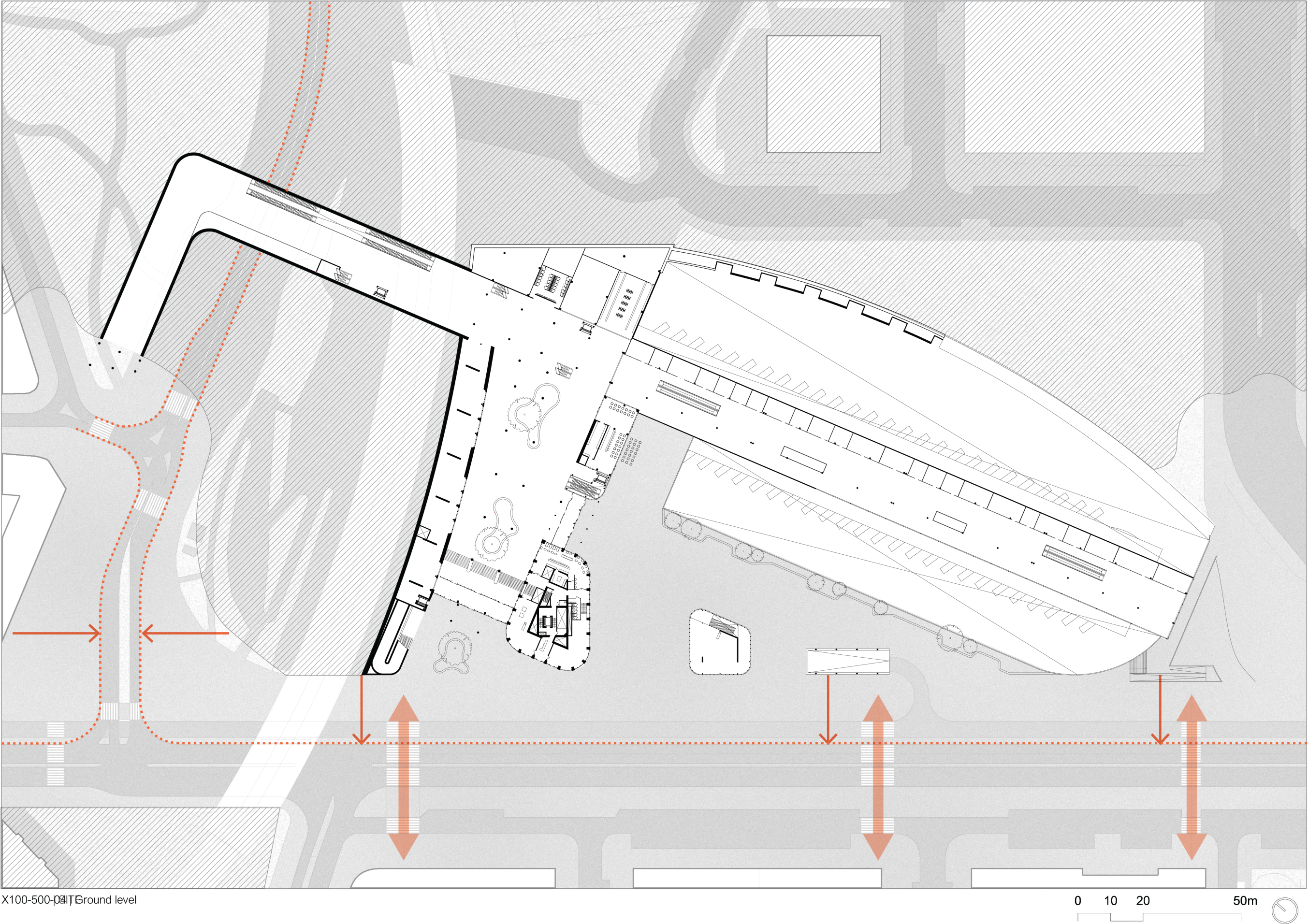




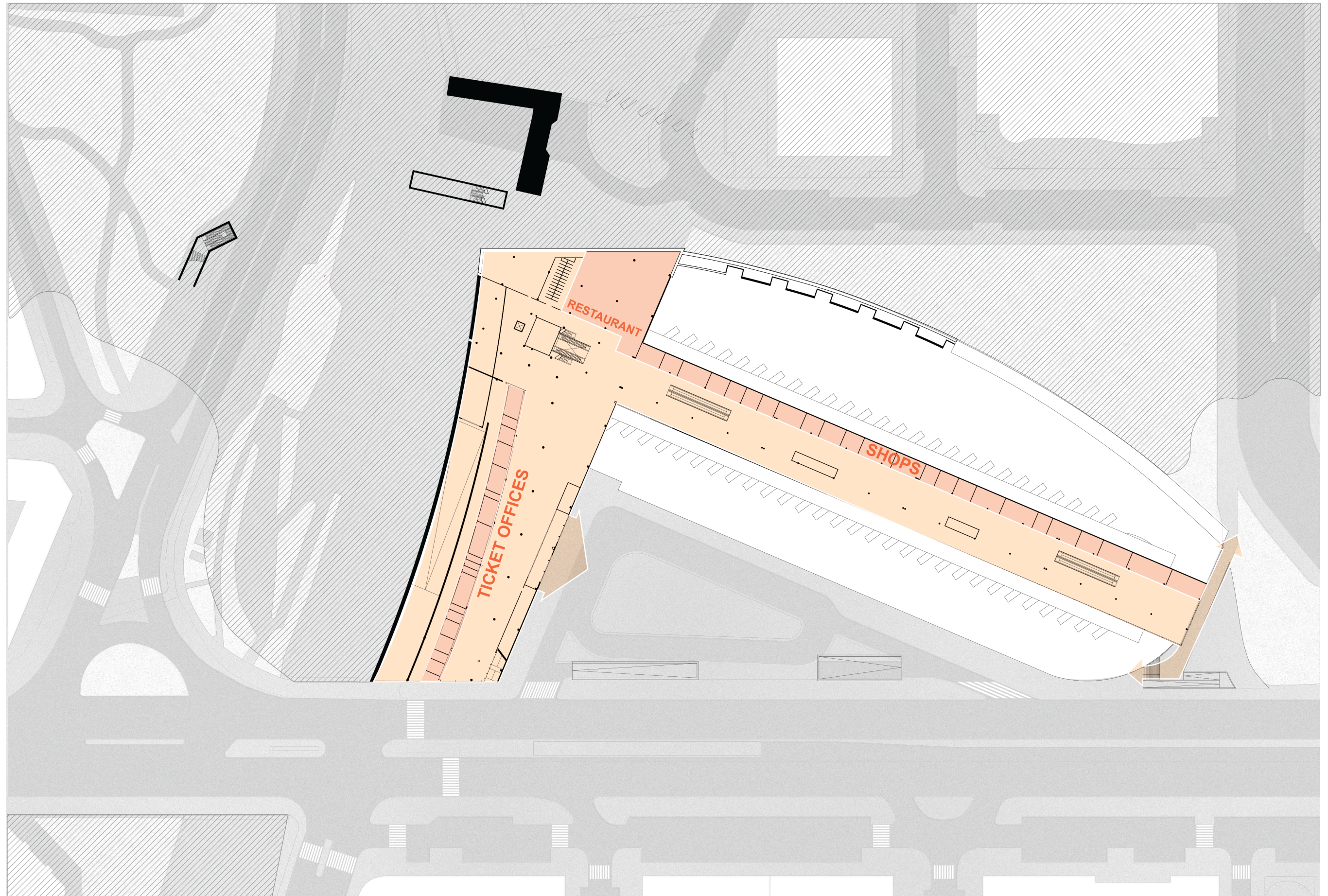
X100-500-X04 | Existing | Ground level







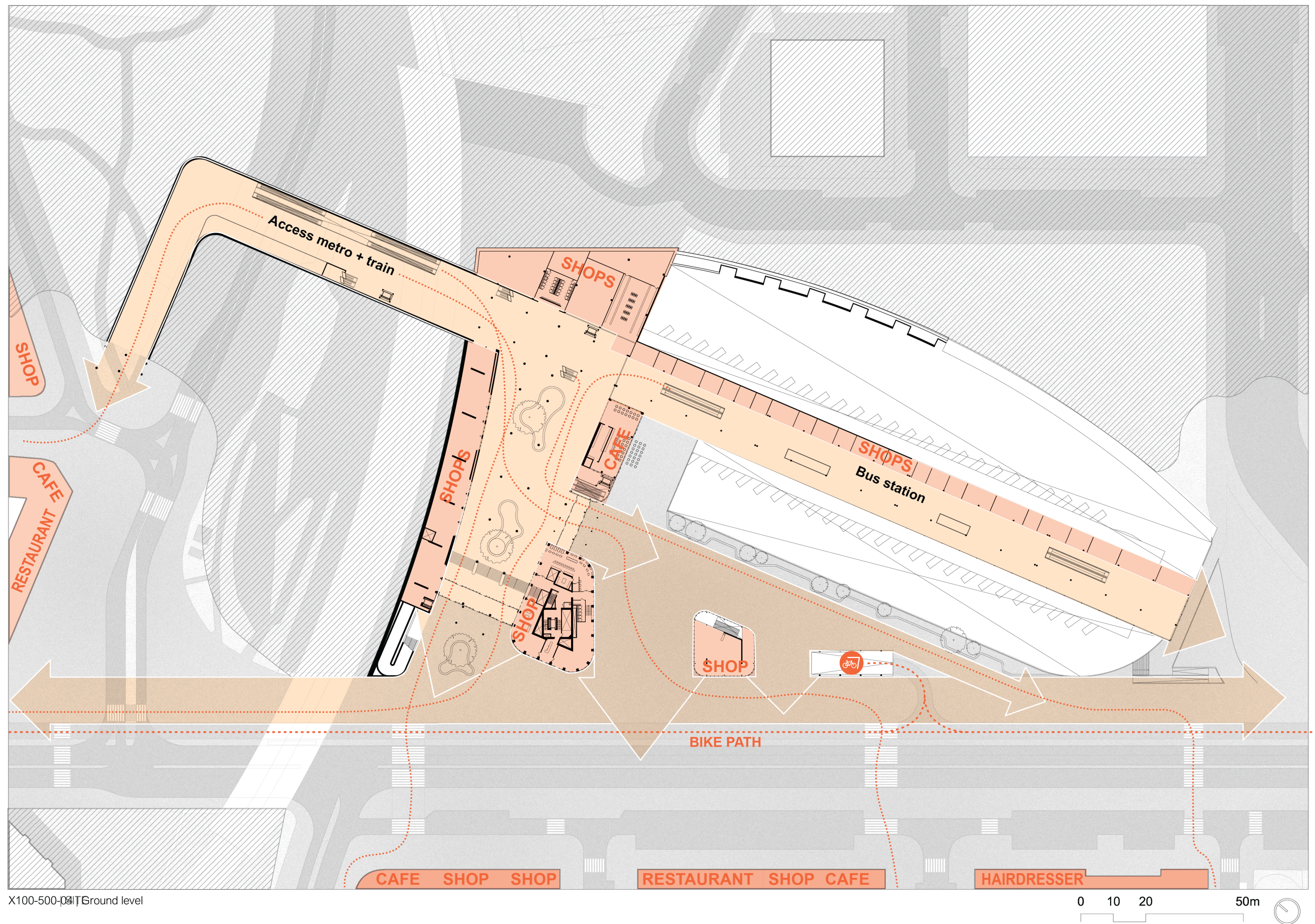




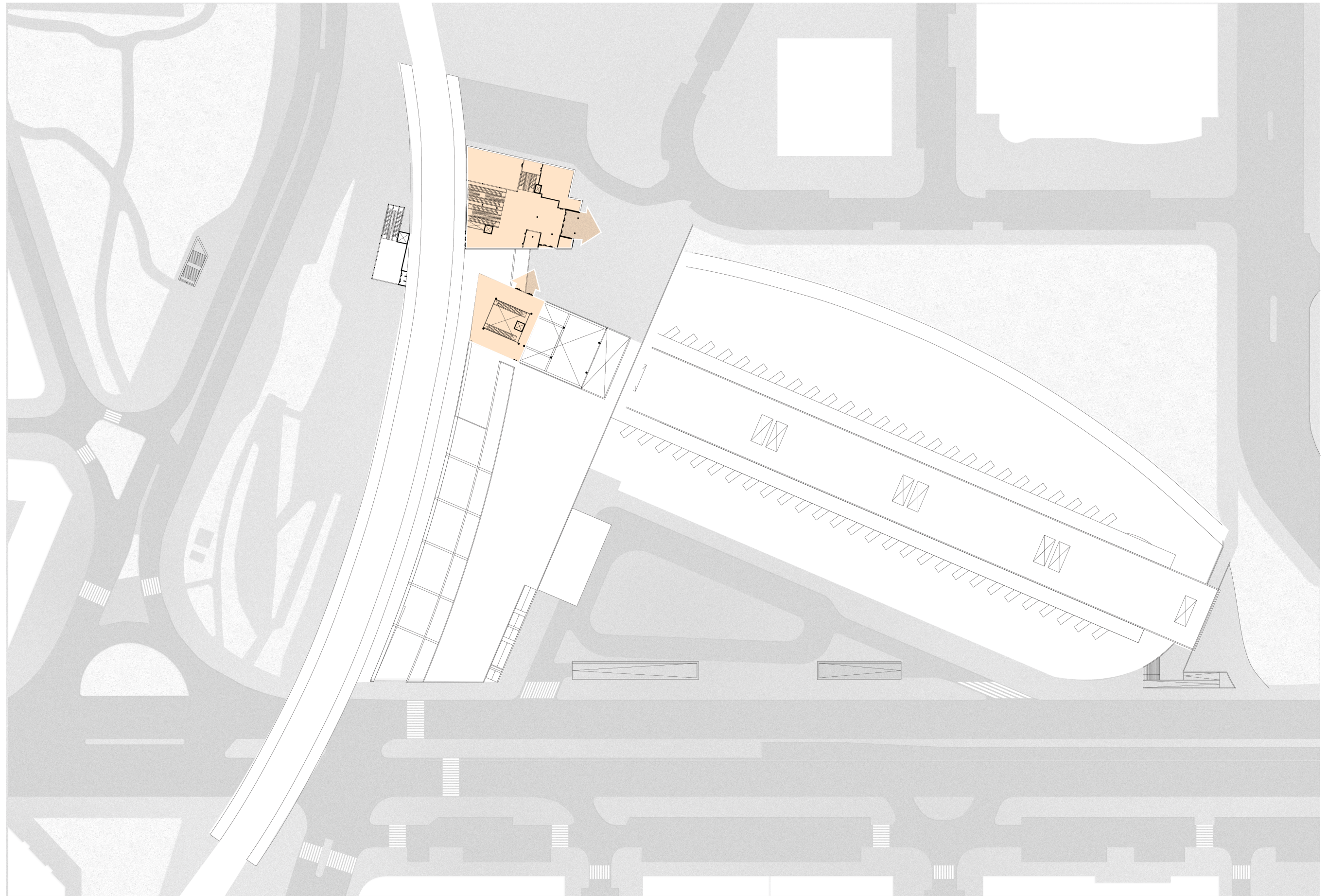
