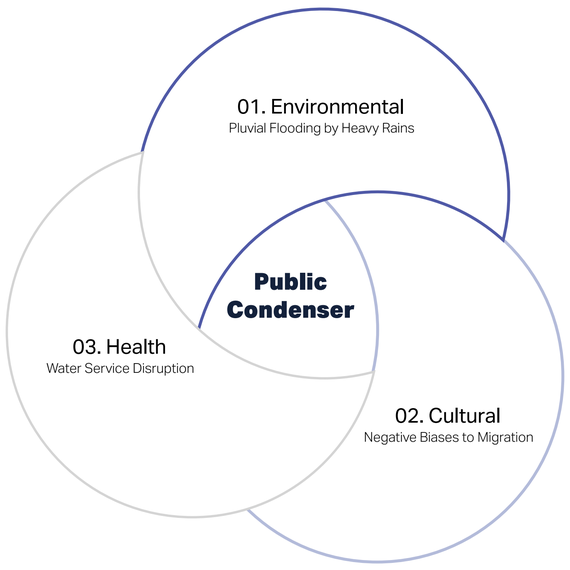
JOYCE DE LOUW
5326486

PUBLIC BUILDING
GRADUATION STUDIO

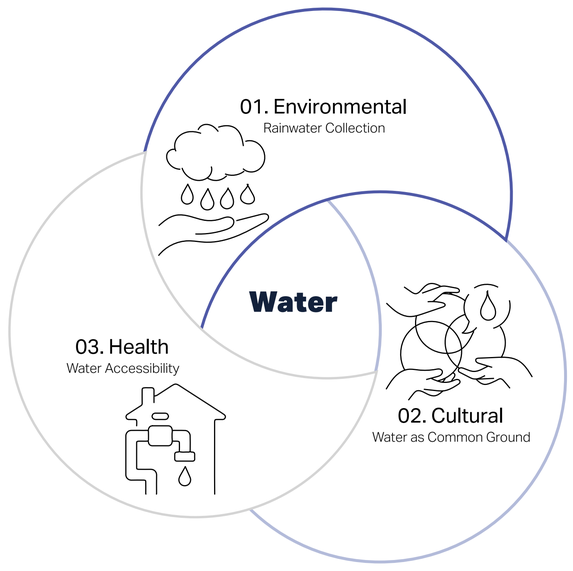
THE WATER HUB

Celebrating Diversity Through a Water Infrastructure

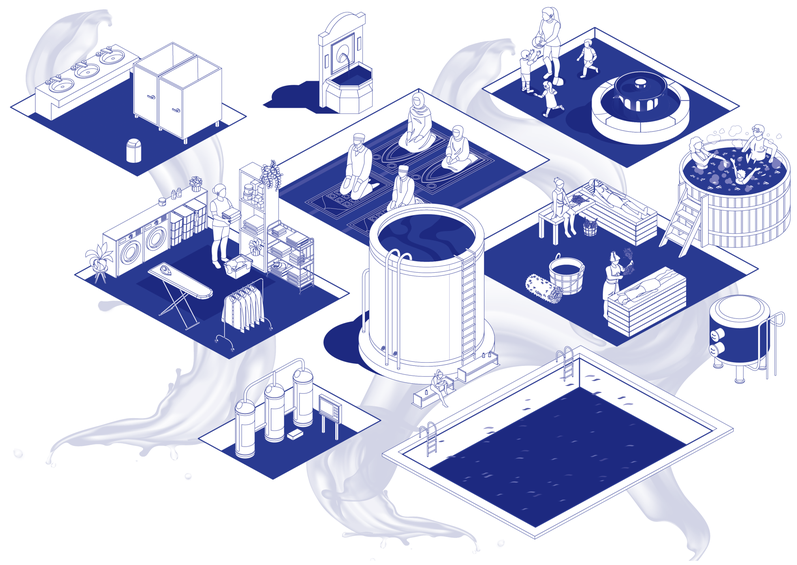
Problem Statement



Solution Statement



Concept



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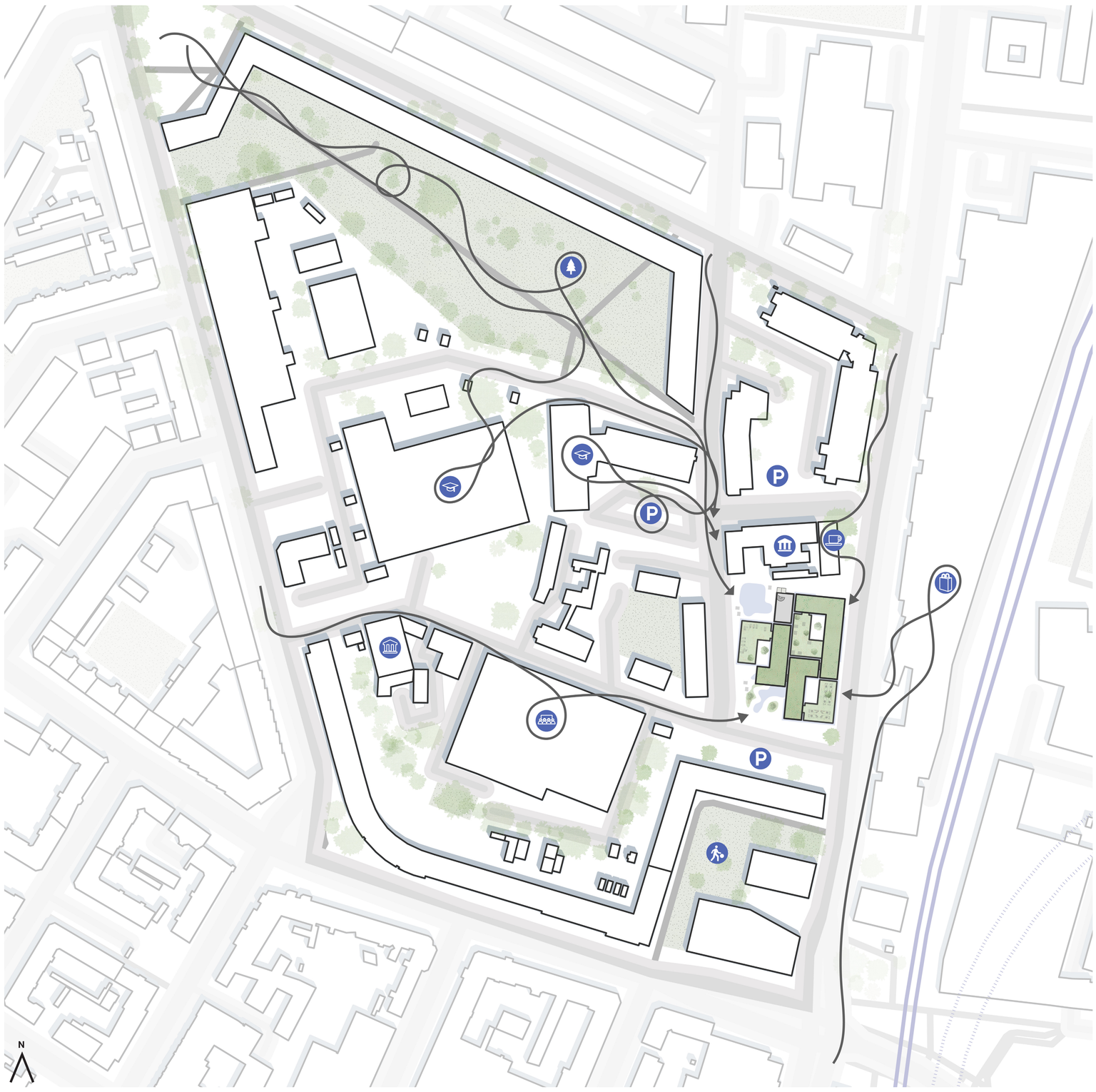
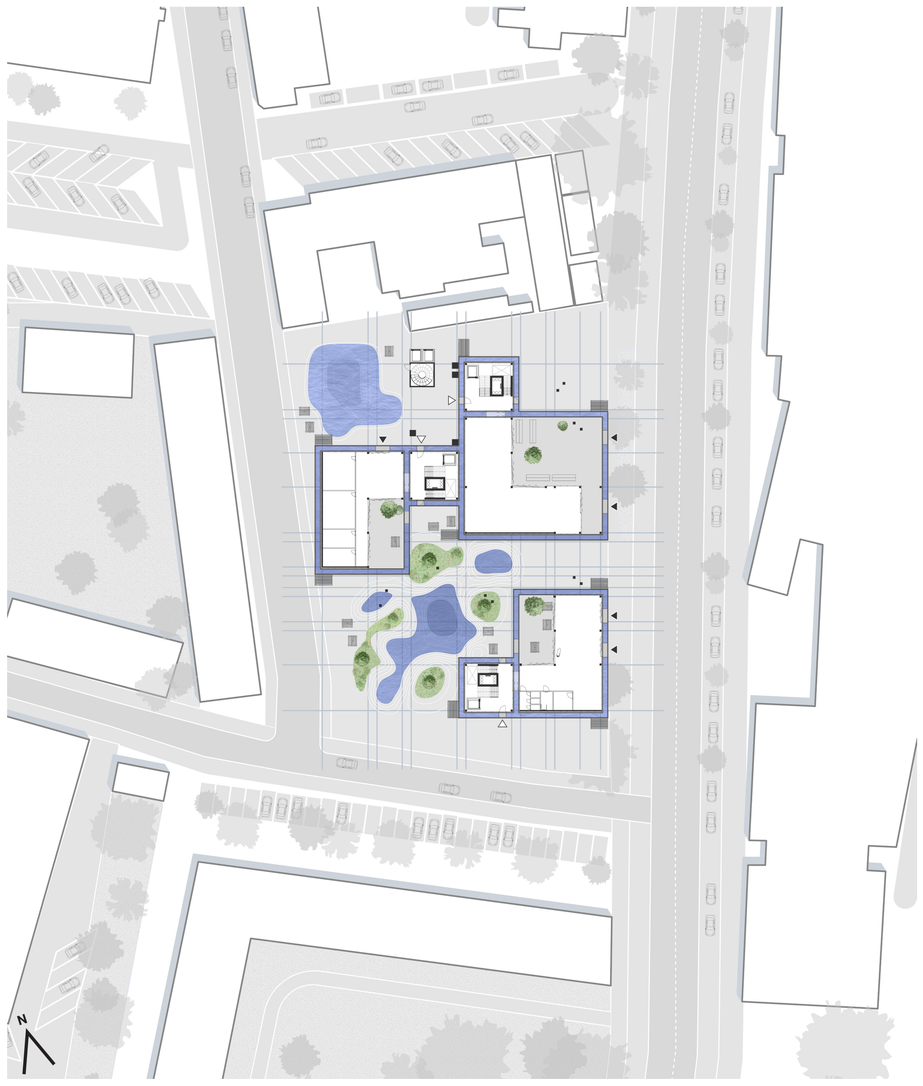
THE CONTEXT

