

BOOK 4: THE SECOND LIFE HUB

THE SECOND LIFE HUB

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In allowing for a re-branding and empowering of the Cigondewah kampung, a “hijacking” of the natural textile process has to occur.

Integrating the natural impetus the Cigondewah population has for the up-cycle of textile waste products a series of support programmes need to be installed in order to create a circular economy that could hopefully, one day, create an independent, self-supporting production clothing/textile market within the kampung that could function without the presence of the adjoining textile factories, with connection to the local Cigondewah textile market and neighbouring kampungs.

The **Second Life Hub** strives to function as a community “think-do-tank” where local entrepreneurs, tailors, seamstresses and apprentices can gather and receive technical education about the process of textile re-cycling.

The Second Life Hub is thought to be divided into 5 main parts:

1. The Material Production Pod: what else can be done with textiles? This part of the hub will aim to produce construction materials for the kampung’s self-help housing and will provide valuable material for the a new strategy towards textile recycling and up-cycling.

2. Open Learning Pod: in this section, education is given about textile-related machinery, their operation, maintenance as well as sewing, stitching, cutting, printing techniques, design etc.

3. Co-Working Pod: here community members can get together to teach each other known techniques for garment production and provides space for an open production space that connects to the surrounding urban tissue.

4. Washing Pod: water is a vital not only to the textile production process but also for the health and safety of the community. By arranging a functional water catching landscape and Decentralized Water Treatment System water is filtered and re-used throughout the Hub to maintain hygiene levels and production levels at its best.

5. Learning Market: Much like the way cooking schools work in which students are given the opportunity to cook and serve for paying customers in the school’s learning kitchens, the Learning Market will help connect the communal designs with other entrepreneurs, local retail brands and local markets to provide an outlet for people’s designs.

By utilizing the local know-how on the processing techniques of the different sizes of scraps, non-conforming parts and rolled textile, a hierarchal system of education can begin to form where the eldest, most experienced textile tailors/seamstresses can teach the younger generation that has dropped out of formal education to help them pursue a life in the production-design and selling of a community kampung brand.

Following the first steps in the textile up-cycle process, waste from PT Kahatex is taken into the kampung where it is stored, weighed and sorted, the waste is taken into the Second Life Hub where non-conforming parts and large sheets of textiles are provided for the Open Learning Pod and Co-working pods, where older members, and hopefully other professionals, teach the willing students the in’s and out’s of the garment production process. This in turn allows for specialized knowledge within the kampung on how to deal with the ubiquitous refuse and streamlines the in-home production of the community’s brand. The raw materials can also be acquired by the kampung population for all the in-home production which is in turn, sold at the Learning Market. The hub spaces

are to be designed as social support structure for the learning process.

The Material Production segment of the Hub is at first, treated as the main form of income for the hub, if materials such as recycled insulation mats, polyester mats, fiberization of garments and construction blocks is produced within the Material Production unit then those products can be sold within Indonesia and abroad creating a steady income that could subsidize the Technical School and Learning Market. Once the kampung is successfully producing its own brand and has reached local markets and brands, the income can be used for community integration and infrastructure up-keep of the whole kampung.

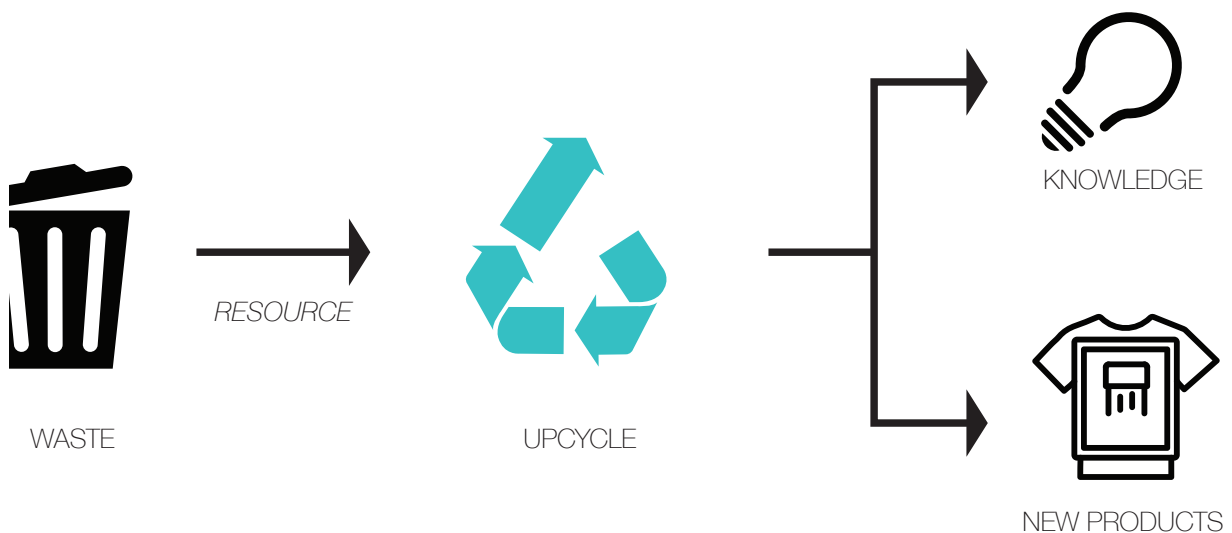
With this in mind I have experimented with various techniques in the production of Textile Bricks which could hopefully be integrated into the material production cycle and sold within the kampung and adjoining neighbourhoods.

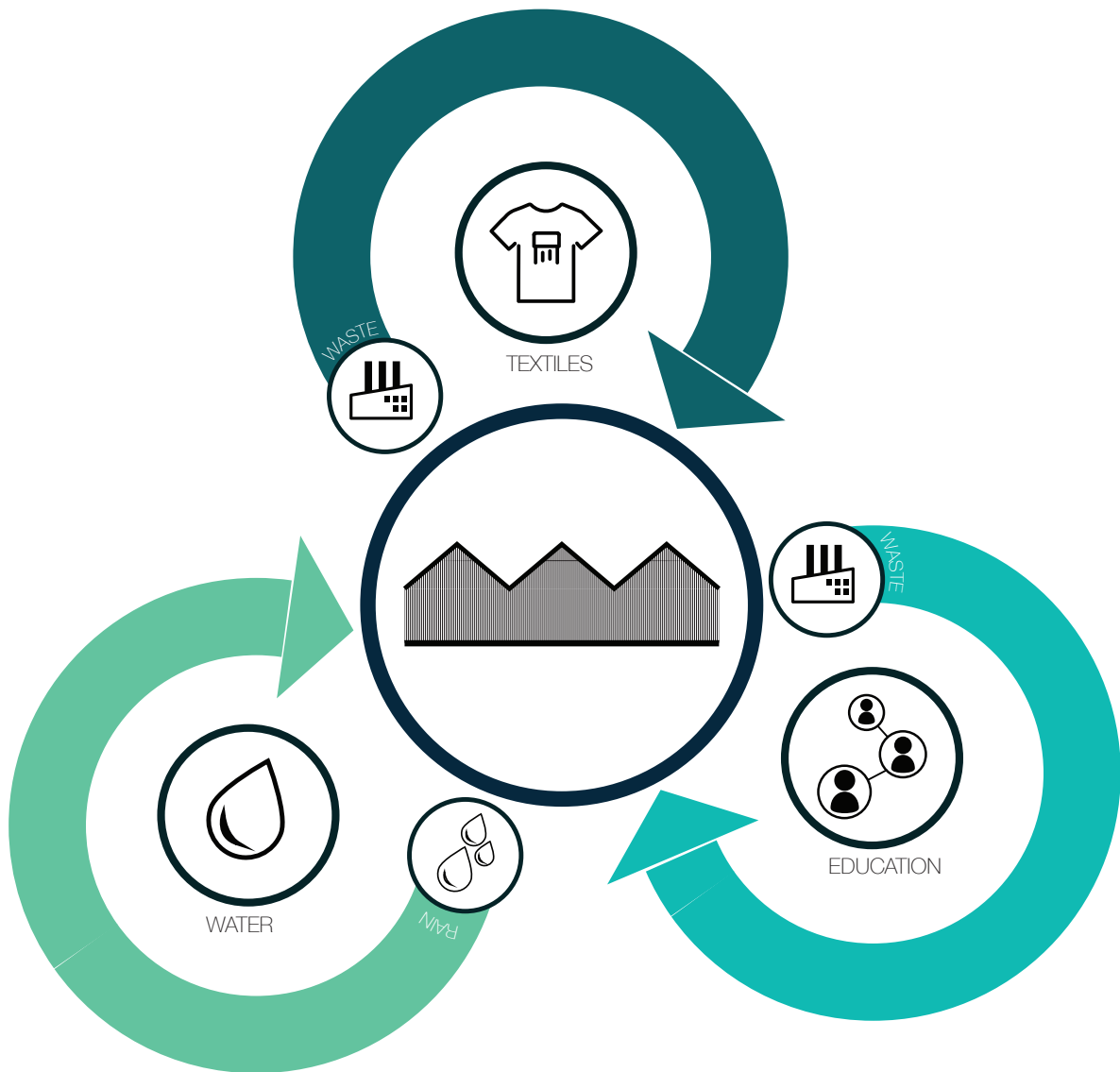
THE TRADITIONAL FUTURE

THE SECOND LIFE HUB

RE-CYCLE AND UP-CYCLE HUB FOR TEXTILE COMMUNITIES IN INDONESIA.

DEALING WITH INDUSTRIAL TEXTILE WASTE AND THE COMMUNITY.





CONCEPTUAL DIAGRAM FLOW

The SLH will be designed around three basic needs:

1. The need to re-use and re-cycle textile waste from the adjoining factories.
2. The need to provide the community with developable skills to ensure an innovative and working community.
3. The need to provide the community with a point for hygiene and water resources that deal with textile and garment production.

THE TRADITIONAL FUTURE

INDONESIA AND THE TEXTILE INDUSTRY

WASTE AND THE INDEPENDENT WORKFORCE

INDONESIA AND THE TEXTILE INDUSTRY

OF TEXTILES USED IN THE INDUSTRY ARE PRODUCED WITHIN INDONESIA



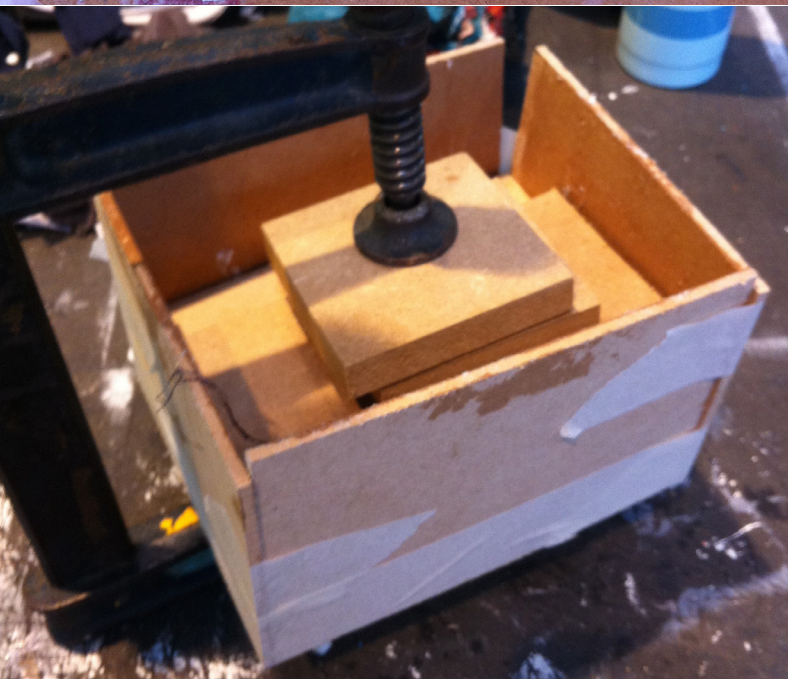
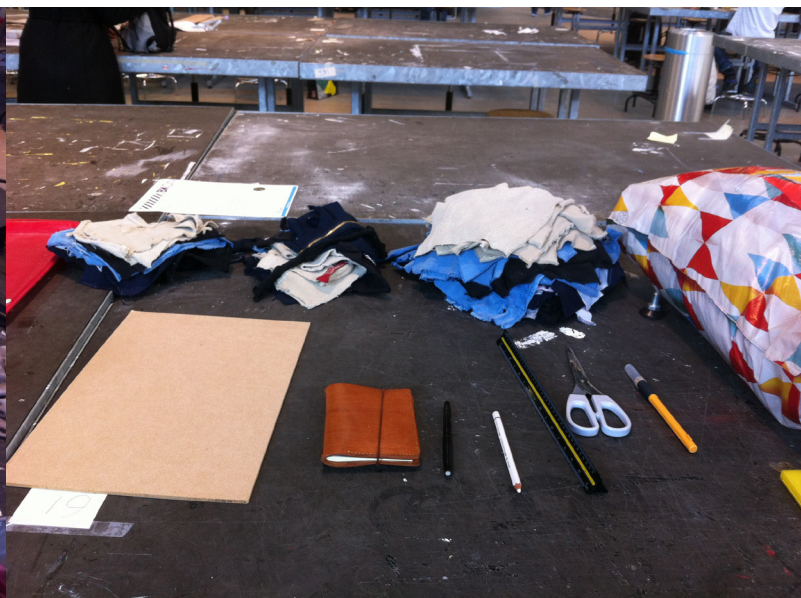
OF ALL OF THE TEXTILE COMPANIES IN INDONESIA ARE IN BANDUNG



NEARLY A THIRD OF BANDUNG'S POPULATION IS EMPLOYED IN THE TEXTILE INDUSTRY





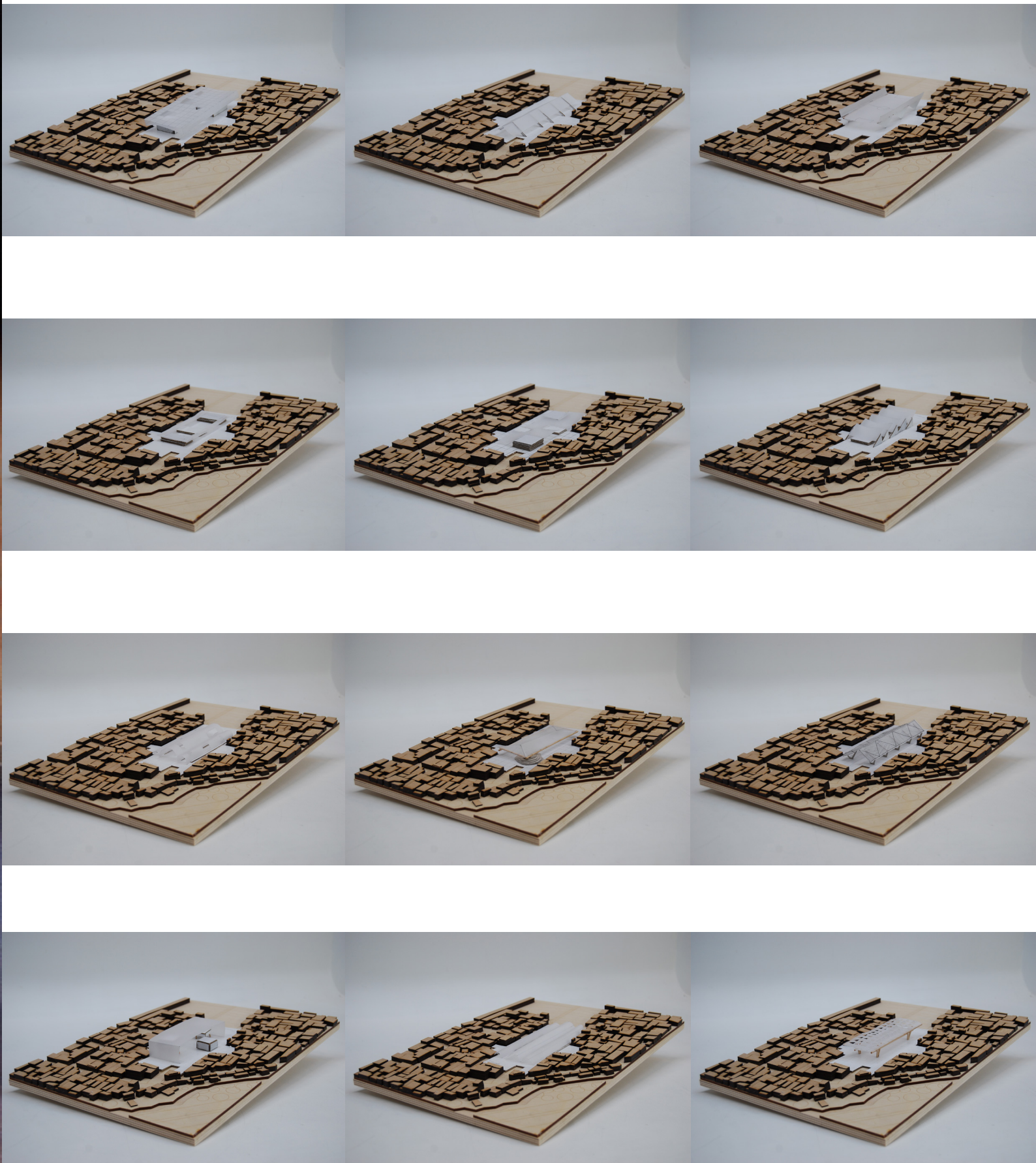




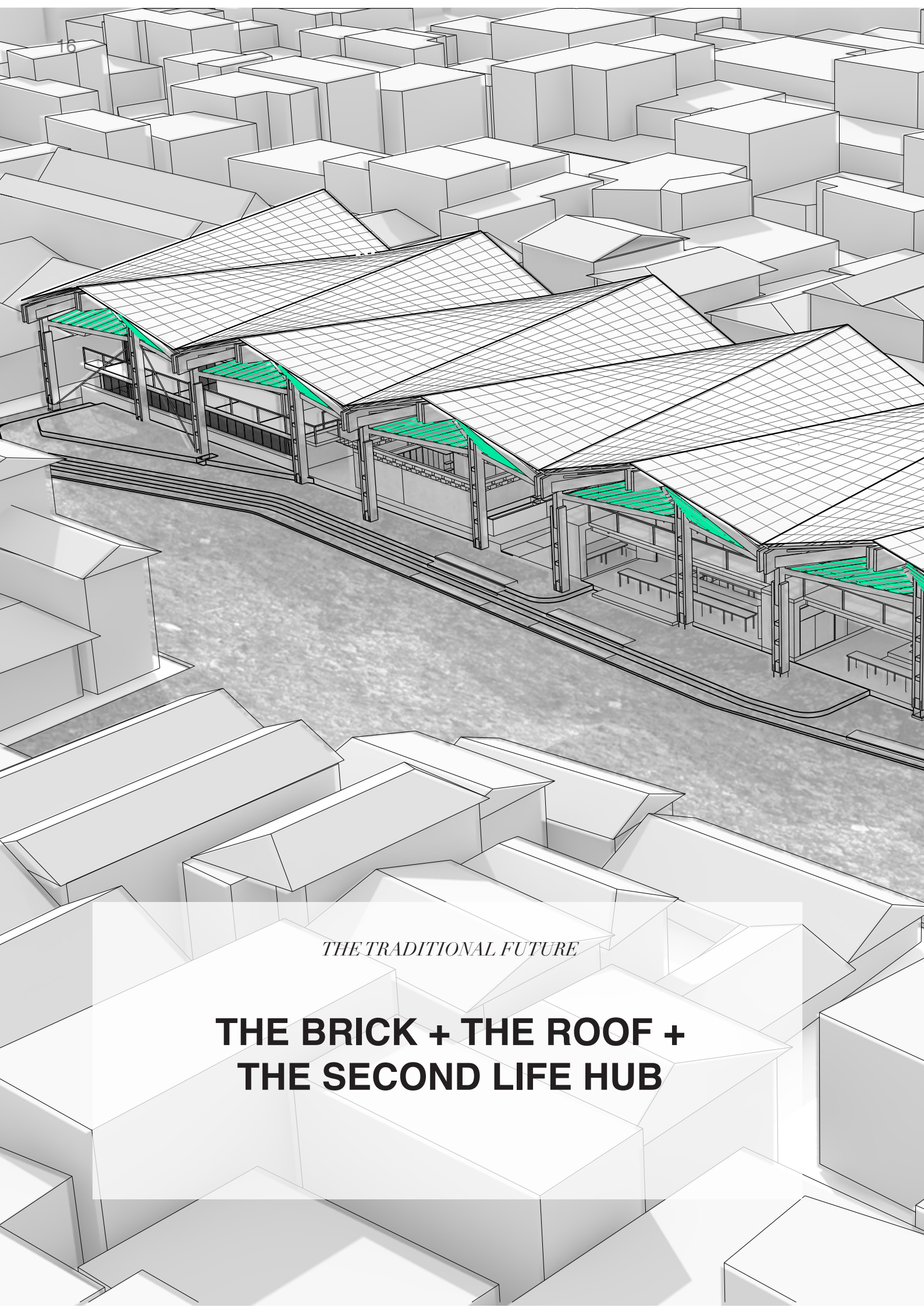
THE PROTO-STRUCTURE



THE BRICK

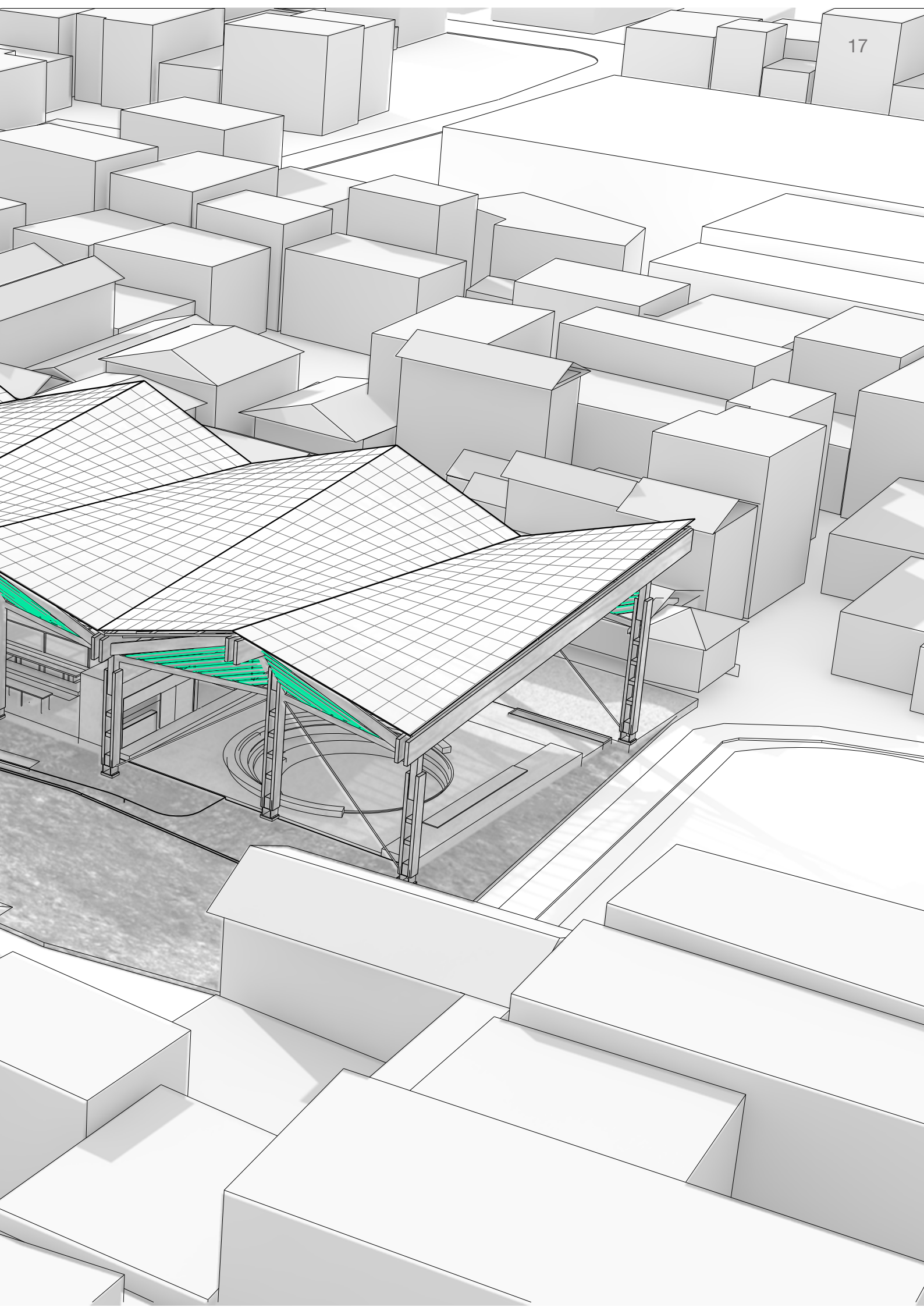


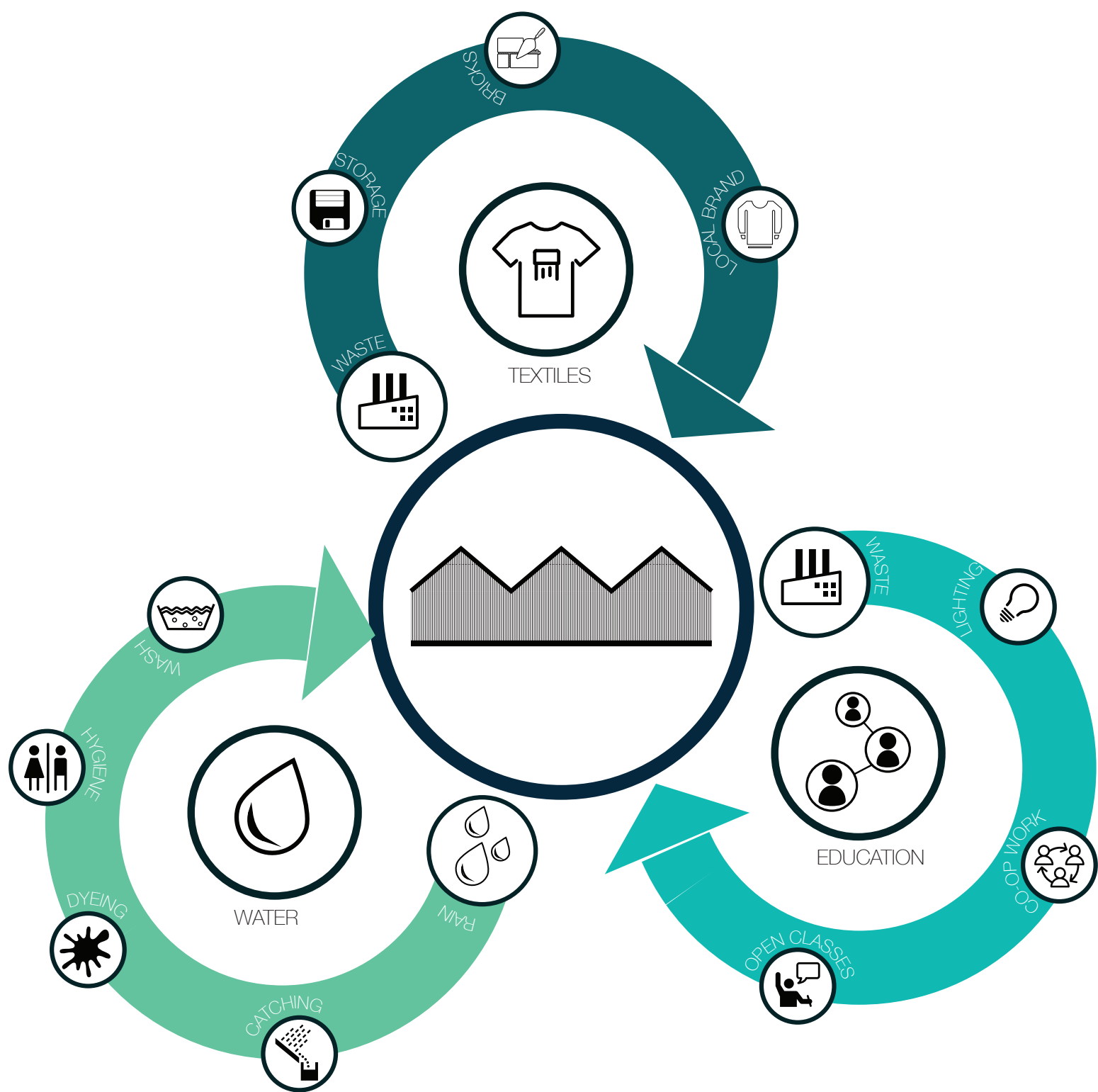
THE ROOFS



THE TRADITIONAL FUTURE

THE BRICK + THE ROOF + THE SECOND LIFE HUB







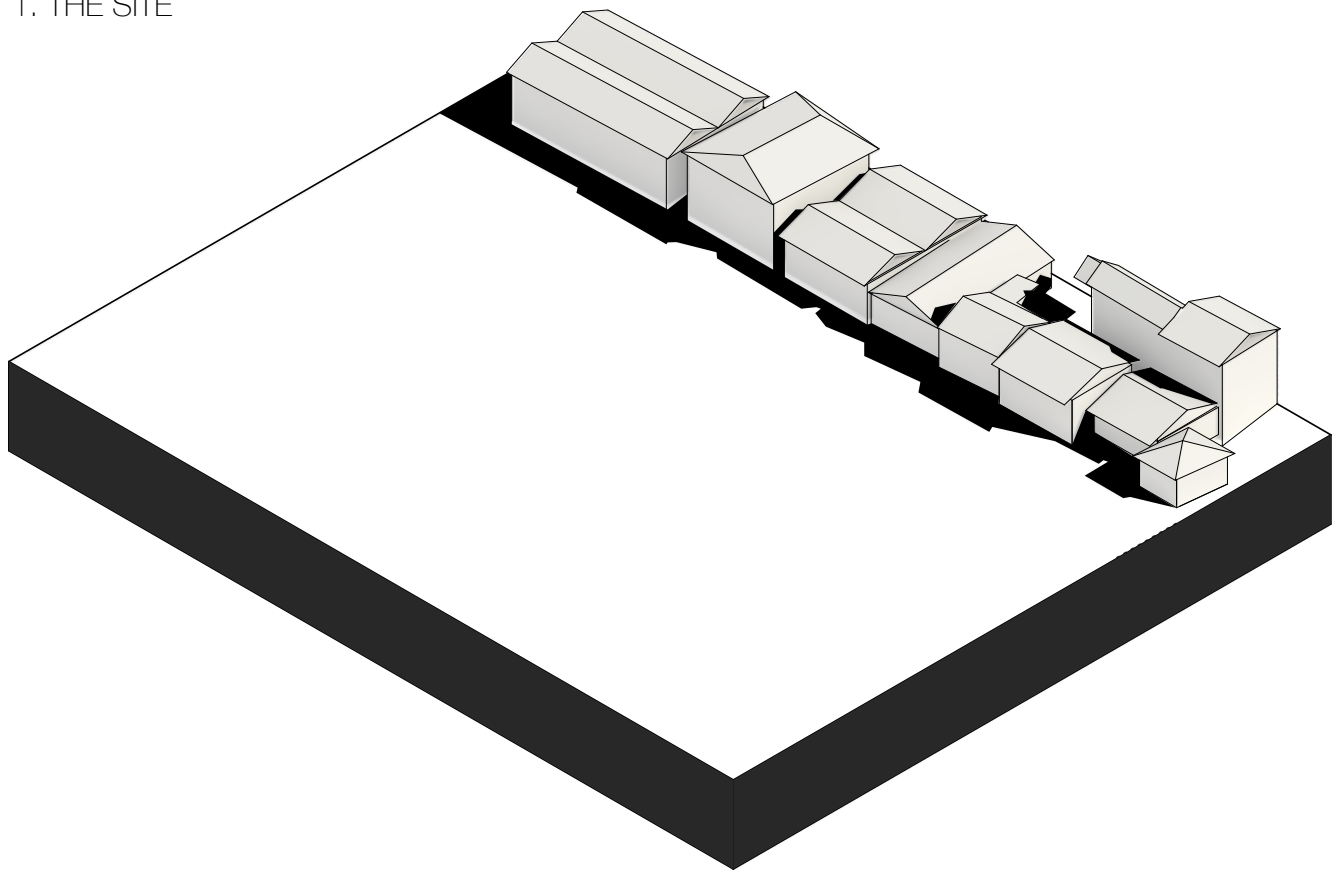


SITE

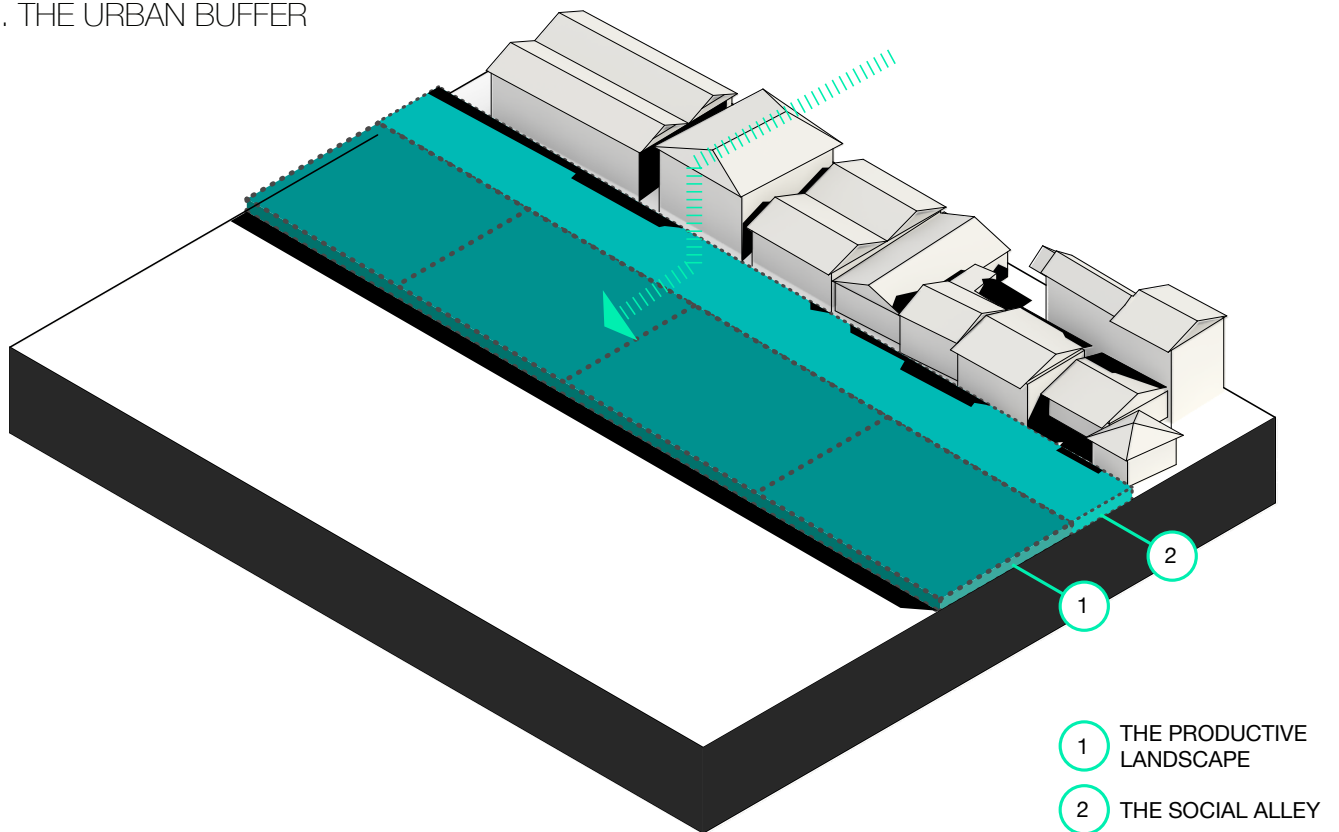
m 10 50
20 100



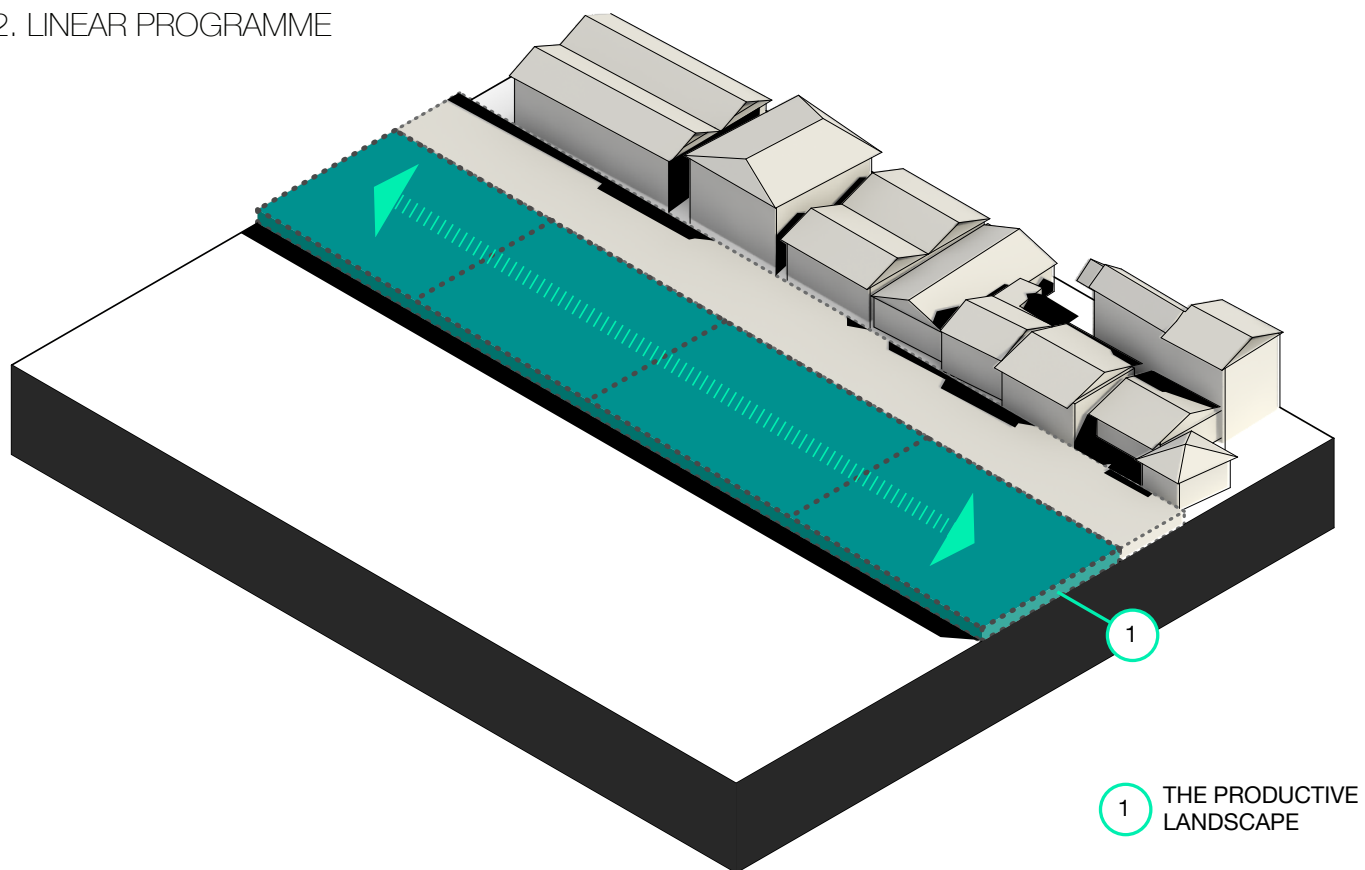
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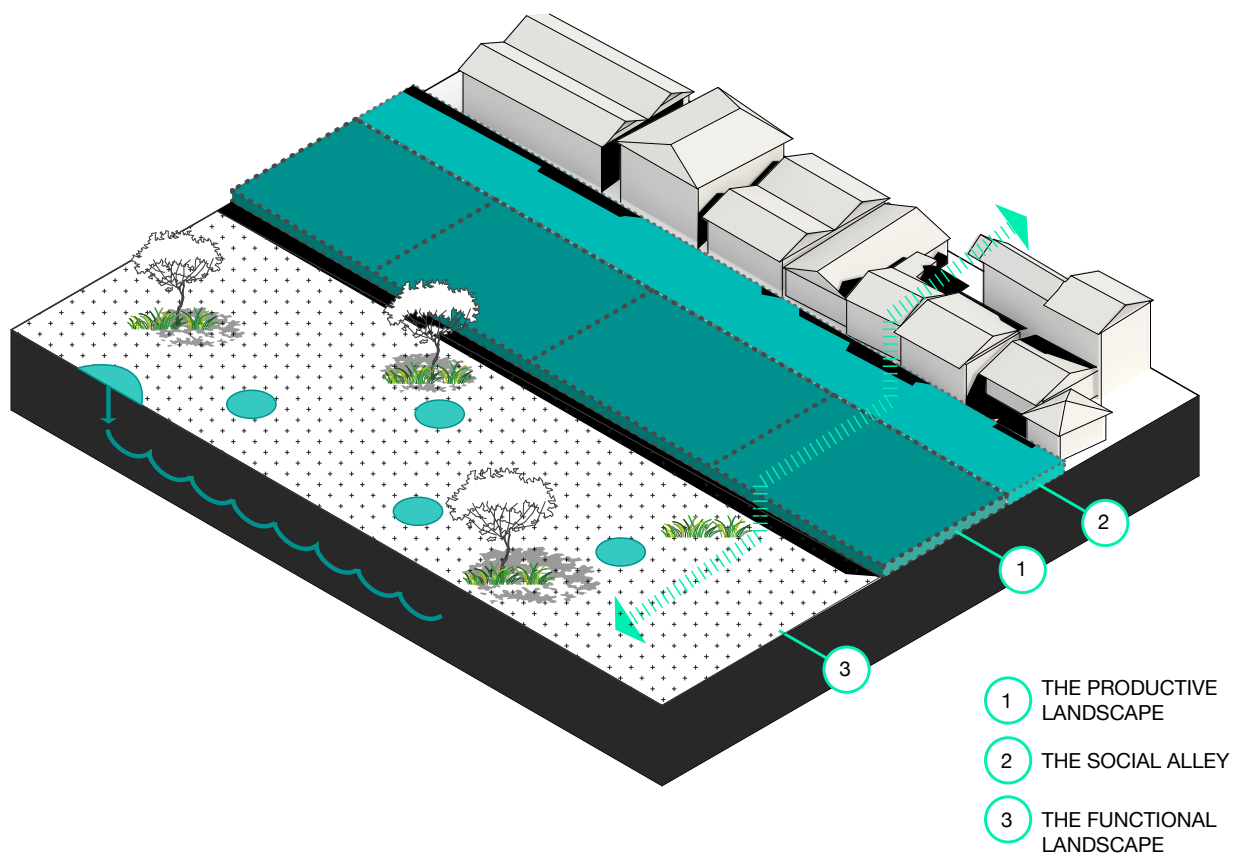
3. THE URBAN BUFFER