X100-500-X04 | Existing | Ground level







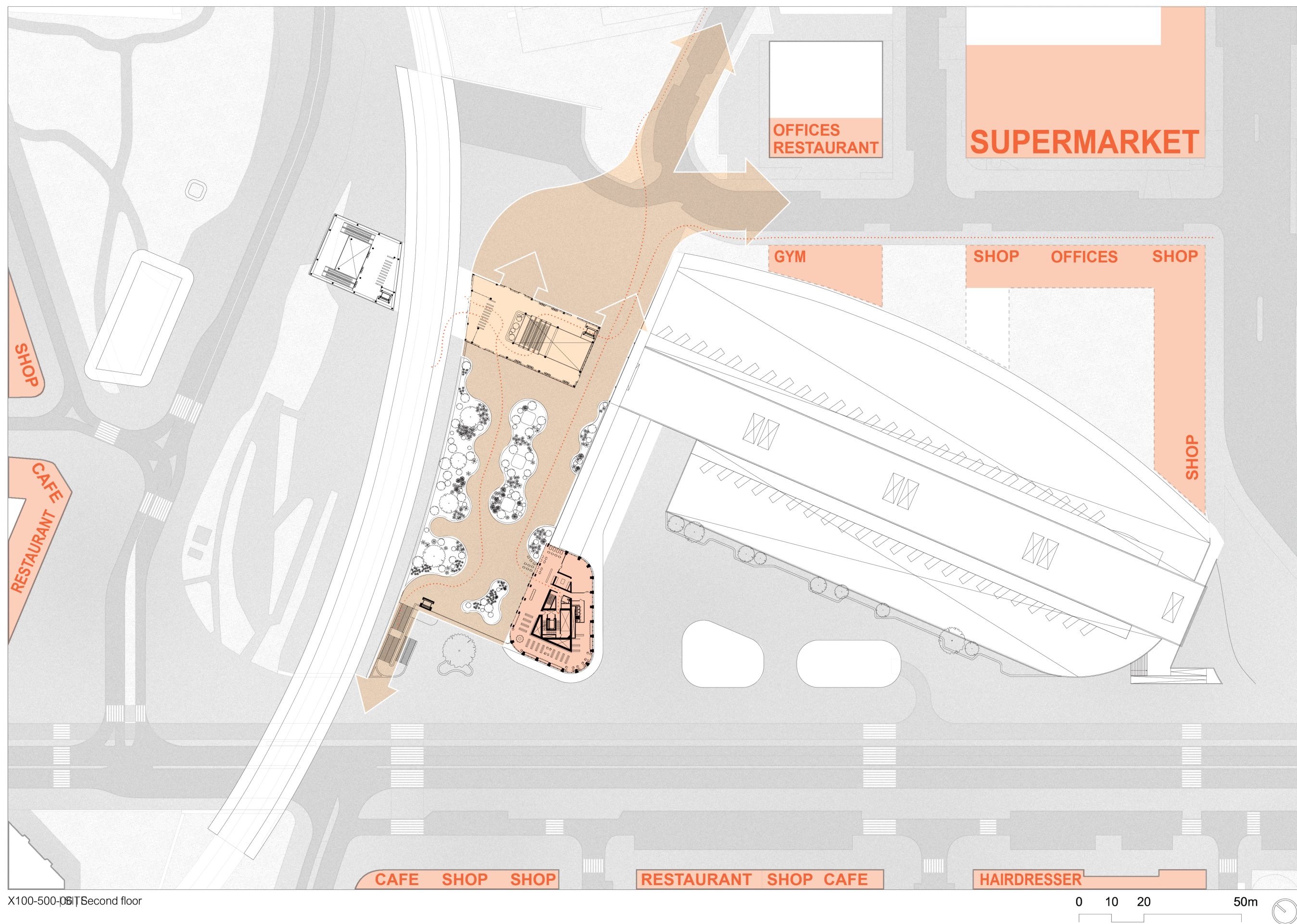




X100-500-X06 | Existing | Second floor







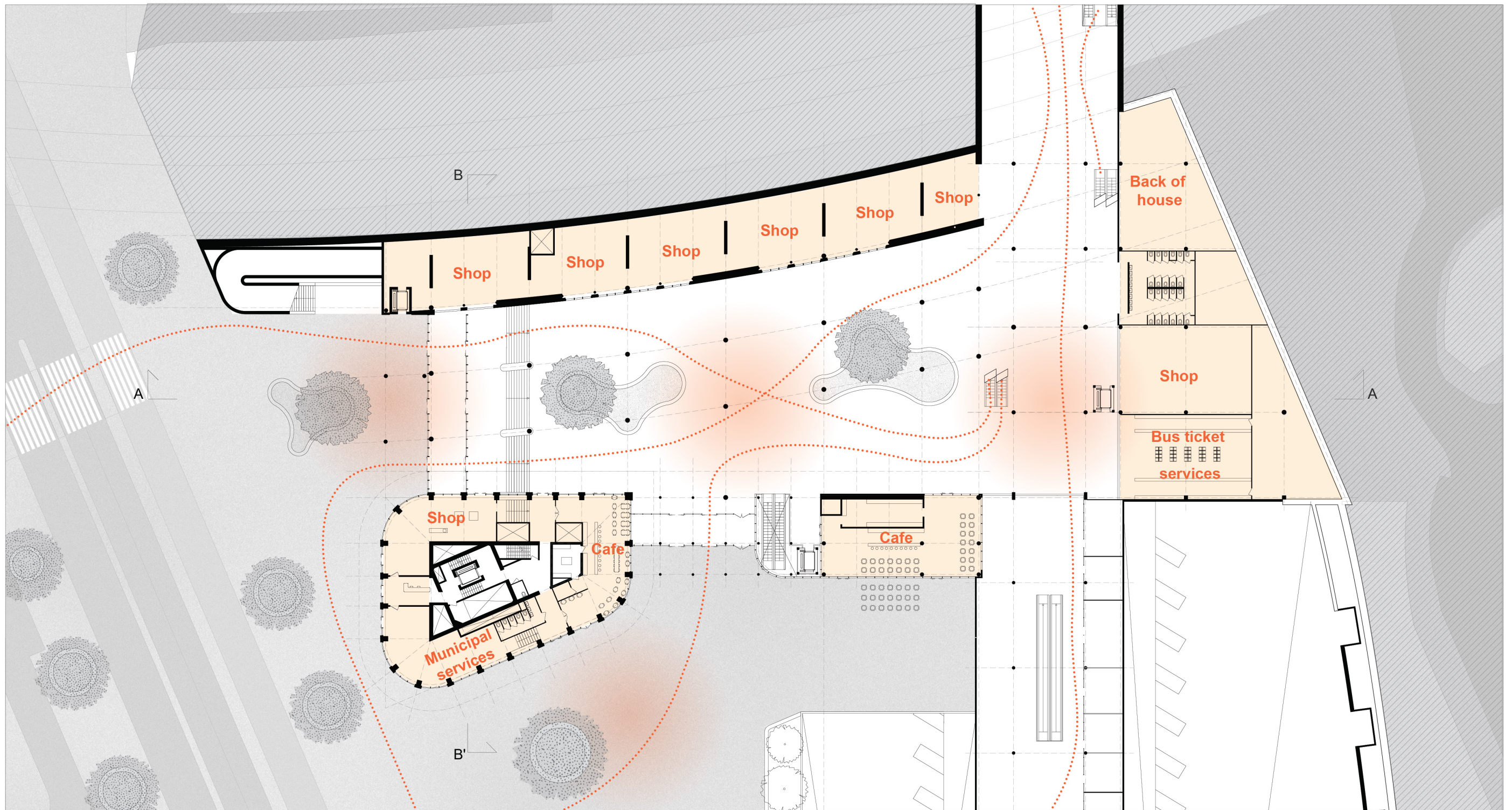














