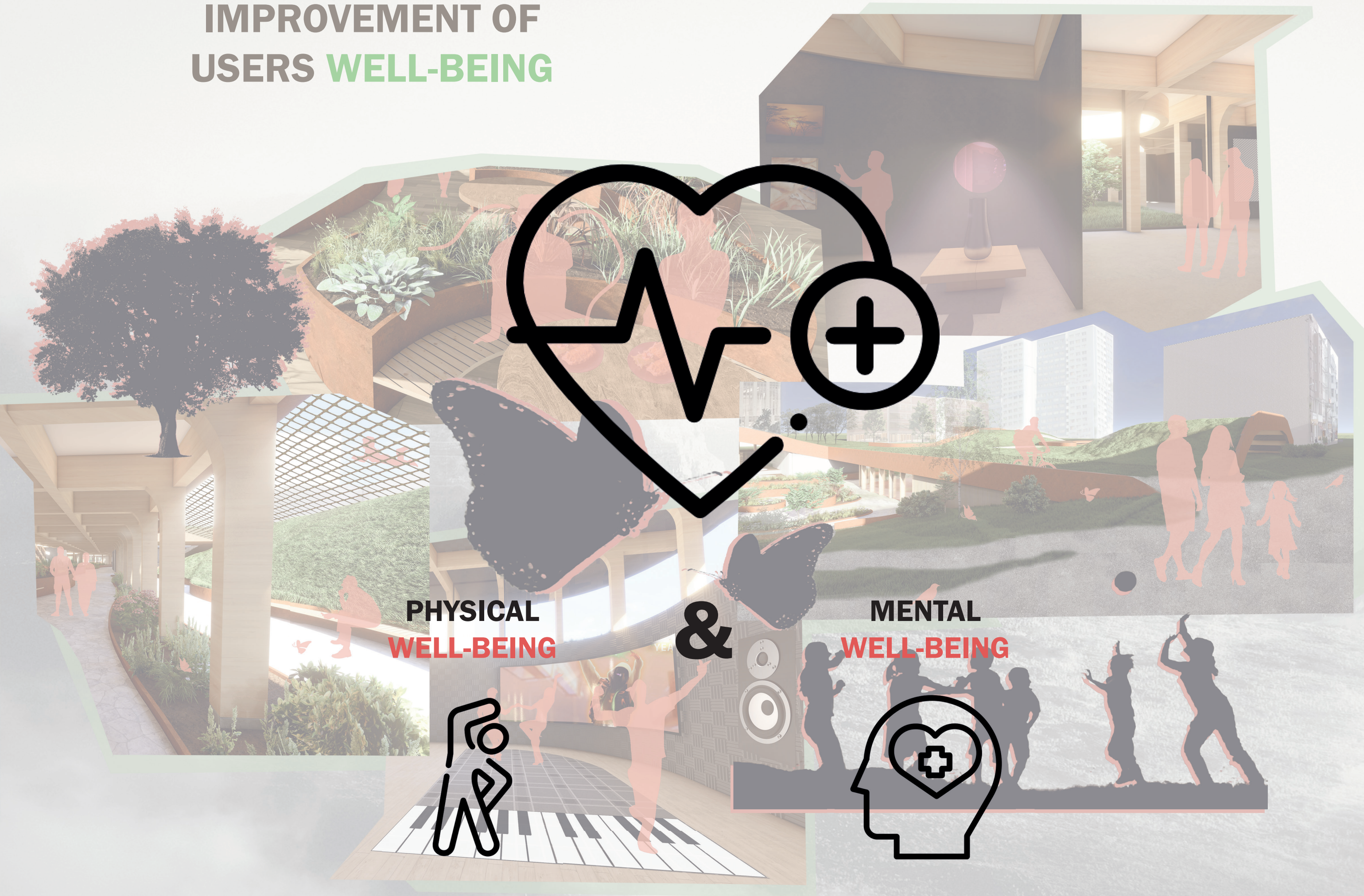


THE SENSORY HEALING-SCAPE



IMPROVEMENT OF
USERS **WELL-BEING**



**PHYSICAL
WELL-BEING**

&

**MENTAL
WELL-BEING**

CREATING **INTERACTIVE ATMOSPHERES** BY DESIGNING FOR THE **SENSES**

SIGHT
Iconic



100ms

TOUCH
Haptic



2 sec

SOUND
Echoic



3-4 sec

SMELL
Olfactory



5 sec

TASTE
Olfactory



5 sec

Sensory memory (Erik Ruuska)

PUBLIC CONDENSER



CONNECTOR
NEIGHBORHOODS & USERS



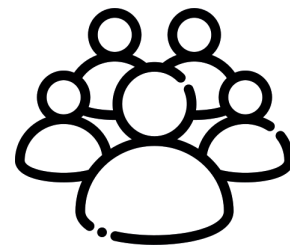
**HEALTHY
ENVIRONMENT**
IMPROVING USER CONDITIONS
AND/OR SURROUNDING ENVIRONMENT



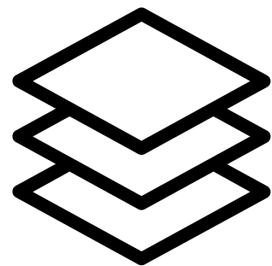
**LEISURE &
RELAXATION**
SPENDING YOUR FREE TIME

PUBLIC CONDENSER

MULTIPLICITY



**ACCESSIBLE PLACE
FOR EVERYONE**
INCLUSION & DIVERSITY



**PROVIDES MULTIPLE
FACILITIES (HYBRID)**



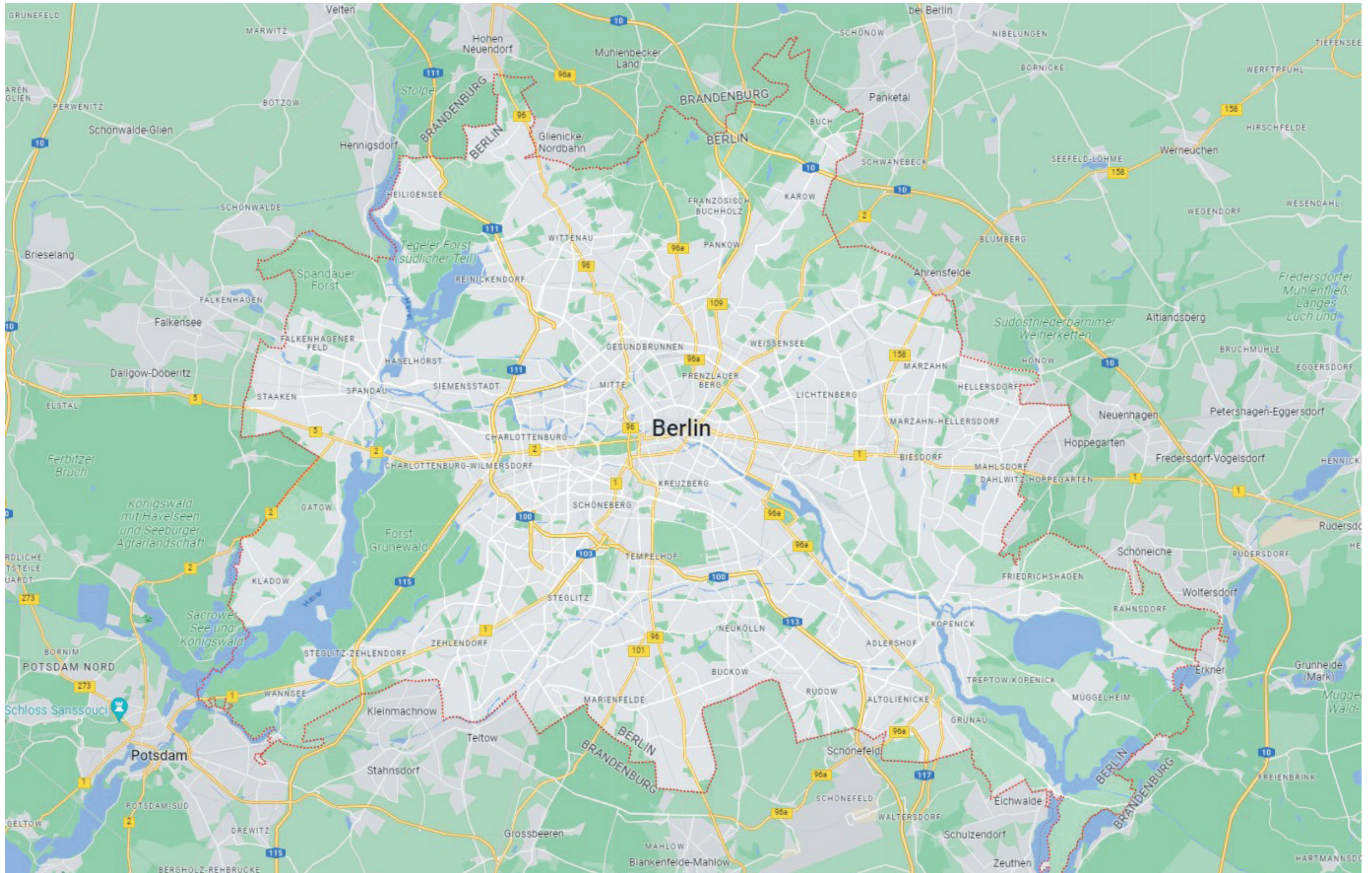
**PRODUCTIVE
ARCHITECTURE**
IN USE, MATERIALS AND ENVIRONMENT



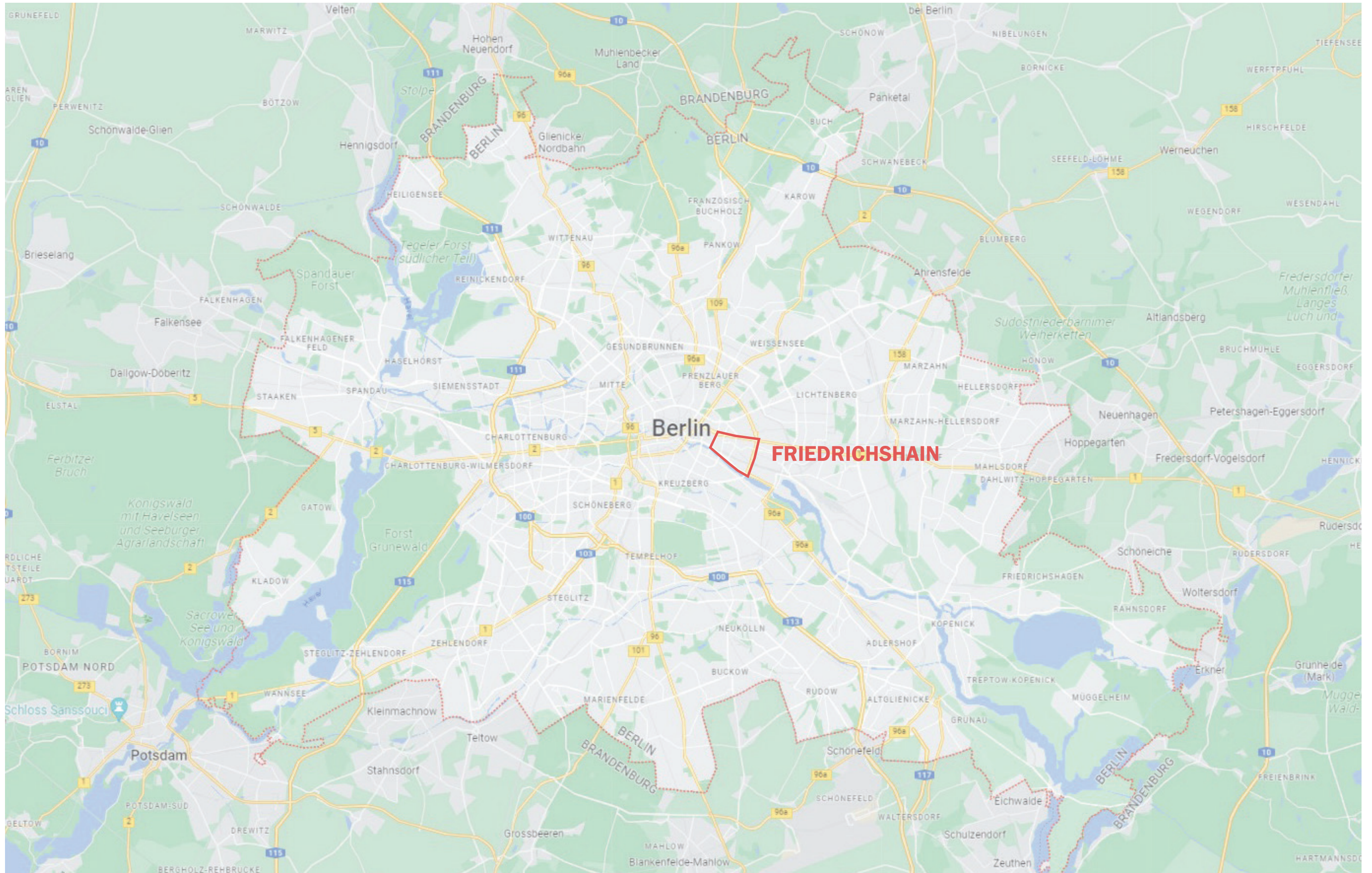
**CIRCULAR &
NATURE ORIENTED**

BERLIN

BERLIN

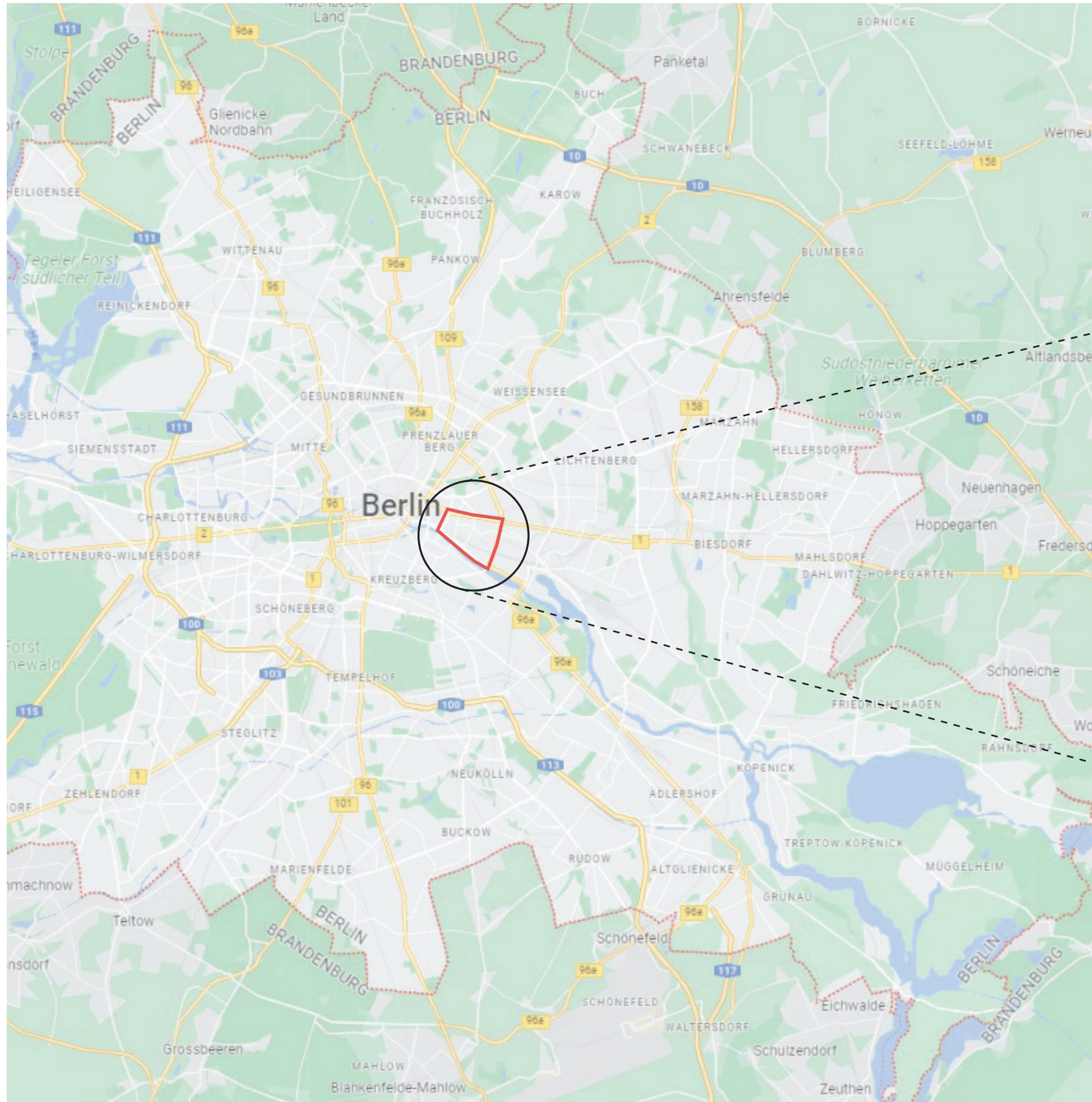


BERLIN



BERLIN SITE AREA

FRIEDRICHSHAIN











Berghain





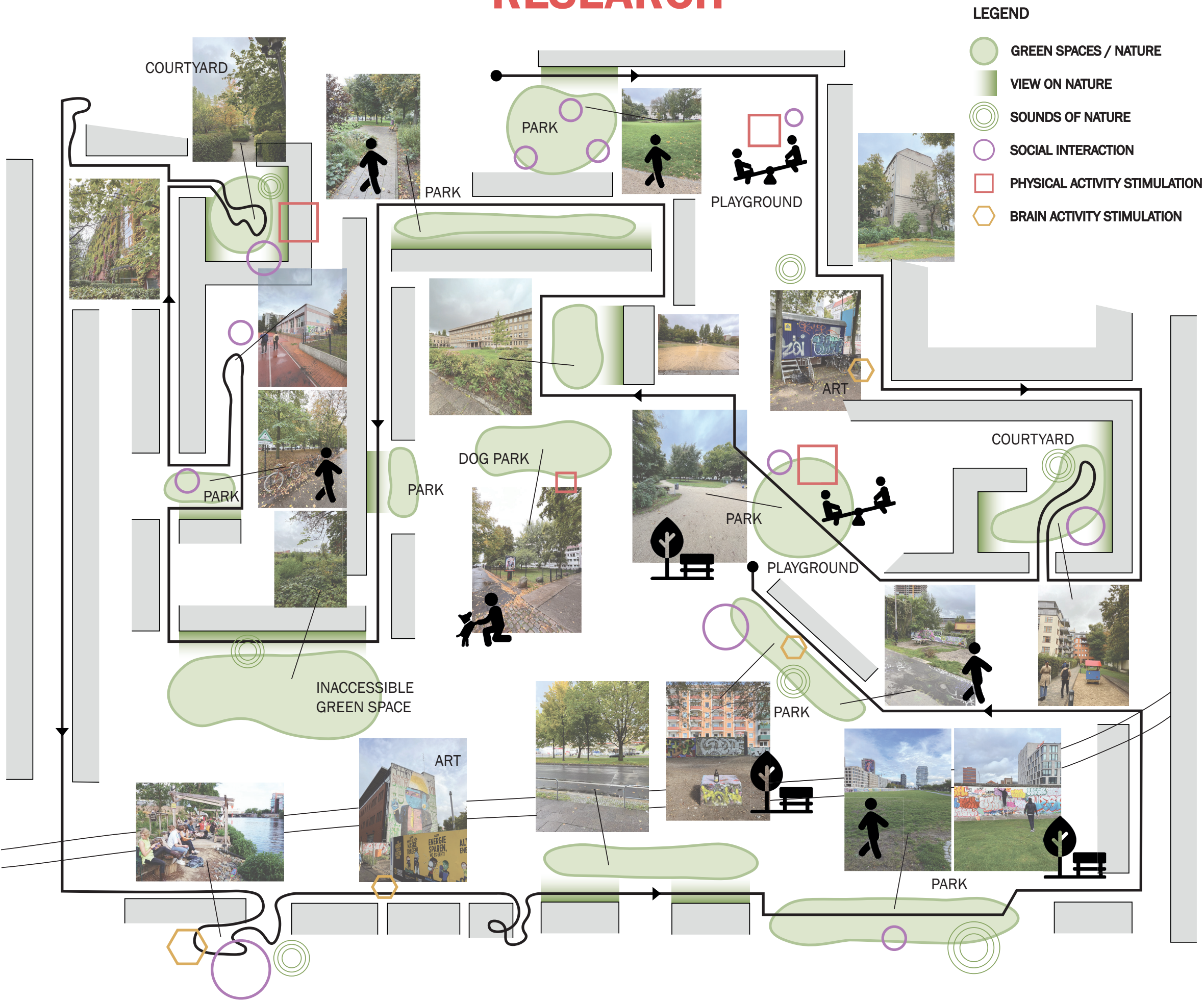






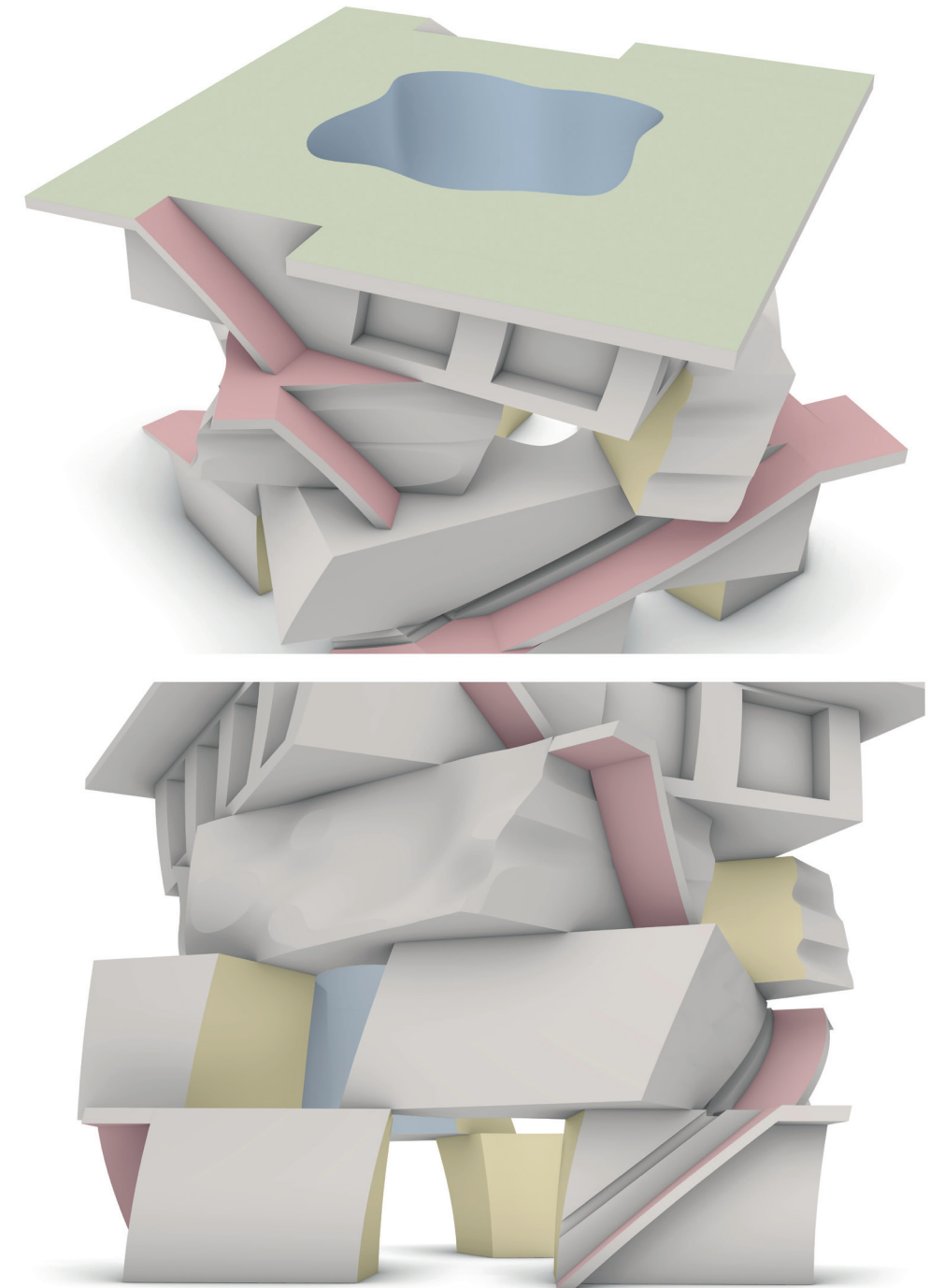
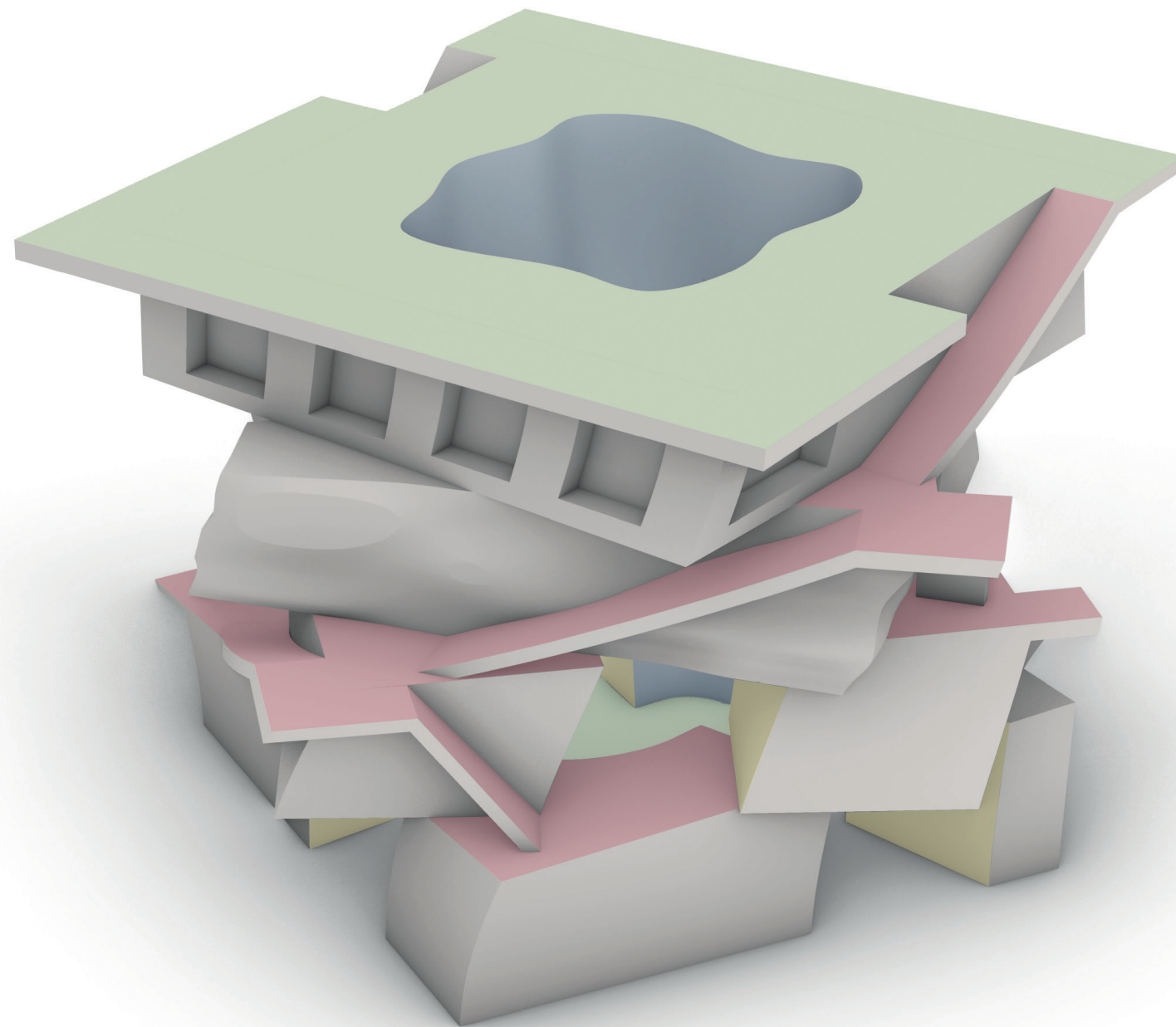
BERLIN FRIEDRICHSHAIN

RESEARCH



BERLIN

BUILDING NEEDS



WHAT IS THE BUILDING ASKING FOR?



USERS

All kind of people



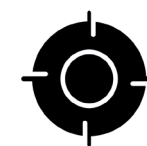
MOVE/STAY

Both, creating an interactive experience



BUILDING SHAPE / SPATIAL QUALITIES

- Curvilinear shapes inside the building
- Vertical or small building masses for light
- (Green) Inner space that attracts people with view, sound & smell
- Space for movement & interactions

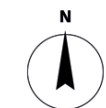


ATMOSPHERE

- Interactive experience by multisensory design
 - Interaction between users
 - Interaction between user & building
- Green spaces
- Attraction

BERLIN

SITE ANALYSES



LEGEND

- Site area
- Bus/tram stop
1 min walk
(90m / 1,5m/s)
- Train stop
2 min walk
(180m / 1,5m/s)
- / Important sightlines
- Sound of nature
- ~ Smell - attraction
- Social interaction
- Physical activity stimulation
- ⬡ Brain activity stimulation



BUILDING HEIGHT

All heights are possible <45m



BUILDING SHAPE

Free



USERS

Residents, offeworkers,
tourists, passers-by



FUNCTION

Leisure & interaction



MOVE/STAY

Both



ATMOSPHERE

Green, interaction, food, relax

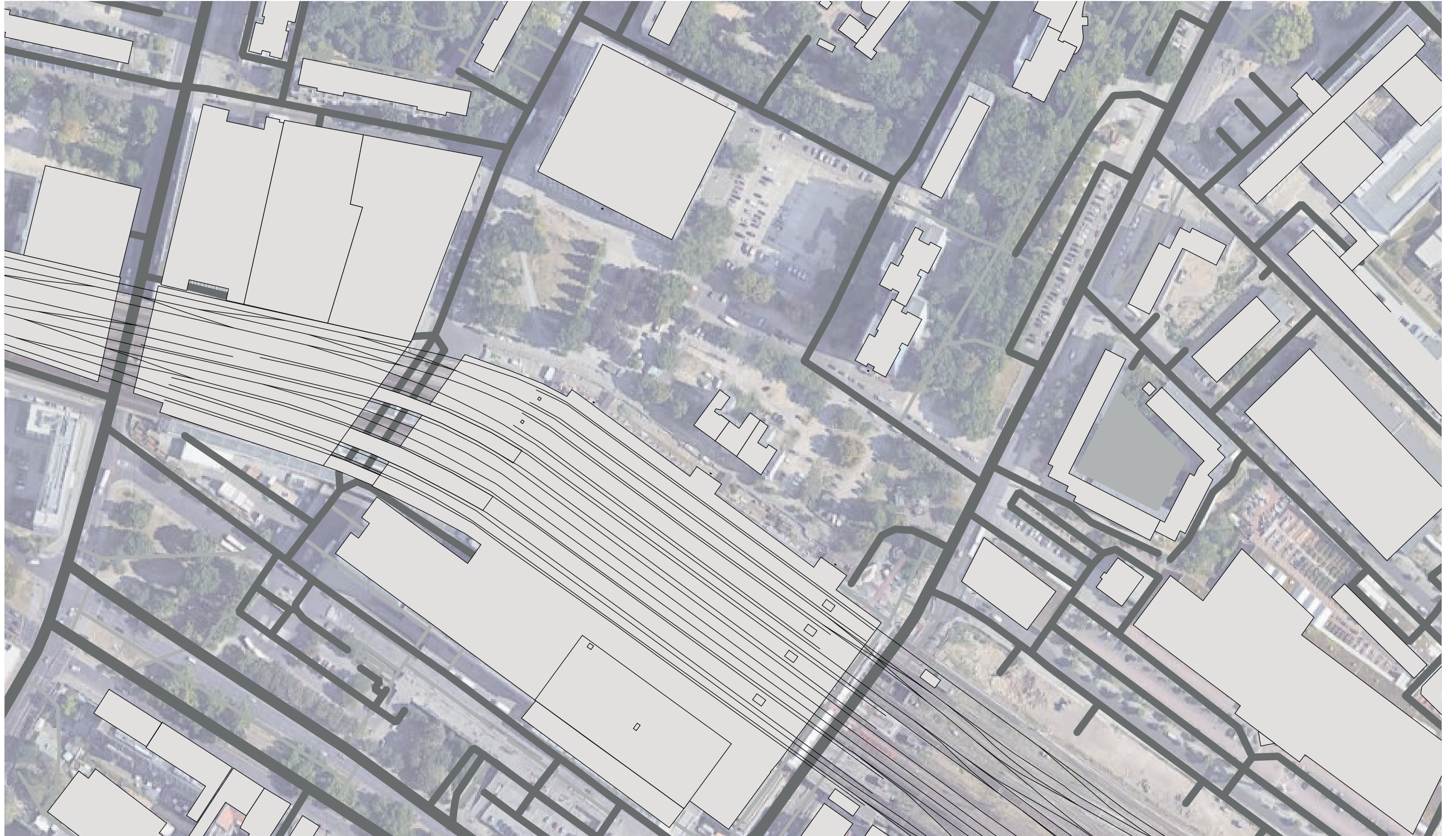


INTERVIEWS

- Missing sports for children
- Missing workspace
- Lots of passers-by, tourists and mix of different people
- Missing connection east - west