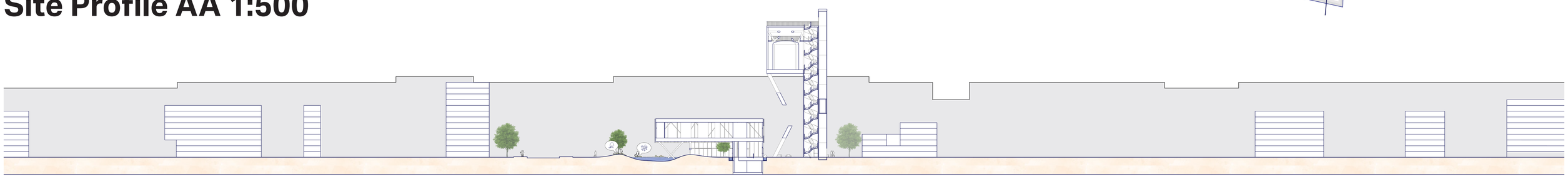
Urban Flows 1:1000

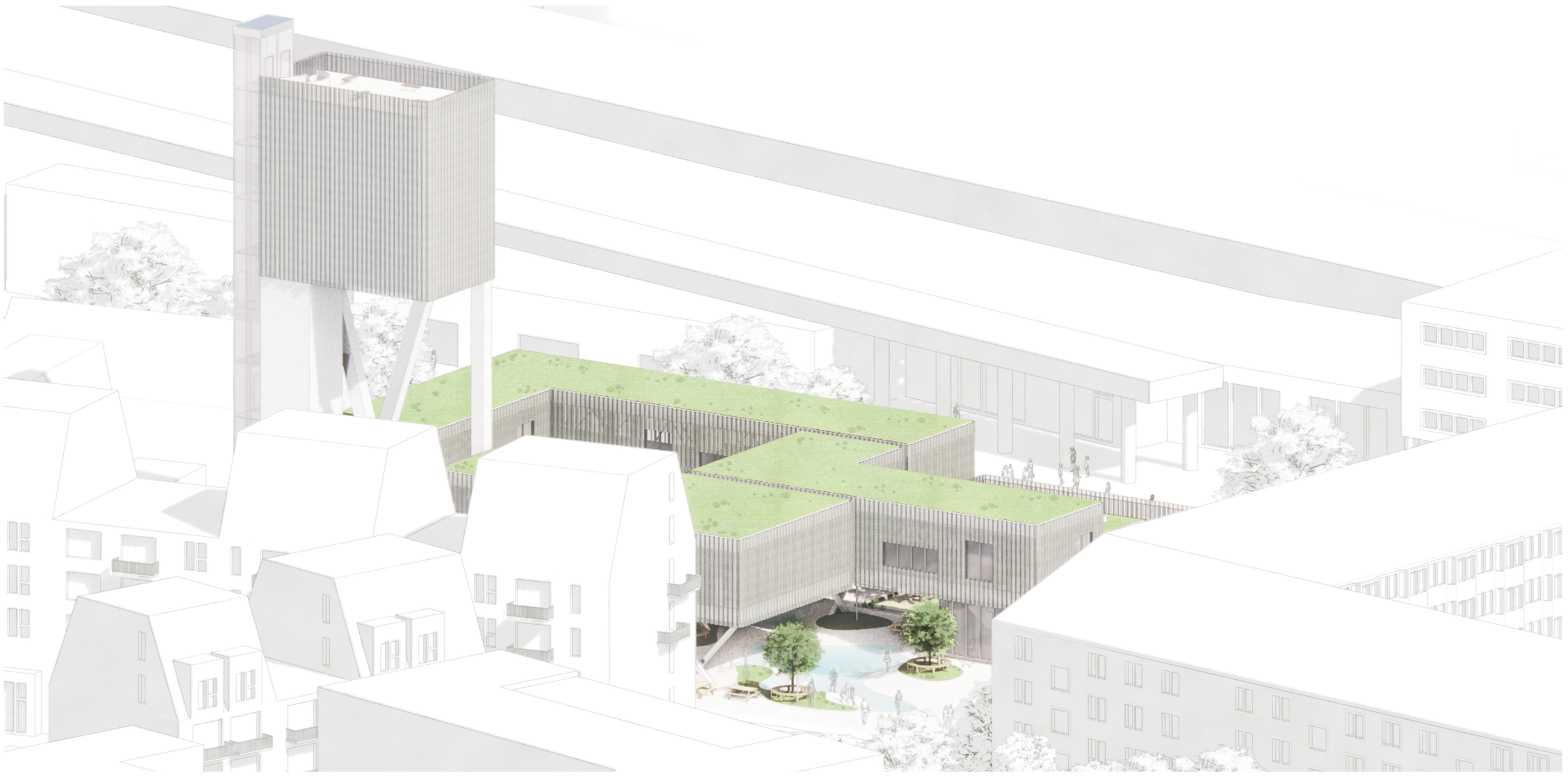


Accessibility 1:500



Site Profile AA 1:500