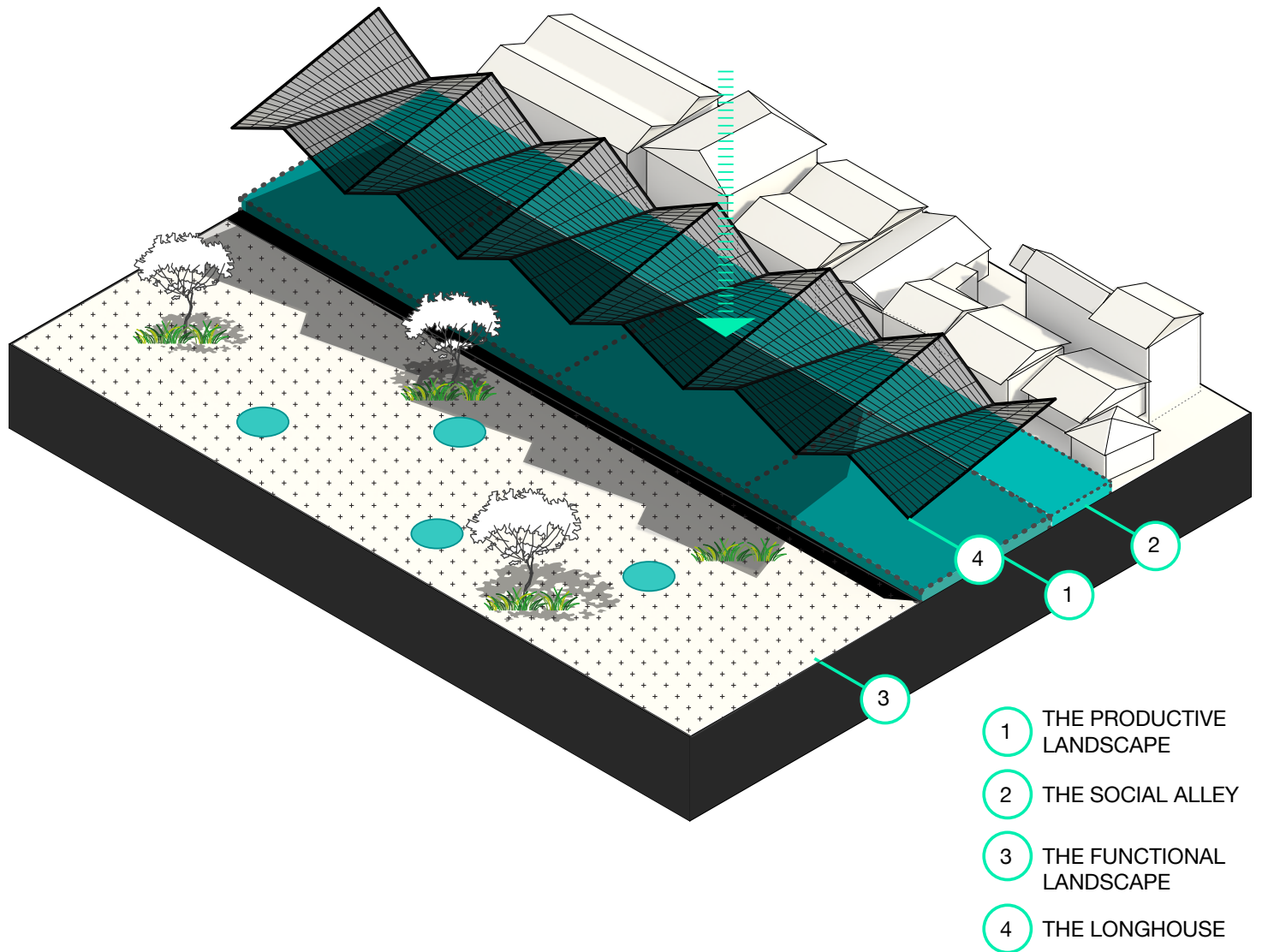
2. LINEAR PROGRAMME



4. THE PRODUCTIVE LANDSCAPE



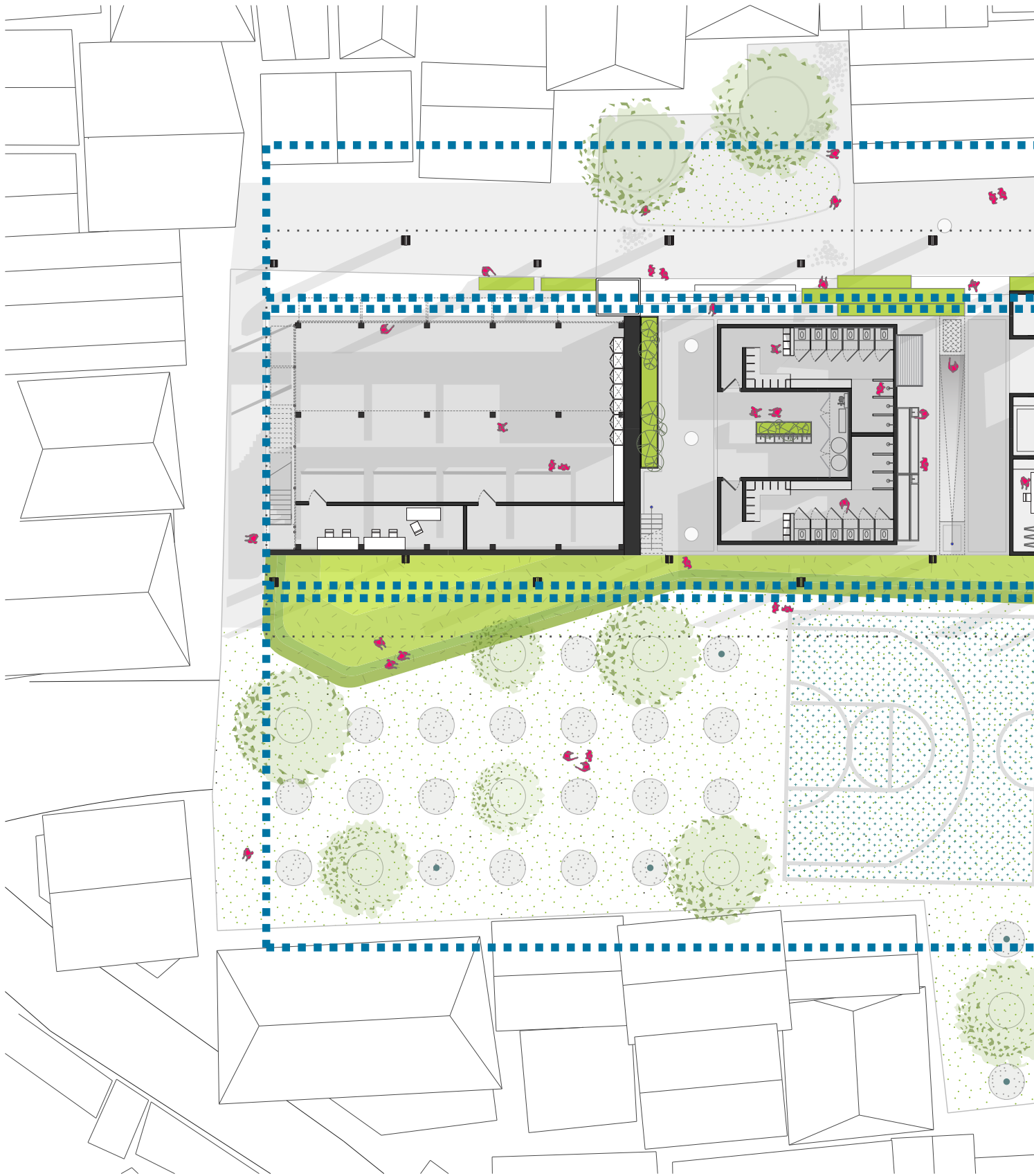
5. THE LONGHOUSE

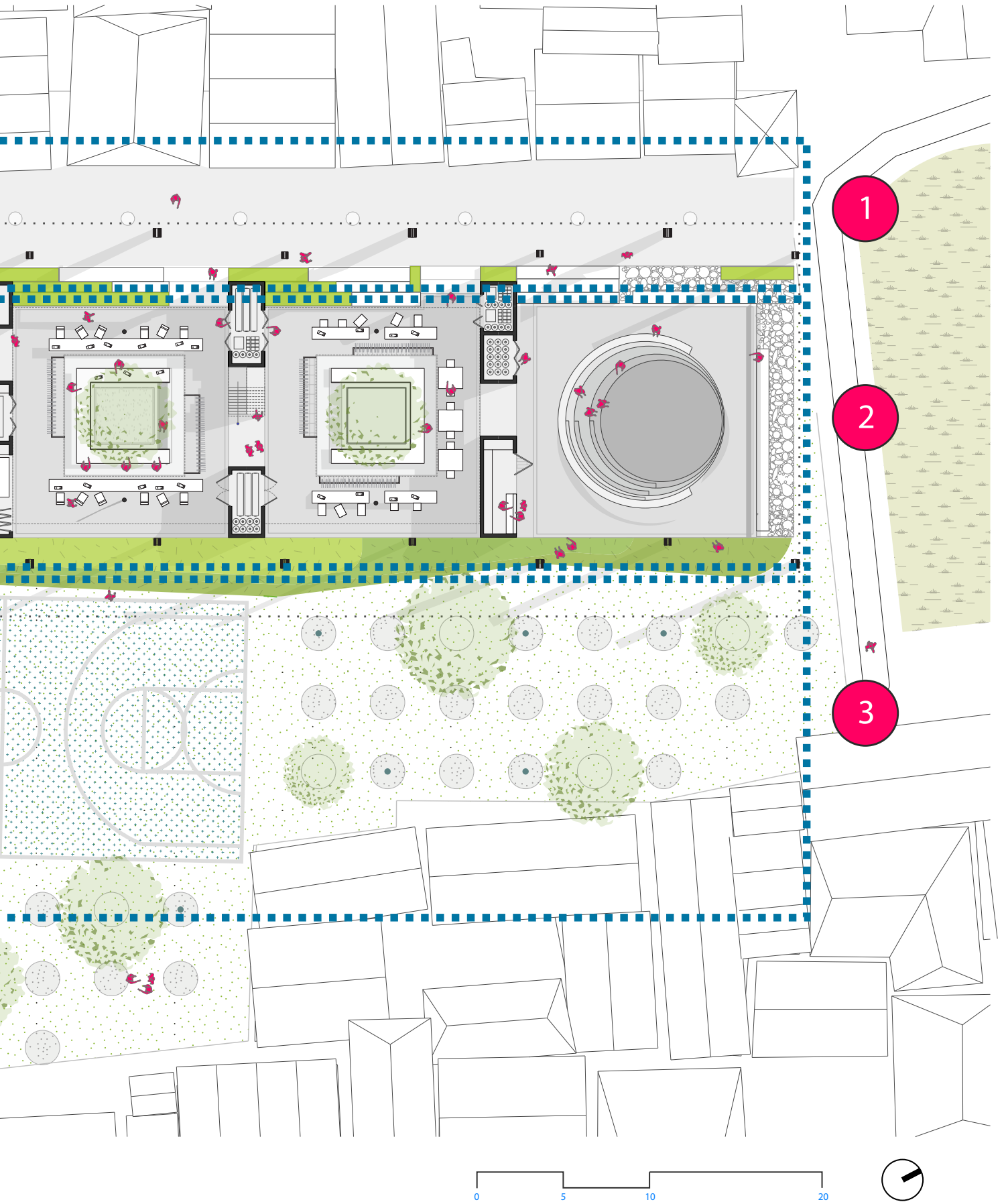


THE TRADITIONAL FUTURE

THE PROGRAMME

SPACES AND ACTIVITIES







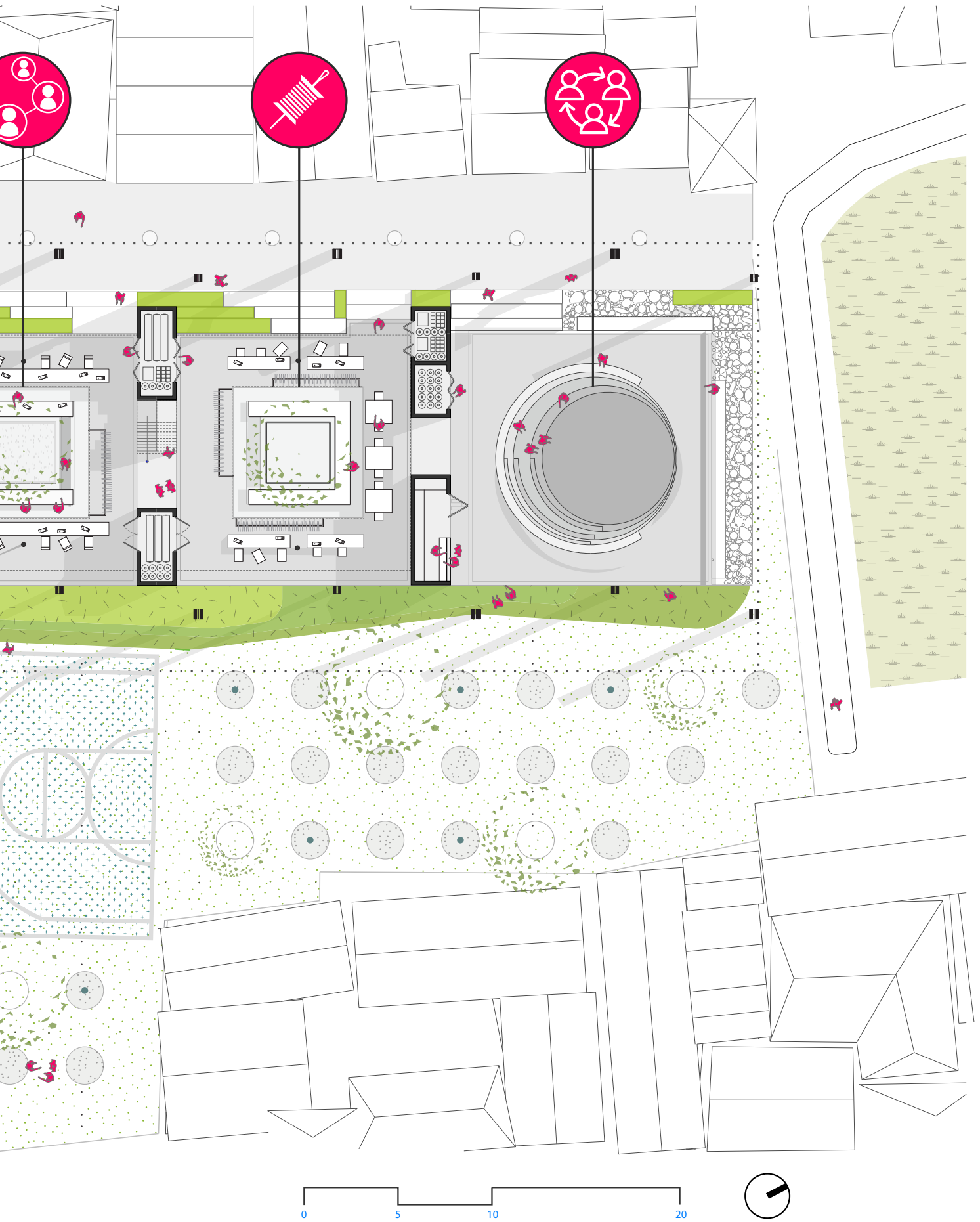
BRICK POD



WASHING POD



COWORKING POD



DESIGN POD



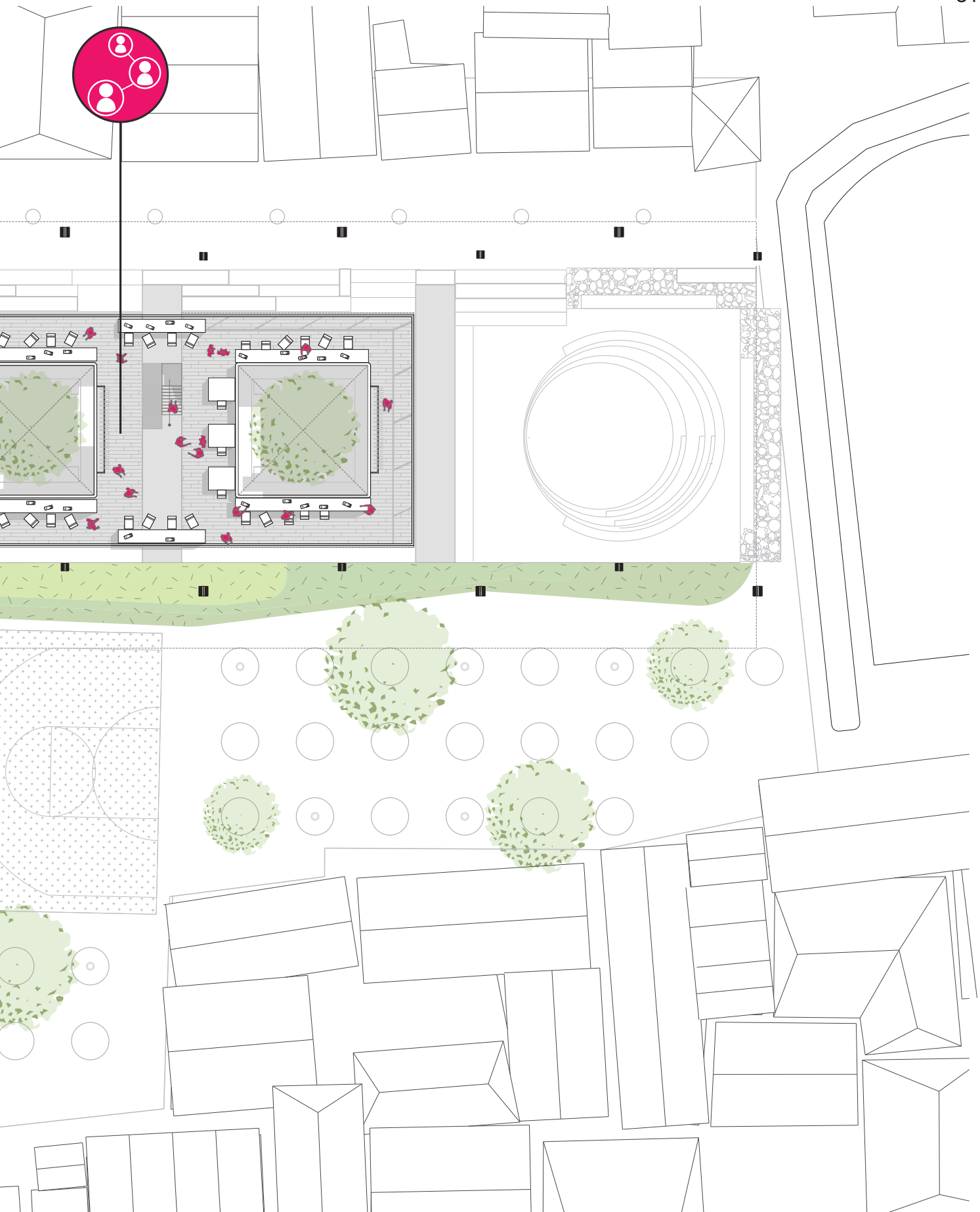
OPEN LEARNING POD



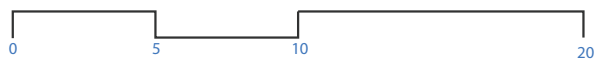
MULTIPURPOSE
LANDSCAPE

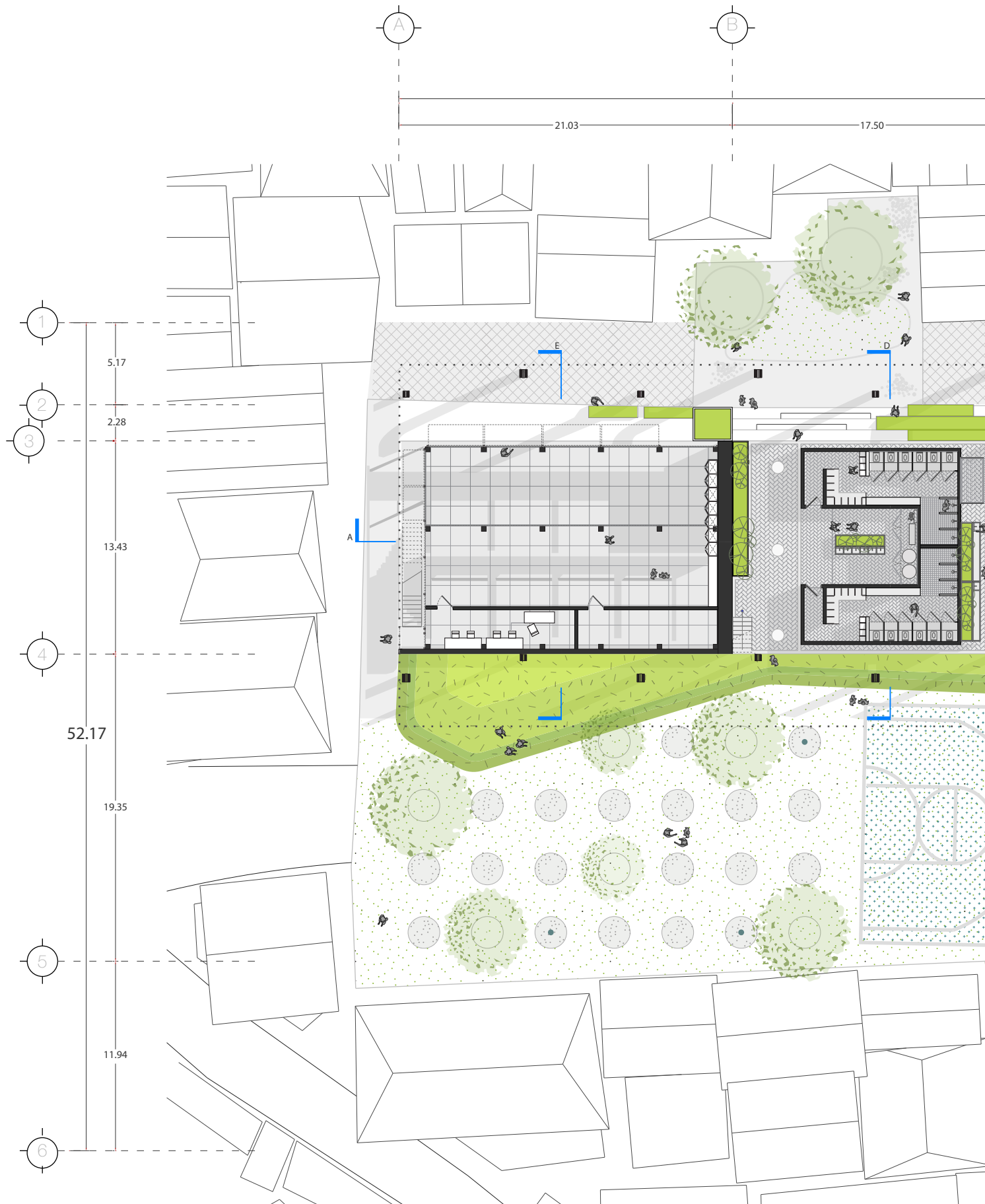


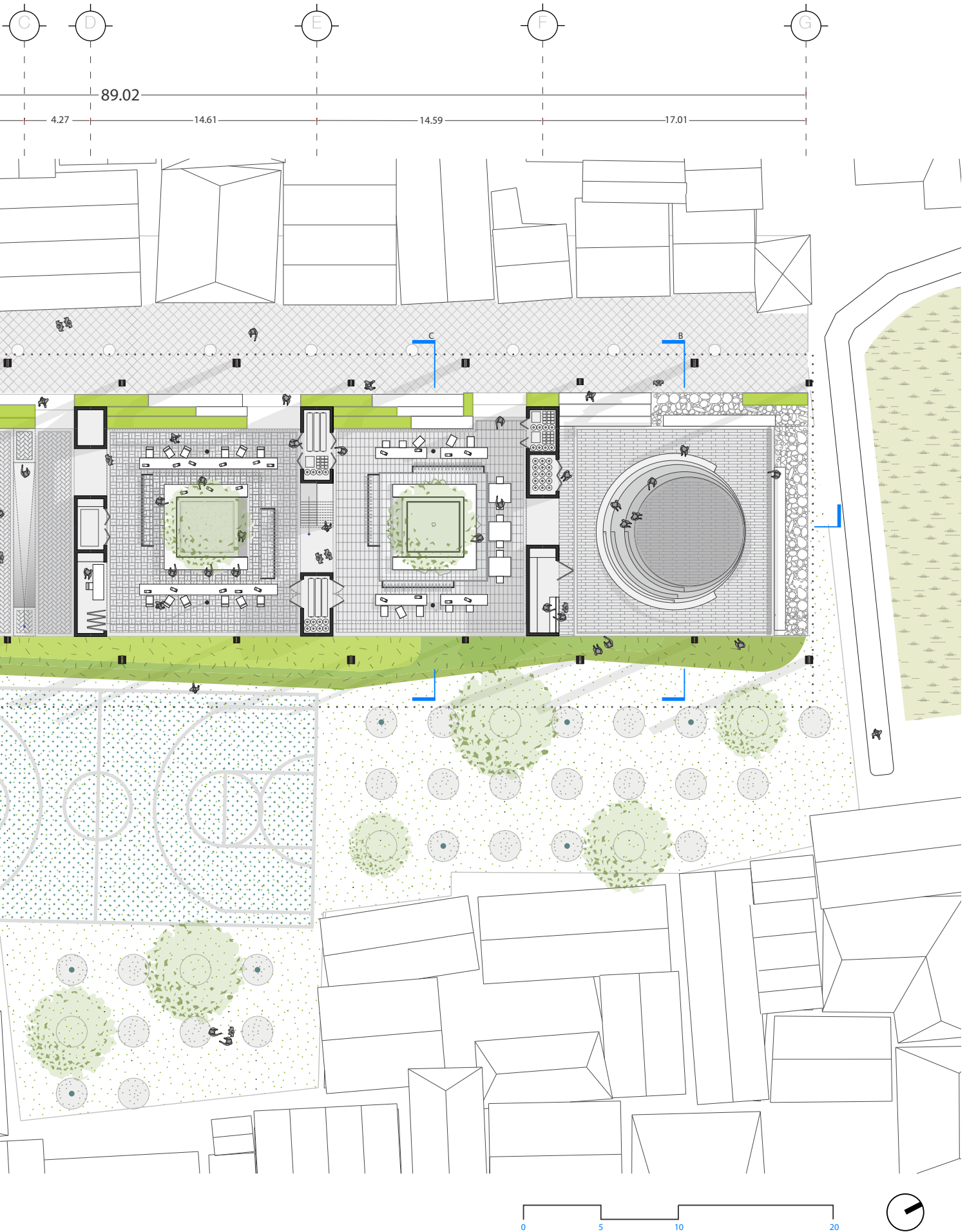
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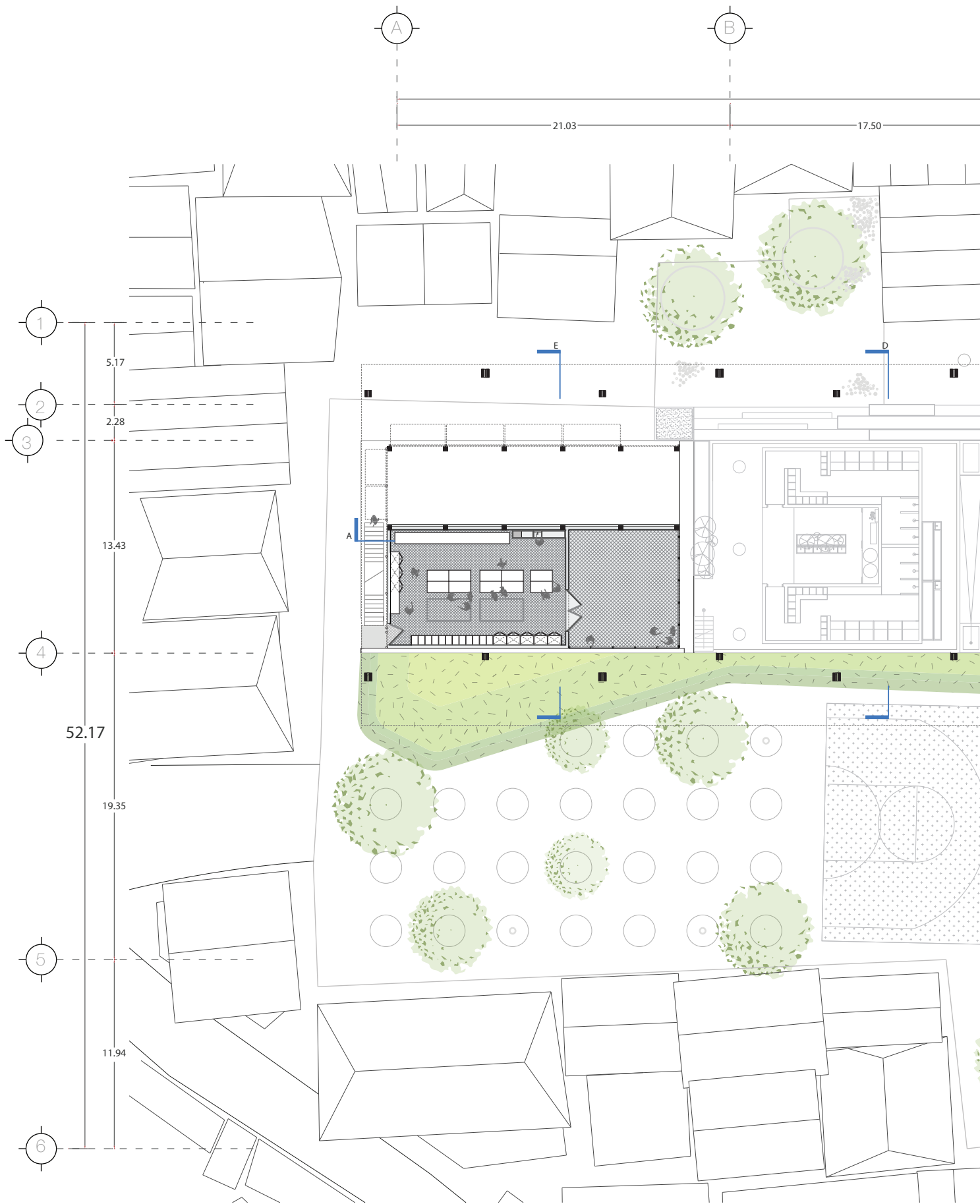


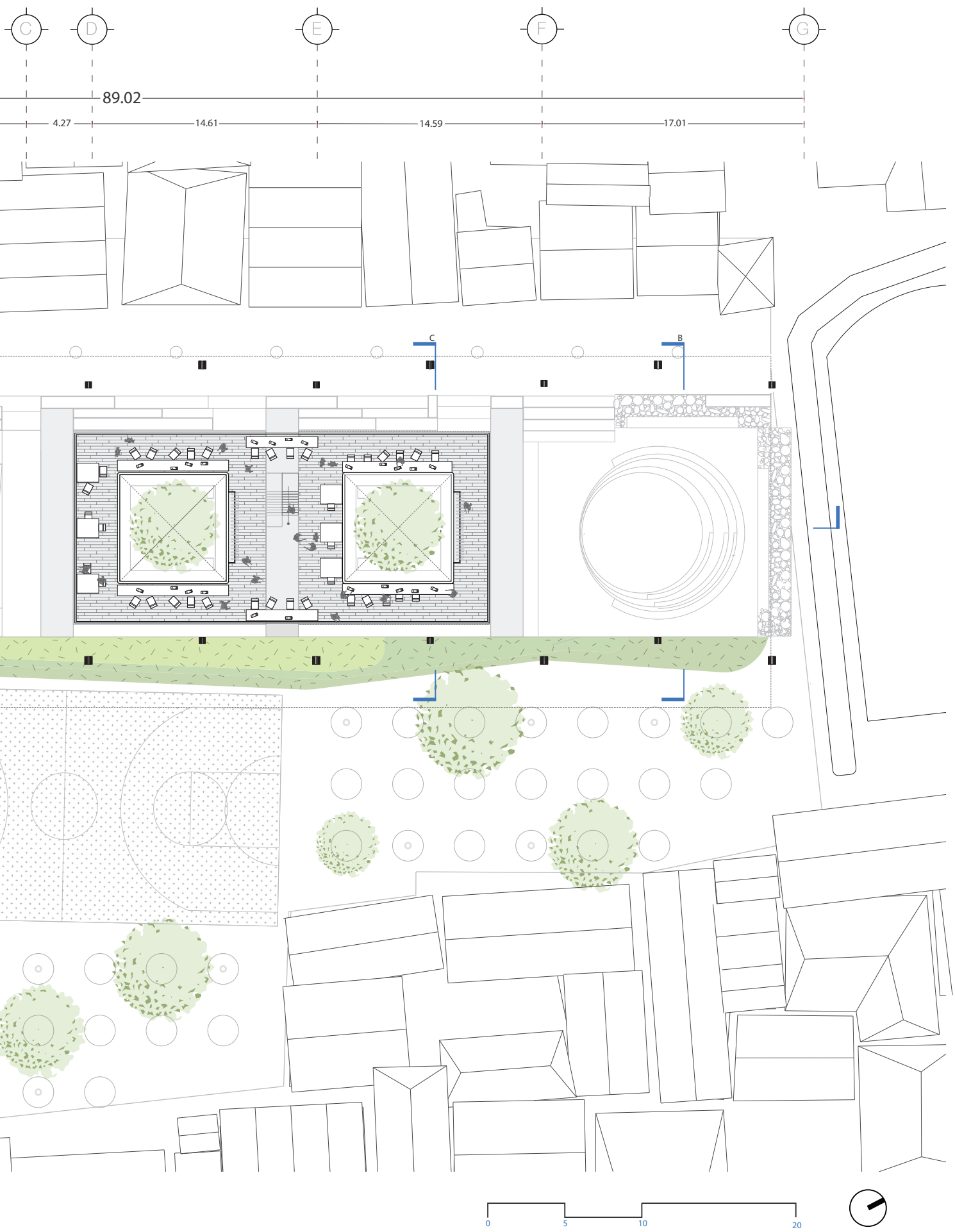
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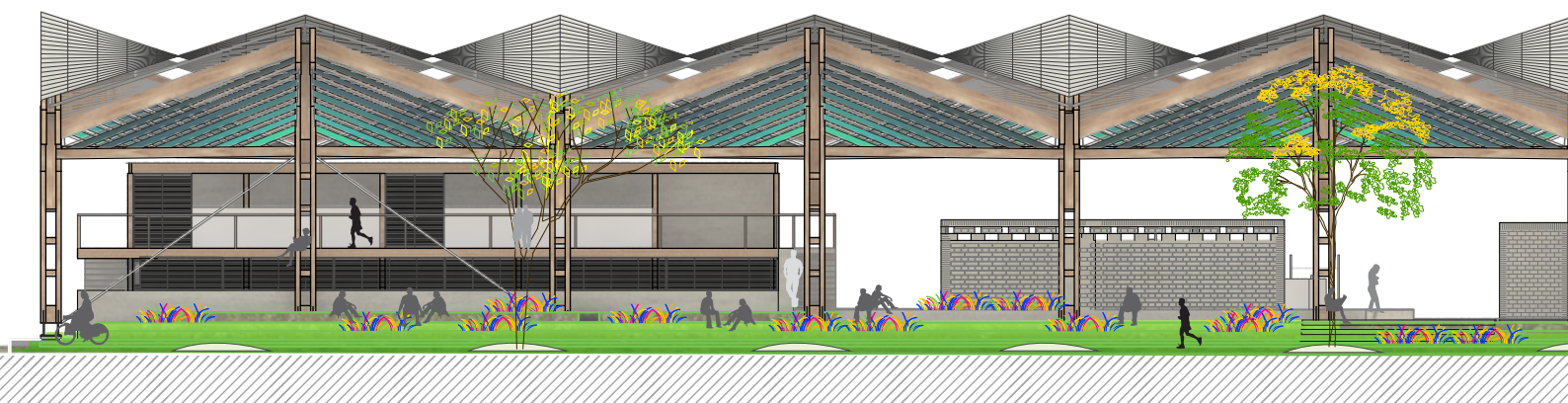
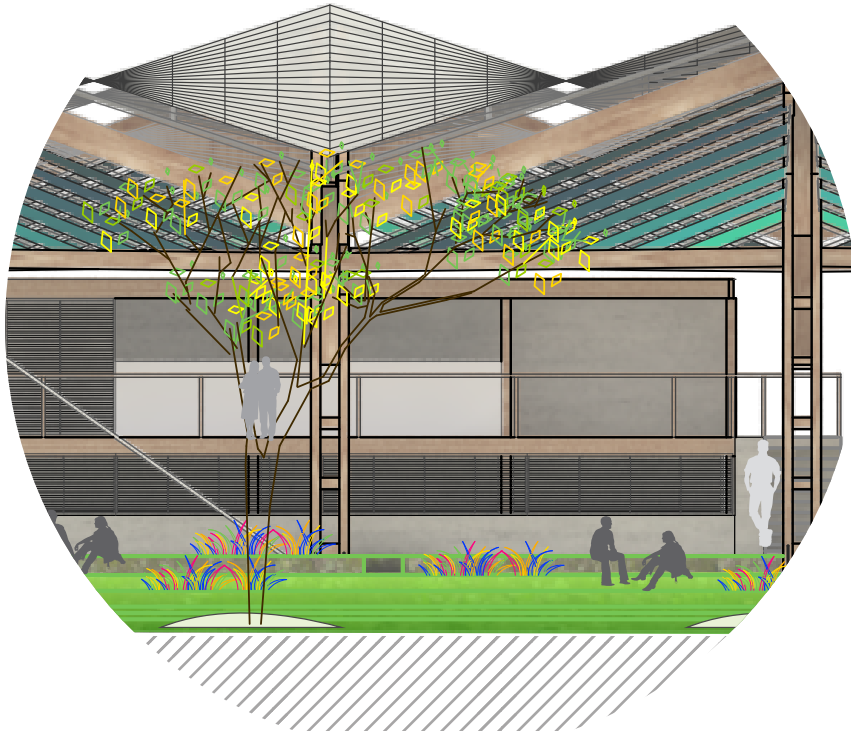


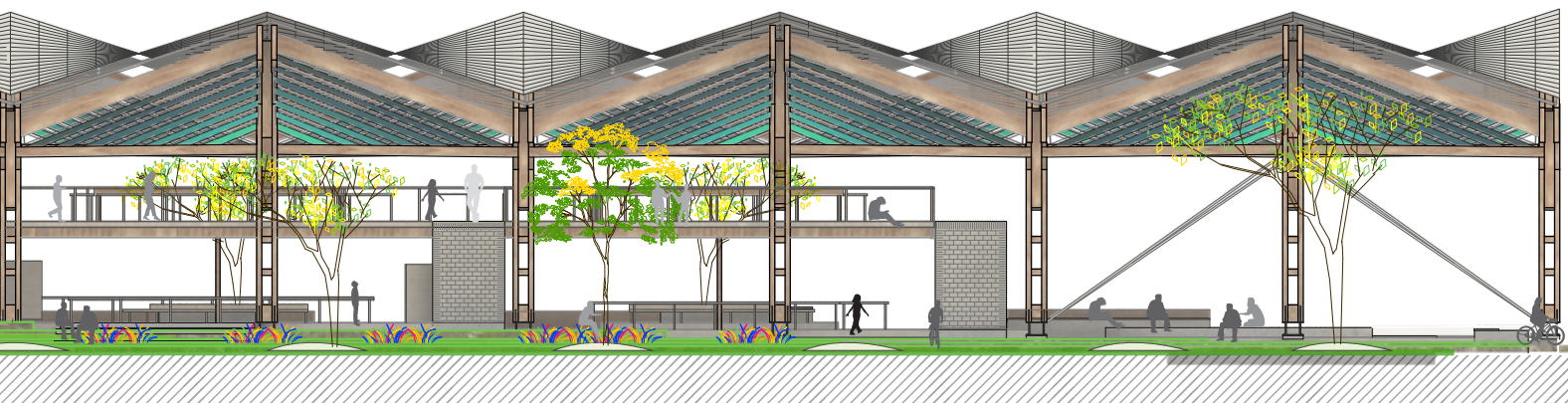
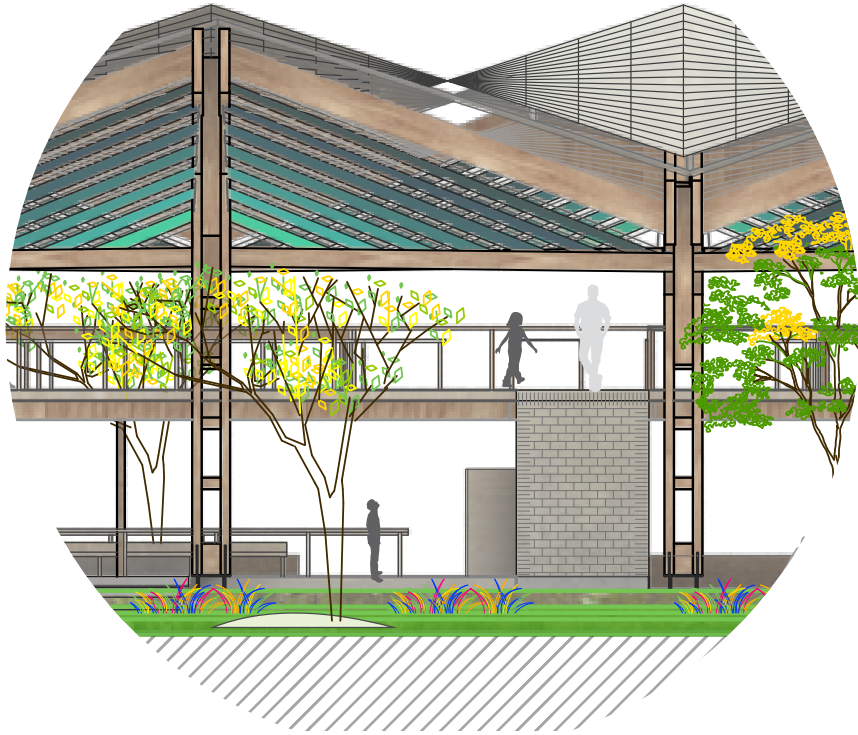


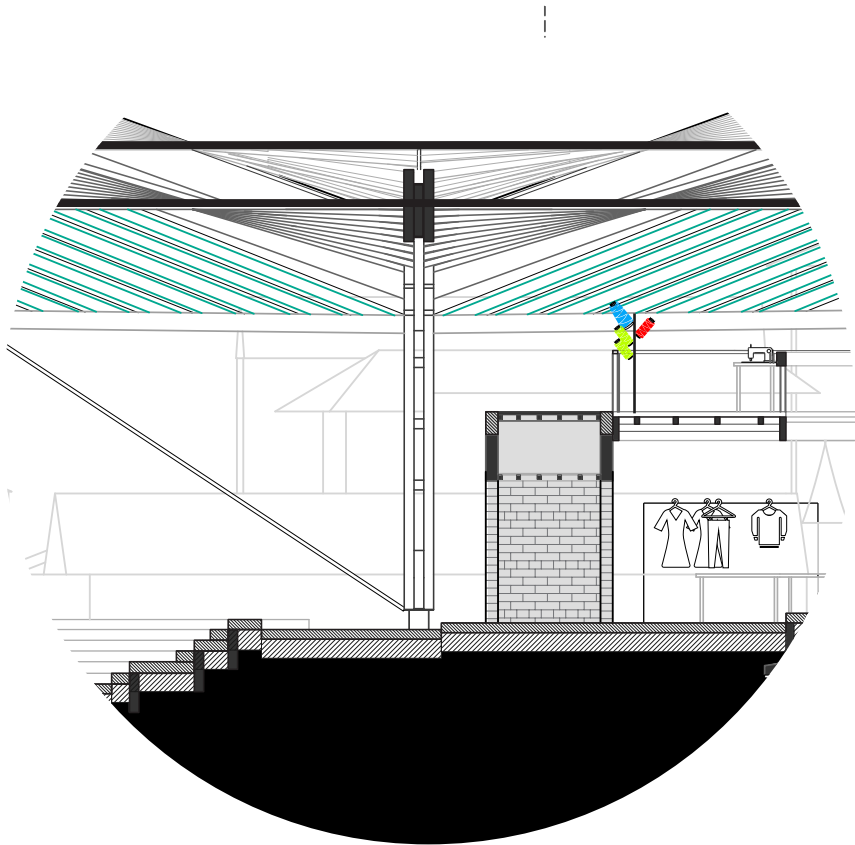












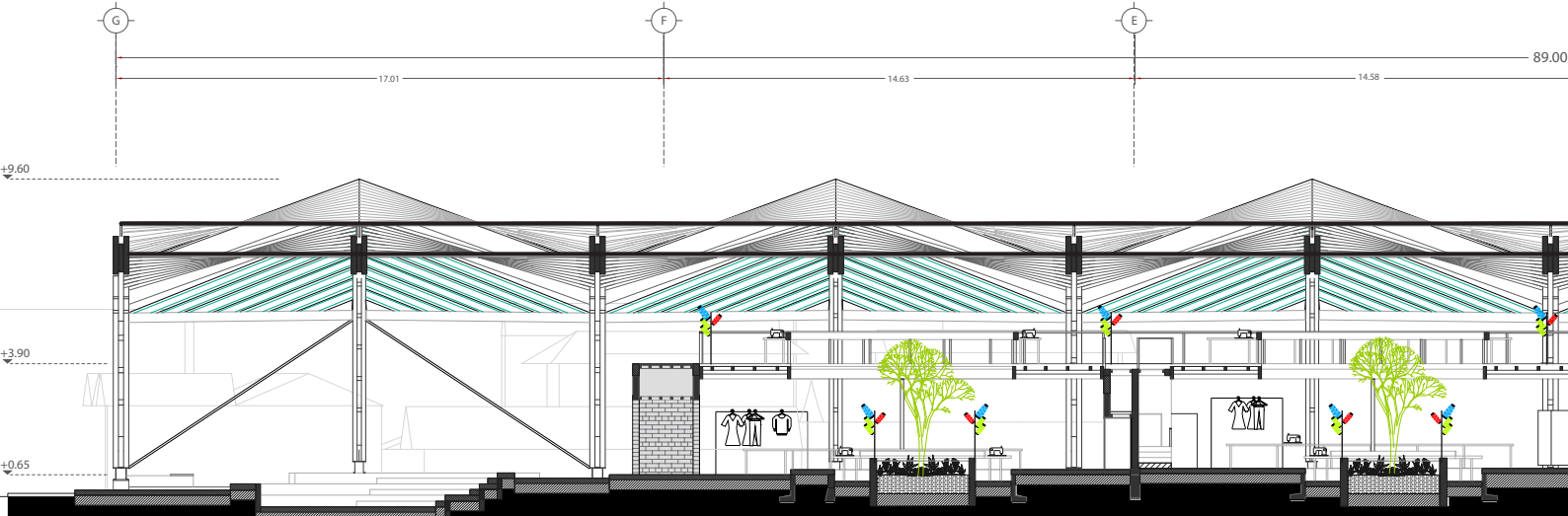
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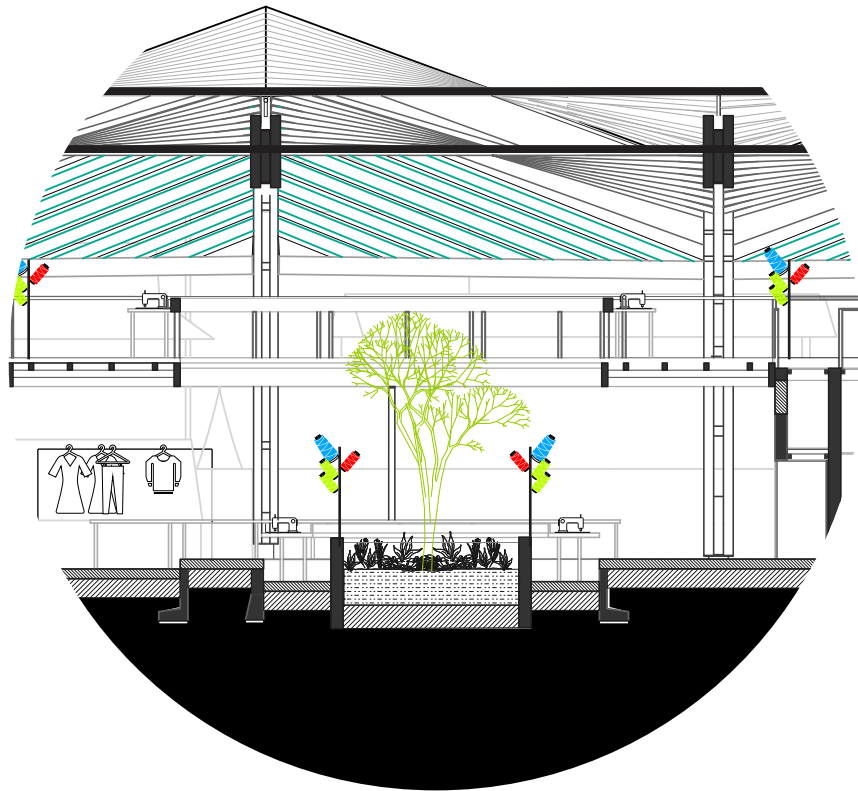
DESIGN POD