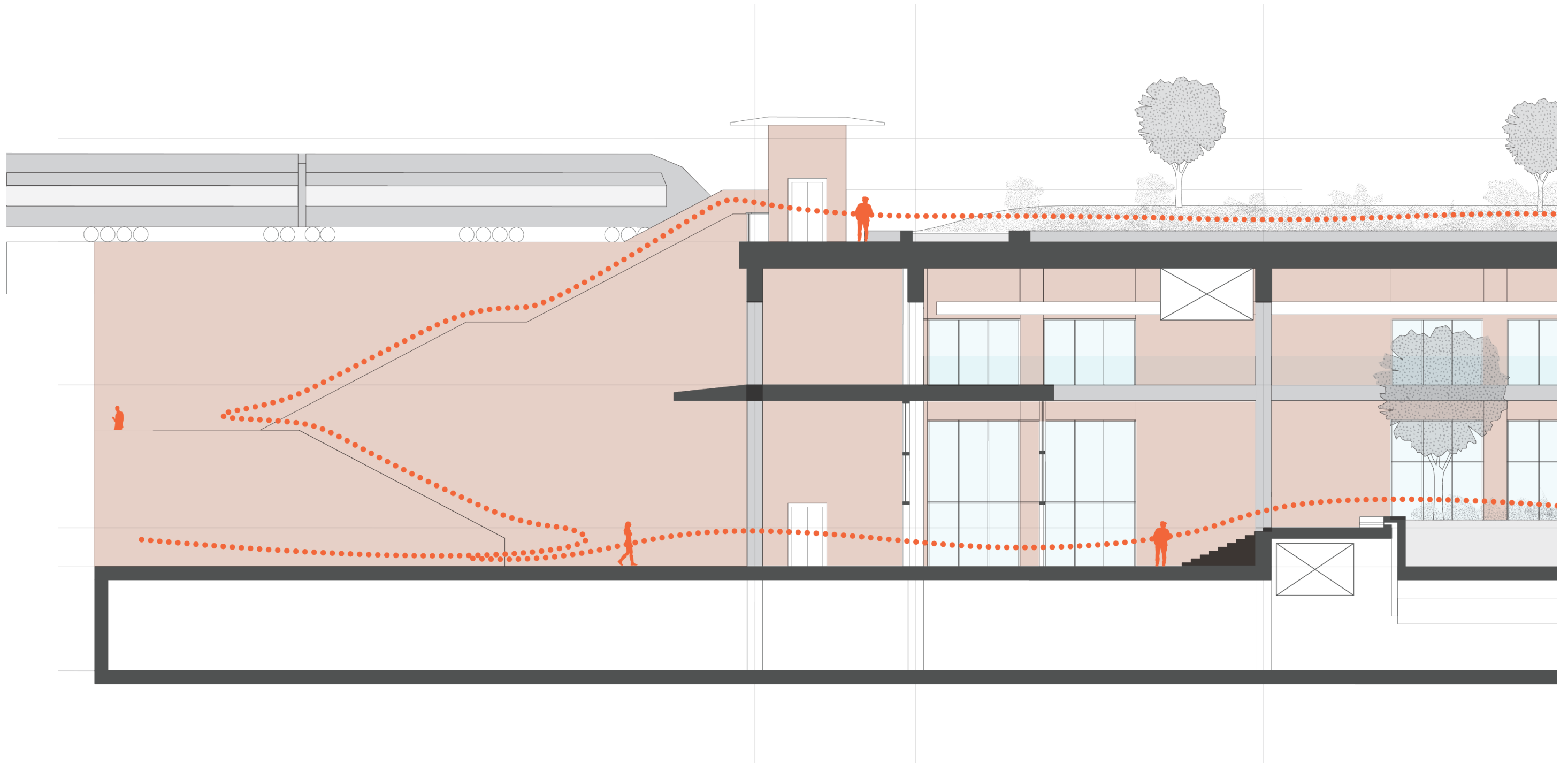




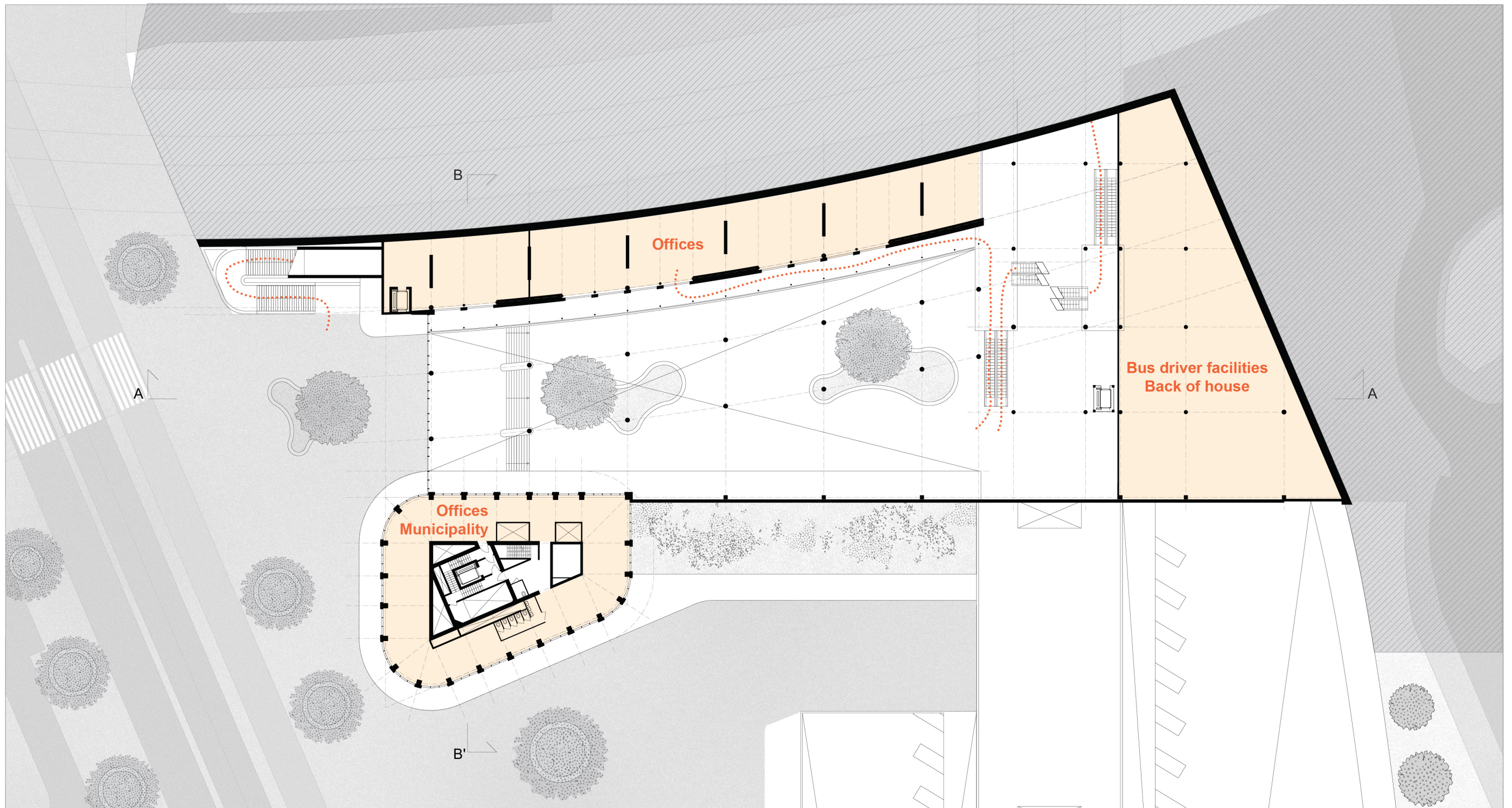




## TRANSFORMATION | SECTION WEST ENTRANCE

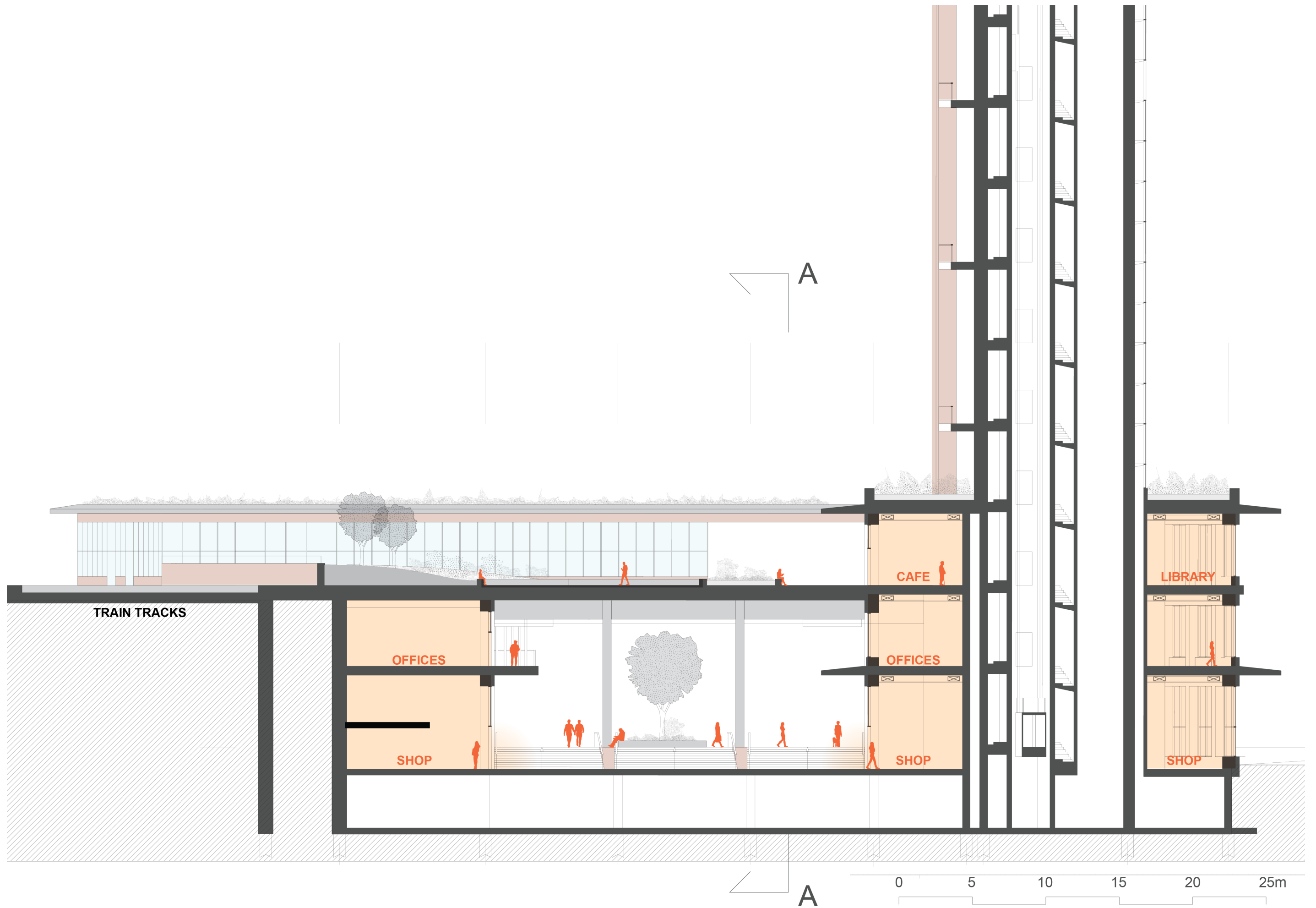




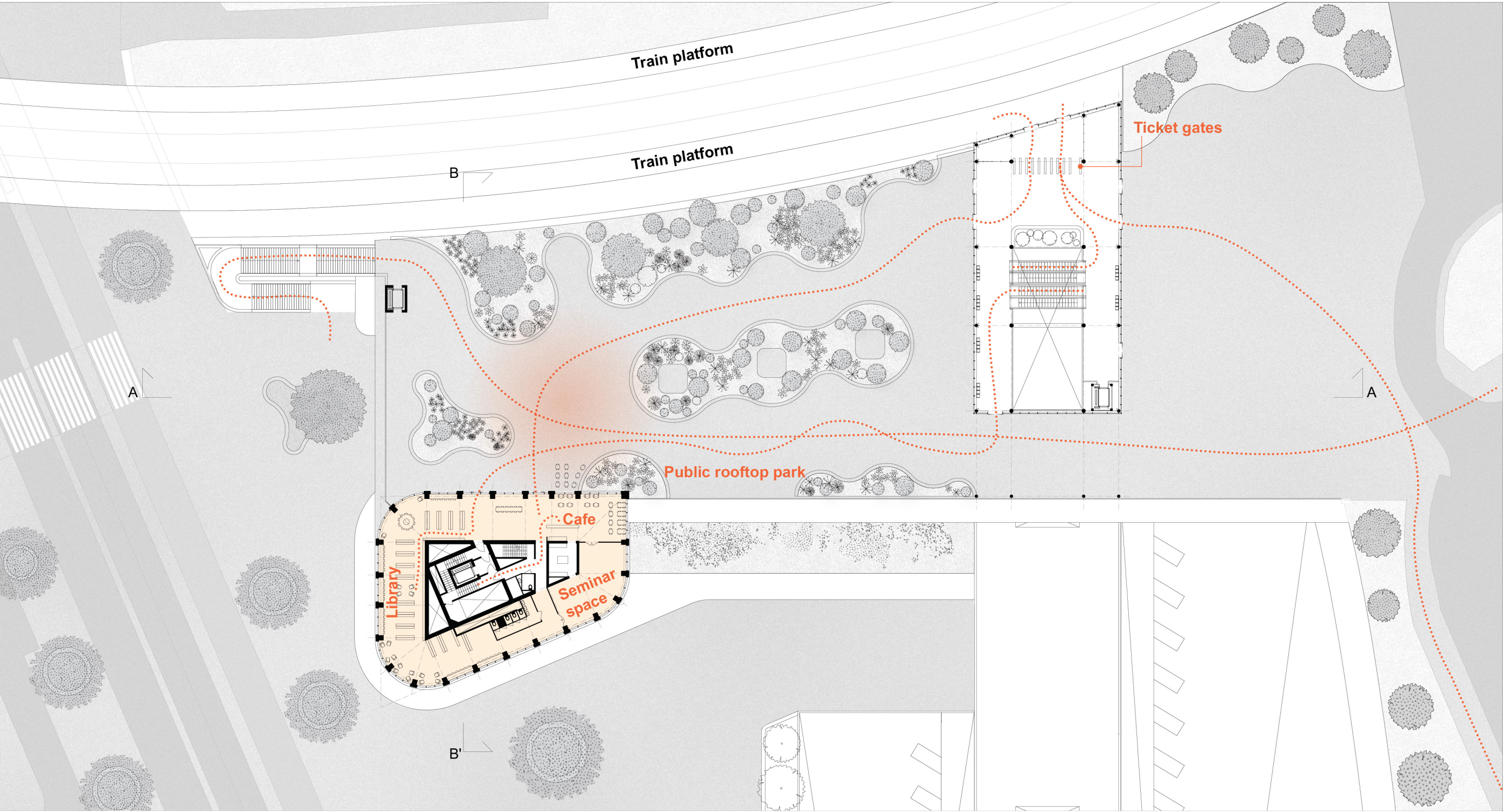