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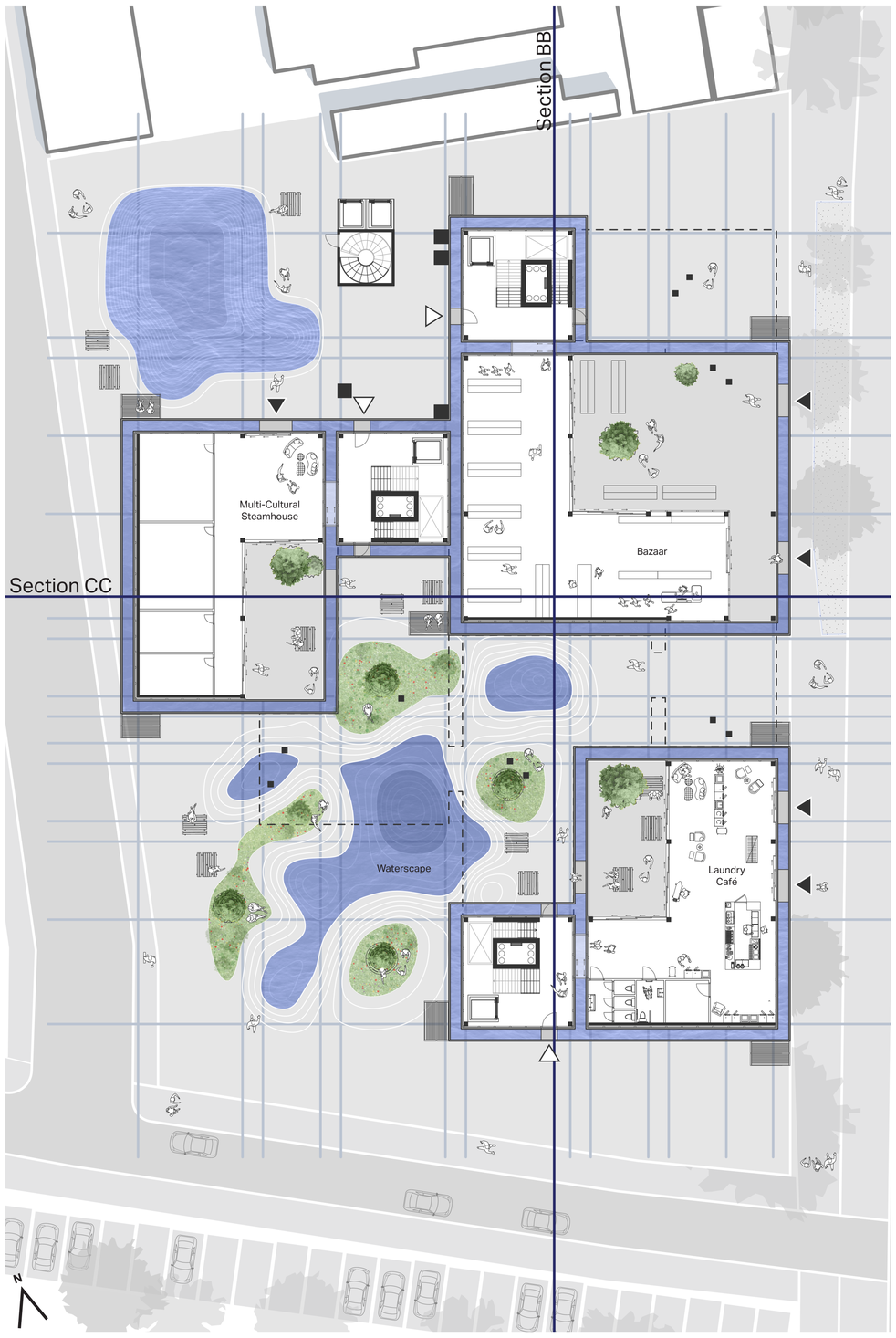
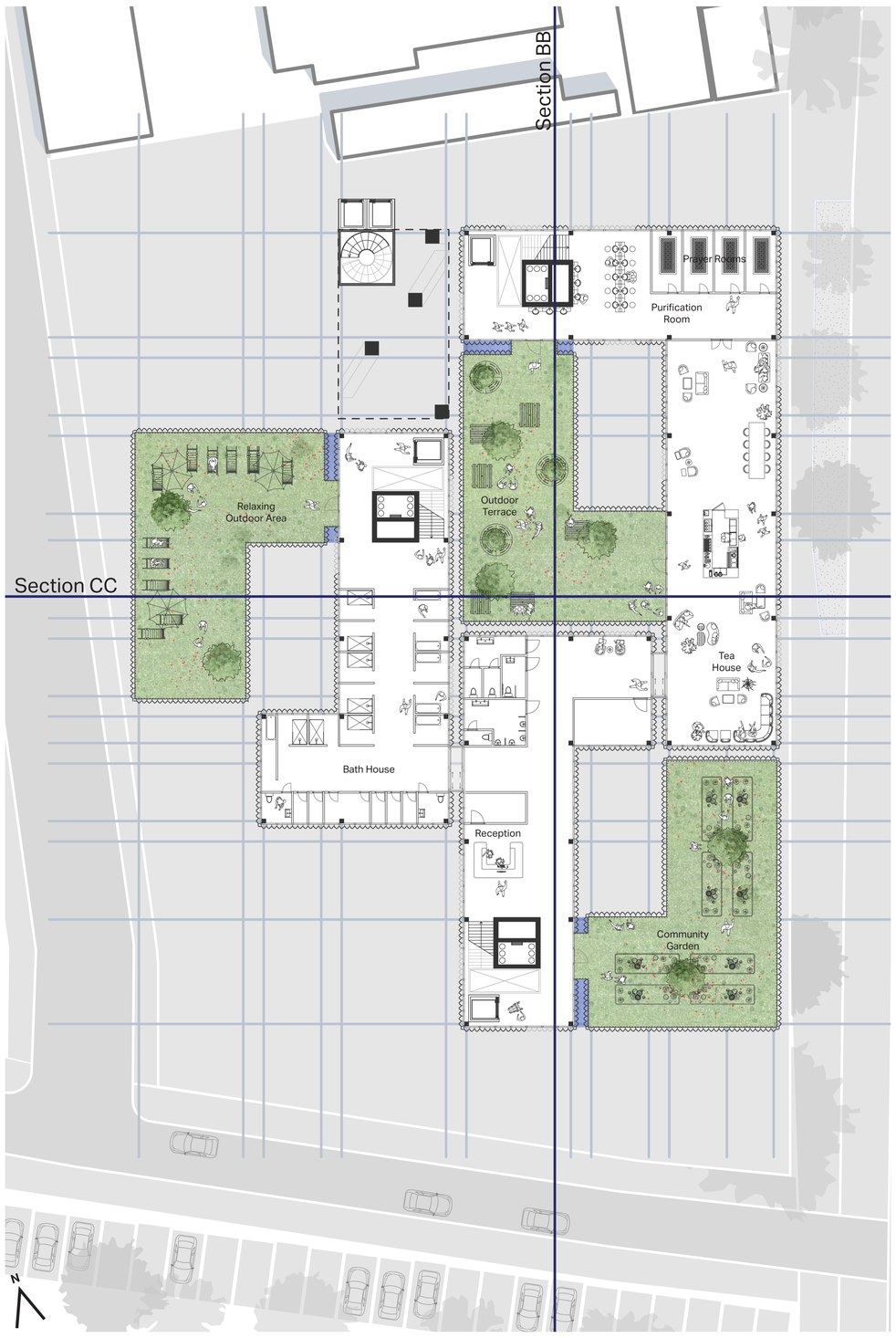
THE DESIGN

