

WS 2024

SKYRO - SCHOOL OF THE FUTURE

stredná škola budúcnosti

Subject: Atelier VII

Project name: Skyro - IT school extension

Client: Skyro

Project leads: Ján Baška, Michal Ráchela, Andrej Boroš,
Matthew Oravec, Nikol Maraj

Student: Alisa Aryutova (4 year)

Student year: 2024 / 25



CONTENTS

Analysis

Concept

Massing

Masterplan

Plans, sections, elevations

Visuals

Project Overview: Extension of IT Middle School Skyro

Client: Skyro

Objective: The project aims to create an extension for an IT school that will serve 500 students. The design emphasizes innovation in education, incorporating advanced technology and modern learning approaches.

Scope:

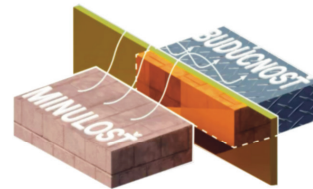
- Building Extension: A three-story building covering 4000 m², designed to house modern classrooms and innovation labs.
- Facilities: Incorporation of a gym and multipurpose areas to promote physical wellness and wellbeing of students.
- Outdoor Revitalization: Redevelopment of the football field, addition of basketball pitches, and enhancement of public playground areas to foster a vibrant school environment.
- Design Focus: A blend of aesthetic appeal with functional spaces, ensuring a holistic educational experience.

The studio is co-run by Bjarke Ingels Group BIG and Inflow architecture studio.

Project leads: Ján Baška, Michal Ráchela, Andrej Boroš, Matthew Oravec, Nikol Maraj

MIDDLE SCHOOL OF THE FUTURE

INNOVATION IN IT EDUCATION



Vision of the school:



Shaping of the future generation of leaders



Support of the young talents and students



Innovation and establishment of new standards in education



Prevention of talent migration to abroad

Who are the primary users?

parents



students



What are their **needs**?

- safety
- welcoming spaces
- school activities
- parent-teacher meetings
- clear access
- waiting areas

- flexible learning spaces
- technology-enhanced classes
- social interaction zones
- relaxation area
- food and snacks
- outdoor sport and play area
- wellbeing spaces

mentors / teachers



guest lecturers



- adaptable classrooms
- meeting places
- advanced teaching technology
- quiet areas
- collaboration areas
- food and snacks

- presentation spaces
- workshops areas
- lecture areas
- latest tech auditoriums
- flexible teaching spaces

Flexible learning spaces



Flexible classrooms / Office pods / Collaborative Spaces / Technology-Enhanced Learning Environments / Acoustic Treatments

Health & Wellbeing



Chill Zones / Psychological Wellbeing Rooms / Neutral Toilets (WC for all) /
Healthy Food Options

Sports & Recreation



Football Field / Basketball Court / Multipurpose Sports Area / Running Track /
Outdoor common space

Smart Learning Solutions



Power Outlets / Smart Lighting Systems / Window Blinds or Shades / Charging Stations / Learning Technological equipment / Creative Lab

Community & Connectivity



Common areas / Workshops and Event Spaces / Colorful and children friendly /
School Vibe

Sustainability & Eco-Friendly Design



Waste Sorting Stations / Eco-Friendly Materials / Bicycle and Scooter Storage / Green Landscaping

How can we make the best Skyro school?



Summary

1. Flexible Learning Spaces

- Adaptable Classrooms: Spaces designed to easily transition between individual and group work, supporting diverse teaching styles.
- Modular Layouts: Future-proof configurations that allow for reorganization and growth

2. Central Learning Hubs

- Atrium/Agora: Central spaces that eliminate long corridors, encourage interaction, and foster a sense of community.
- Learning Transparency: Open layouts that showcase learning activities, though careful balance with privacy is needed.

3. Seamless Spatial Integration

- Fluid Circulation: Designs that connect interior and exterior spaces, enhancing movement and interaction
- Outdoor Access: Direct links from classrooms to outdoor areas.

4. Sustainability & Comfort

- Natural Light & Ventilation: Maximized daylight and smart ventilation for a healthy learning environment.
- Sustainable Materials: Long-lasting, efficient materials (e.g., copper facades, biomass energy systems).

5. Visual Identity & Inclusivity

- Bold, Distinct Designs: Schools that stand out through unique exteriors (e.g., Isenberg's copper facade), making them landmarks.
- Inclusive Spaces: Biophilic and psychologically supportive designs that cater to diverse student needs.

6. Collaborative & Safe Environments

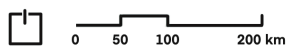
- Open, Transparent Layouts: Promote collaboration and reduce isolation.
- Functional Zoning: Clear spatial organization ensures smooth transitions between learning, play, and administration.

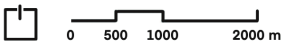
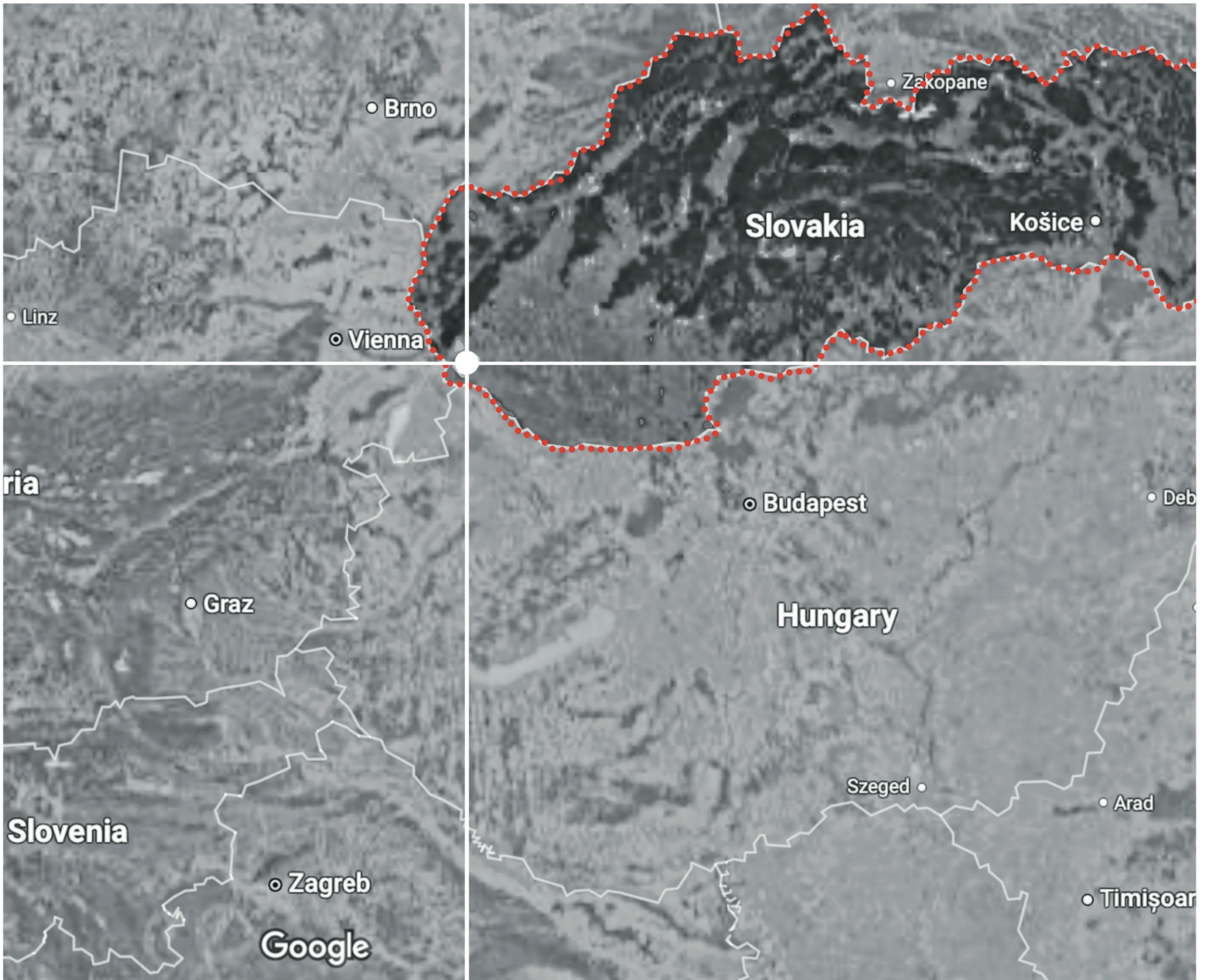
SITE CONTEXT

ЖИЖИ

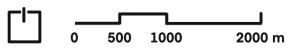
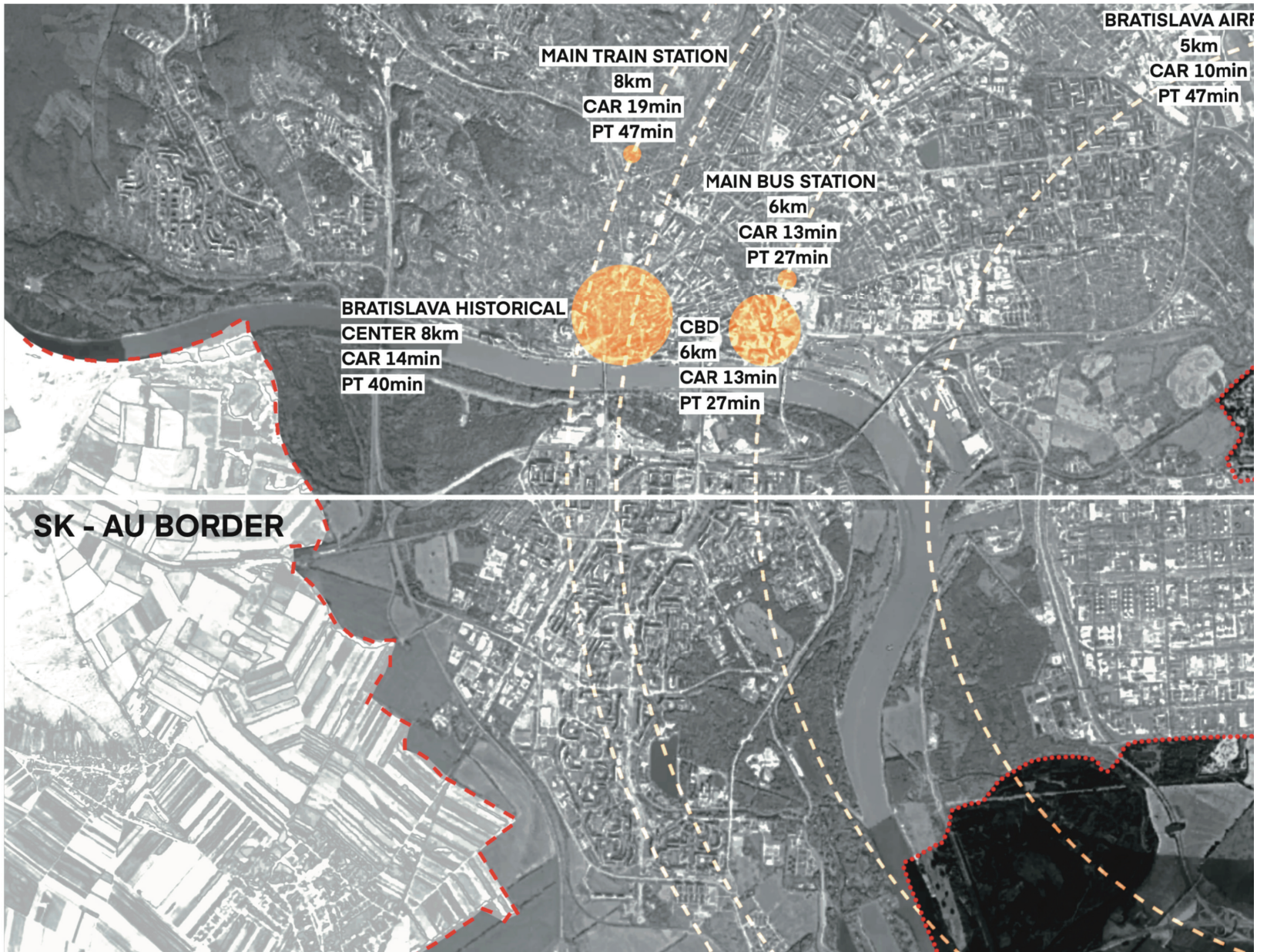


..... Slovakia - Austria Border
- - - - - Border of the area of Podunajské Biskupice





Macro view Bratislava



7A AIRPORT
cm
10min
7min



Macro view Bratislava

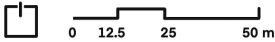
SITE ANALYSIS

SHIRO

Macro view Podunajské Biskupice



..... Outline of the boundaries of the building site
The original main object of the school

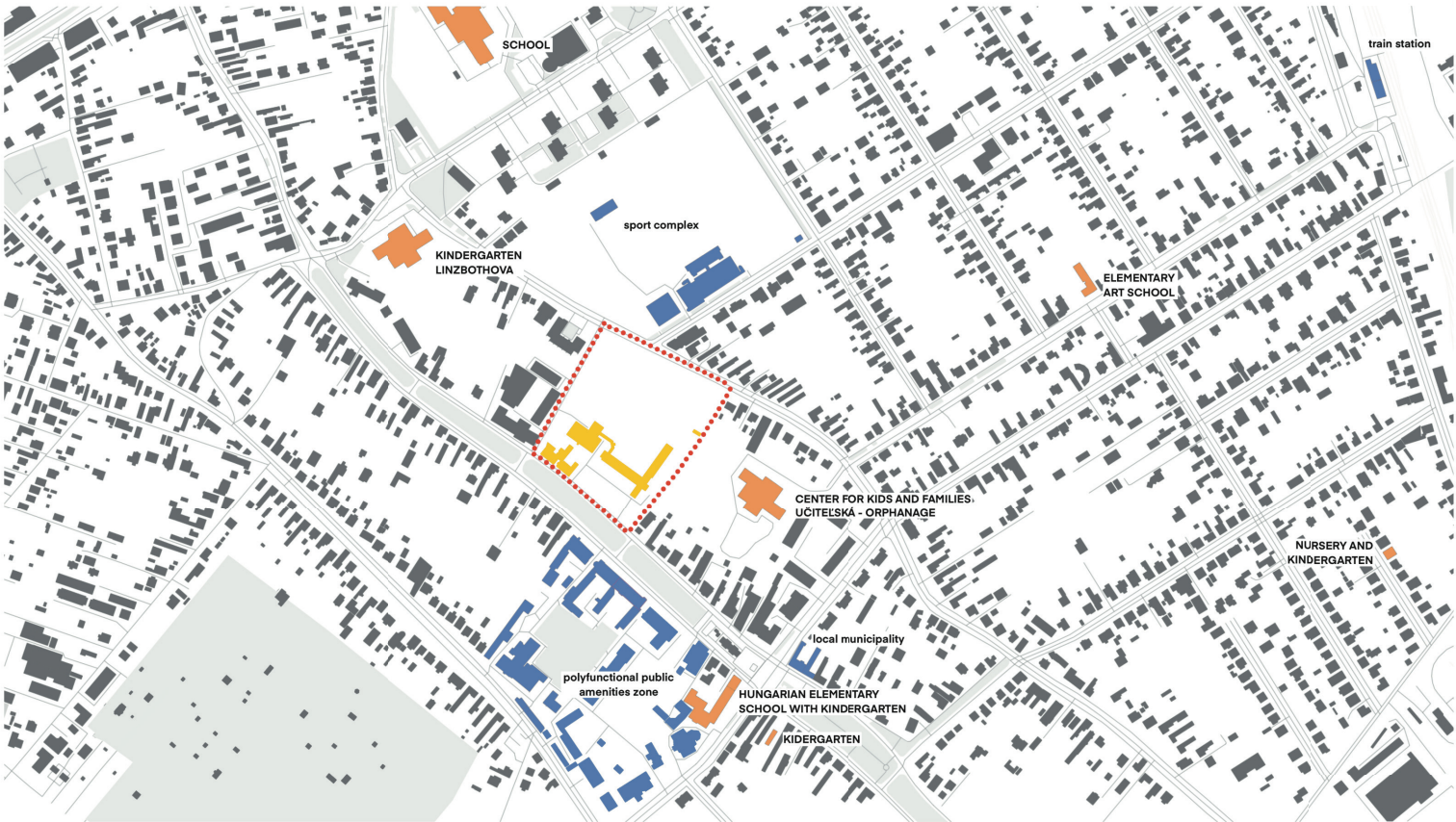


Transportation network analysis

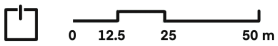


- Outline of the boundaries of the building site
- The original main object of the school
- Railway
- Train stop Podunajské Biskupice
- Bus lane
- Bus stop
- Cycling lane

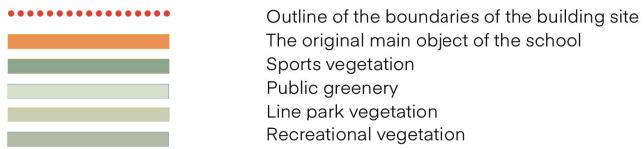
Educational facilities and main functions in the area