BERLIN SITE AREA

ANDREASVIERTEL



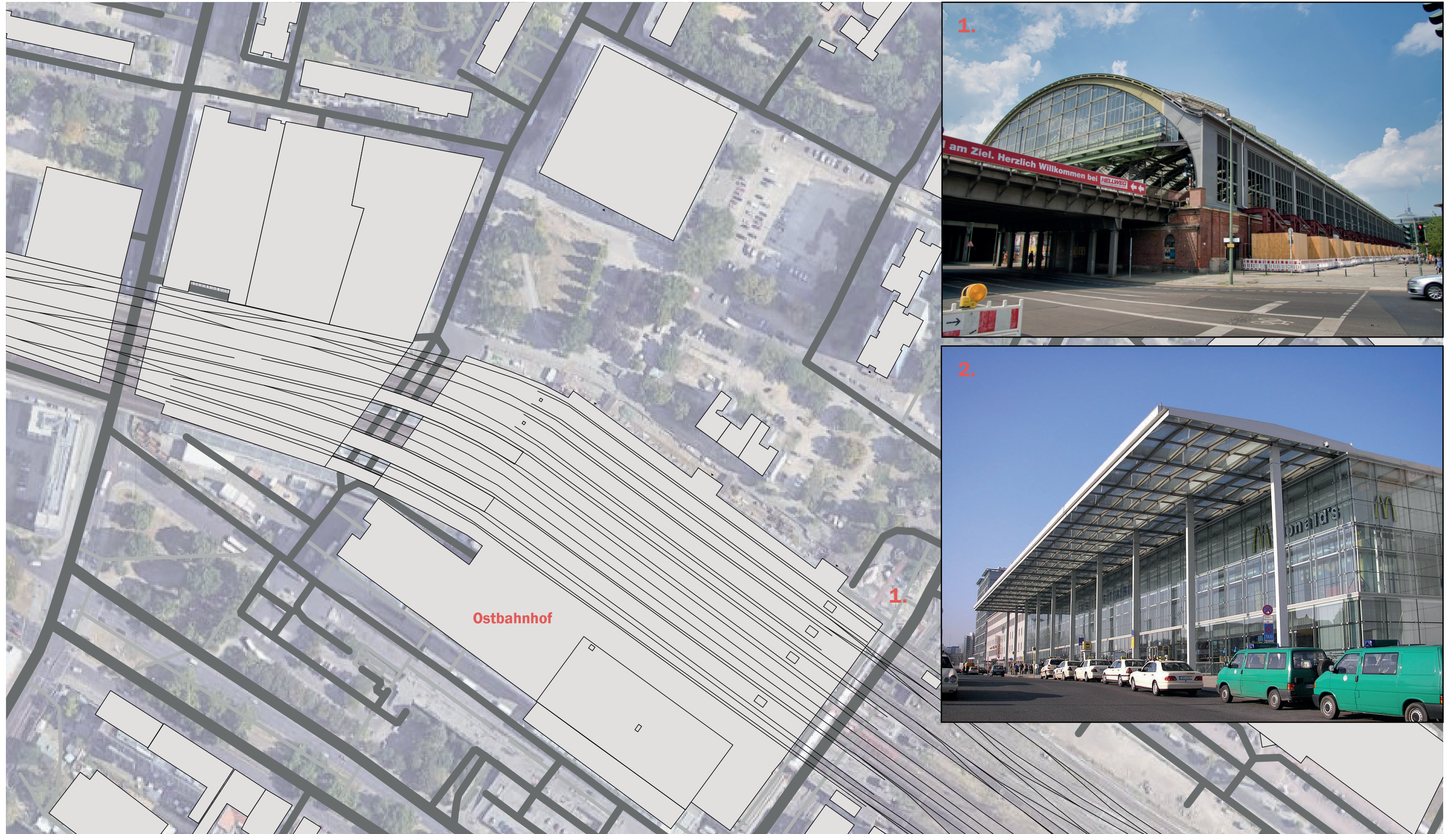
BERLIN SITE AREA

ANDREASVIERTEL



BERLIN SITE AREA

OSTBAHNHOF



BERLIN SITE AREA

UP! OFFICE BUILDING



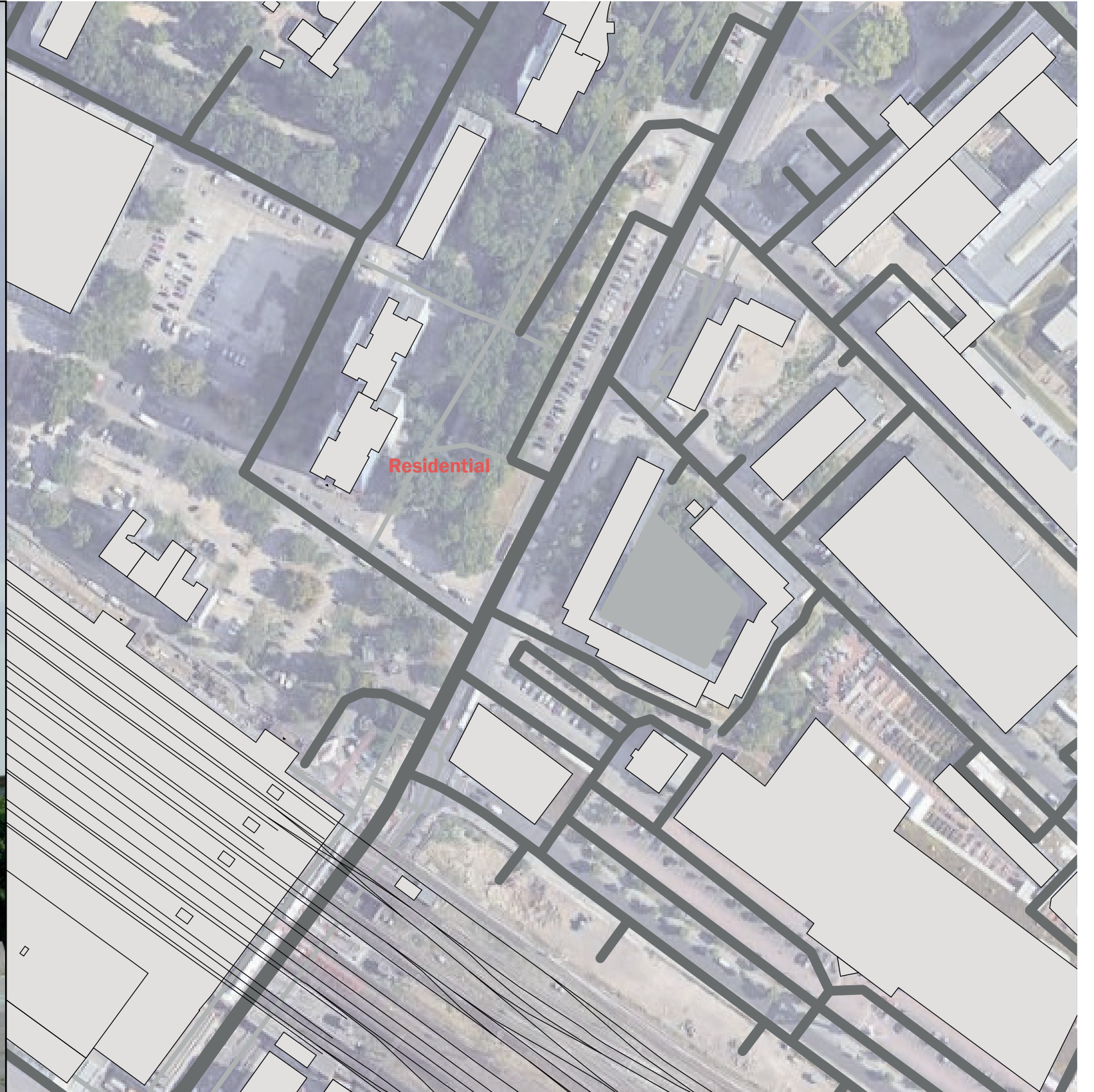
BERLIN SITE AREA

COMMERZBANK



BERLIN SITE AREA

RESIDENTIAL BUILDING



BERLIN SITE AREA

LEFT OVER BUILDING



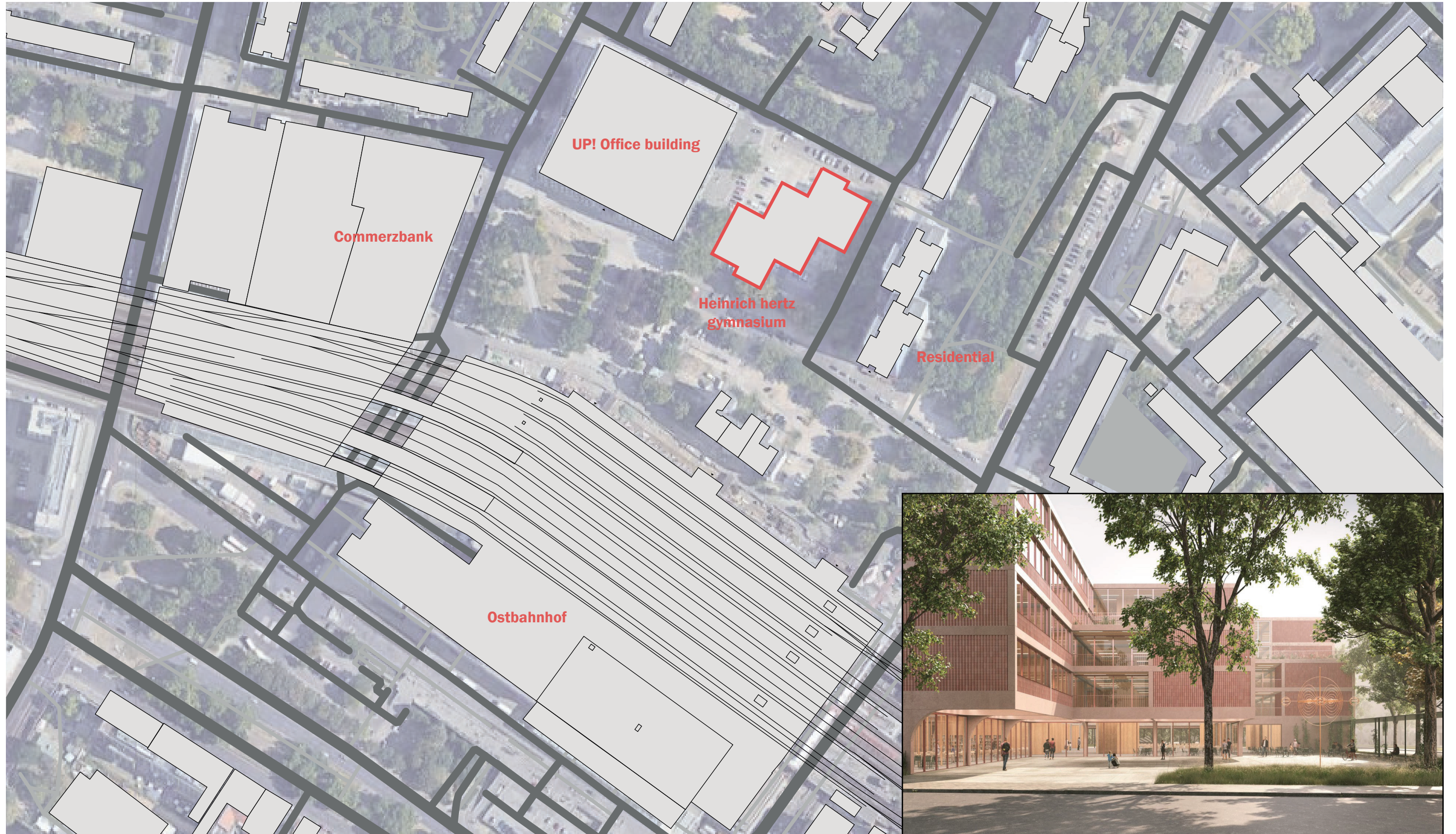
BERLIN SITE AREA

MAIN ROUTE & PARKING PLOT



BERLIN SITE AREA

HEINRICH HERTZ GYMNASIUM



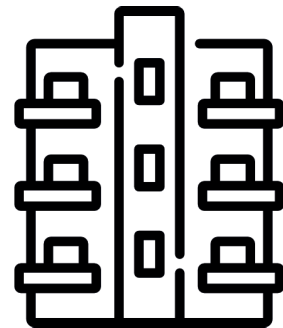
SITE RESEARCH

ANDREASVIERTEL



Missing functions

- Sport facilities
- Communal functions / activities
- Parks / green areas



Small houses



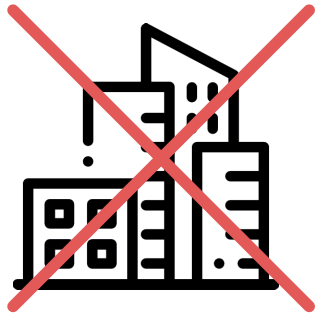
Lack of safety feelings



Missing feeling of community

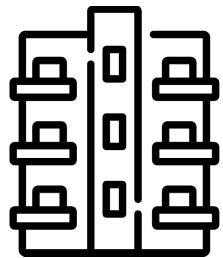
SITE RESEARCH

ANDREASVIERTEL



Missing functions

- Sport facilities
- Communal functions / activities
- Parks / green areas



Small houses



Lack of safety feelings



Missing feeling of community

**Slowly decreasing
overall well-being**



GOAL

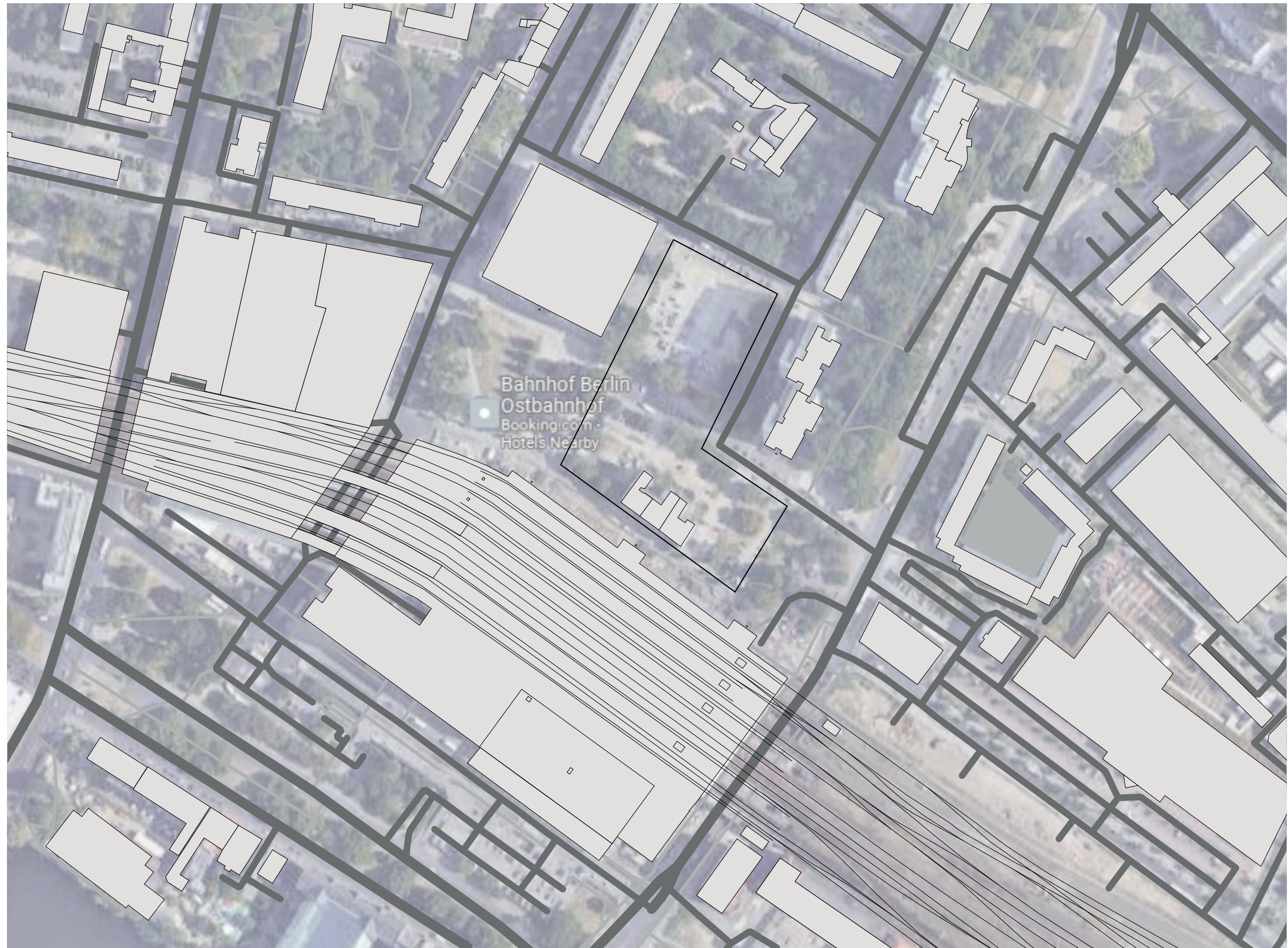
**IMPROVEMENT
OF WELL-BEING**



- CREATING SENSORY EXPERIENCES
- EVIDENCE BASED DESIGN

URBAN STRATEGY

CURRENT SITUATION



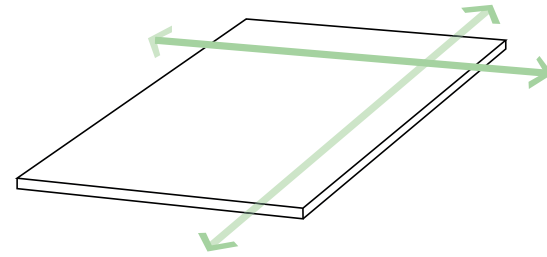
URBAN STRATEGY

CURRENT SITUATION



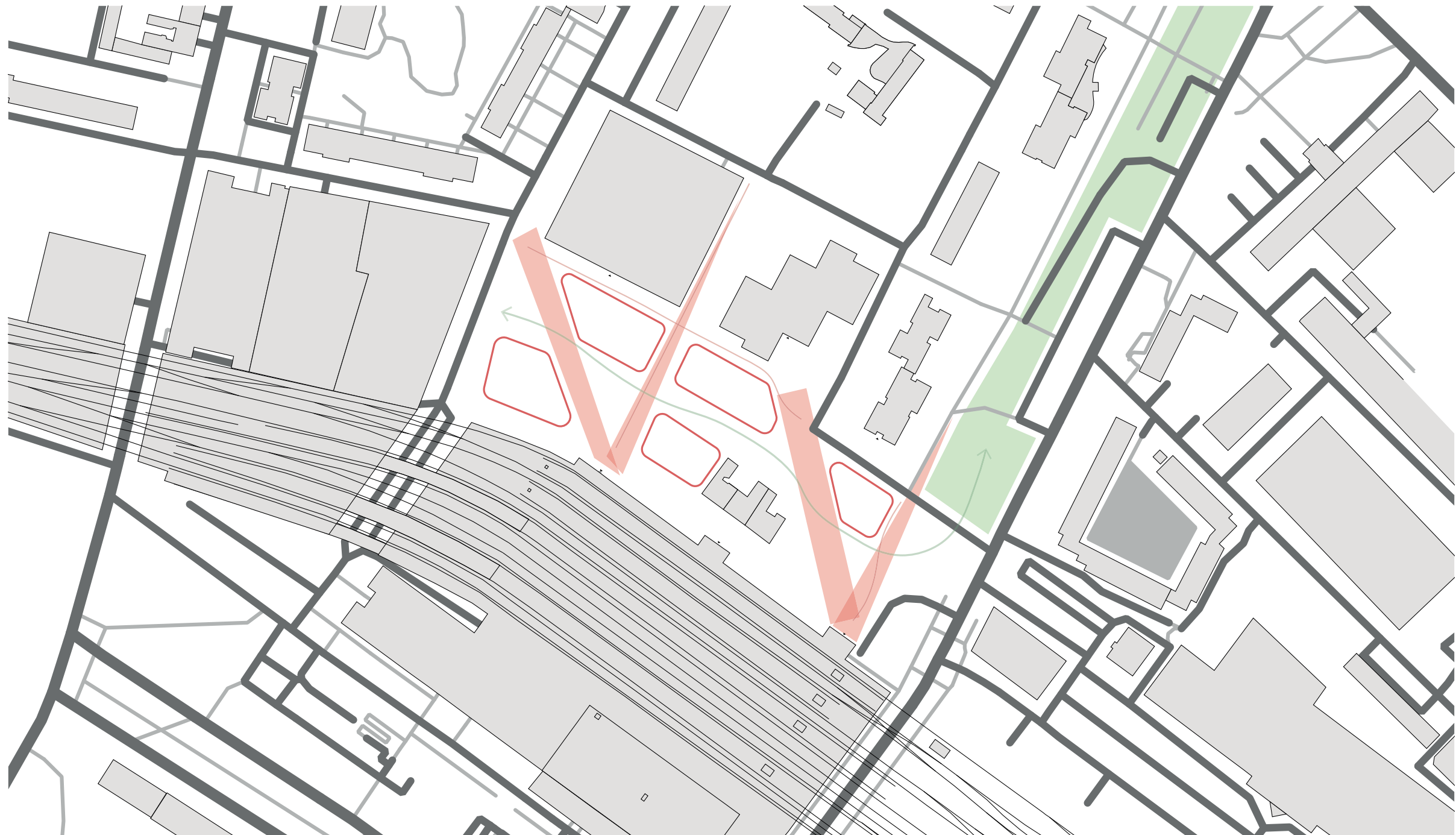
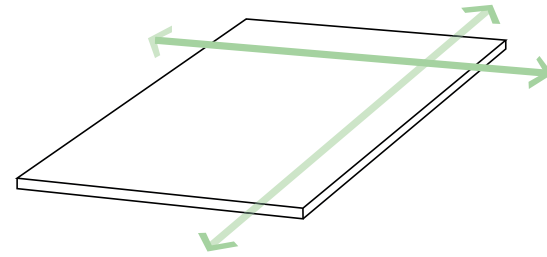
URBAN STRATEGY

EXISTING ROUTES & SIGHTLINES



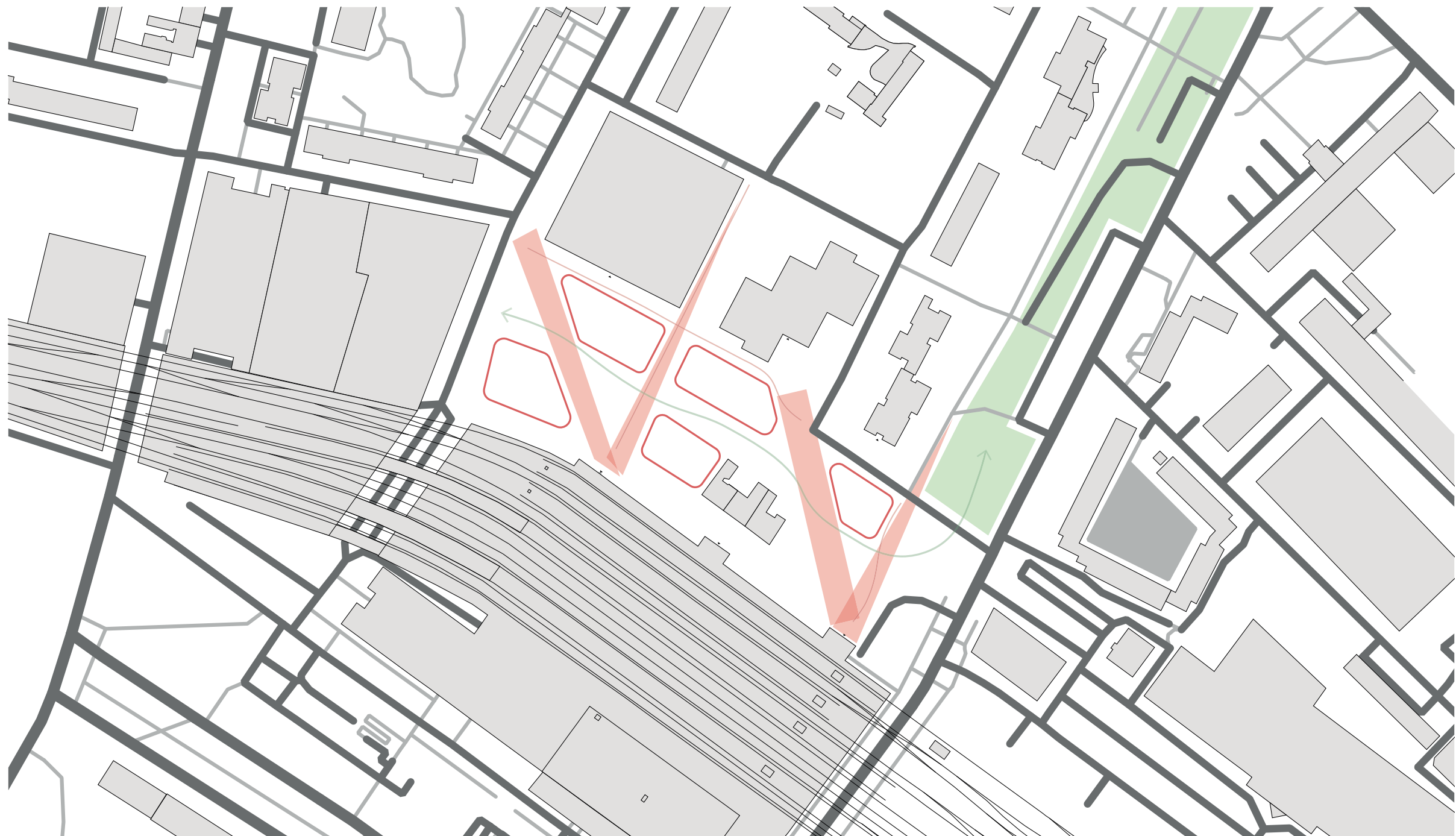
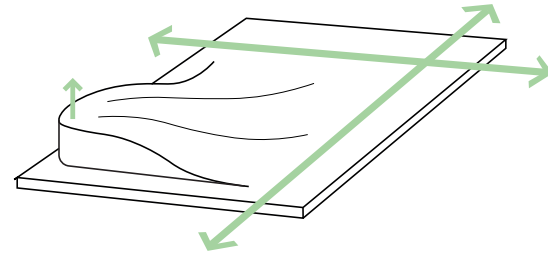
URBAN STRATEGY

EXISTING ROUTES & SIGHTLINES



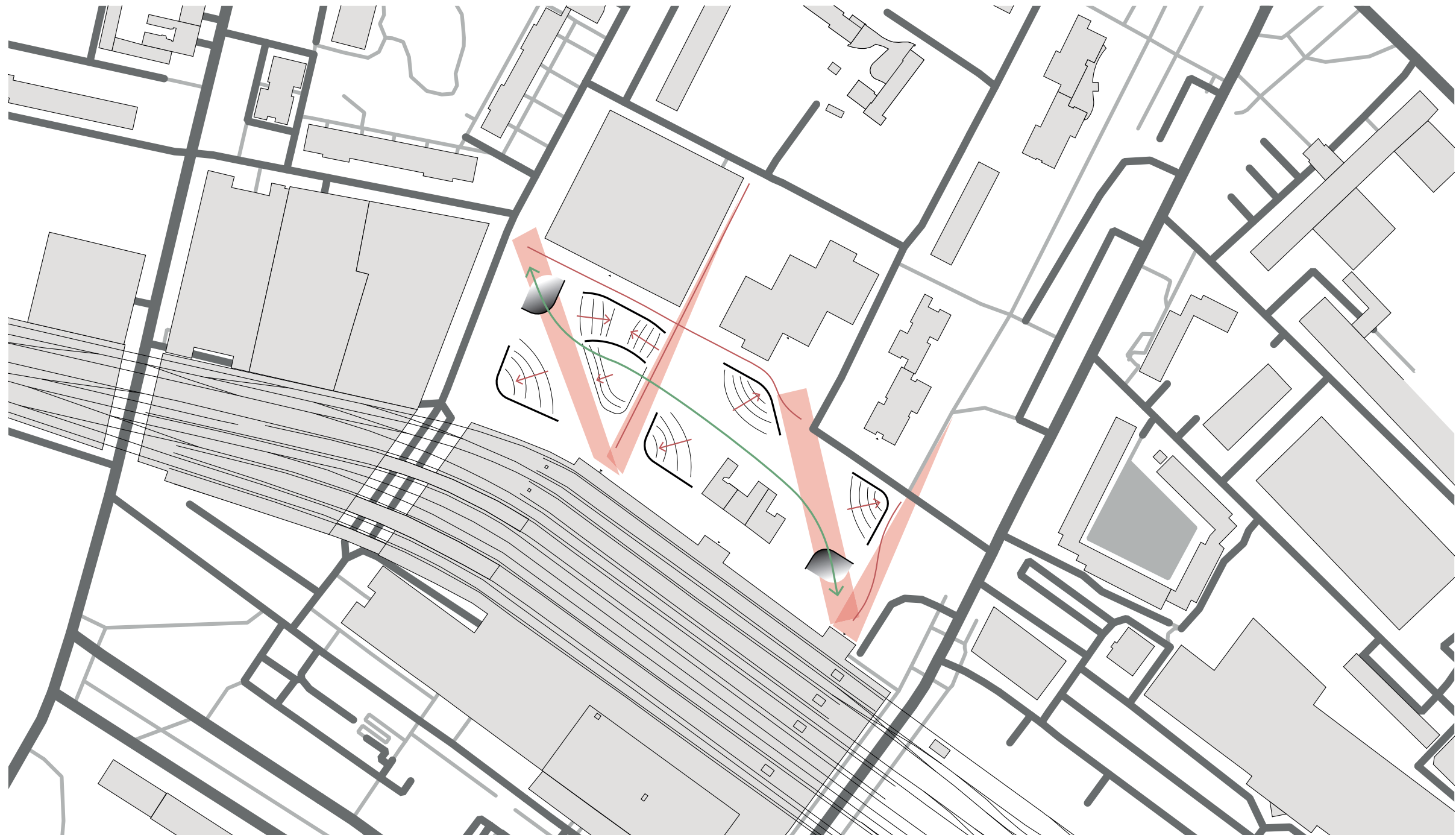
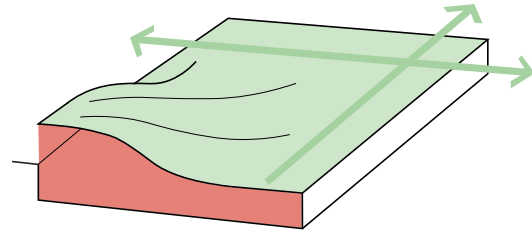
URBAN STRATEGY

BUILDING PLOTS



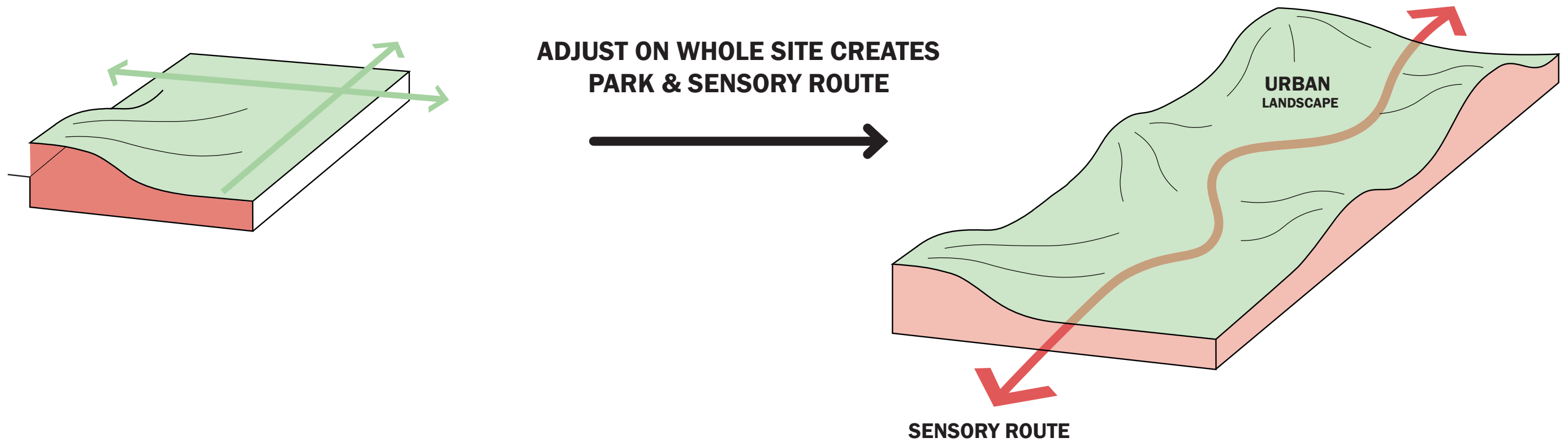
URBAN STRATEGY

LANDSCAPE & BUILDING MASS



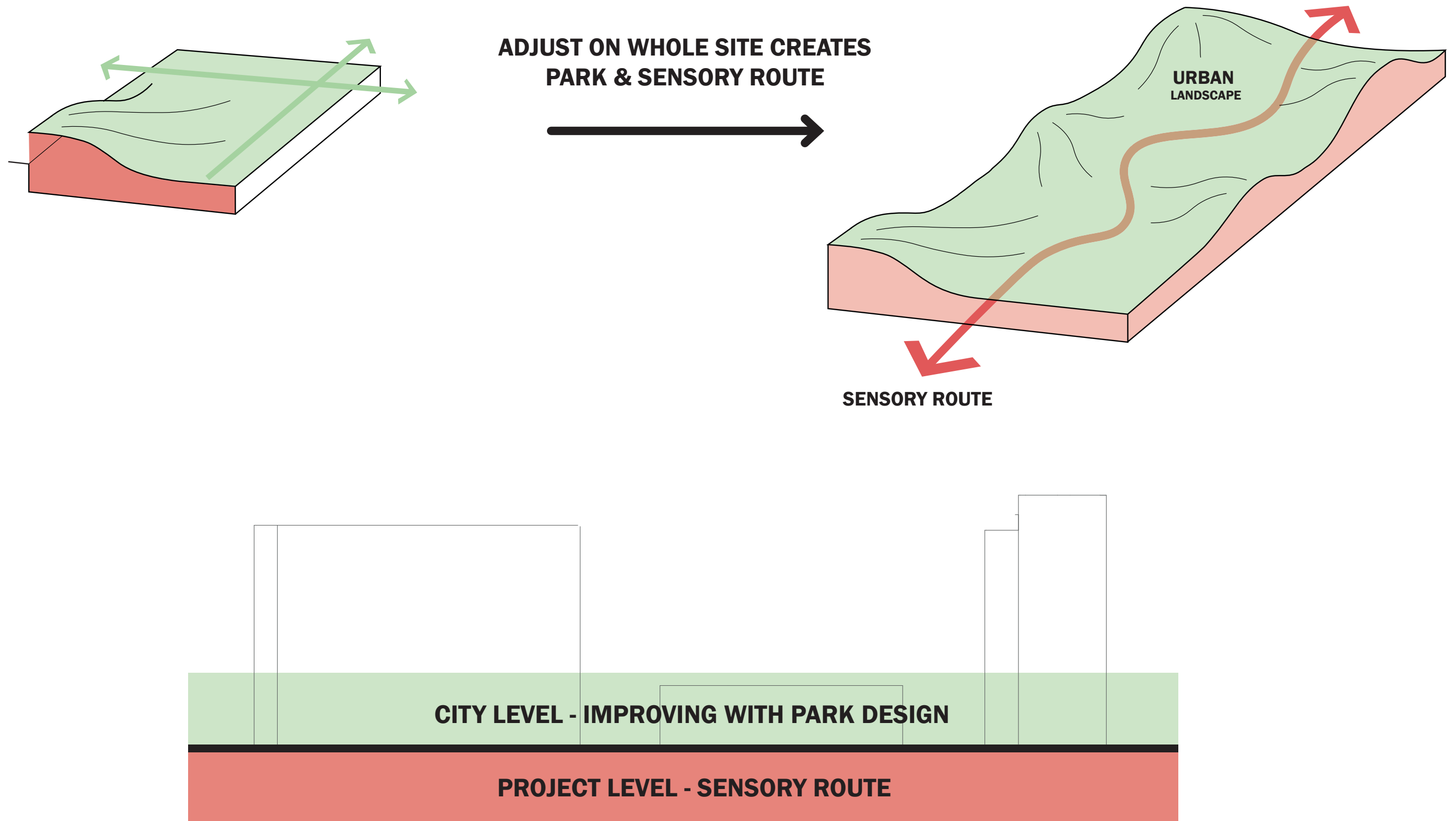
URBAN STRATEGY

LANDSCAPE & SENSORY ROUTE



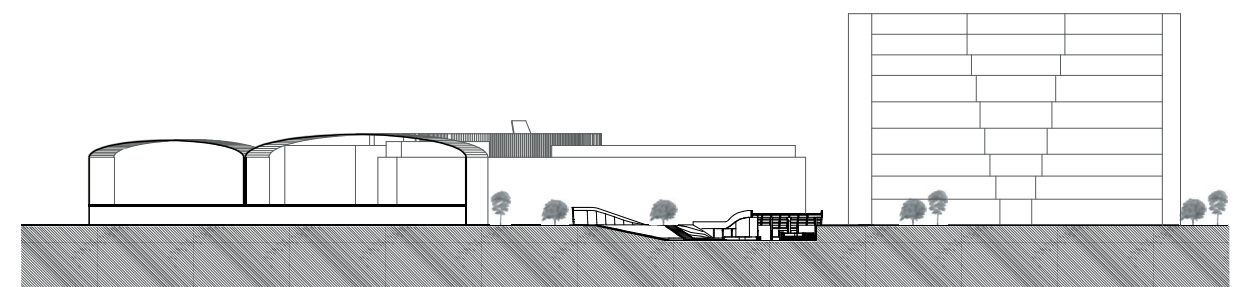
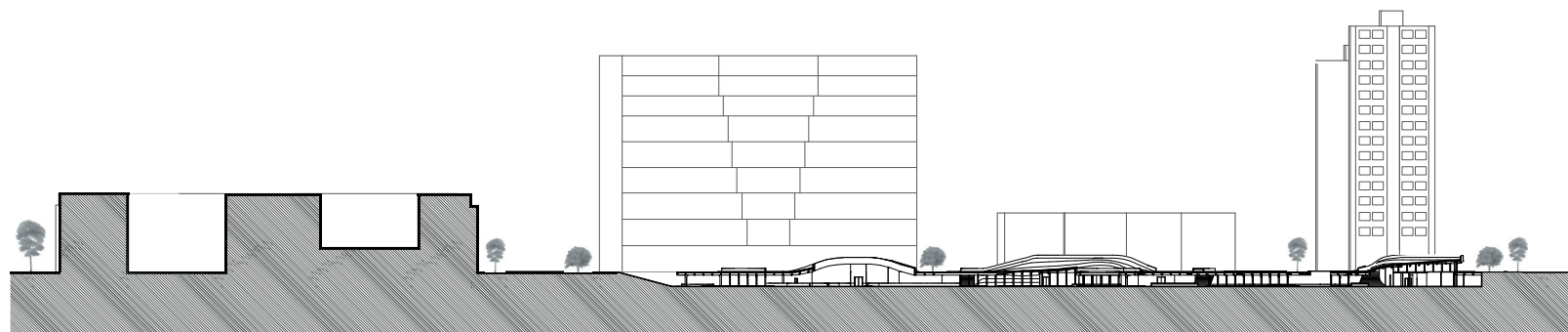
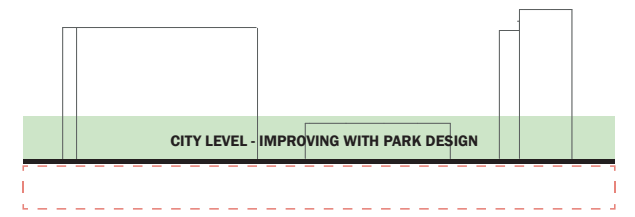
URBAN STRATEGY