COWORKING POD



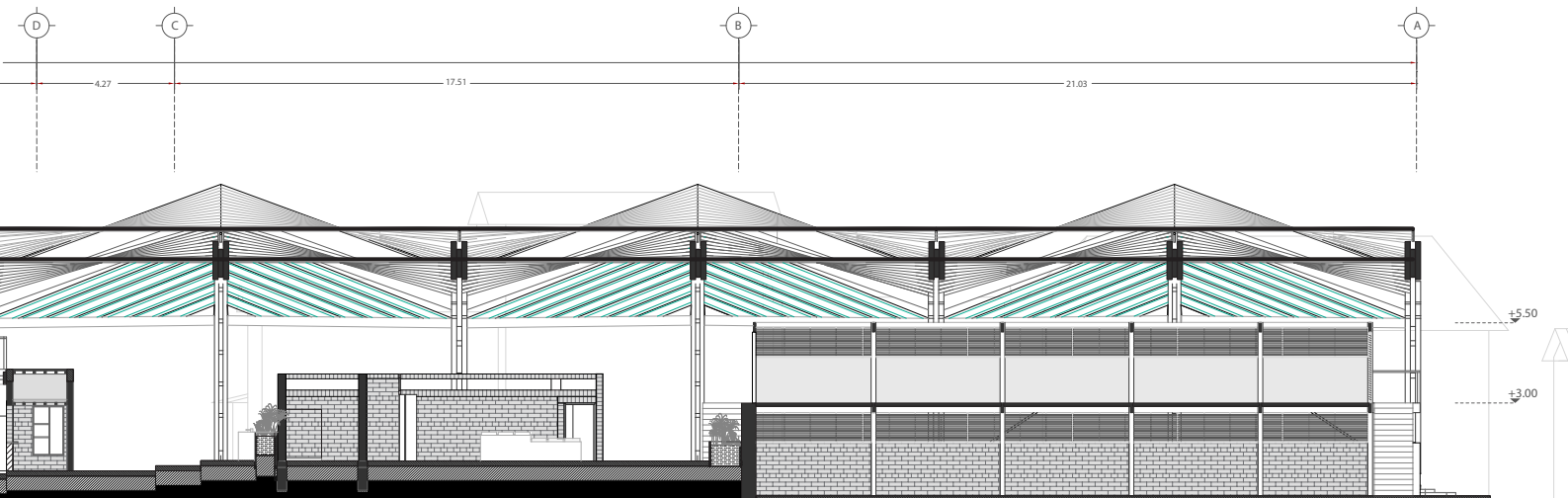
SECTION AA

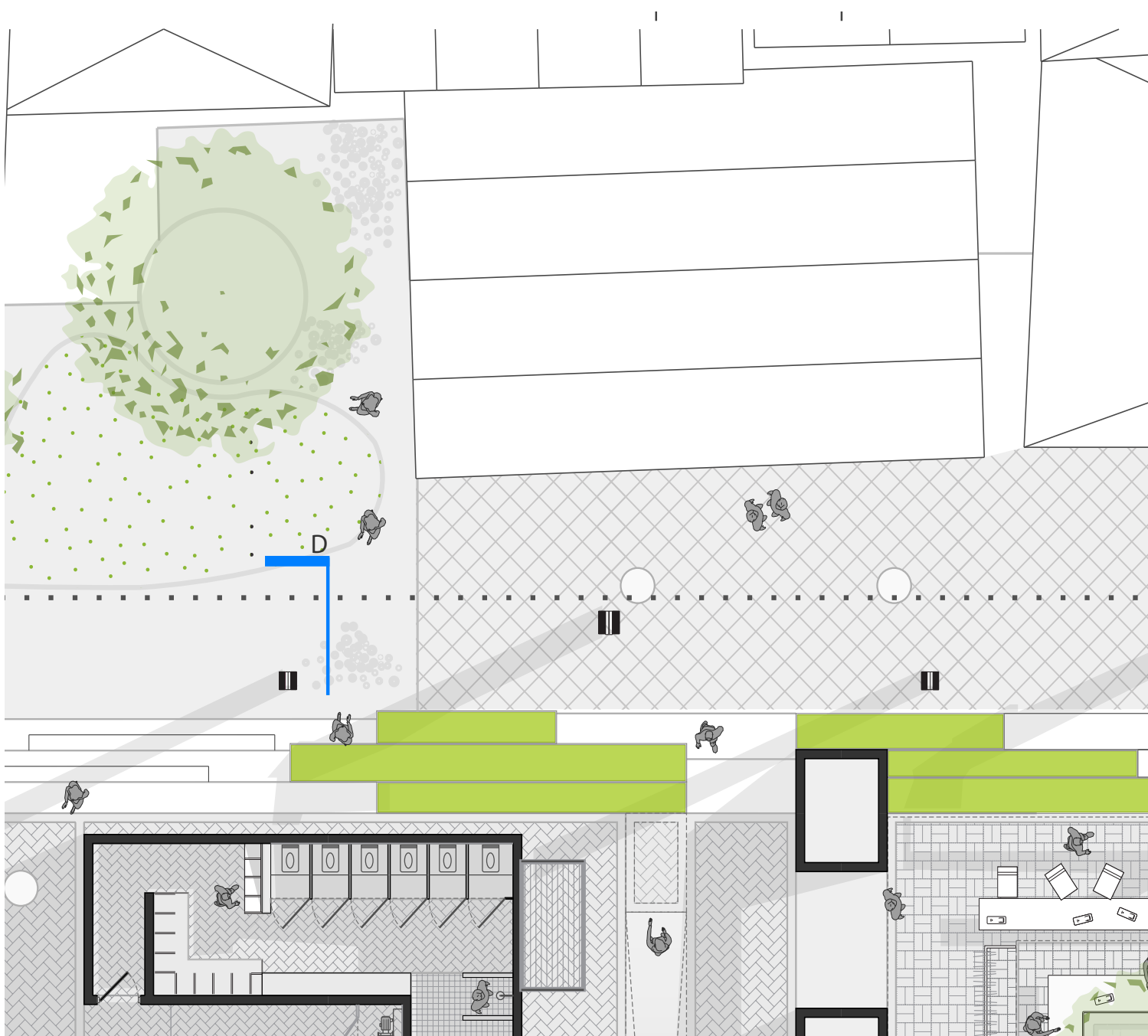


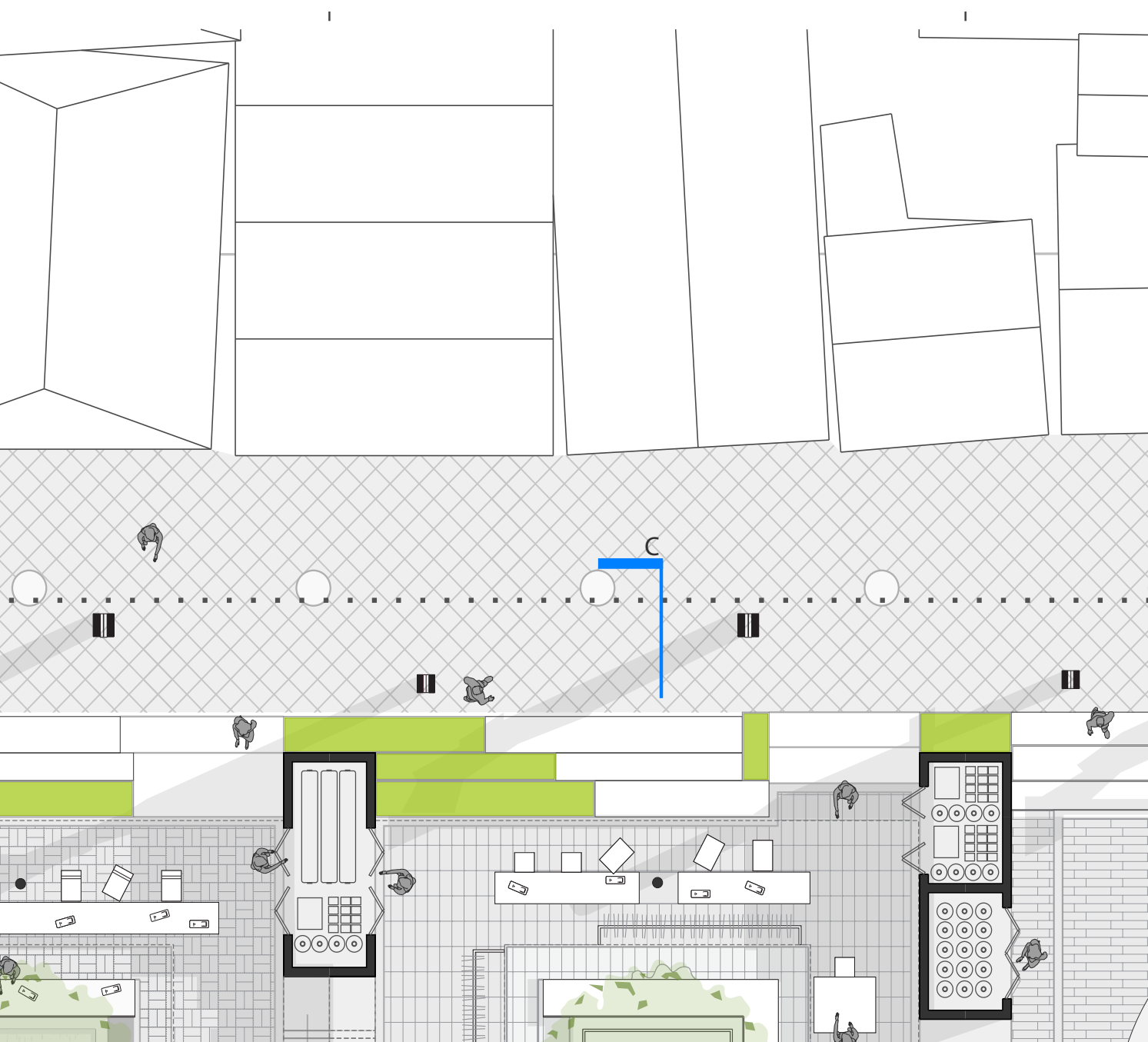
WASHING POD



BRICK POD

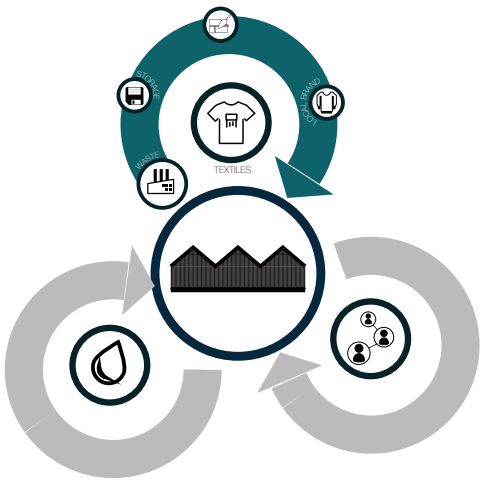




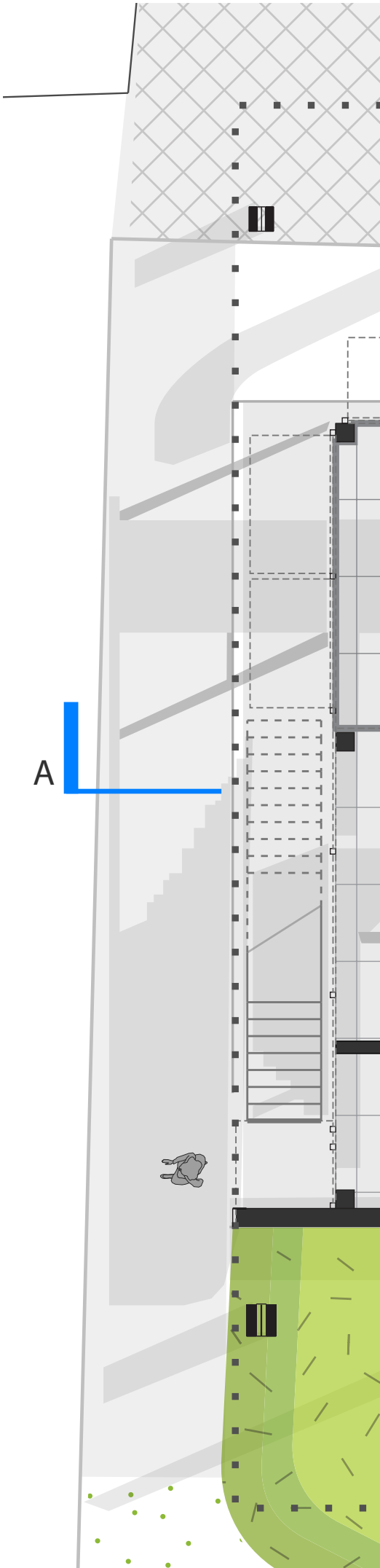




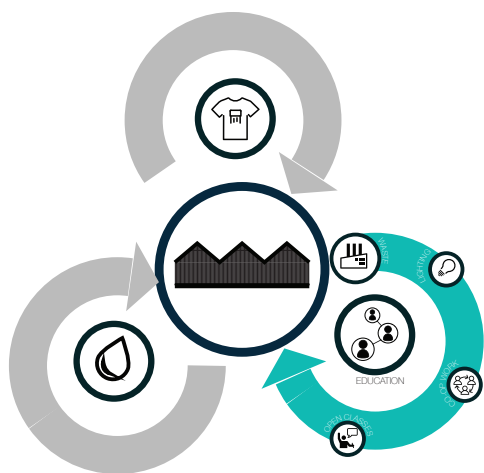




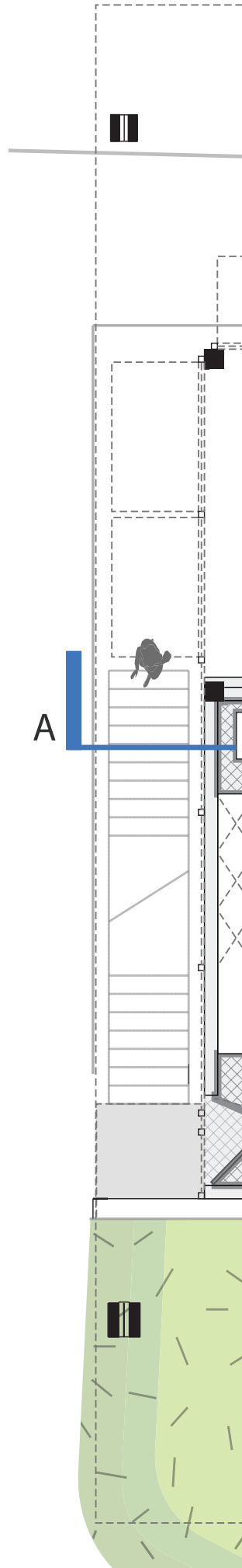
MATERIAL PRODUCTION

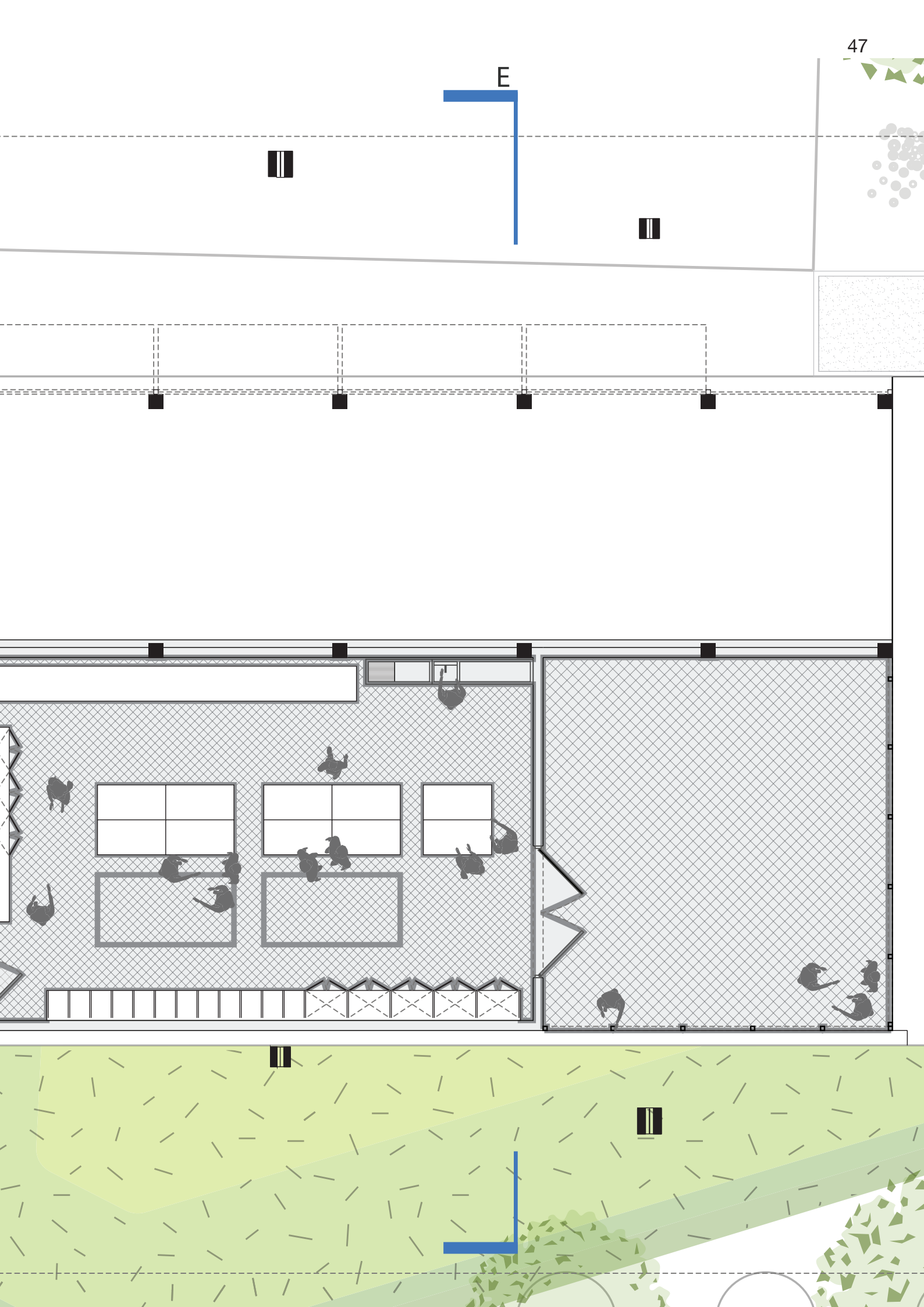


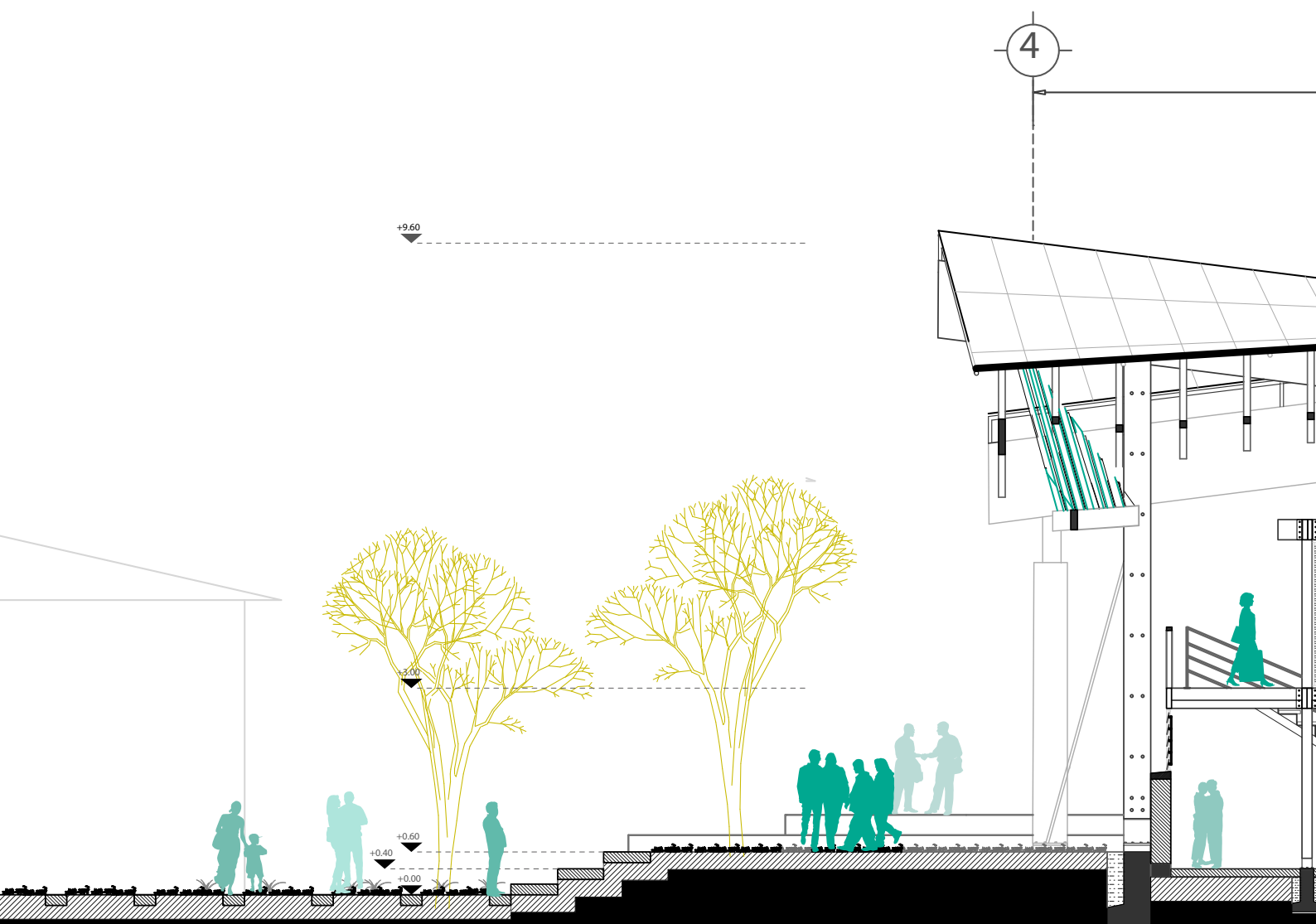




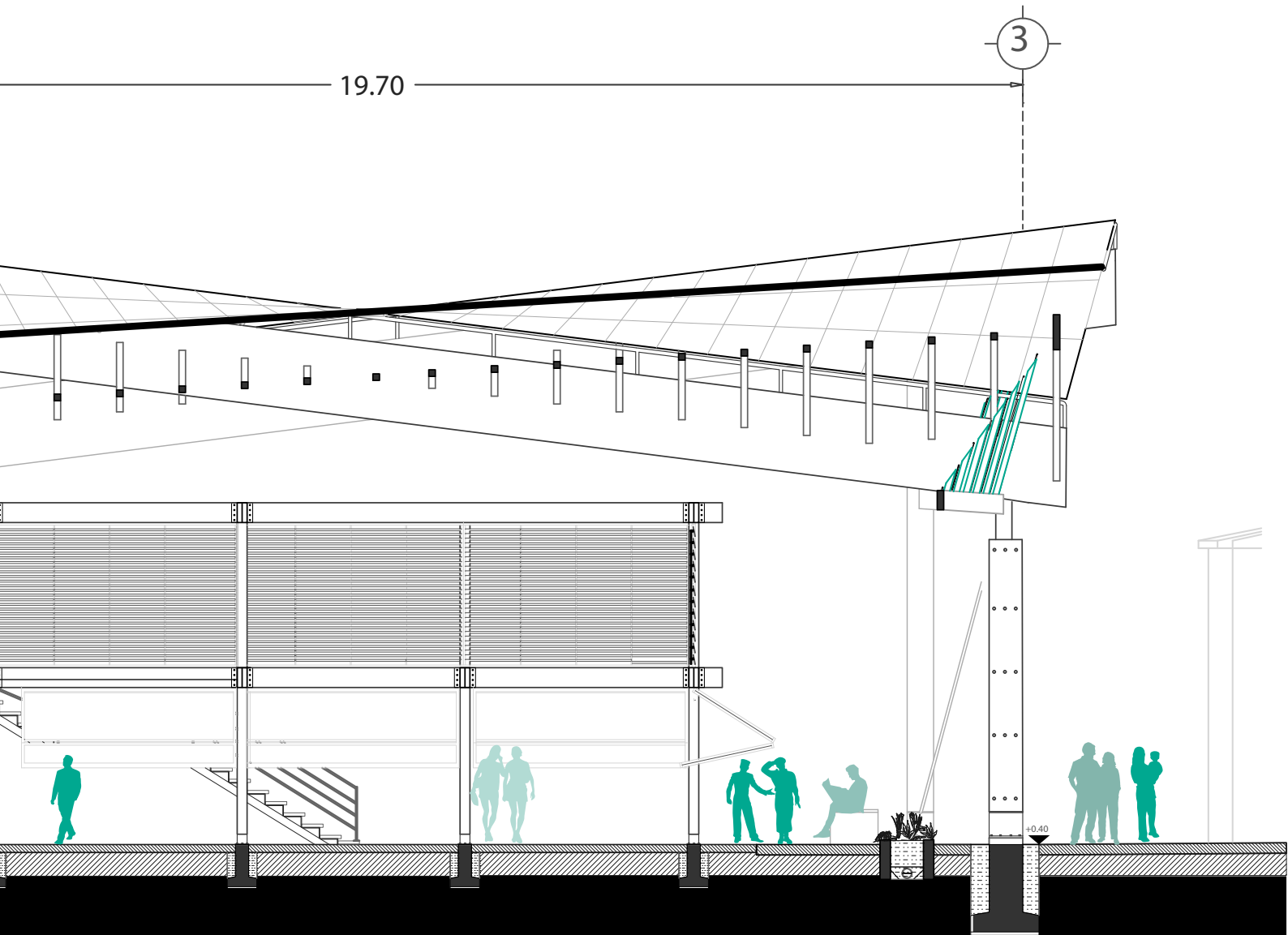
DIGITAL POD

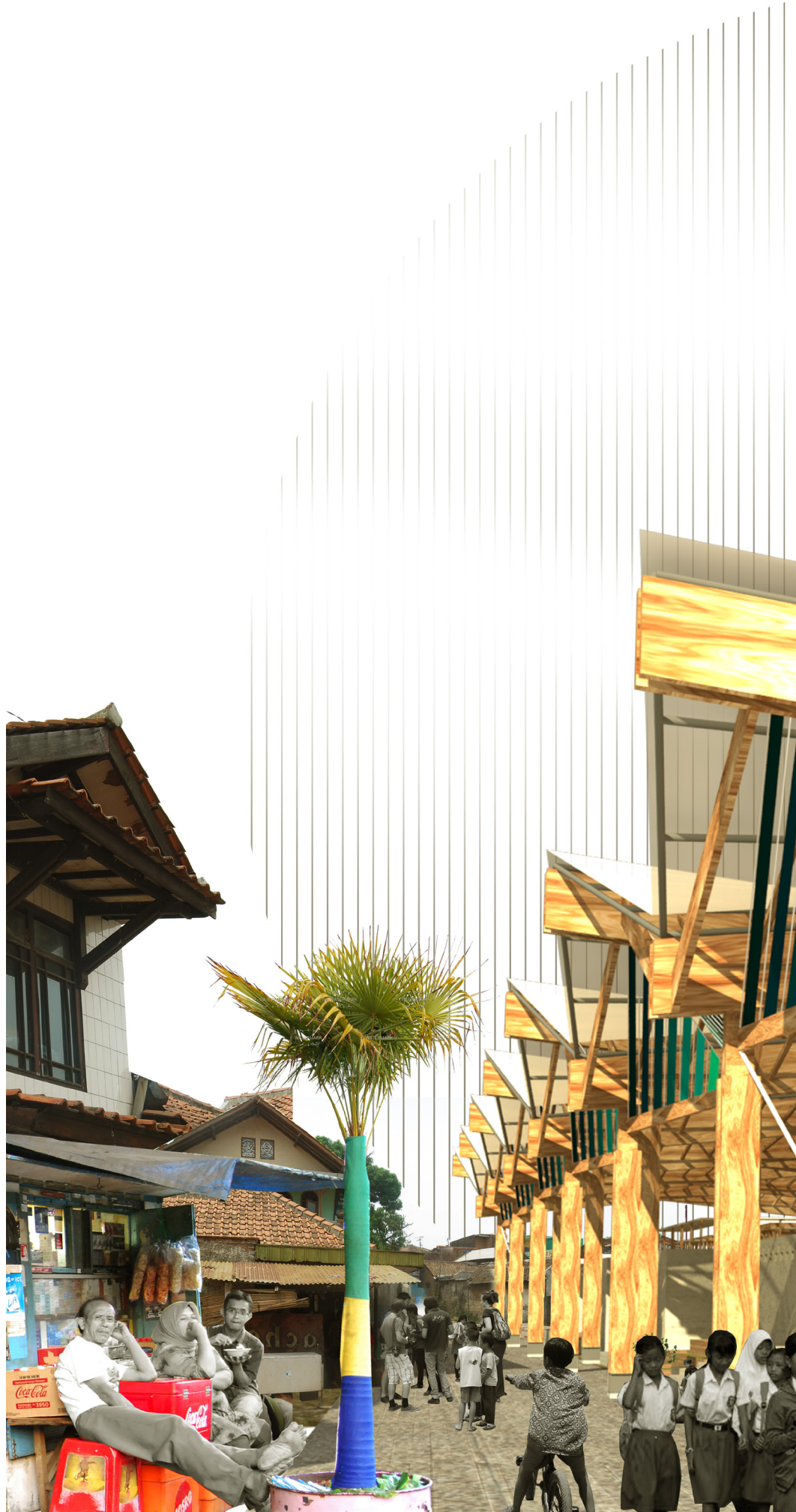




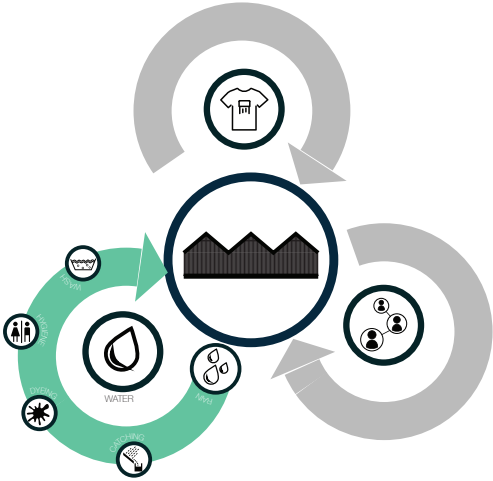


SECTION EE

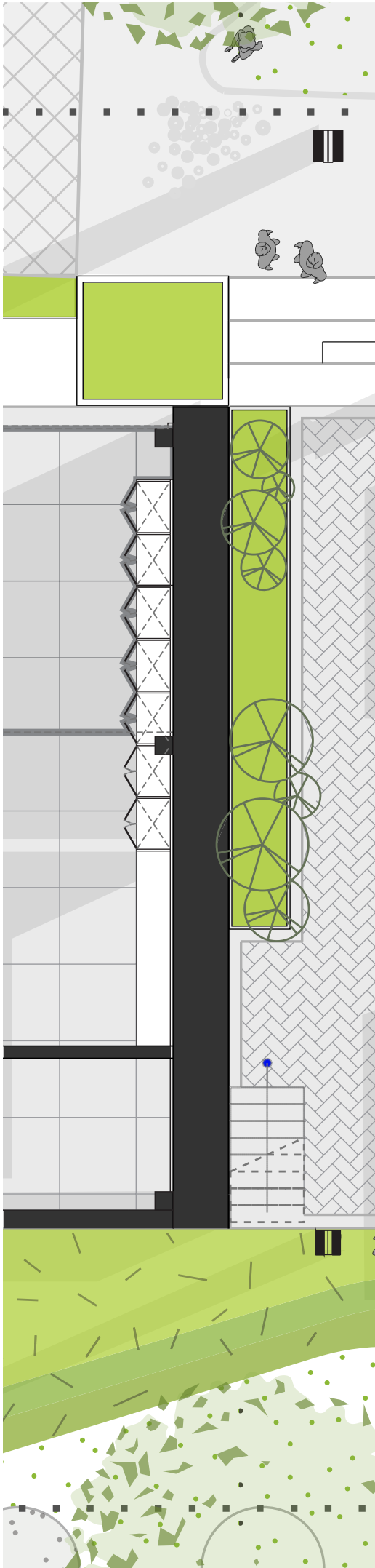


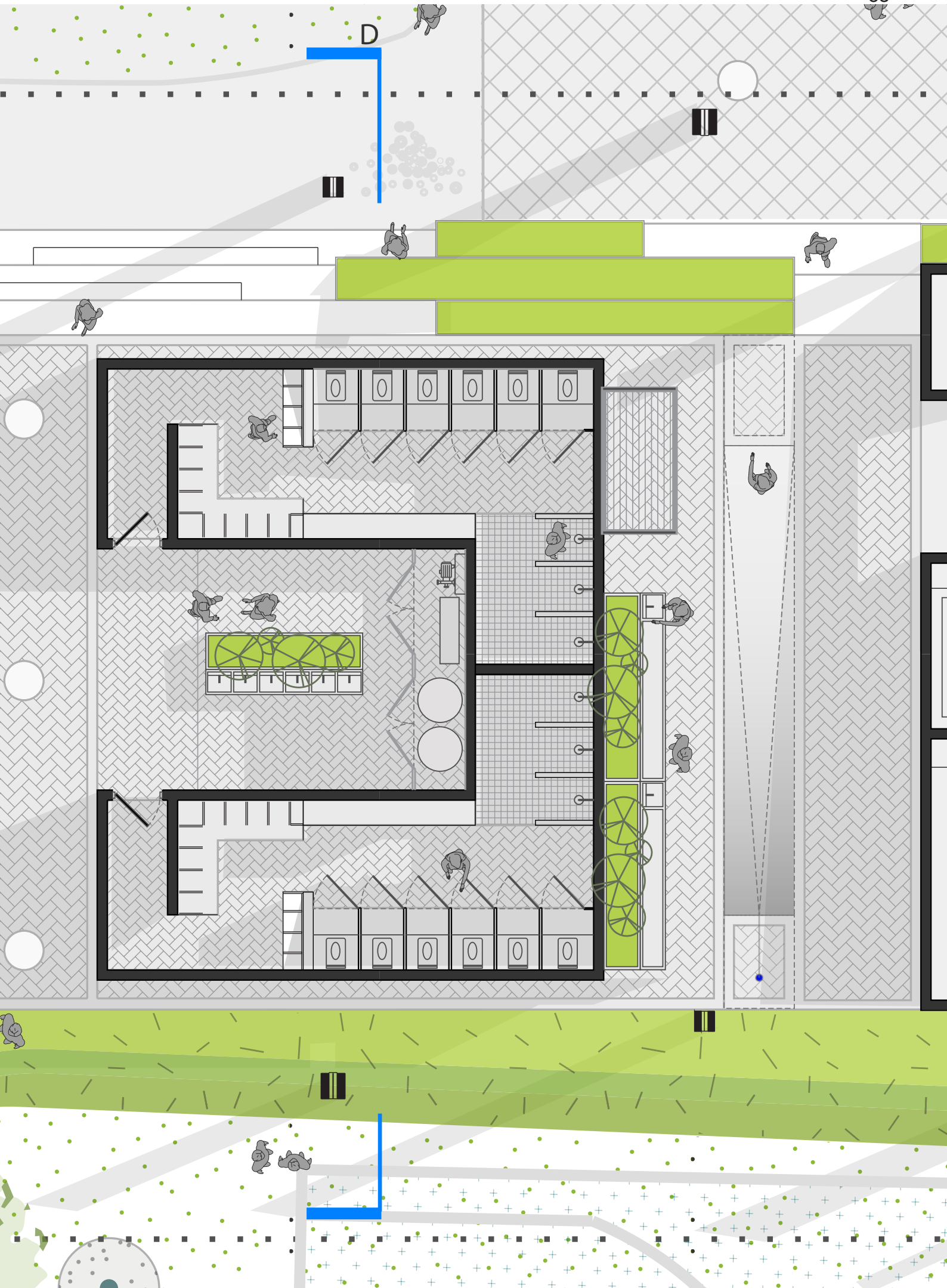


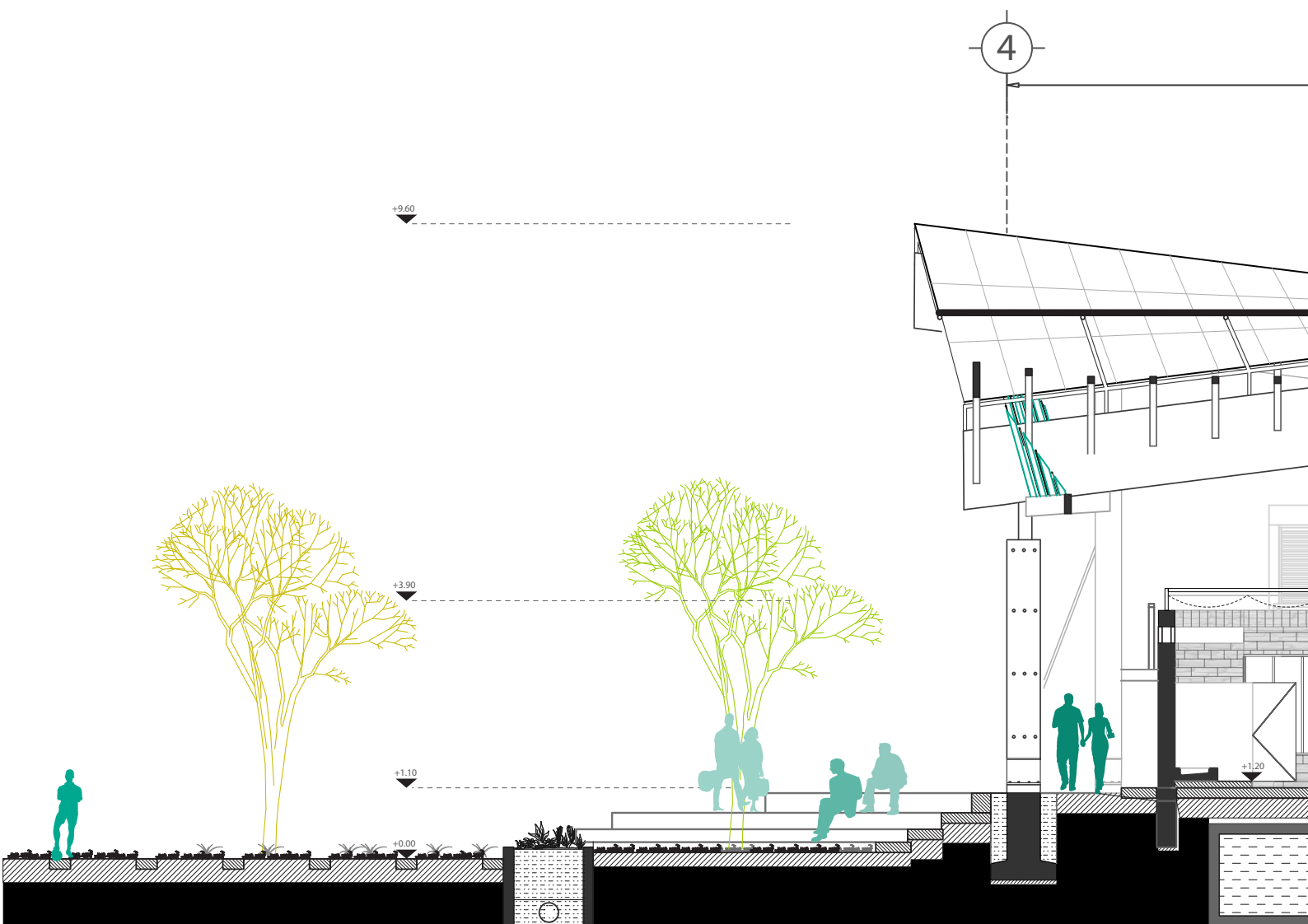




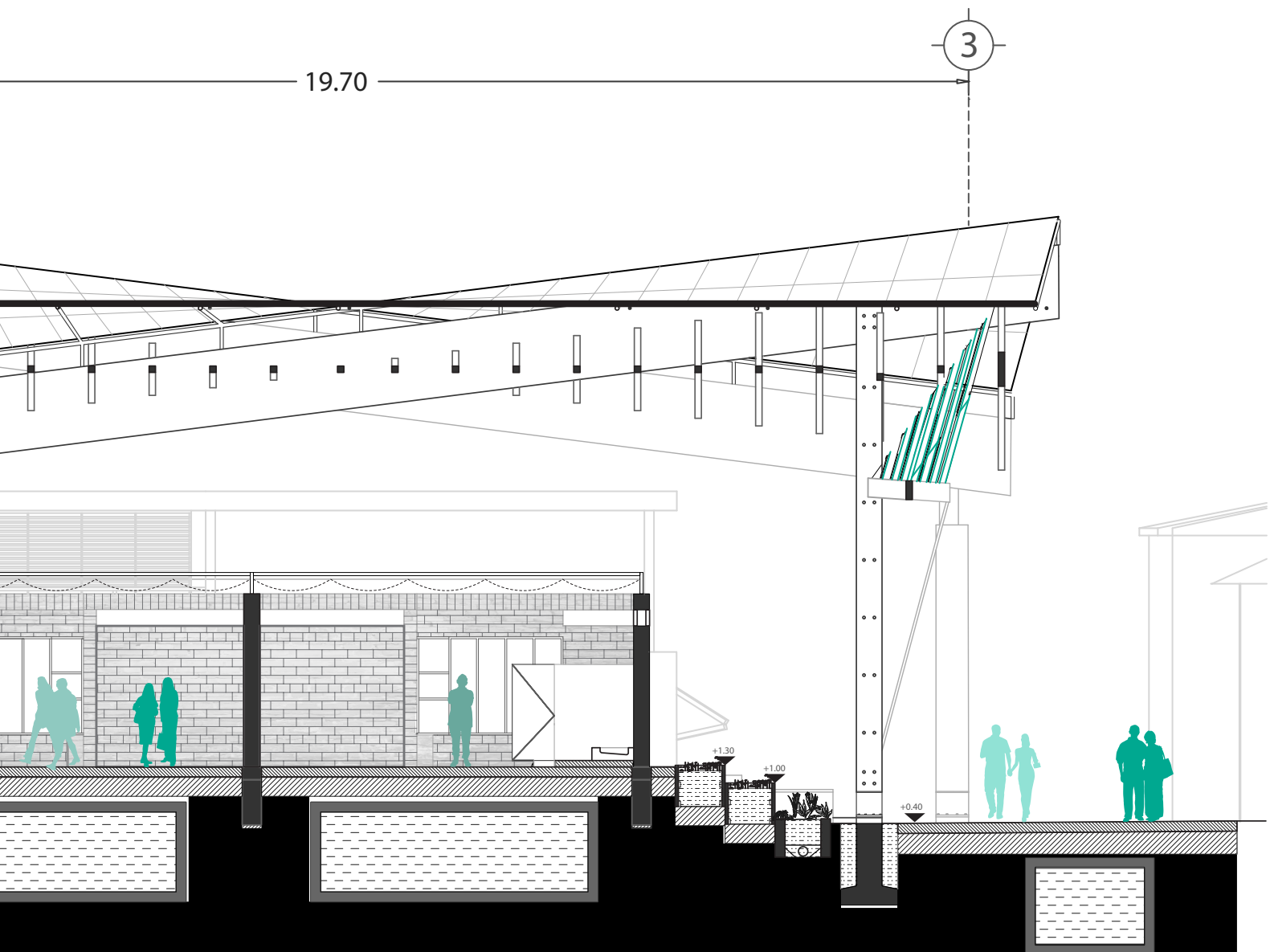
WASHING POD



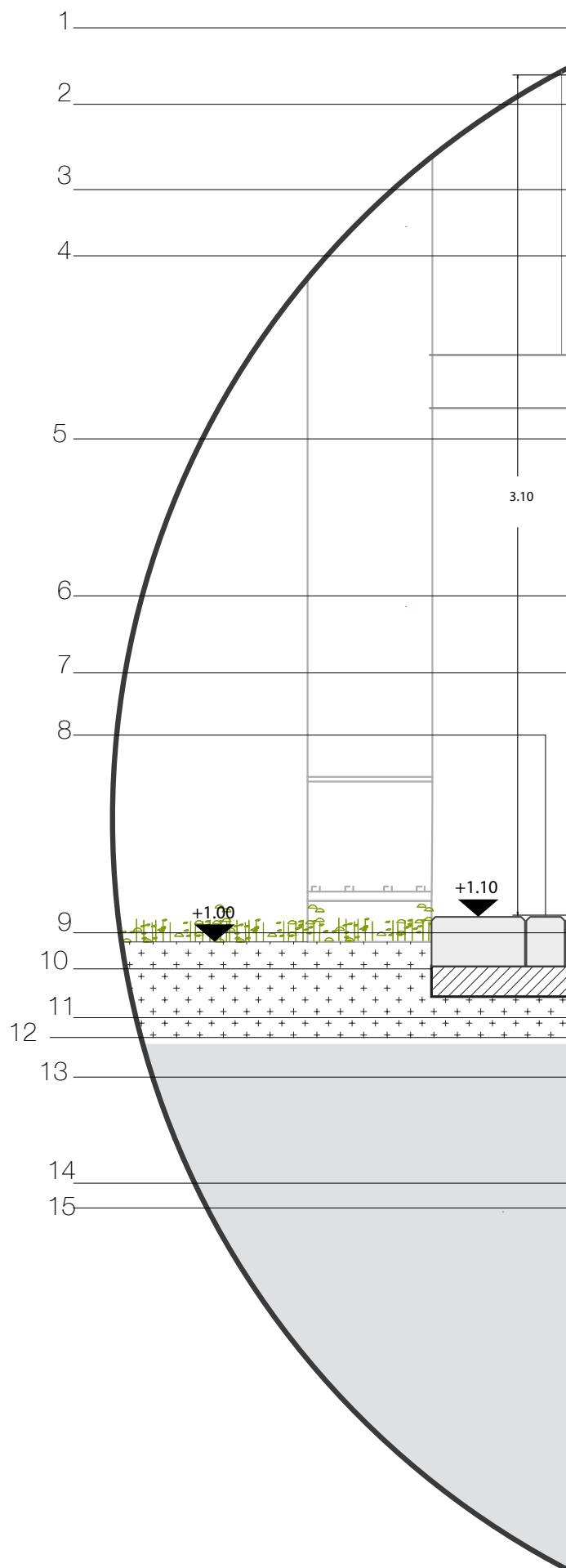


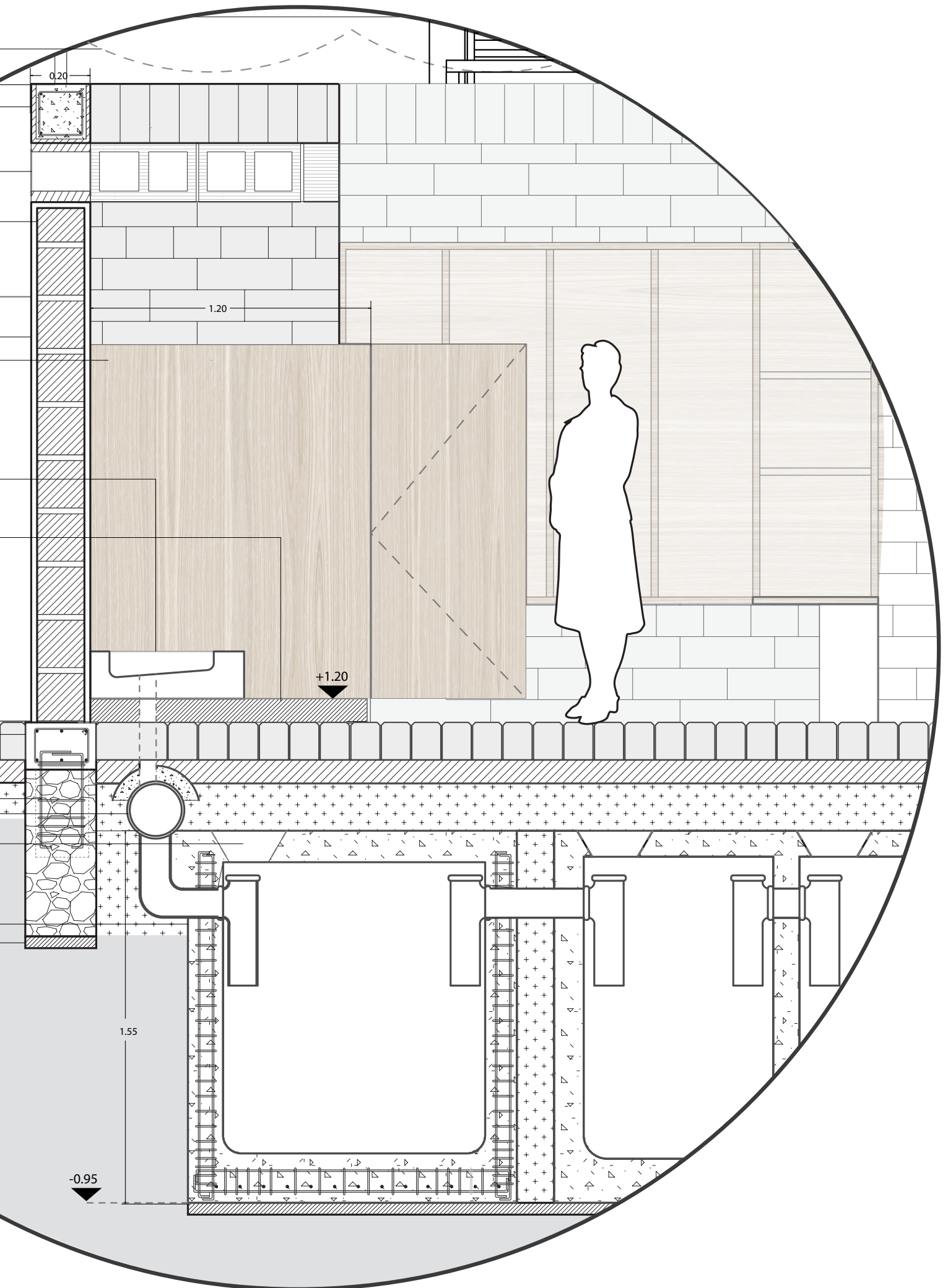


SECTION DD



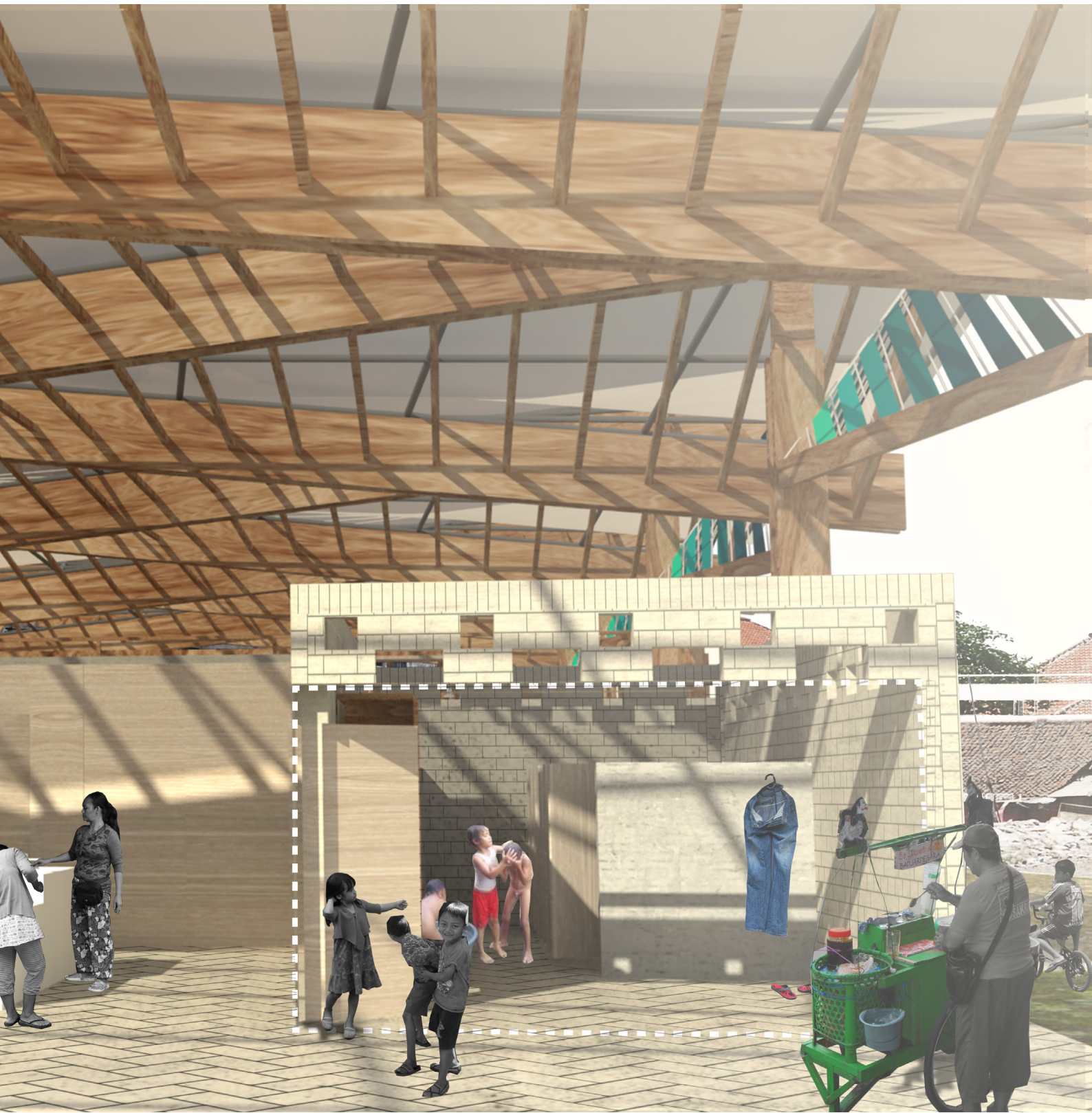
- 1 Loose textile membrane for privacy
- 2 Sawed textile-hollow block with reinforced poured concrete for creation of closing lintel
- 3 Textile hollow block 200x200x400 rollock position for natural ventilation
- 4 Textile hollow block 200x200x400 wall with mortar-cement joints 1:5
- 5 Coconut wood partitions for WC
- 6 Ceramic floor-toilet
- 7 Poured concrete step for toilet installation
- 8 Textile-cement paver 100x200x200mm
- 9 6" HDPE perforated drain pipe on foundation
- 10 Foundation head reinforced concrete with No.4 rebar 300x00mm
- 11 Stone foundation 700x300mm mortar-cement 1:5