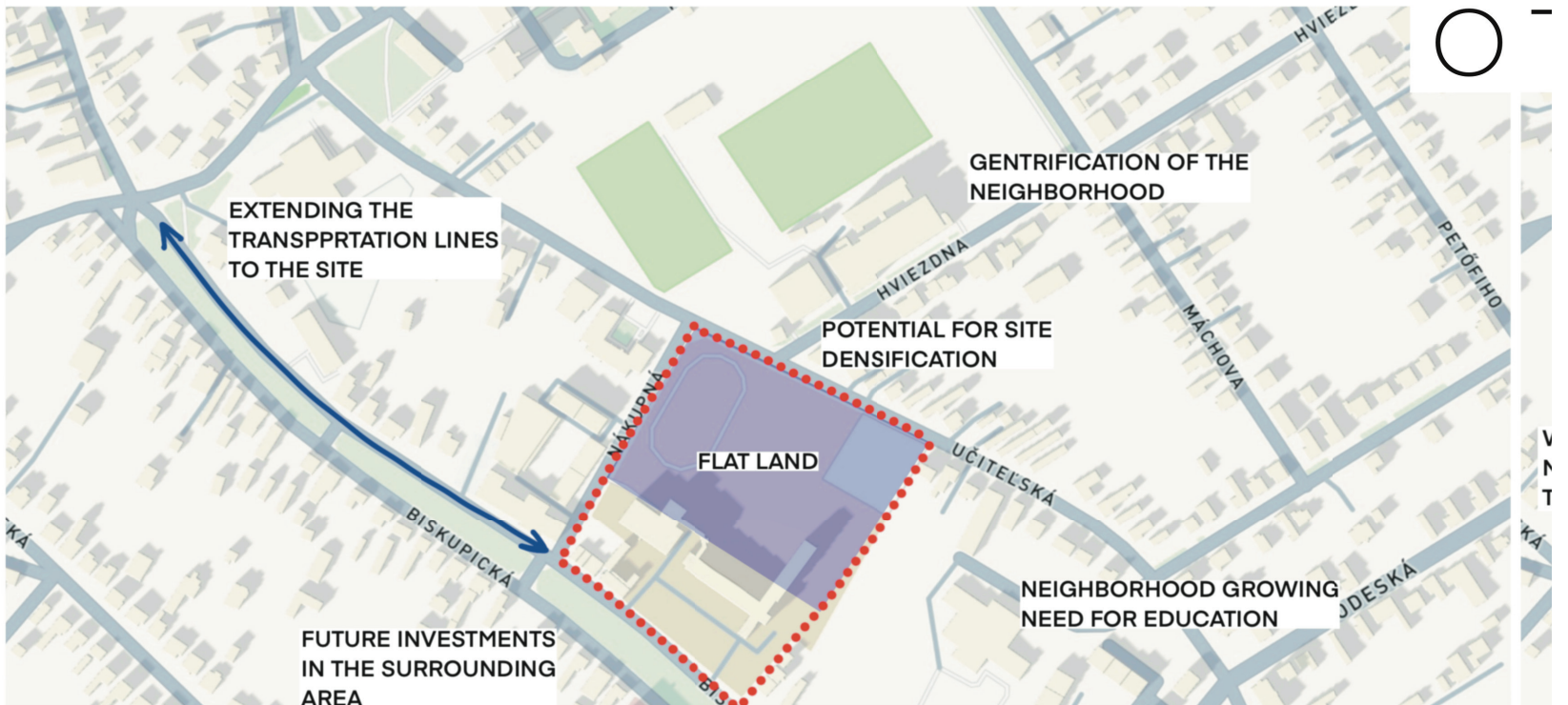
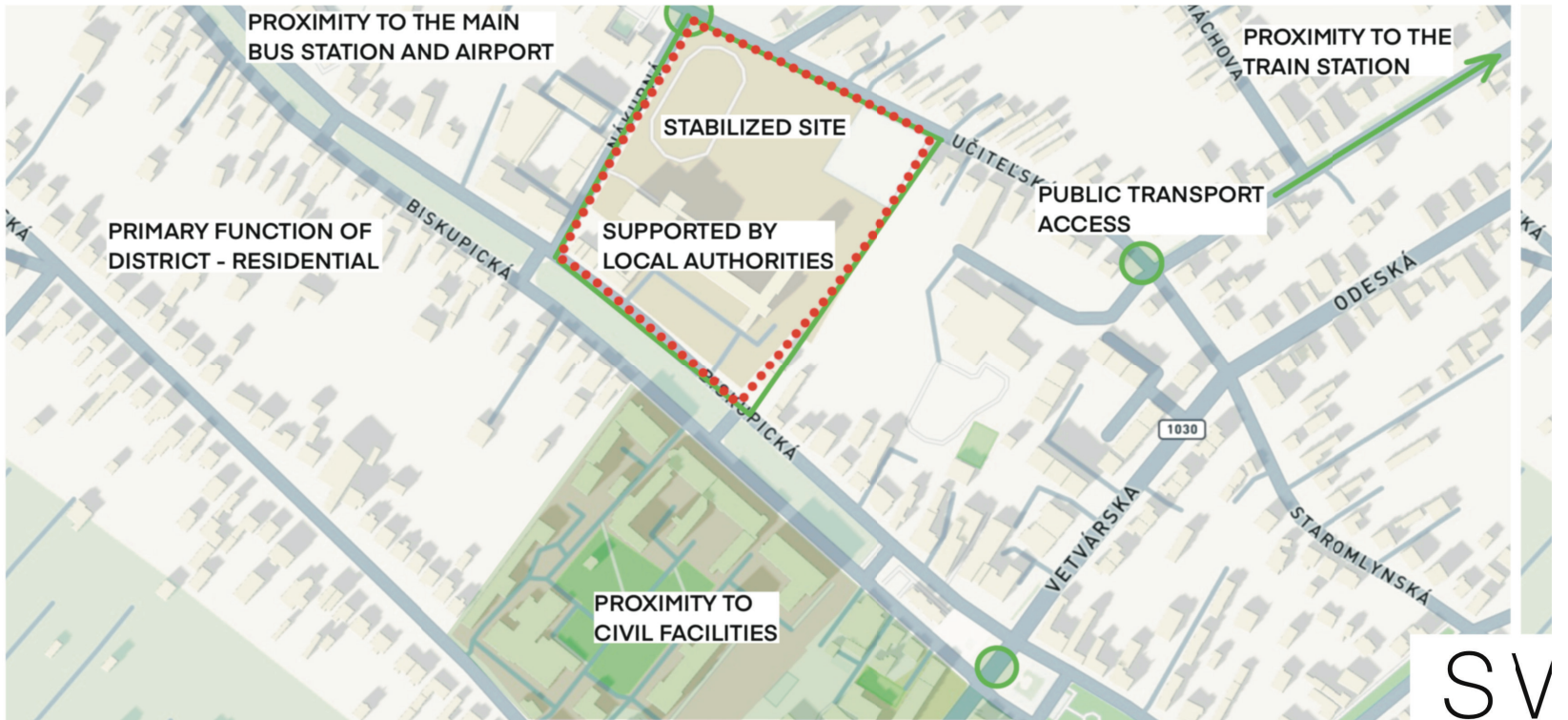


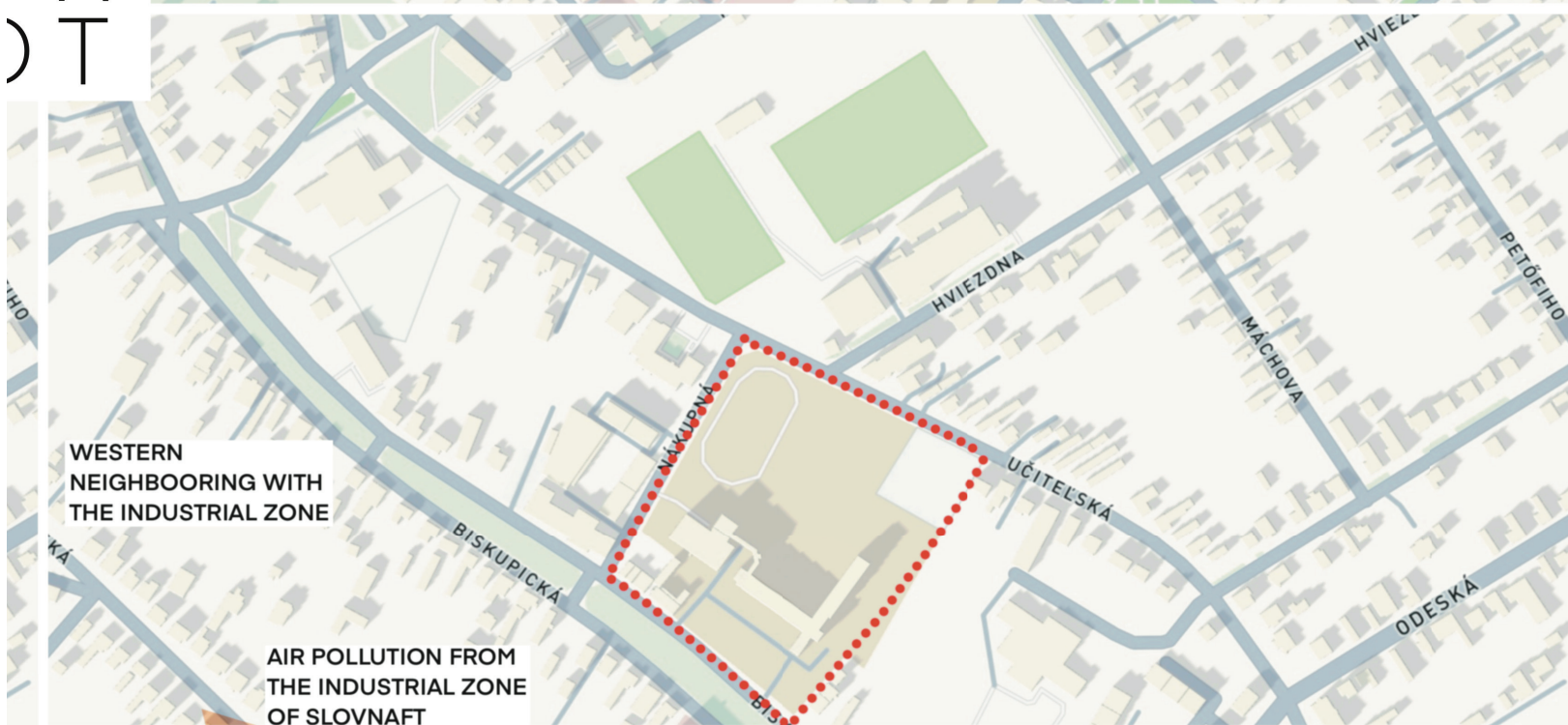
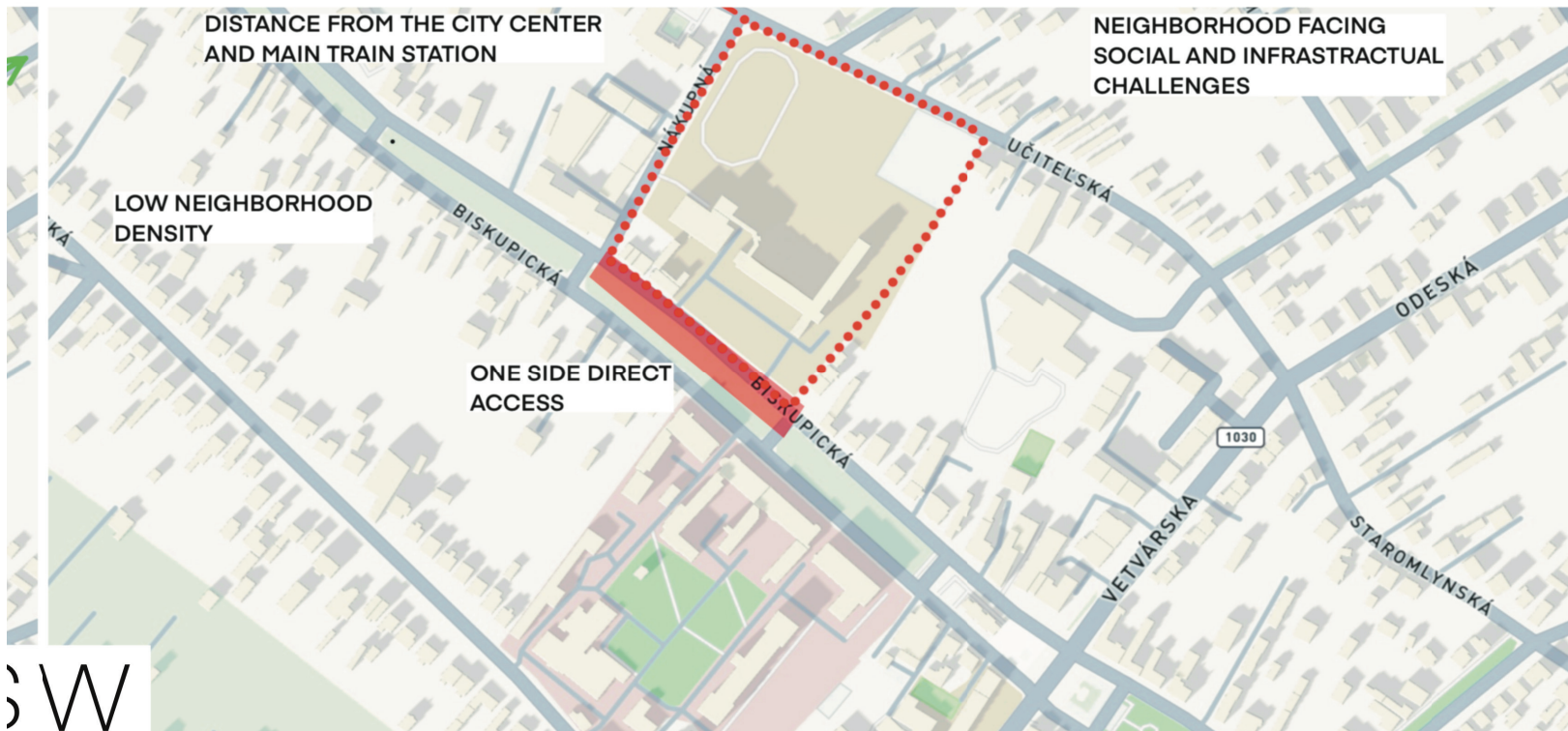
- Outline of the boundaries of the building site
- Yellow bar The original main object of the school
- Orange bar educational buildings
- Blue bar public amenities



Vegetation







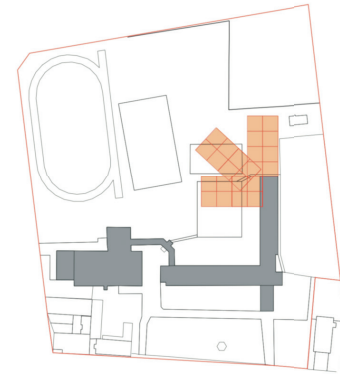
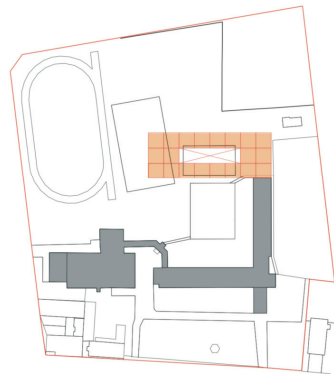
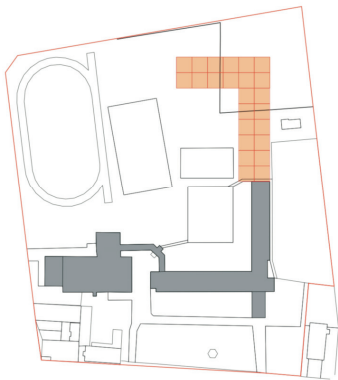
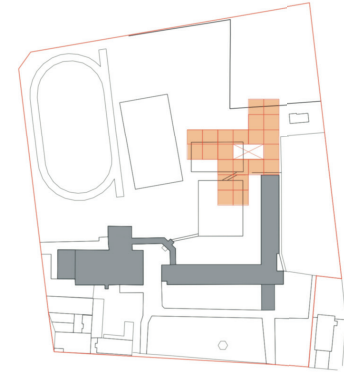
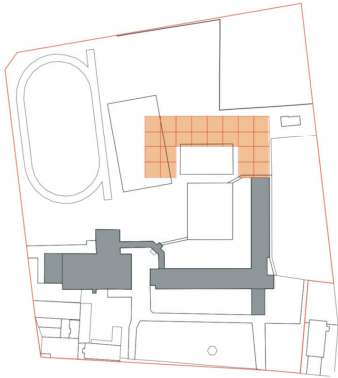
SW
DT

CONCEPT

Over 50 concepts were tested to find the best 1



Top 3 most suitable layout types and why



Courtyard Layout (U-shape or L-shape)

- protected outdoor space to gather, socialize and hold outdoor learning
- natural light and ventilation in the classrooms
- L-shape maximizes plot usage by hugging the boundaries
- seamless direct connection

Considerations:

- classic corridor system (elongated circulation)
- traditional design option
- attention to corners

Linear Layout

- indoor atrium central hub for communication and flow
- protected inner space
- strong zoning control over access and circulation
- optimized light
- "stairs" shape brings visual rhythm

Considerations:

- careful and complex zoning
- "stair" shape might be challenging with layout

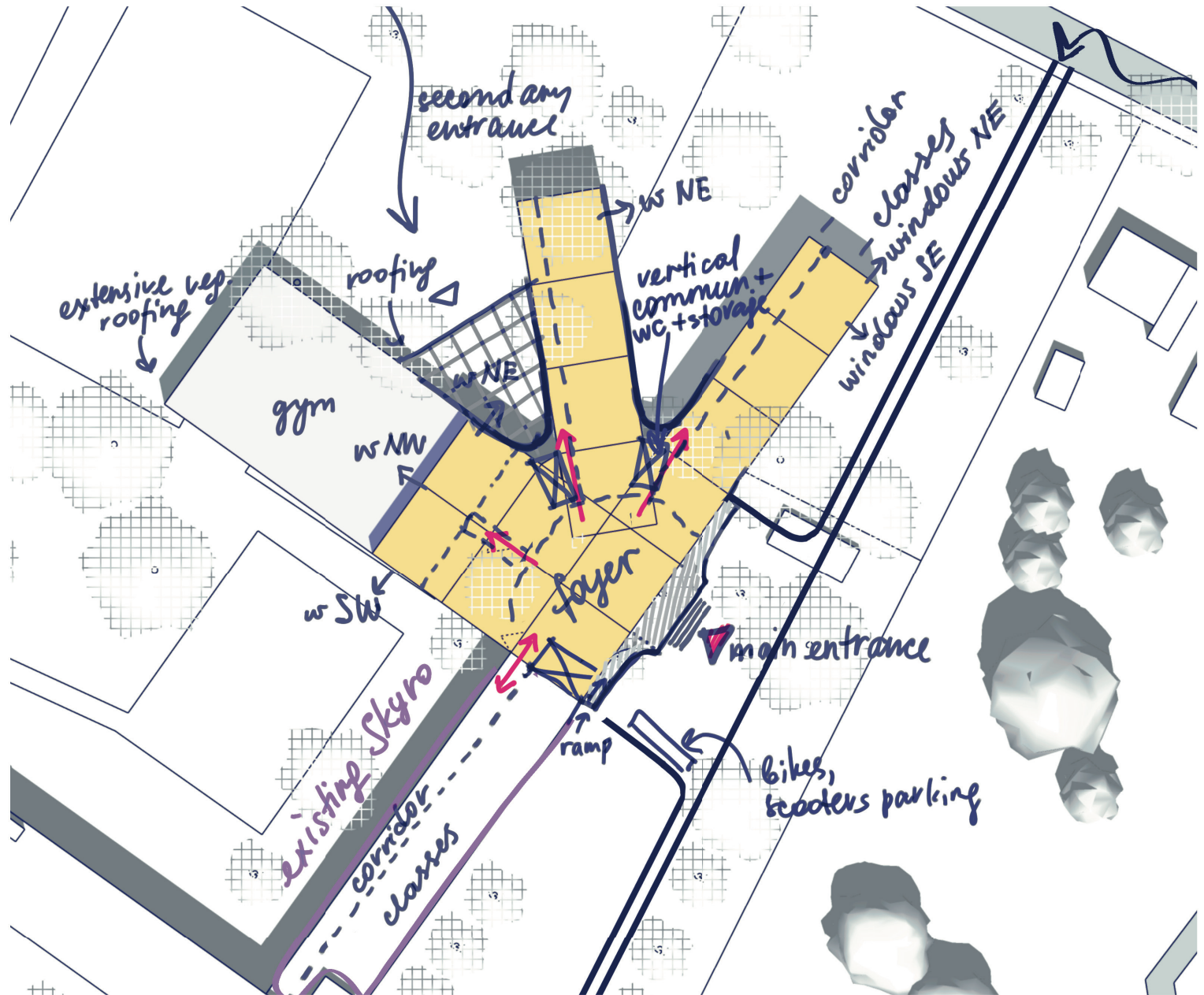
Clustered Layout

- sense of community
- central hub for events, gatherings
- adaptability of the zones and functions
- dynamic form
- defined zones
- natural light and good orientation