LANDSCAPE & SENSORY ROUTE



URBAN SITUATION

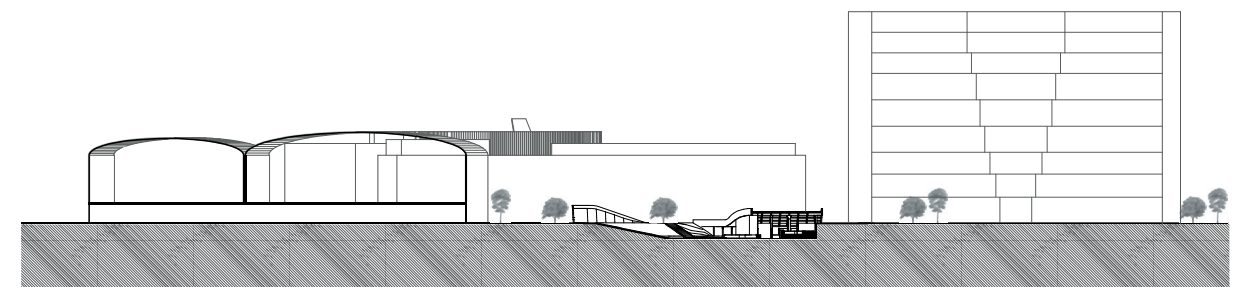
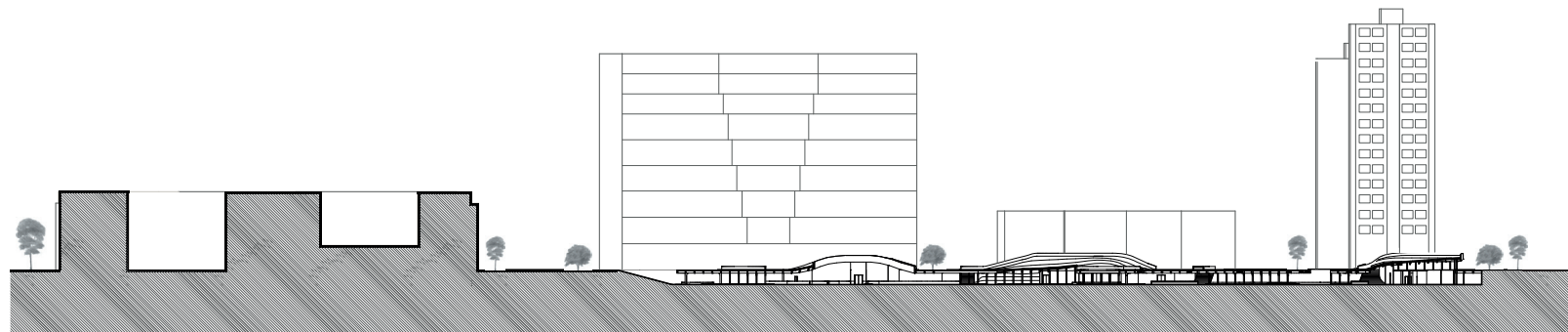
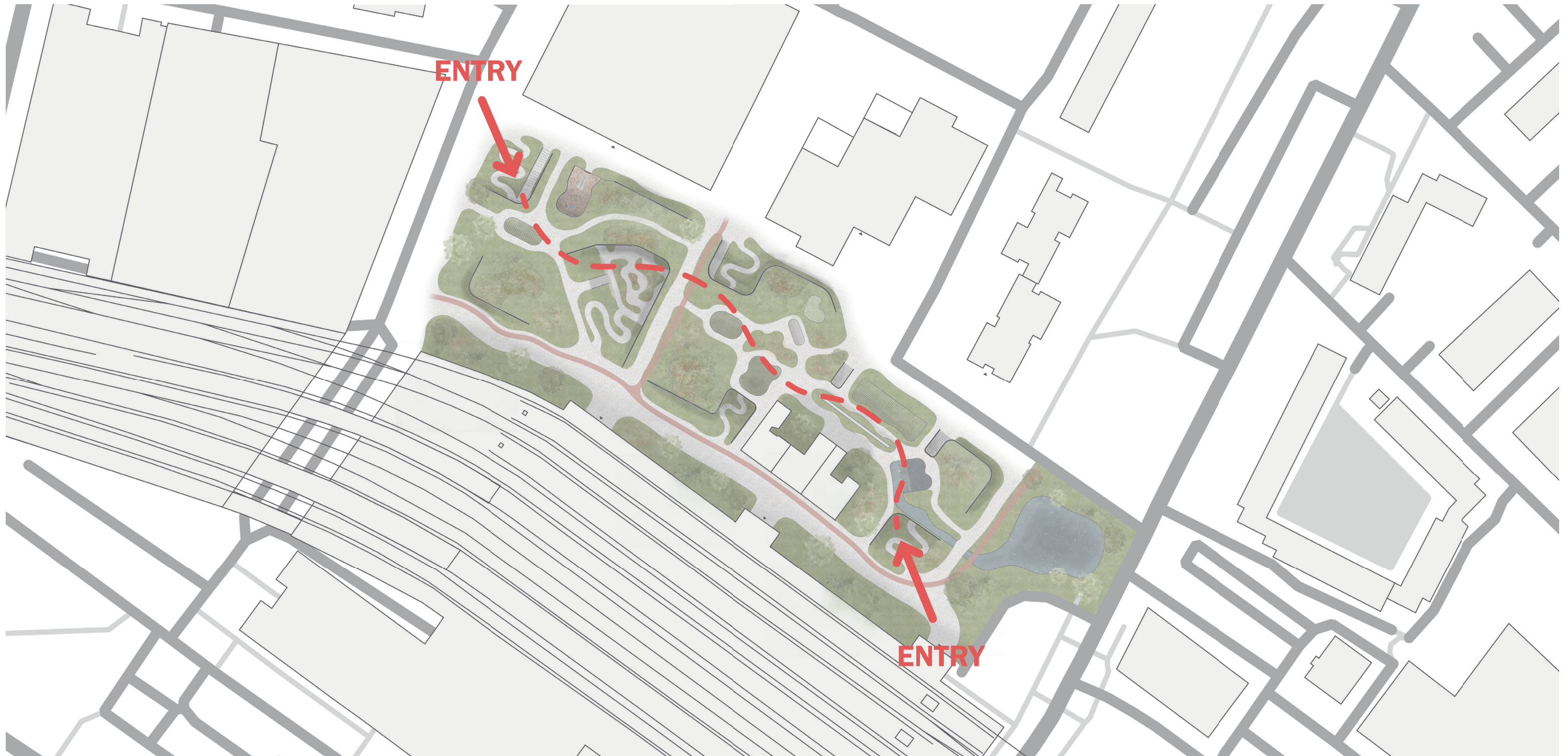
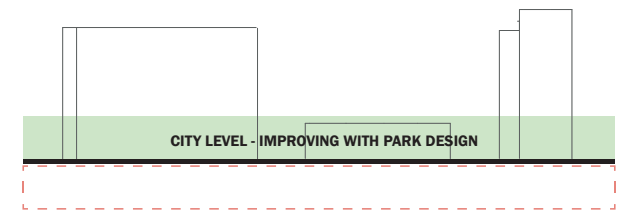
PARK DESIGN





URBAN SITUATION

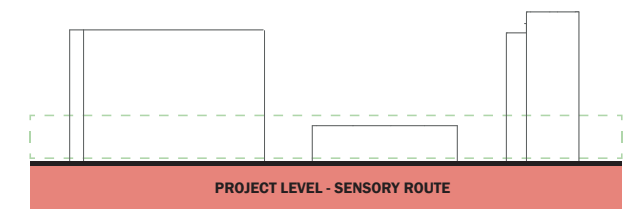
SENSORY ROUTE



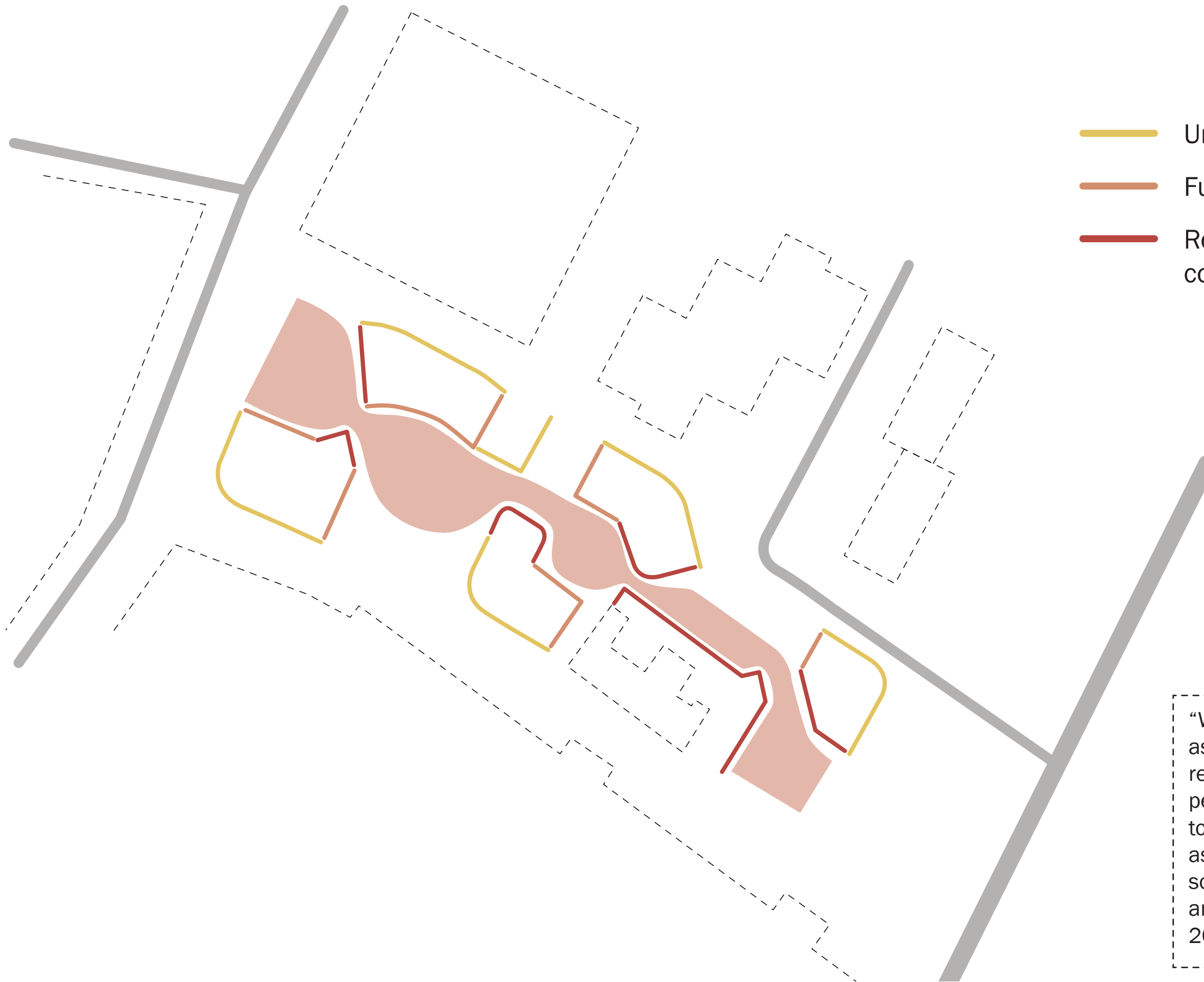


DIAGRAM

SENSORY ROUTE



- Urban strategy
- Function / atmosphere
- Route:
compressing & decompressing



“We typically rate curvilinear forms as being more approachable than rectilinear ones. Angular forms, especially when pointing downward/toward us, may well be perceived as threatening, and hence are somewhat more likely to trigger an avoidance response.” (Spence, 2020).

DIAGRAM

SENSORY ROUTE

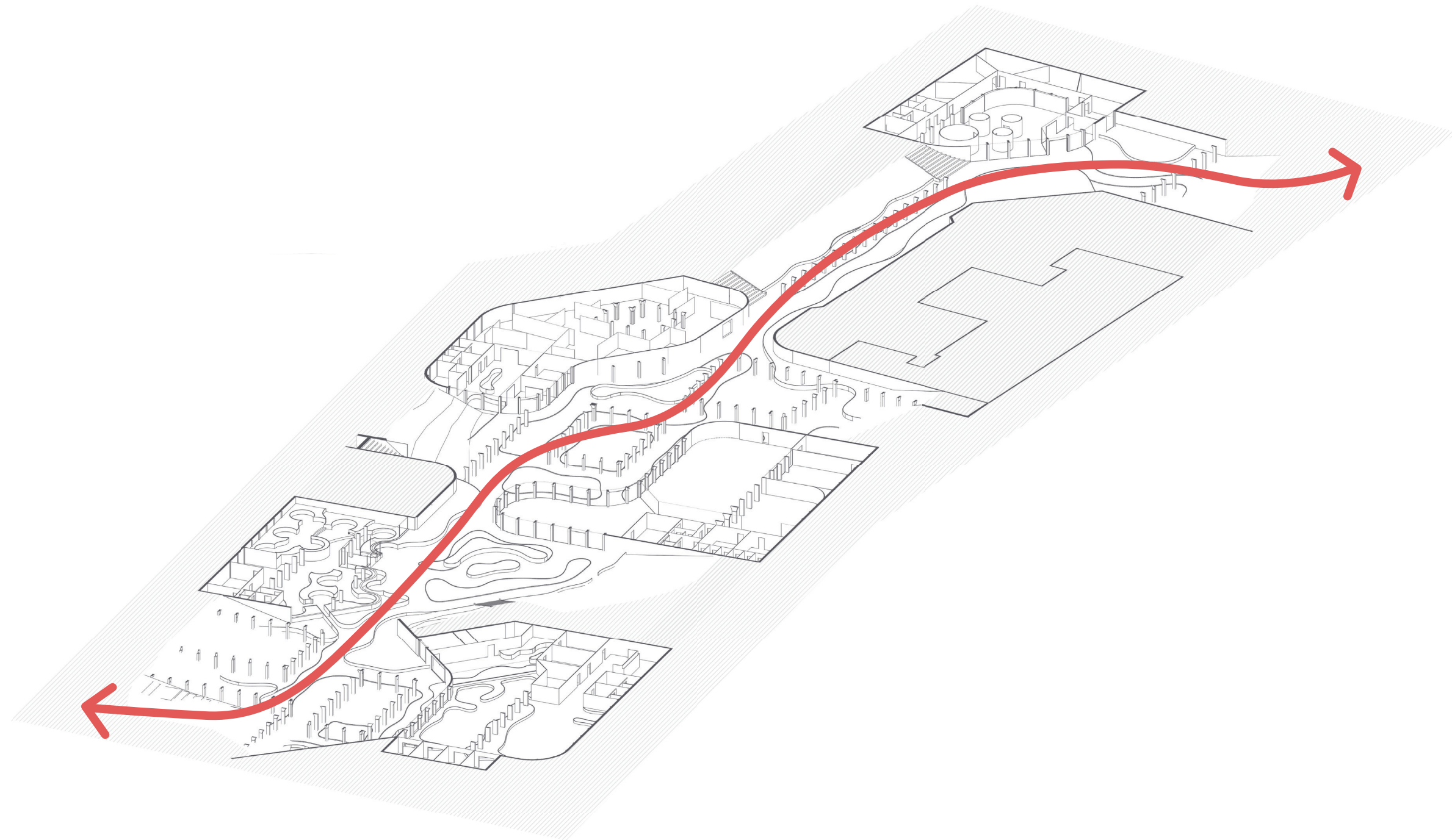
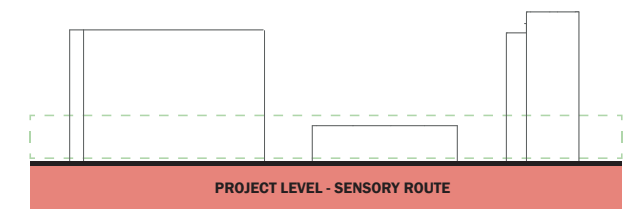
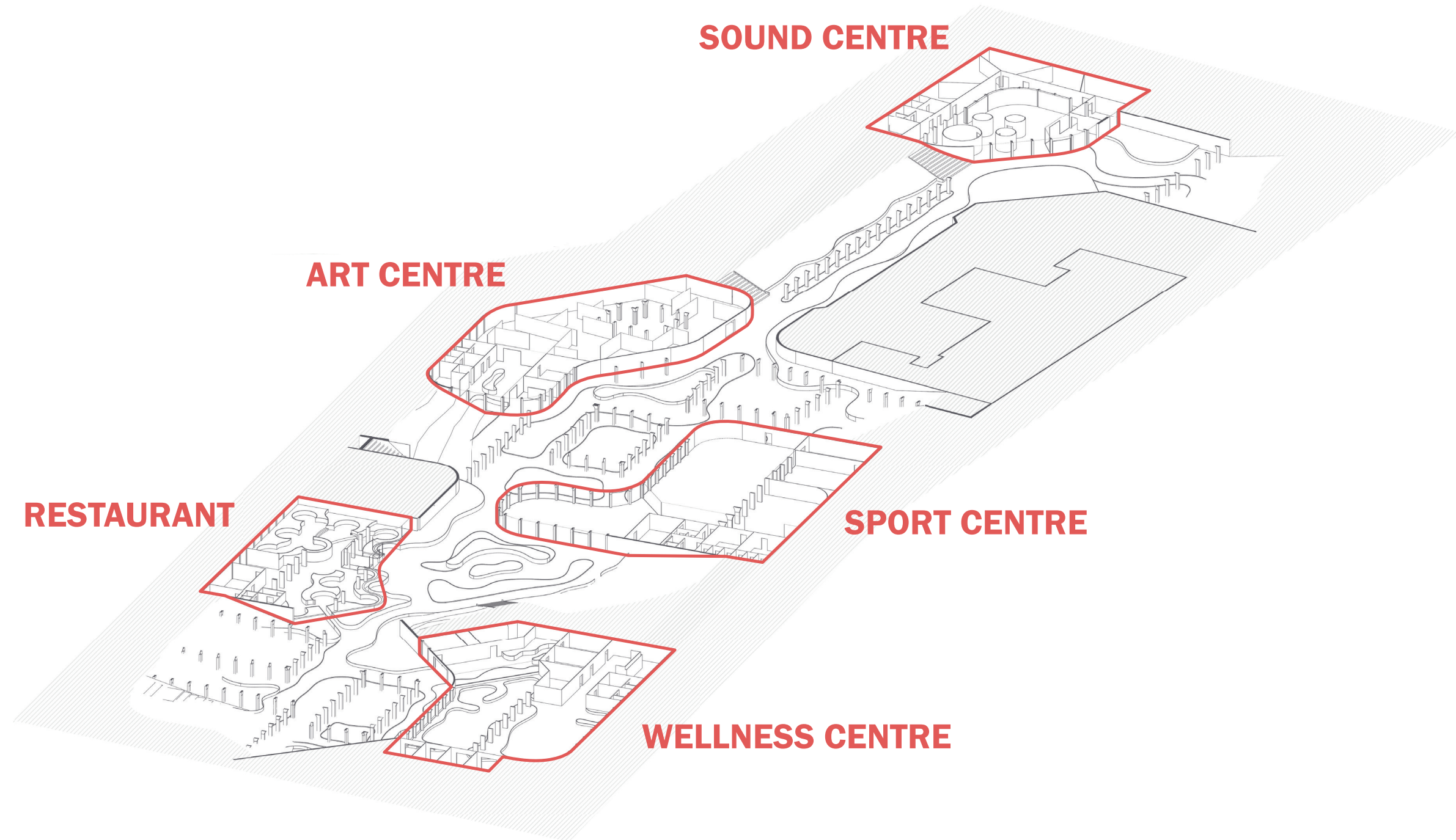
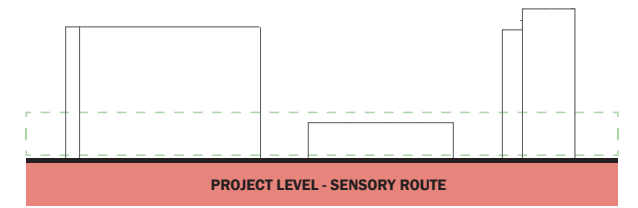
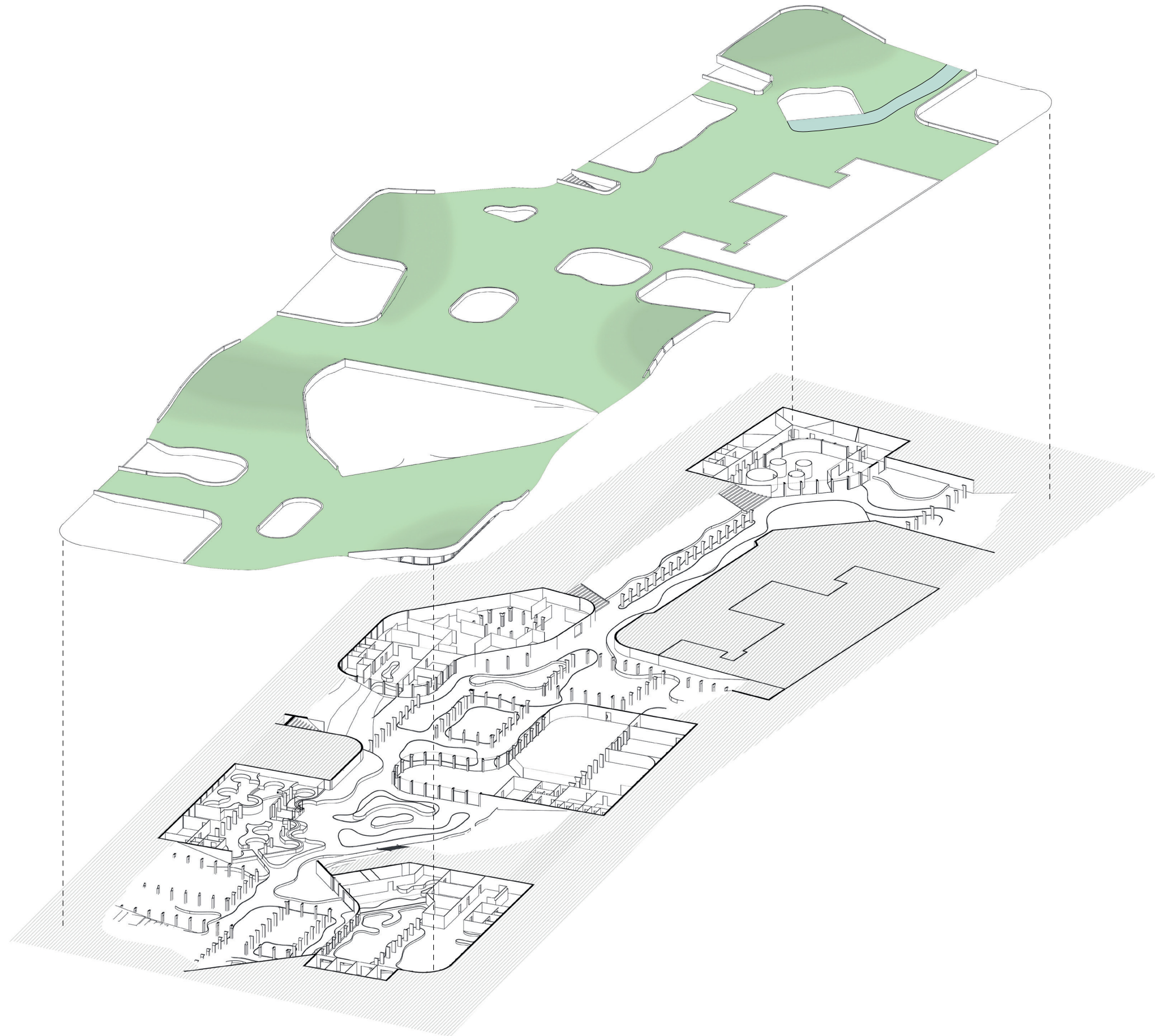
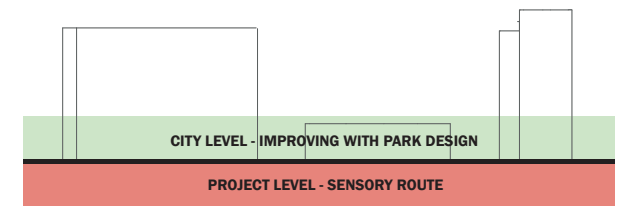


DIAGRAM PAVILIONS

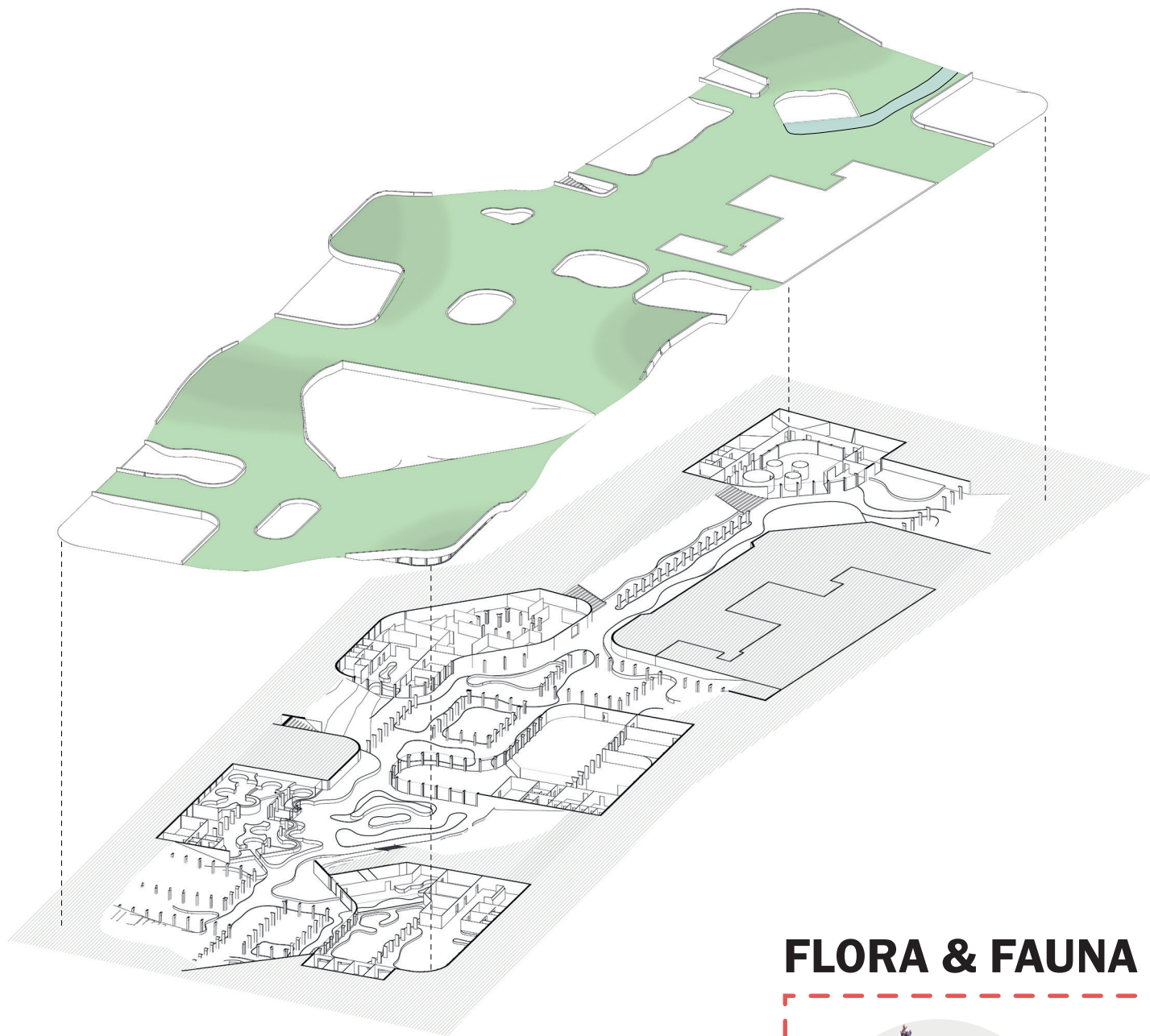


DIAGRAM

2 LAYERS



GREEN LANDSCAPED ROOF



URBAN HEAT STRESS

- REDUCTION OF 30-40 DEGREES OF ROOF TEMPERATURE
- UP TO 5 DEGREES OF SURROUNDED AMBIENT CITY TEMPERATURE DECREASE

(WUR, 2015)

REDUCTION OF ENERGY

- SMALL ENERGY USE REDUCTION (SUMMER CONDITIONS)

FLORA & FAUNA



LAVENDER

- Stress-relieving benefits
- Reduction in anxiety, depression & sleeplessness



CHAMOMILE

- Reduction in anxiety and stress
- Soothing effects on skin
- Mental health improving aroma



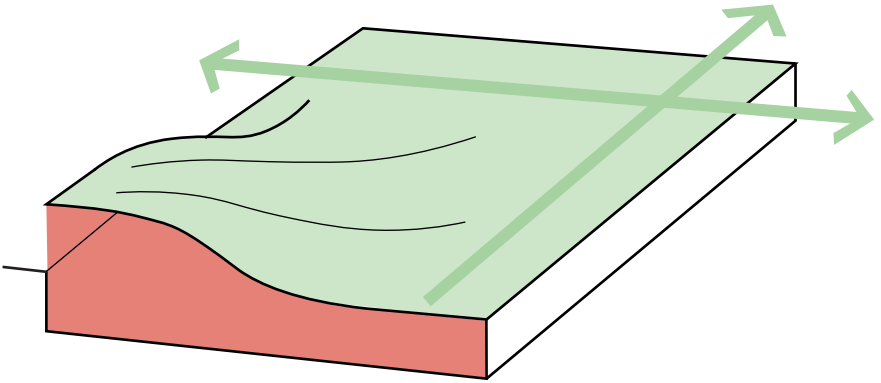
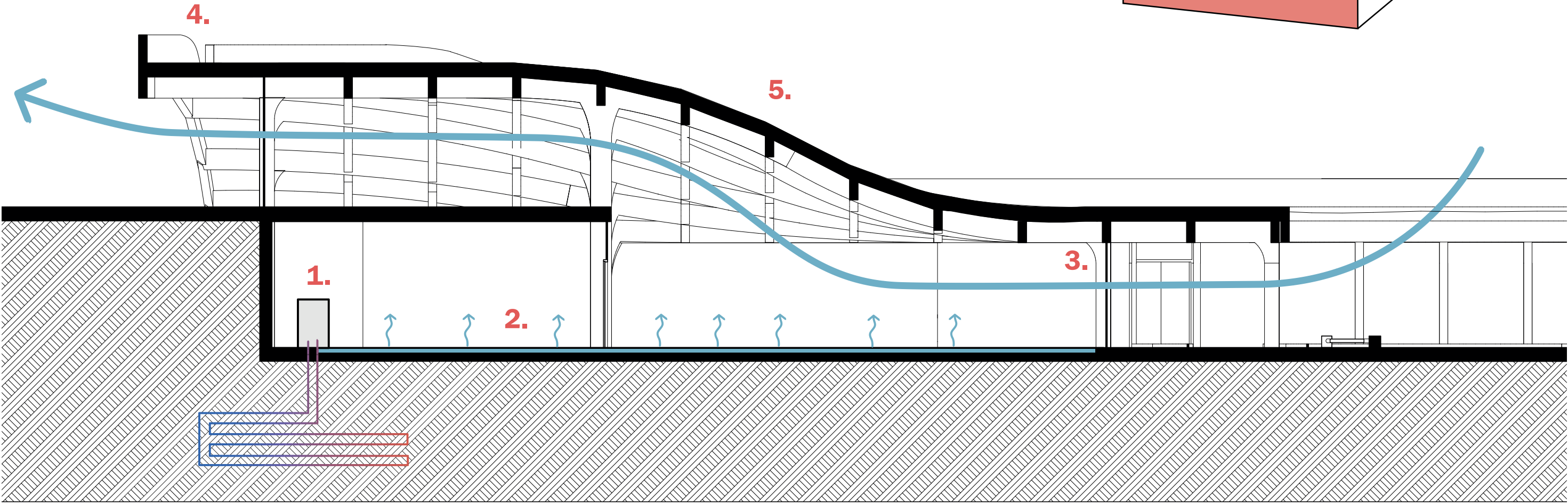
INSECTS

- Healthy flora by pollination
- Affects public health

(Belluco et al, 2023)