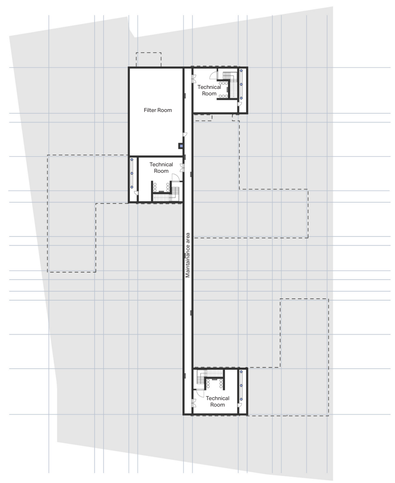
Ground Floor 1:200



First Floor 1:200

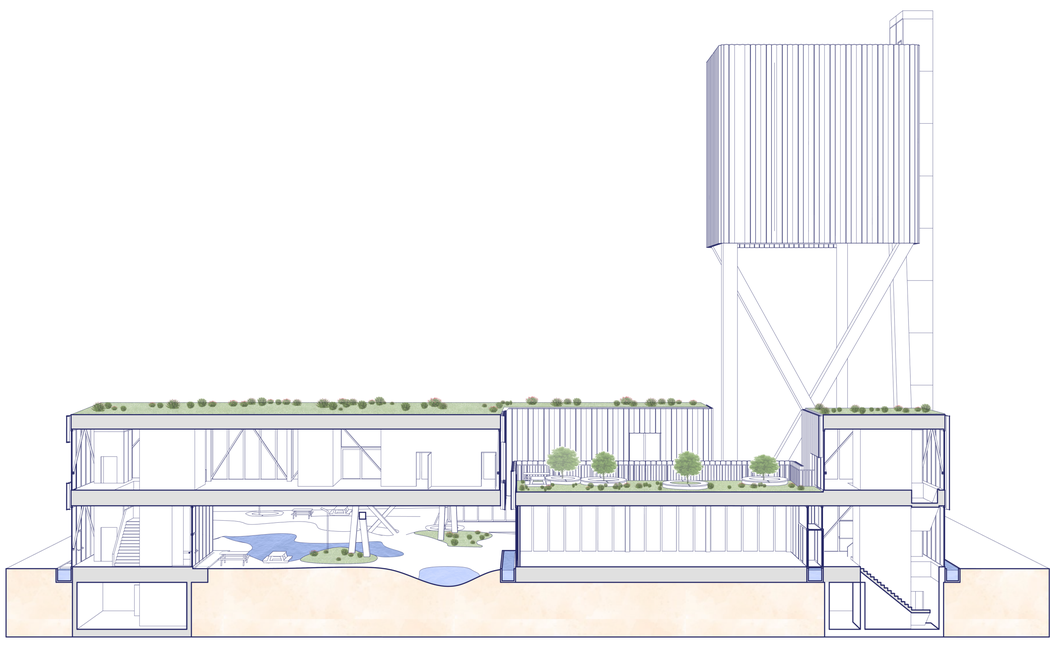


Basement 1:500

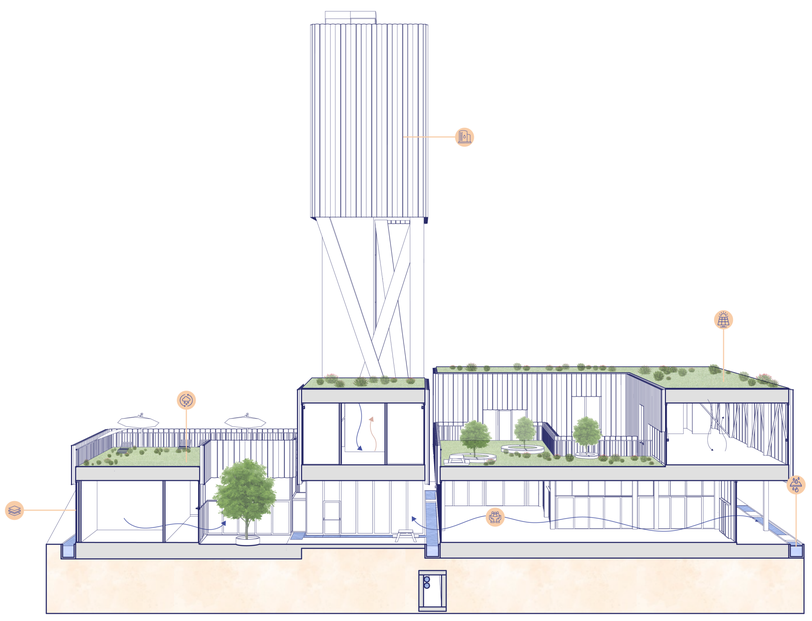


Fourth Floor 1:500

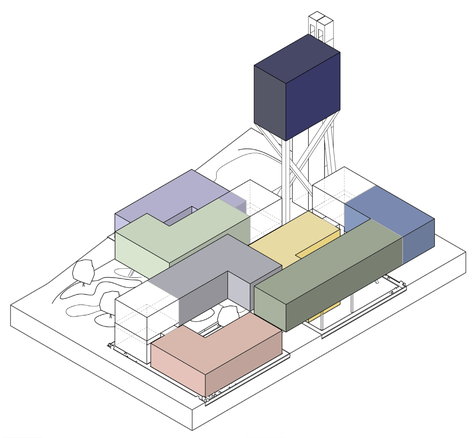
Section BB 1:200



Section CC 1:200

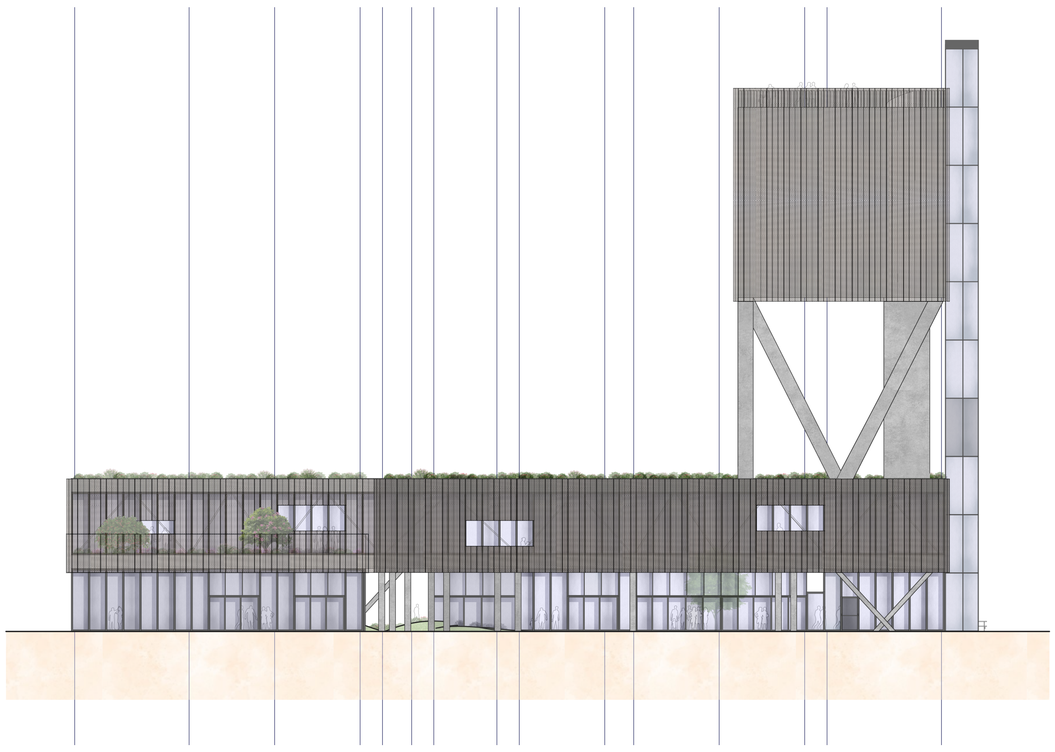


Program

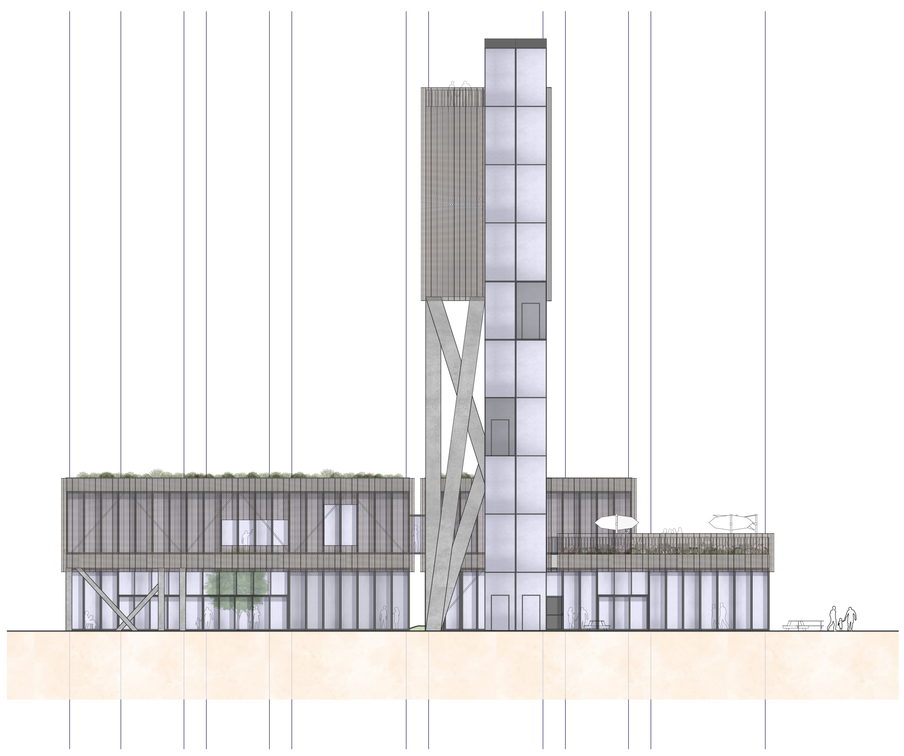


- Bazaar
- Tea House
- Laundry Café
- Multi-Cultural Steamhouse
- Purification Room
- Reception
- Water Tower
- Bath House