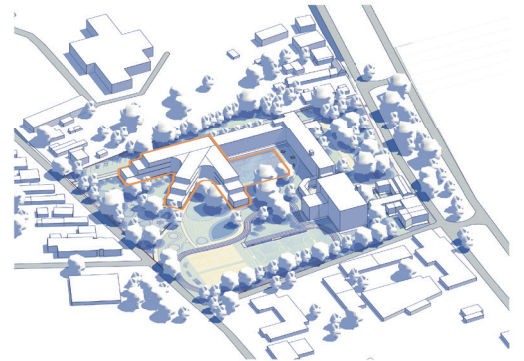
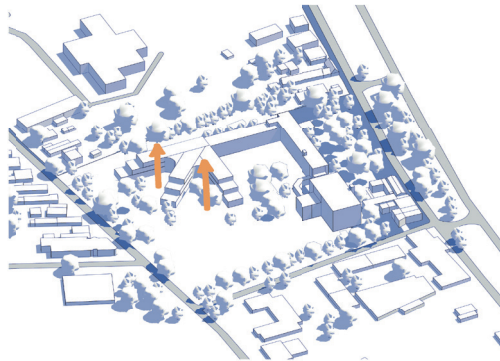
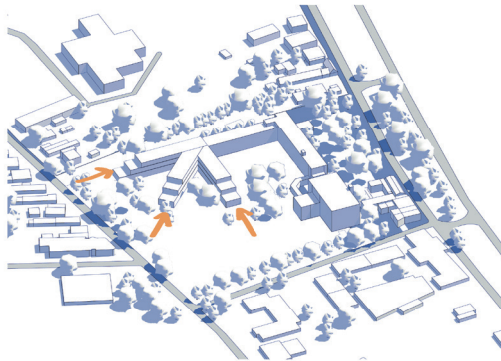
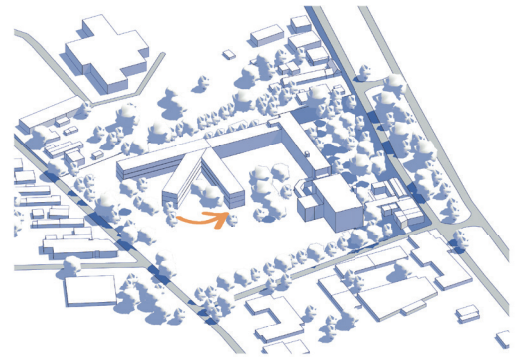
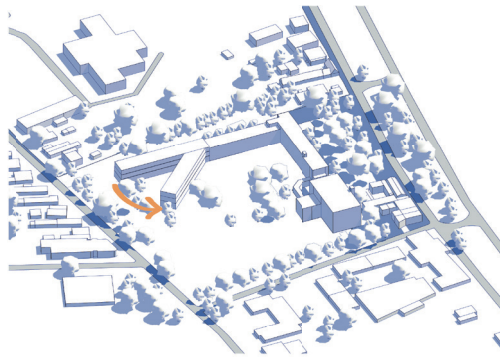
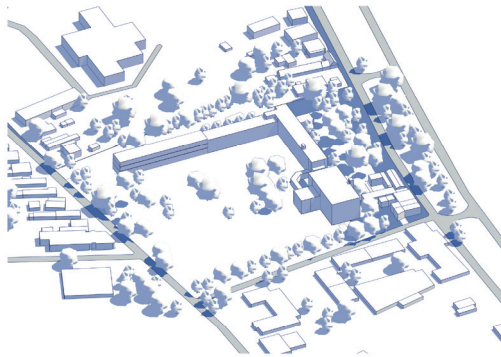
Considerations:

- might be structurally more complicated

Final volume concept



MASSING



MASTERPLAN

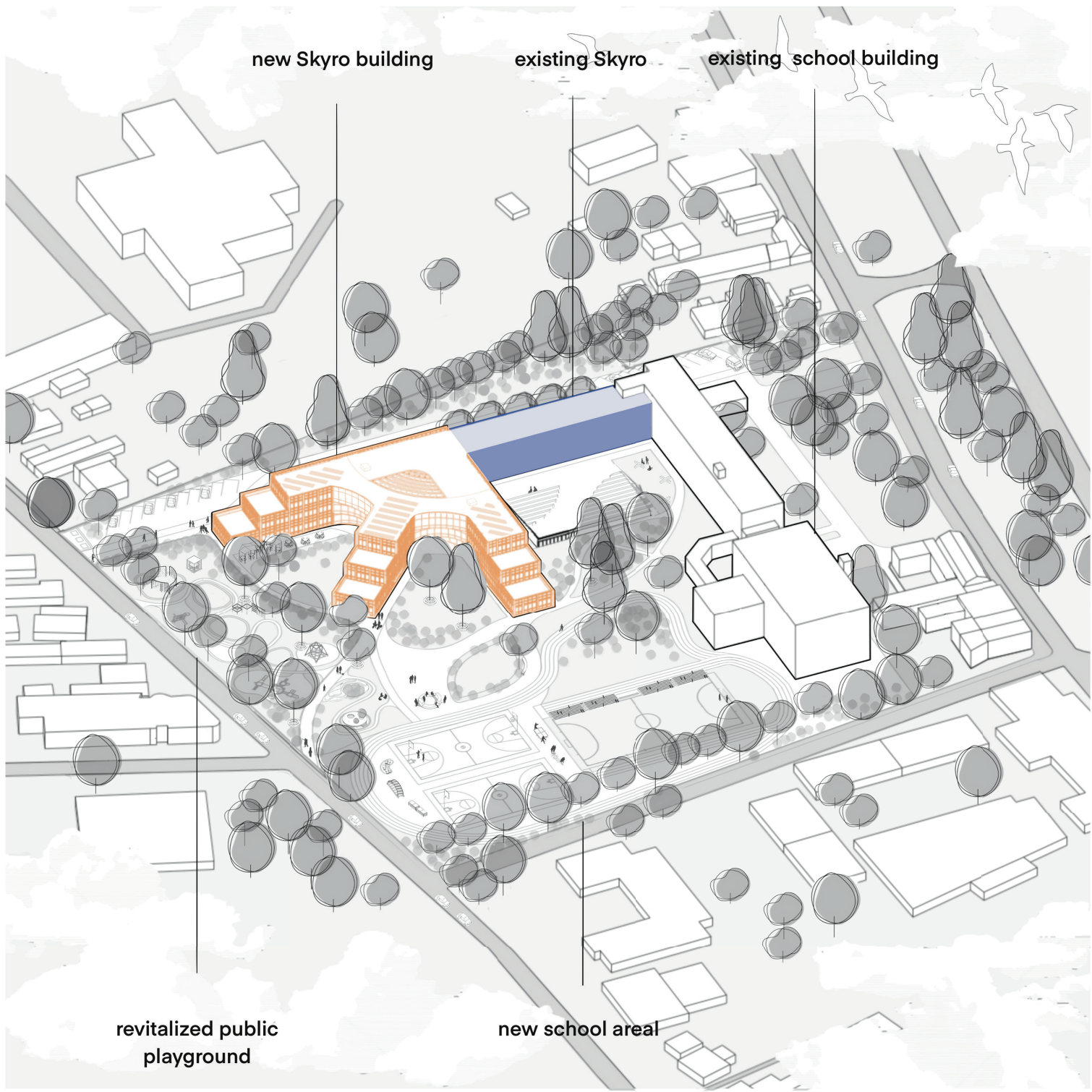




new Skyro building

existing Skyro

existing school building



**revitalized public
playground**

new school area

Parking



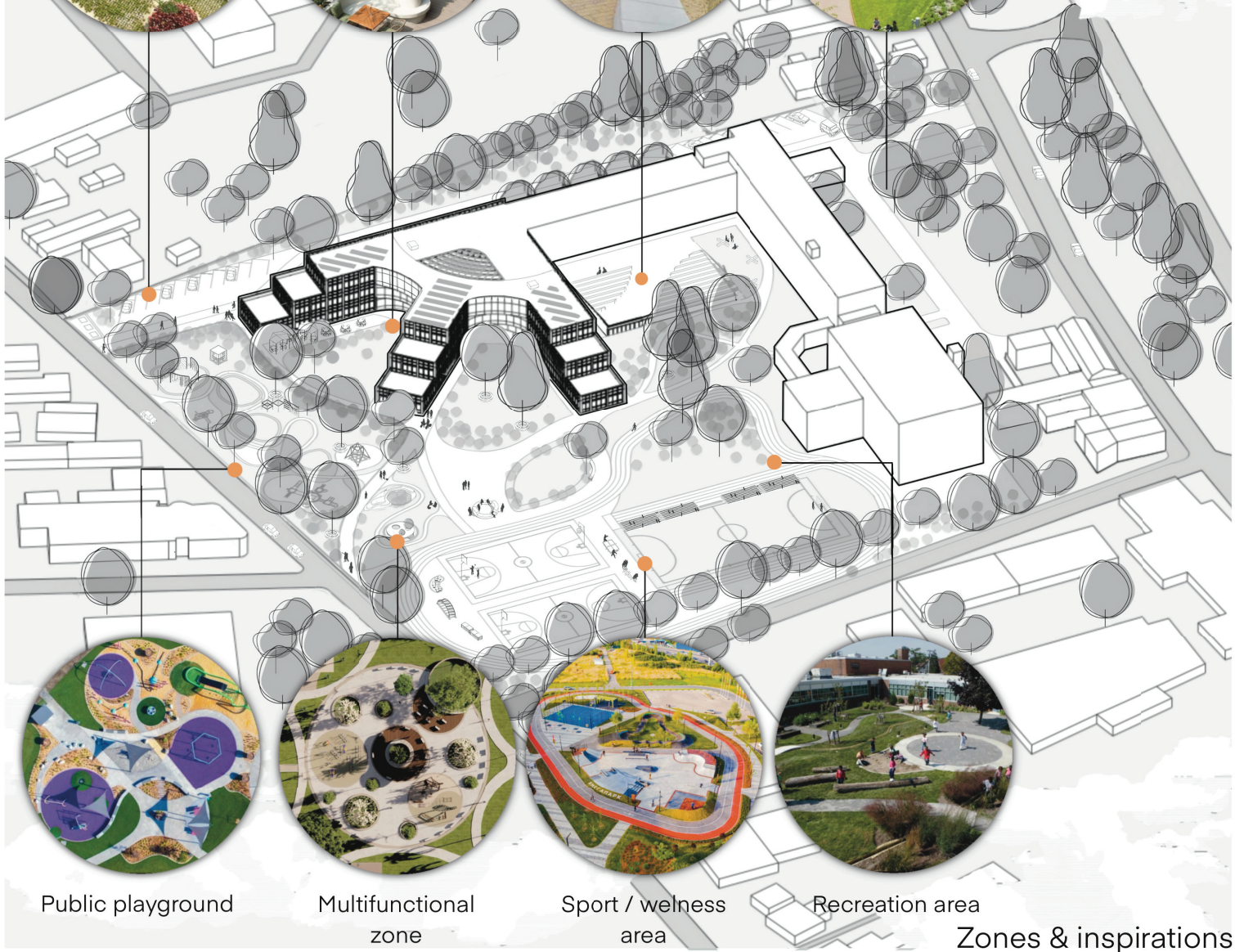
Outdoor dining



Exterior education / hang-out spot



Revitalized school area



Public playground



Multifunctional zone

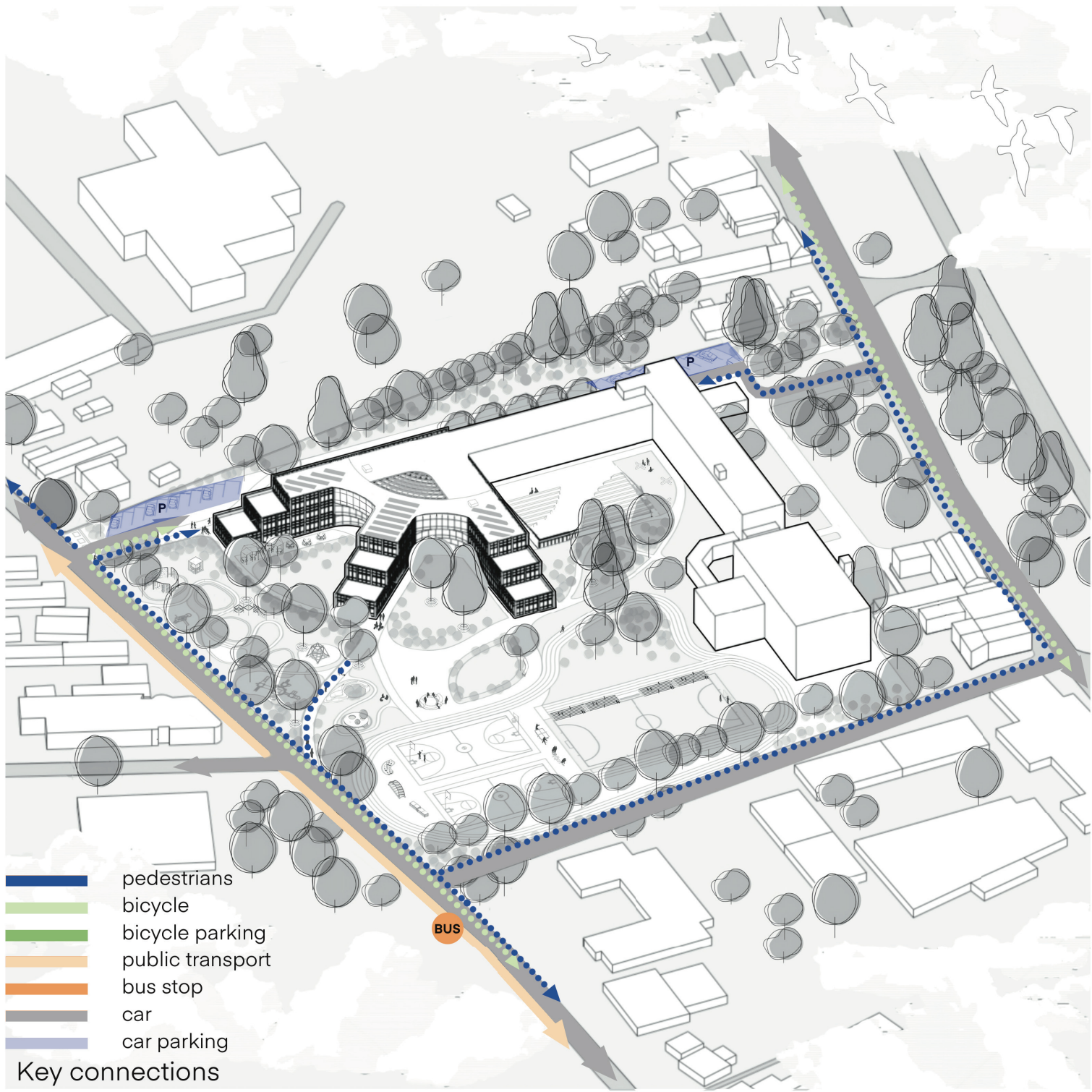


Sport / wellness area



Recreation area

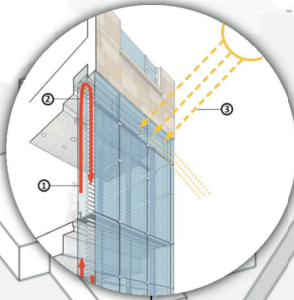
Zones & inspirations



- pedestrians
- bicycle
- bicycle parking
- public transport
- bus stop
- car
- car parking

Key connections

passive design



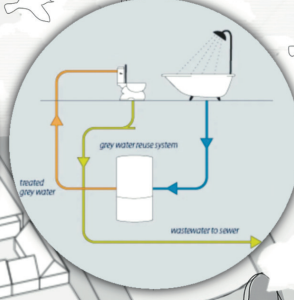
renewable energy



permeable surfaces



greywater recycling



waste management



urban garden









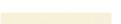




rainwater harvesting

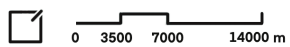


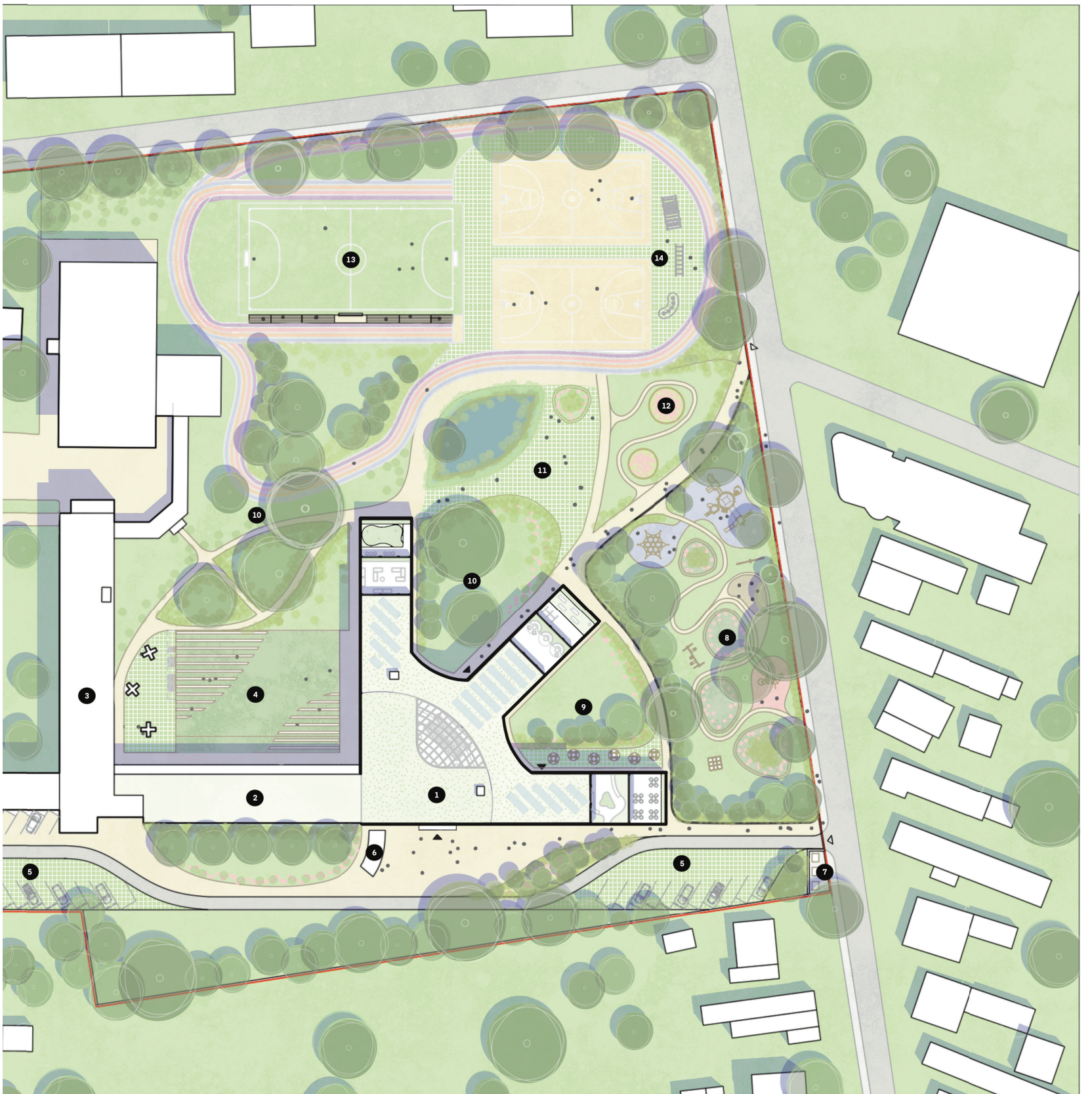
biodiversed landscaping

Ecological concept

- 1 Skyro extension
- 2 Existing Skyro
- 3 Existing elementary school
- 4 Outdoor studying / chill
- 5 Parking
- 6 Bicycle parking
- 7 Dumpsters
- 8 Public playground
- 9 Outdoor dining / recreation
- 10 Recreation
- 11 Rain garden / common area
- 12 Garden / chill area
- 13 Outdoor sports
- 14 Outdoor wellness