- 12 7" cement pipe connecting into septic tank and further into a simplified sewage system
- 13 Inspection opening into septic tank
- 14 Septic tank construction with reinforced concrete slab 150mm thick with No.3 rebar
- 15 Preparation layer, excavated earth, cement, water.

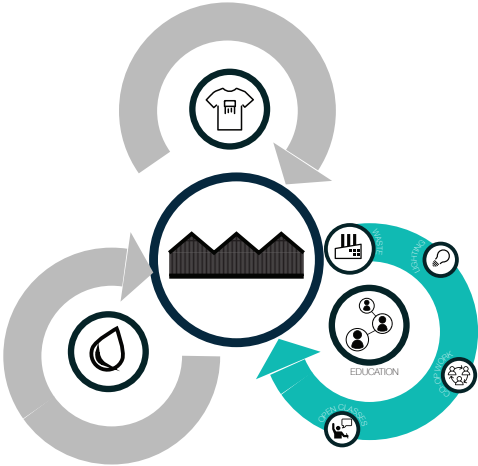




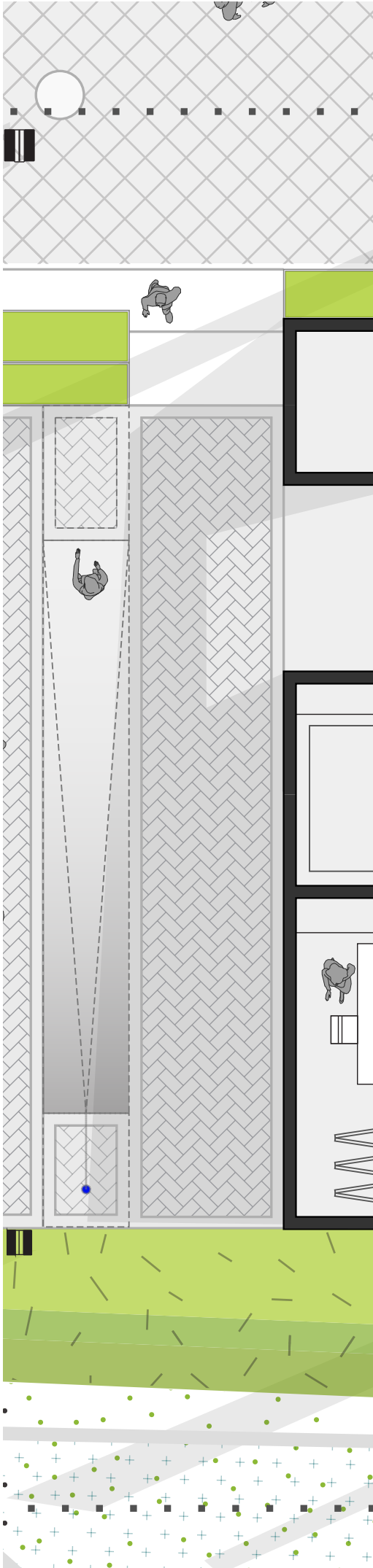


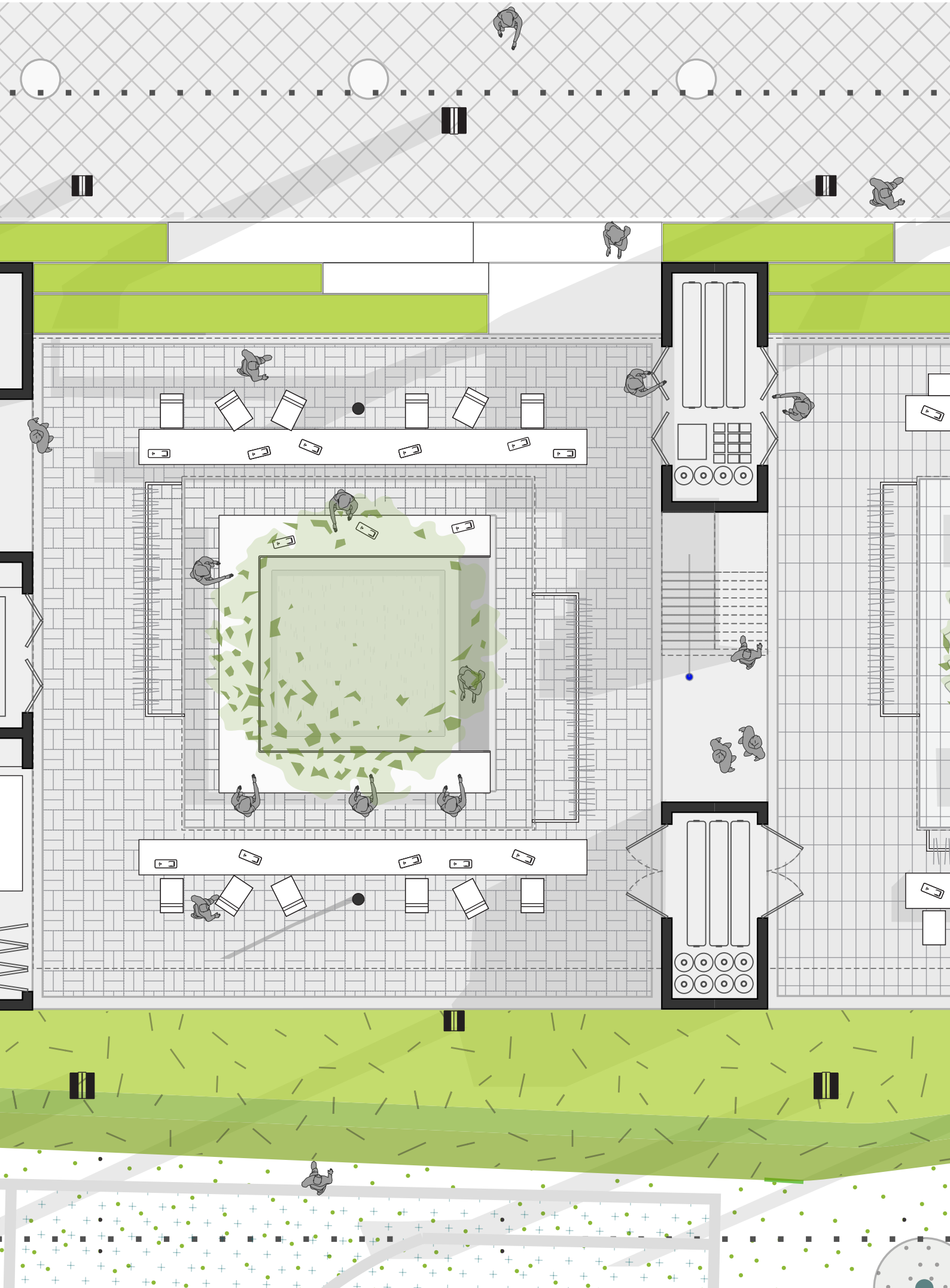
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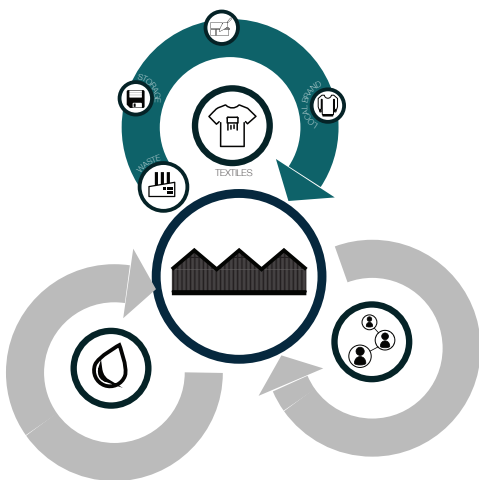




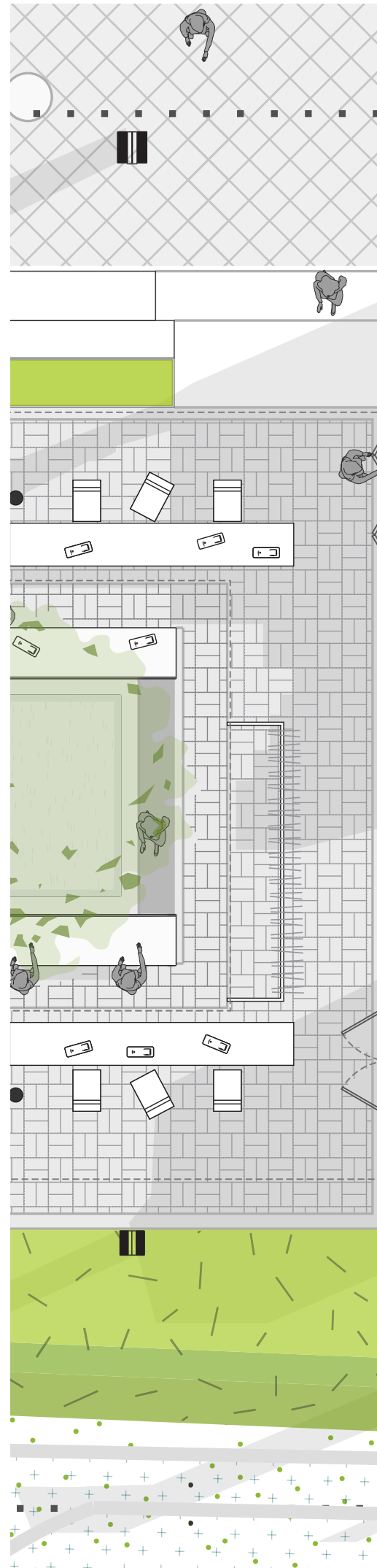
CO-WORKING POD

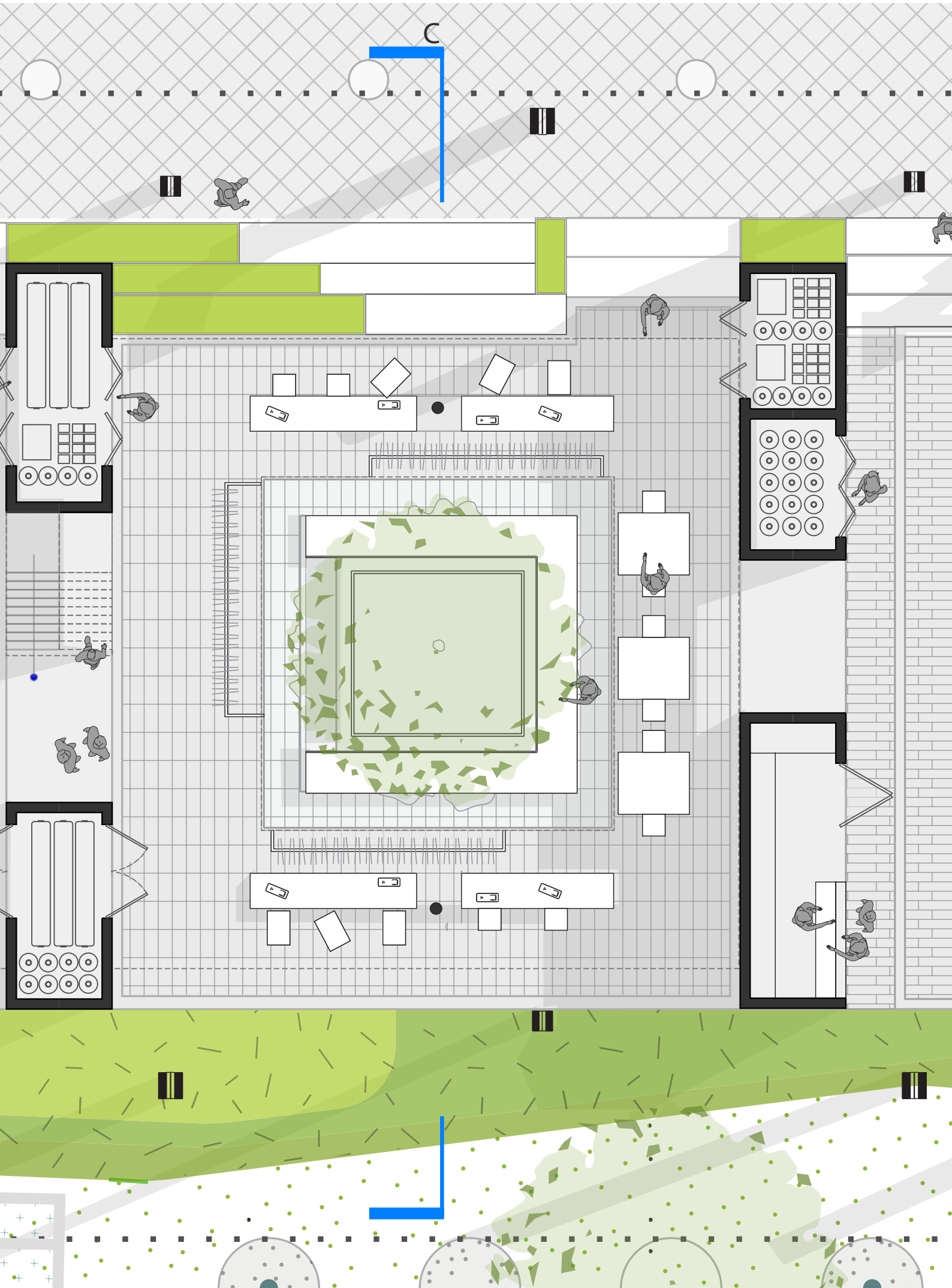


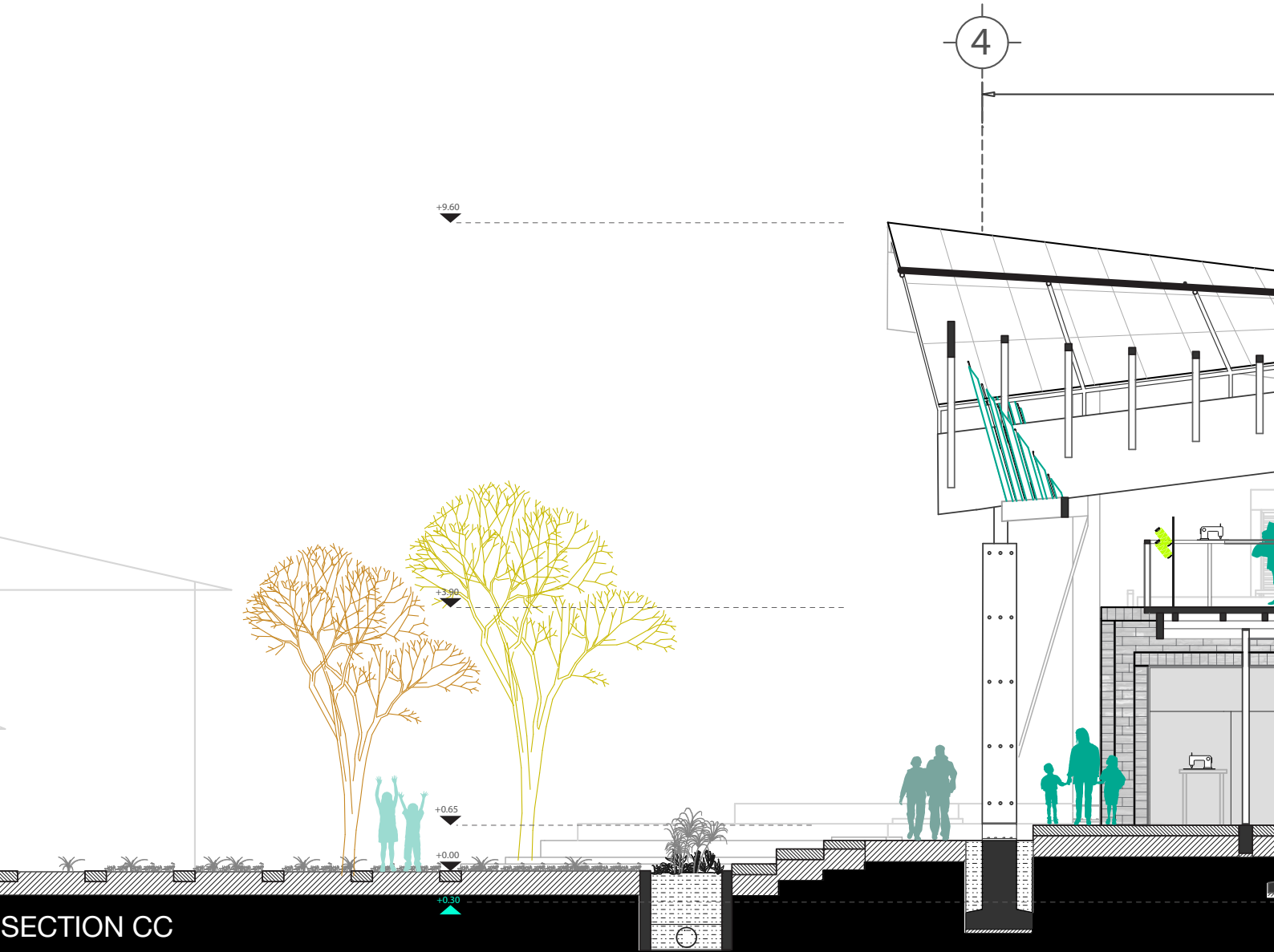


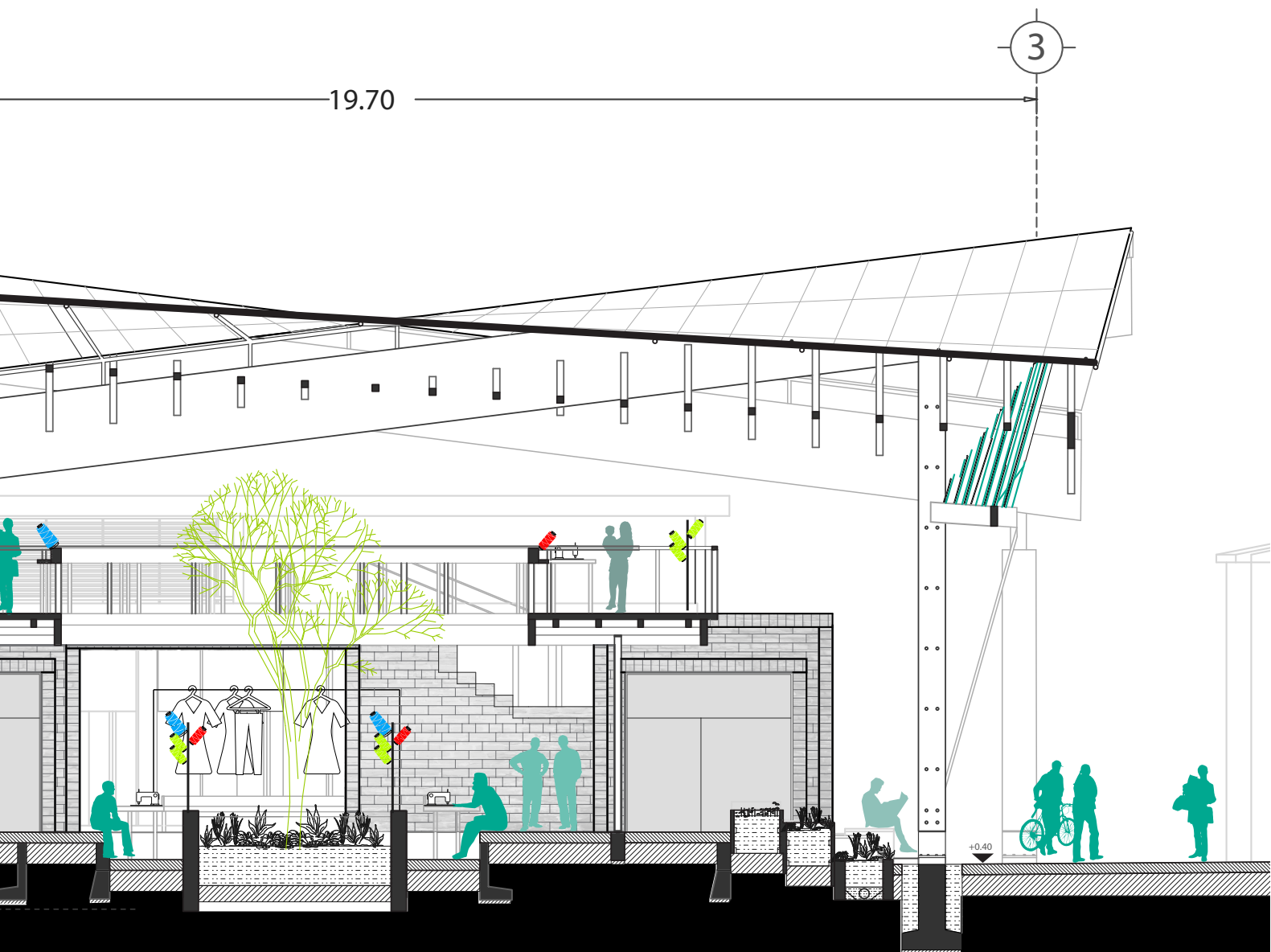


WORKSHOP POD





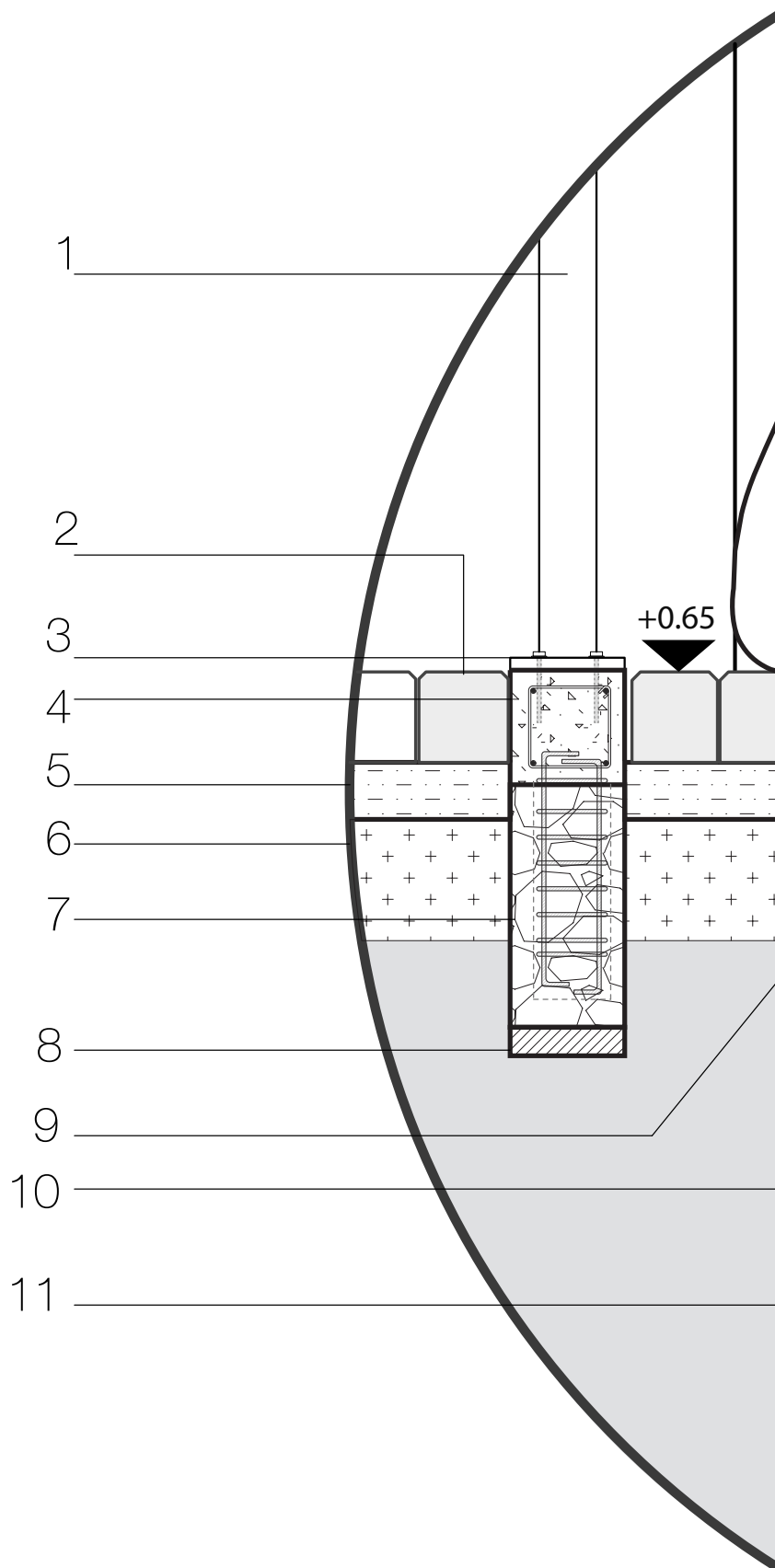


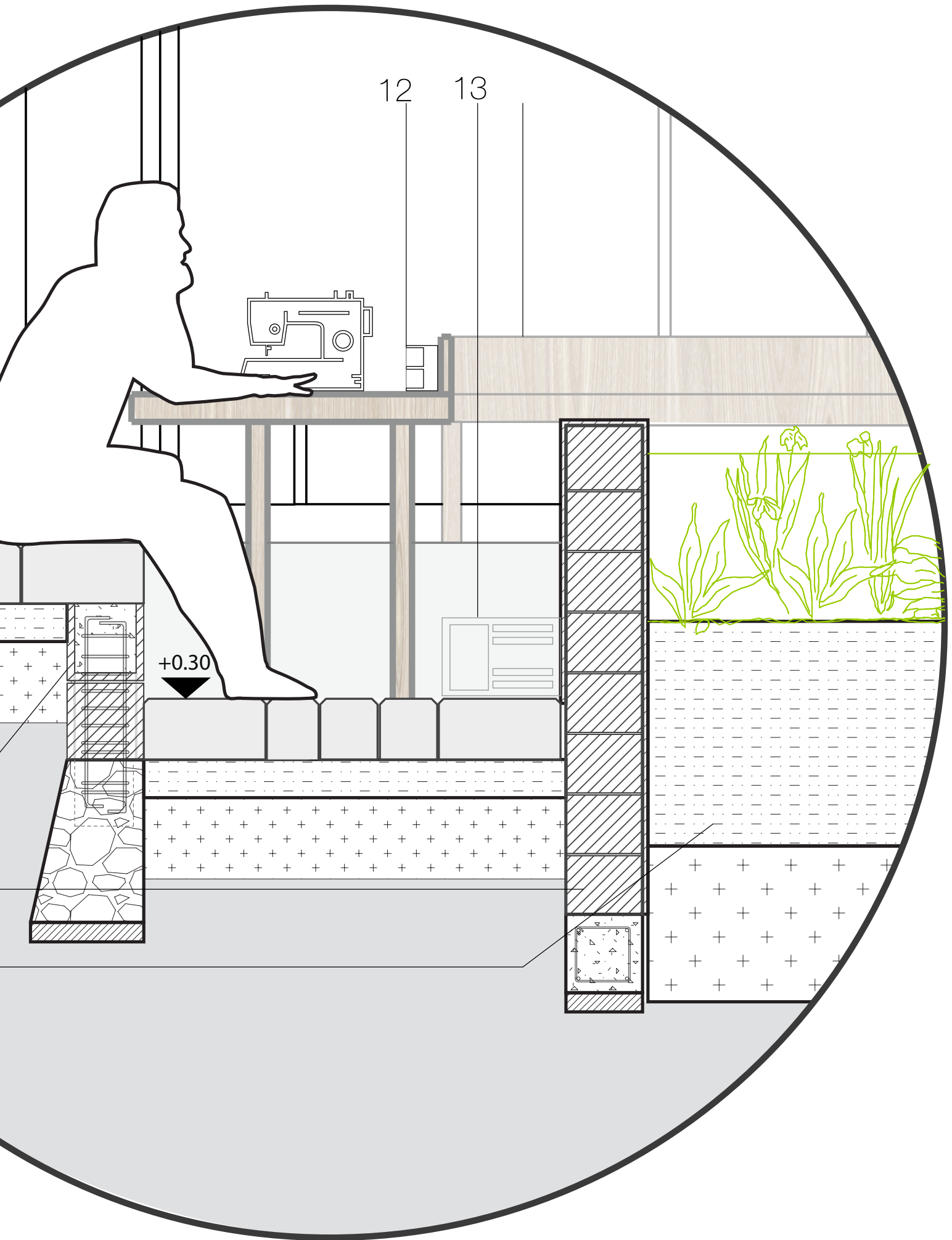


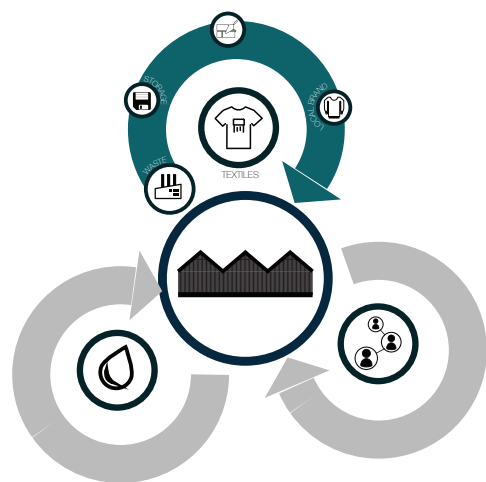




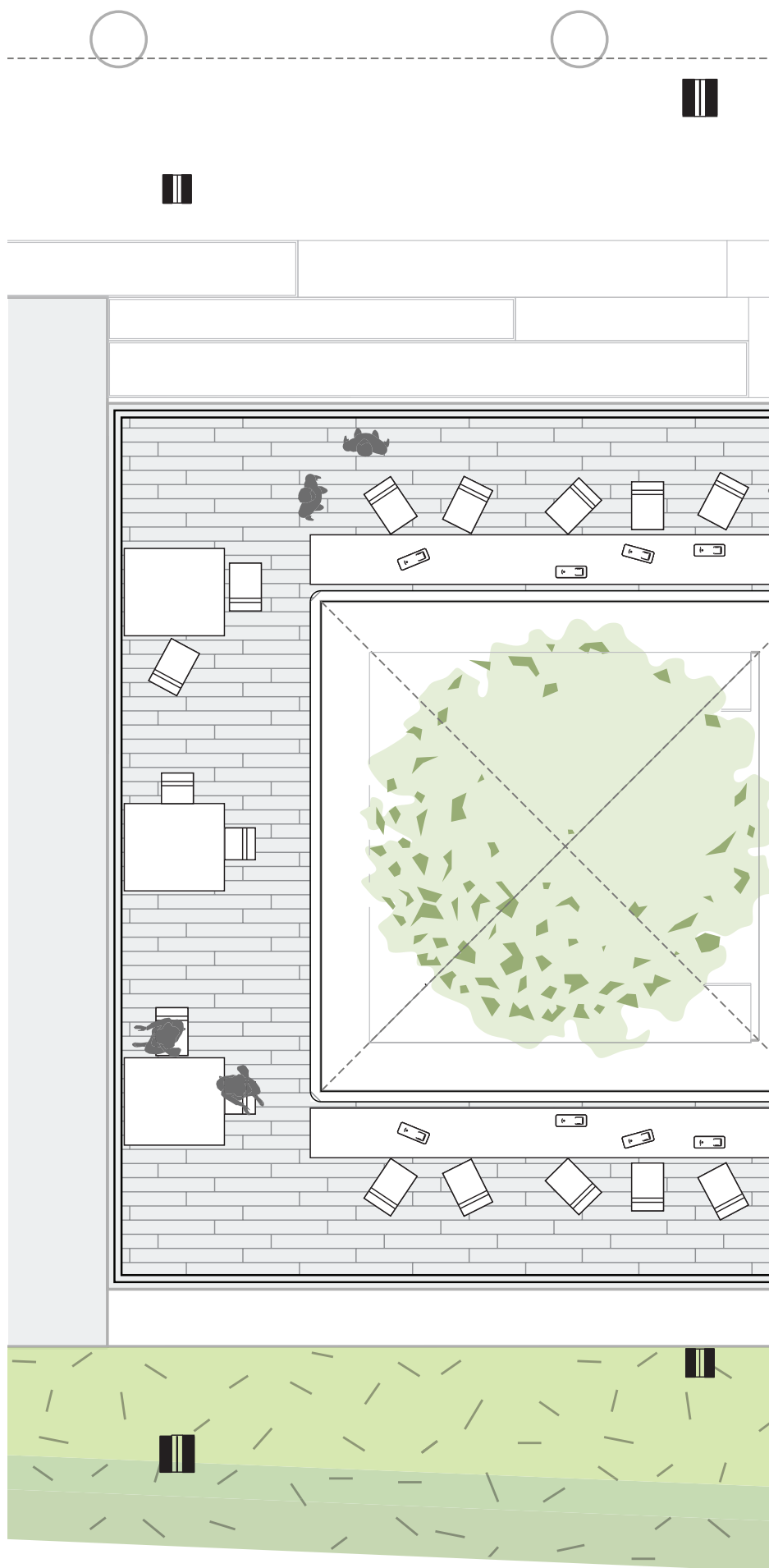
- 1 Tubular steel column 168 x7.11mm for timber frame support of workshops
- 2 Textile-cement paver 100x200x200mm
- 3 Steel plate connection 200x200mm for tubular steel column
- 4 Reinforced concrete foundation header with simple rebar reinforcement 210x210mm
- 5 Compacted sand-layer for paver bedding
- 6 Compacted backfill from in situ soil
- 7 Reinforced stone foundation wall 210x500mm
- 8 Preparation layer, excavated earth,
- 9 Sawed textile-hollow block with reinforced poured concrete for creation of lintel on foundation wall
- 10 Compacted backfill
- 11 Topsoil for planting
- 12 Electrical outlet on table
- 13 Pod switchbox (electrical outlet)