TRANSFORMATION | SECTION BB

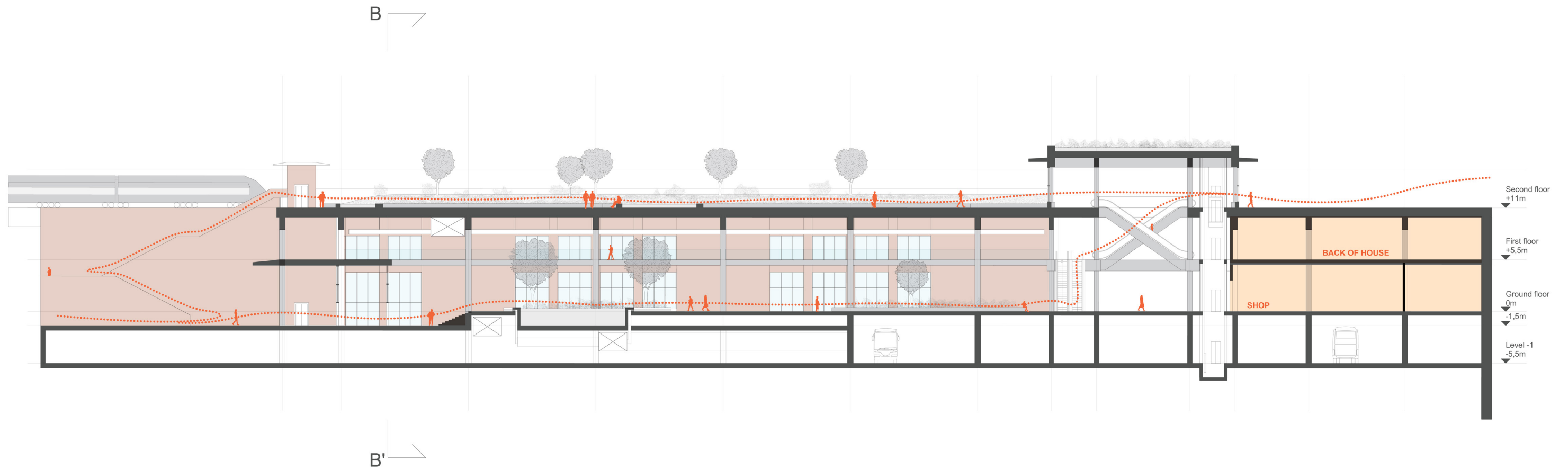








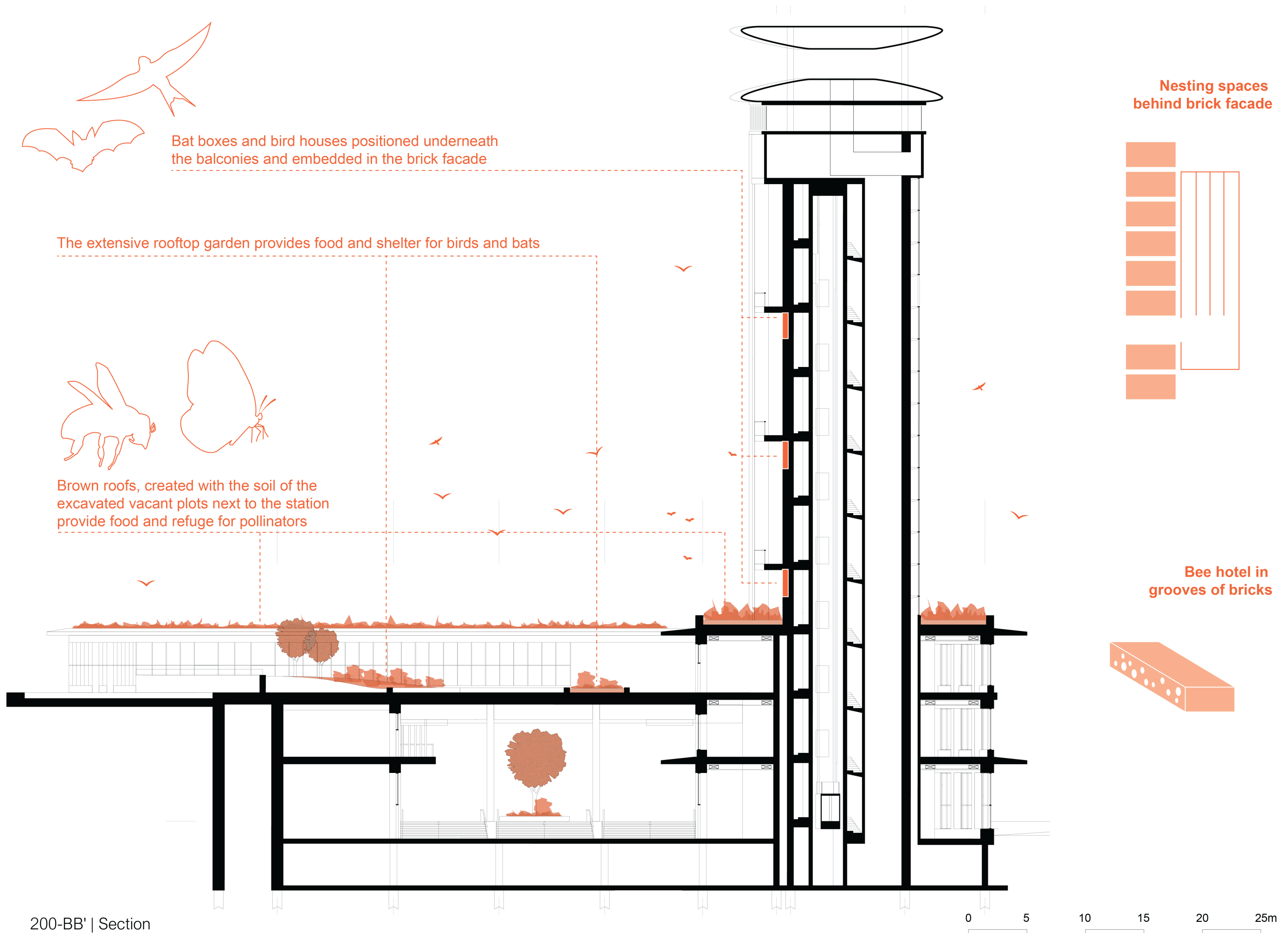
# TRANSFORMATION | SECTION AA



200-AA | Section







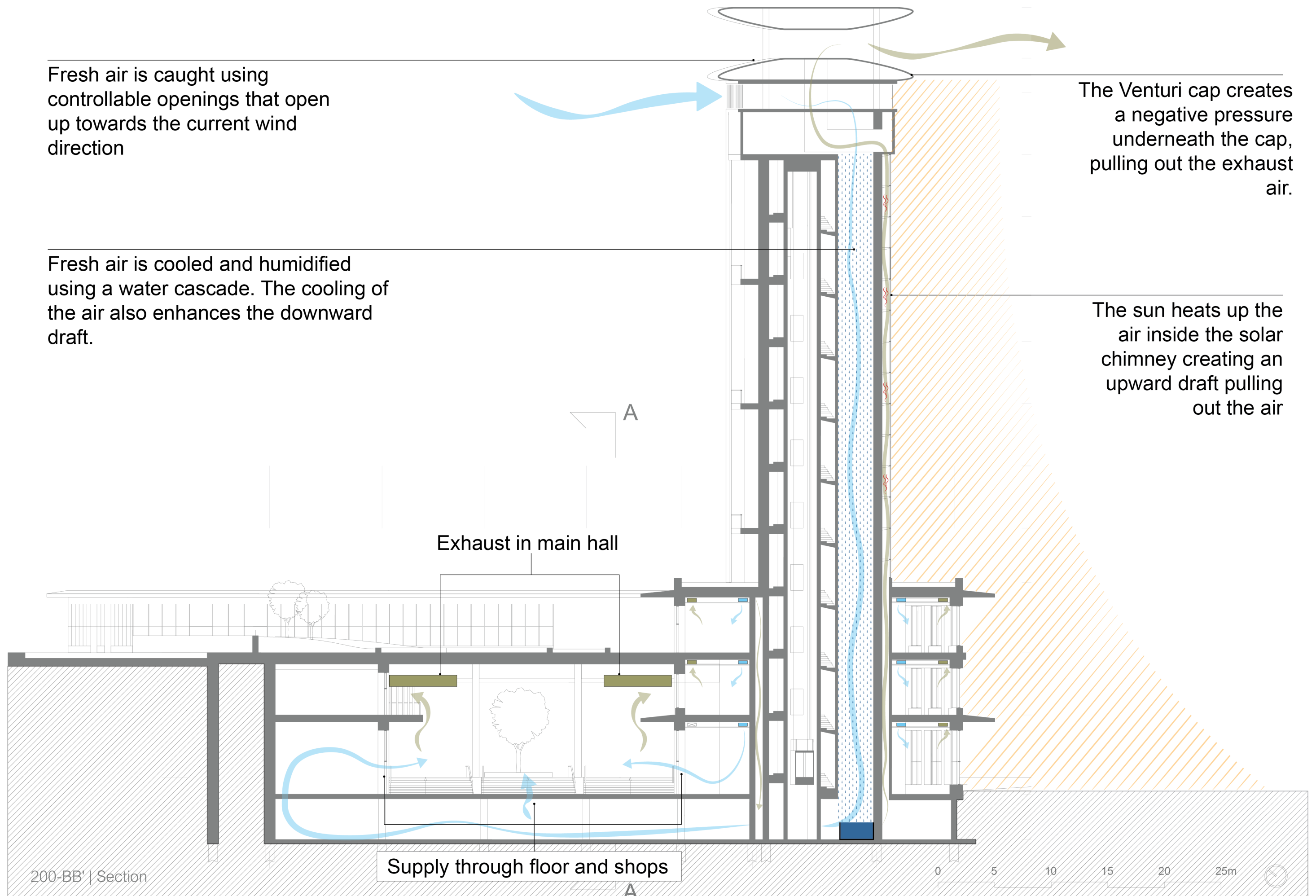


Fresh air is caught using controllable openings that open up towards the current wind direction

Fresh air is cooled and humidified using a water cascade. The cooling of the air also enhances the downward draft.

The Venturi cap creates a negative pressure underneath the cap, pulling out the exhaust air.

The sun heats up the air inside the solar chimney creating an upward draft pulling out the air