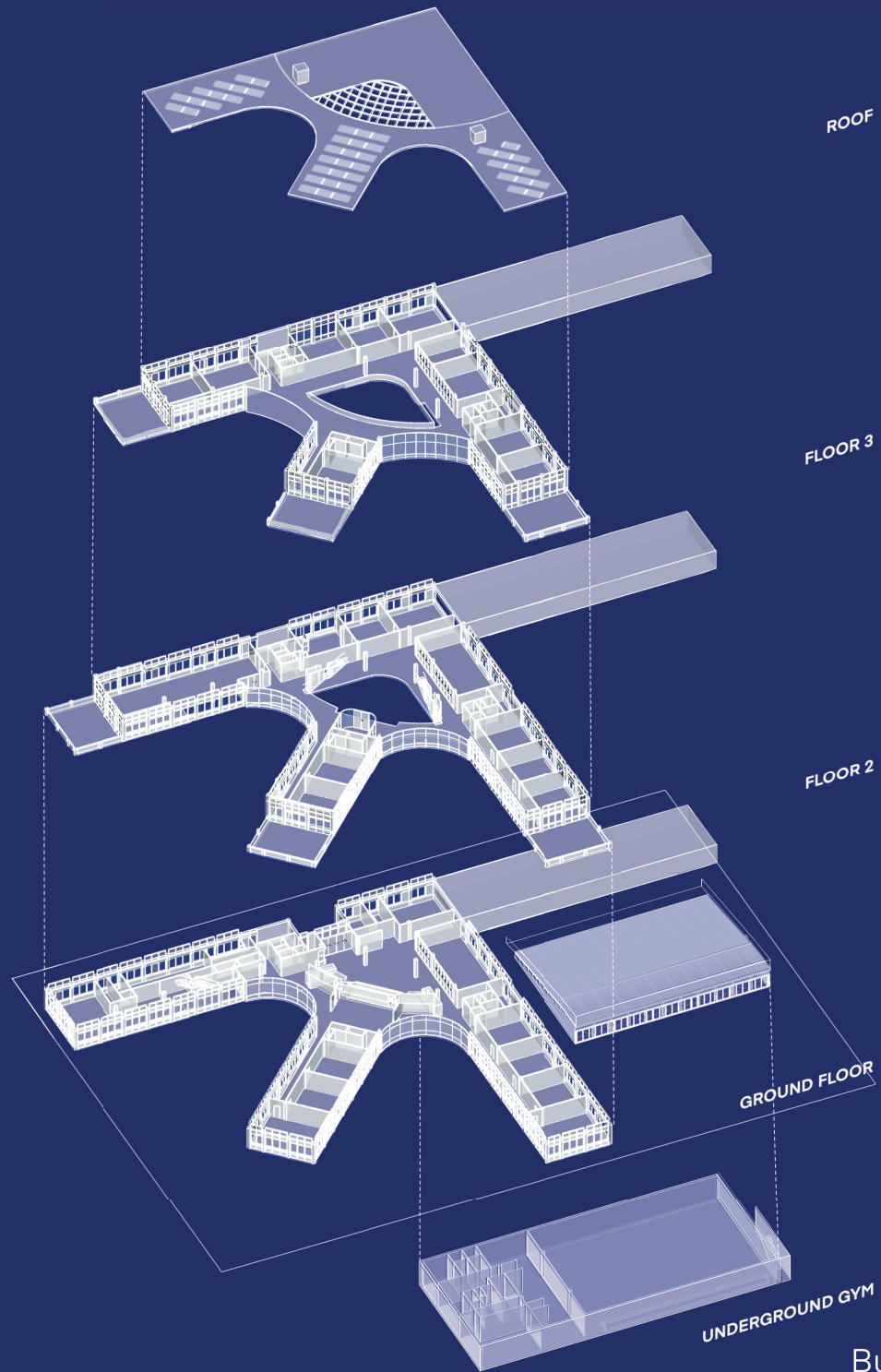
-  Green lawn
-  Bushes and flowers
-  Trees
-  Asphalt road
-  Paved pathways
-  Permeable pavers
-  EPDM sport / playground
-  Asphalt bound running track
-  Water surface
-  Main entrance
-  Secondary entrance



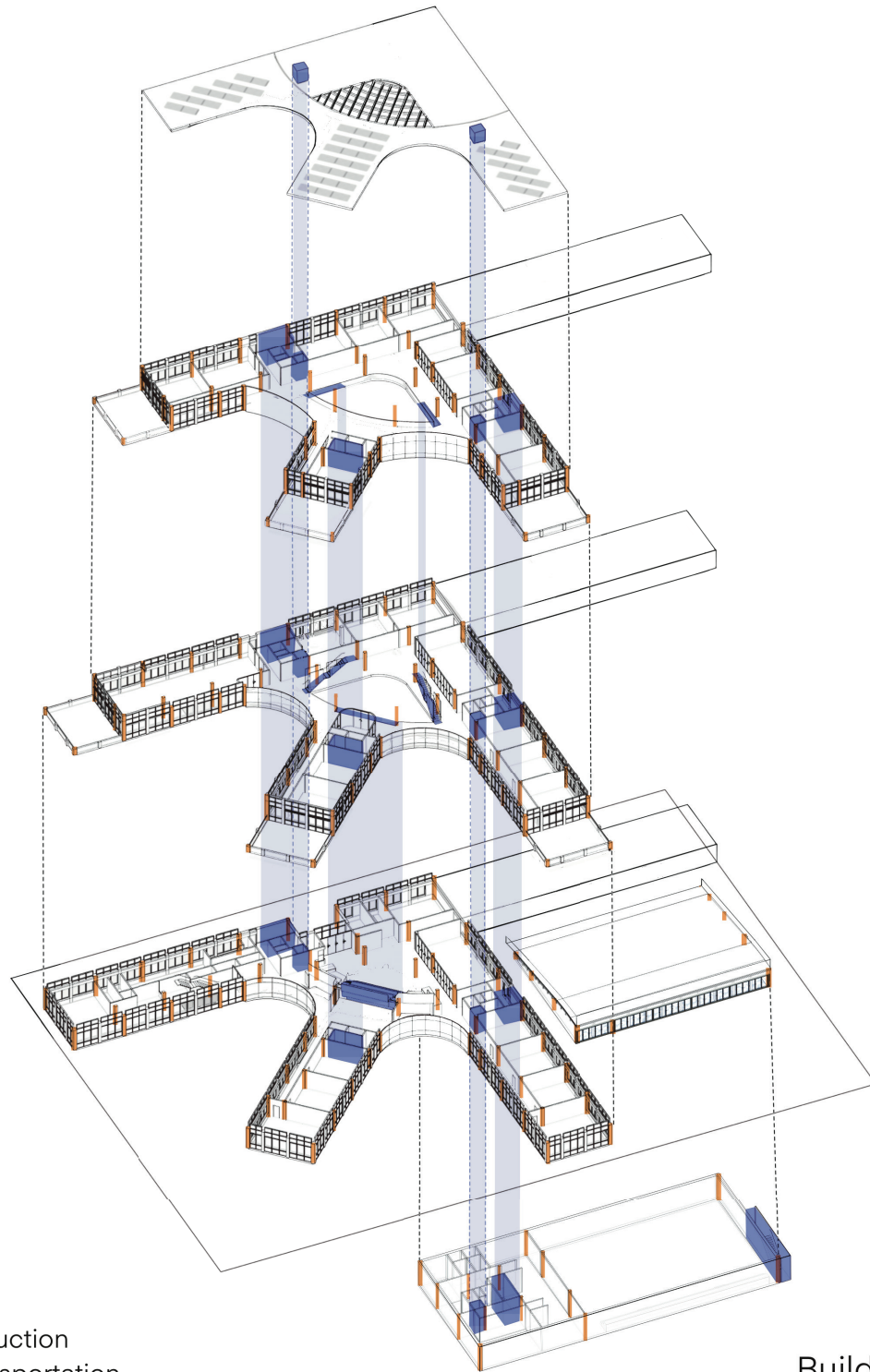


**PLANS
SECTIONS
ELEVATIONS**

SHIRO

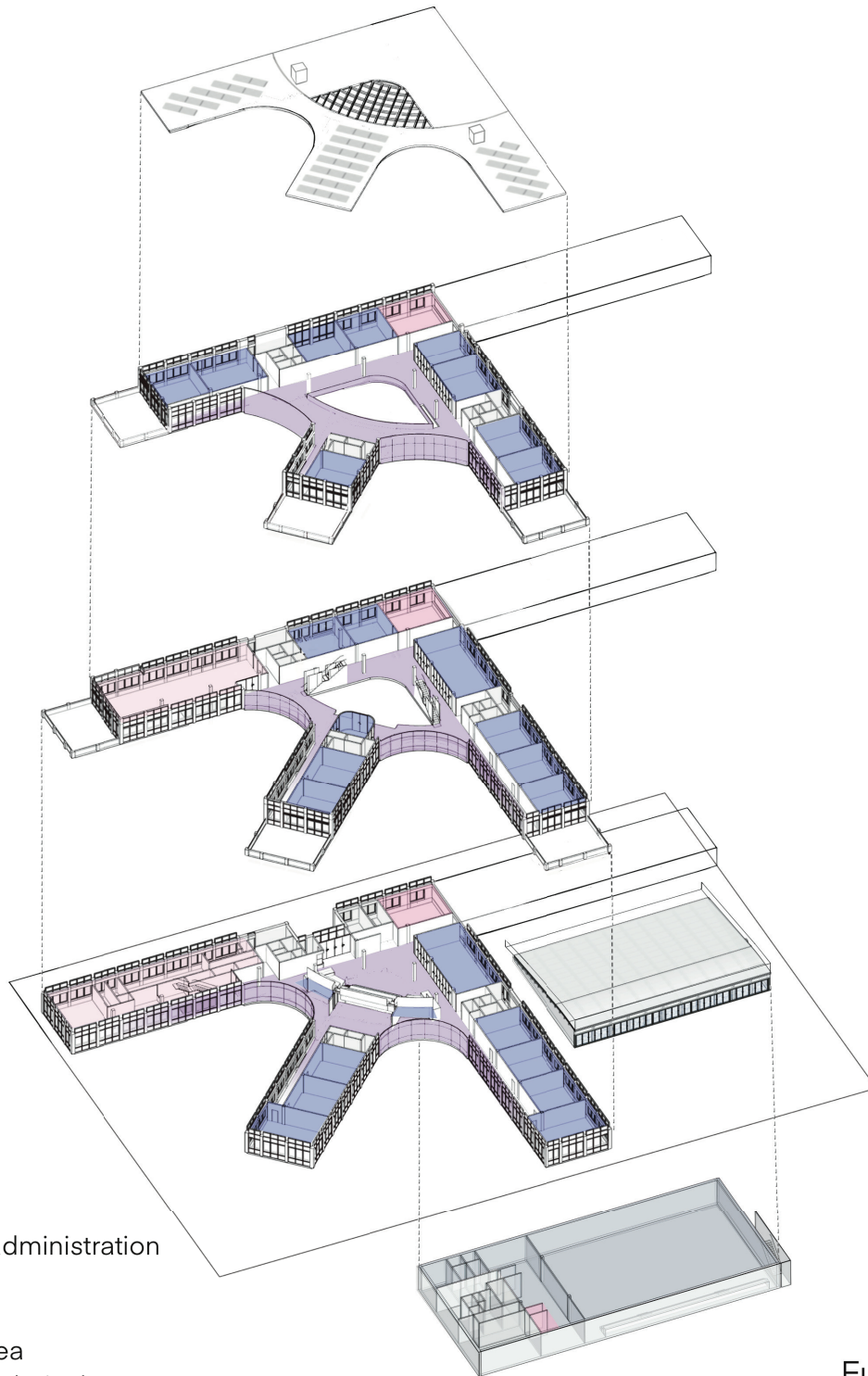


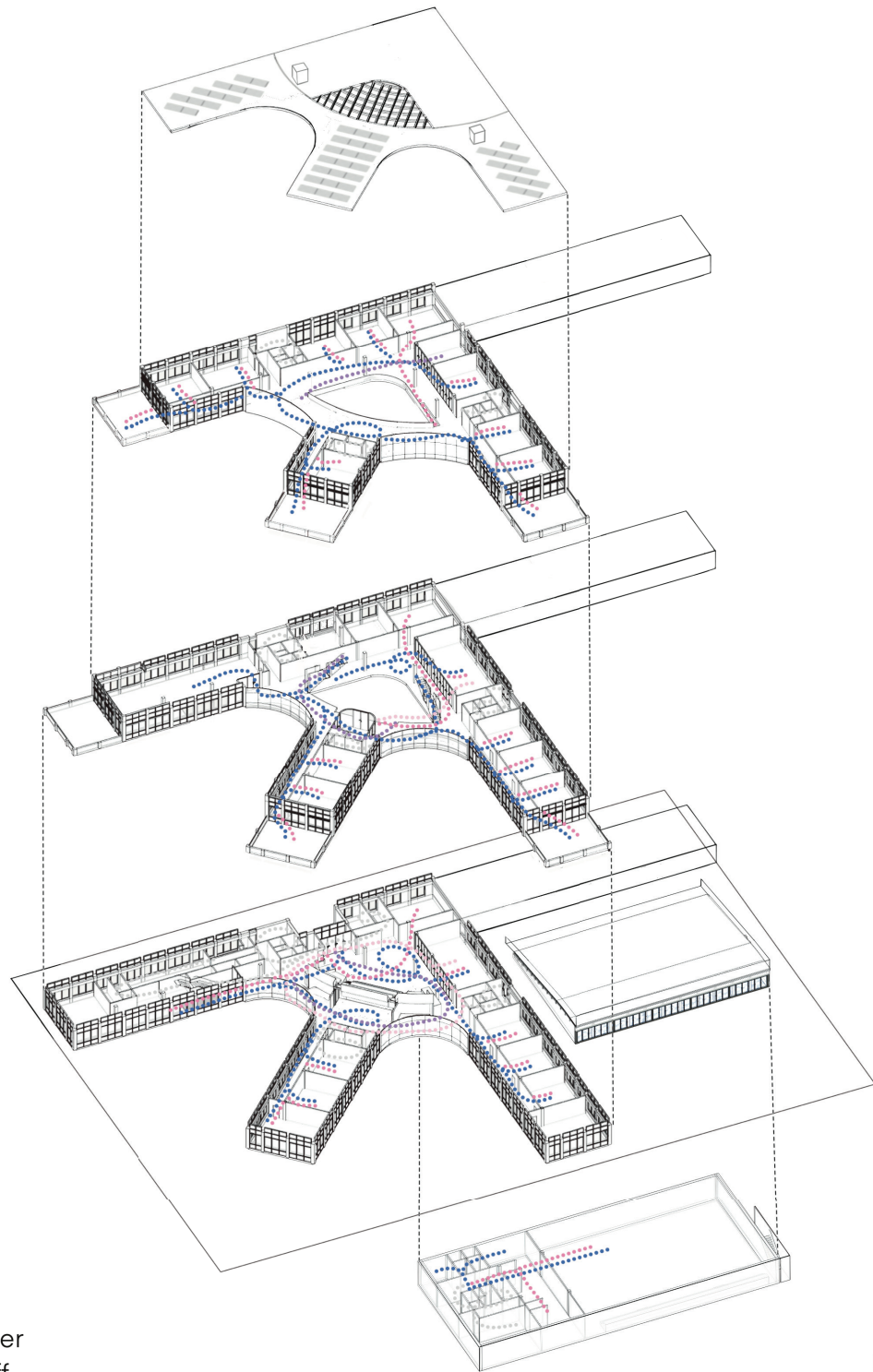
Building in layers



— core construction
— vertical transportation

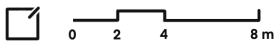
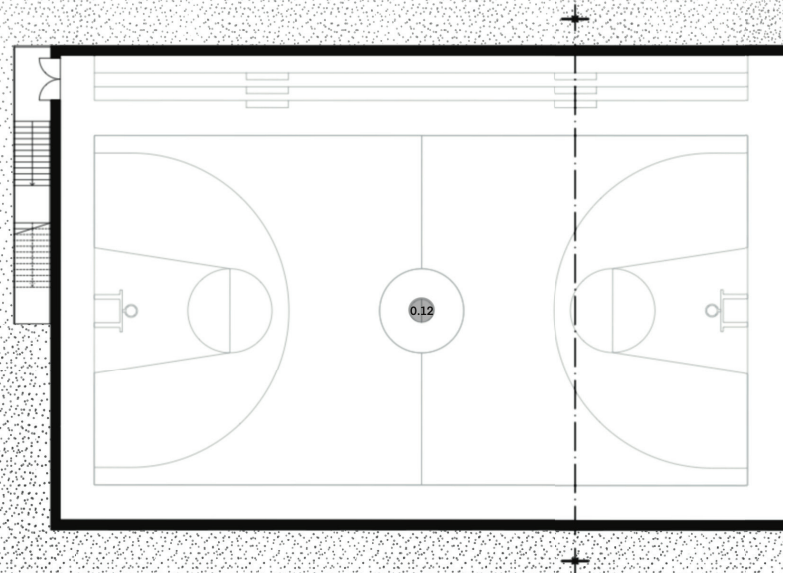
Building construction