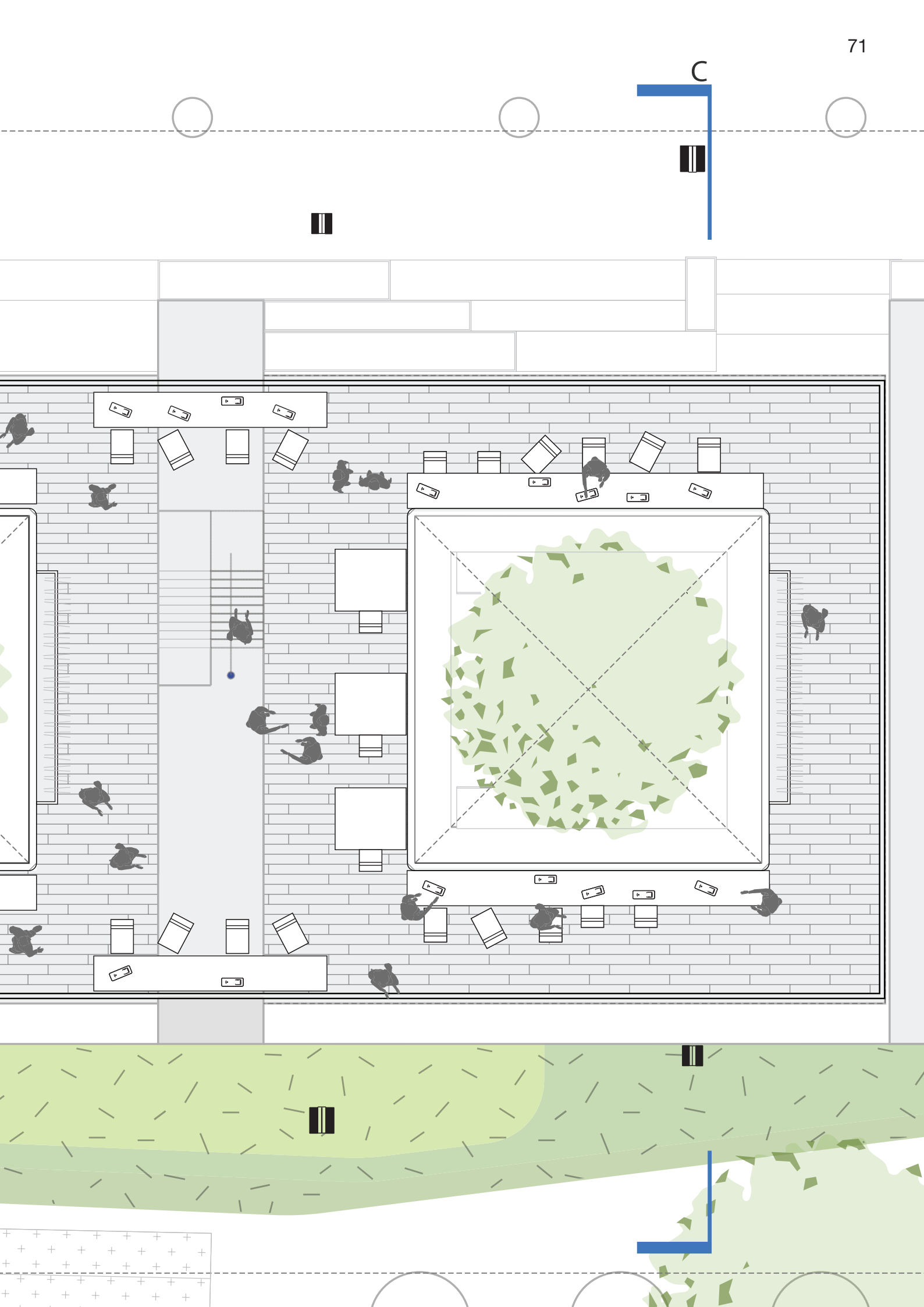






SEWING WORKSHOP POD

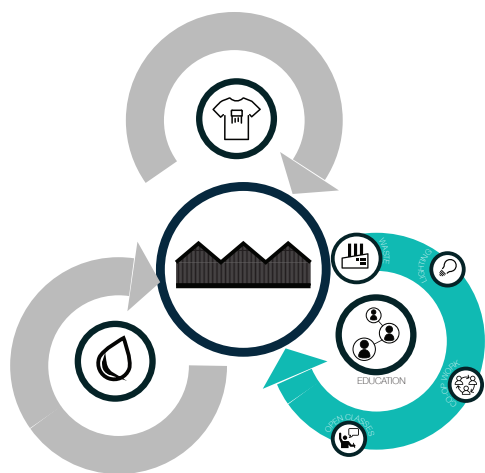




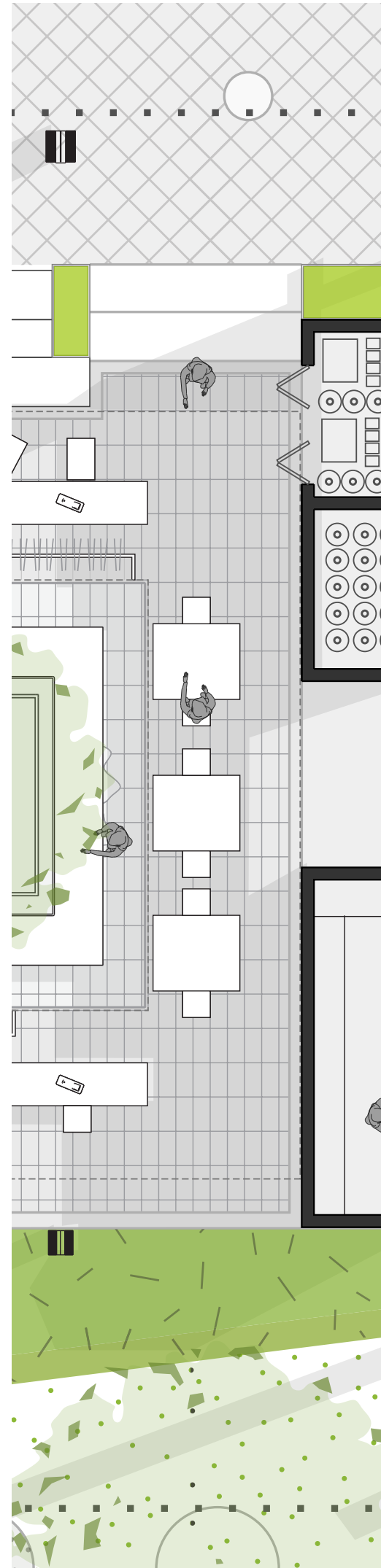


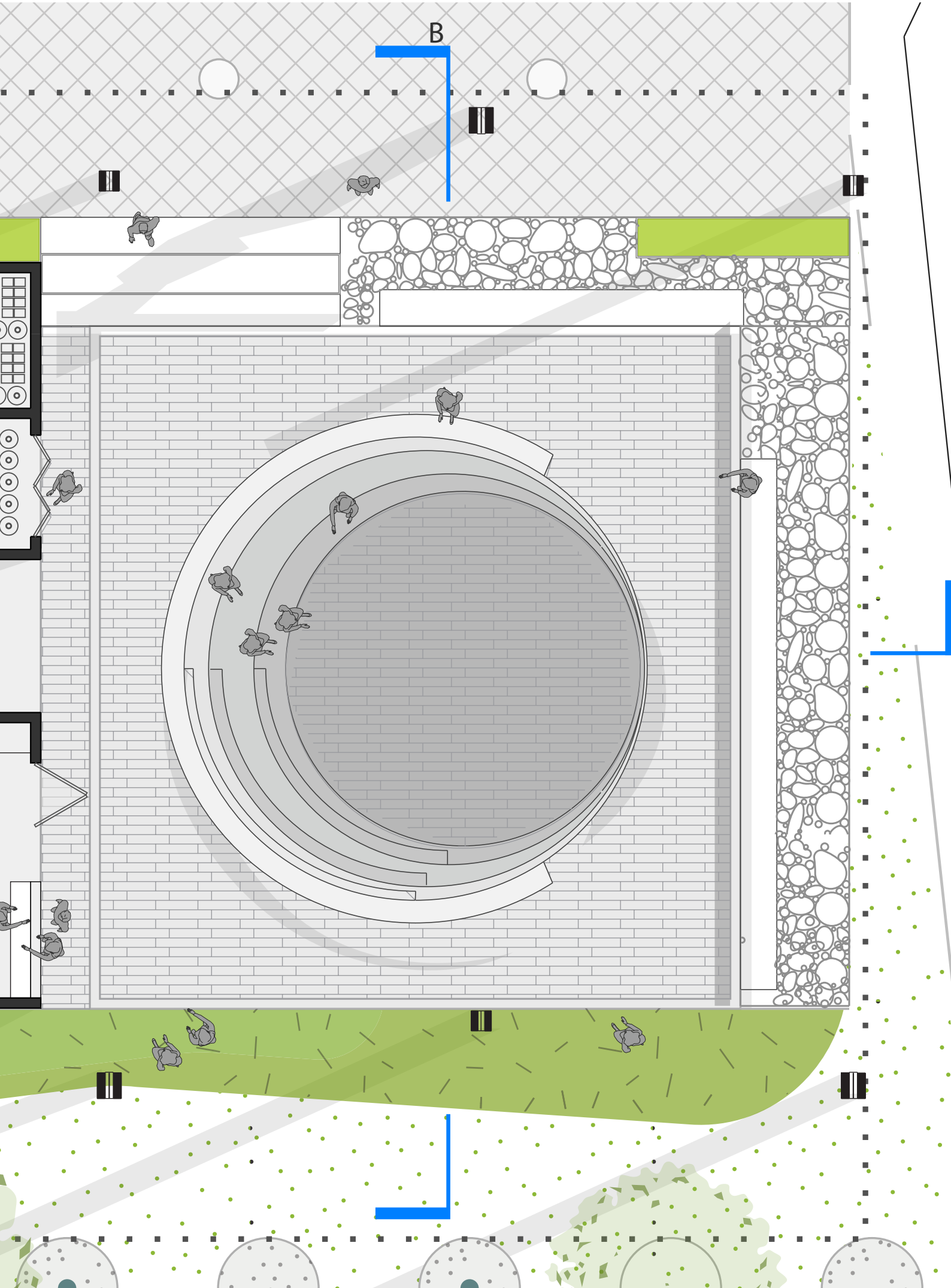
TOP SEWING PODS

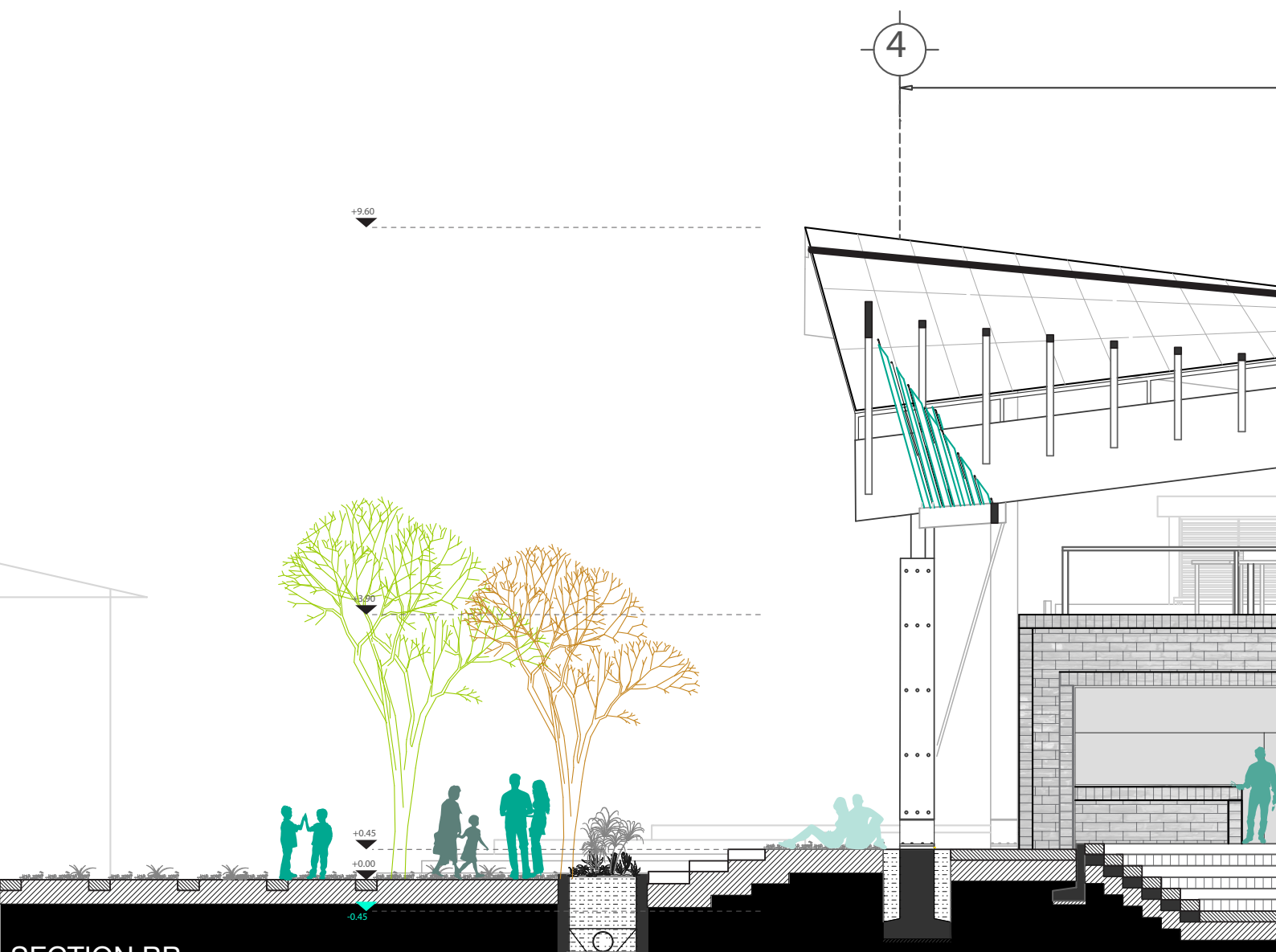


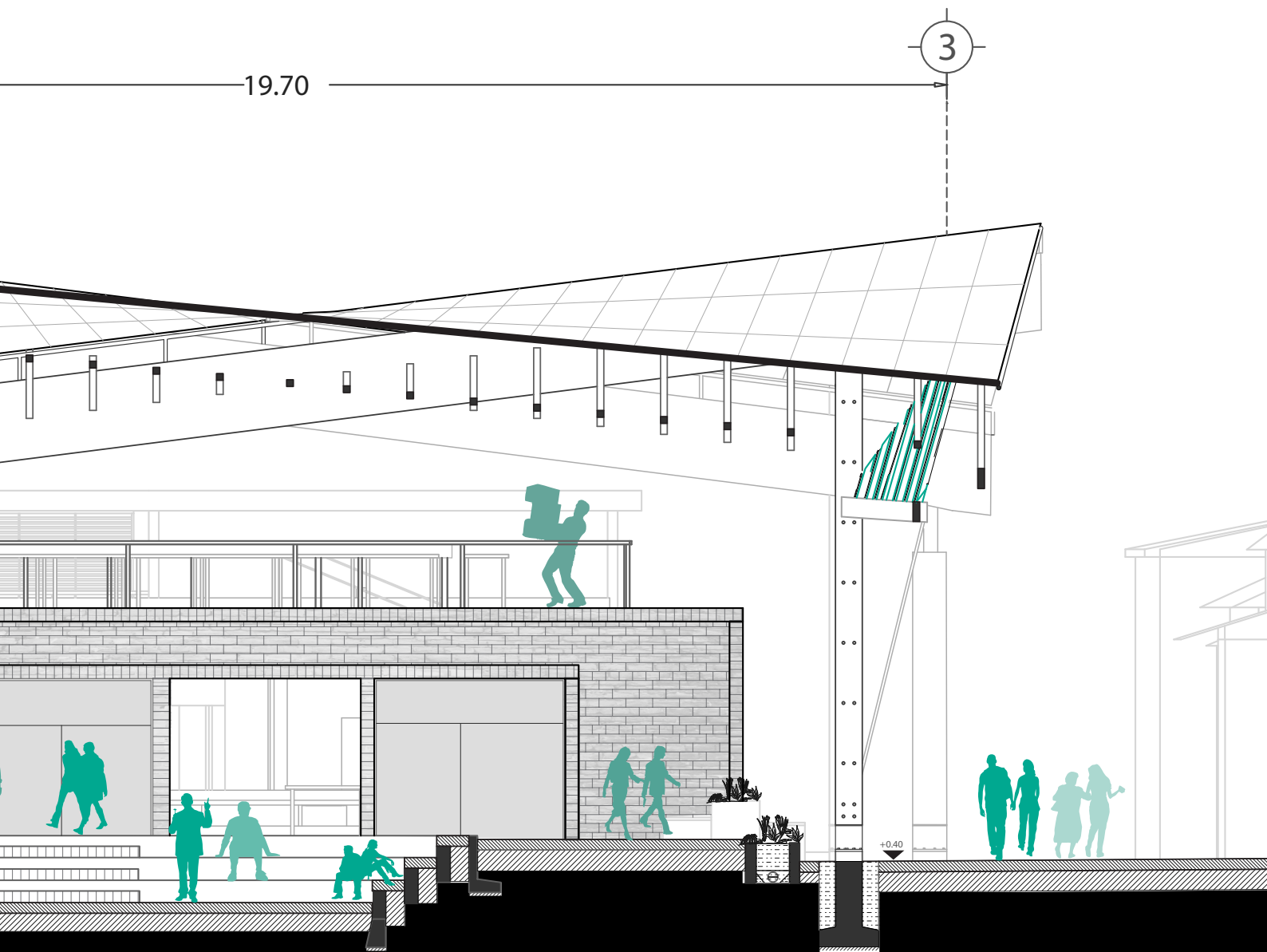


OPEN LEARNING











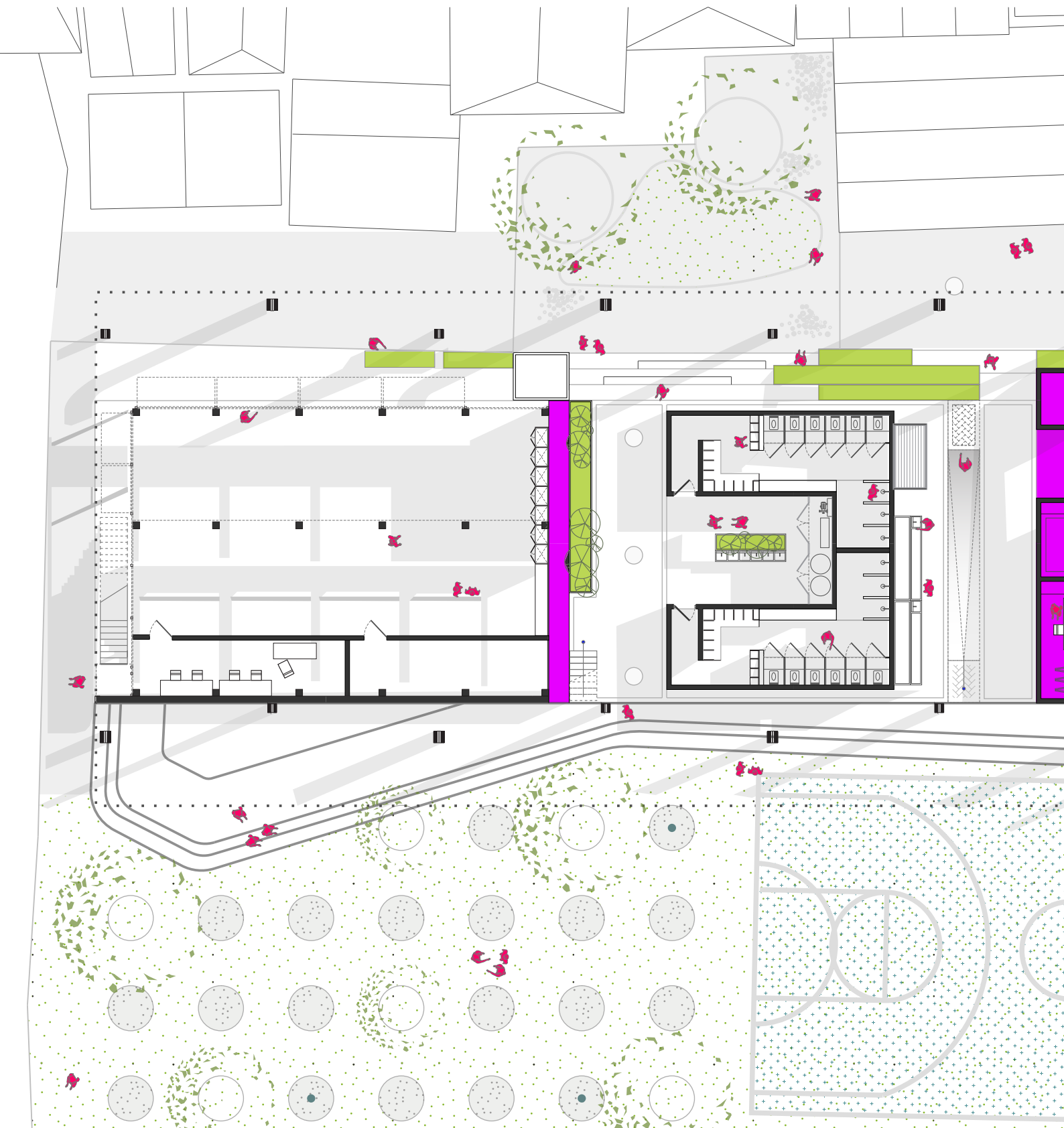
OPEN LEARNING POD

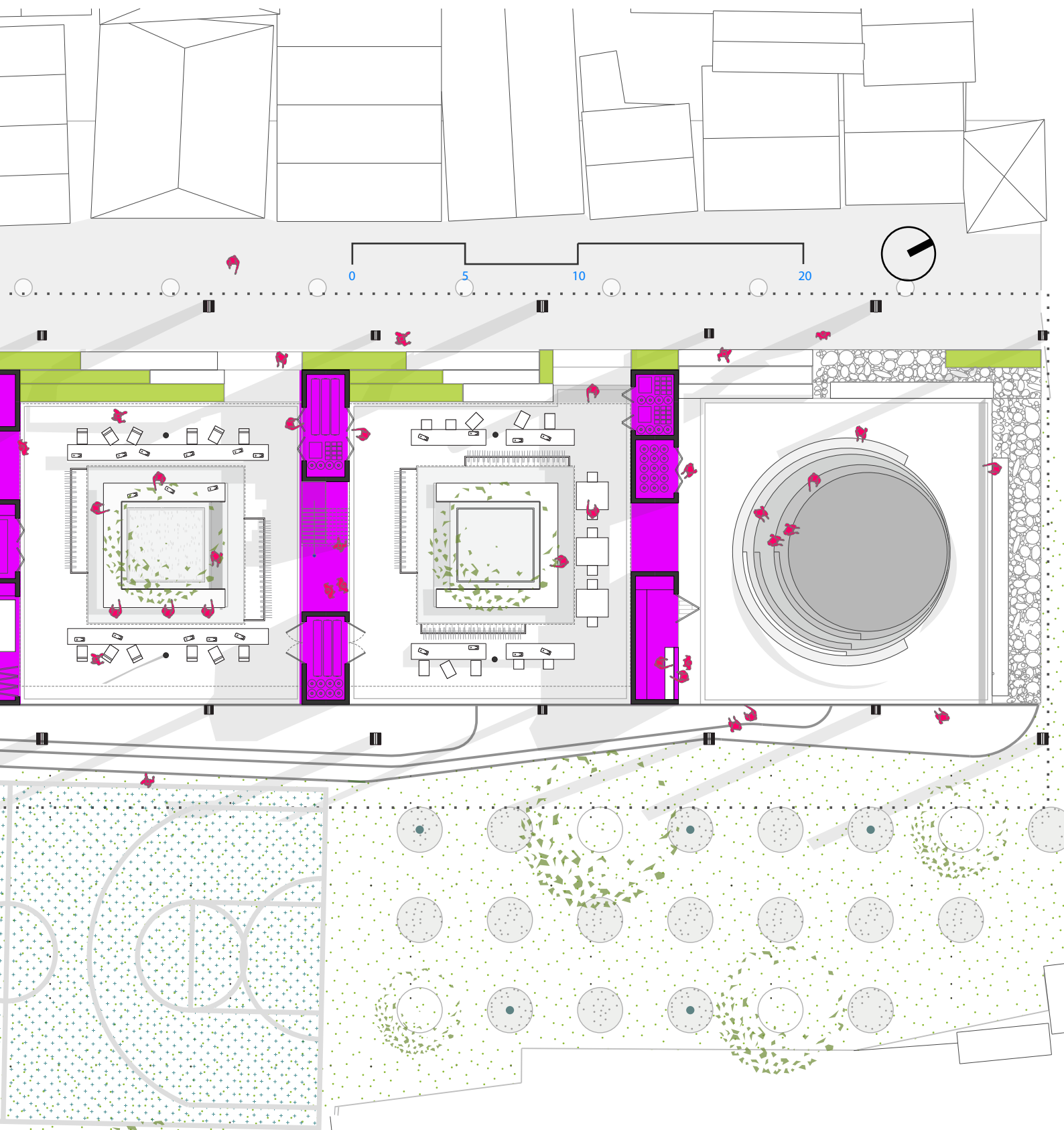


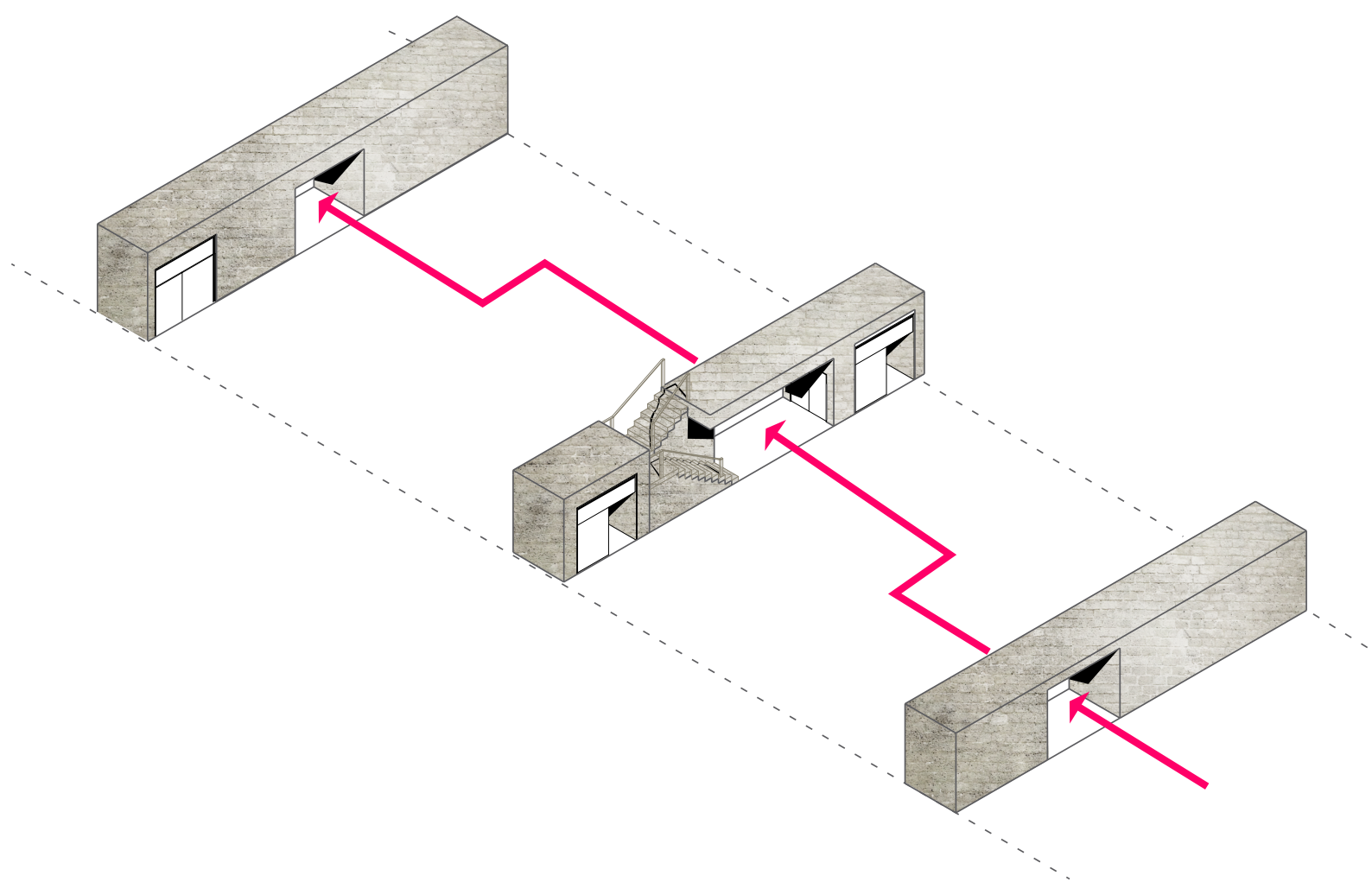
THE TRADITIONAL FUTURE

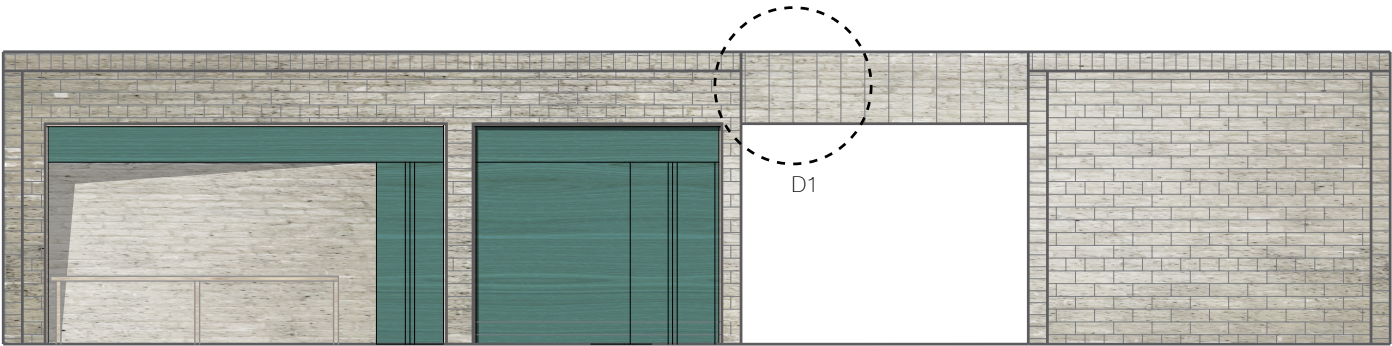
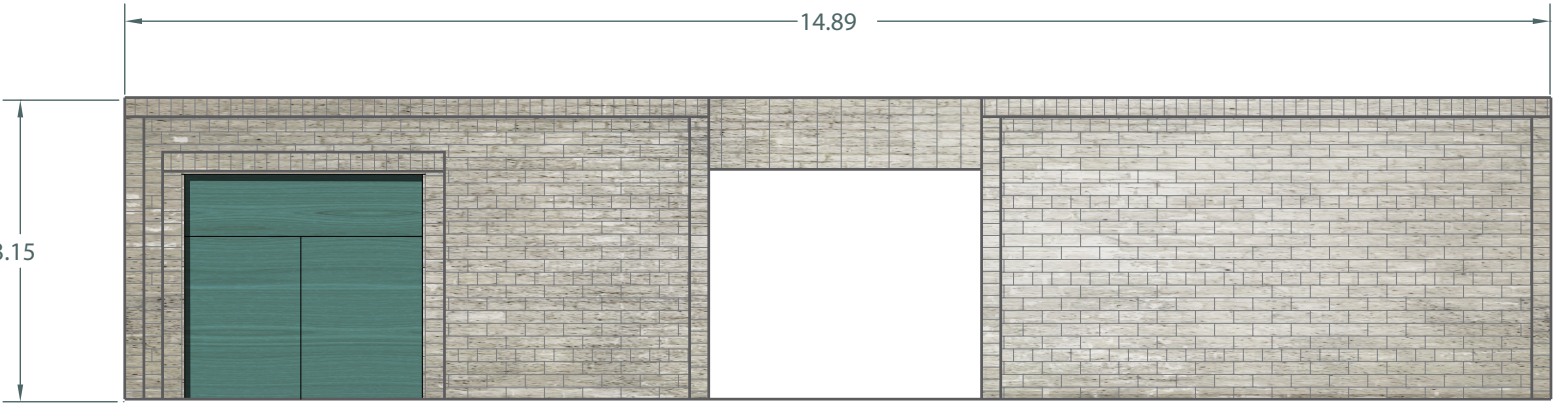
THE “PURPLE WALLS”

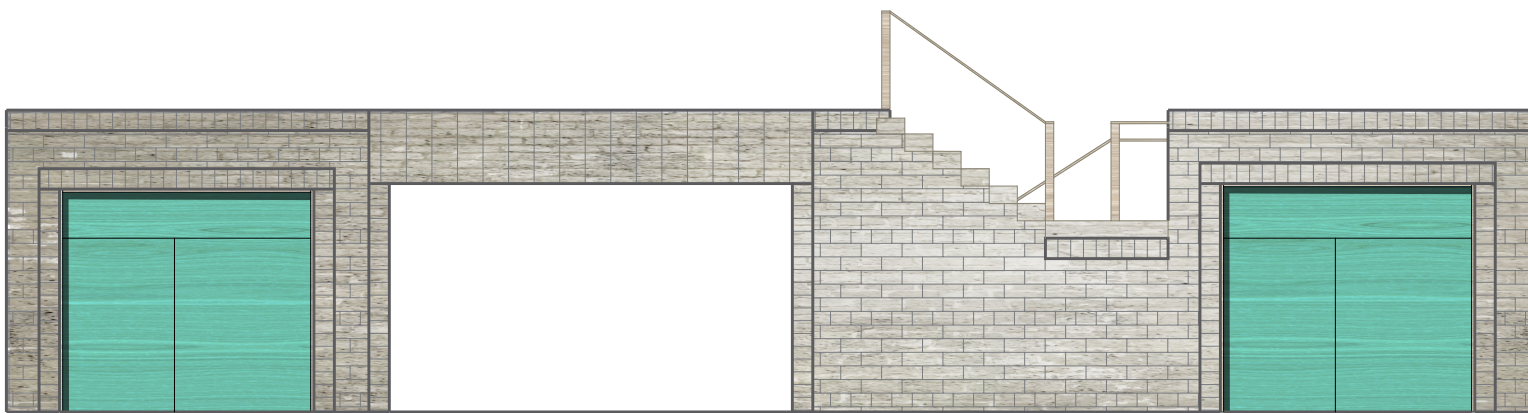
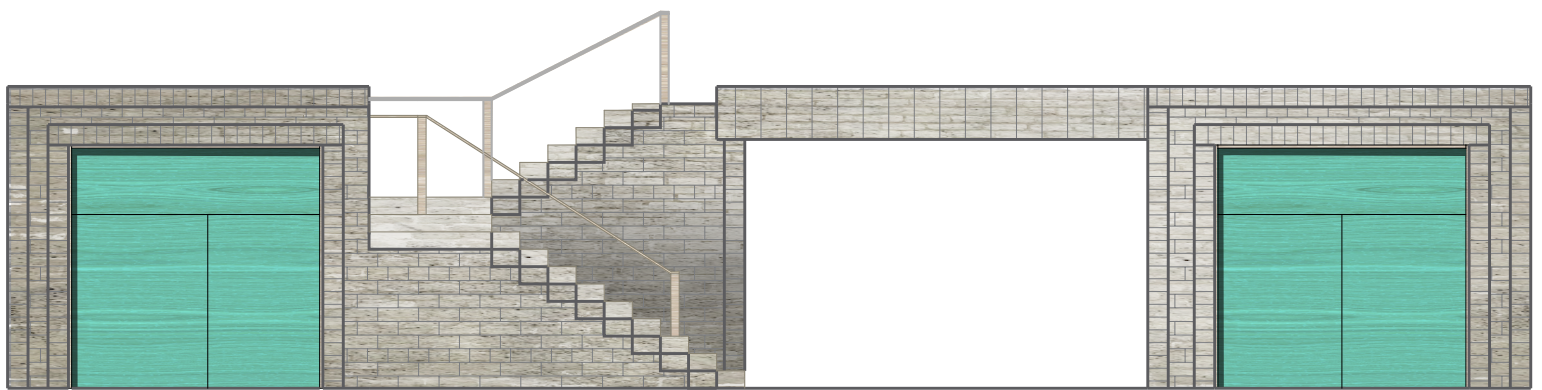
ACTIVITY PARTITION

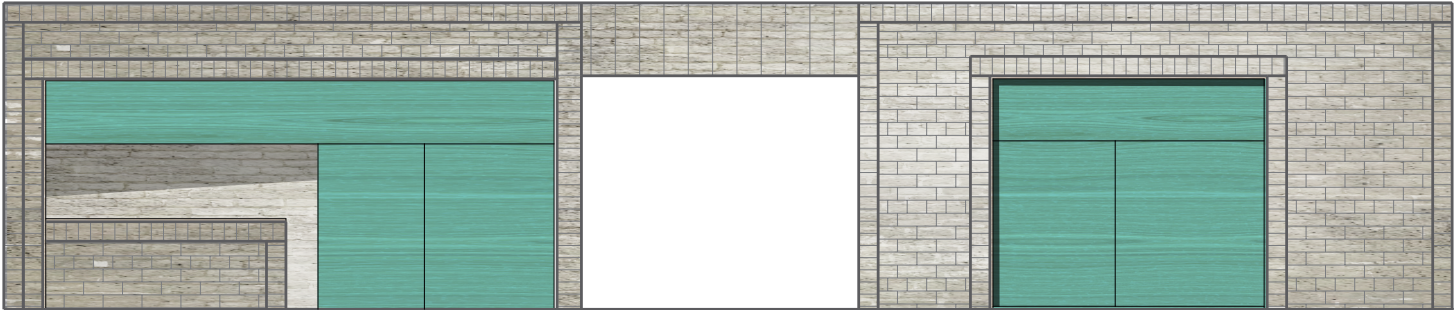
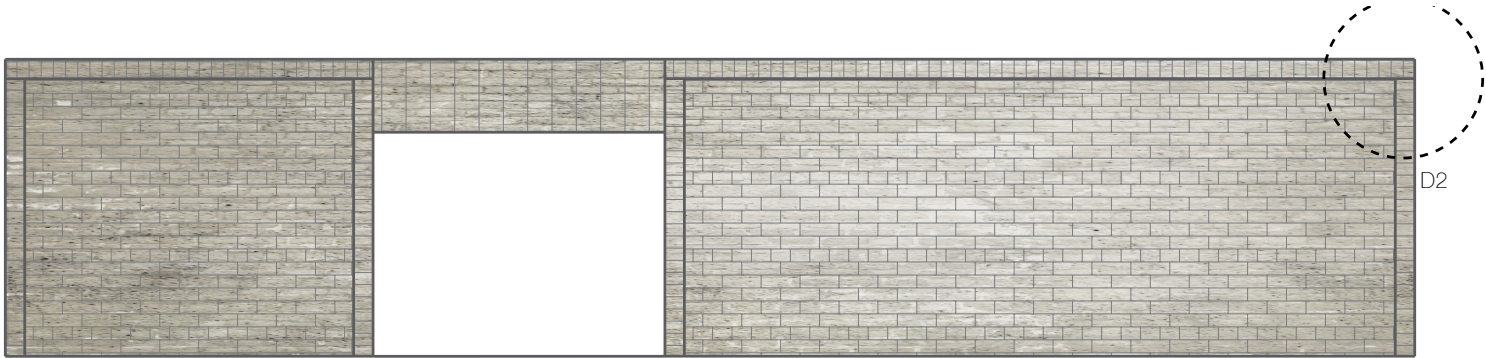