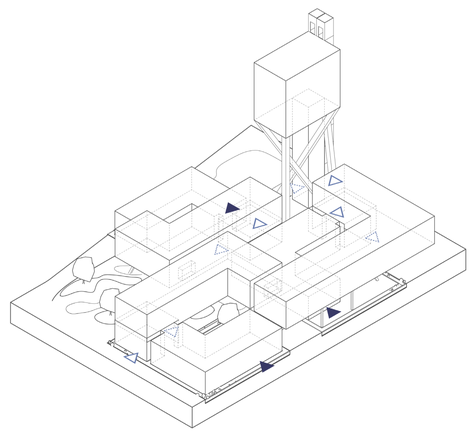
East Facade 1:200



North Facade 1:200



Entrances



- Main Entrance
- Secondary / Security Entrance
- Emergency Exit

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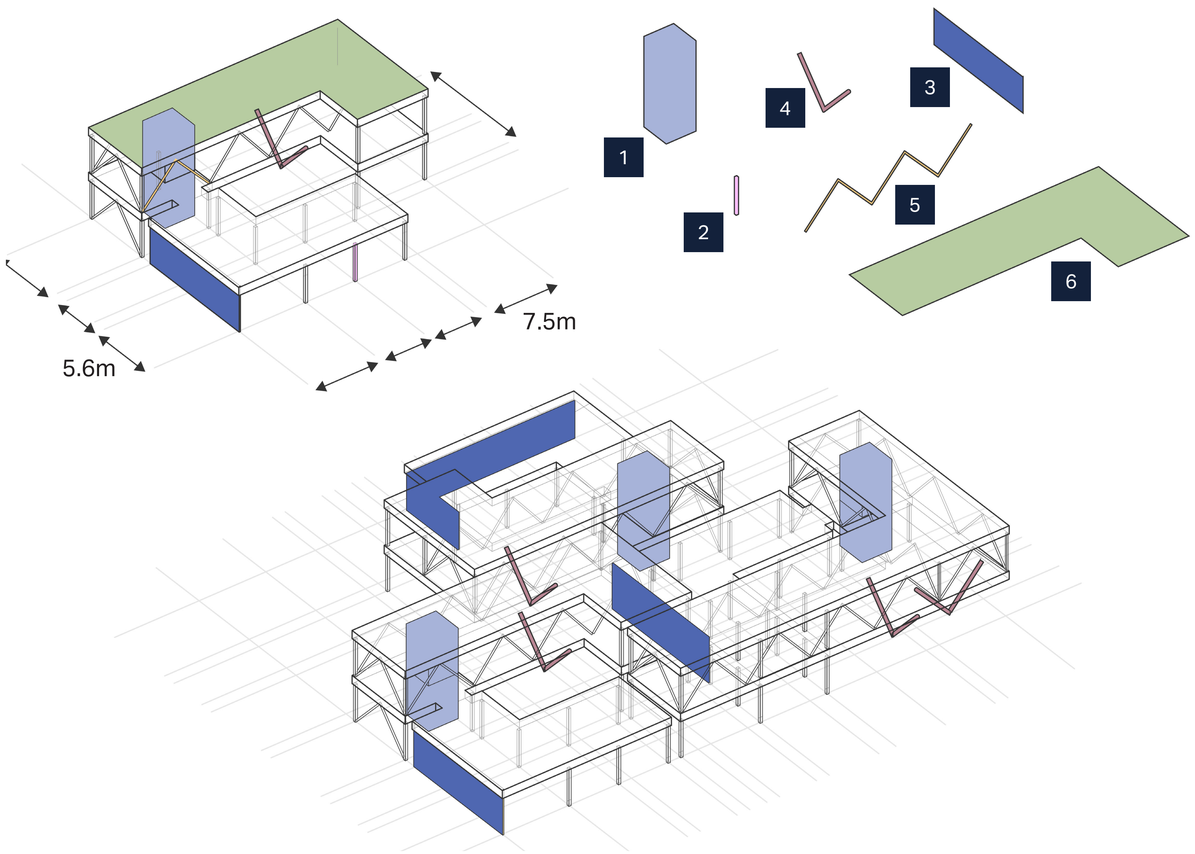
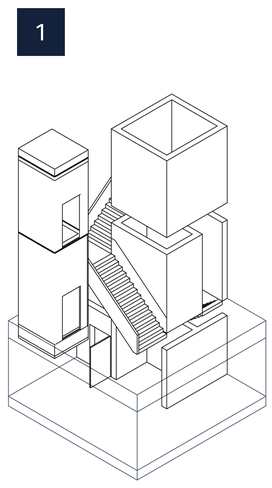
THE TECHNOLOGY