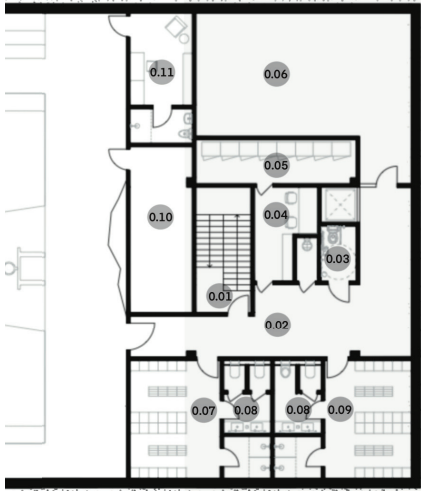




User experience

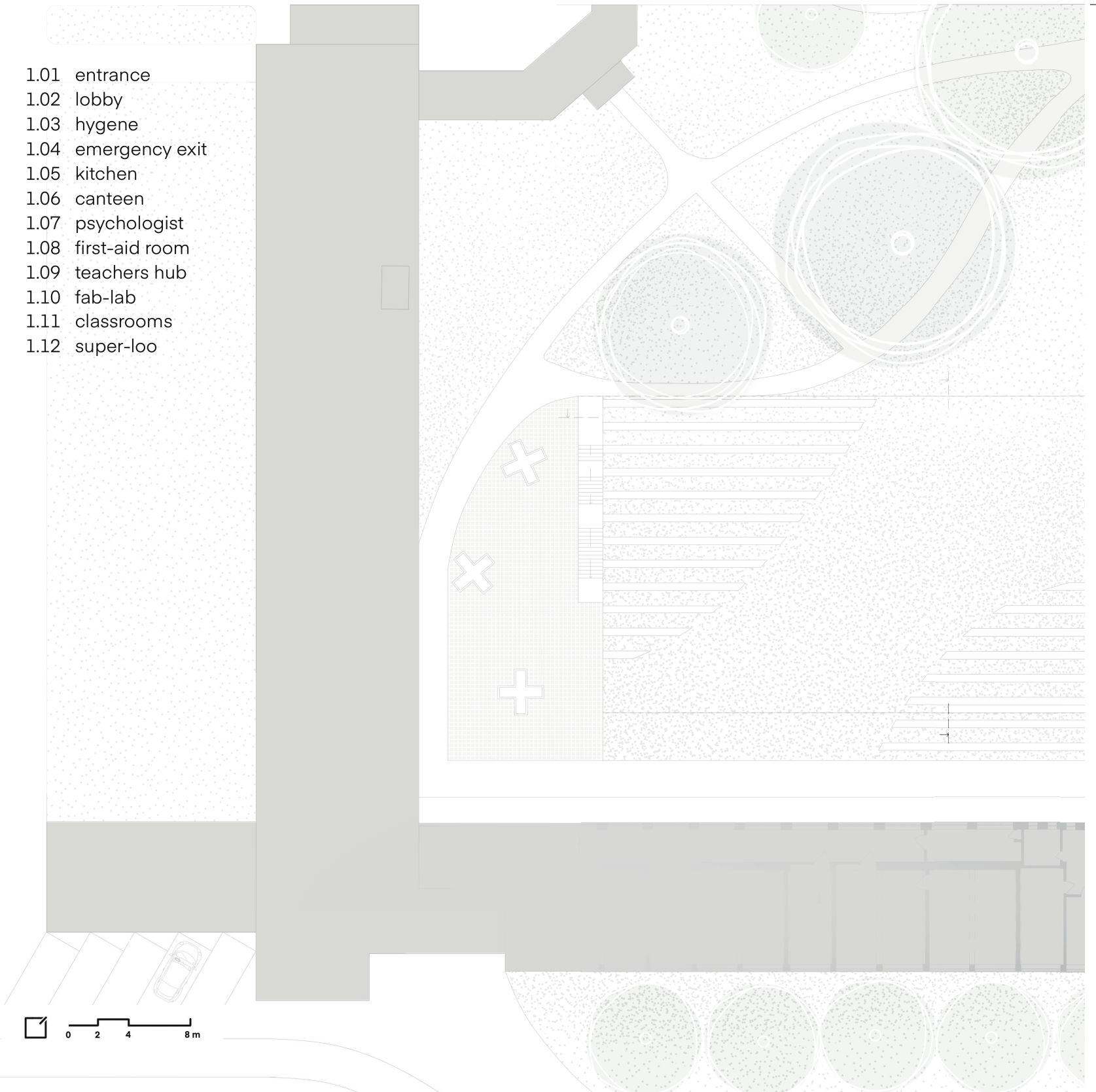
- 0.01 entrance
- 0.02 hallway
- 0.03 wc universal
- 0.04 server office
- 0.05 server room
- 0.06 technical infrastructure room
- 0.07 changing room girls
- 0.08 hygiene
- 0.09 changing room boys
- 0.10 gym equipment
- 0.11 PE coach office
- 0.12 gym

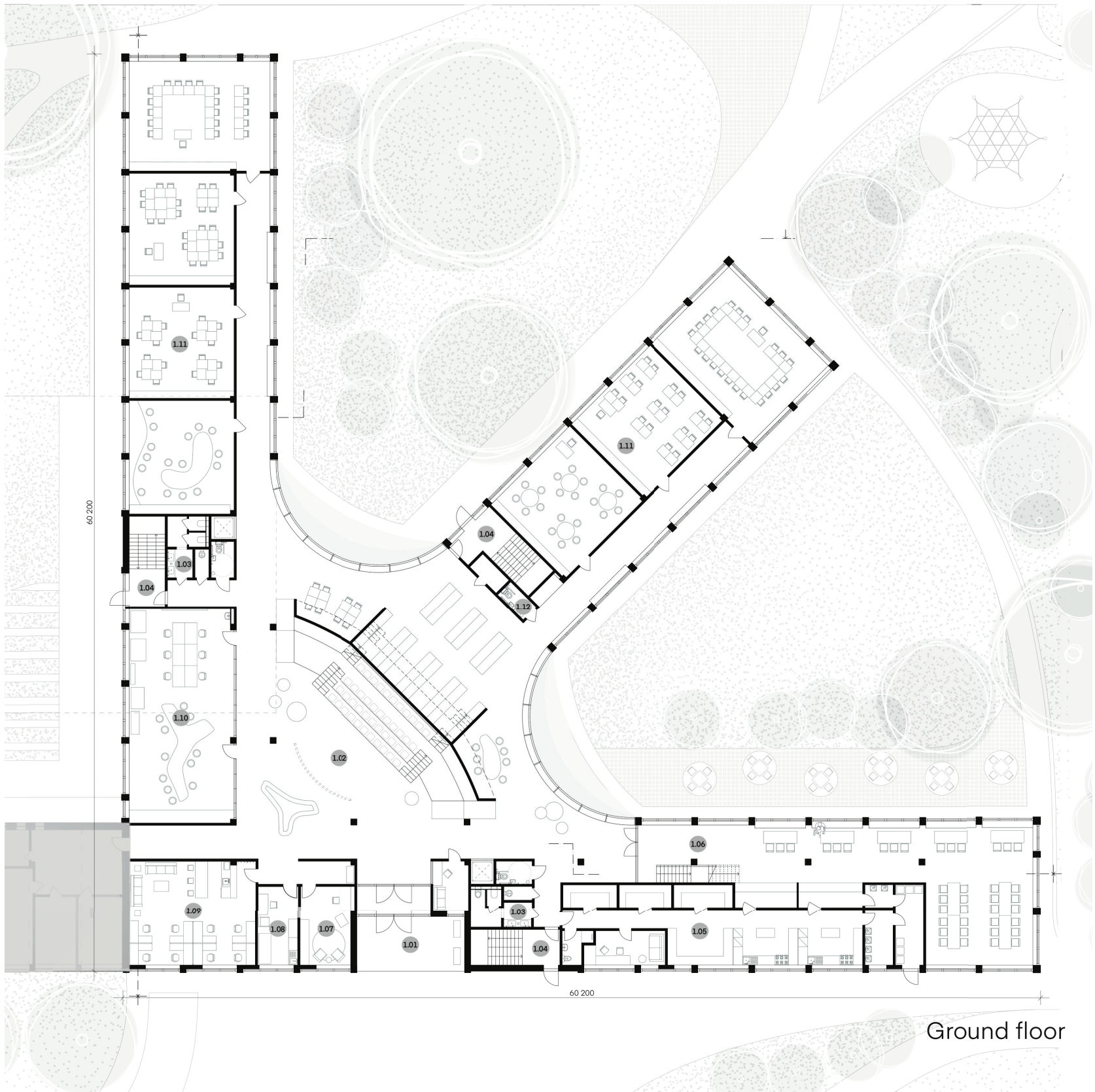




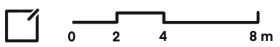
Underground floor

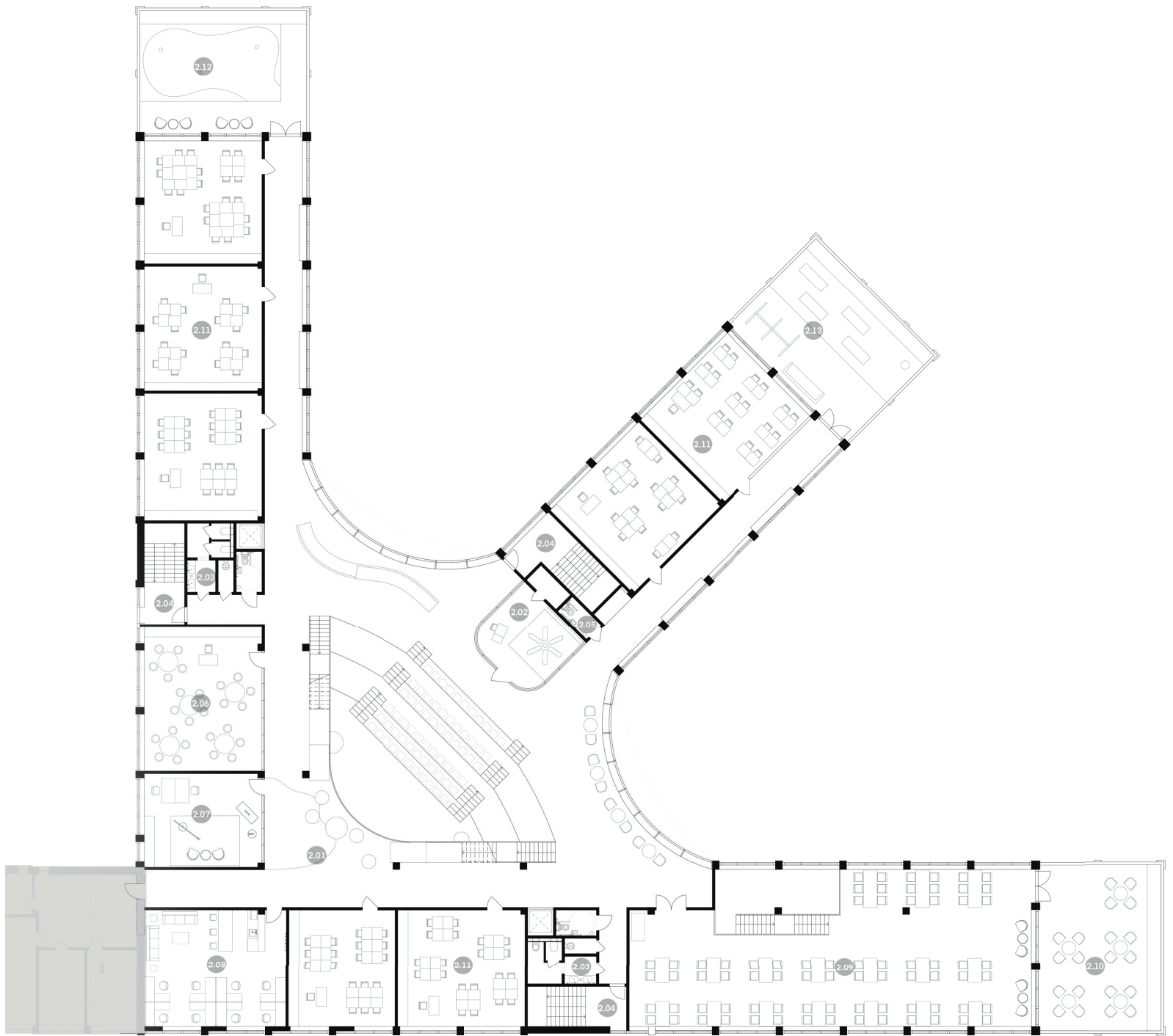
- 1.01 entrance
- 1.02 lobby
- 1.03 hygiene
- 1.04 emergency exit
- 1.05 kitchen
- 1.06 canteen
- 1.07 psychologist
- 1.08 first-aid room
- 1.09 teachers hub
- 1.10 fab-lab
- 1.11 classrooms
- 1.12 super-loo





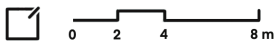
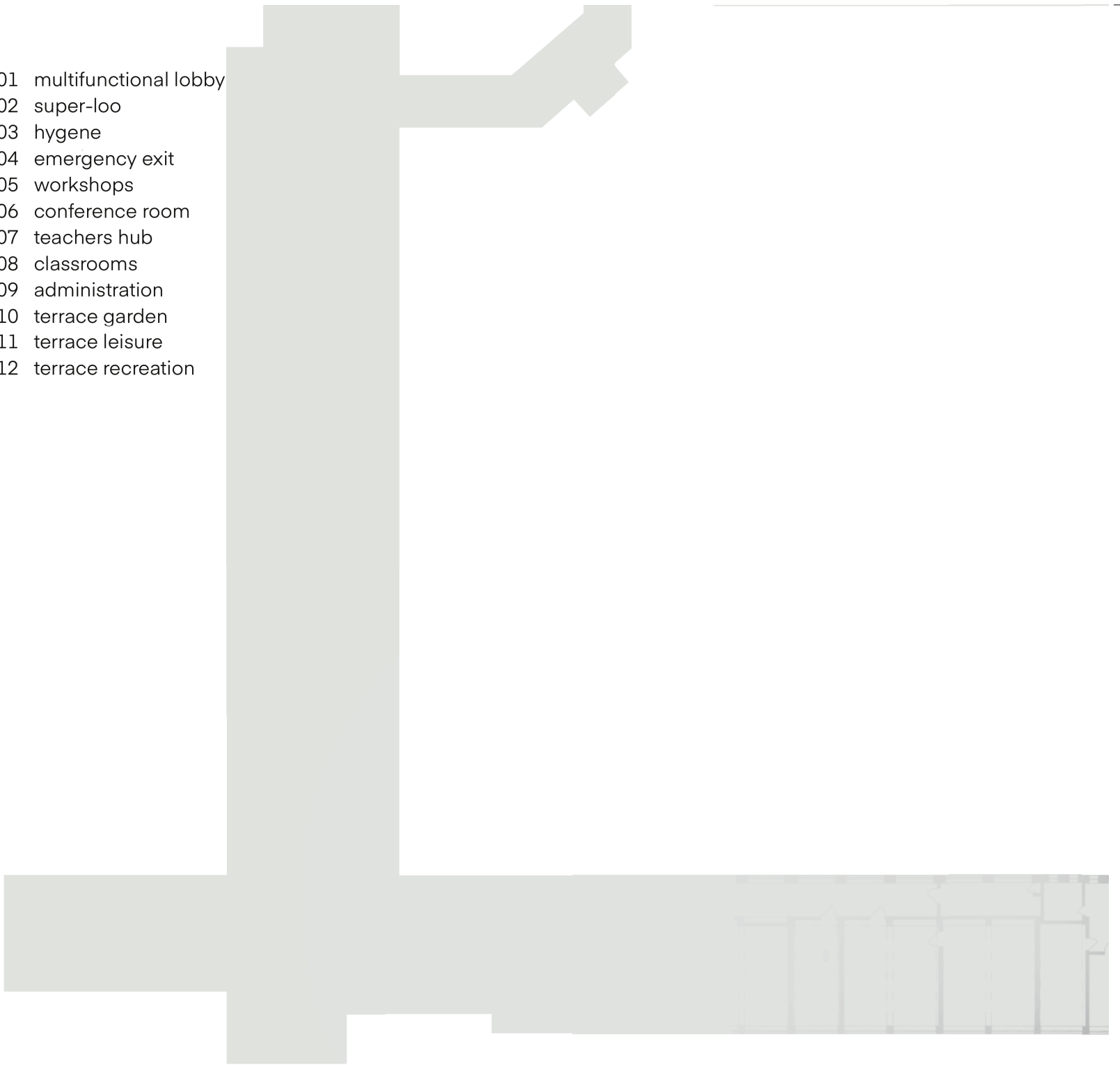
- 2.01 multifunctional lobby
- 2.02 AI/VR Lab
- 1.03 hygiene
- 1.04 emergency exit
- 1.05 super-loo
- 1.06 workshops
- 1.07 media production room
- 1.08 teachers hub
- 1.09 canteen
- 1.10 canteen terrace
- 1.11 classrooms
- 1.12 terrace mini-golf
- 1.13 terrace wellness