DIAGRAM CLIMATE

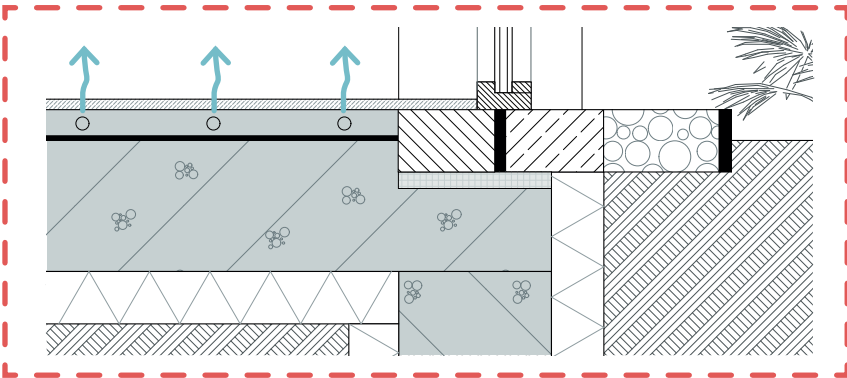
SUMMER SITUATION



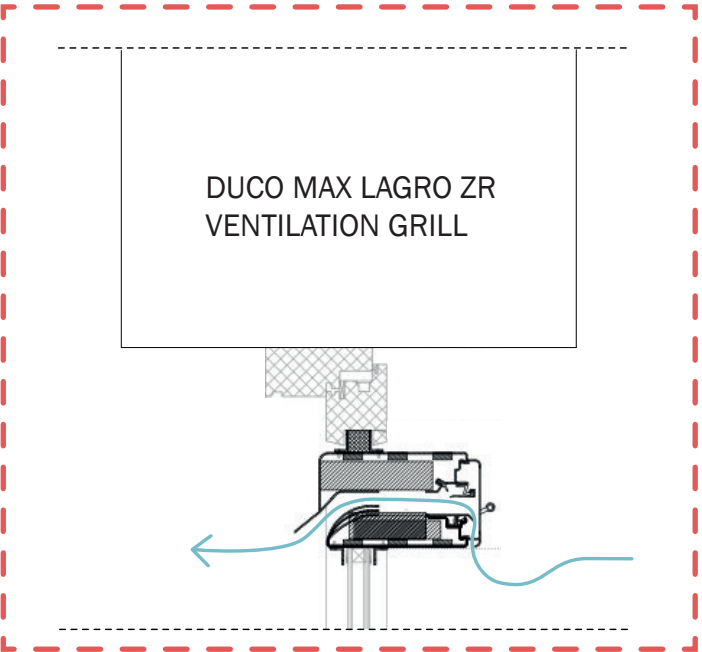
1. GEOTHERMAL HEAT PUMP

EXTRACTING COLD FROM THE SOIL

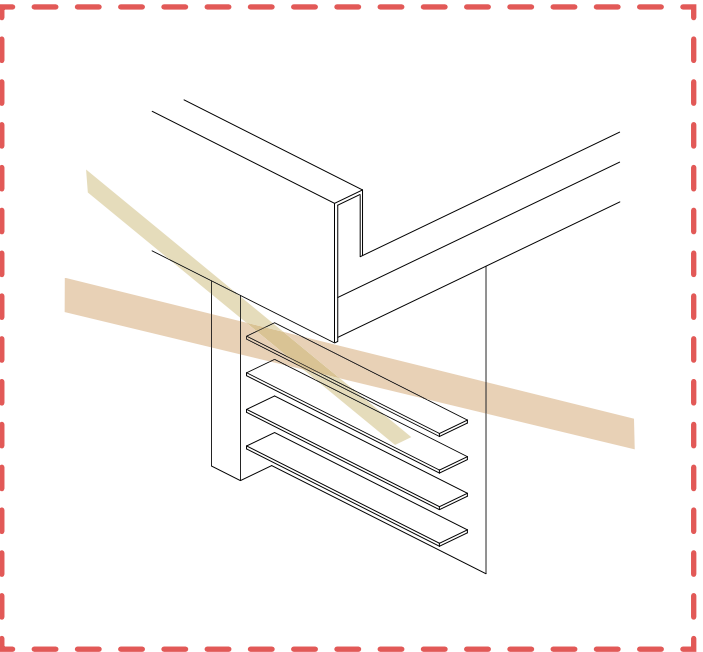
2. ENERGY SUFFICIENT FLOOR COOLING



3. PASSIVE VENTILATION



4. CANOPY & SLATS

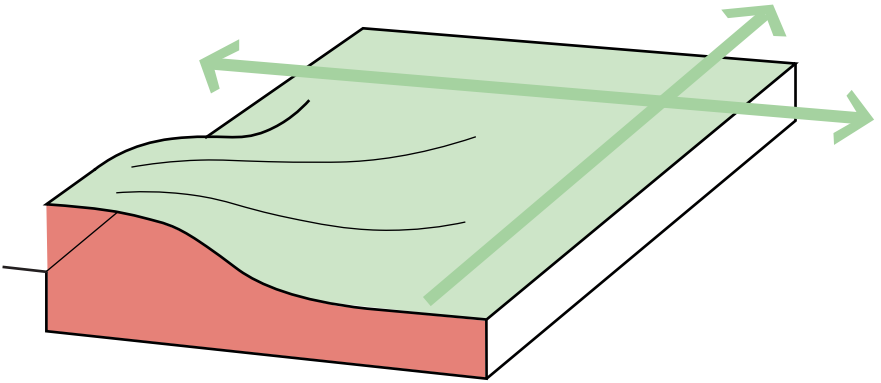
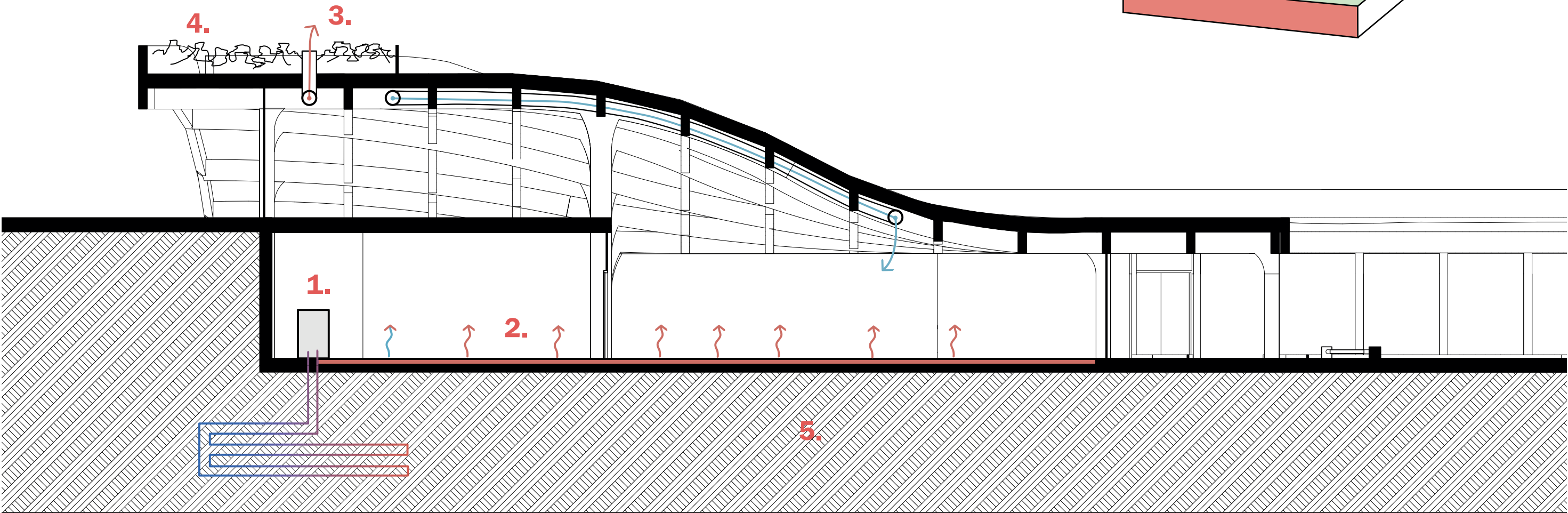


5. GREEN ROOF

REDUCES
COOLING
ENERGY

DIAGRAM CLIMATE

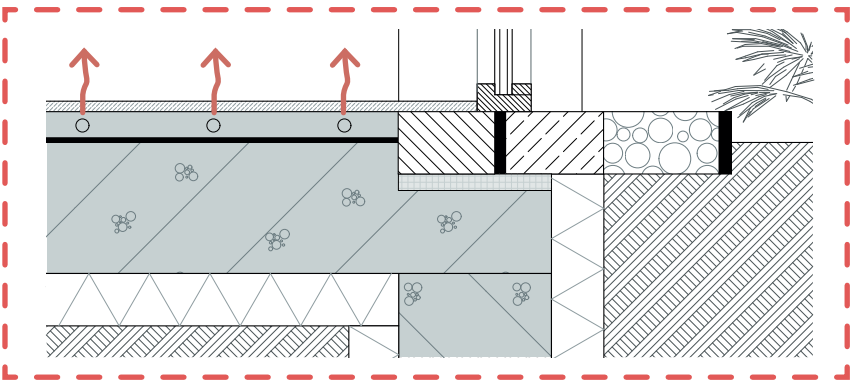
WINTER SITUATION



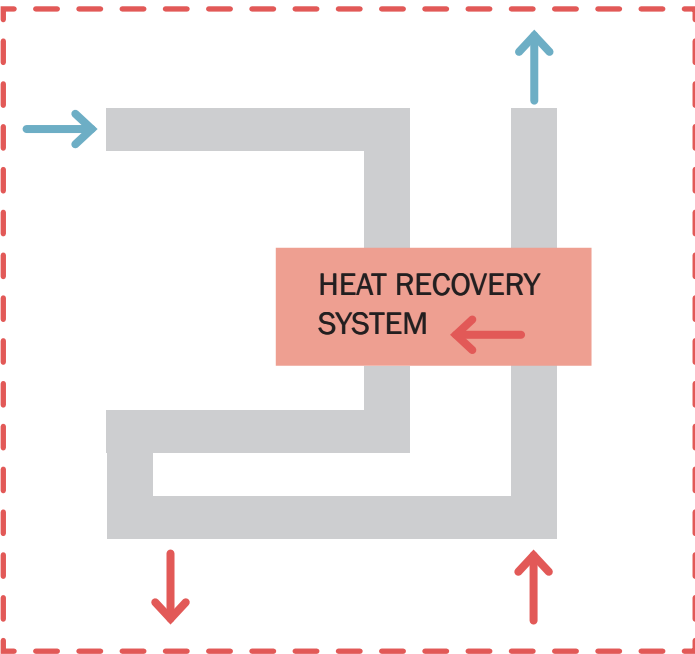
1. GEOTHERMAL HEAT PUMP

EXTRACTING WARMTH FROM THE SOIL

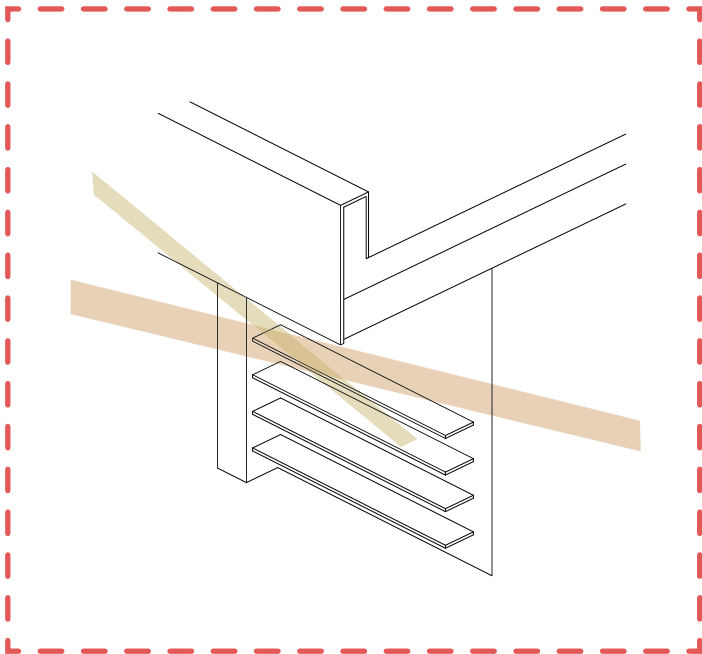
2. ENERGY SUFFICIENT FLOOR HEATING



3. MECHANICAL VENTILATION



4. CANOPY & SLATS

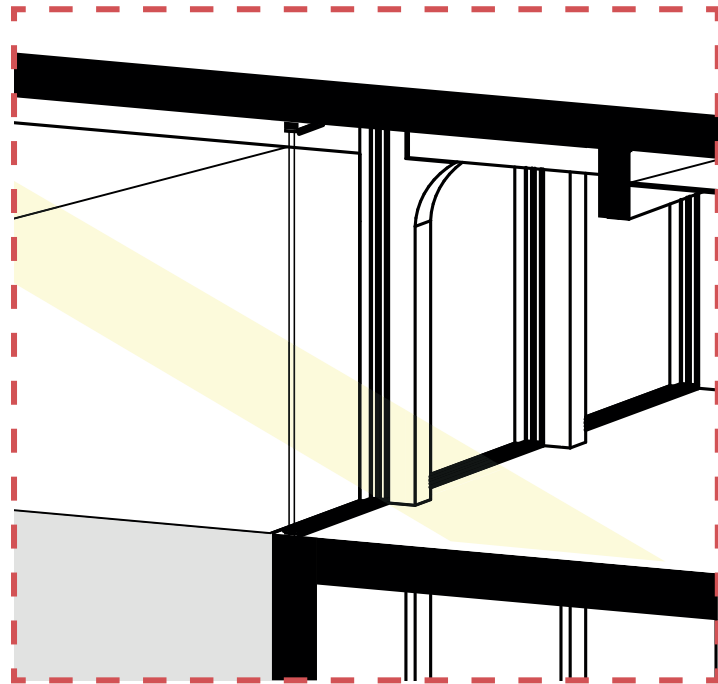
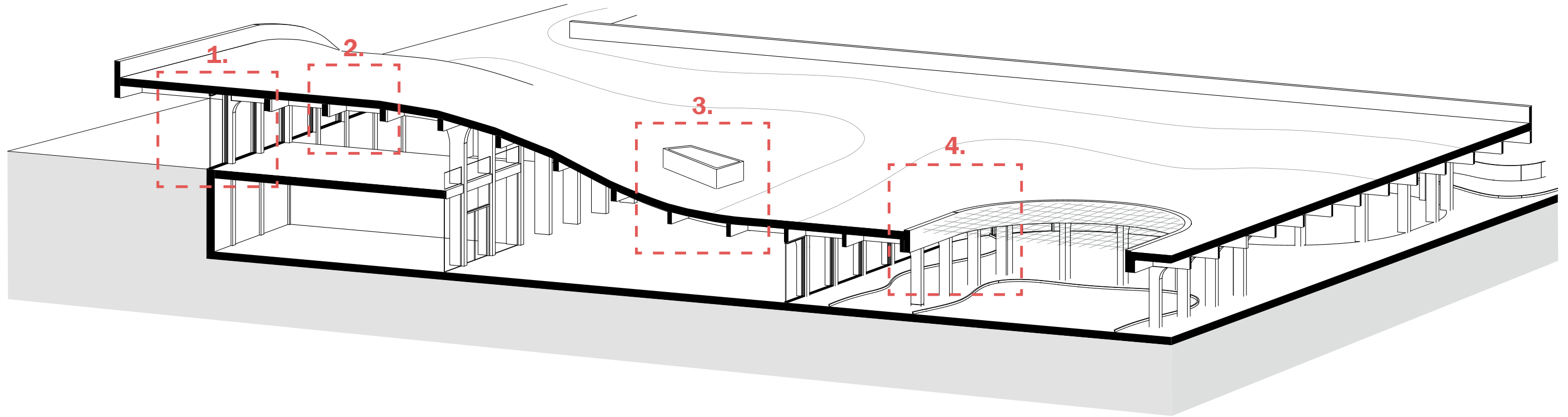


5. CONSTANT SOIL TEM- PERATURE

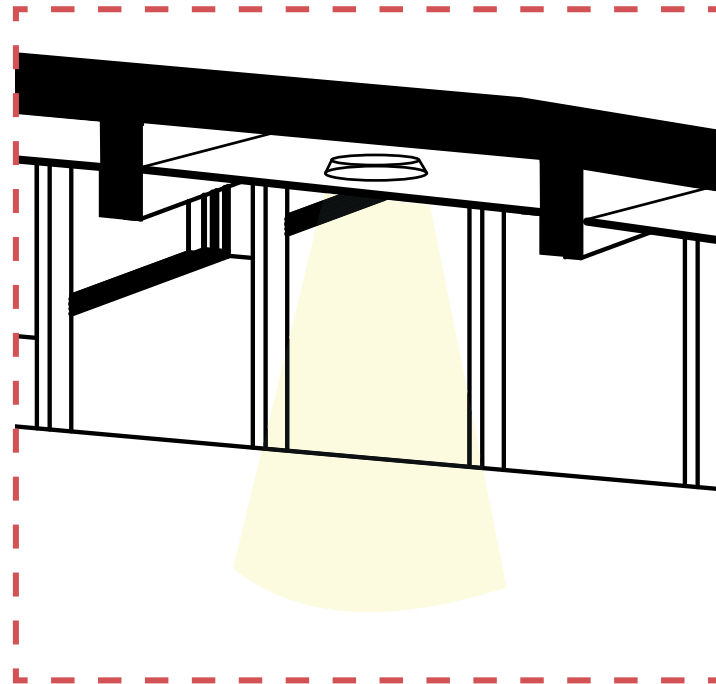
REDUCES
HEATING
ENERGY

CONSTANT S
OIL TEMPERATURE
OF AROUND 10 °C

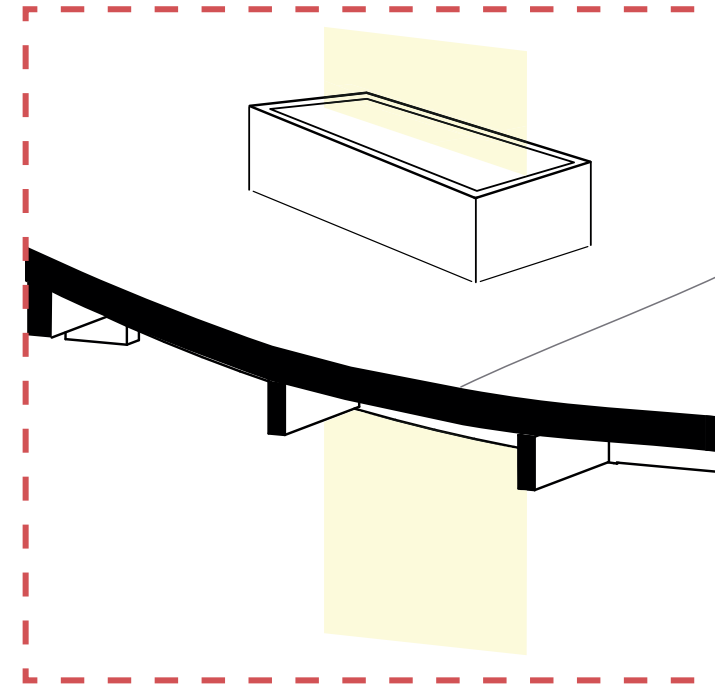
LIGHT PRINCIPLES



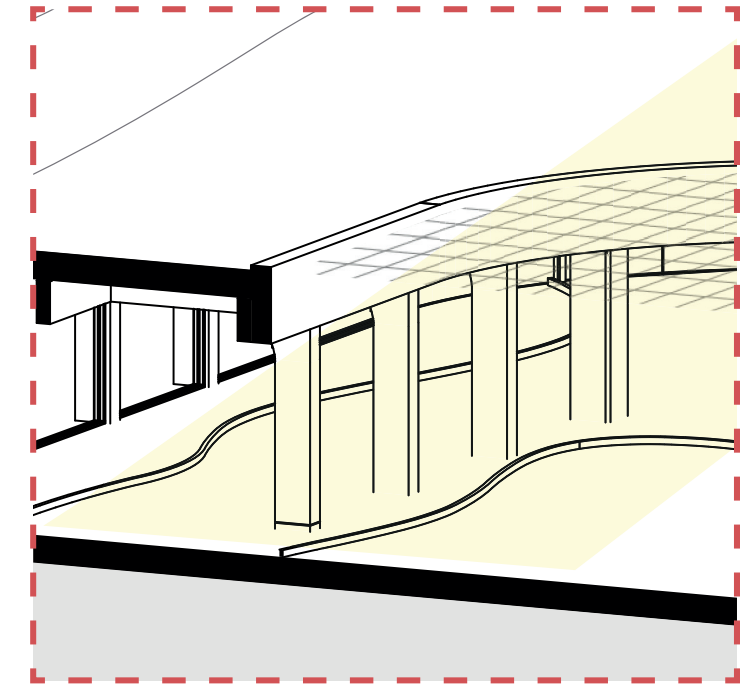
1. GLASS FACADE



2. ARTIFICIAL LIGHT

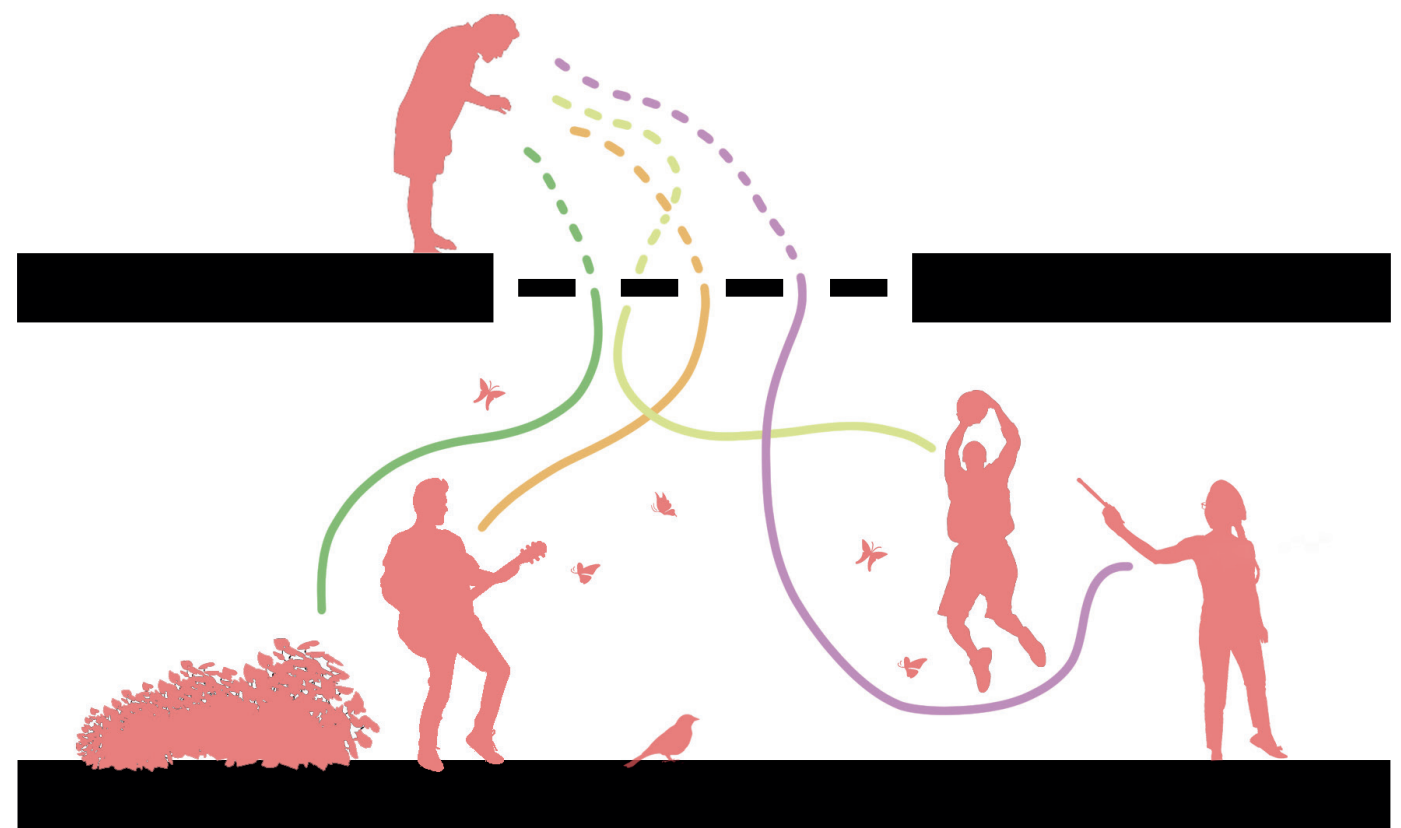
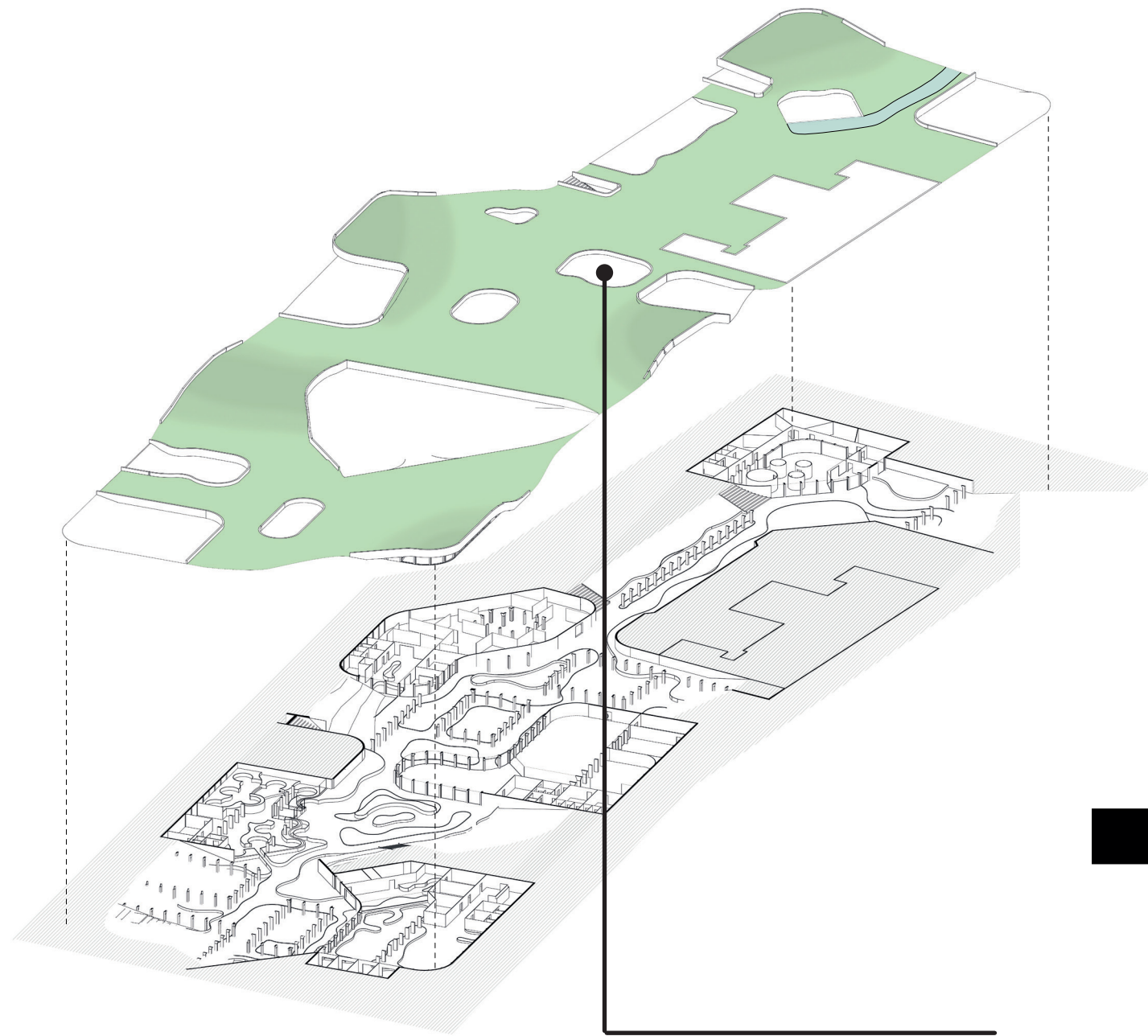


3. ROOF LIGHT



4. NET OPENINGS

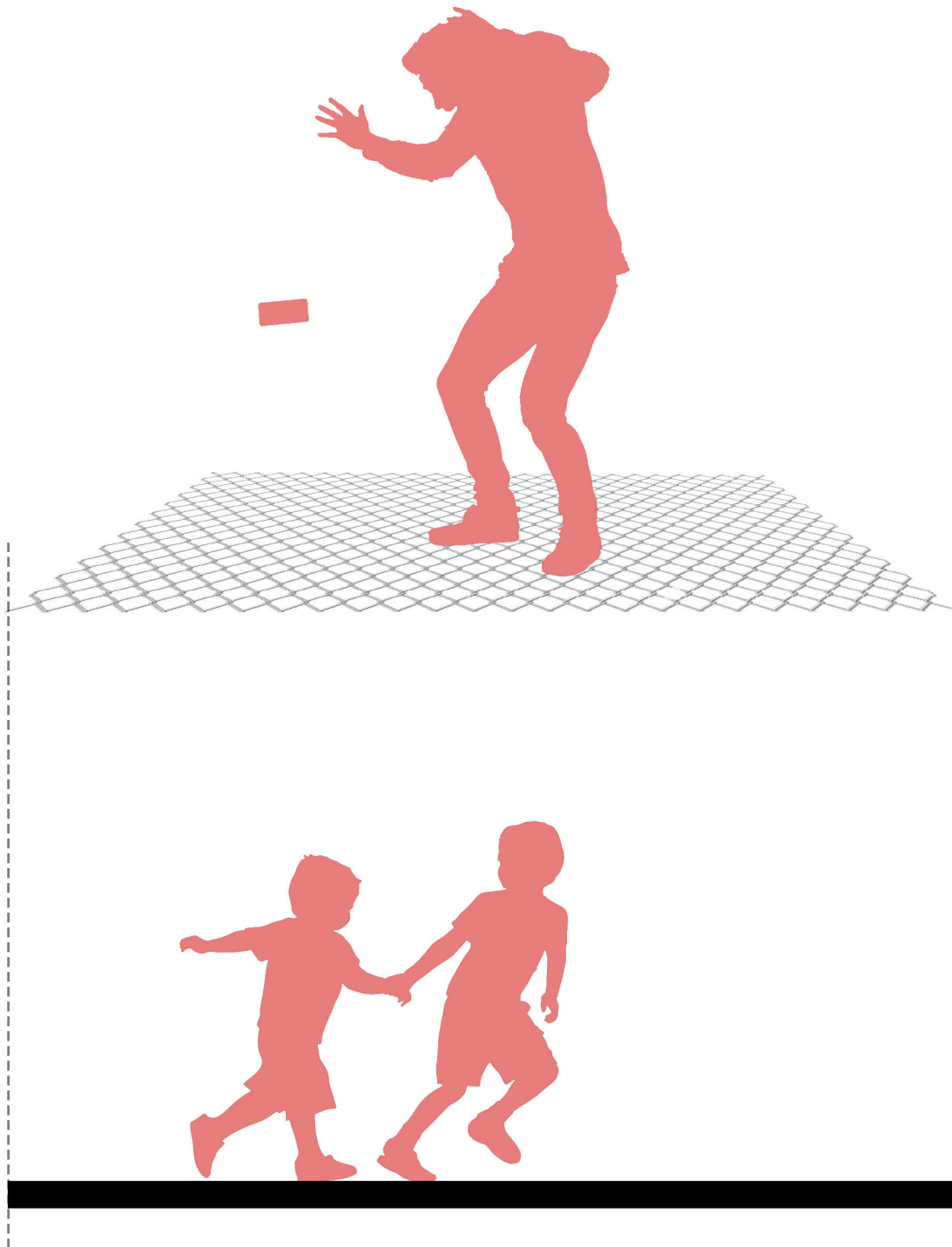
NET PRINCIPLE



NET PRINCIPLE

SAFETY

MOST COMMON PRODUCTS FALLING OUT OF POCKETS



7 x 14,5 cm

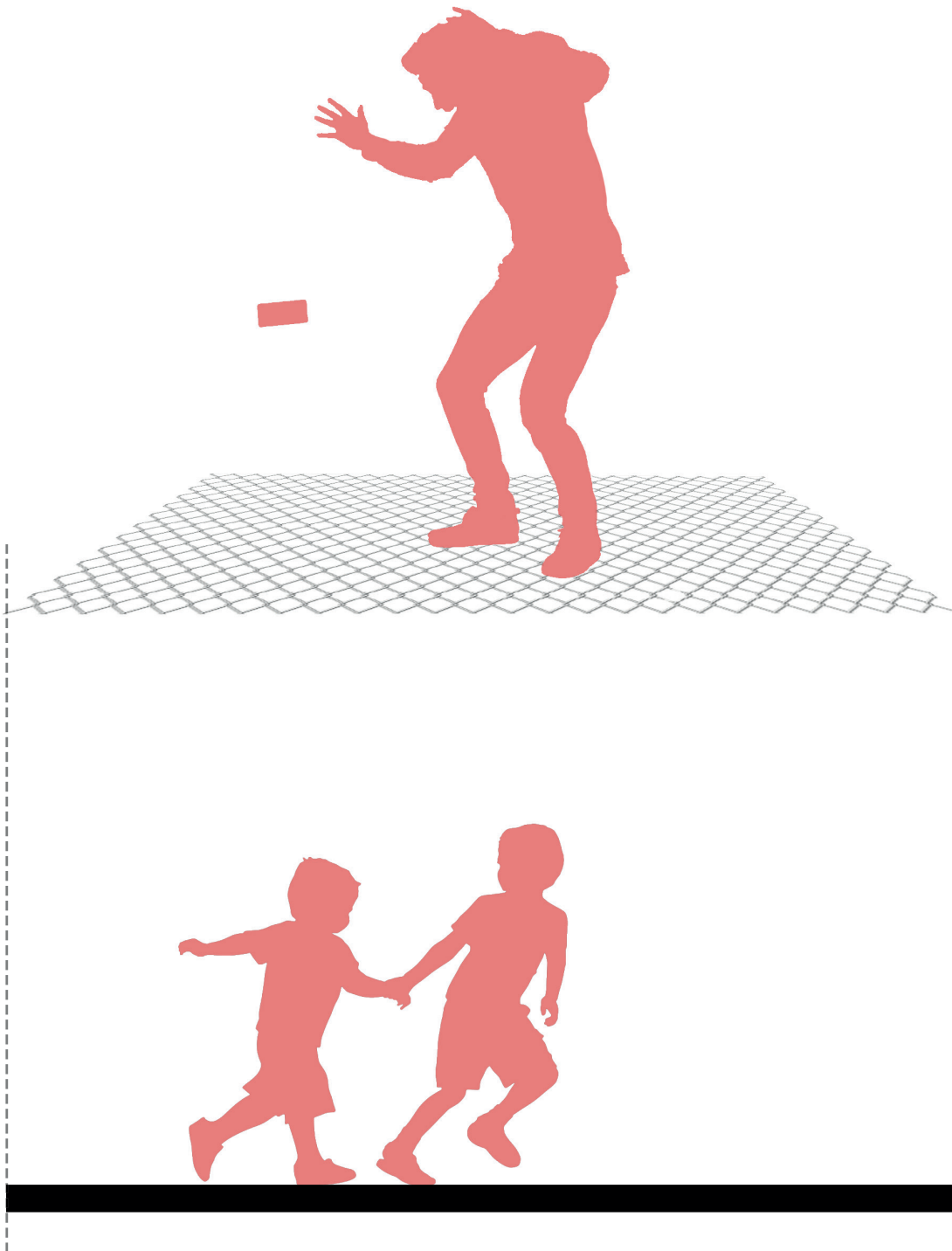


9 x 12 cm

NET PRINCIPLE

SAFETY

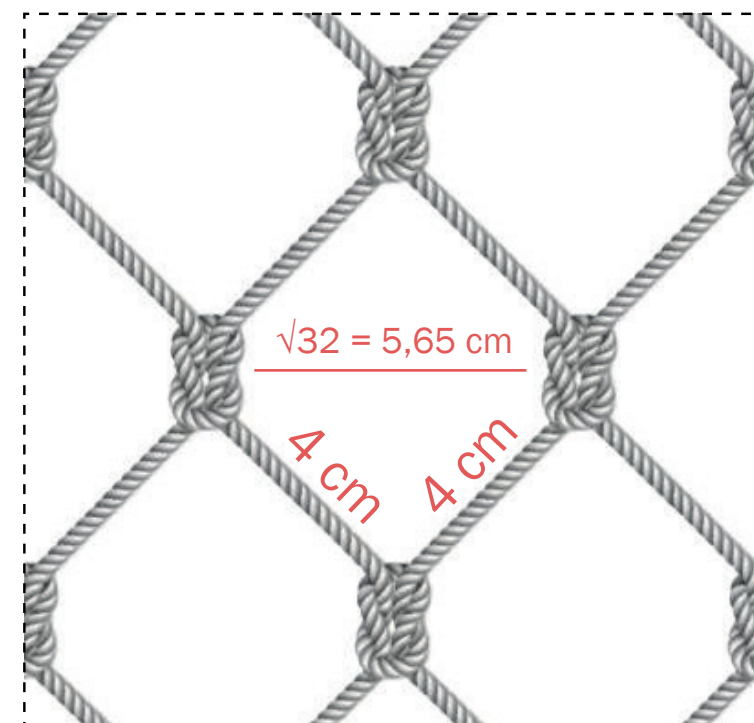
MOST COMMON PRODUCTS FALLING OUT OF POCKETS