Structural Axo



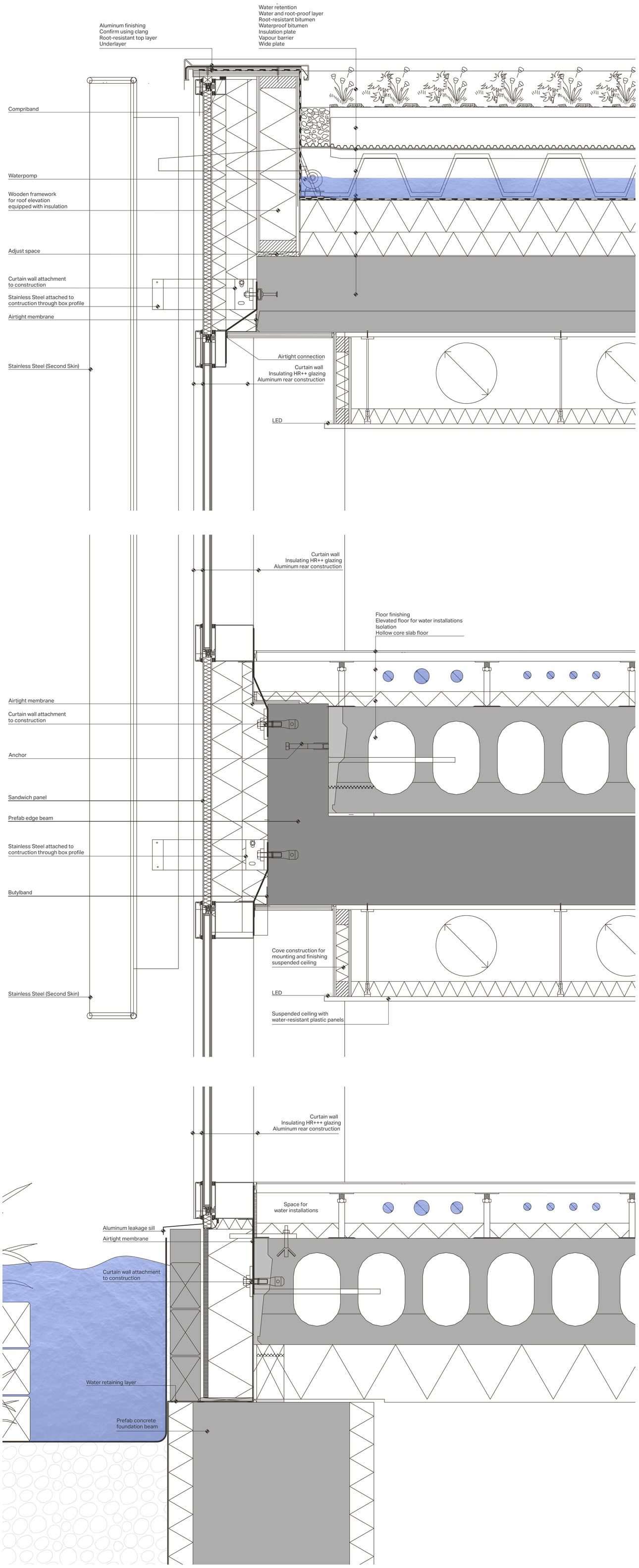
1. Concrete Core with room for Technical Facilities
2. HEB280 Columns in a Grid of 7,5m/5,6m
3. Concrete Bricks on Southern/West Facade (Trombe Wall)
4. V-Columns to support First Floor
5. (Wind) Braces to increase Structural Stiffness on First Floor