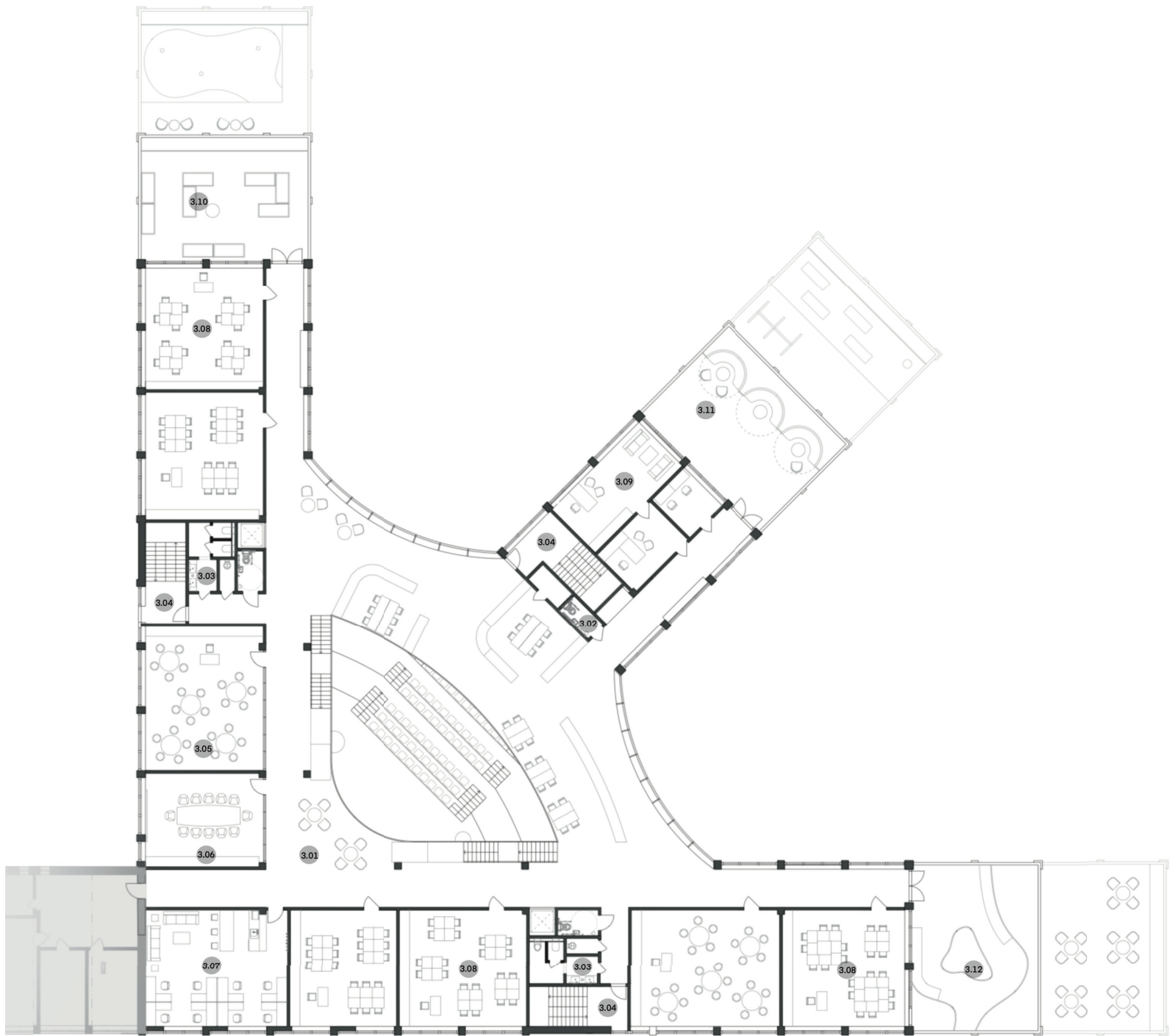




2 floor

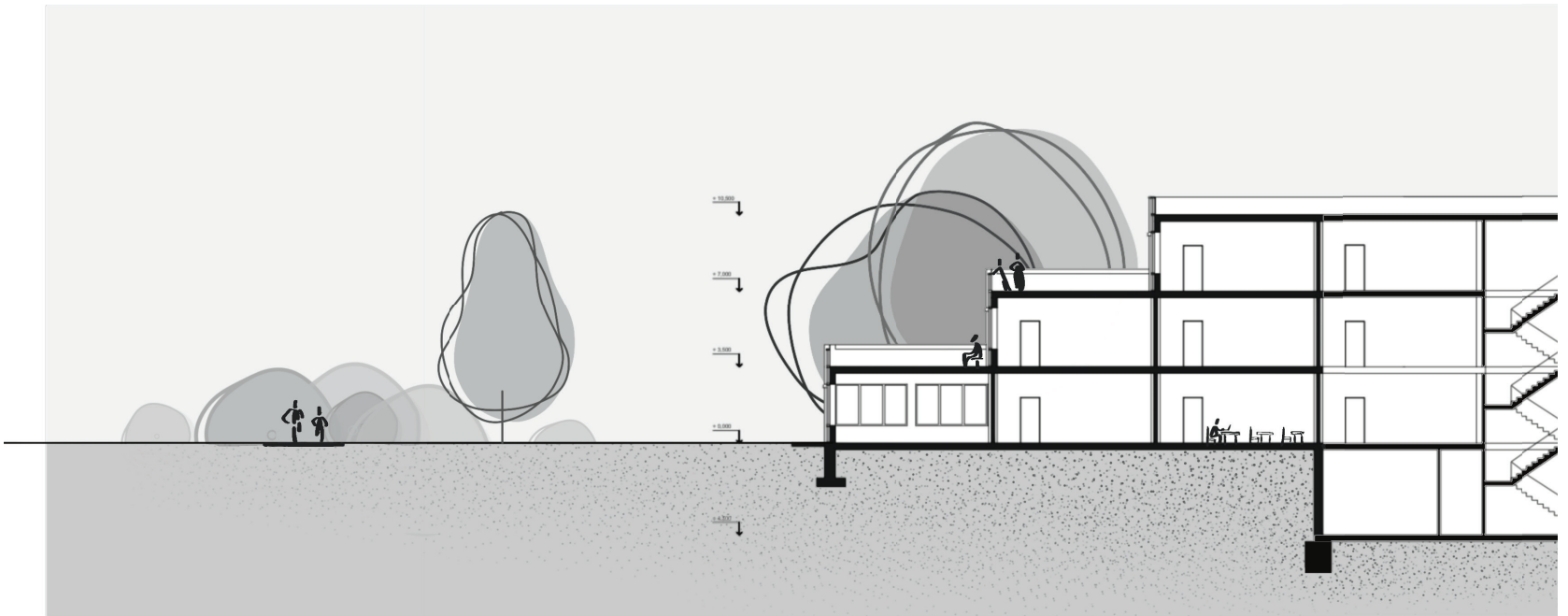
- 3.01 multifunctional lobby
- 3.02 super-loo
- 3.03 hygiene
- 3.04 emergency exit
- 3.05 workshops
- 3.06 conference room
- 3.07 teachers hub
- 3.08 classrooms
- 3.09 administration
- 3.10 terrace garden
- 3.11 terrace leisure
- 3.12 terrace recreation



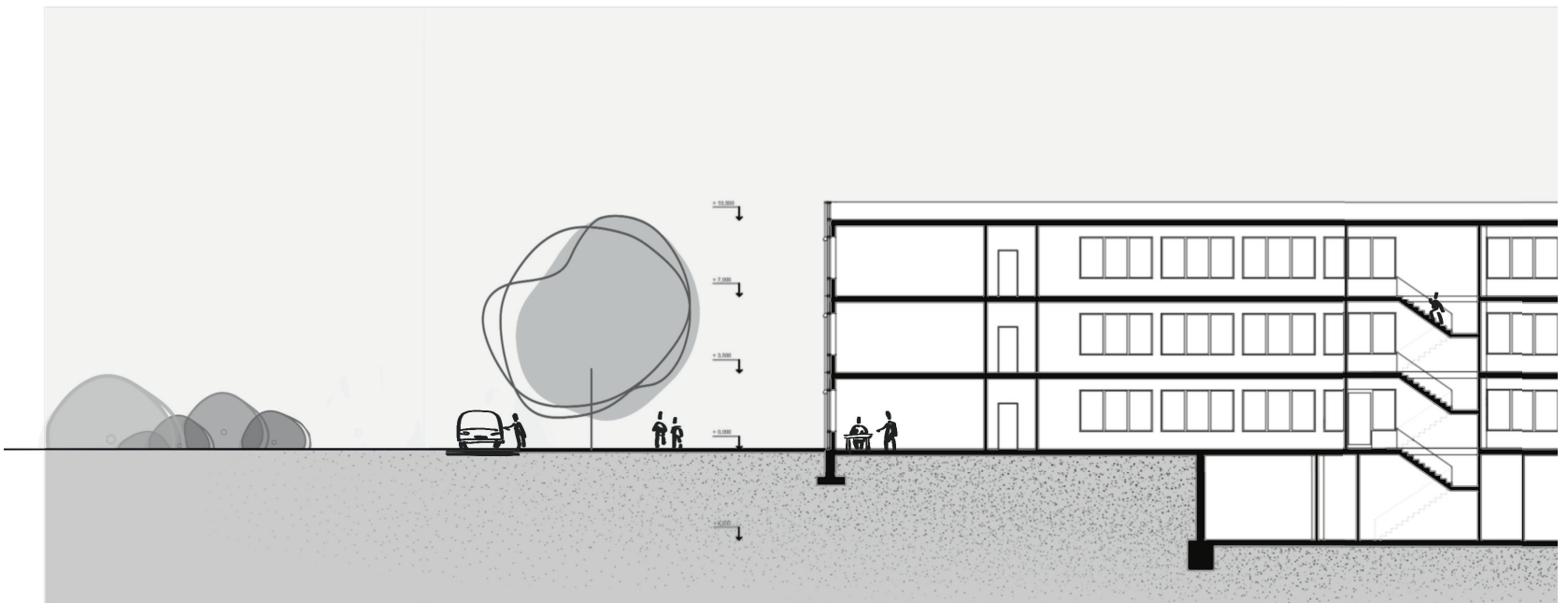


3 floor

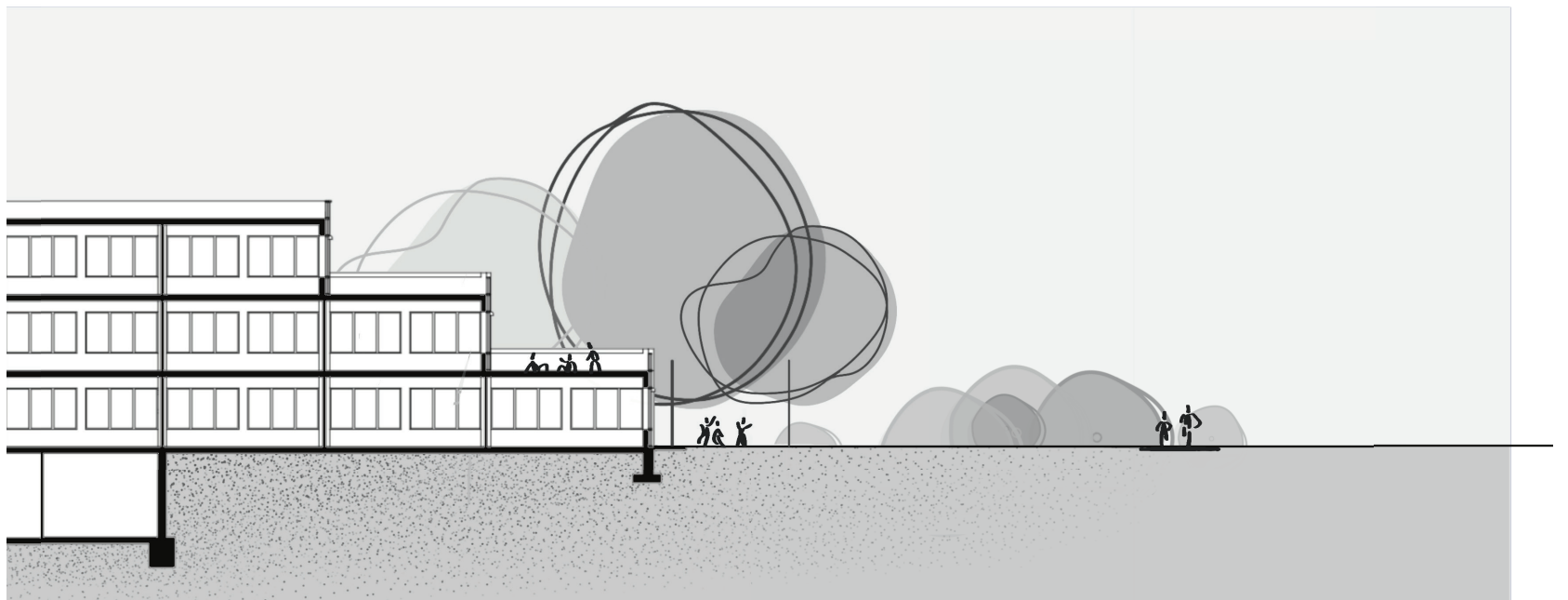
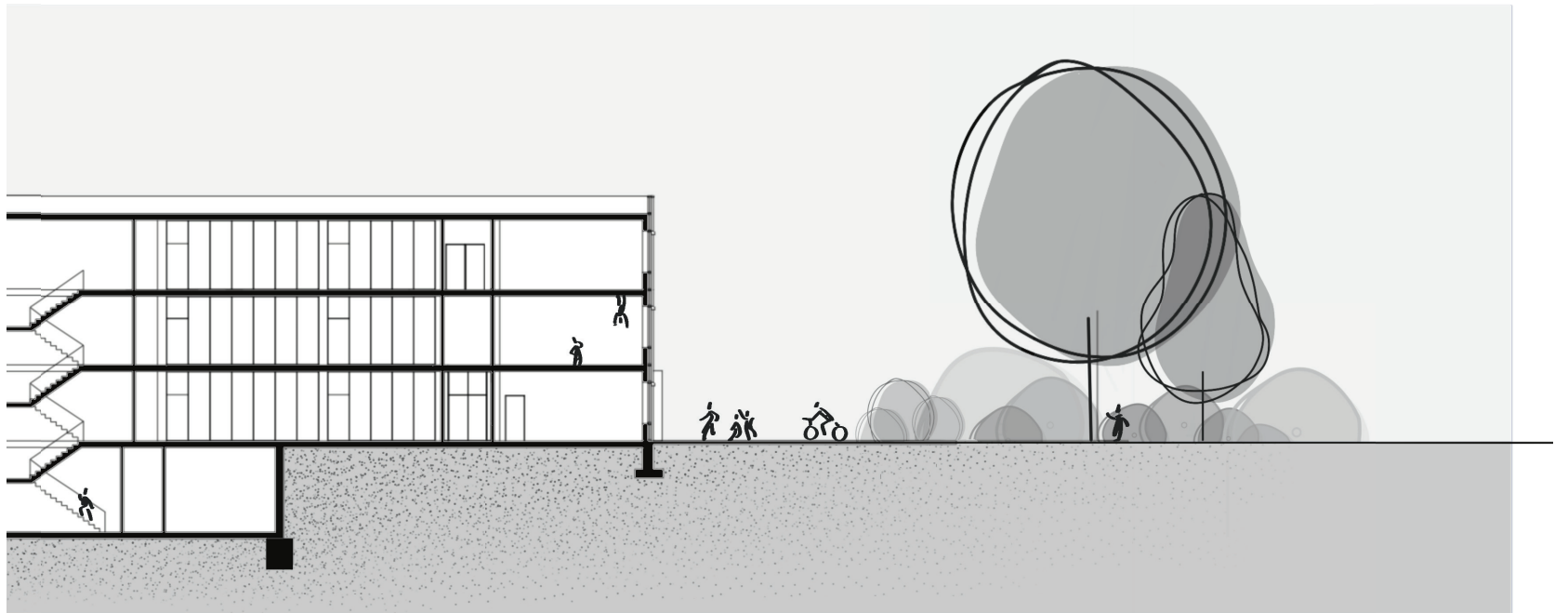
Section A - A



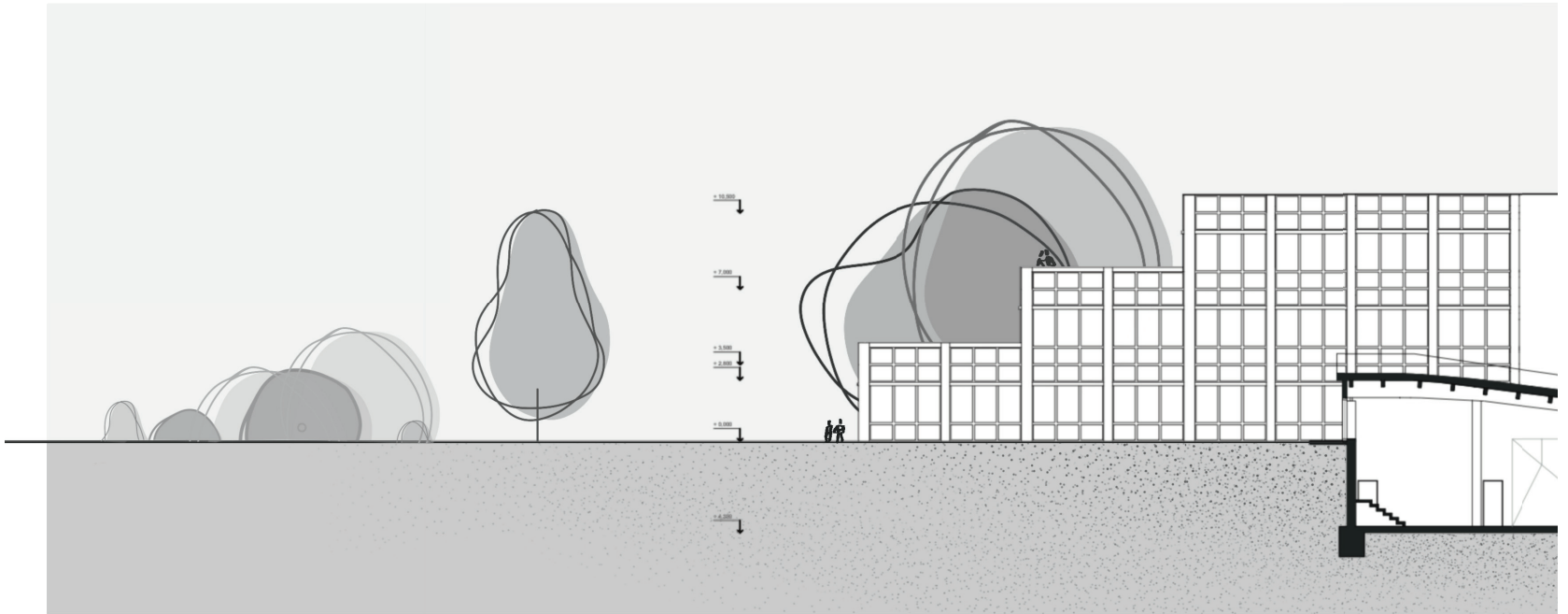
Section A' - A'