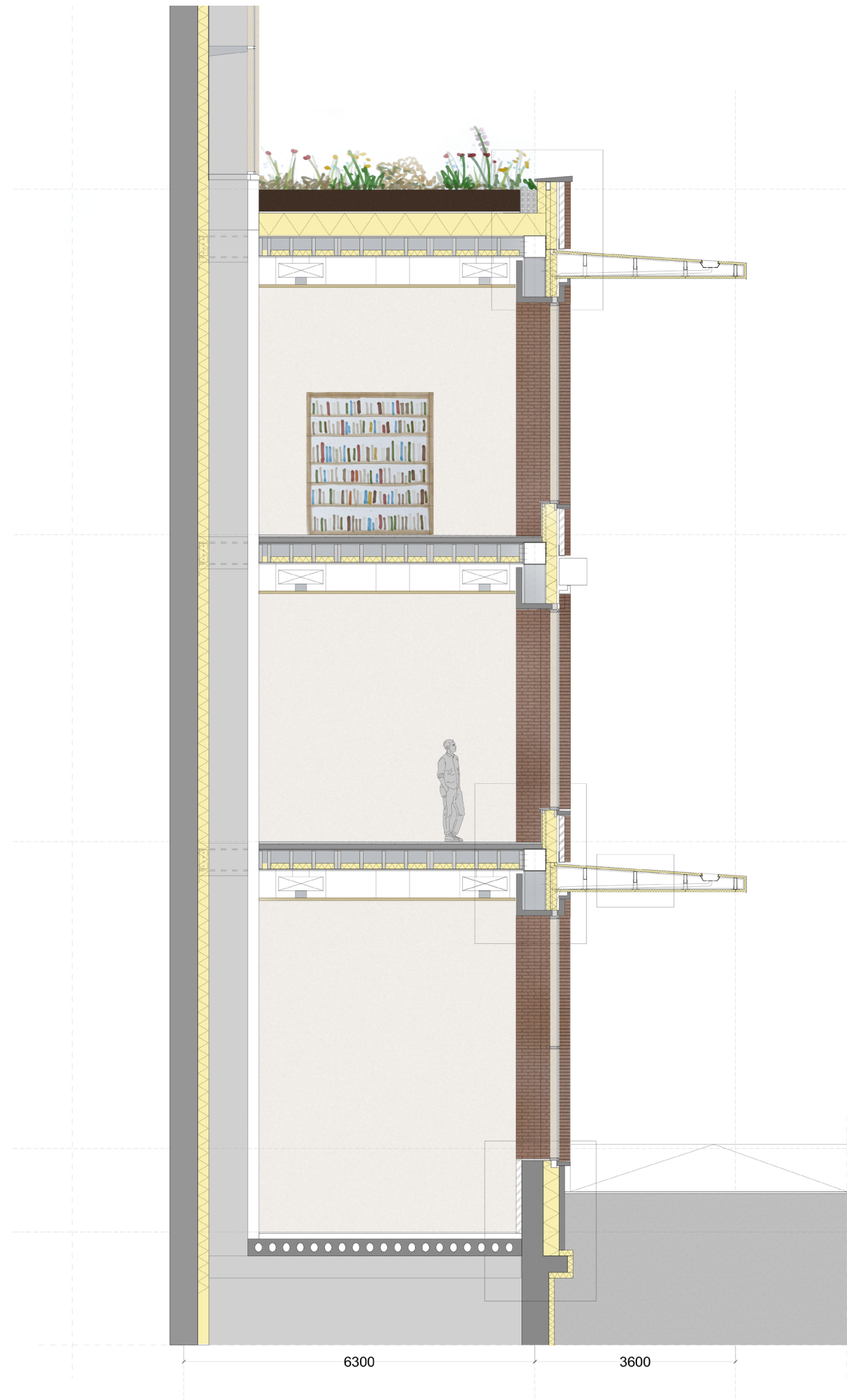


# TRANSFORMATION | FACADE DETAIL





# TRANSFORMATION | FACADE DETAIL



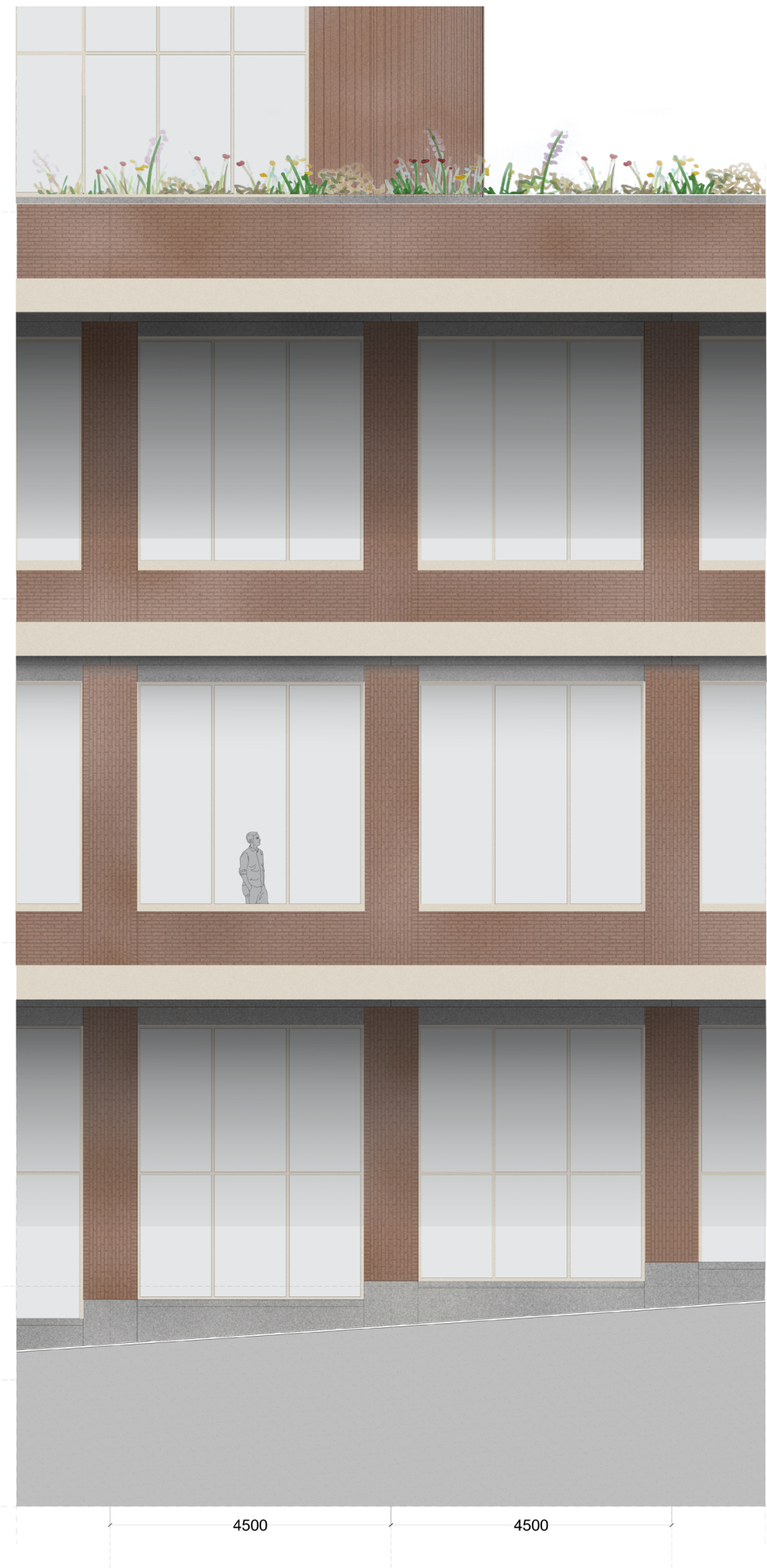
+17205mm

+11000mm

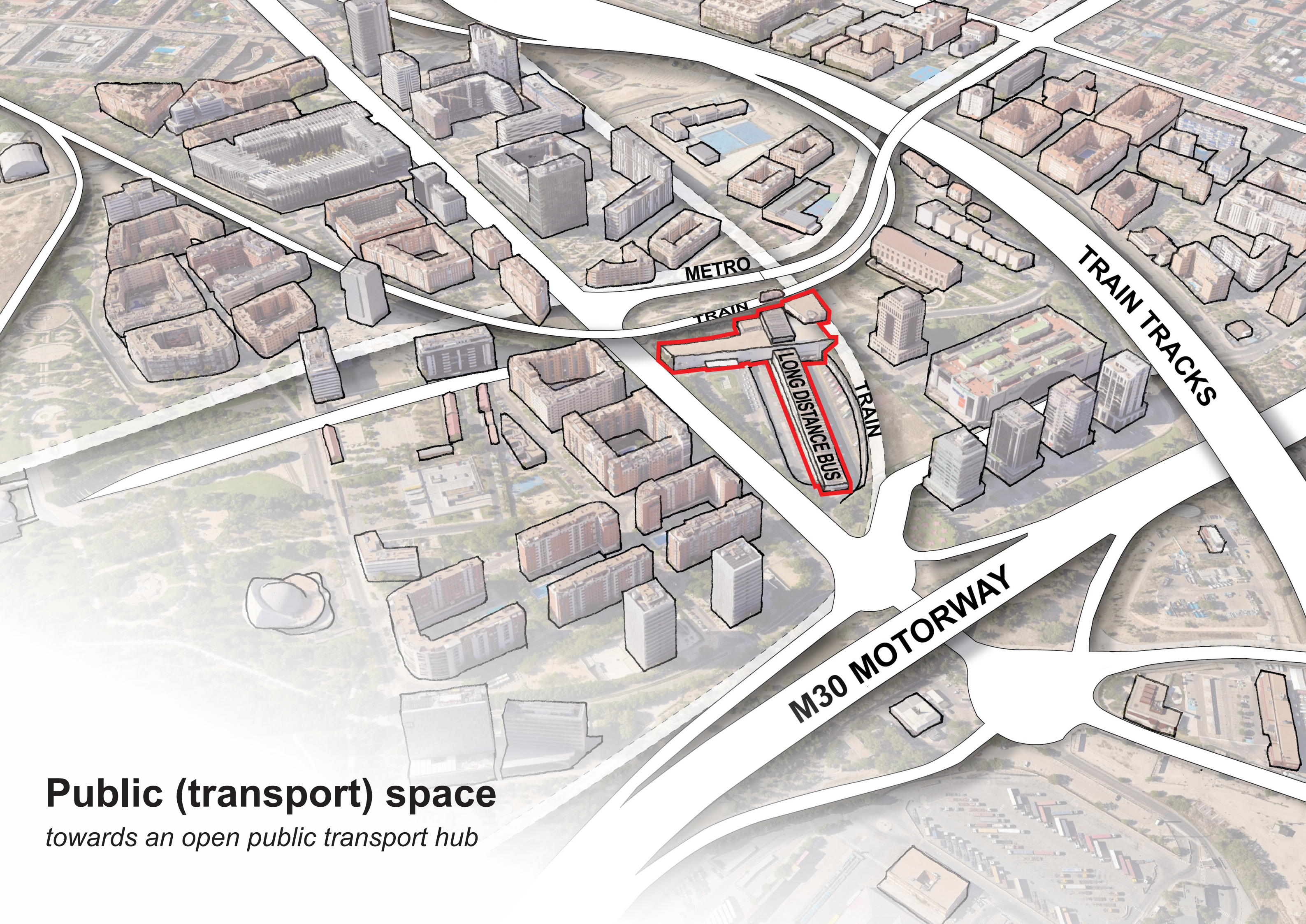
+6500mm

Ground level 0

Ground level -1500







METRO

TRAIN

LONG DISTANCE BUS

TRAIN

TRAIN TRACKS

M30 MOTORWAY

**Public (transport) space**

*towards an open public transport hub*