6. Roofs are reinforced to transfer Wind Forces efficiently



West Facade 1:200

South Facade 1:200

Details 1:5



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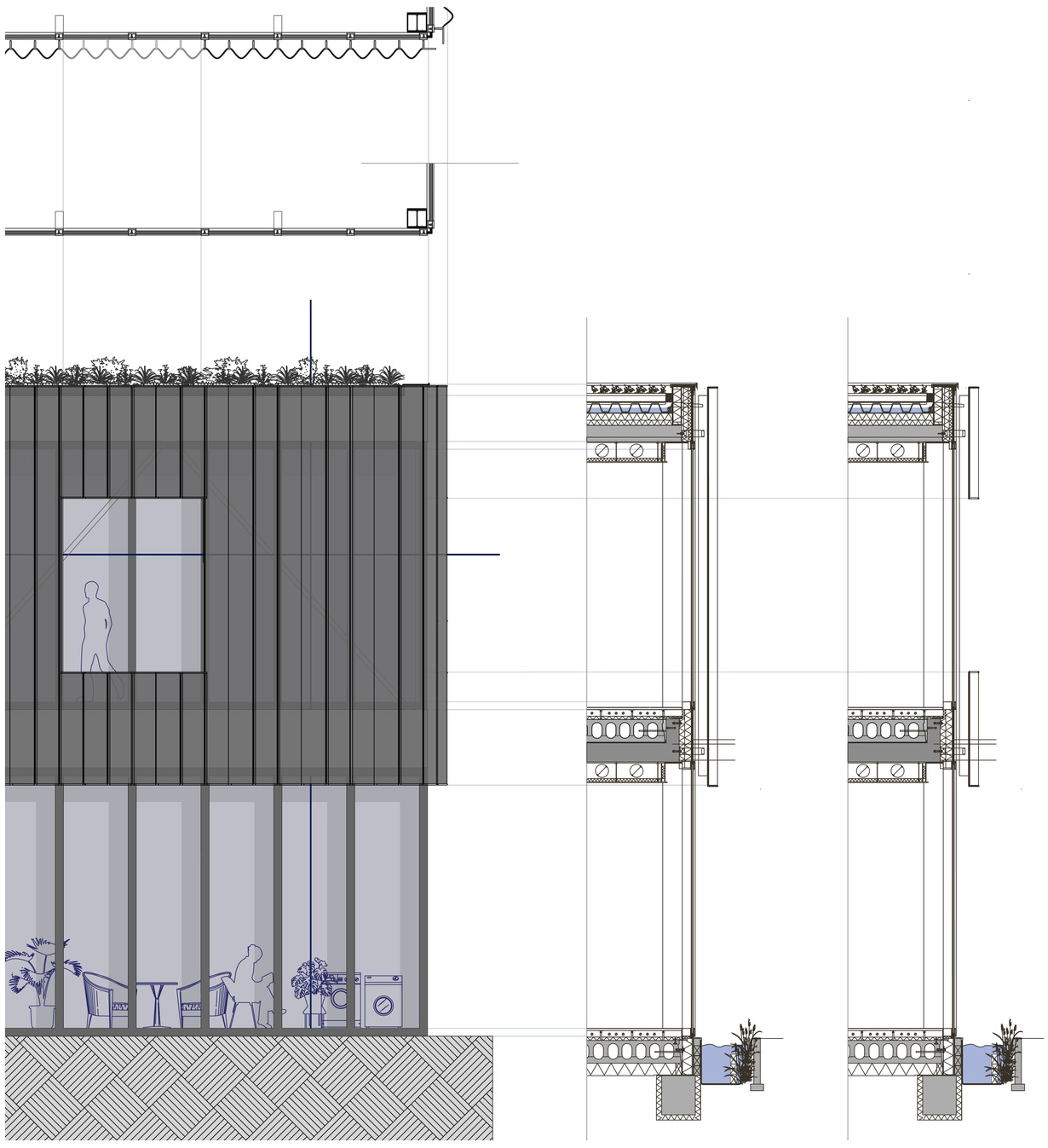
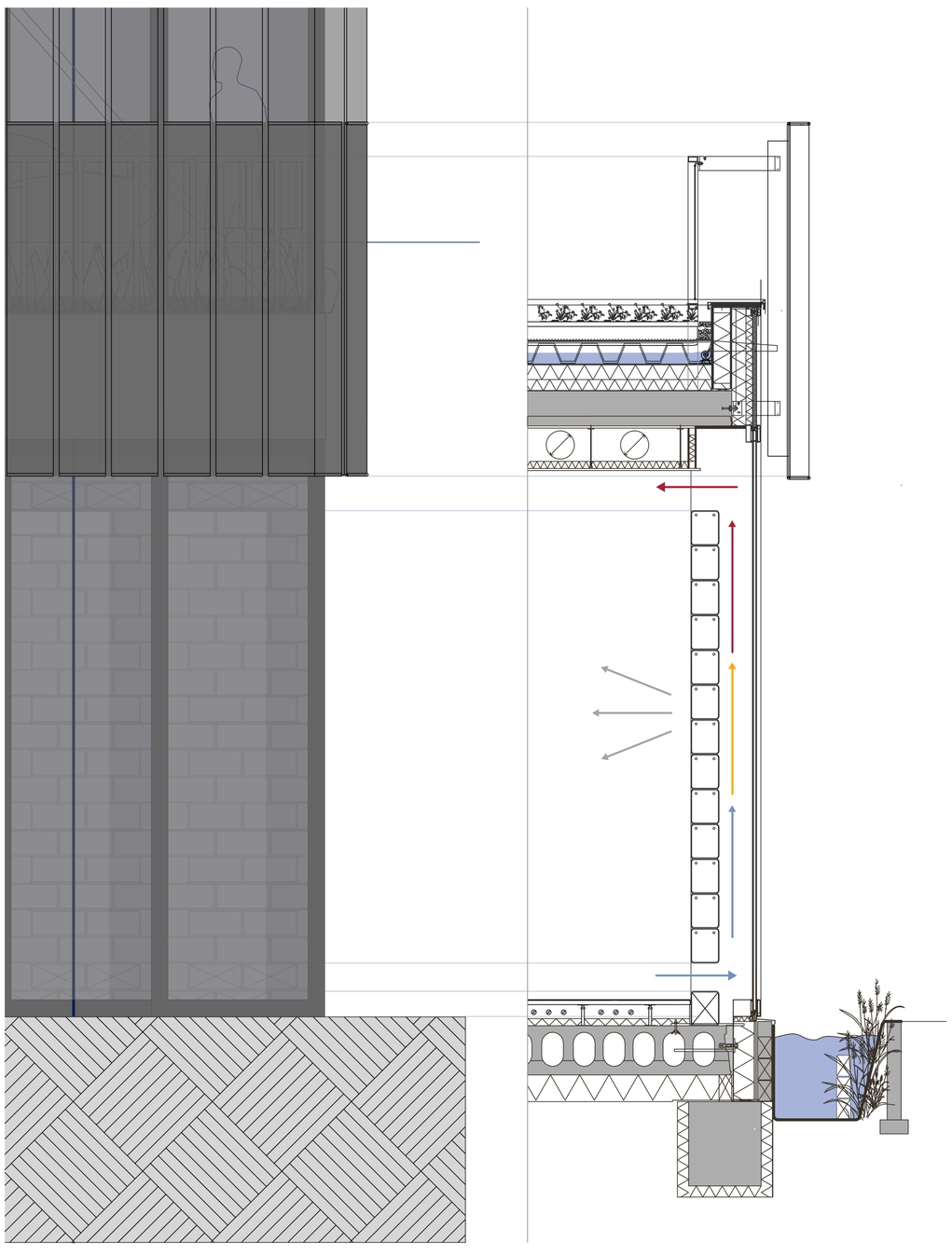
THE SYSTEM