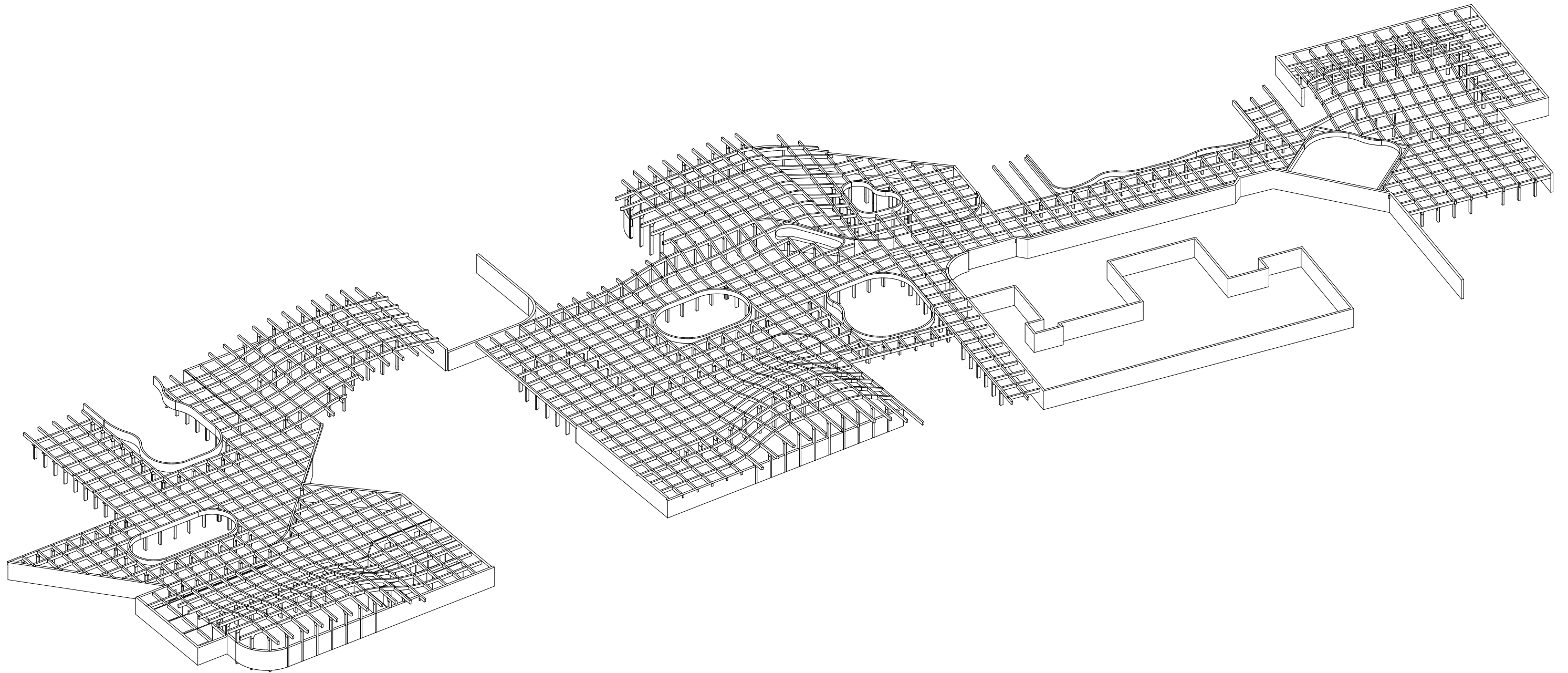
7 x 14,5 cm



9 x 12 cm

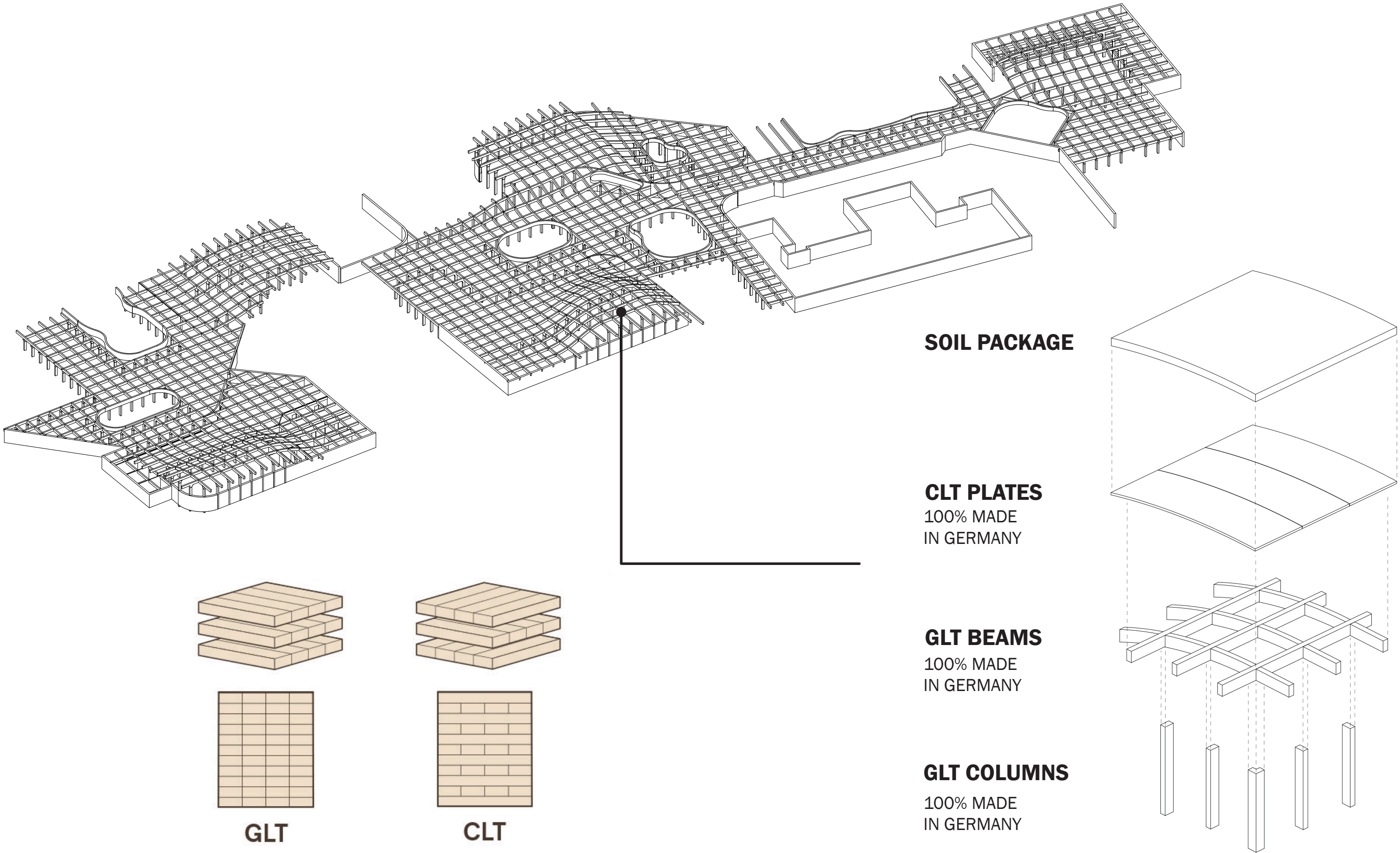


LOAD BEARING STRUCTURE



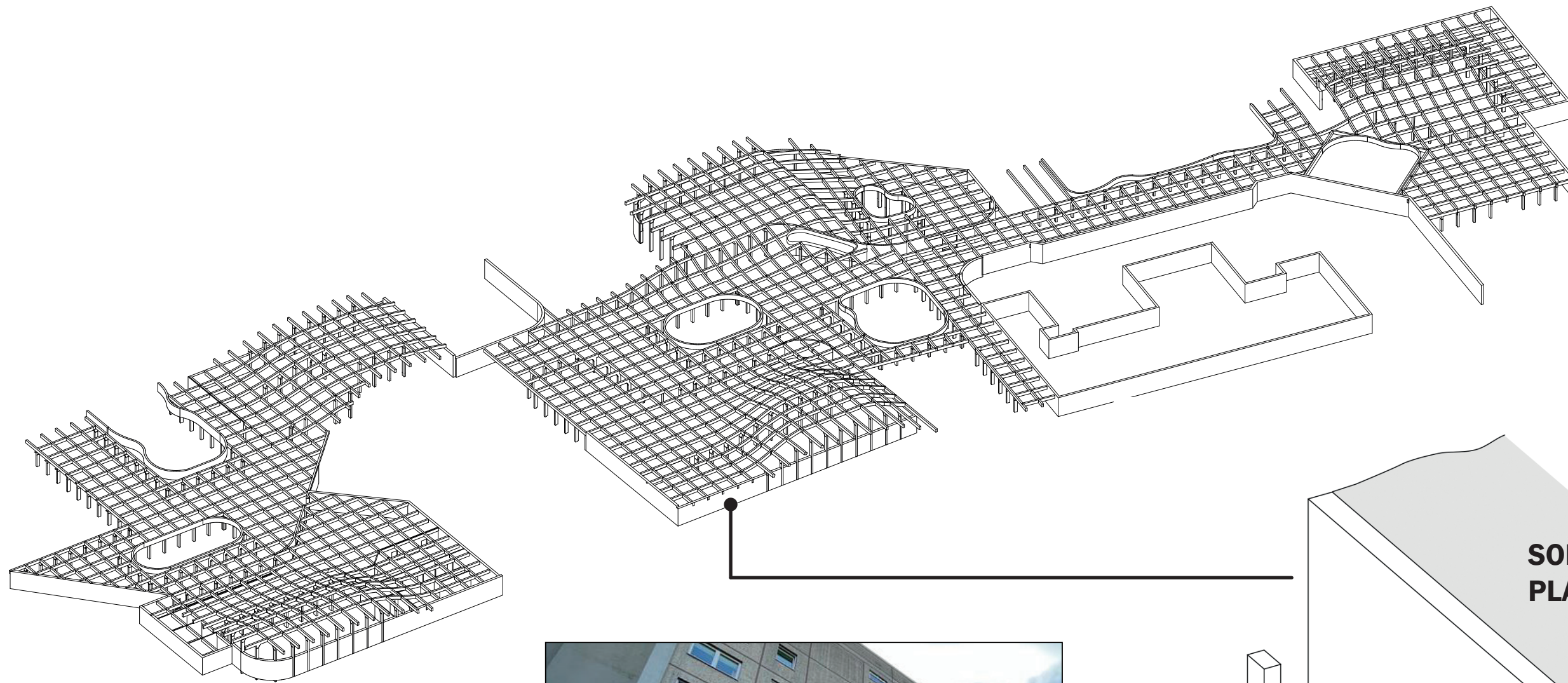
LOAD BEARING STRUCTURE

CONSTRUCTION PRINCIPLE

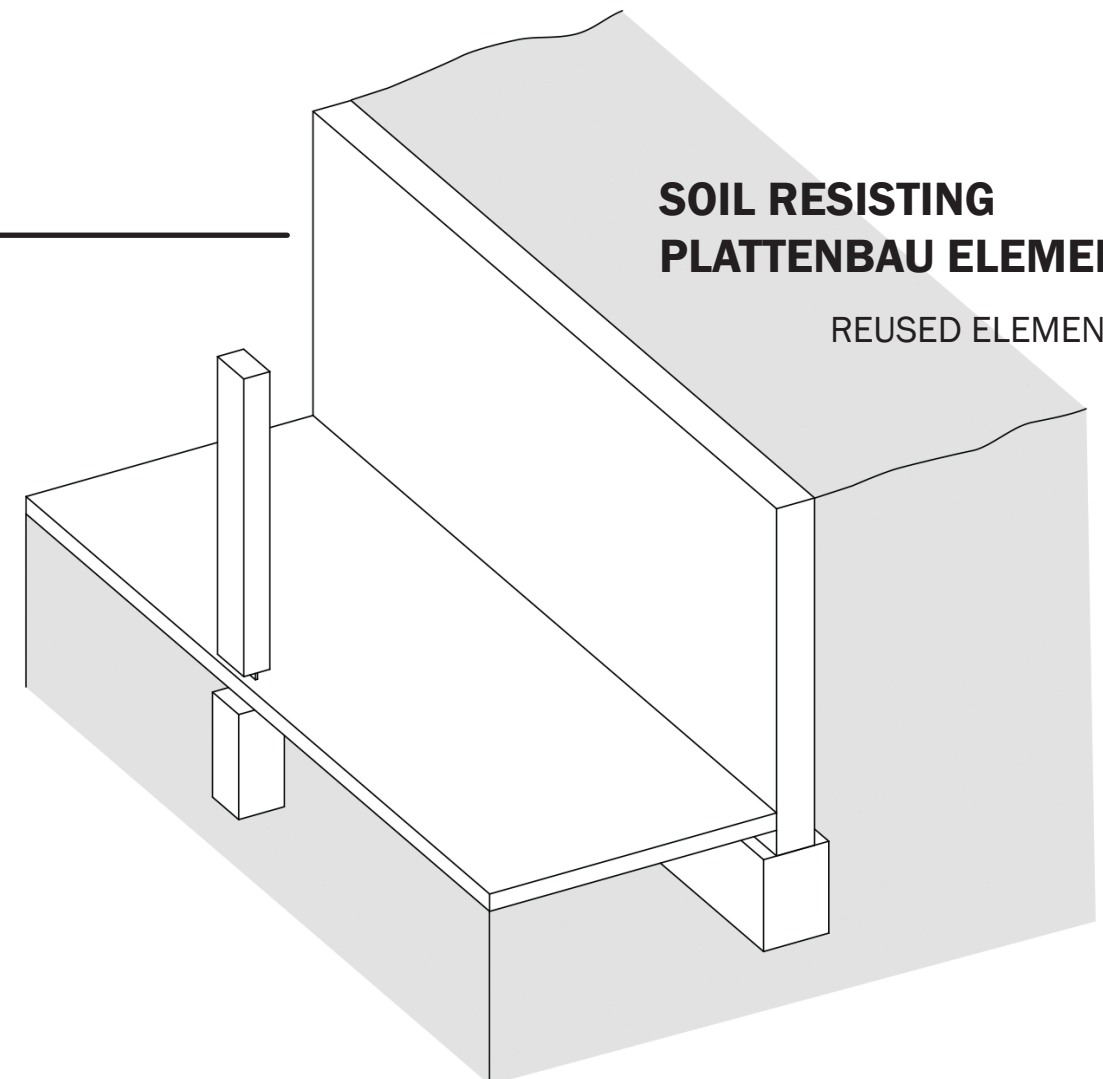
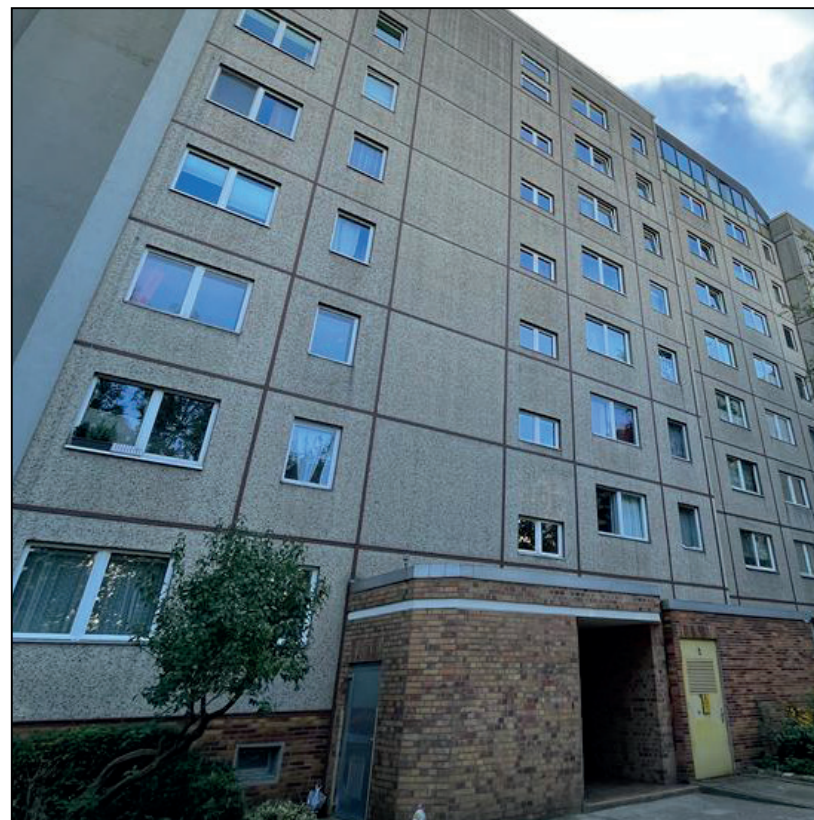