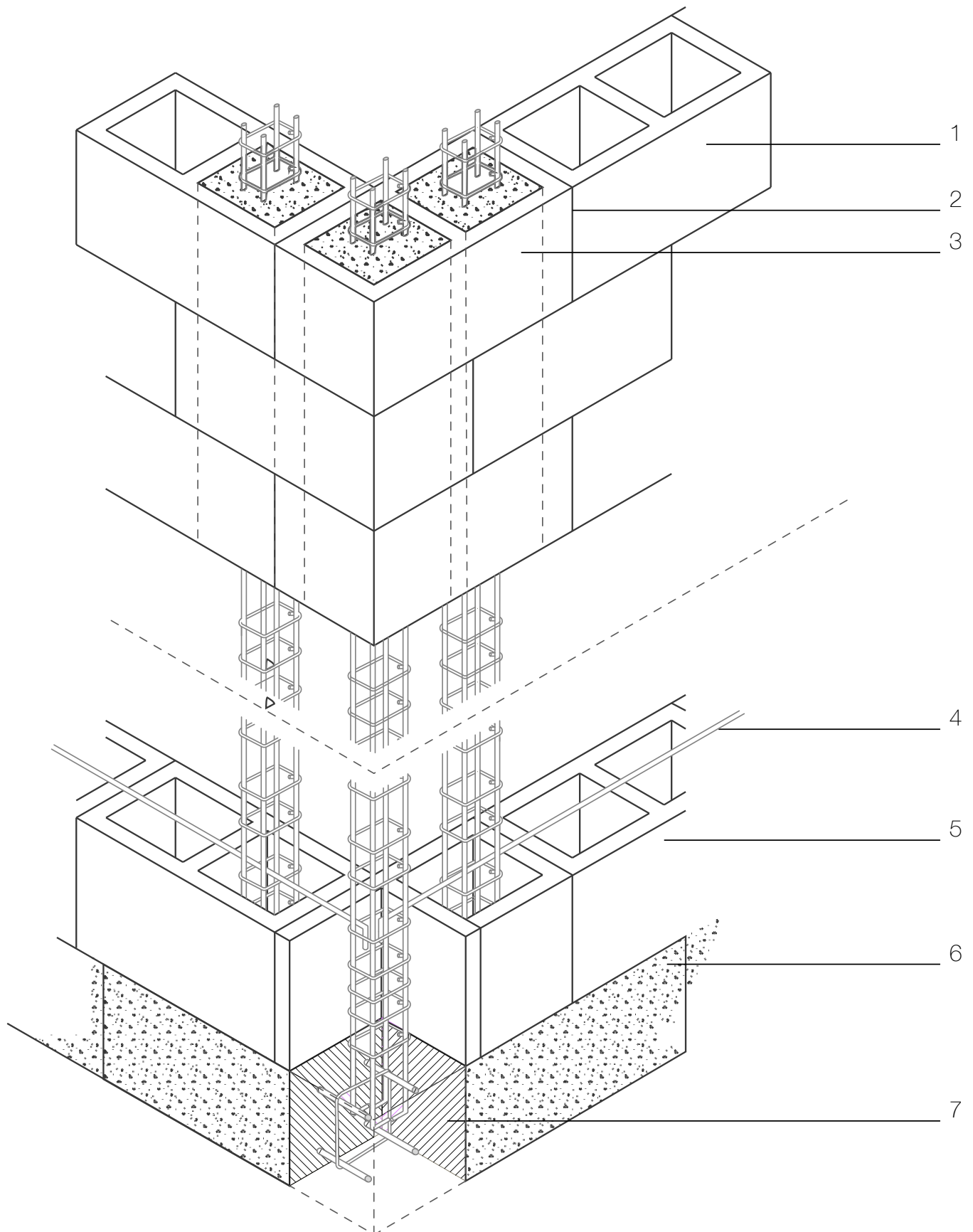


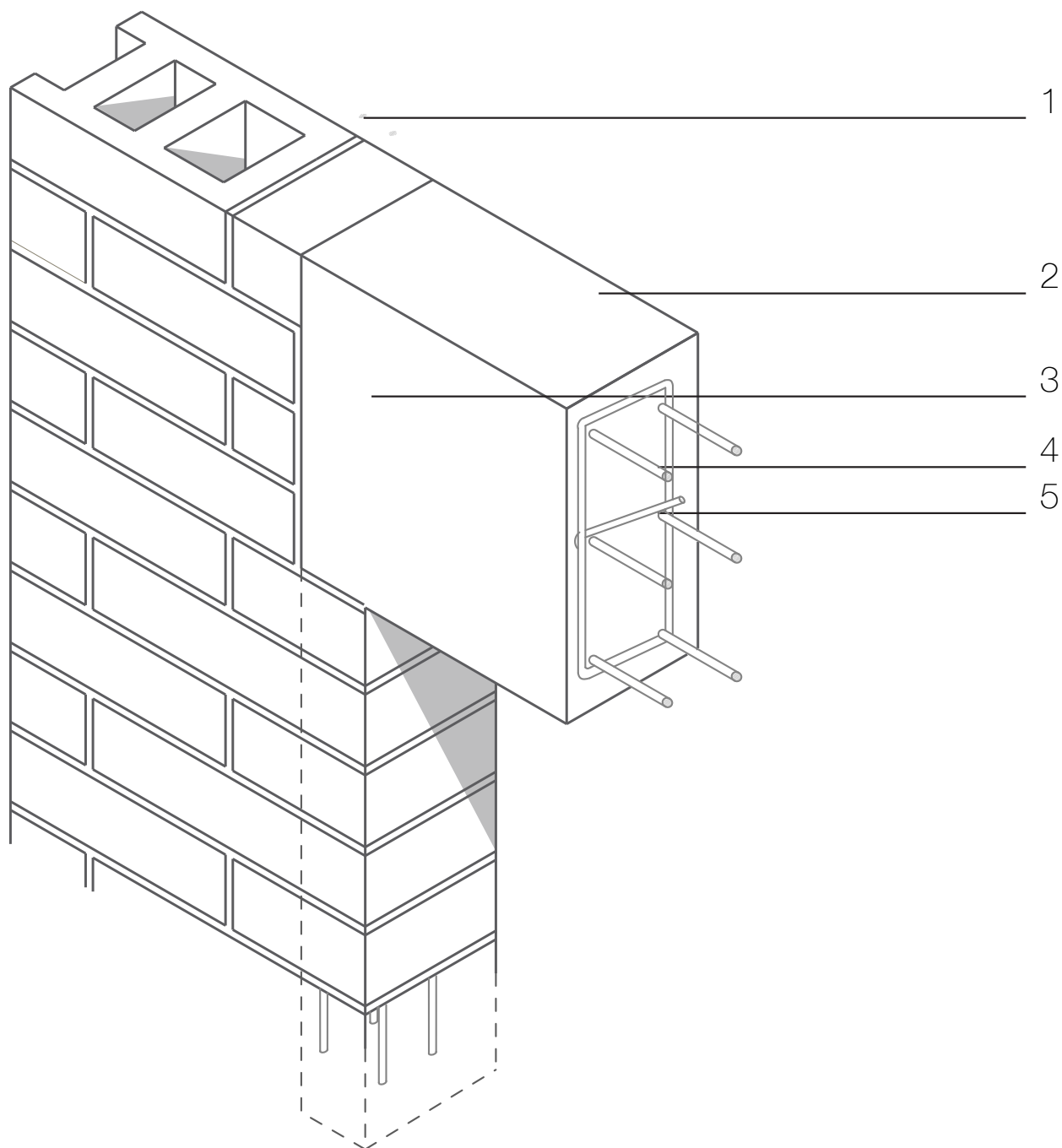










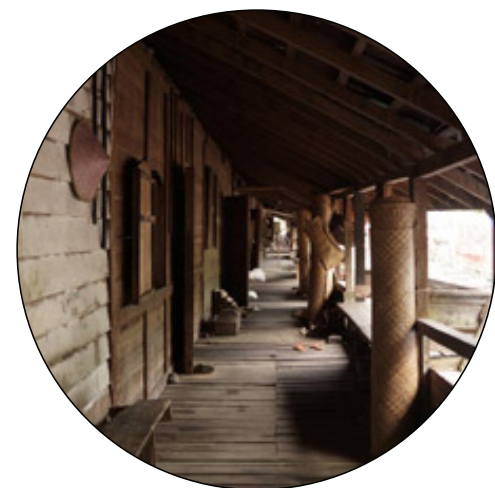


- 1 200x200x400 hollow textile-cement block. 60% recycled textiles (mixed polyester, cotton, acrylic viscose) 30% self-leveling cement 10% lime
- 2 Textile block overlap to form structural corner
- 3 In-block column with rebar reinforcement built in 100x100mm and cement por throughout connection
- 4 Horizontal rebar bracing
- 5 Perimeter stemwall with textile hollow blocks 200x200x400
- 6 Foundation ring pour with horizontal rebar reinforcement
- 7 Rebar connections column-foundation work

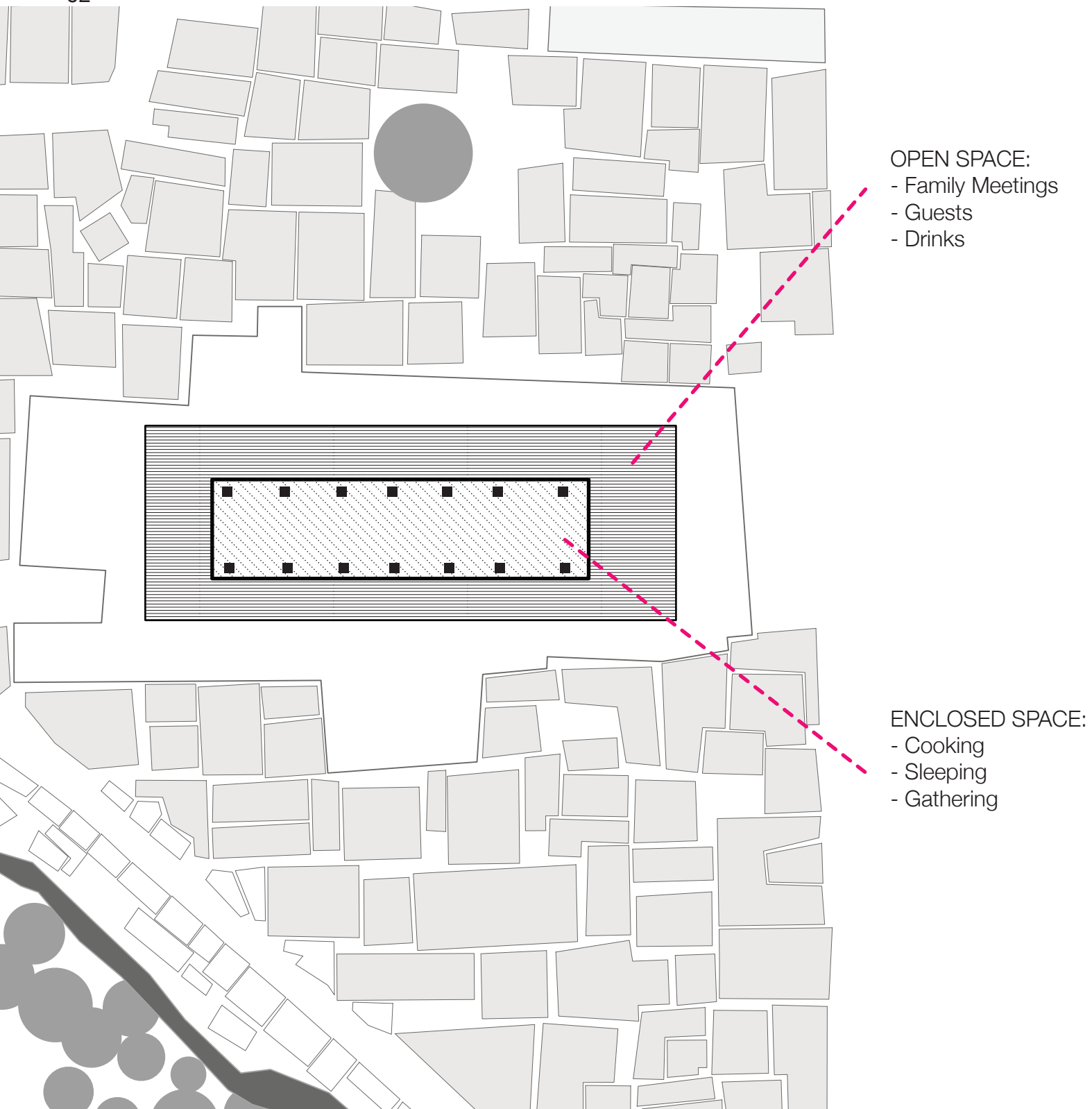
THE TRADITIONAL FUTURE

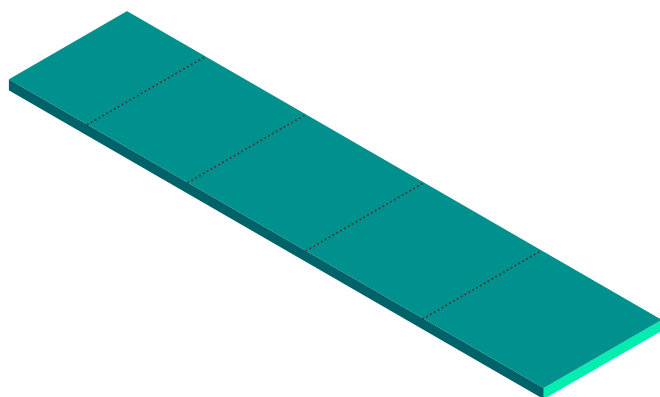
THE ROOF STRUCTURE

COLUMNS & BEAMS

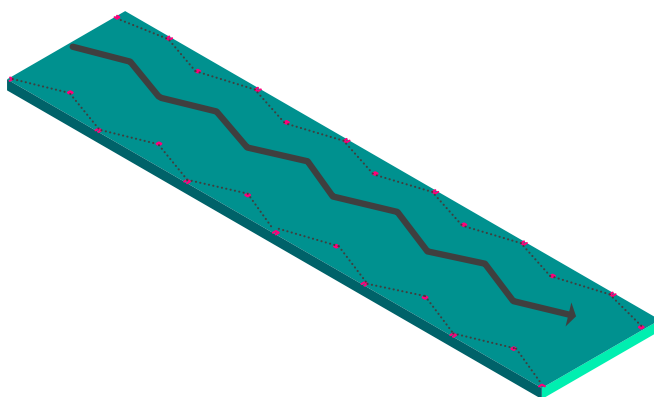


TRADITIONAL COMMUNAL LONGHOUSE

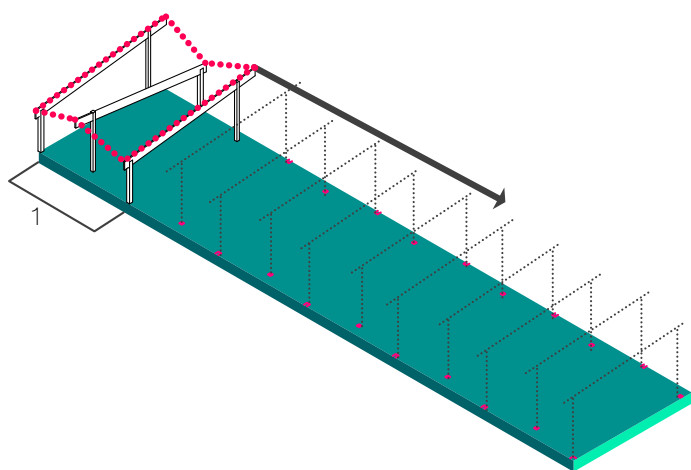




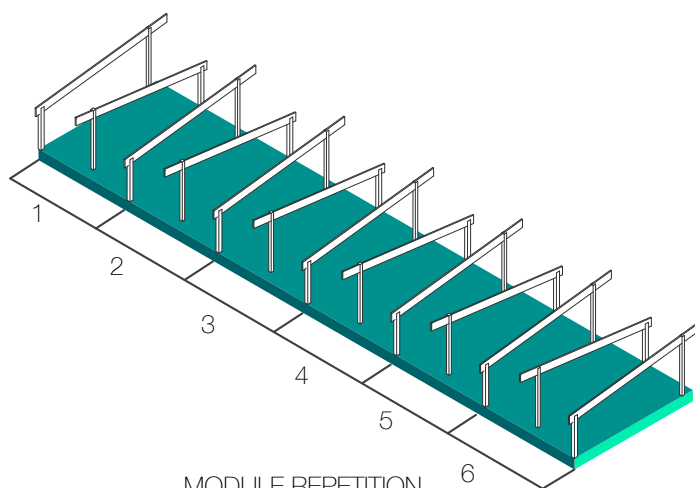
PROGRAMME



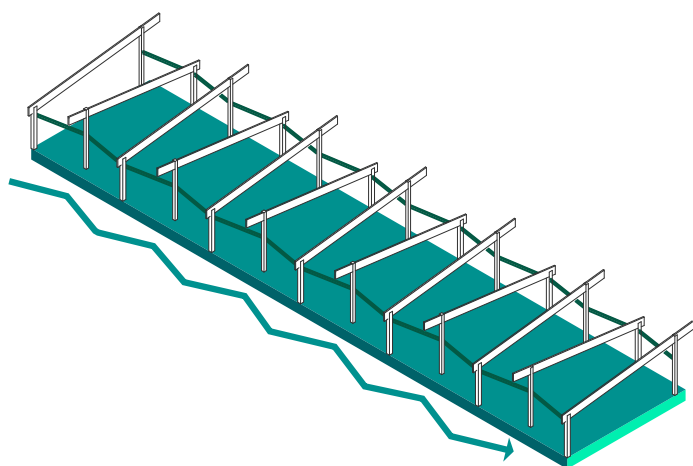
STAGGERED COLUMNS



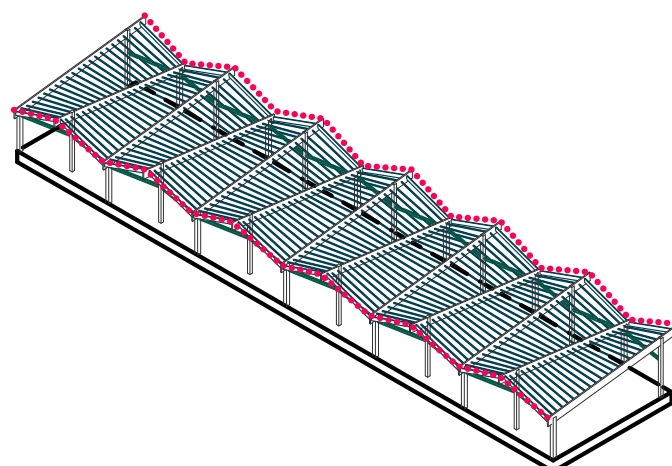
MONOPITCH MODULE



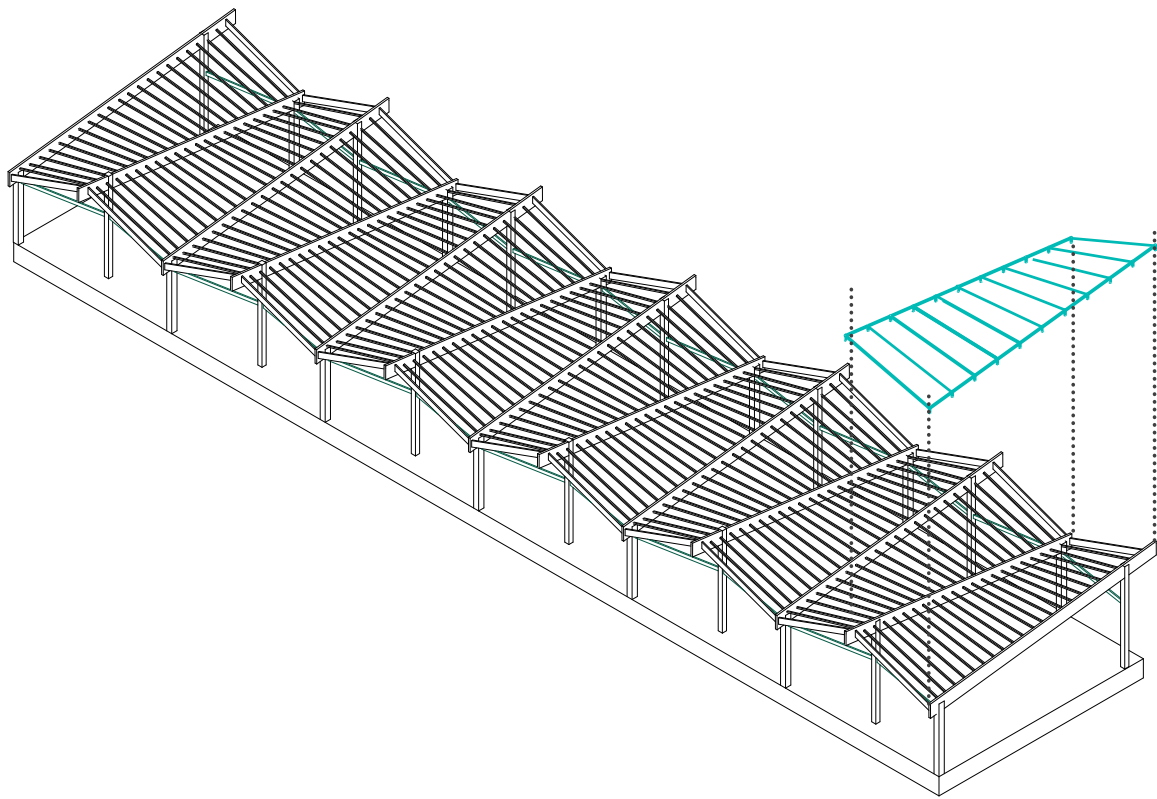
MODULE REPETITION



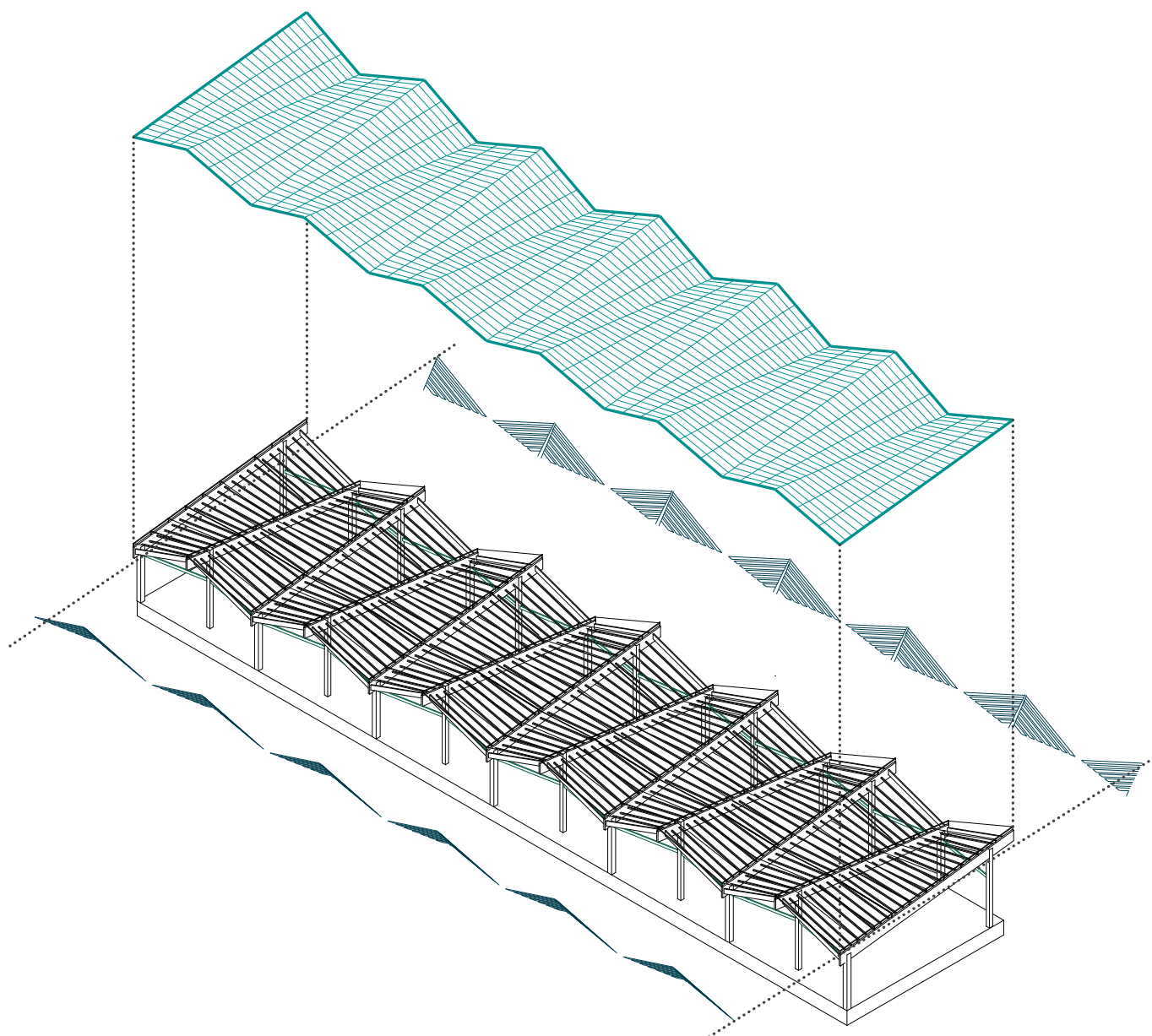
HORIZONTAL BRACING



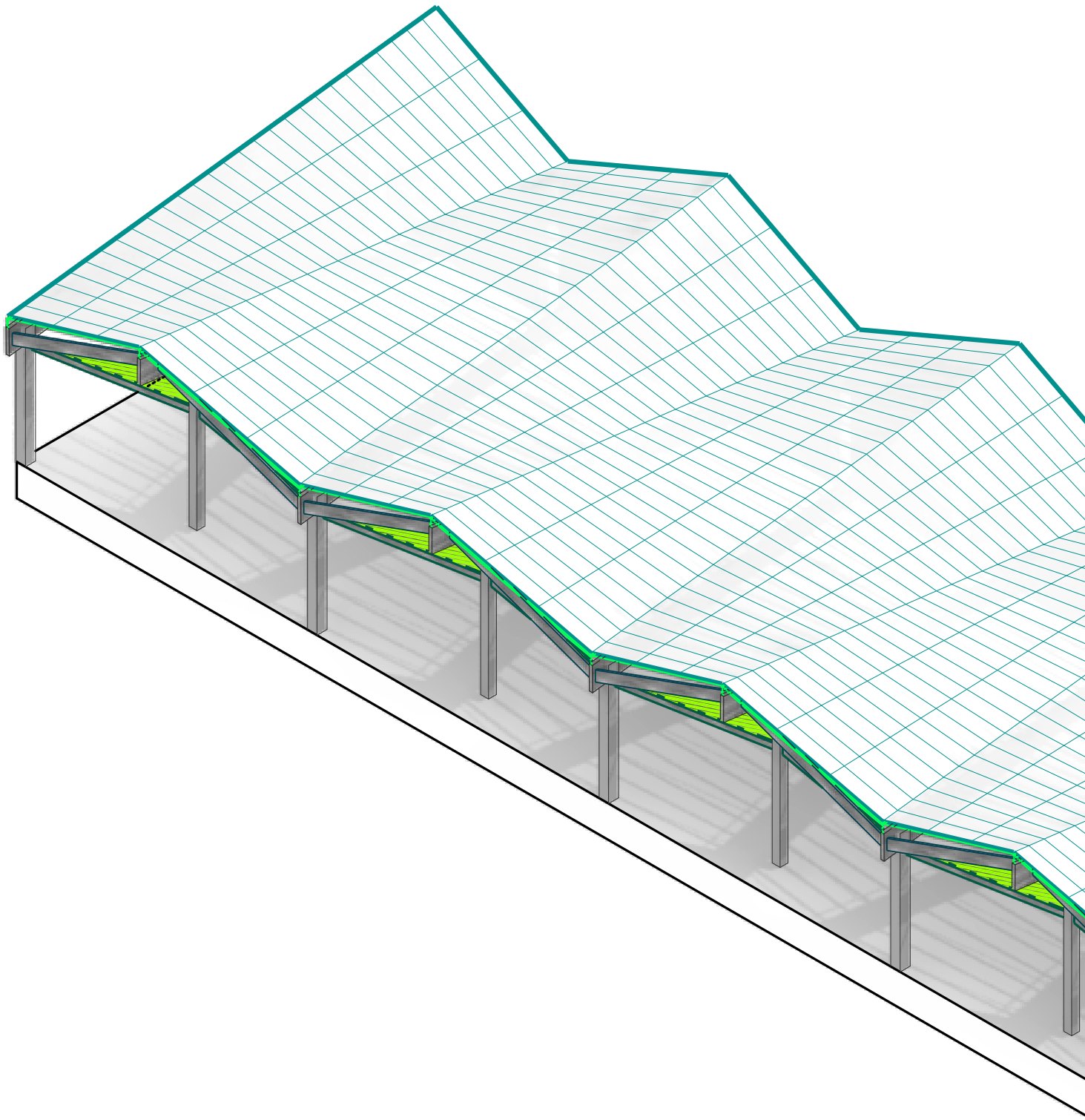
SECONDARY BEAMS

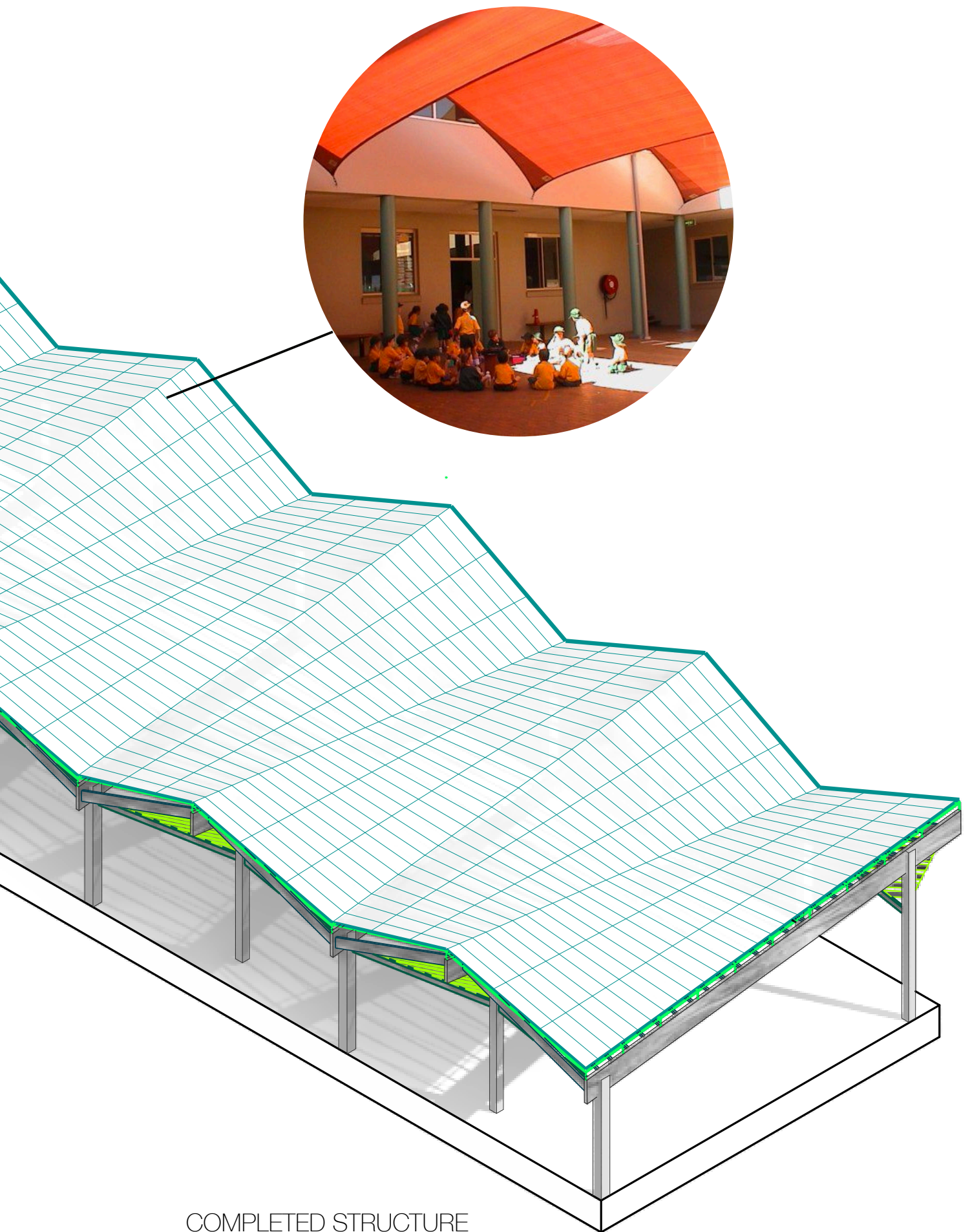


MEMBRANE SUBSTRUCTURE

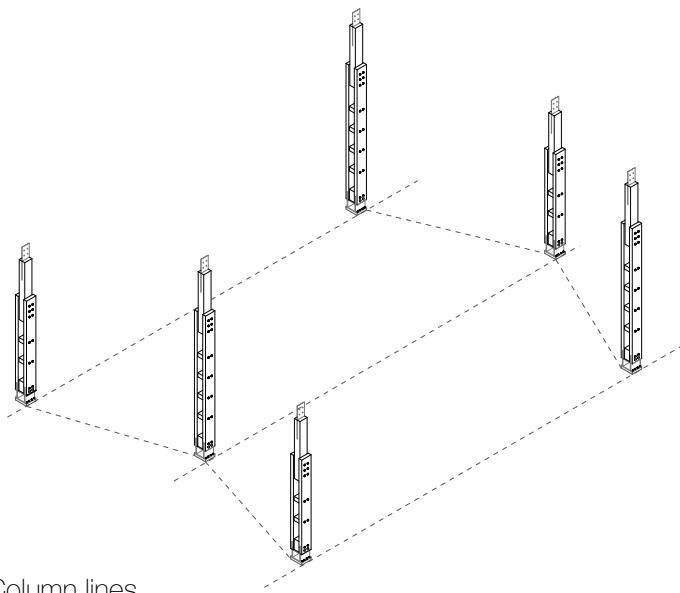


MEMBRANE + SUNSHADING

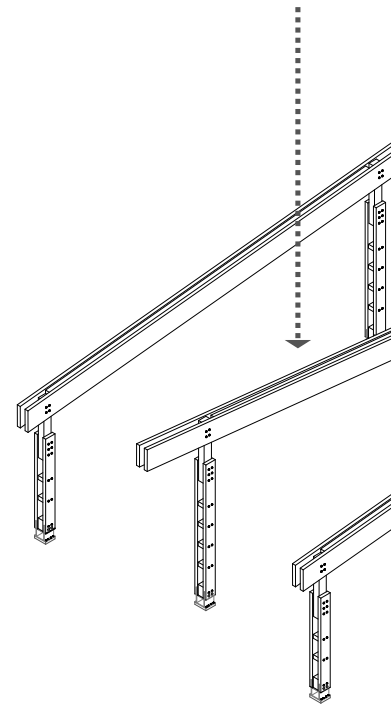




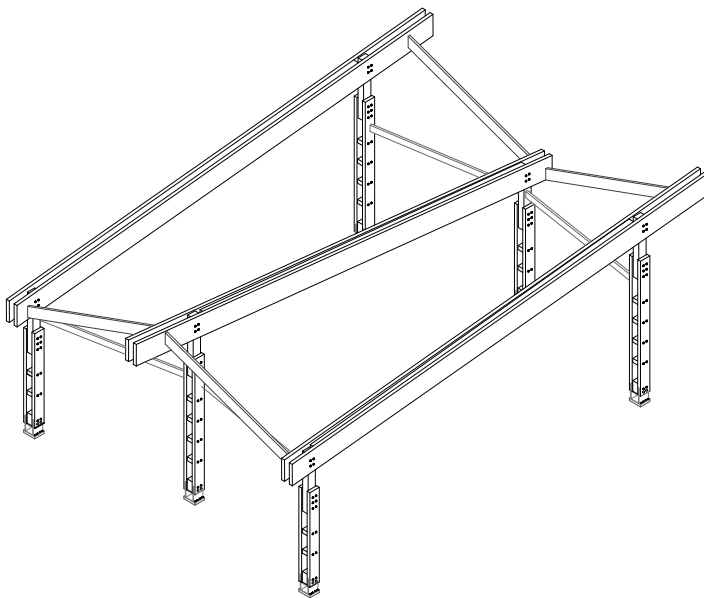
COMPLETED STRUCTURE



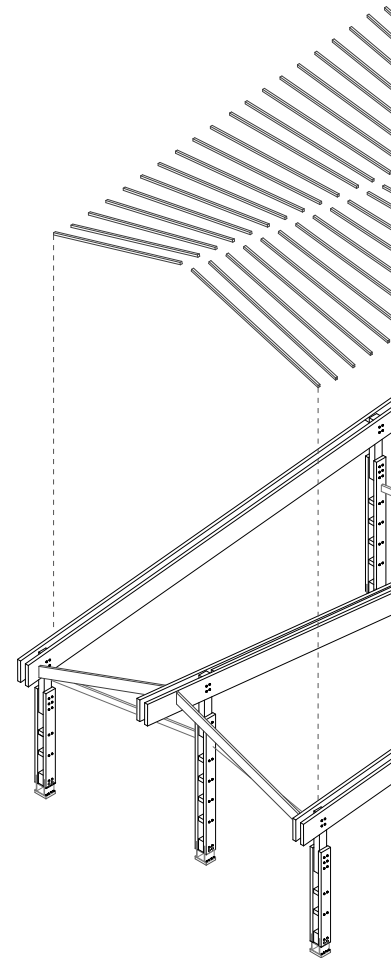
Column lines



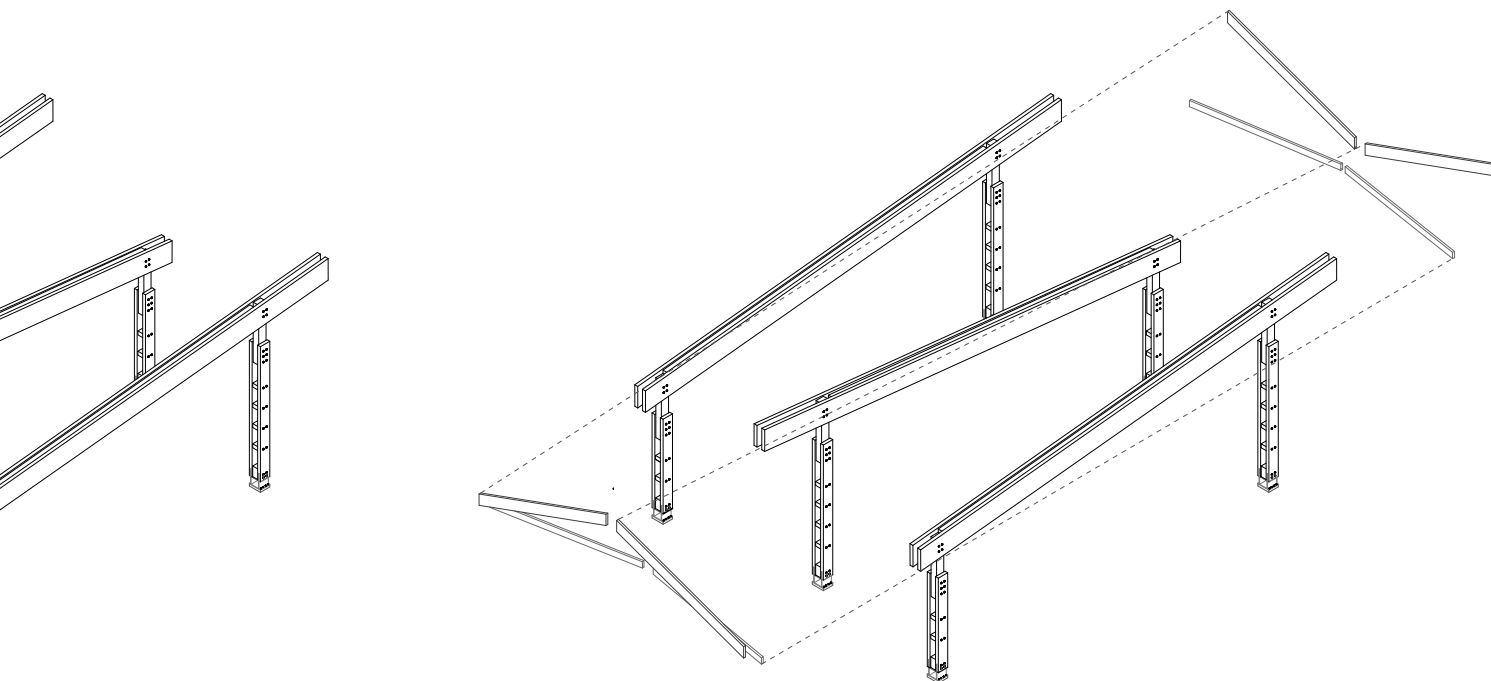
Beam placement



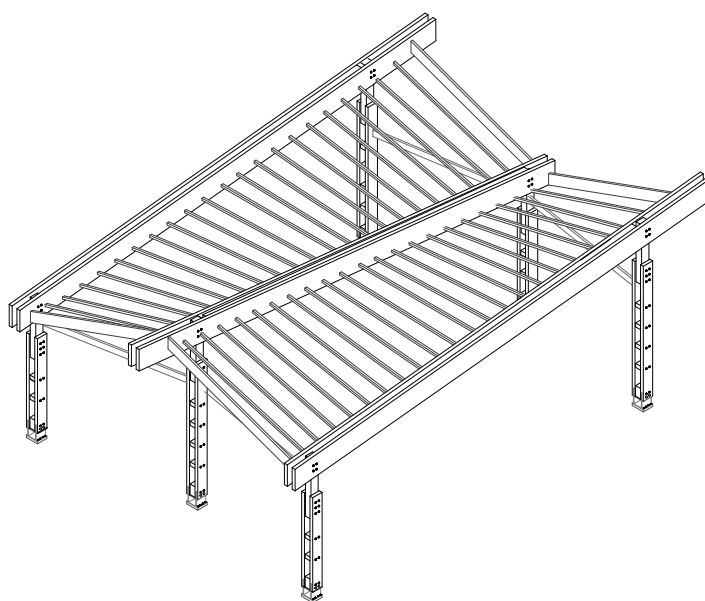
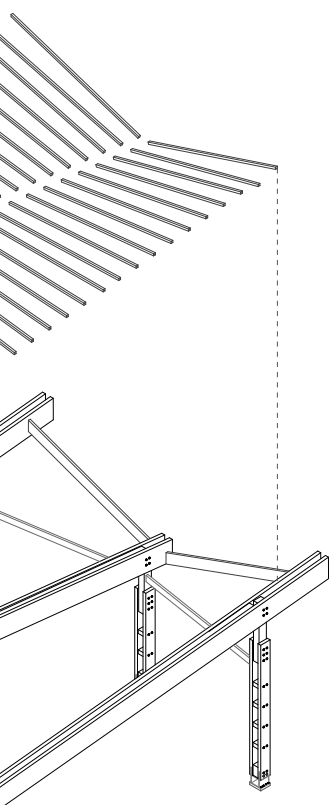
Connection