Fragment Facade System 1:40

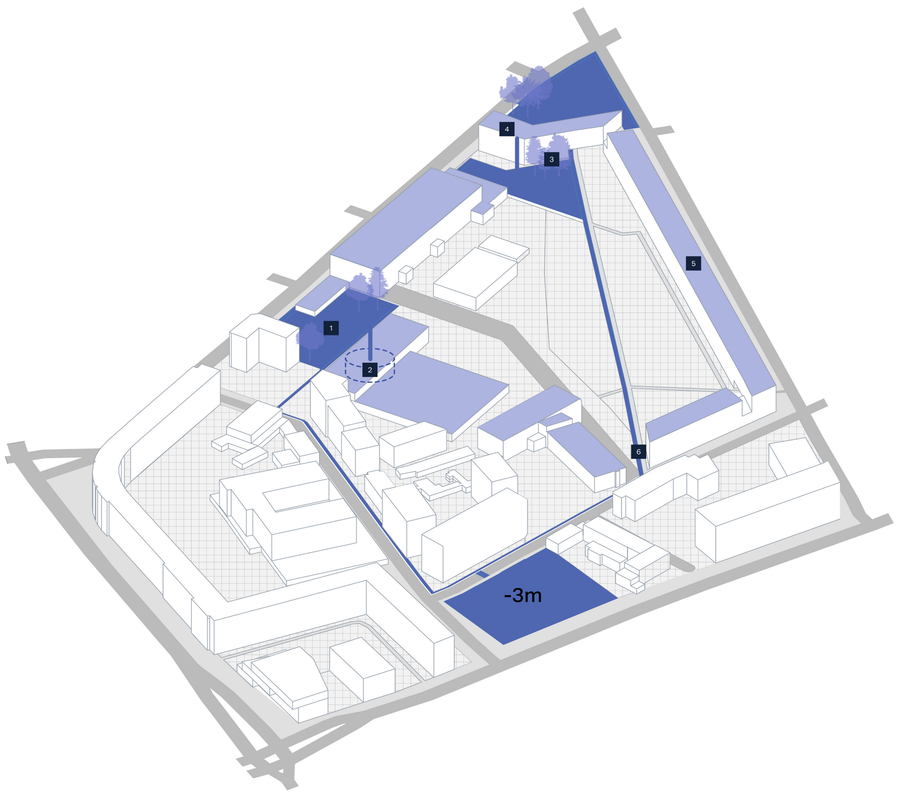


Fragment Trombe Wall 1:20



(Rain)Water Journey

1. Collecting rainwater on project surfaces with a public function
2. Surfaces having its own watertank in cases of extreme flooding
3. Surfaces containing 20% of new green spaces for bio-diversity and wellbeing
4. Collecting rainwater on roofs, transforming some into green blue roofs
5. Green Blue roofs enhances insulation & reduces Urban Heat Island effect
6. Bringing rainwater to the plot, bridging 400m in +3m elevation = 0.5 cm/m



Rule-based Measurements