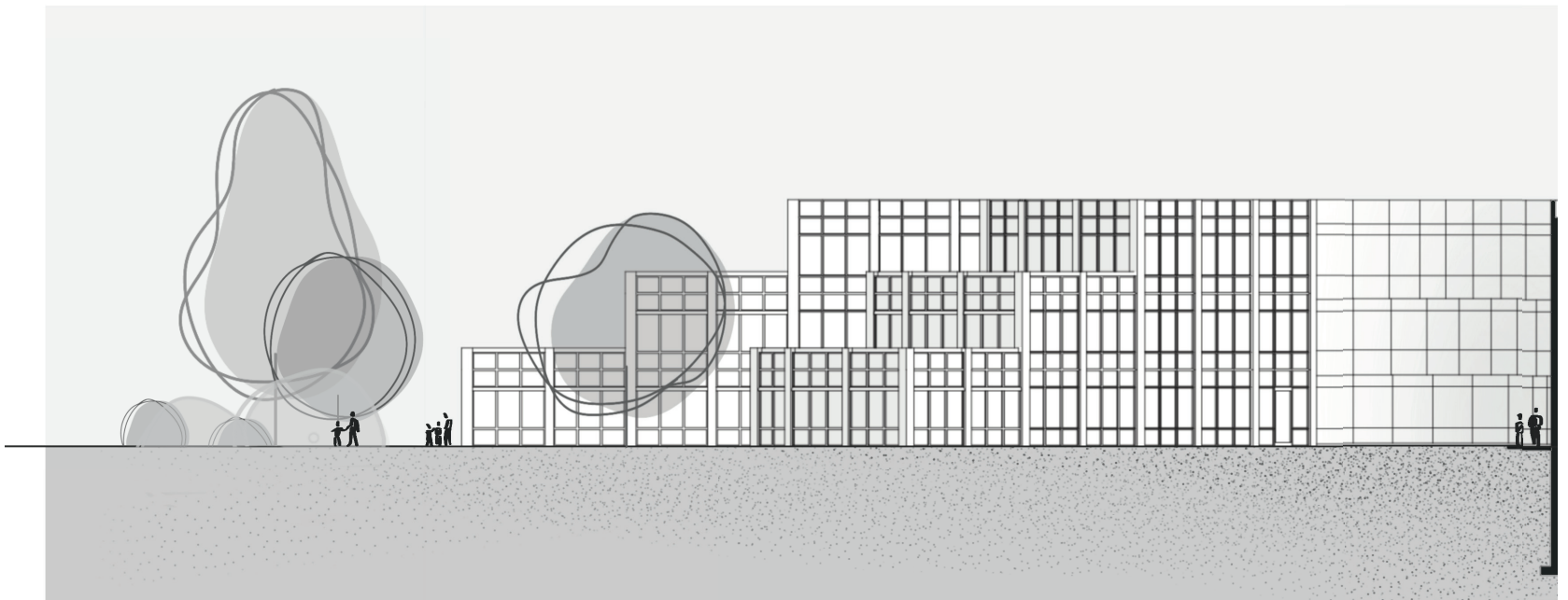
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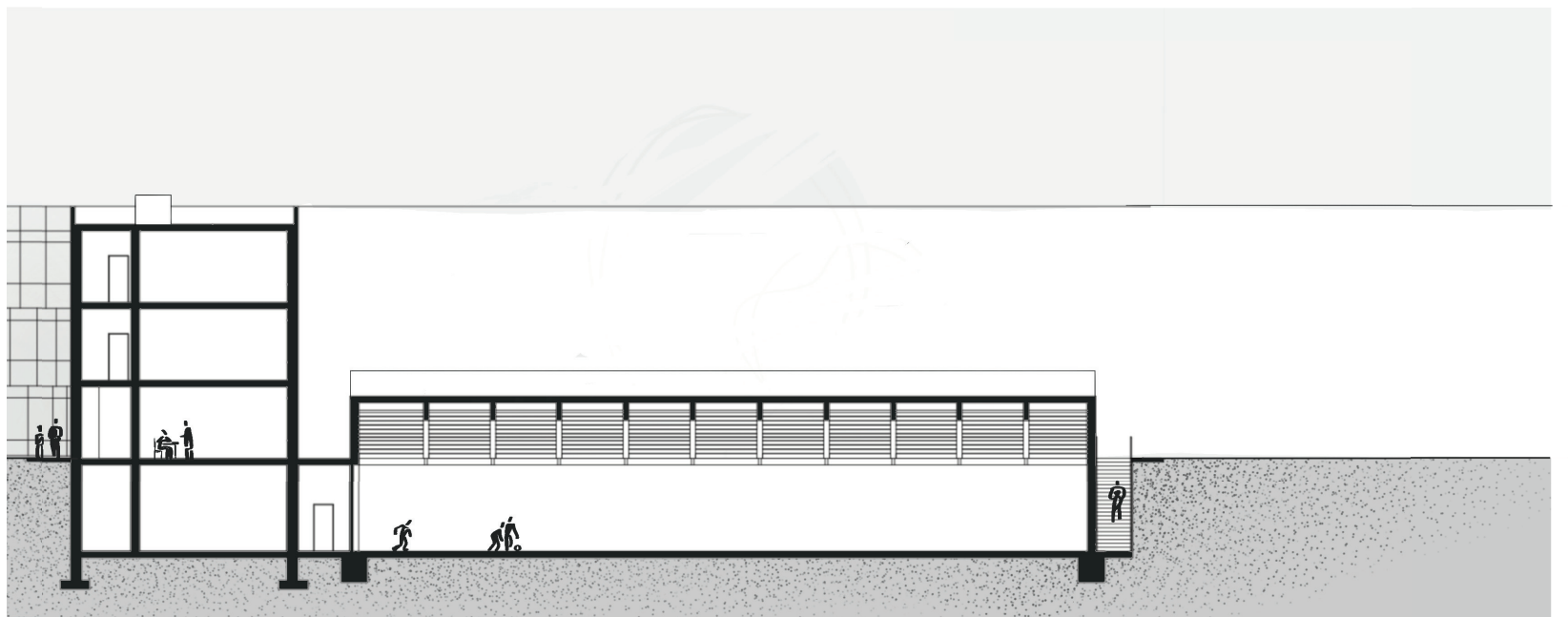
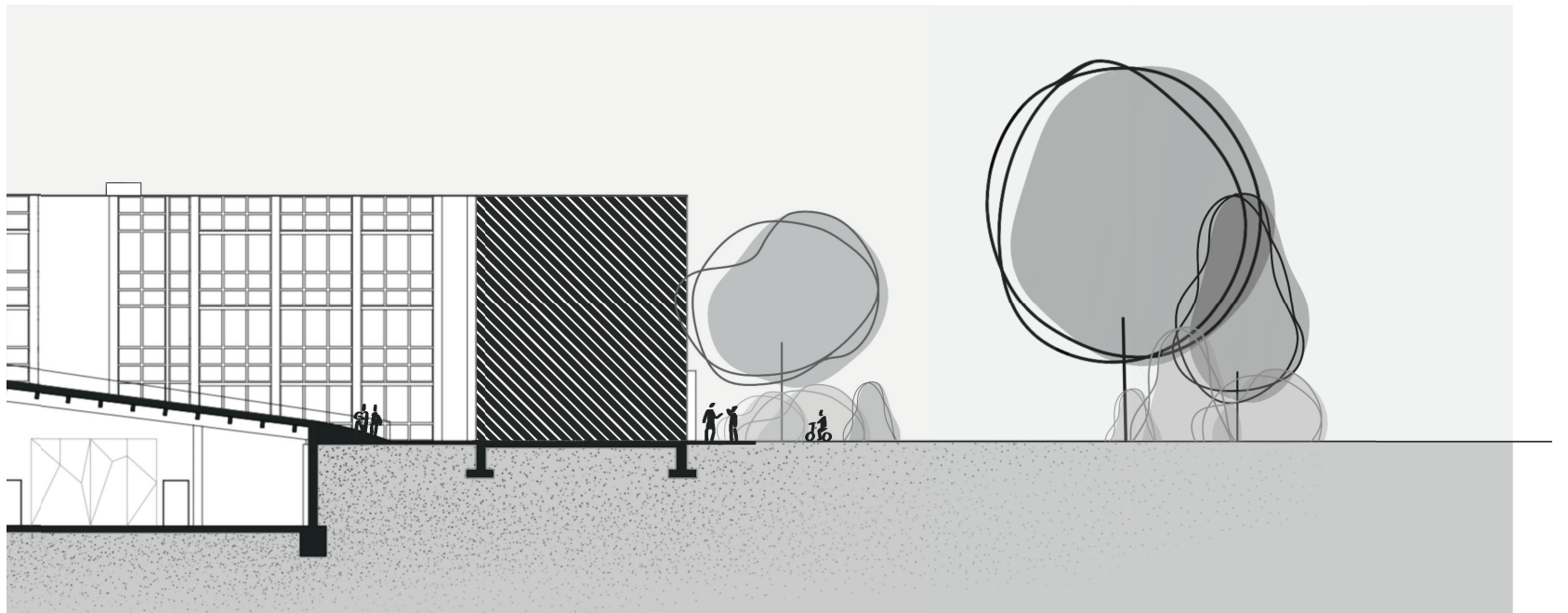
Section C - C



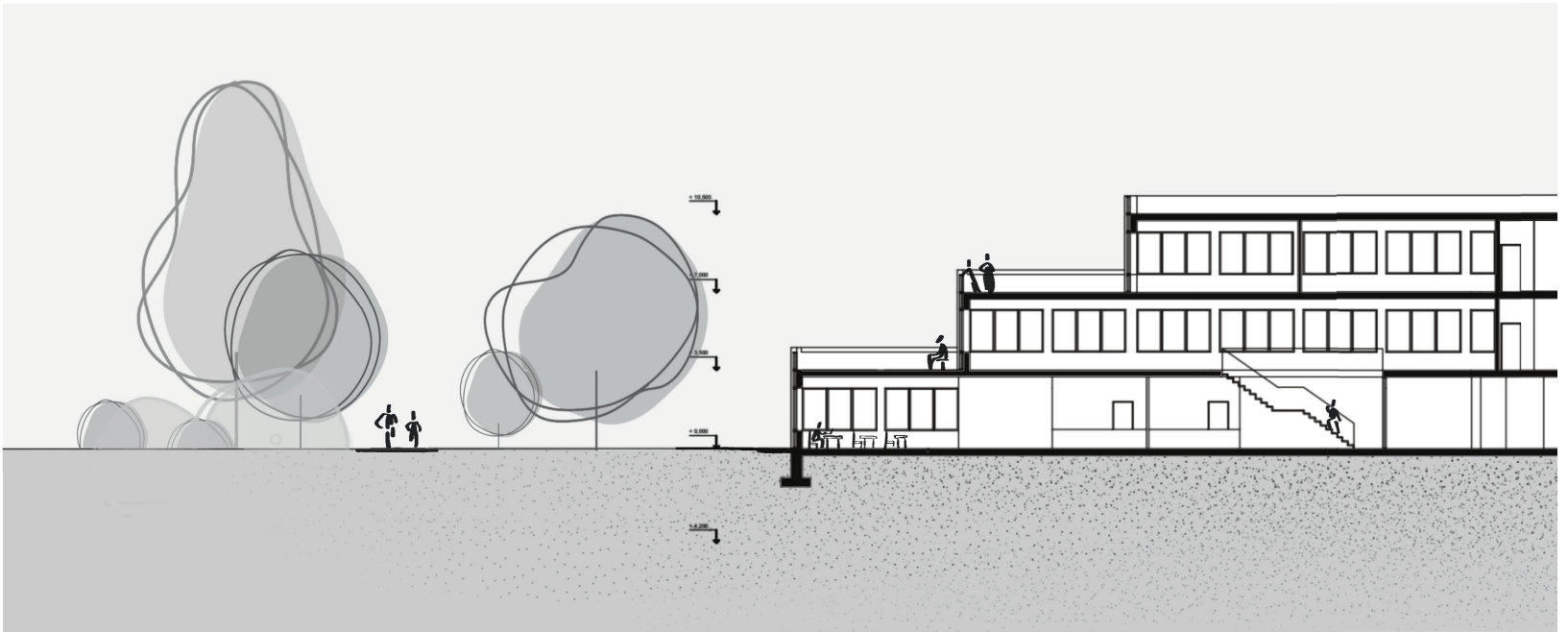
Section D - D



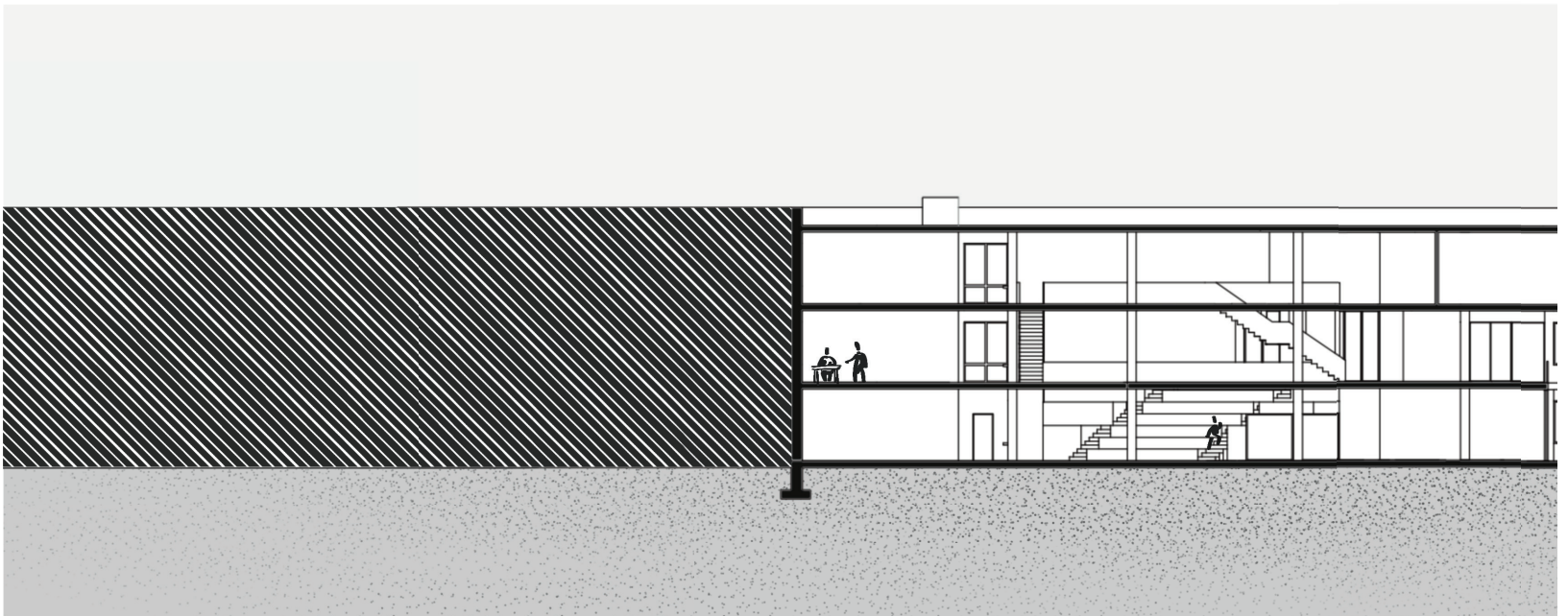
0 2 4 8 m



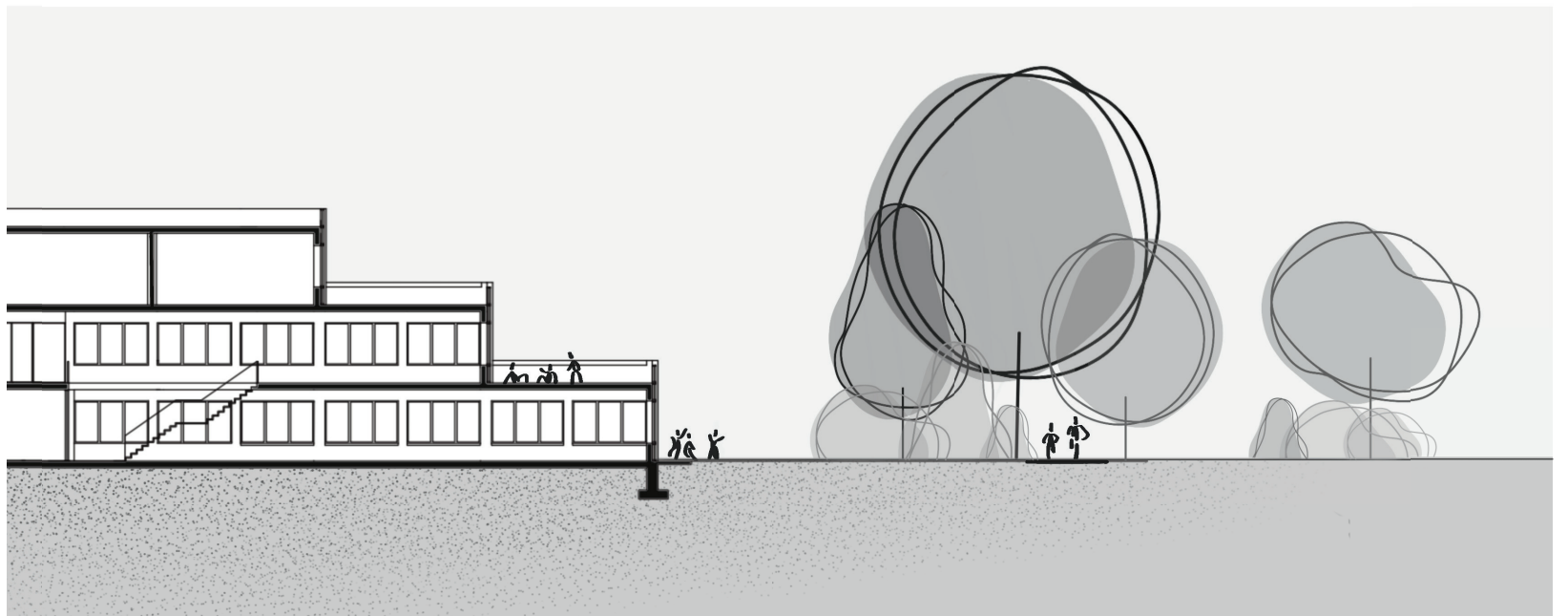
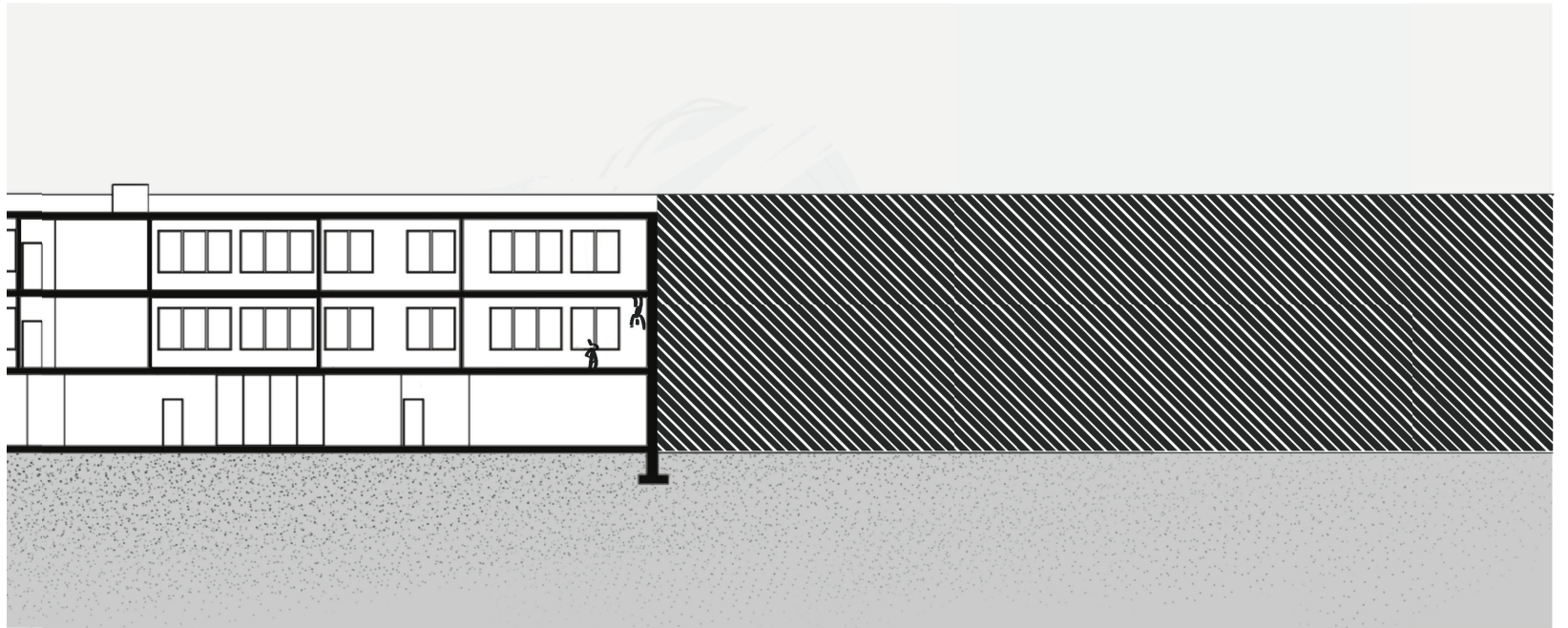
Section B - B