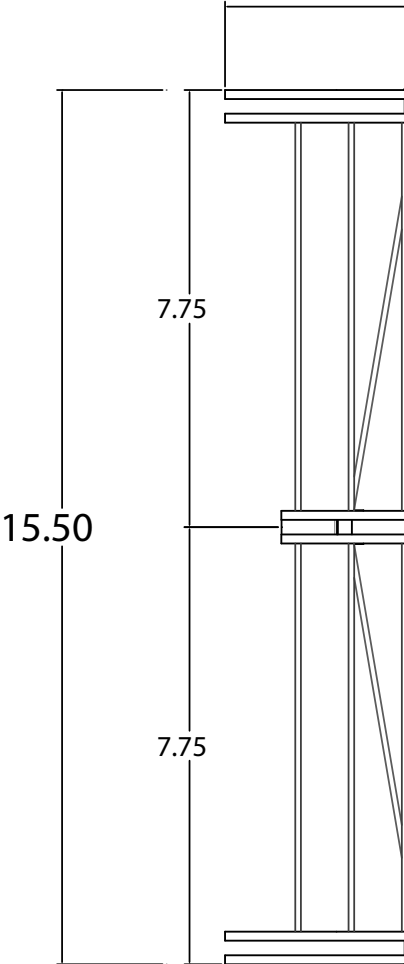
Secondary bracing



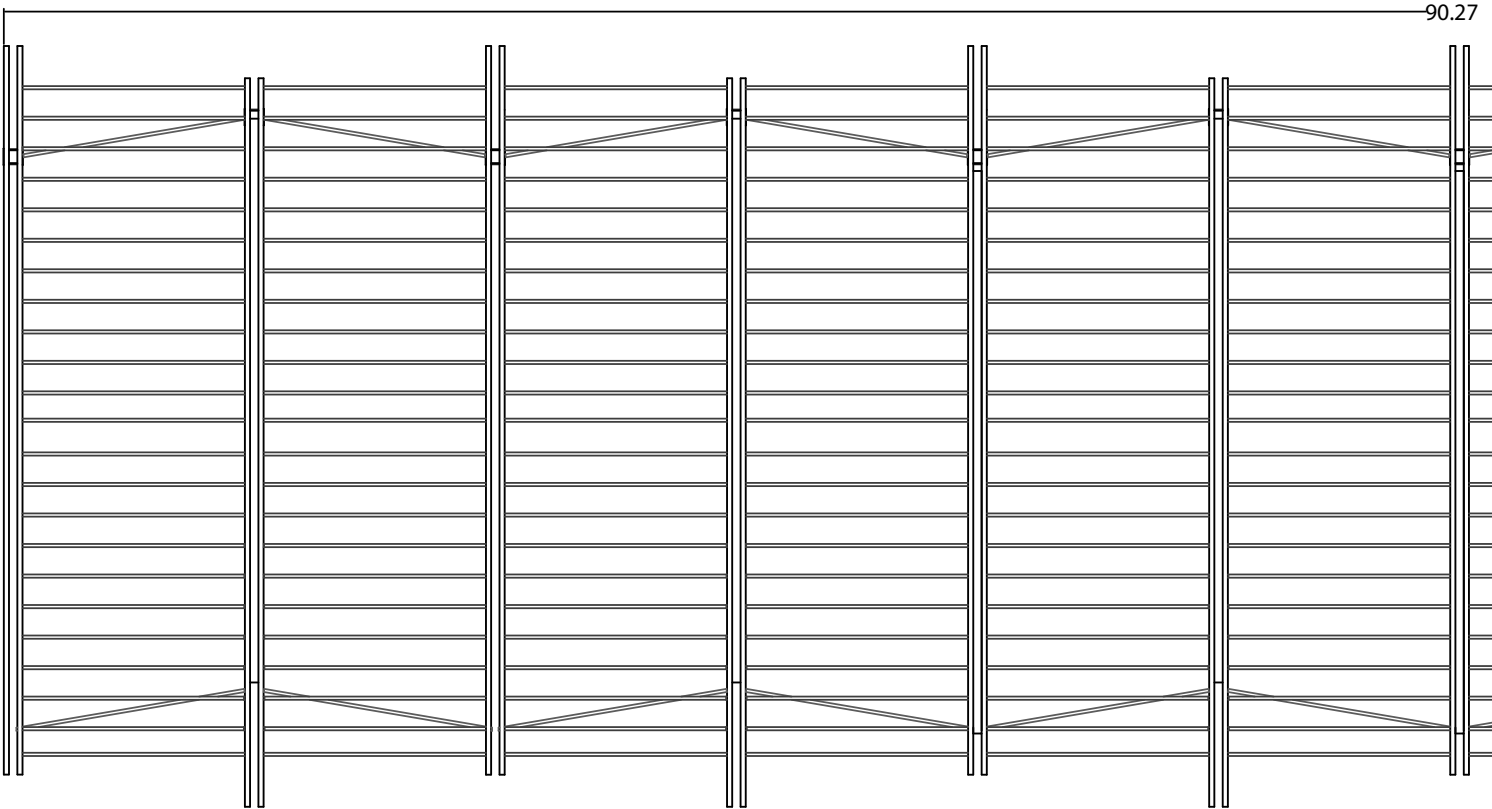
Horizontal bracing



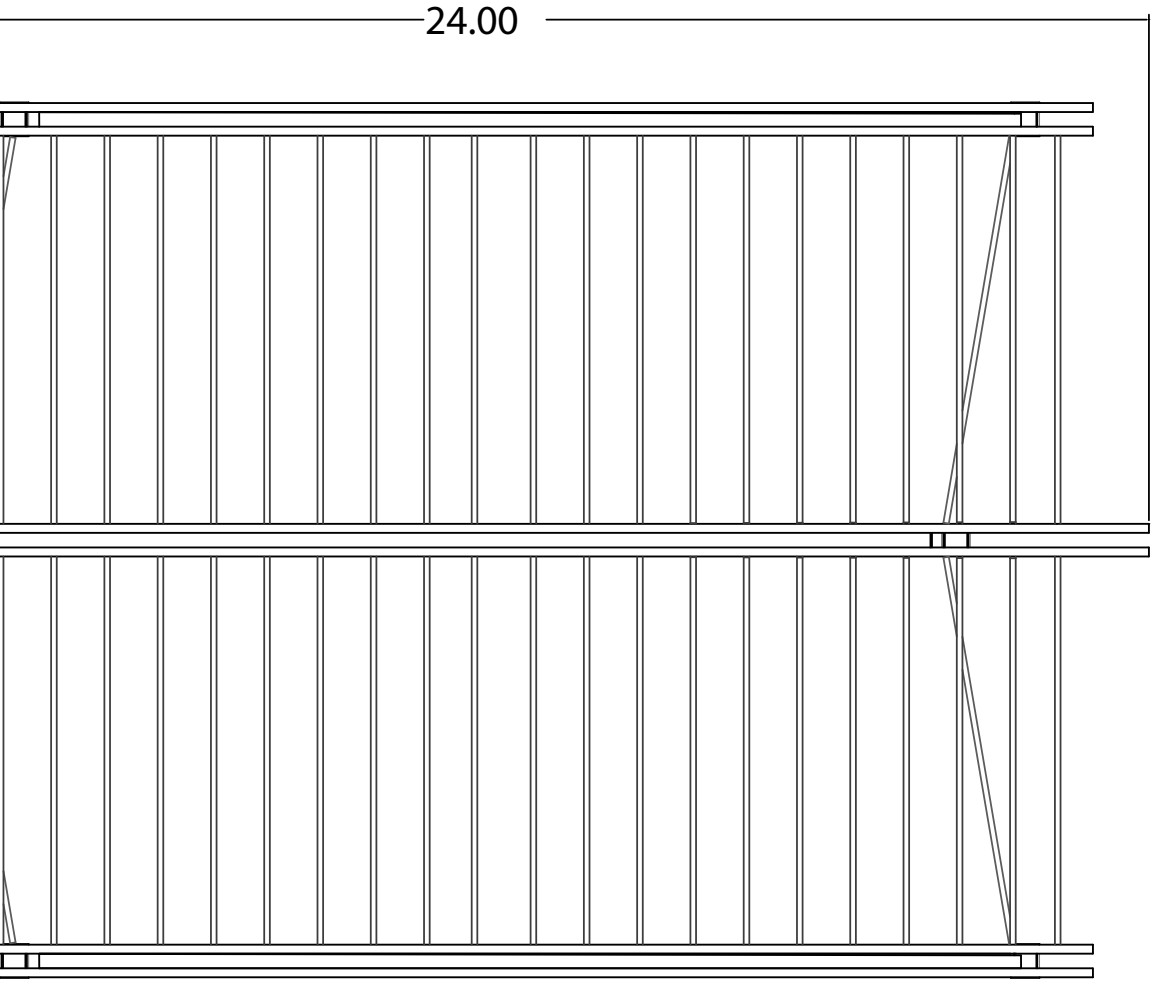
Structural module



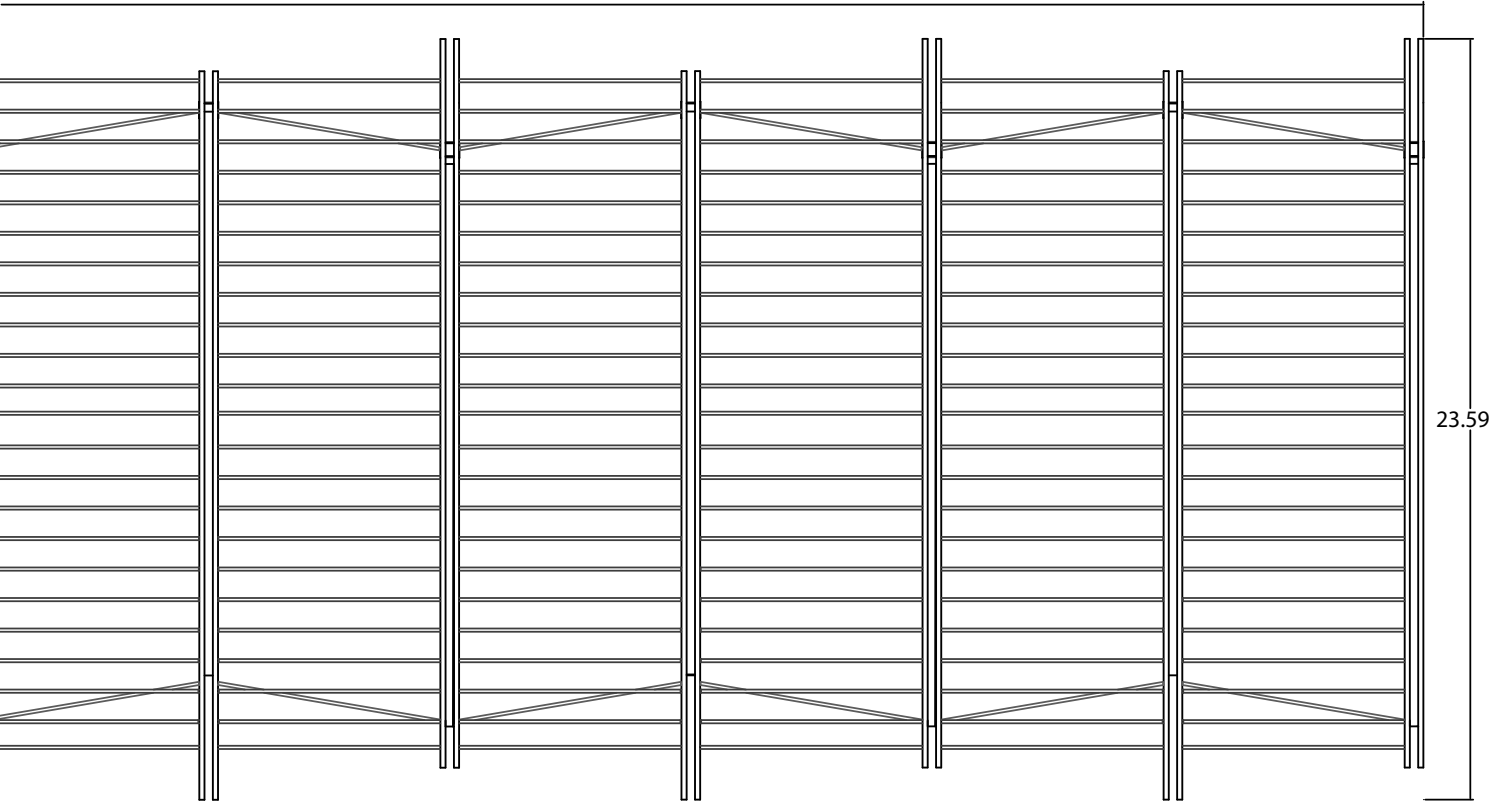
Structural model

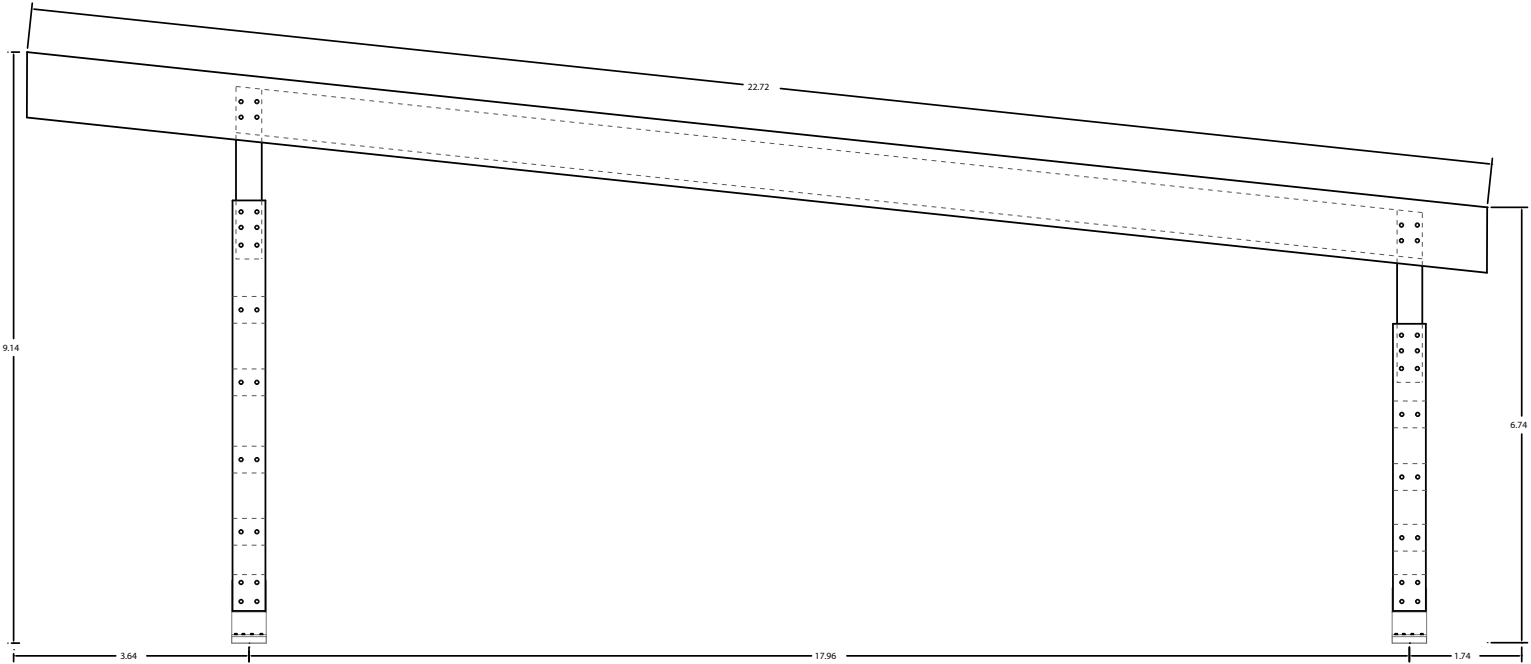


Complete structure plan

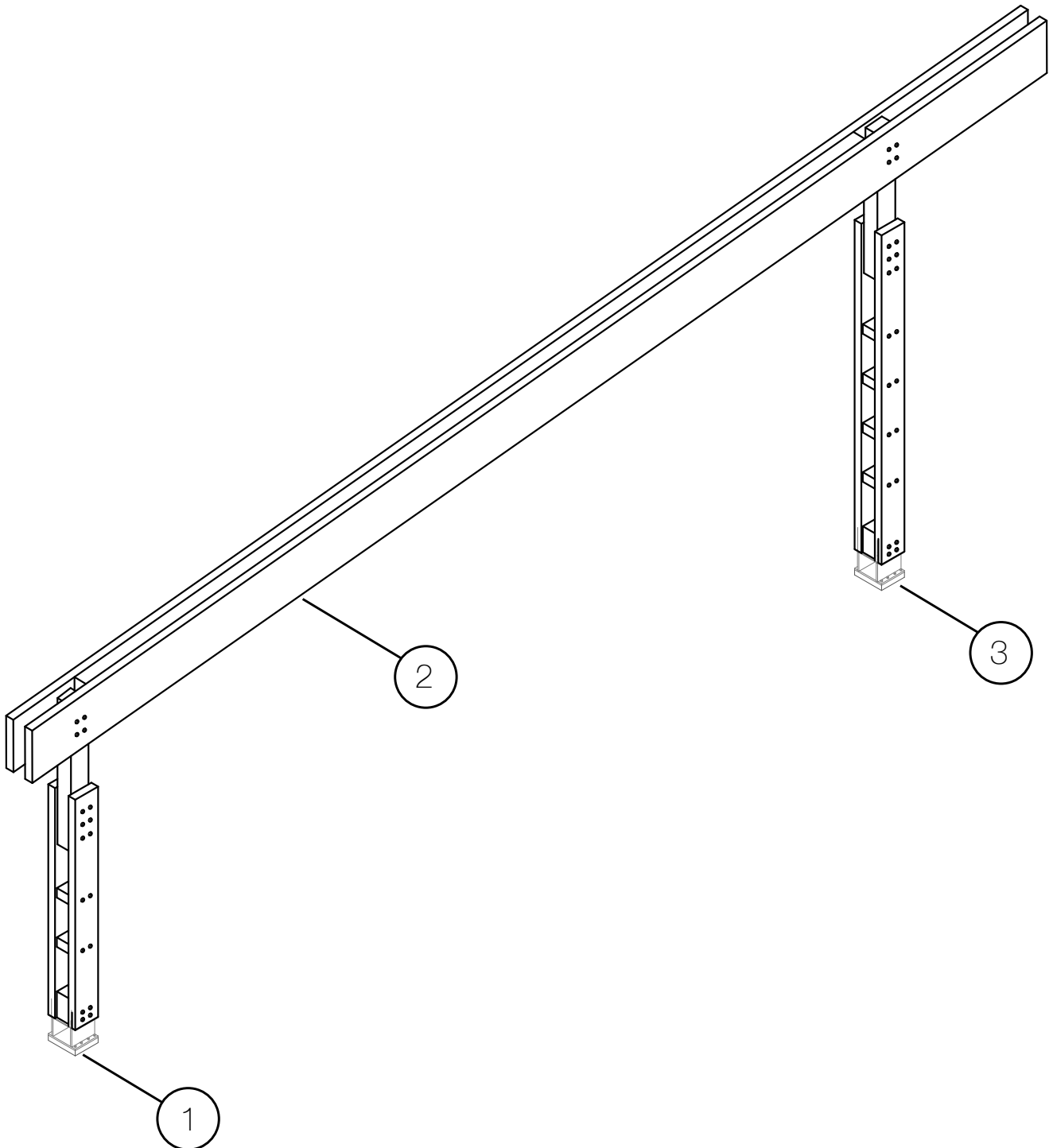


ule plan

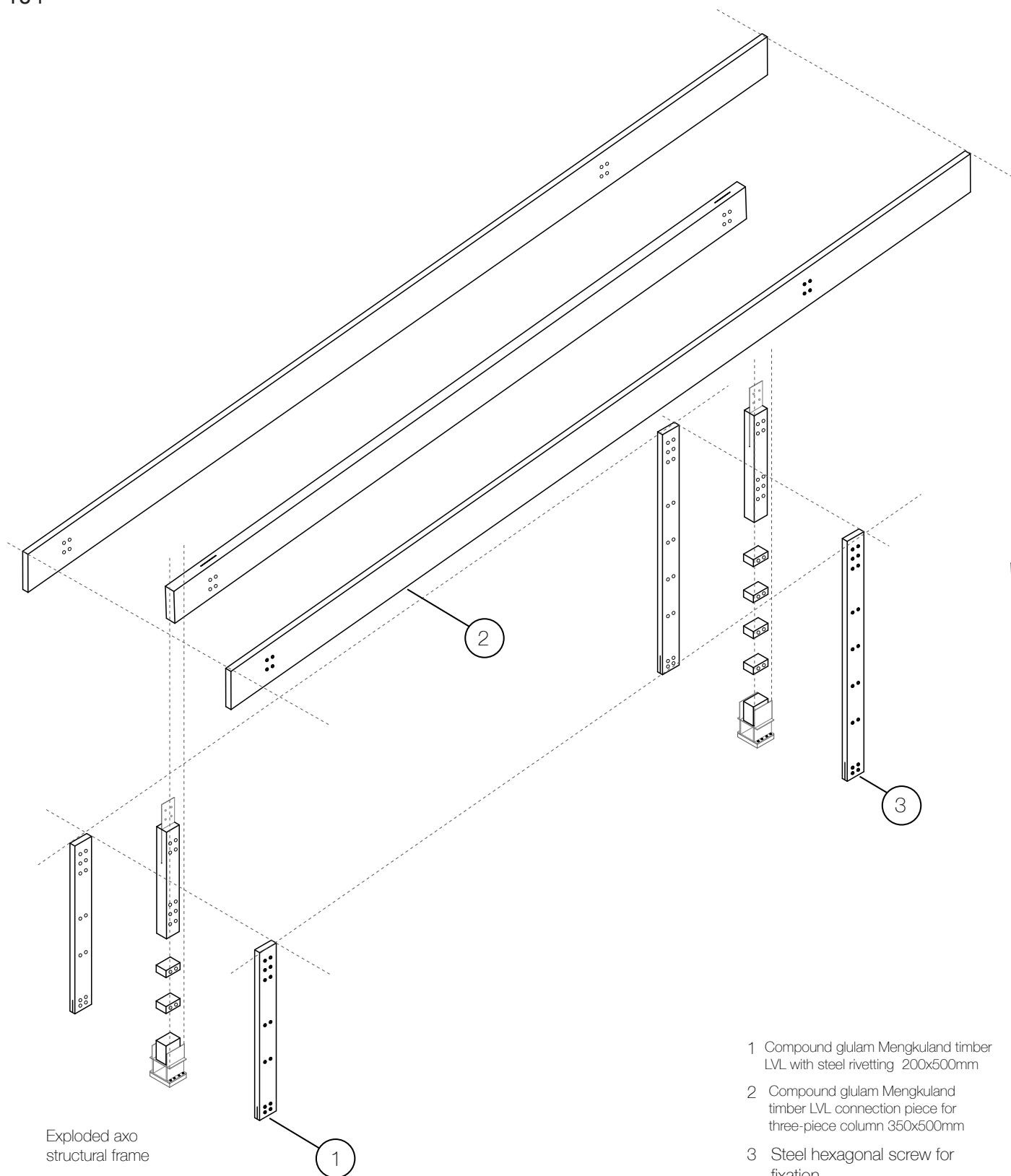




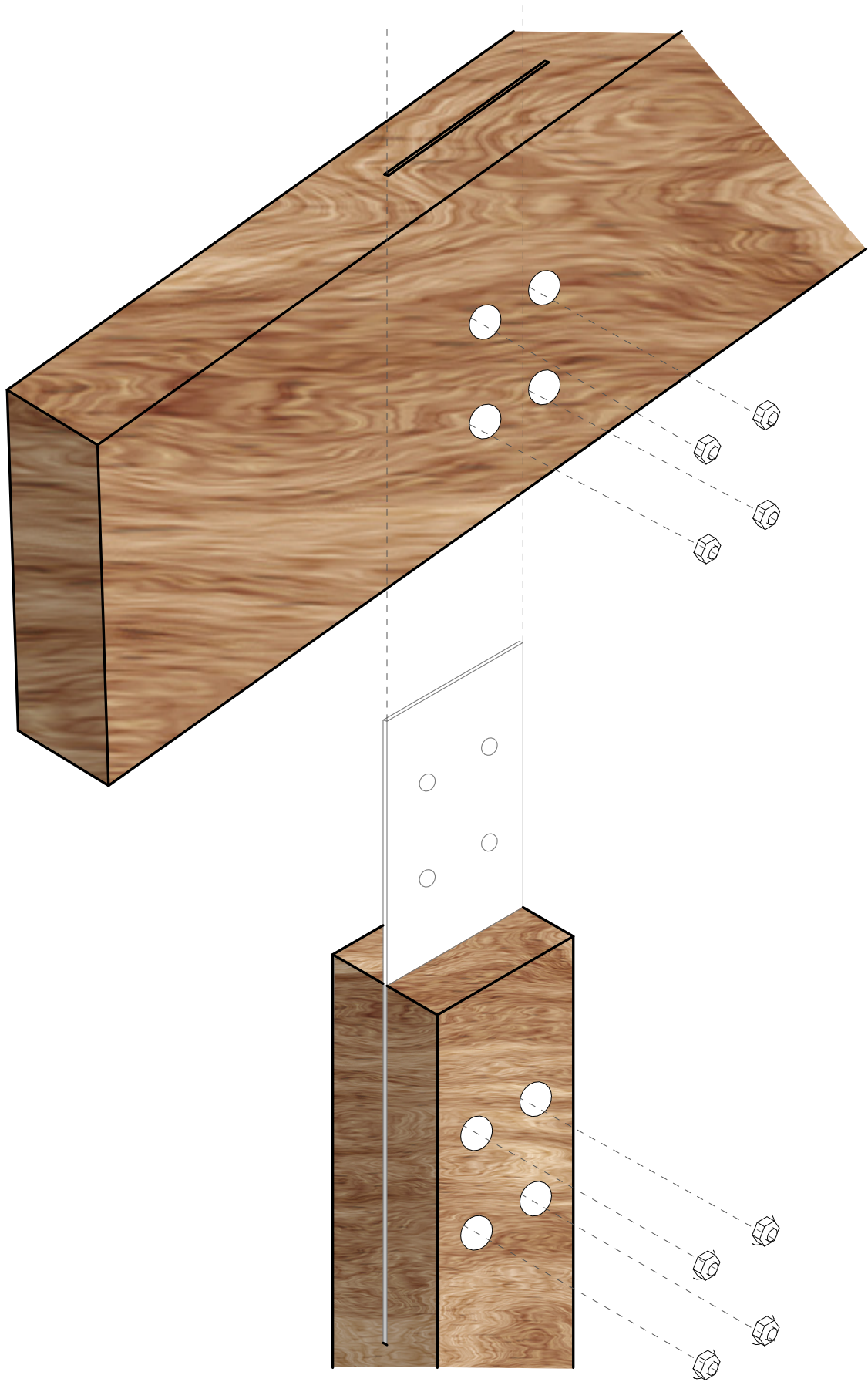
Structural frame



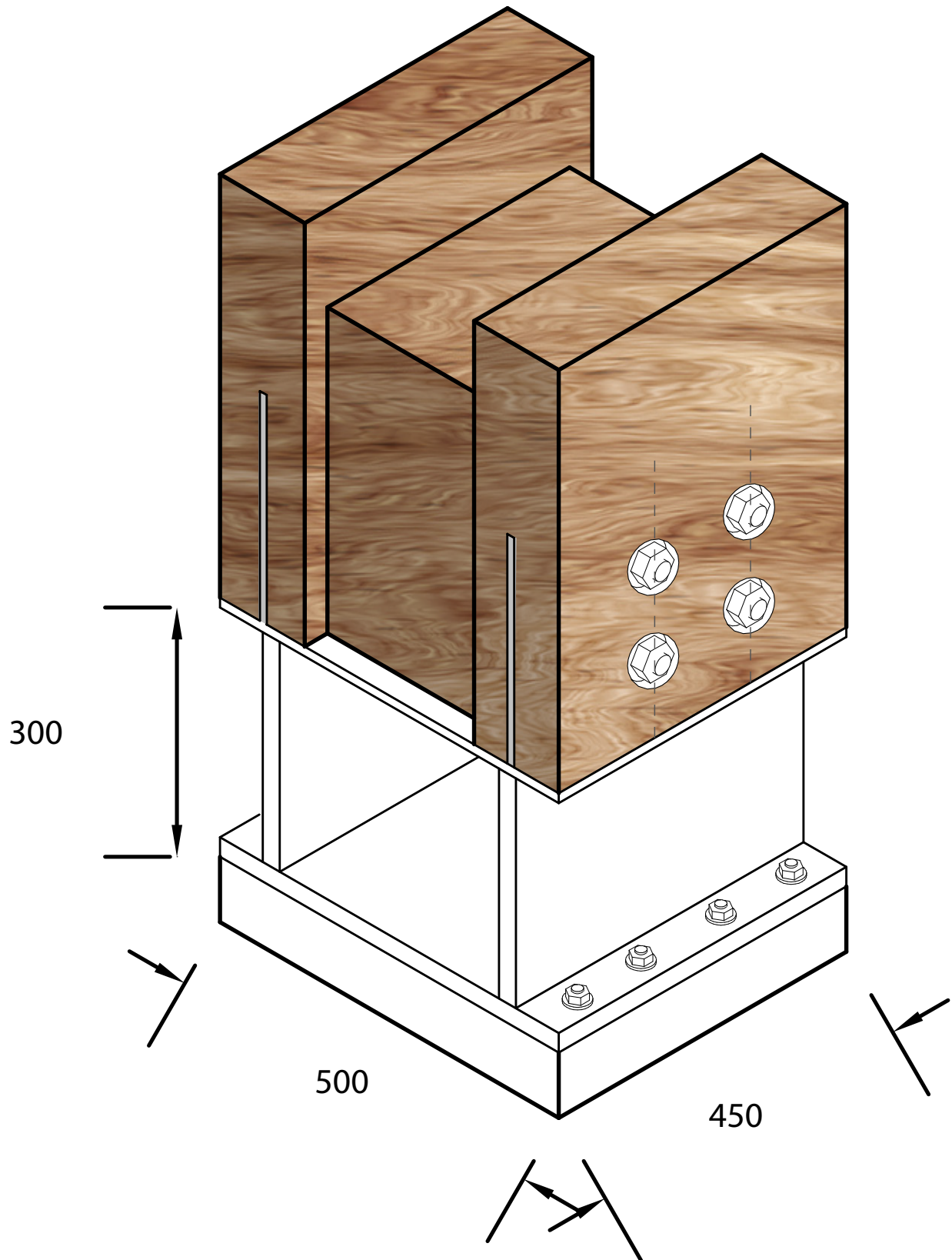
1. Three-piece column A
2. Three-piece beam
3. Three-piece column B



- 1 Compound glulam Mengkuland timber LVL with steel rivetting 200x500mm
- 2 Compound glulam Mengkuland timber LVL connection piece for three-piece column 350x500mm
- 3 Steel hexagonal screw for fixation
- 4 Upper steel base plate 30x500x750mm
- 5 Middle steel plates for base connection 30x500x300mm
- 6 Bottom steel base plate 40x500x750mm
- 7 Steel hexagonal connection base to foundation
- 8 Above-ground grout header for foundation wall connection



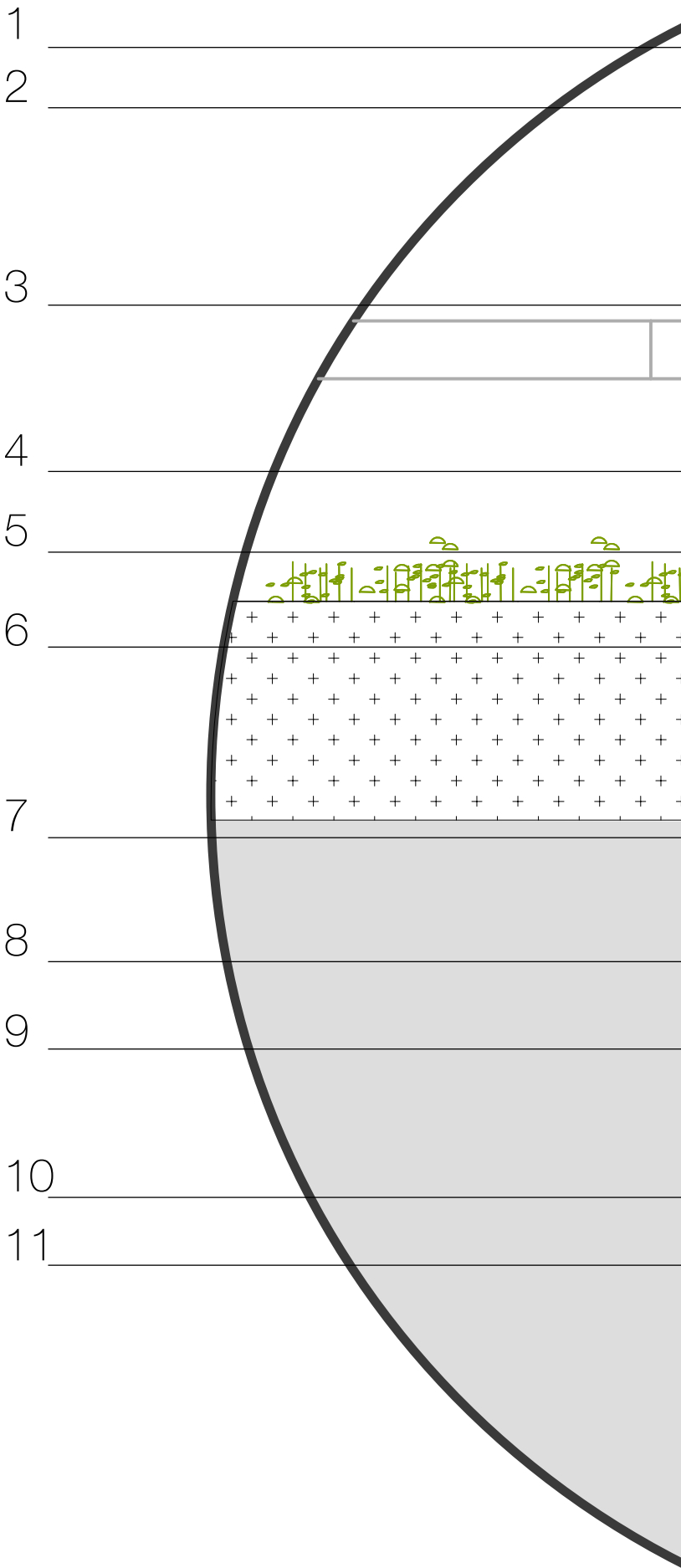
Beam and column
connection

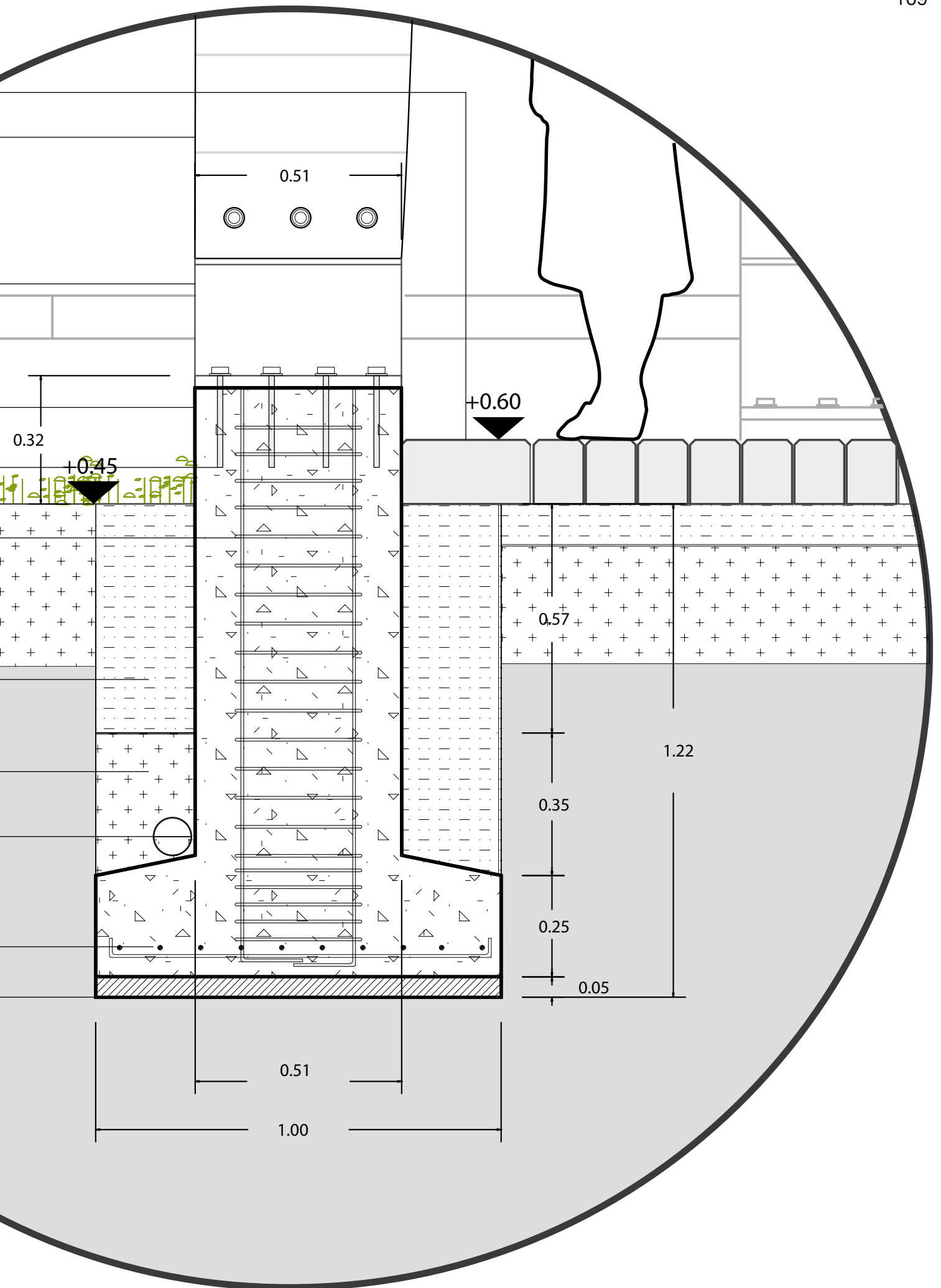


Base connection
(to foundation)

CONNECTION DETAILS

- 1 Textile-cement paver 100x200x200mm
- 2 Compound glulam three-piece column 750x500mm Mengkulang timber LVL with internal steel plate for foundation connection
- 3 Four-piece steel plate connection 750x500x400mm
- 4 Reinforced poured concrete foundation wall 510x510mm with No.4 anchoring rebar
- 5 Anchor bolts into foundation wall
- 6 Steel rebar reinforcement 250x250mm
- 7 Compacted earth backfill
- 8 Fine gravel fill for drainage pipe
- 9 6" HDPE perforated drain pipe on foundation
- 10 Footing foundation rebar grid reinforcement
- 11 Preparation layer, excavated earth, cement, water.