LOAD BEARING STRUCTURE

SOIL RESISTING ELEMENTS

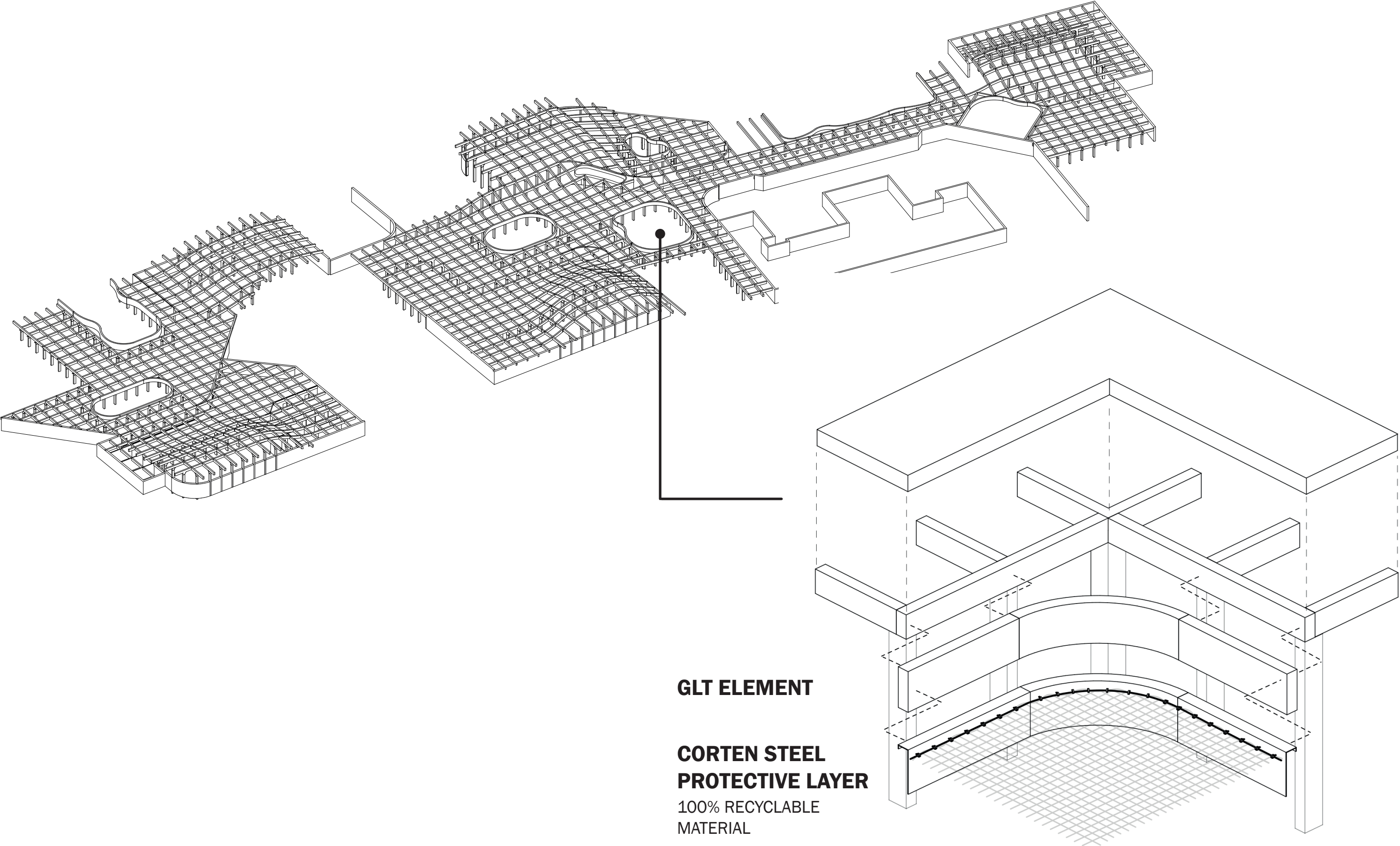


**SOIL RESISTING
PLATTENBAU ELEMENT**
REUSED ELEMENTS



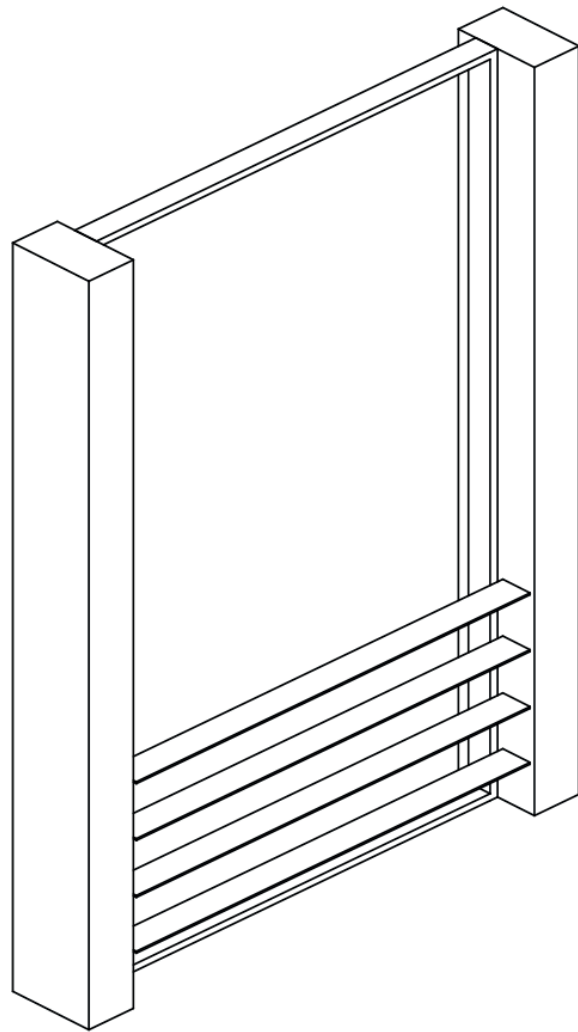
LOAD BEARING STRUCTURE

NET PRINCIPLE

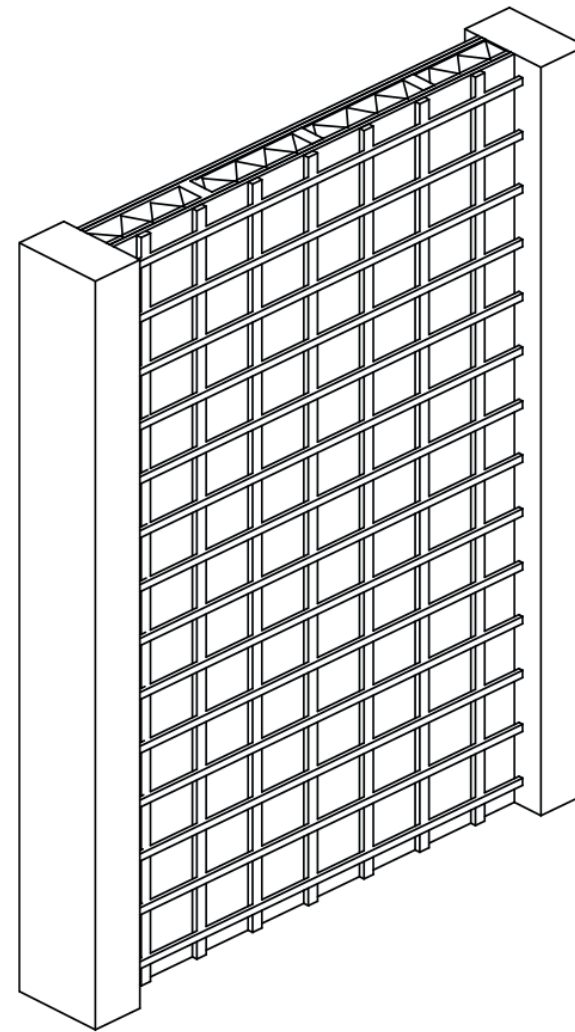


FACADES

PRINCIPLE



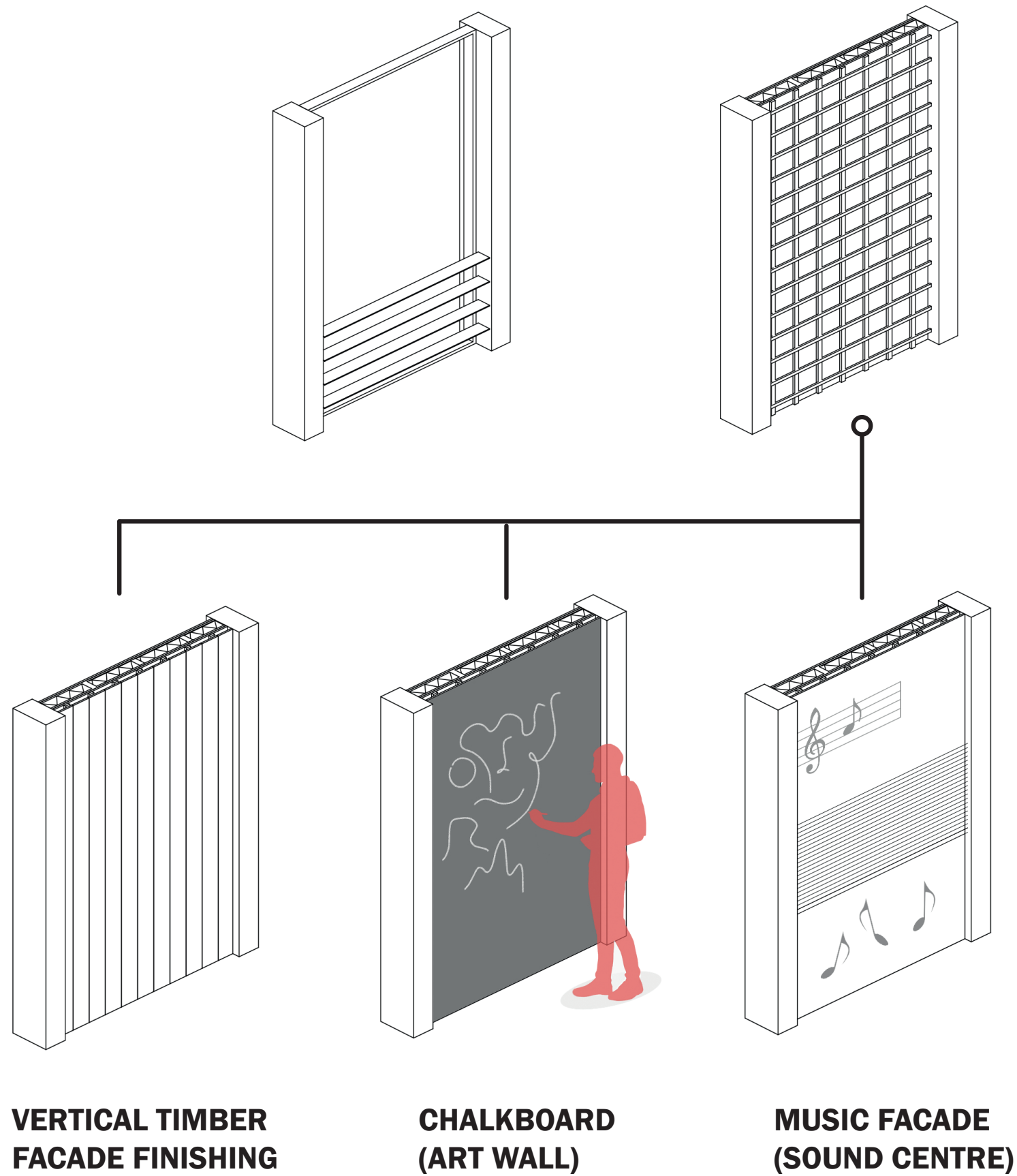
1. GLASS PANEL



**2. TIMBER FRAME
CONSTRUCTION**

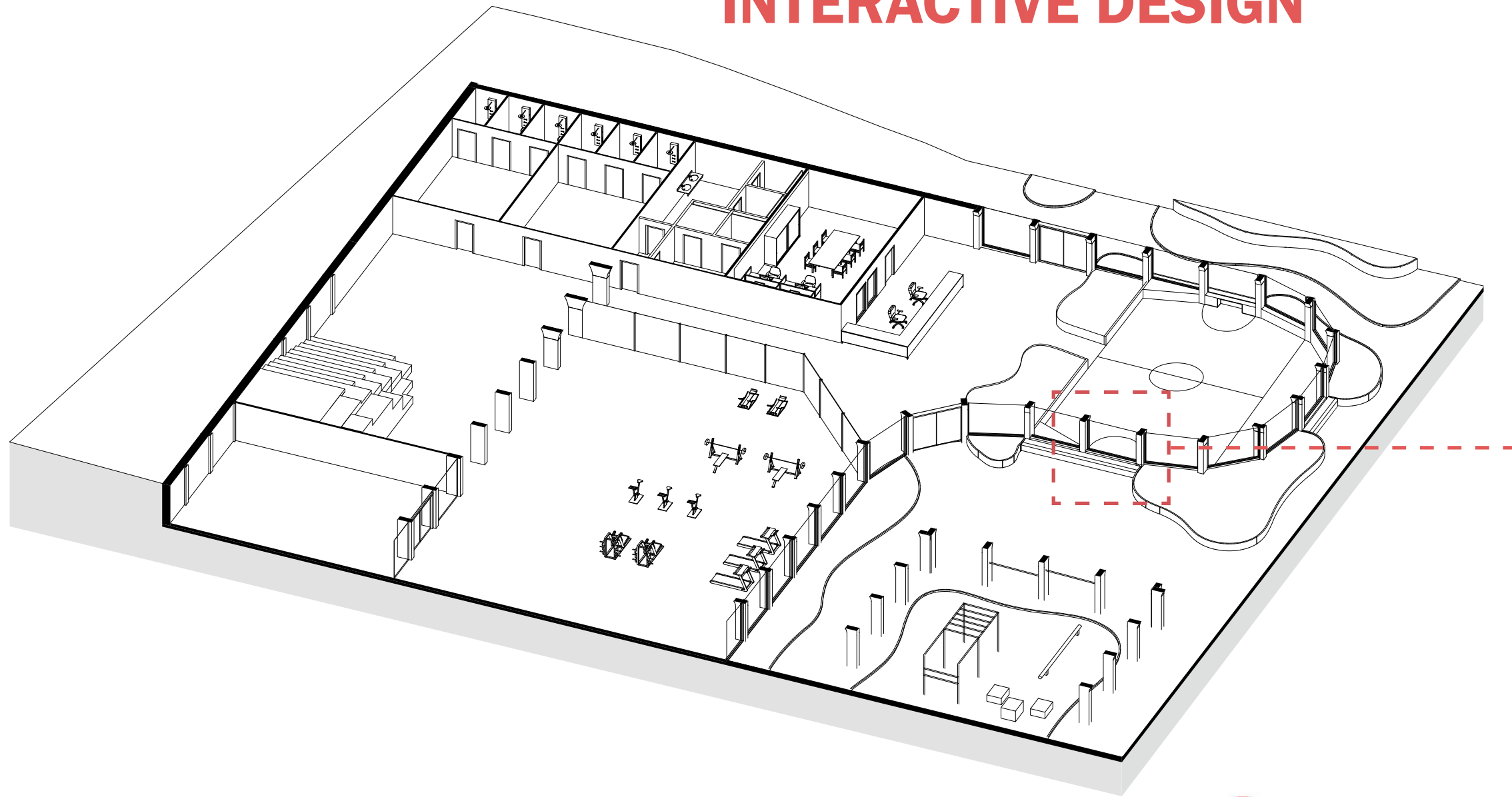
FACADES

PRINCIPLE



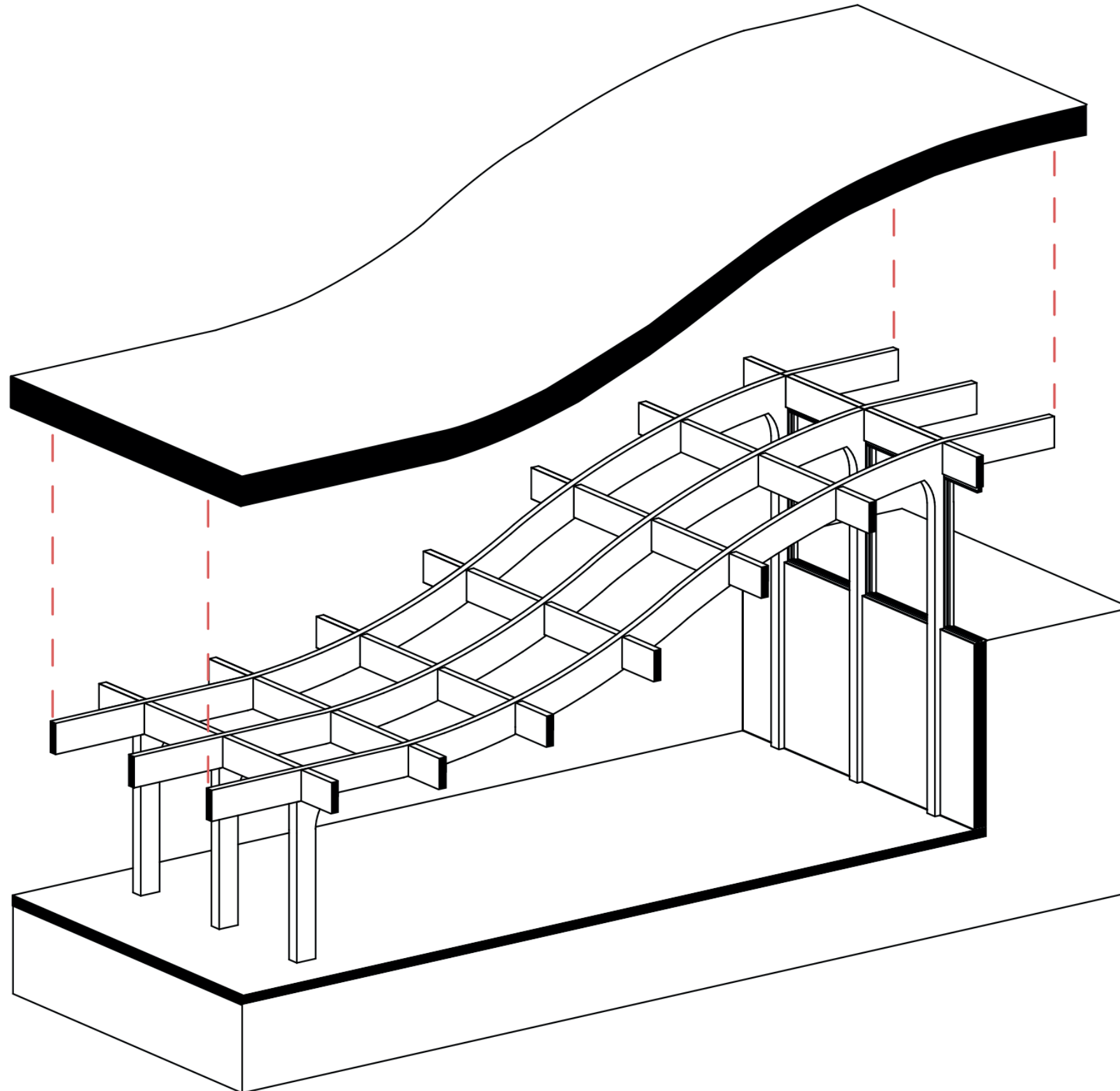
FUNCTIONAL FACADE

INTERACTIVE DESIGN



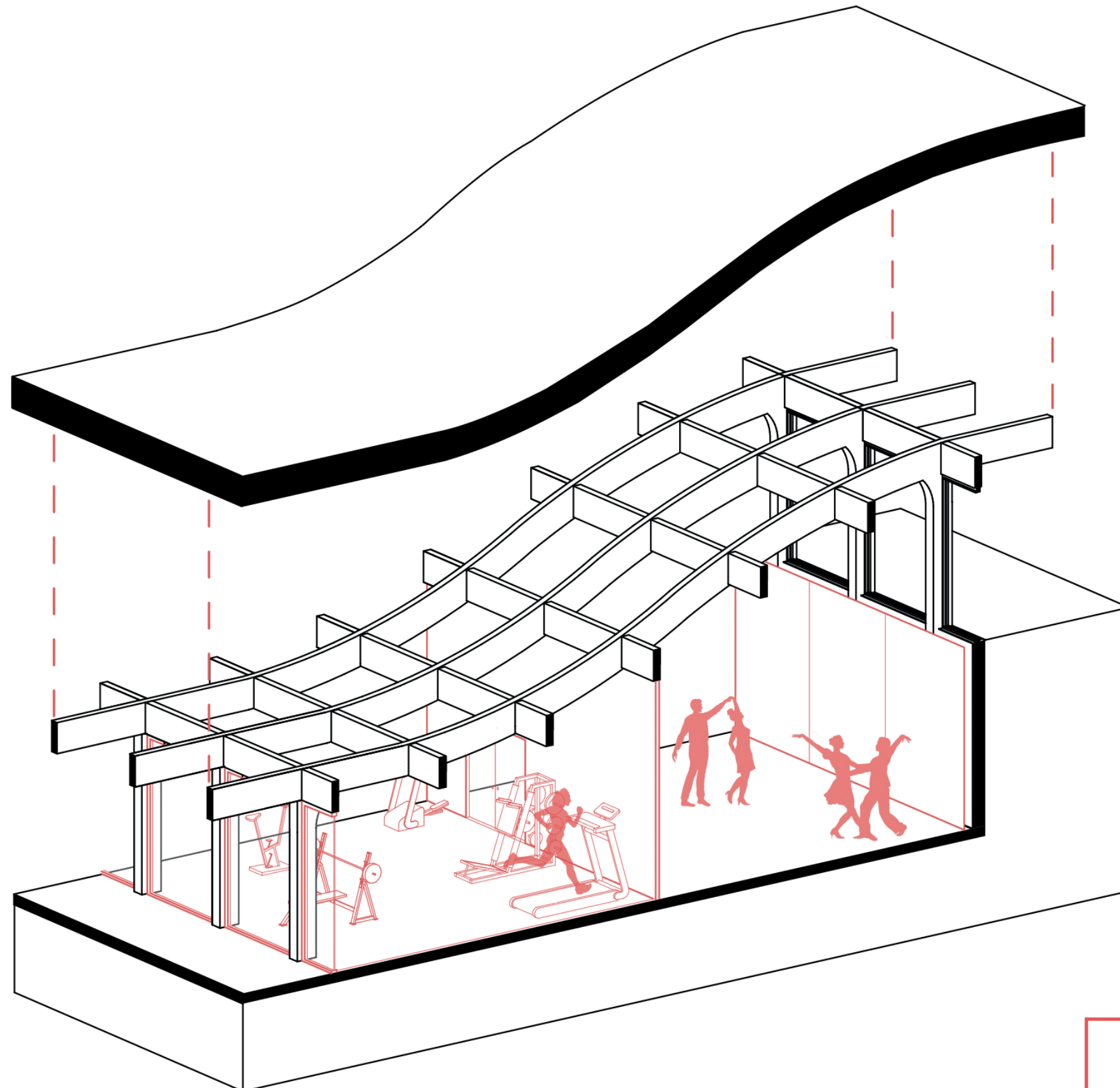
PAVILION INFILLS

'HARDWARE'



PAVILION INFILLS

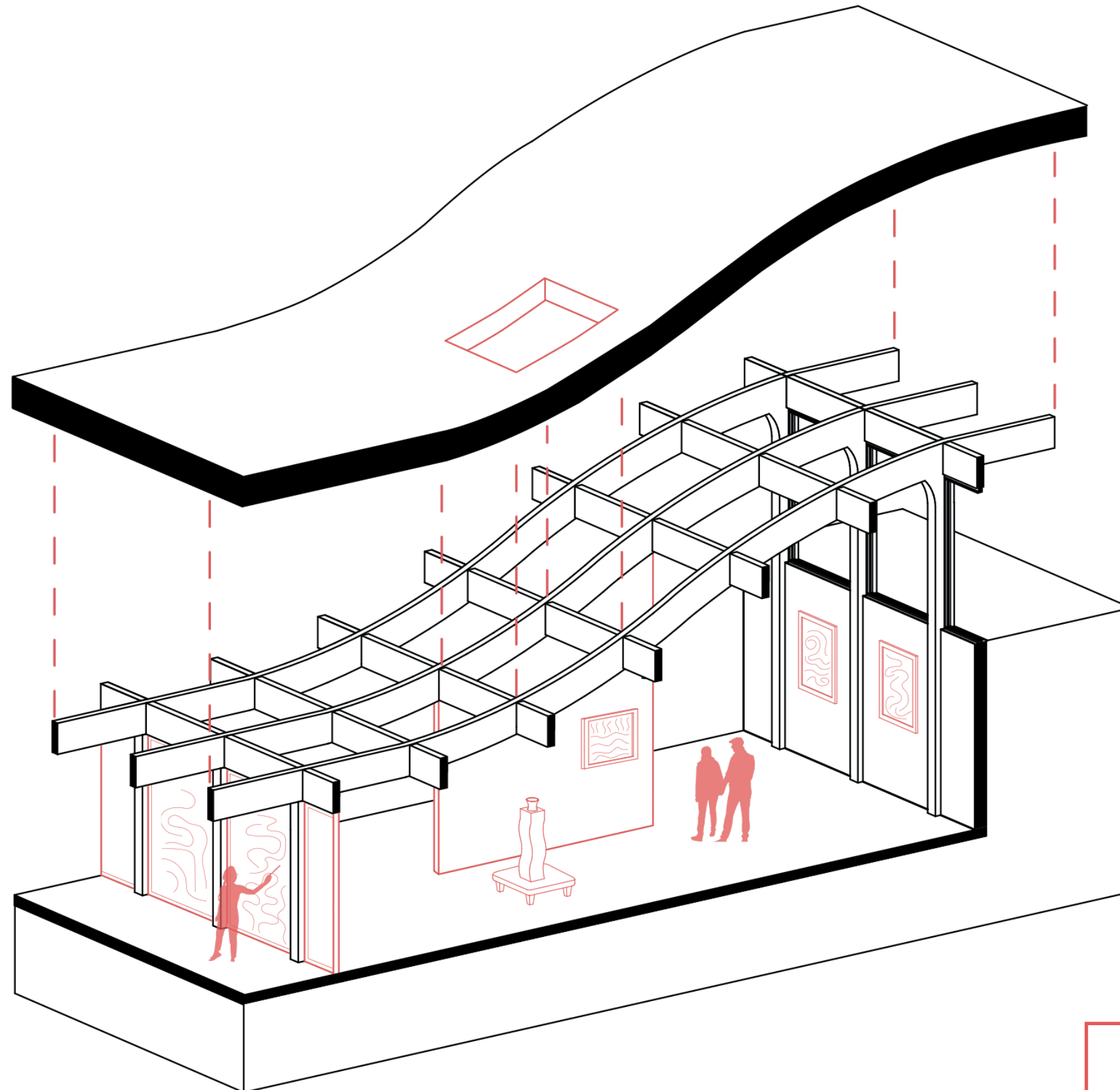
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SPORTS

PAVILION INFILLS

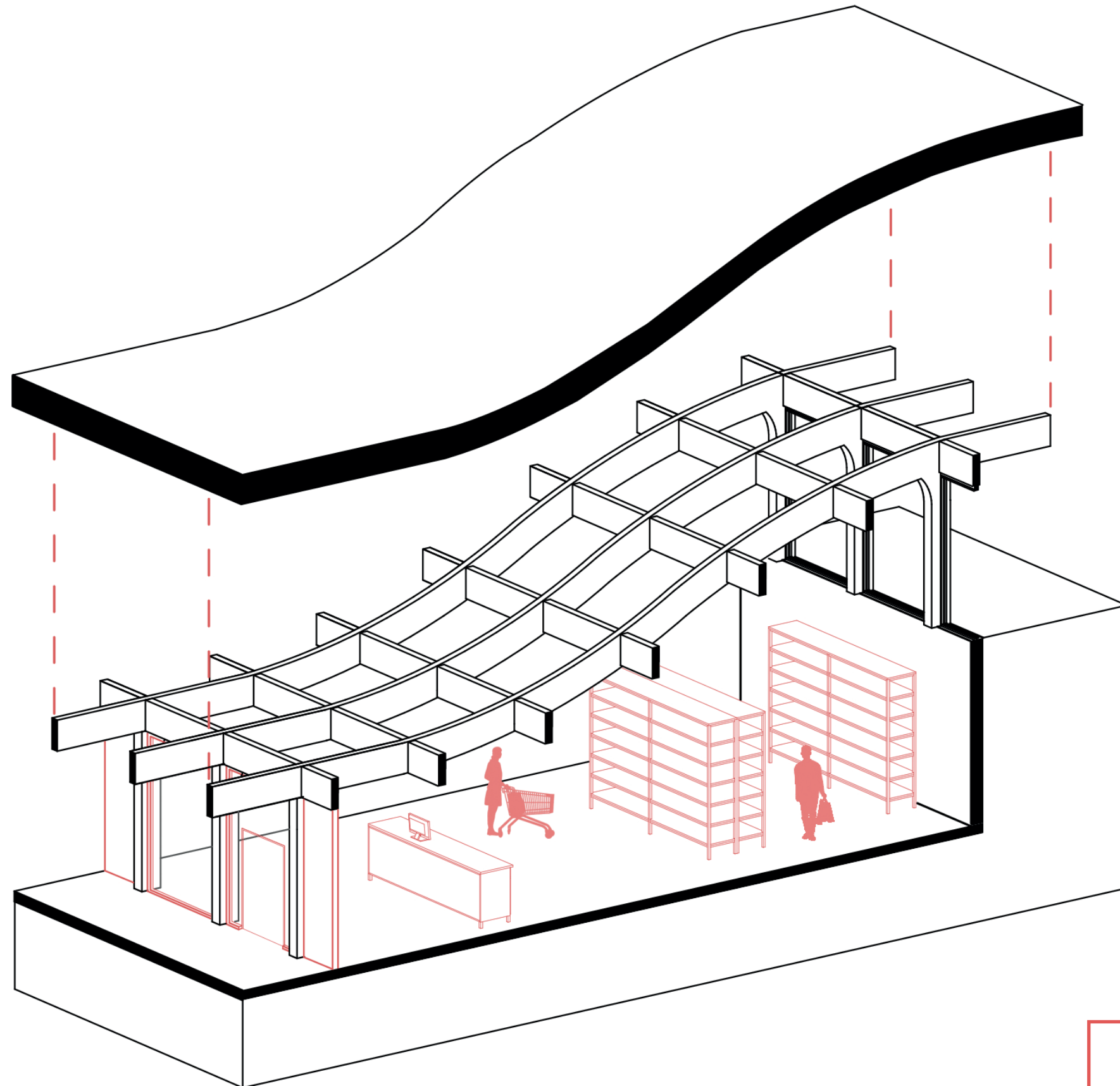
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ART

PAVILION INFILLS

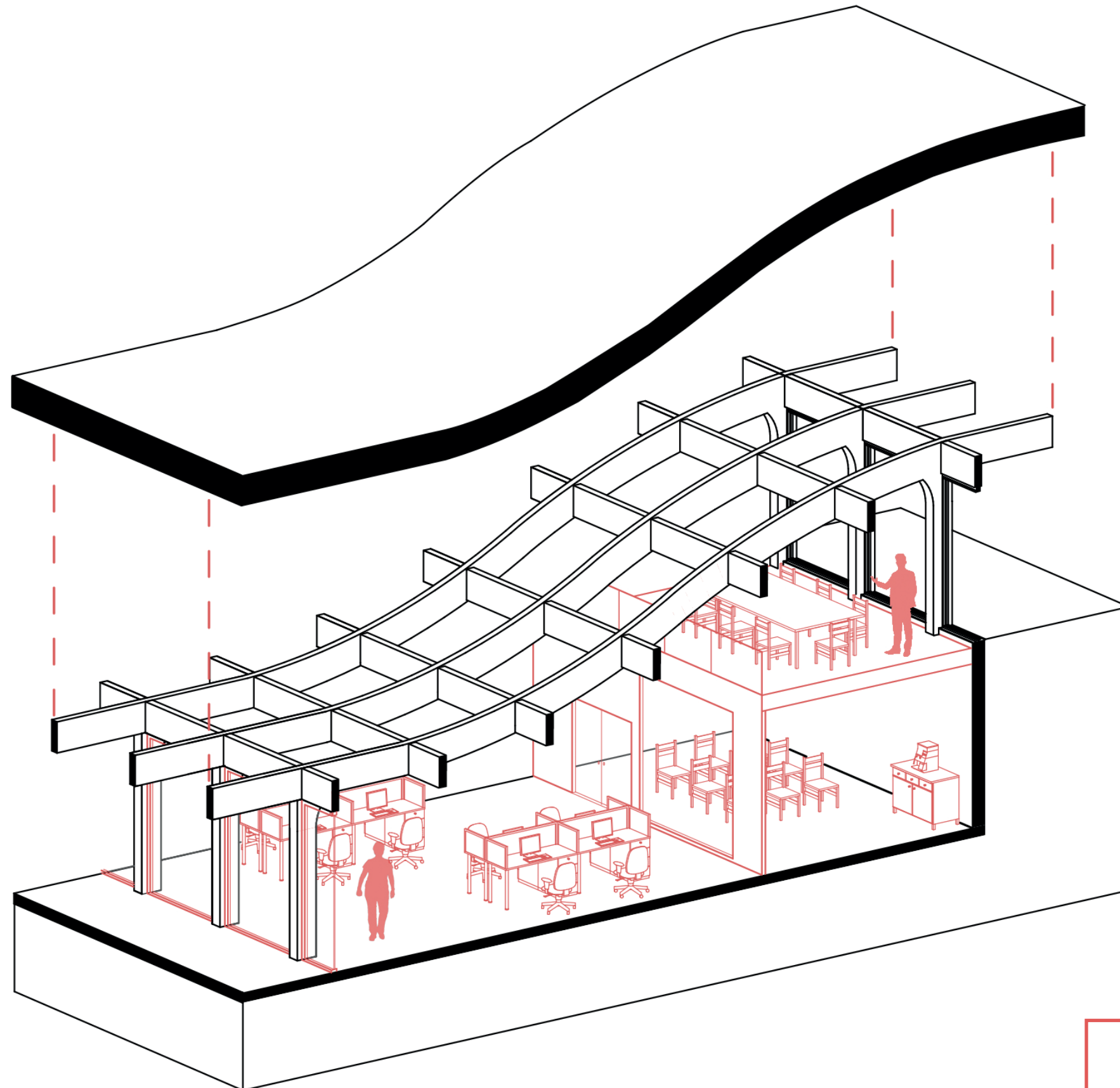
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SHOP

PAVILION INFILLS

'SOFTWARE'



OFFICE

FLOORPLAN

SENSORY ROUTE

RESTAURANT

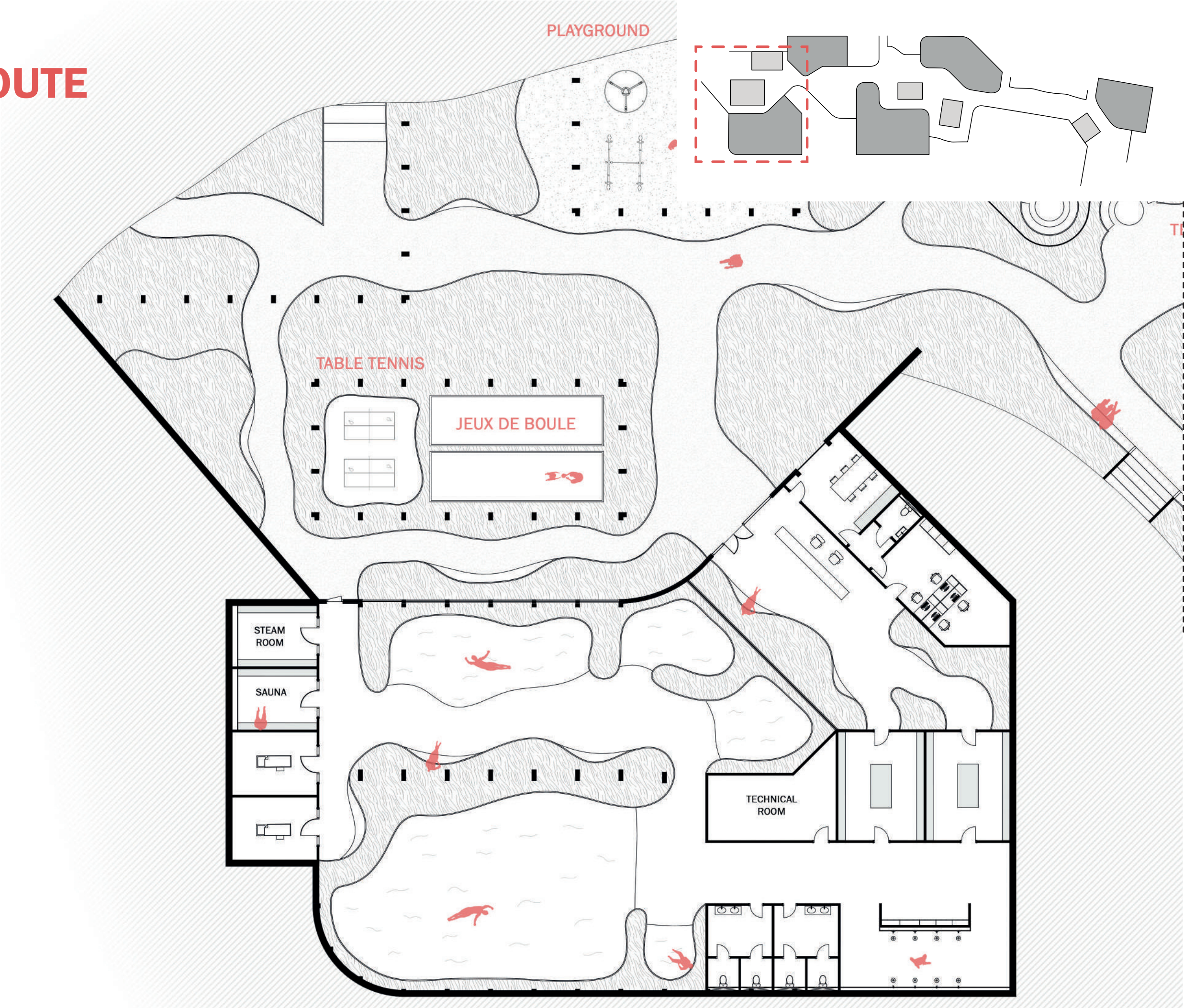
ART CENTRE

SOUND CENTRE



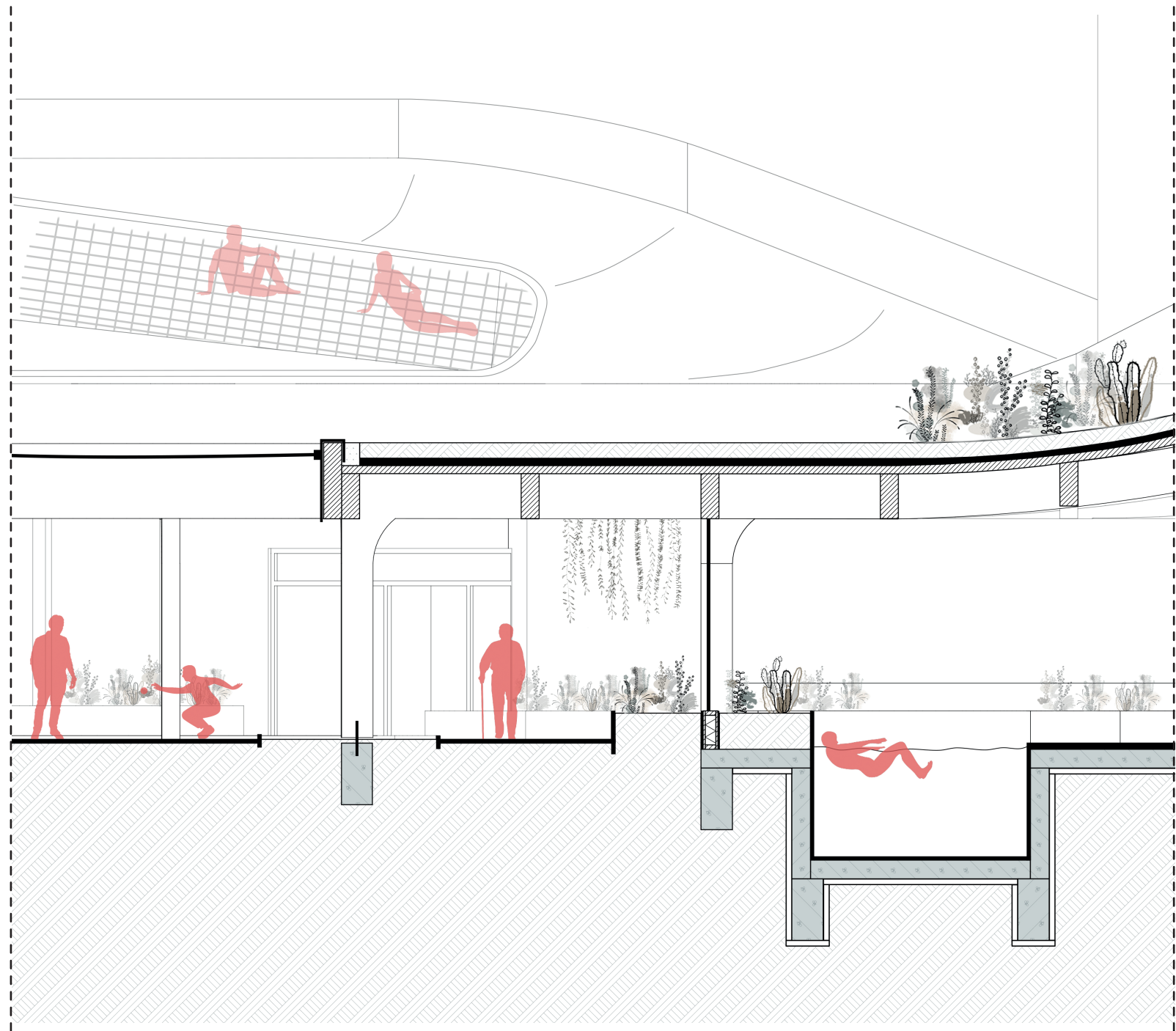
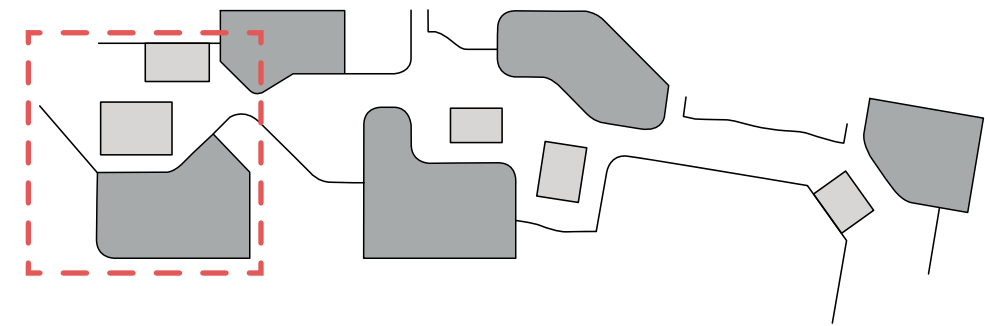
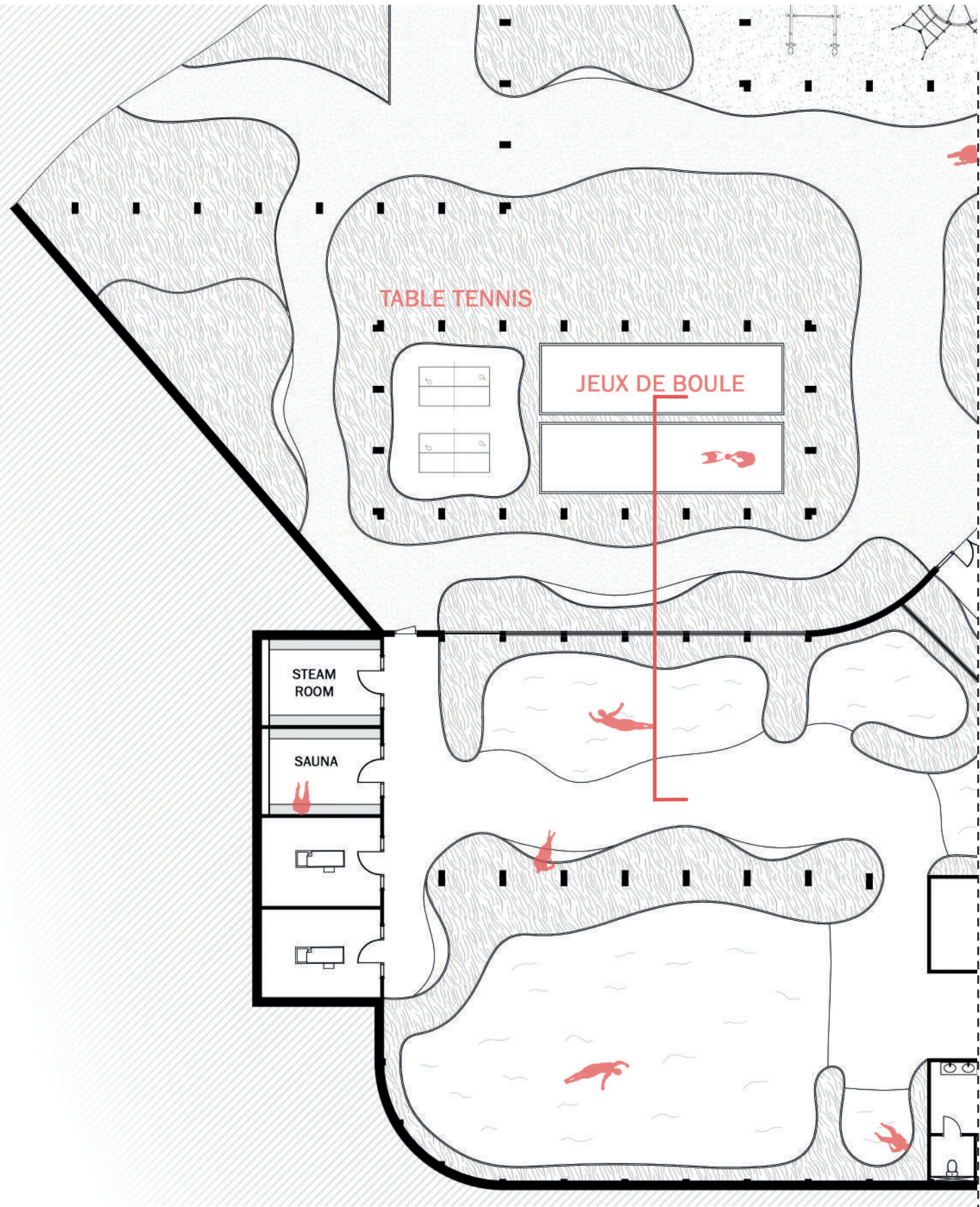
FLOORPLAN

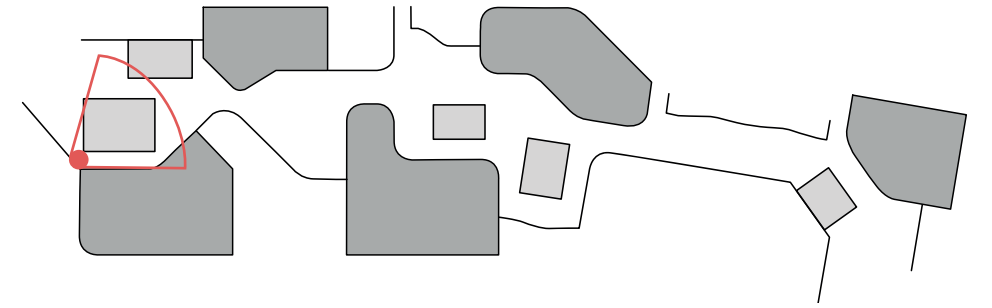
SENSORY ROUTE

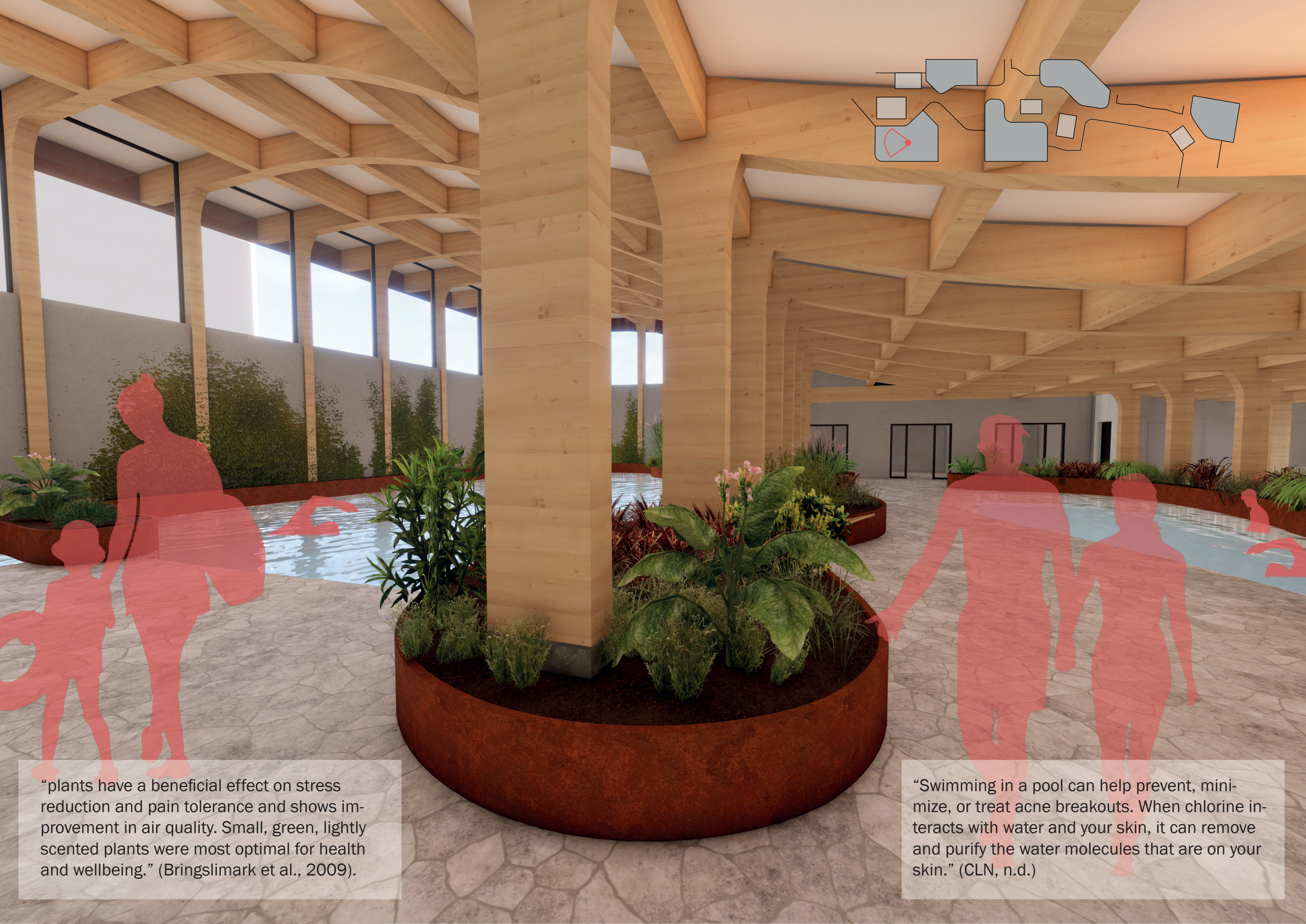


FLOORPLAN & SECTION

SENSORY ROUTE

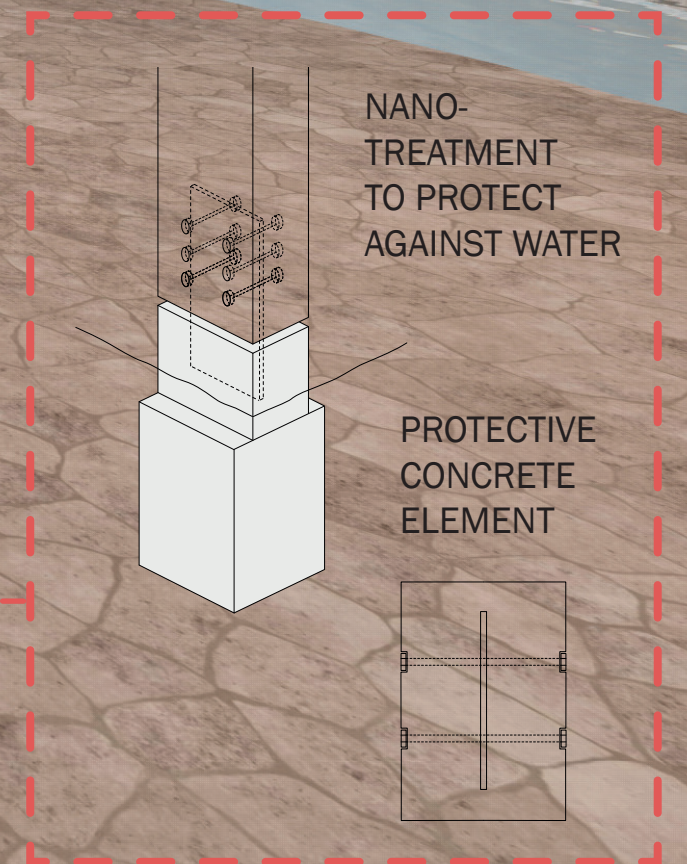
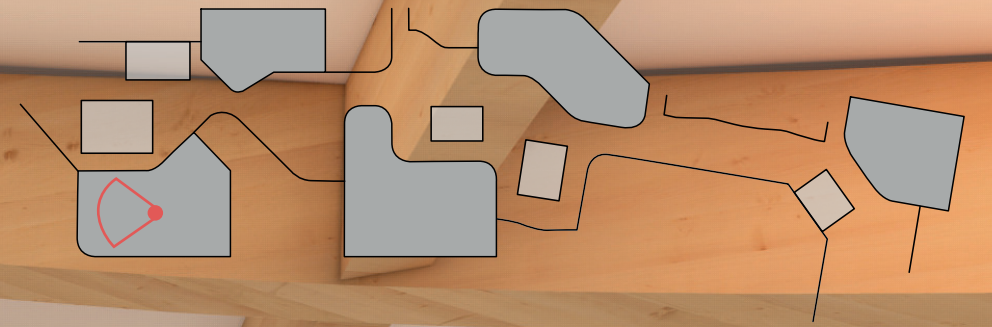






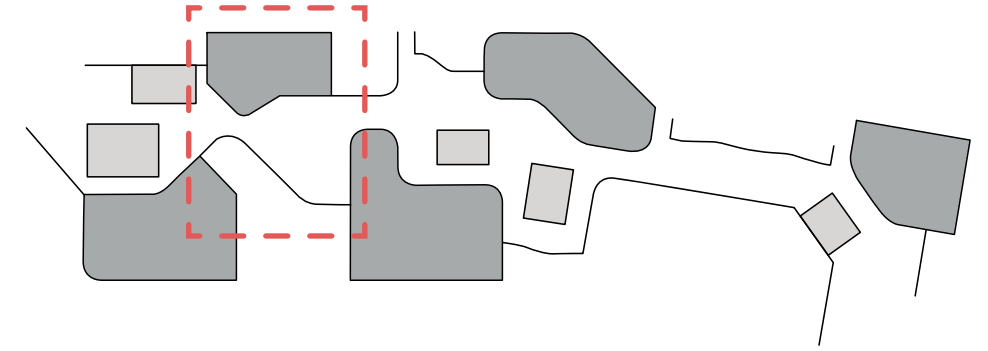
“plants have a beneficial effect on stress reduction and pain tolerance and shows improvement in air quality. Small, green, lightly scented plants were most optimal for health and wellbeing.” (Bringslimark et al., 2009).