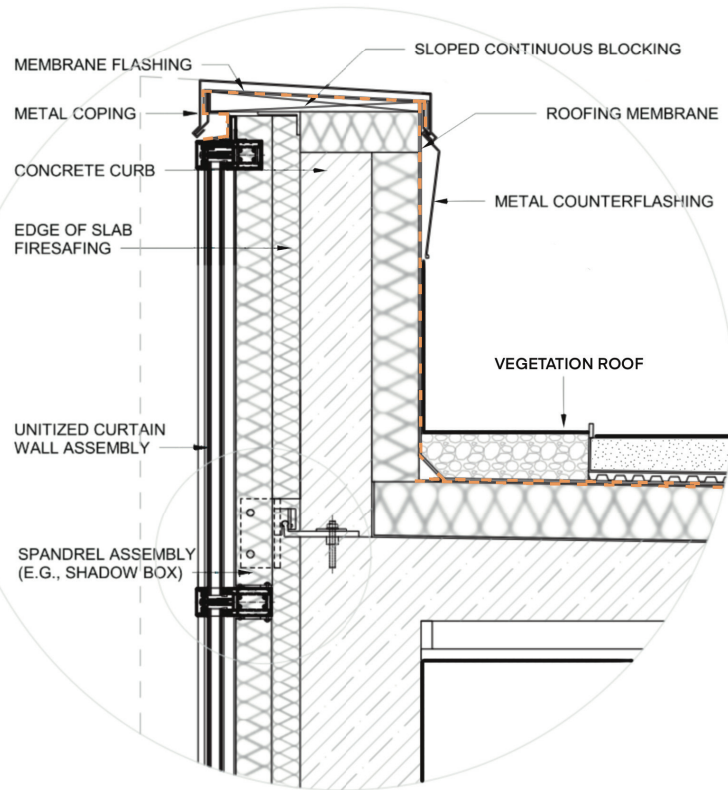
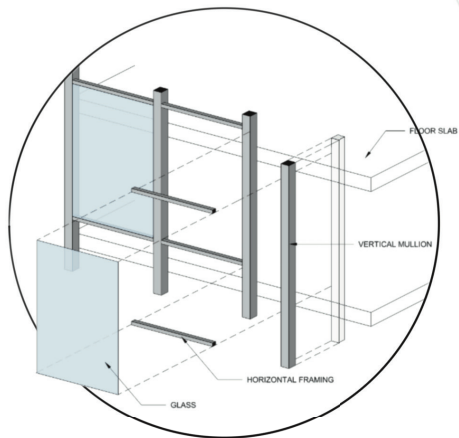
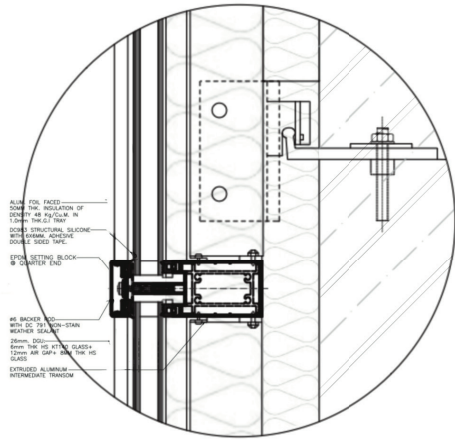


Section B' - B'

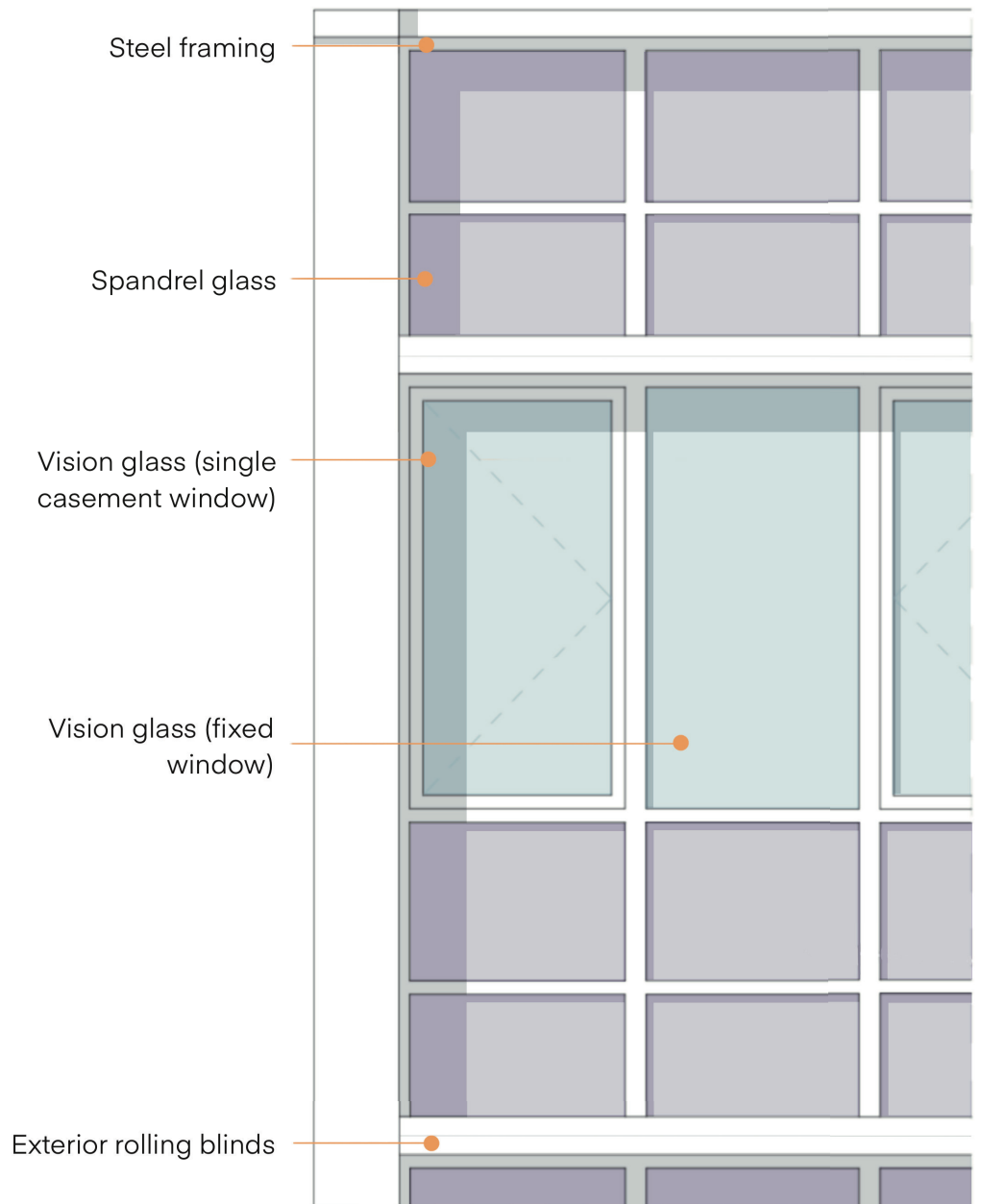
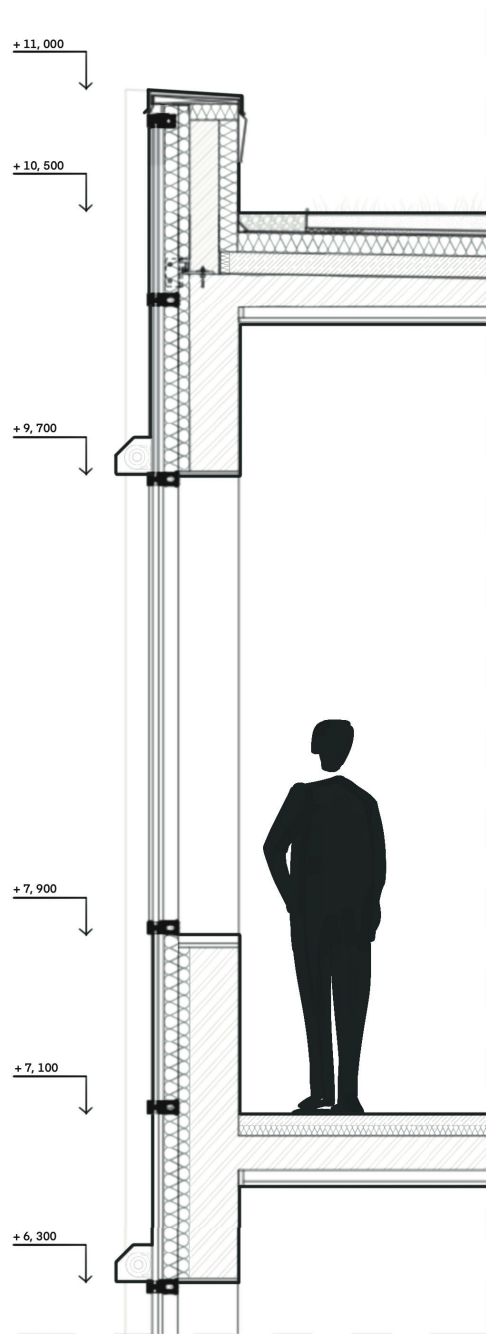


0 2 4 8 m

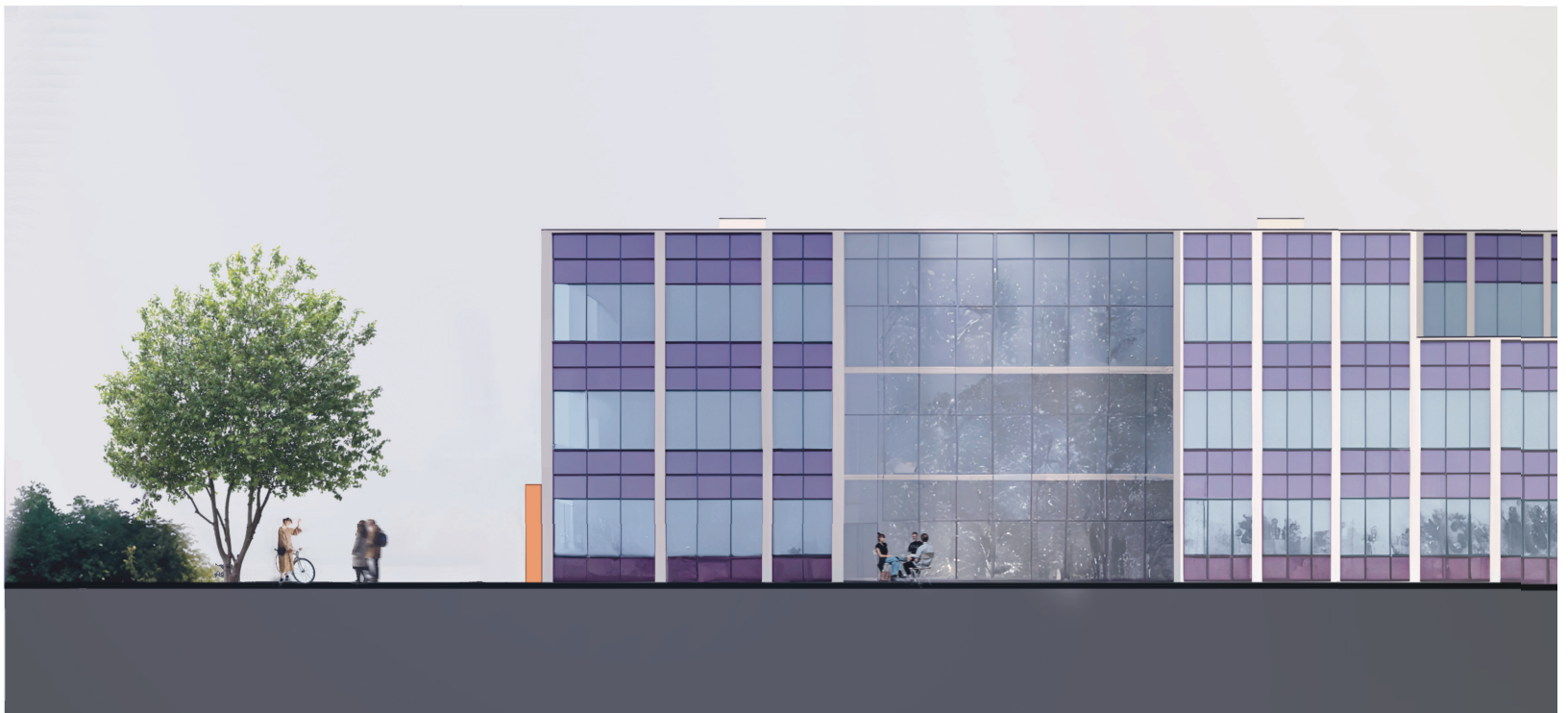




Attic detail with extensive green roof and spandrel glass panels



Architectural detail of spandrel glass facade

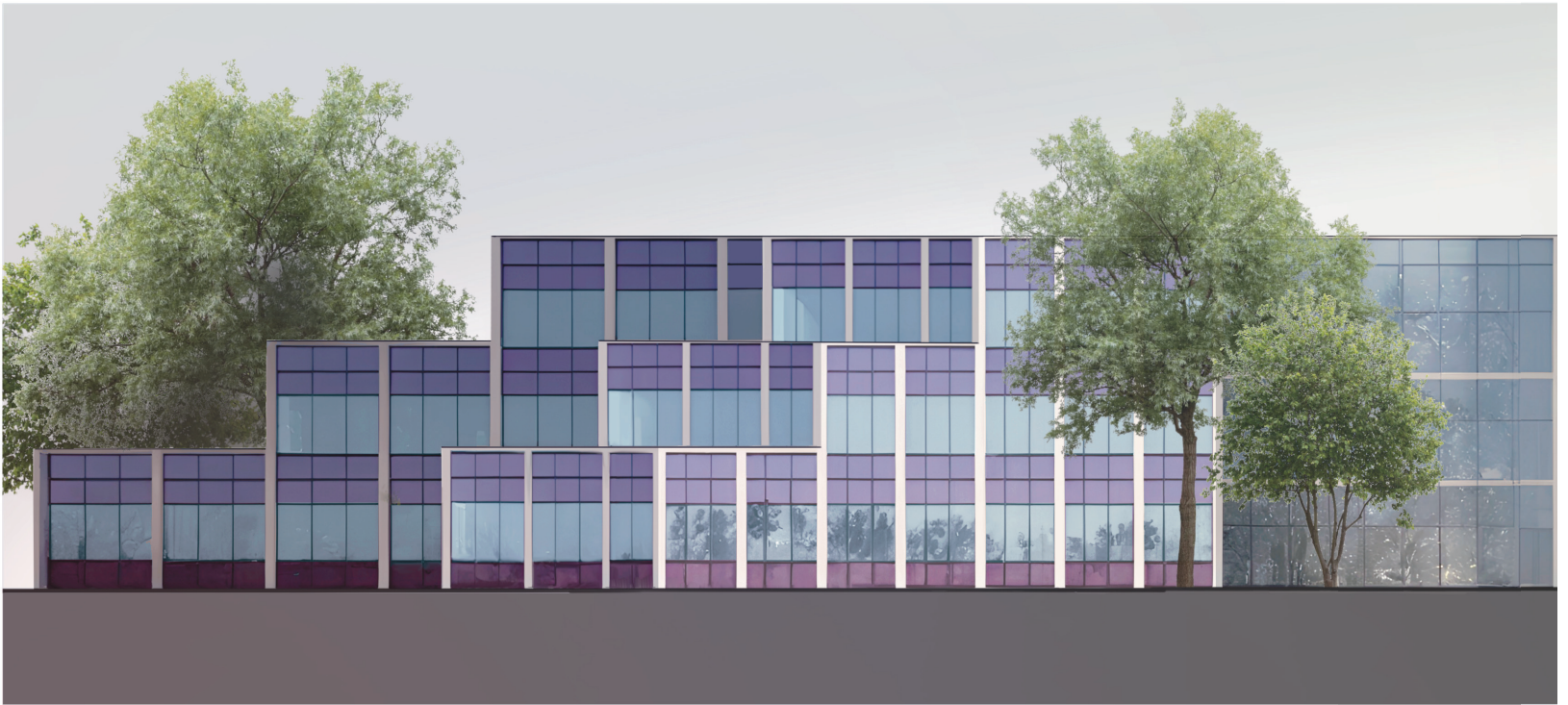




South - East elevation



North - East elevation





VISUALS

SHIRO

















BETONGELEMETS UPPGÅNG

THE RISE OF THE PANEL





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↳ AN VII **Alisa Aryutova** 2024 / 25