“Swimming in a pool can help prevent, minimize, or treat acne breakouts. When chlorine interacts with water and your skin, it can remove and purify the water molecules that are on your skin.” (CLN, n.d.)



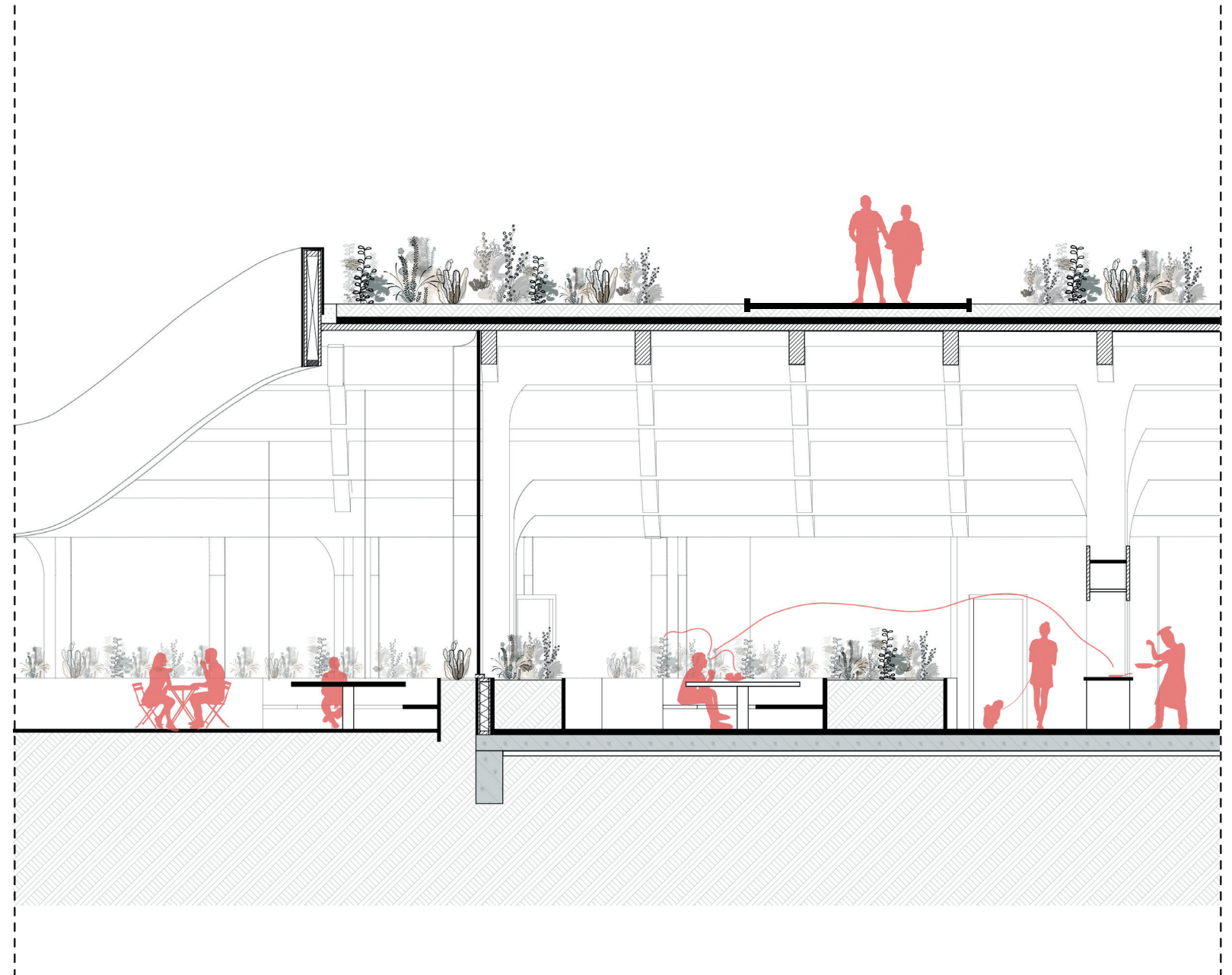
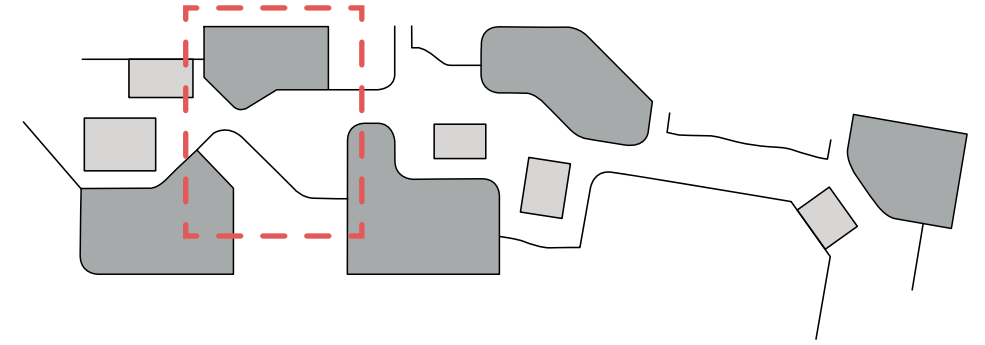
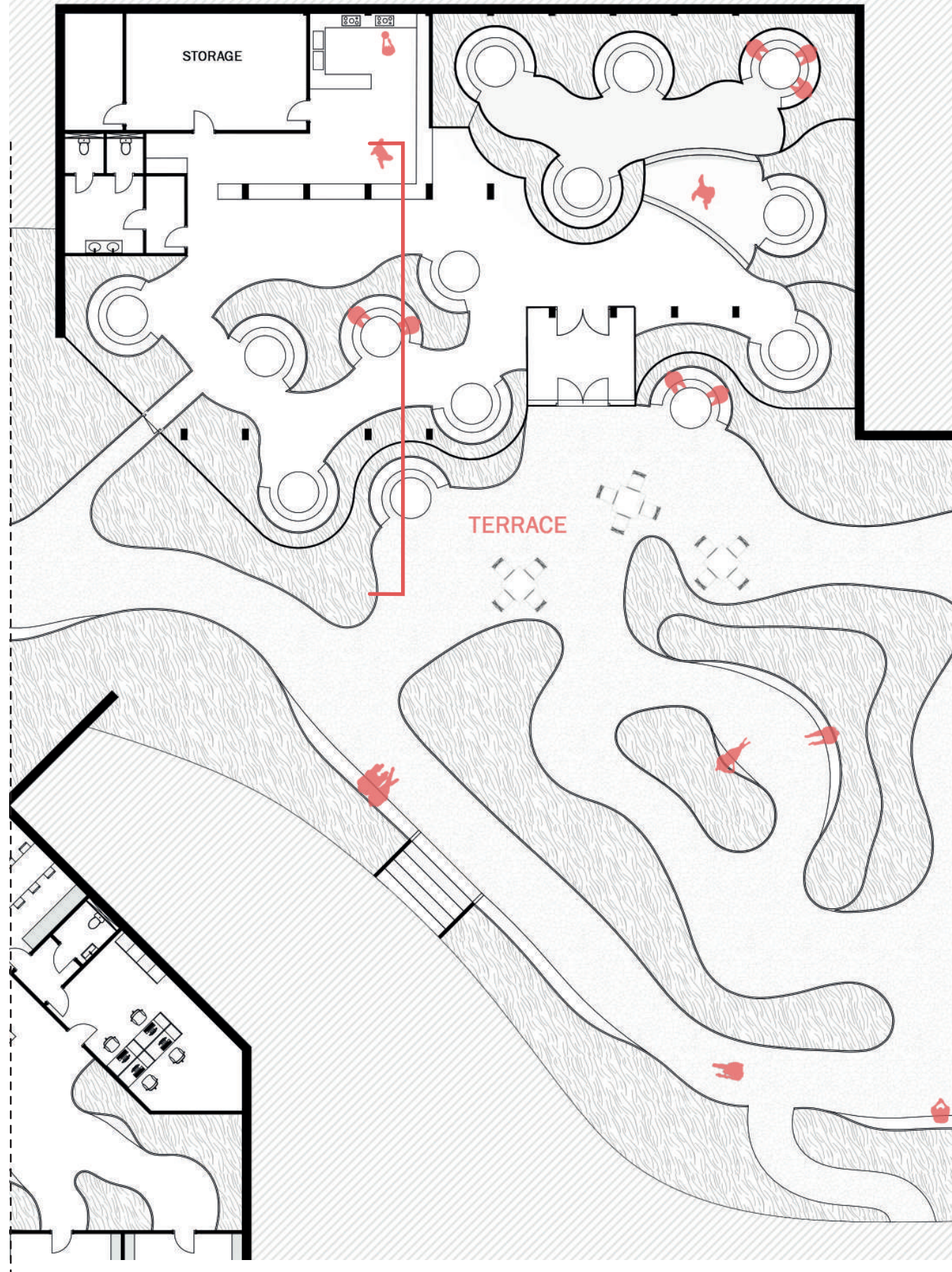
FLOORPLAN

SENSORY ROUTE



FLOORPLAN

SENSORY ROUTE



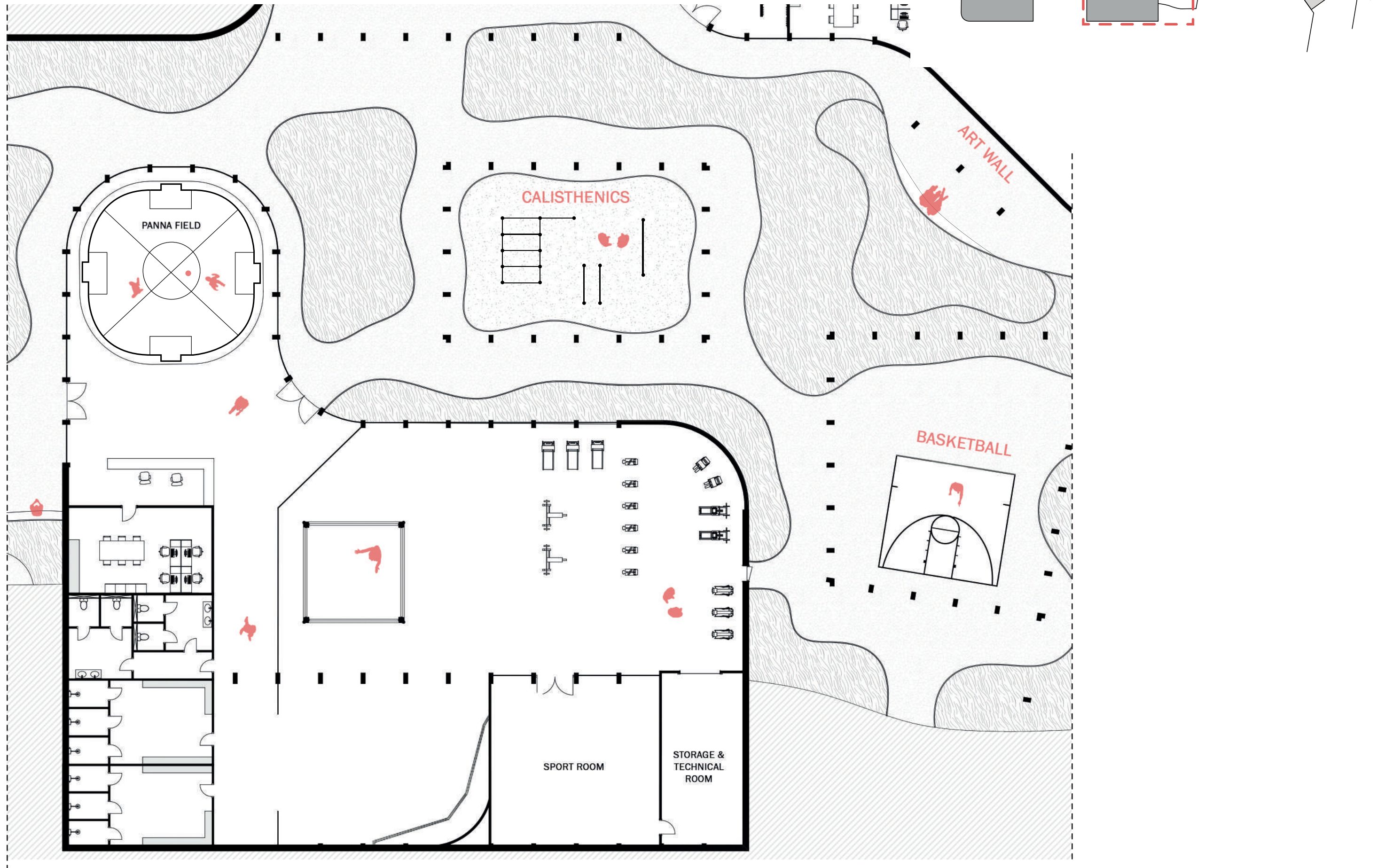


“You may not literally taste the materials in a building, but the design of a restaurant can have an impact on your ‘conditioned response’ to the taste of the food.” (Eberhard, 2007, p.47).

Researchers have already demonstrated the beneficial effects that lavender, and other scents normally associated with aromatherapy, have on those who are exposed to them. So, for instance, the latter tend to show reduced stress, better sleep, and even enhanced recovery from illness. (Spence, 2020).

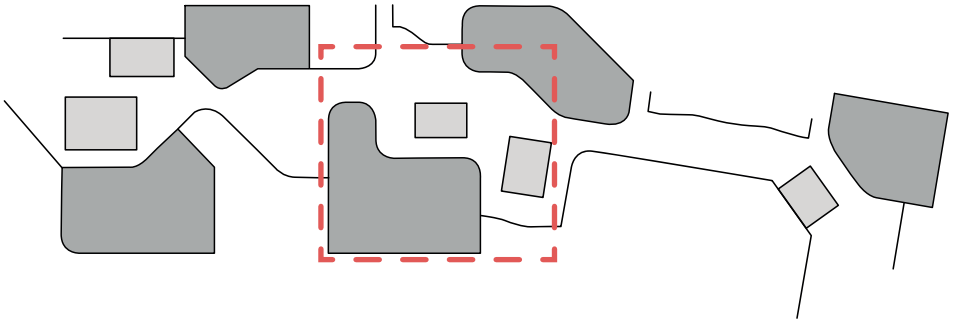
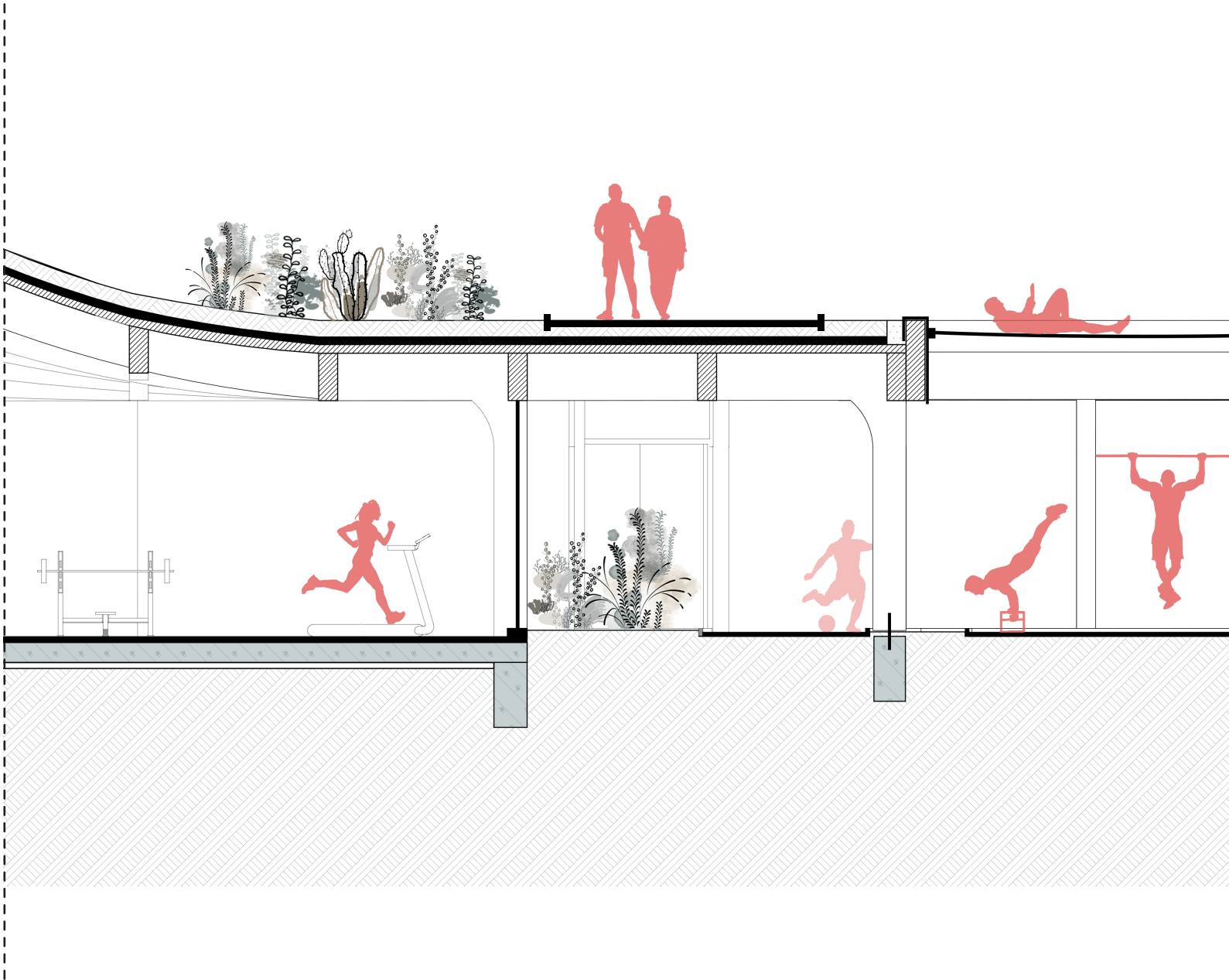
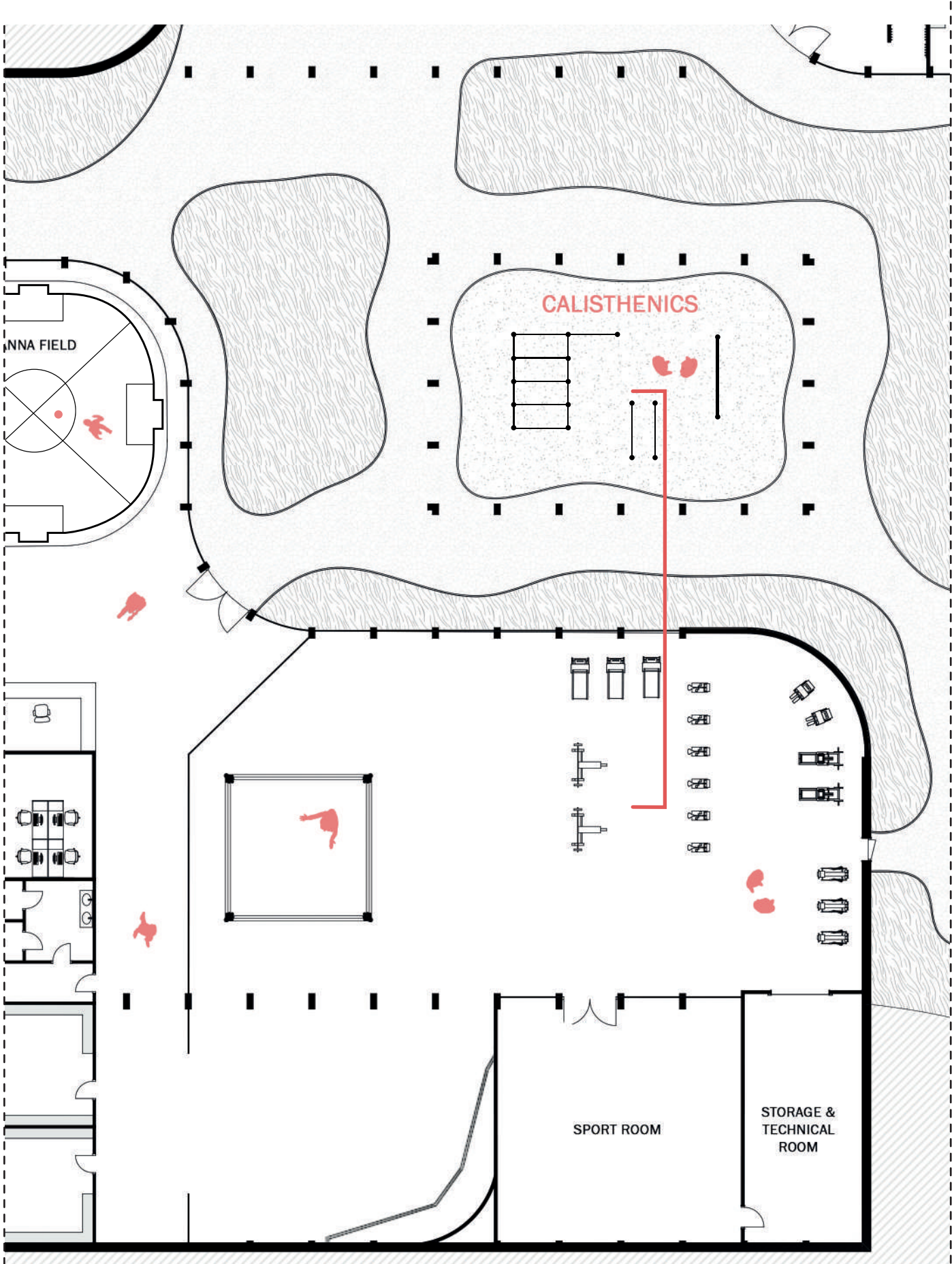
FLOORPLAN

SENSORY ROUTE

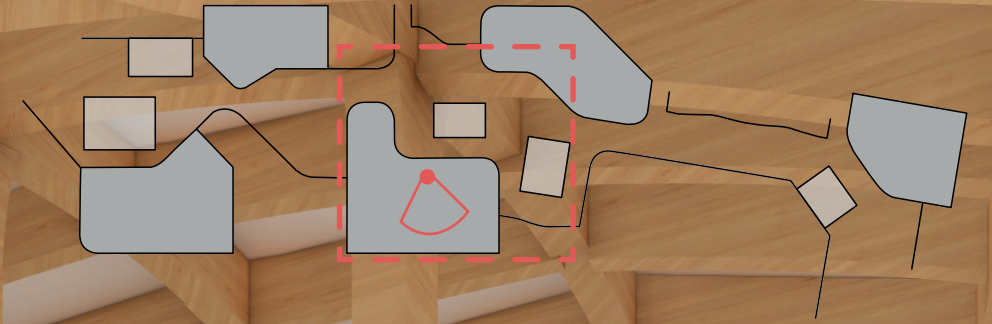


FLOORPLAN

SENSORY ROUTE



A view of greenery from a window has been shown in several researches as having beneficial effects on the wellbeing of building occupants. (Gillis & Gatersleben, 2015).

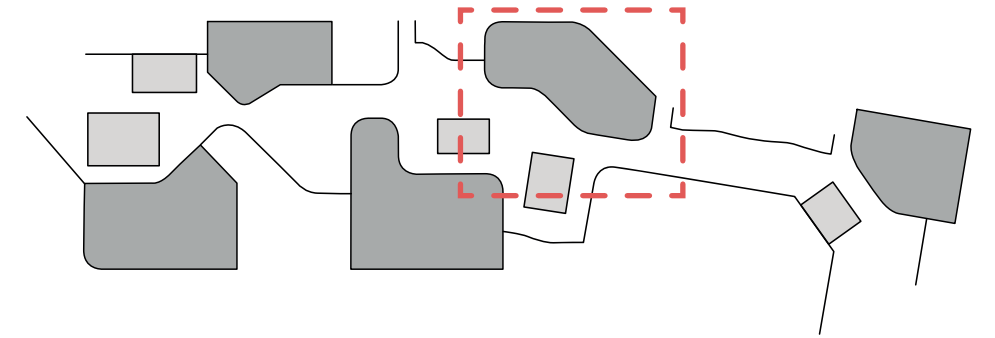


“Physical activity is perhaps the variable which reduces the most overall lifetime morbidity.” (James F. Fries, 2008)

“The color red shows energy, excitement and impulse. It helps people mentally to work a bit harder during exercises.” (Pereira, 2023).

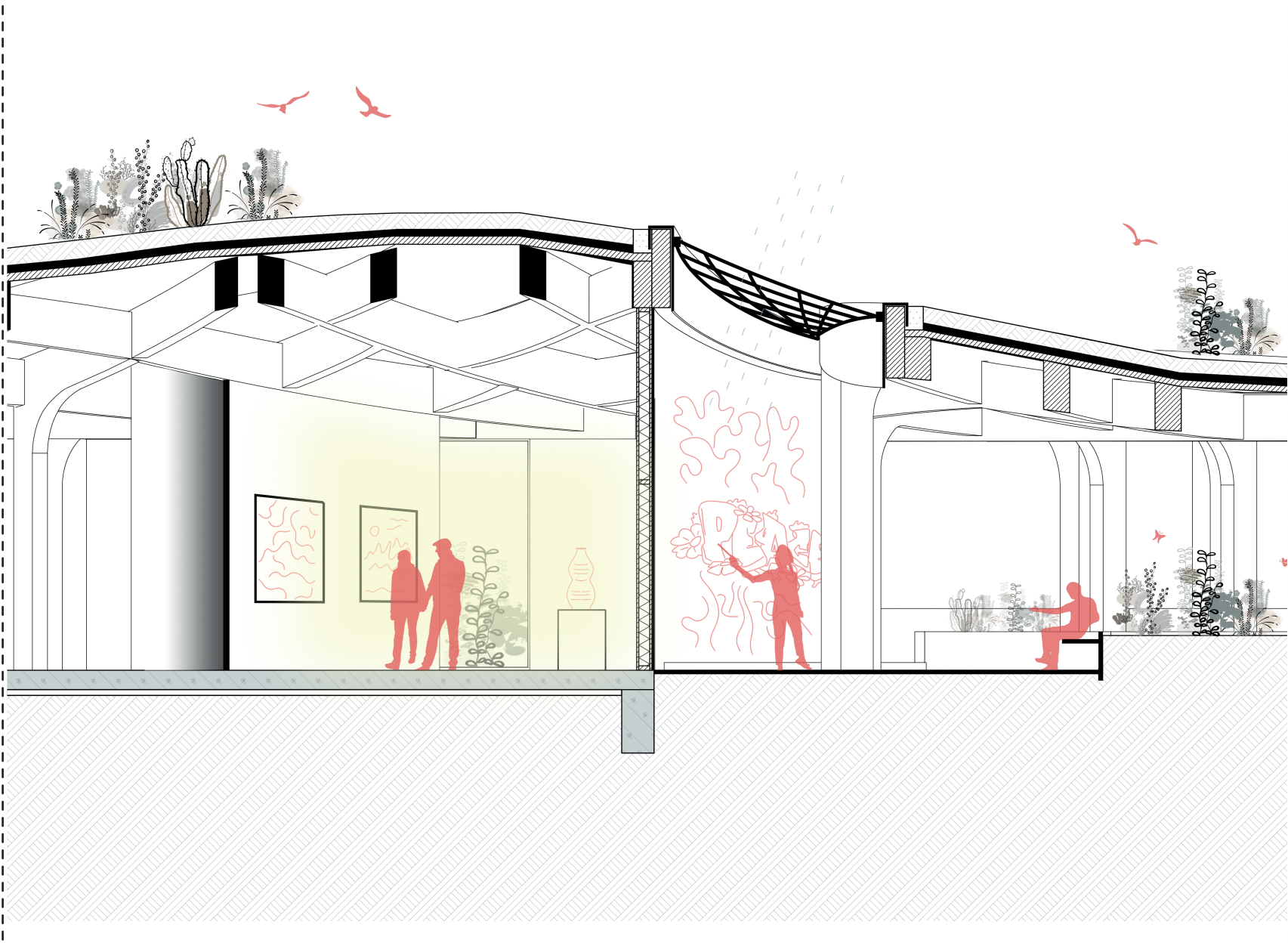
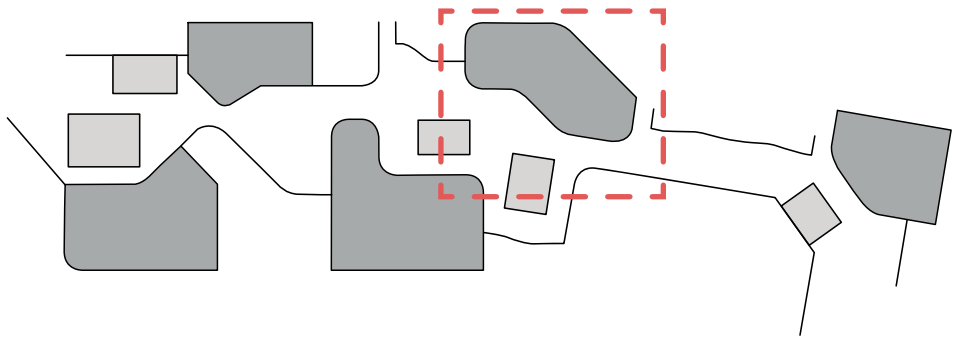
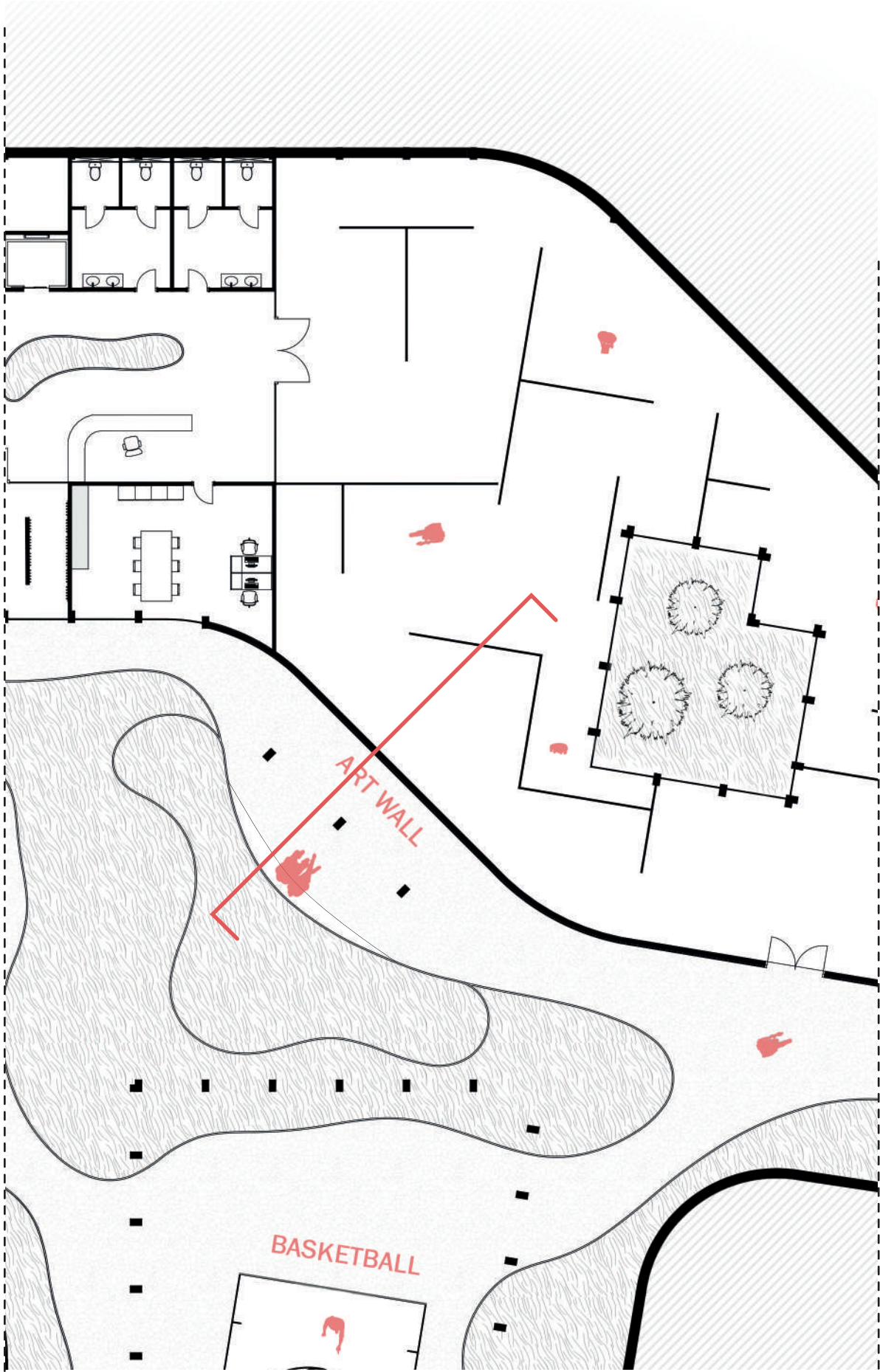
FLOORPLAN

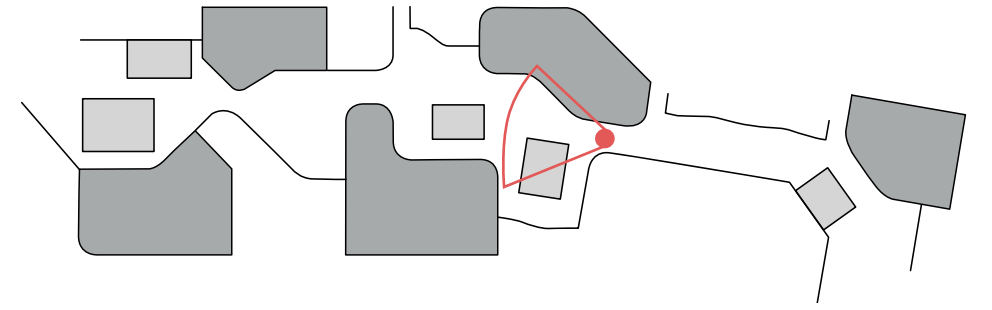
SENSORY ROUTE

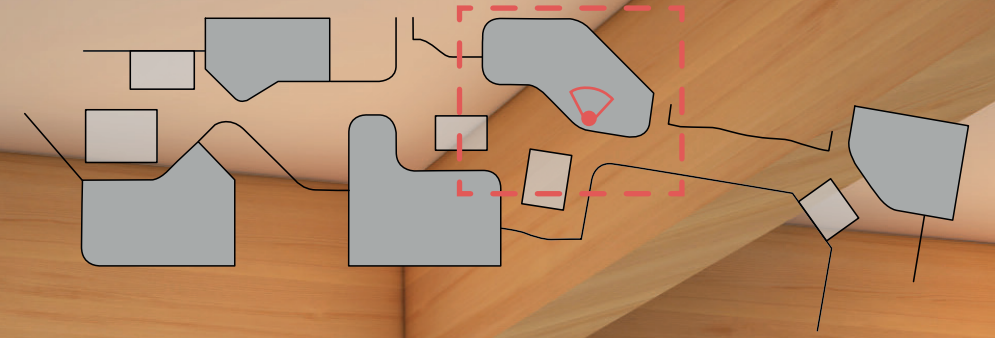
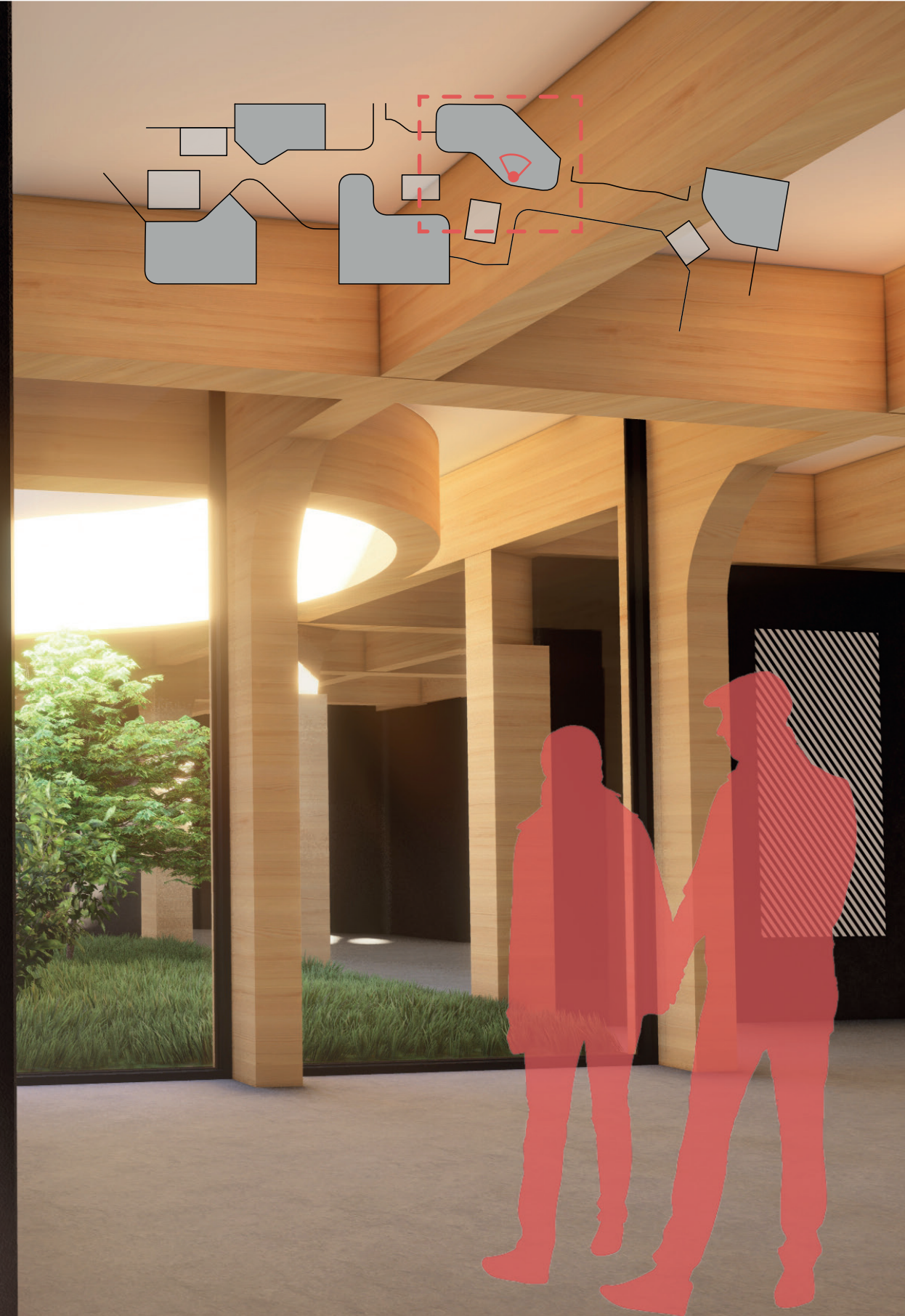


FLOORPLAN

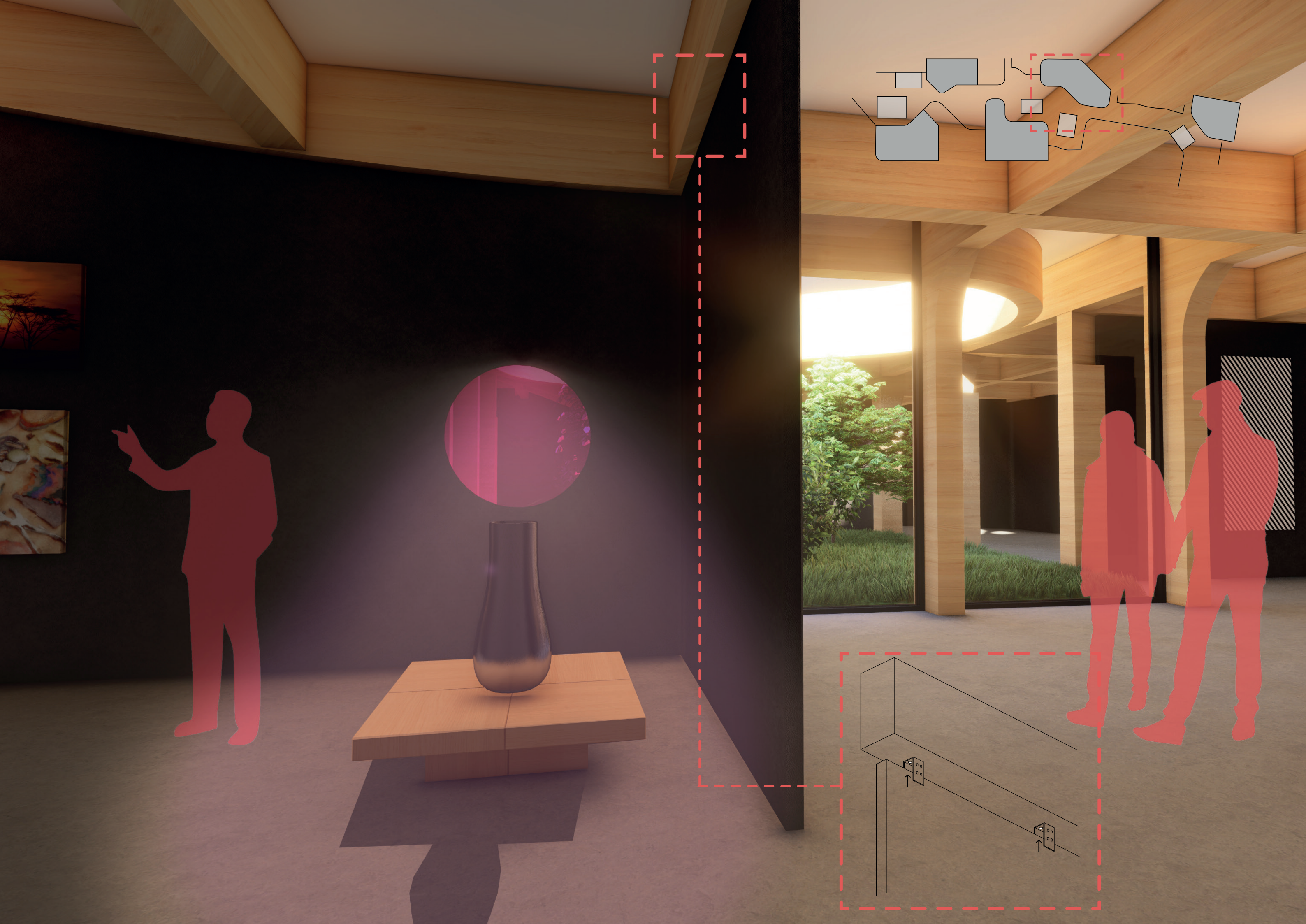
SENSORY ROUTE





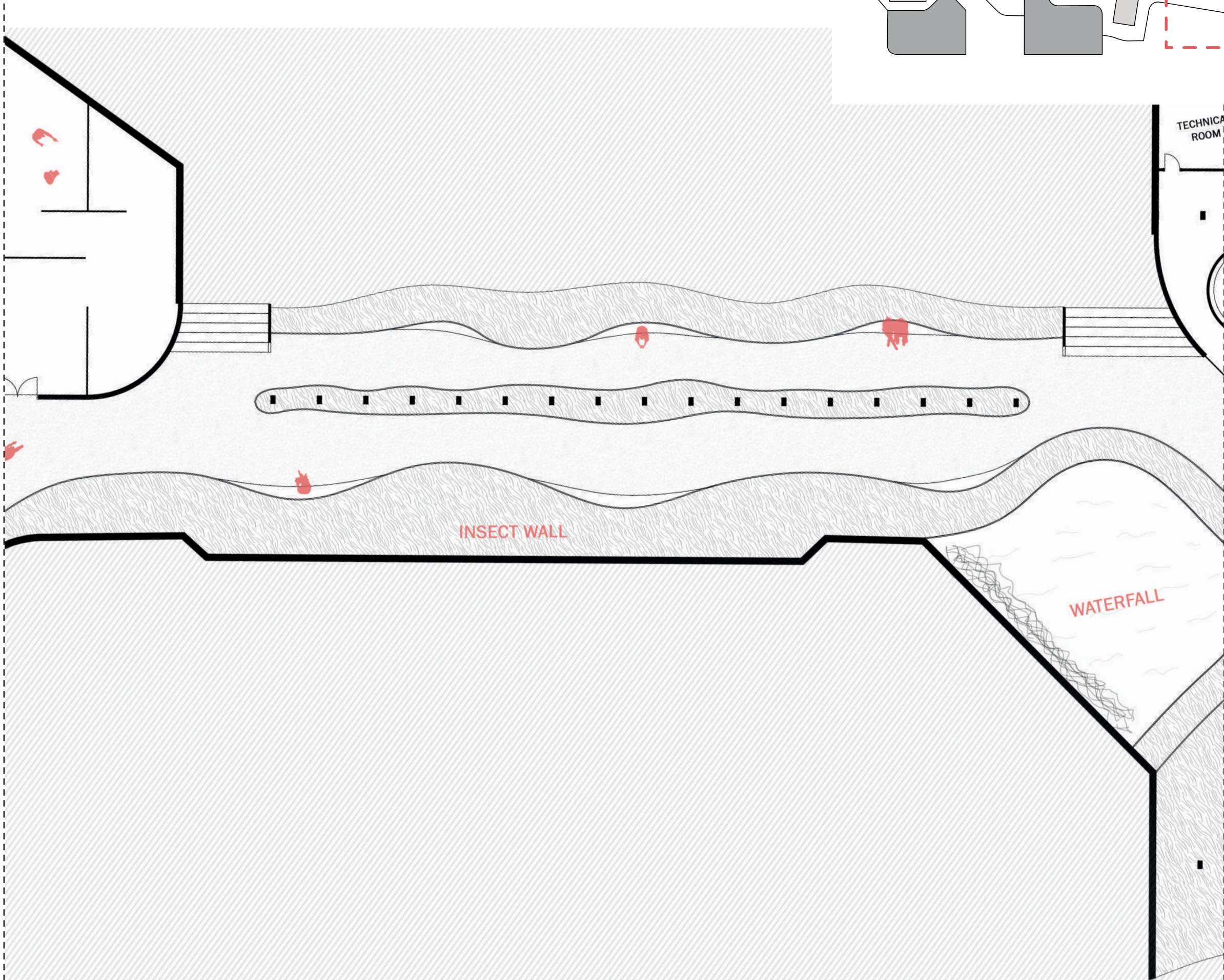
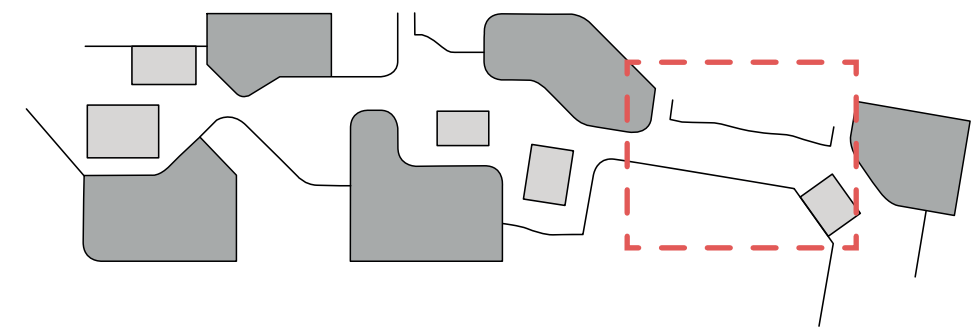


“Participation in an artistic activity encourages personal well-being because it permits a direct and sincere connection with the individual emotions. Such a process implies a threedimensional strengthening: social, emotional and cognitive.” (Mundet-Bolos et al., 2017).

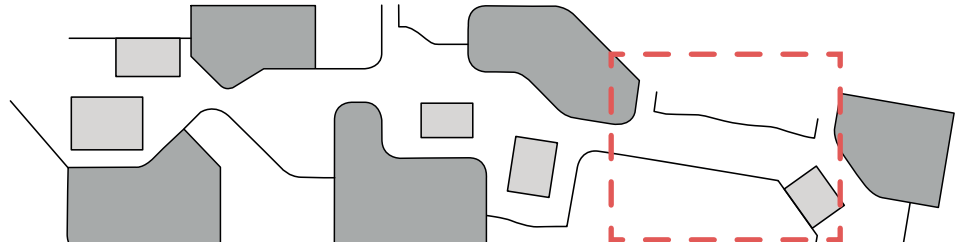
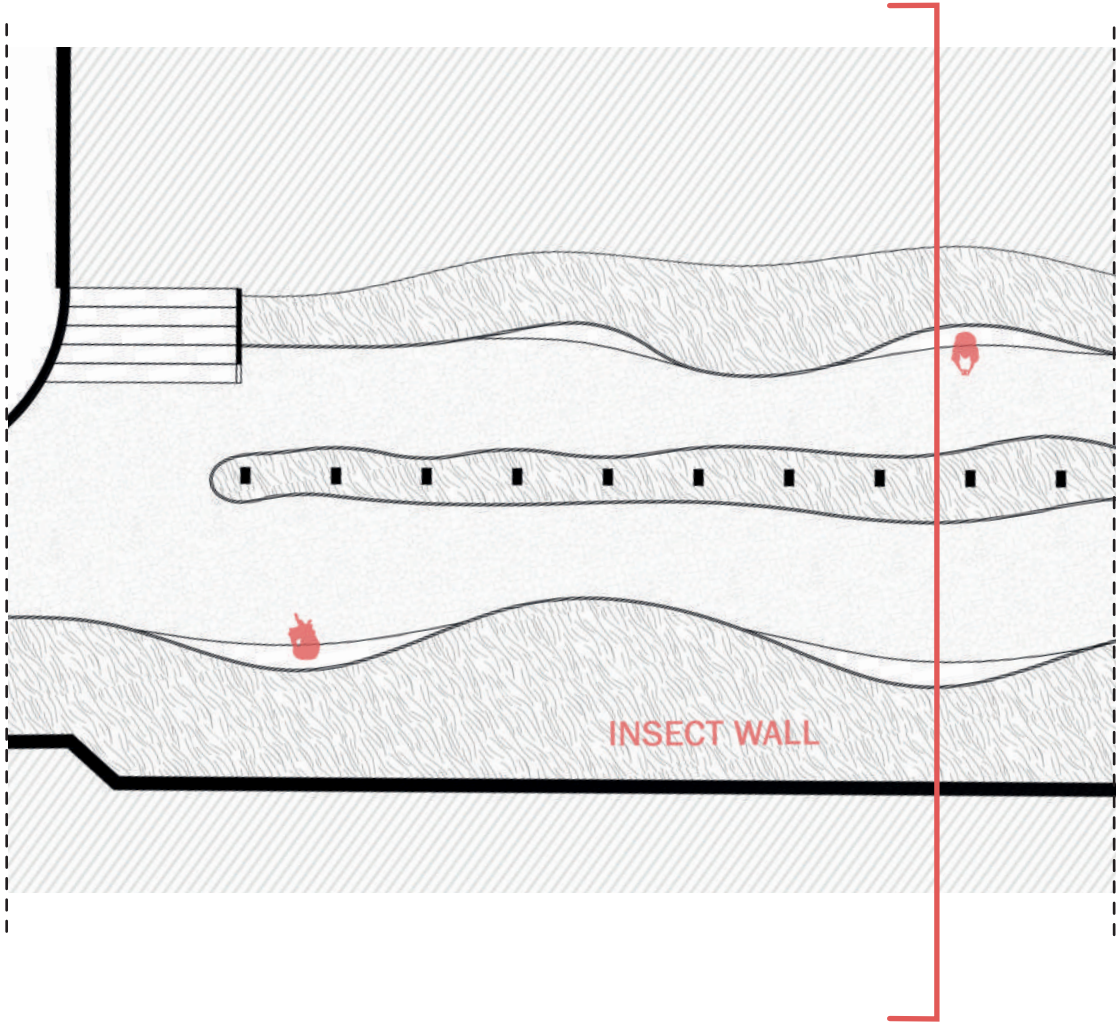
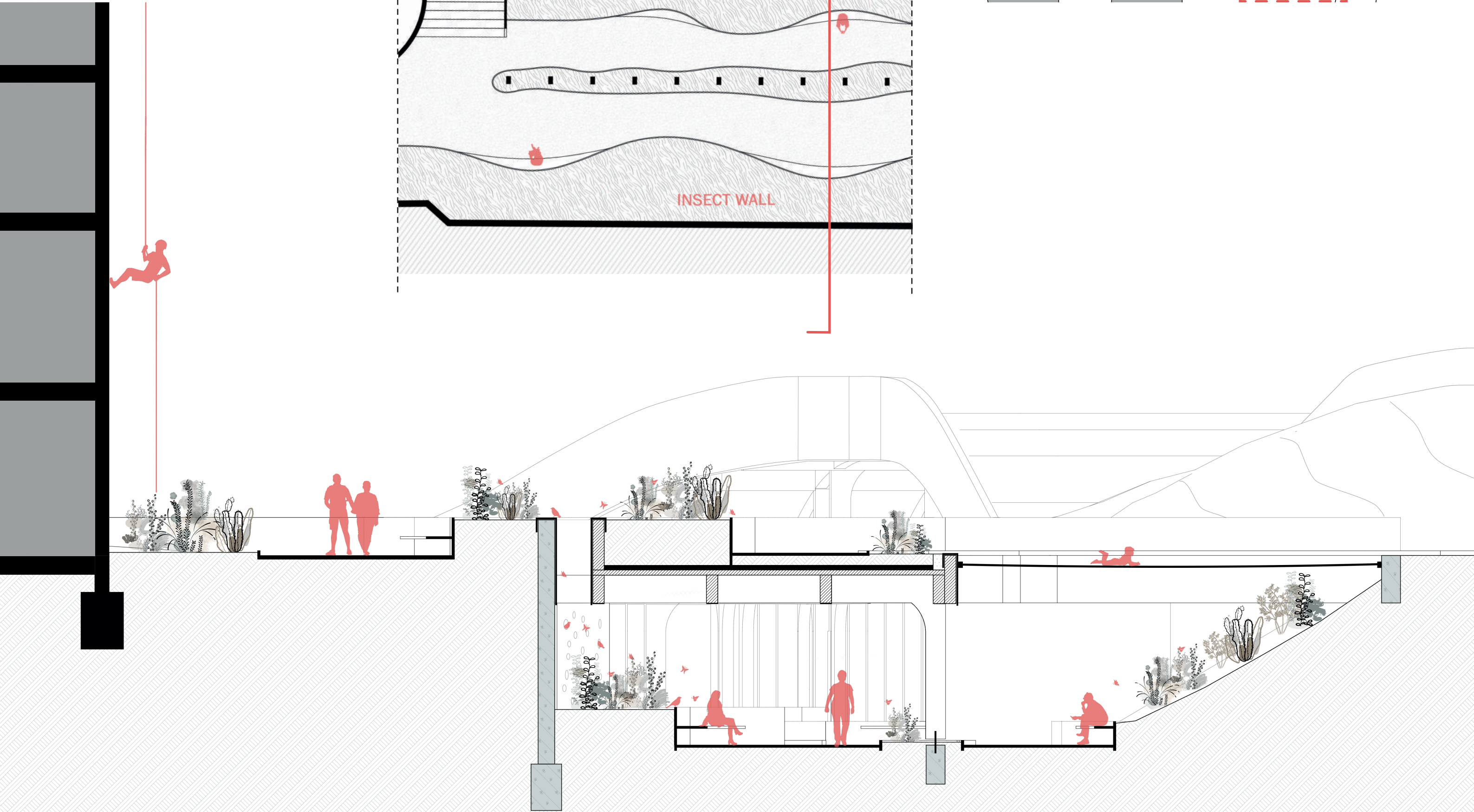


FLOORPLAN

SENSORY ROUTE



FLOORPLAN
SENSORY ROUTE

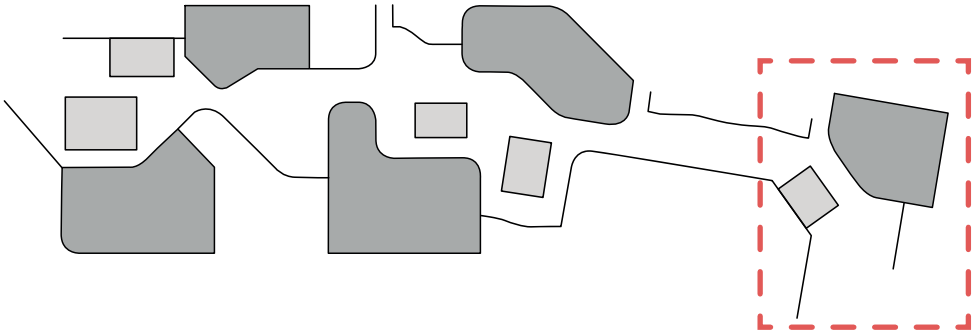




Humans always have had an innate connection with the natural world and exposure to the natural world is therefore important for human wellbeing. (Gillis & Gatersleben, 2015).

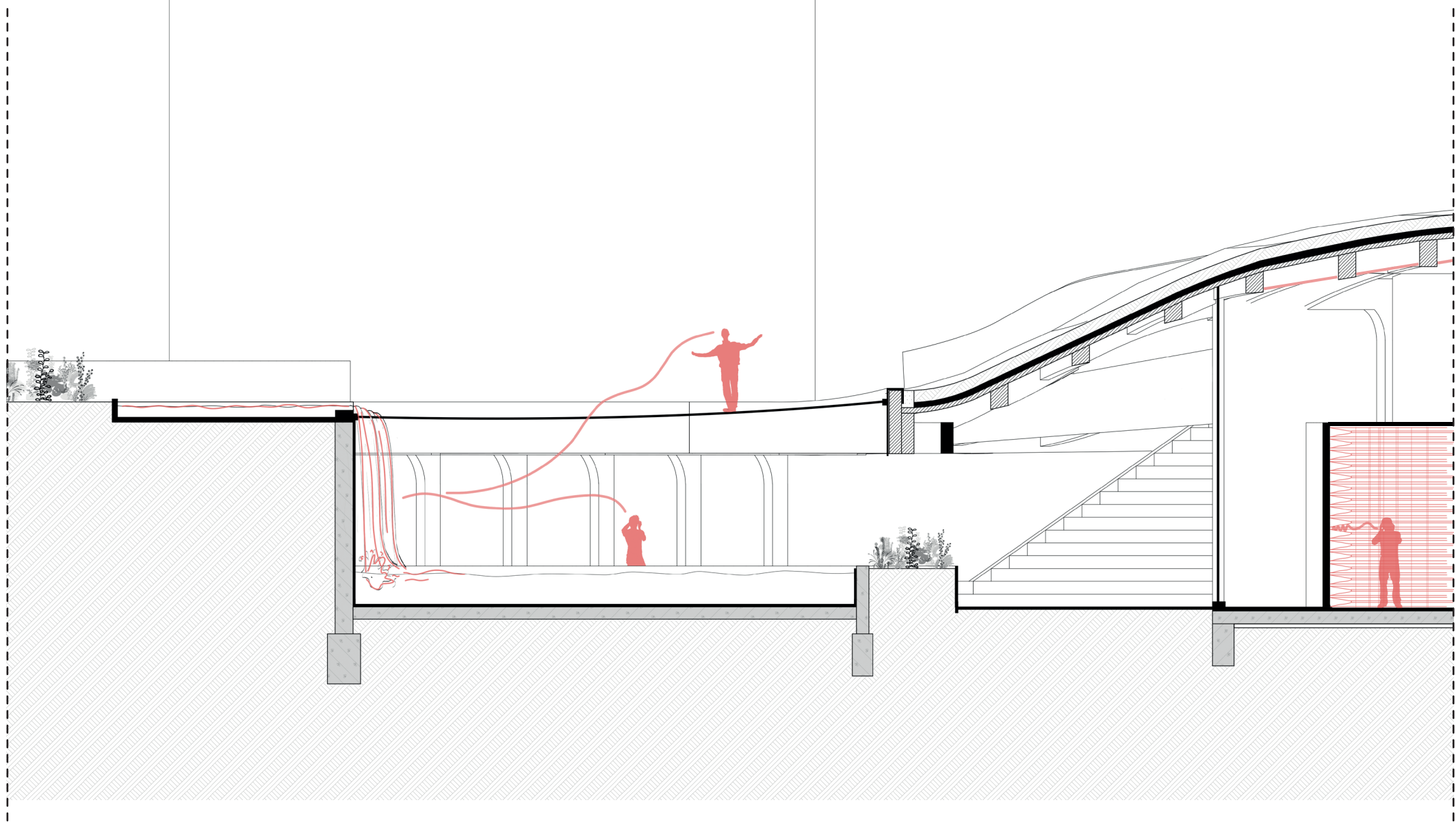
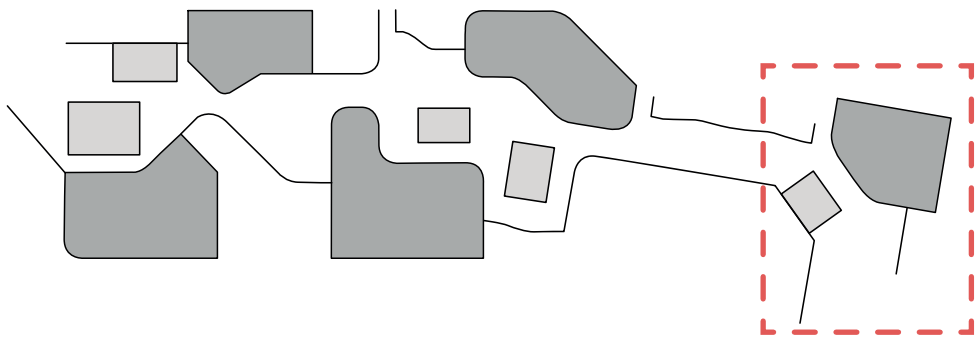
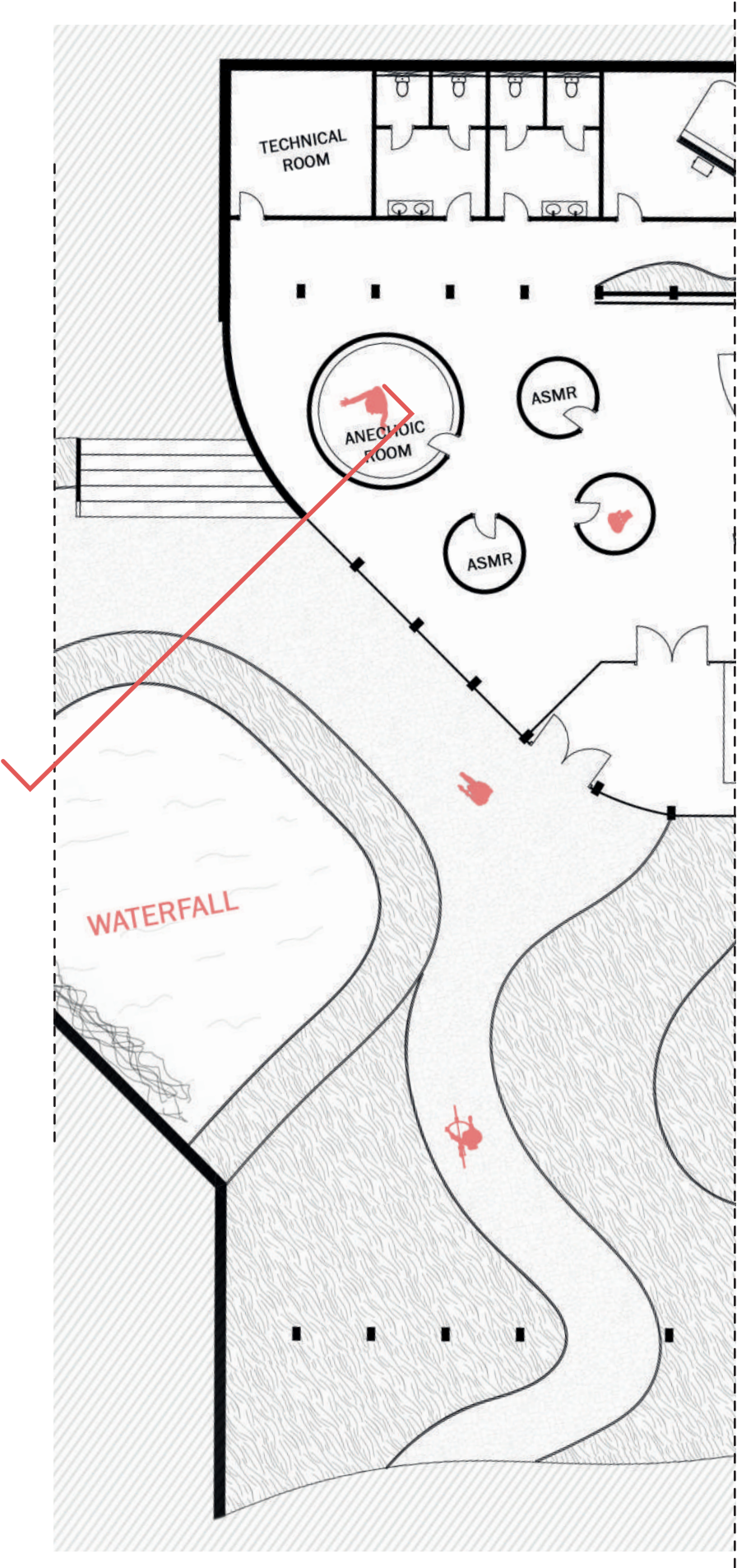
FLOORPLAN

SENSORY ROUTE



FLOORPLAN

SENSORY ROUTE





Music and soundscapes have often-beneficial effects on the recovery (Spence & Keller, 2019).

“People’s beliefs about the source of masking sounds, especially in the case of ambiguous noise, can sometimes influence how much relief they provide”. (Haga, Halin, Holmgren, & Sörqvist, 2016). Sounds of nature have a strong relation to restoration, recovery and well-being.