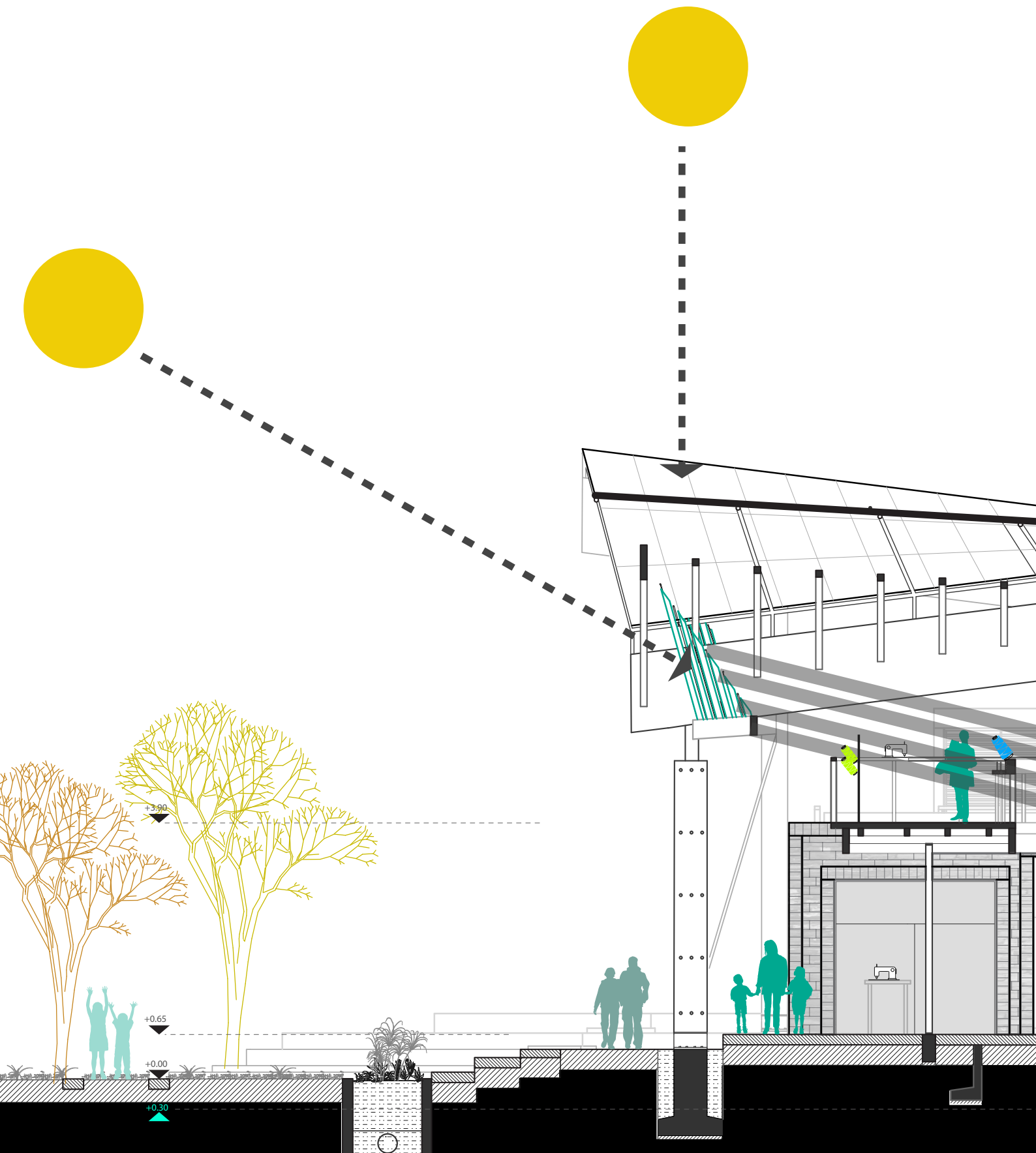


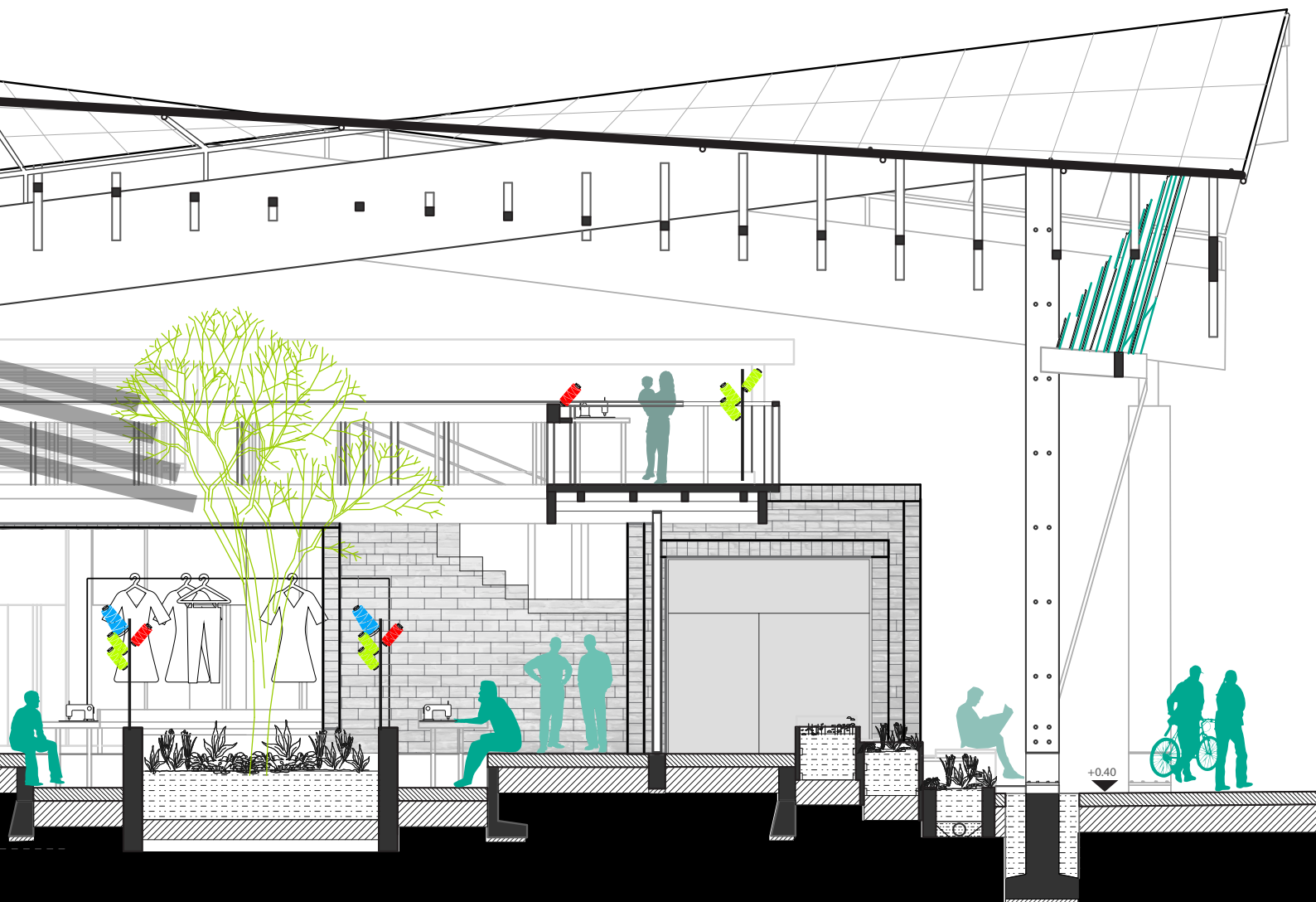
THE TRADITIONAL FUTURE

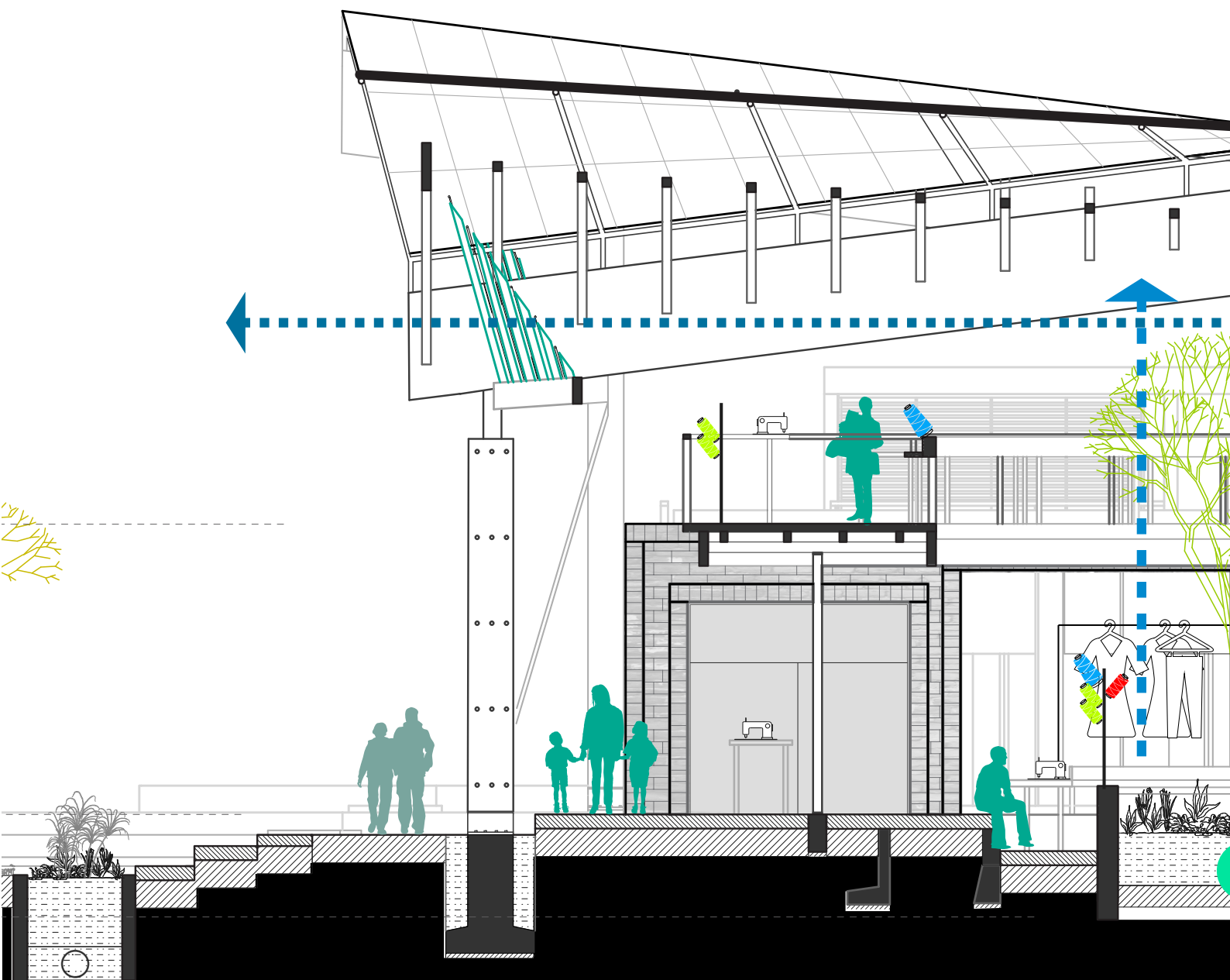
SUN AND WATER

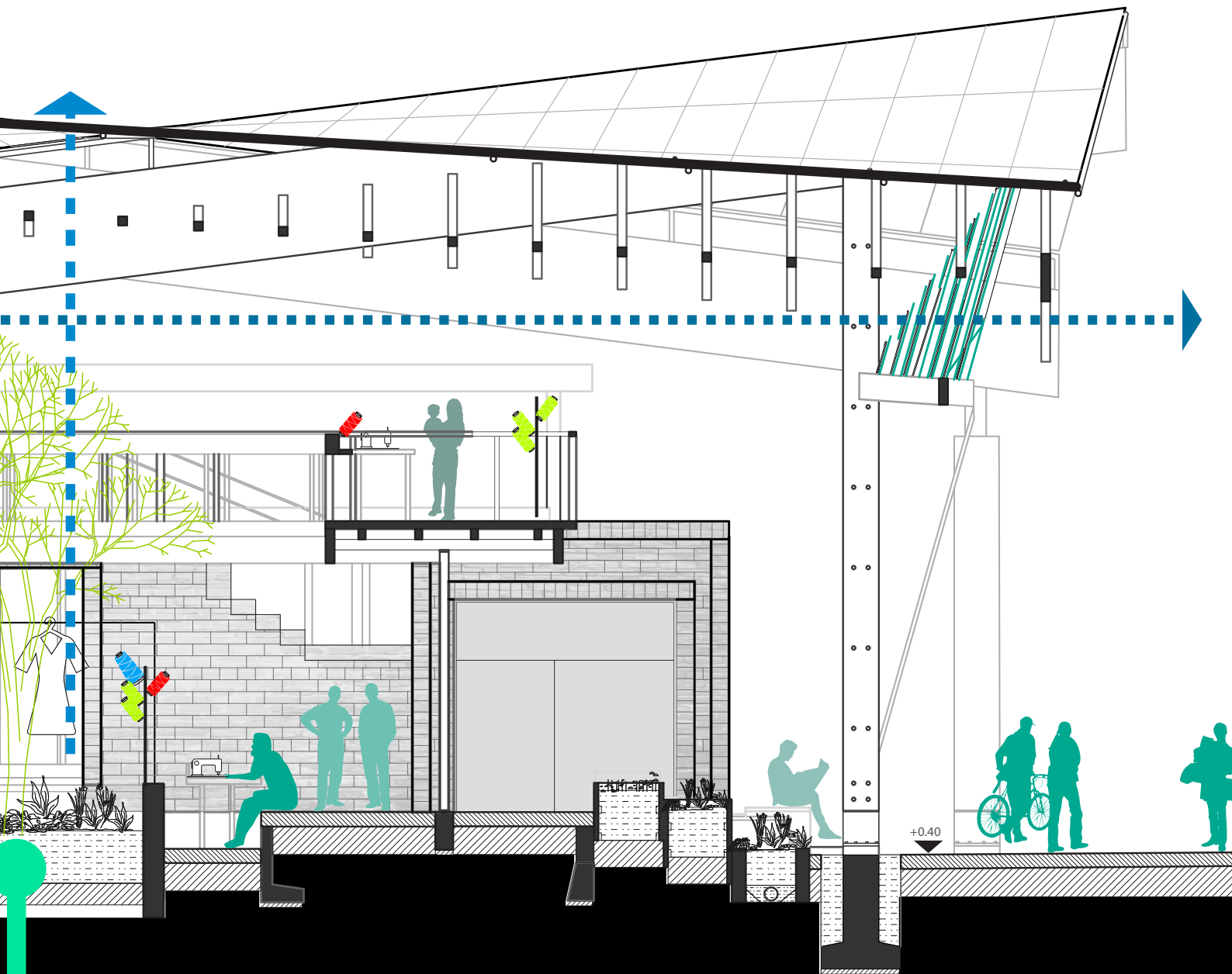
THE FUNCTIONAL LANDSCAPE

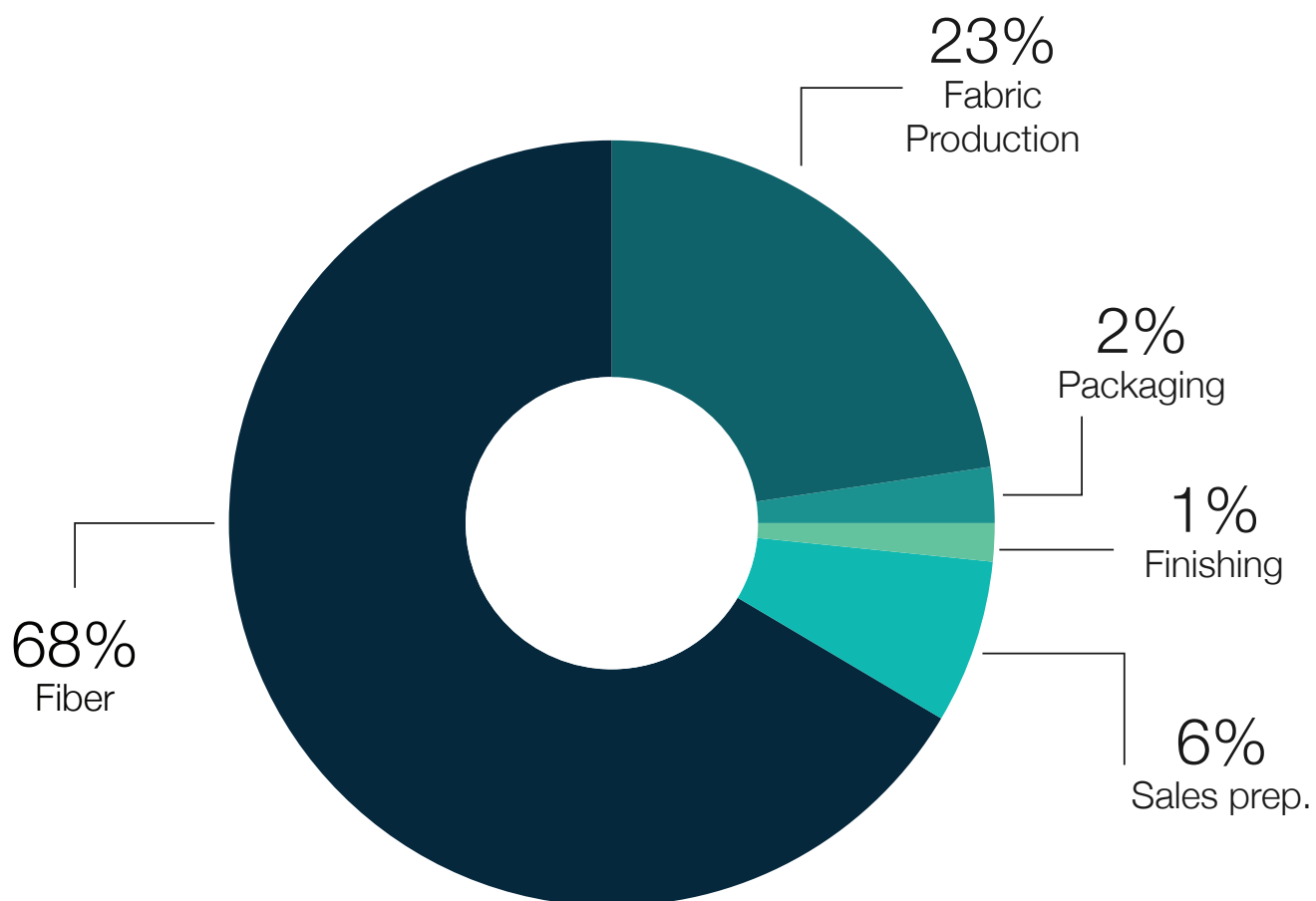


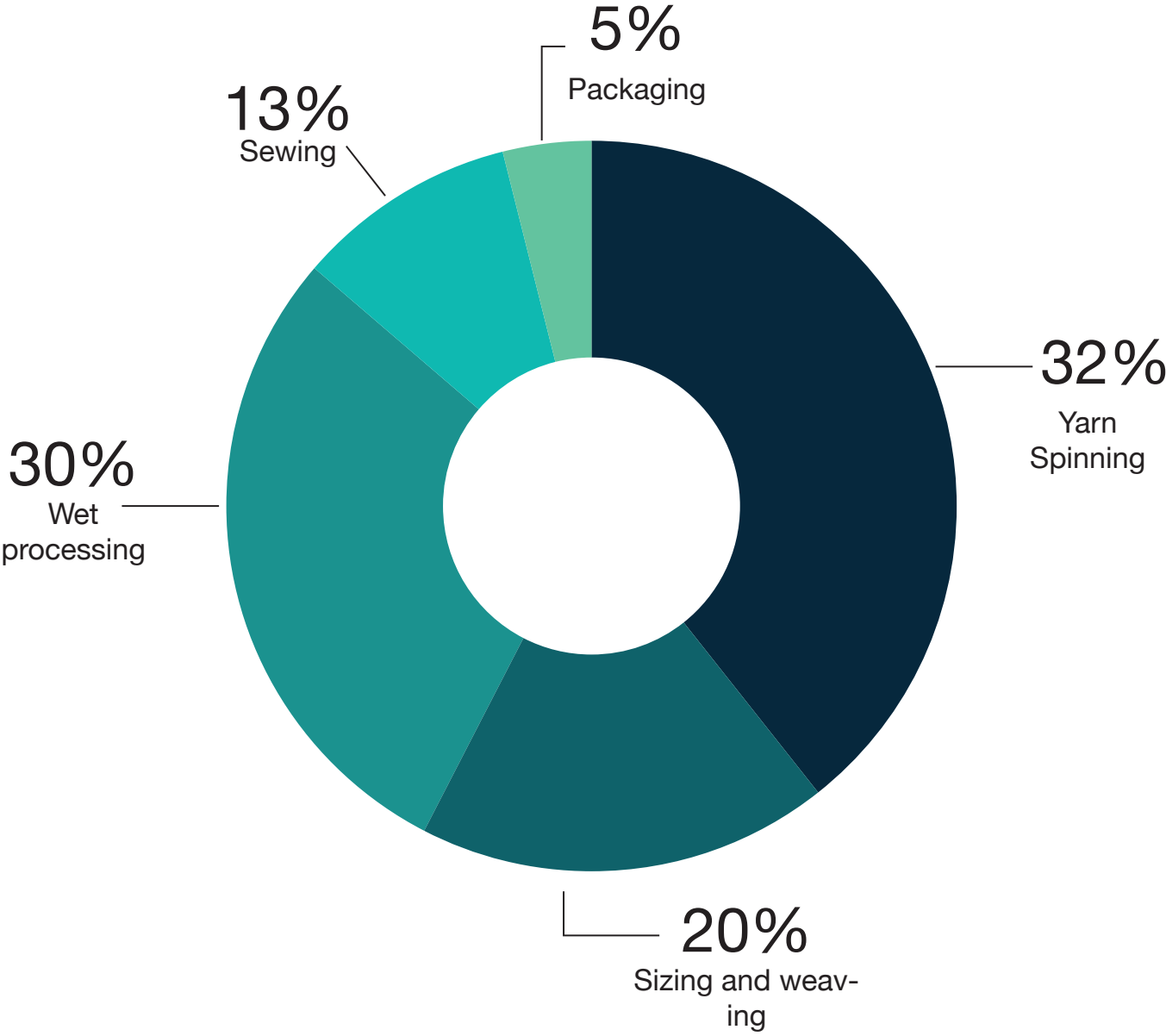


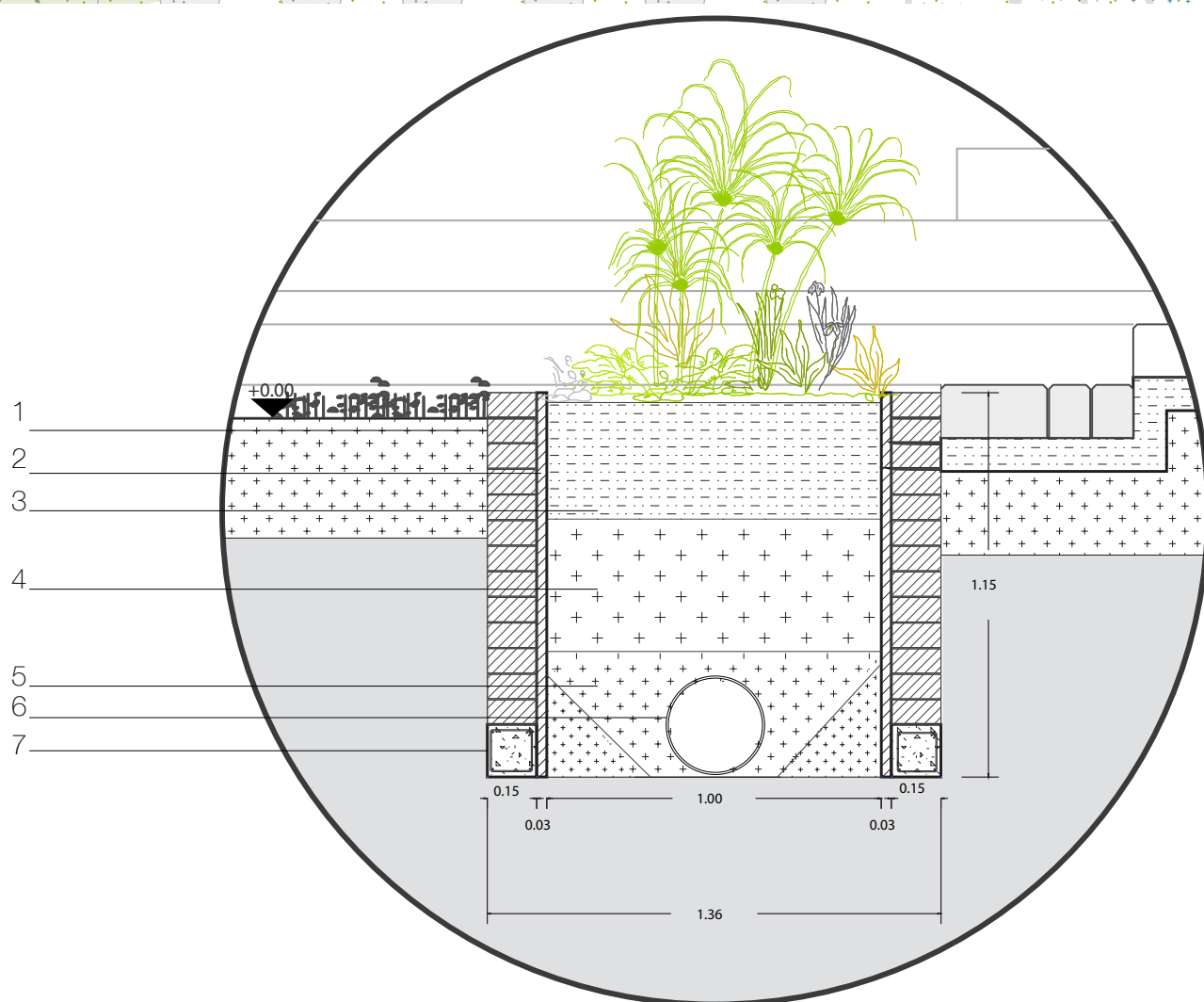
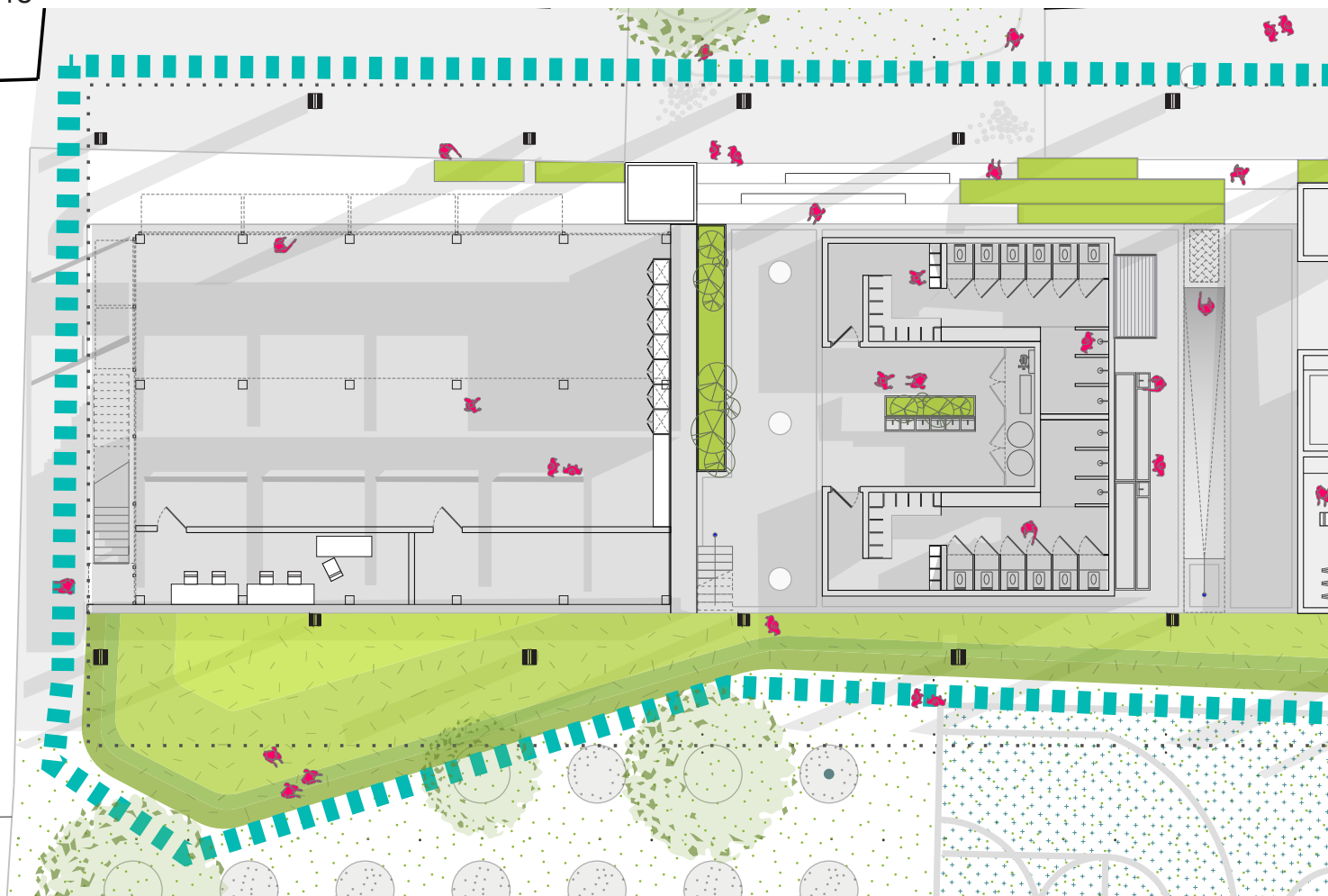


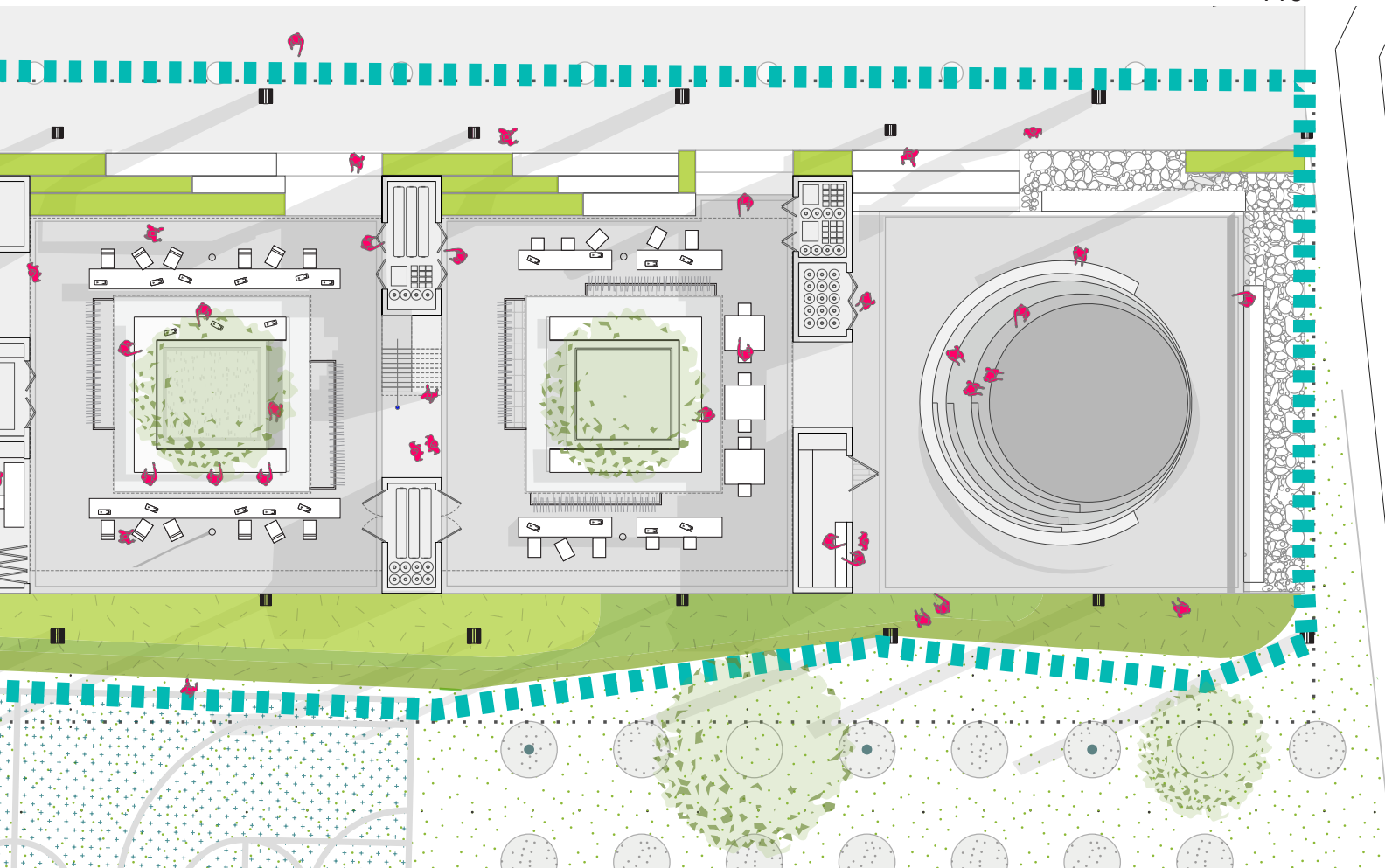






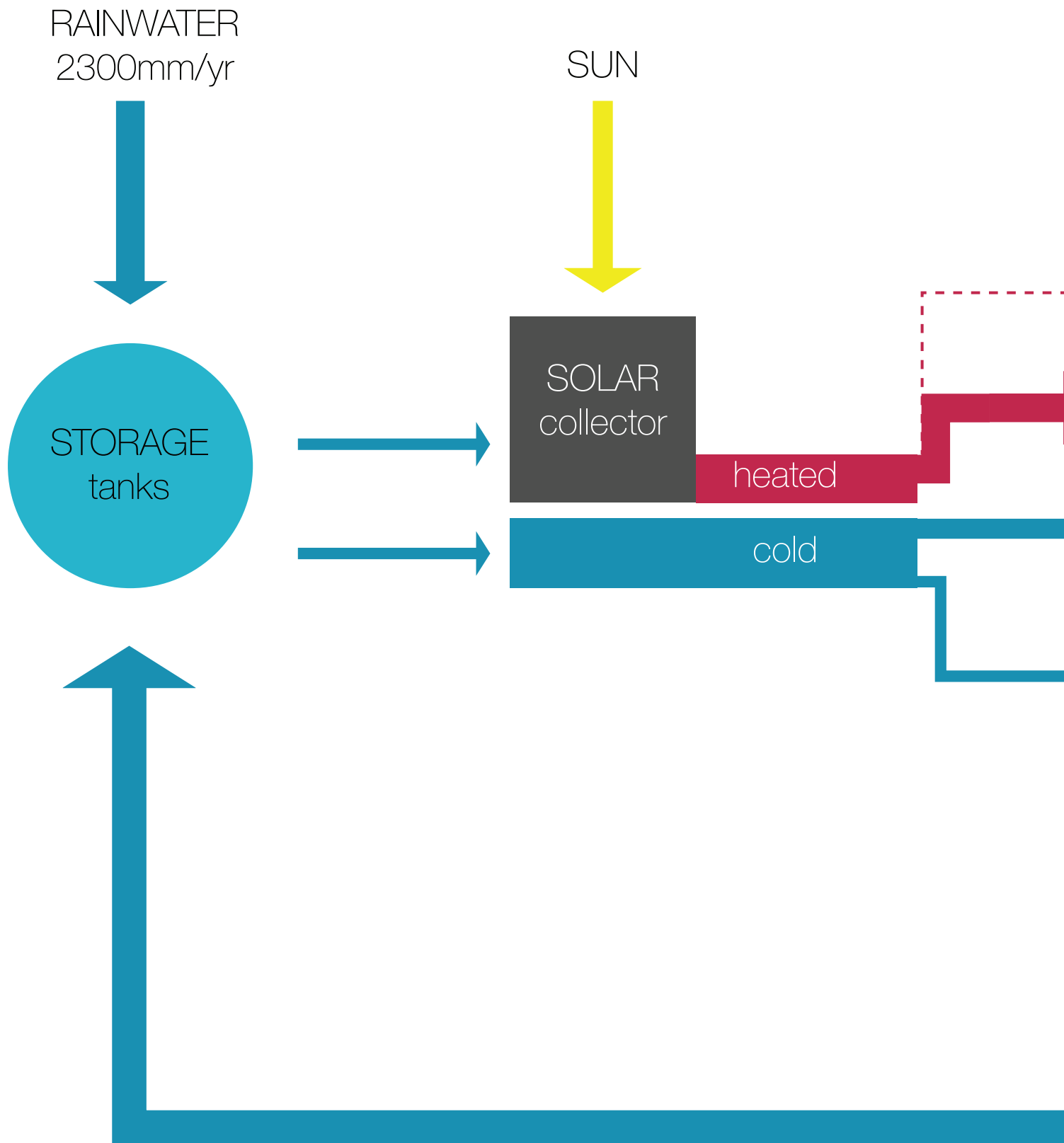


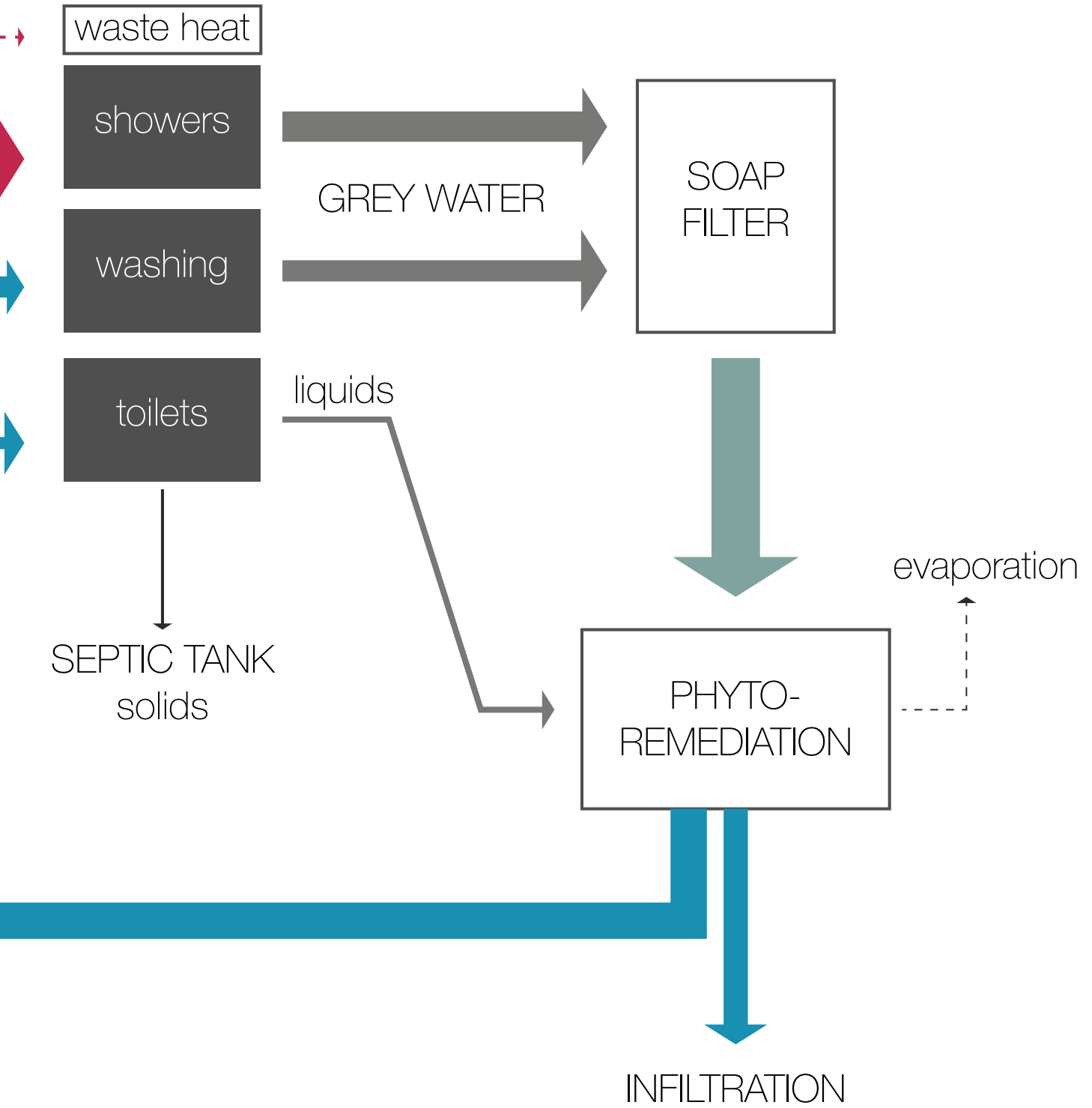


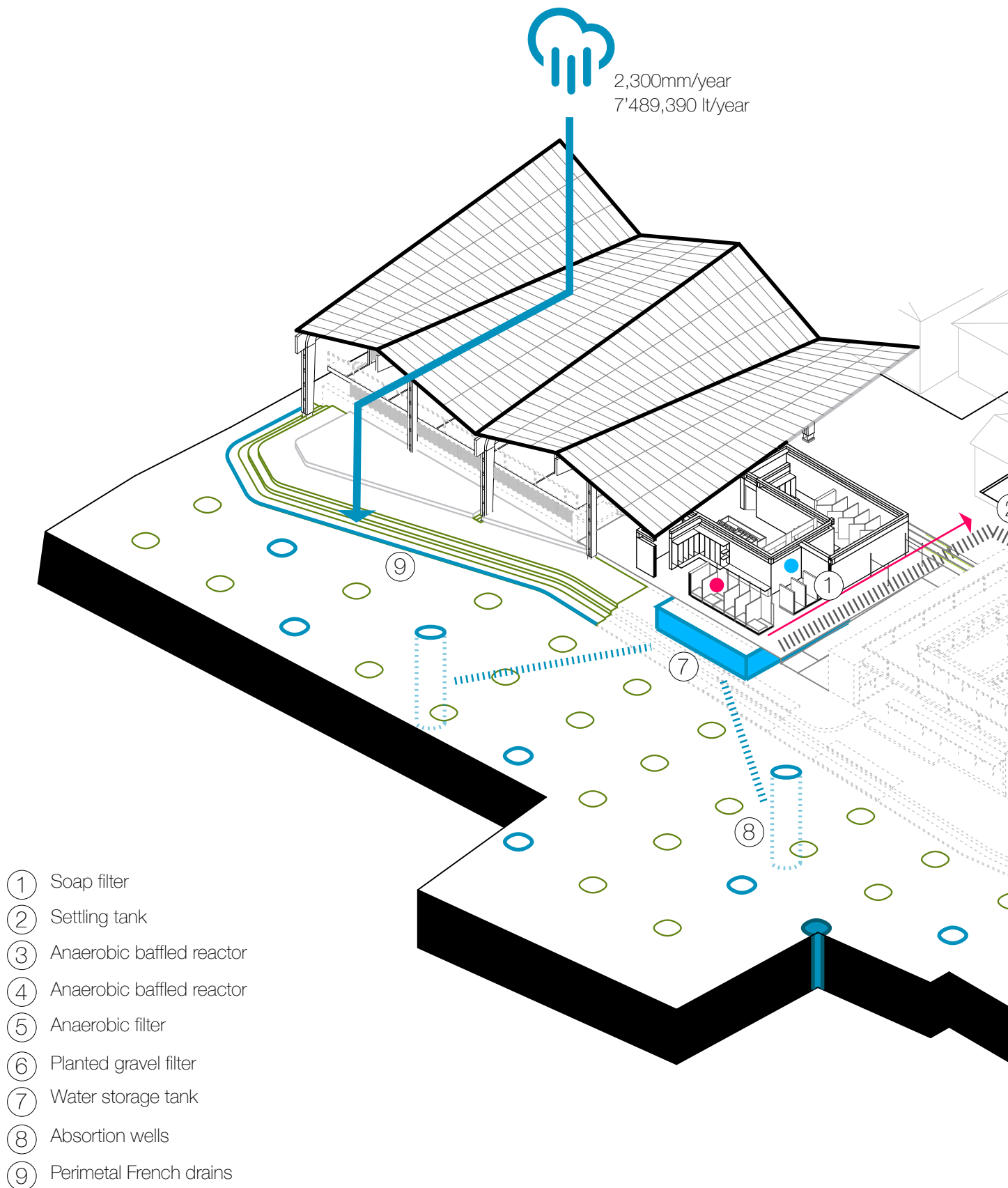


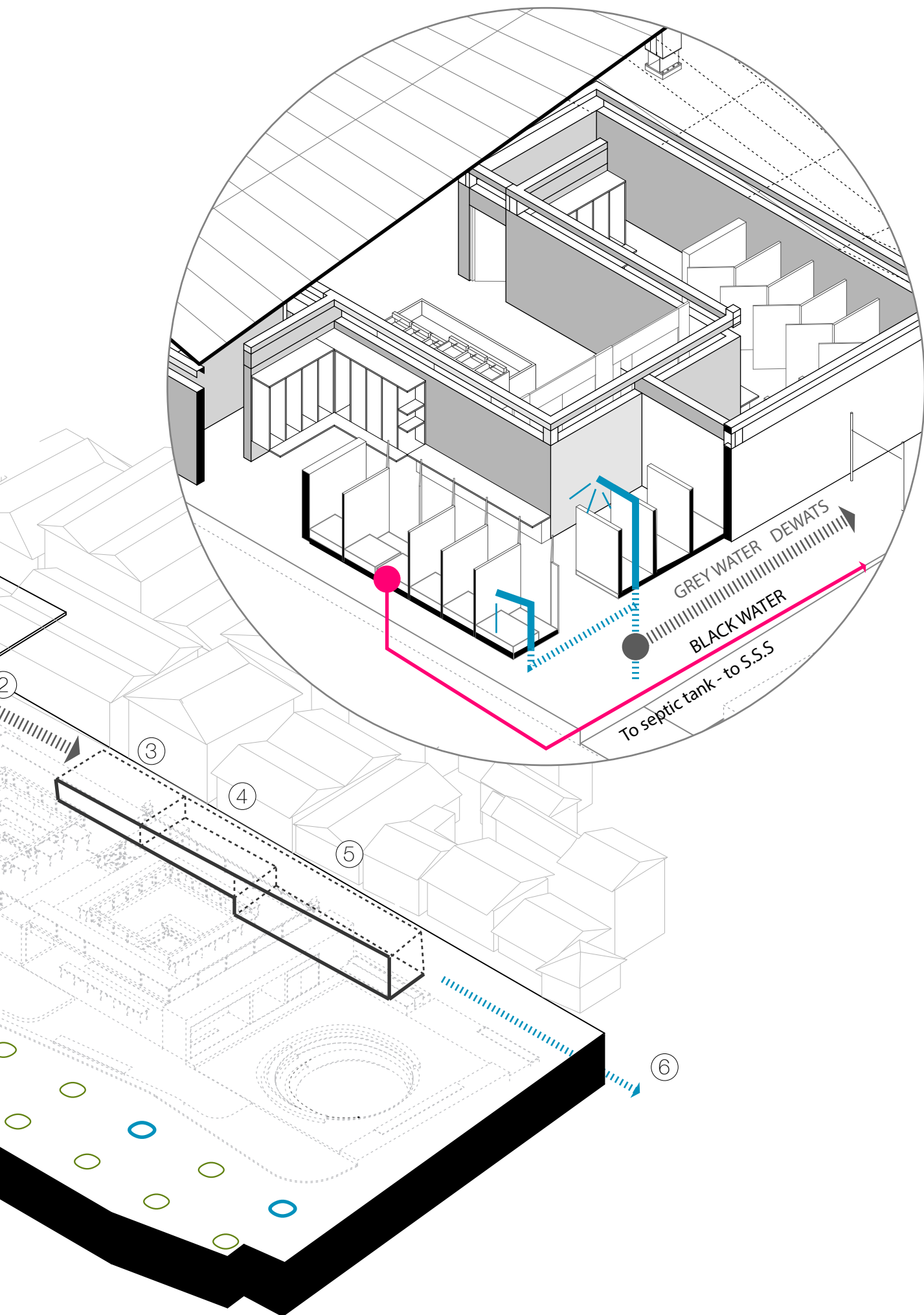
- 1 Textile-cement block (full)
150x100x200mm
- 2 Geotextile wrap
- 3 Topsoil for planting
- 4 Compacted backfill trench from in situ soil
- 5 Rounded gravel 20-40mm as pipe bedding
- 6 Perforated flexible HDPE pipe for rainwater collection (to storage tank)
- 7 Concrete foundation with simple steel rebar reinforcement 150x150mm

PERIMETER WATER CATCHING

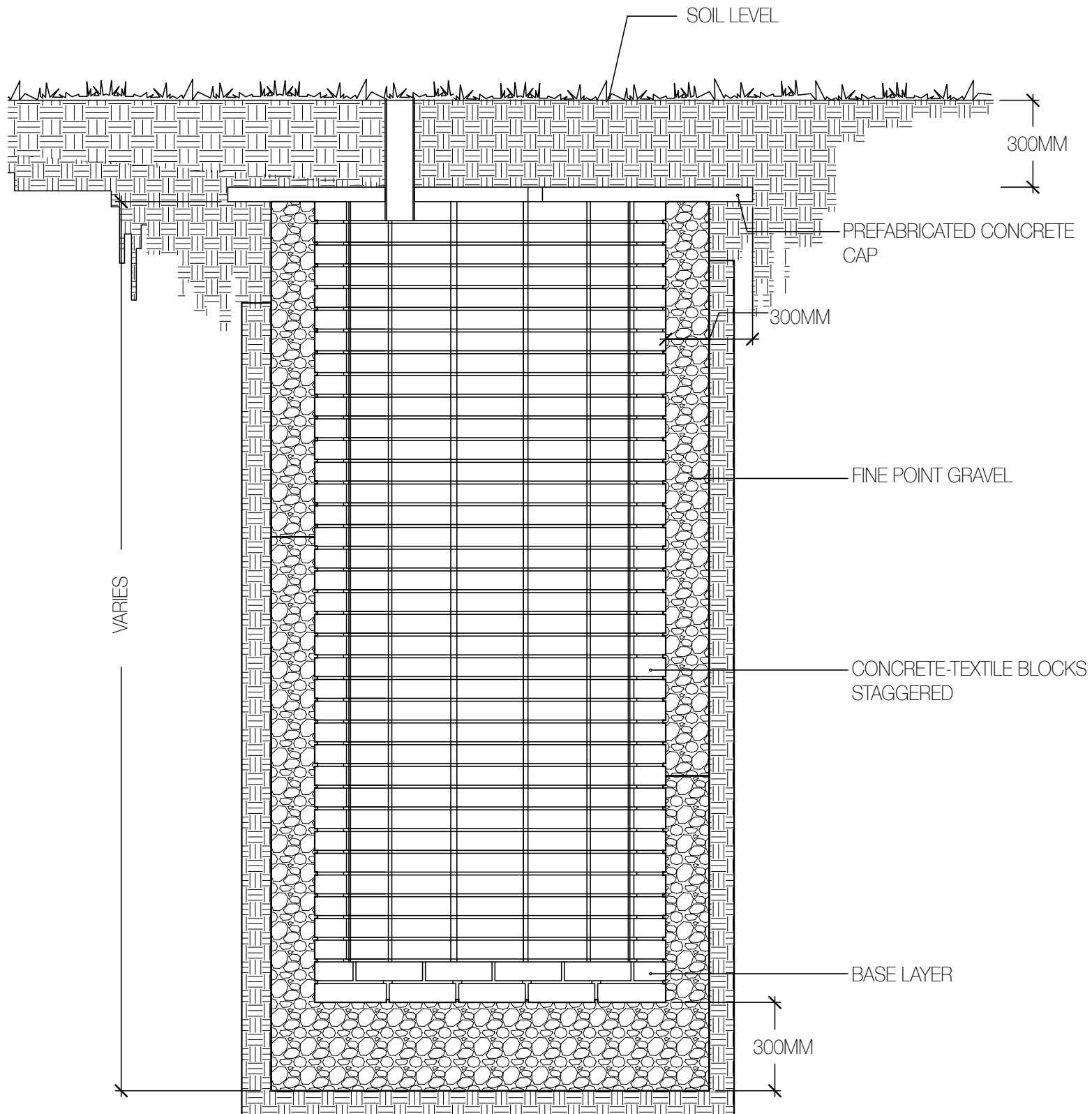






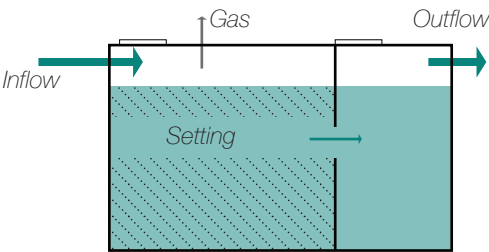


*ABSORPTION WELL
DETAIL*

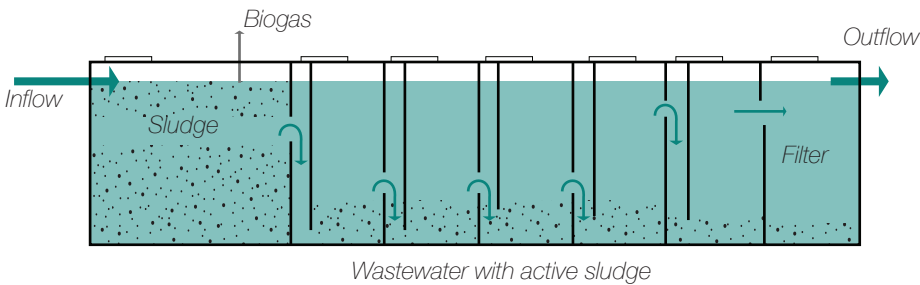


DECENTRALIZED WATER
TREATMENT SYSTEM (DEWATS)

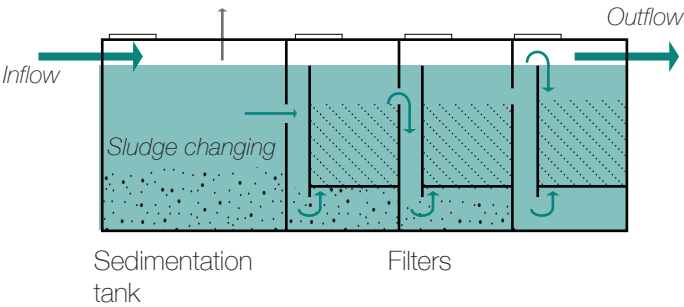
1. Settler



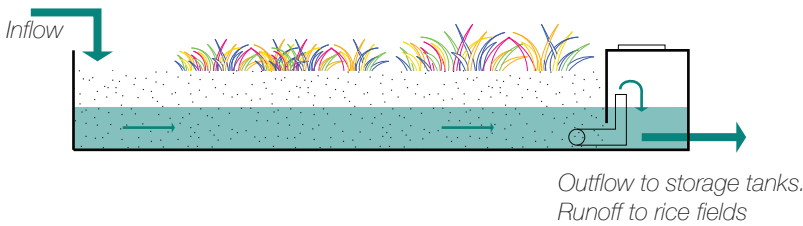
2. Anaerobic Baffled
Reactor



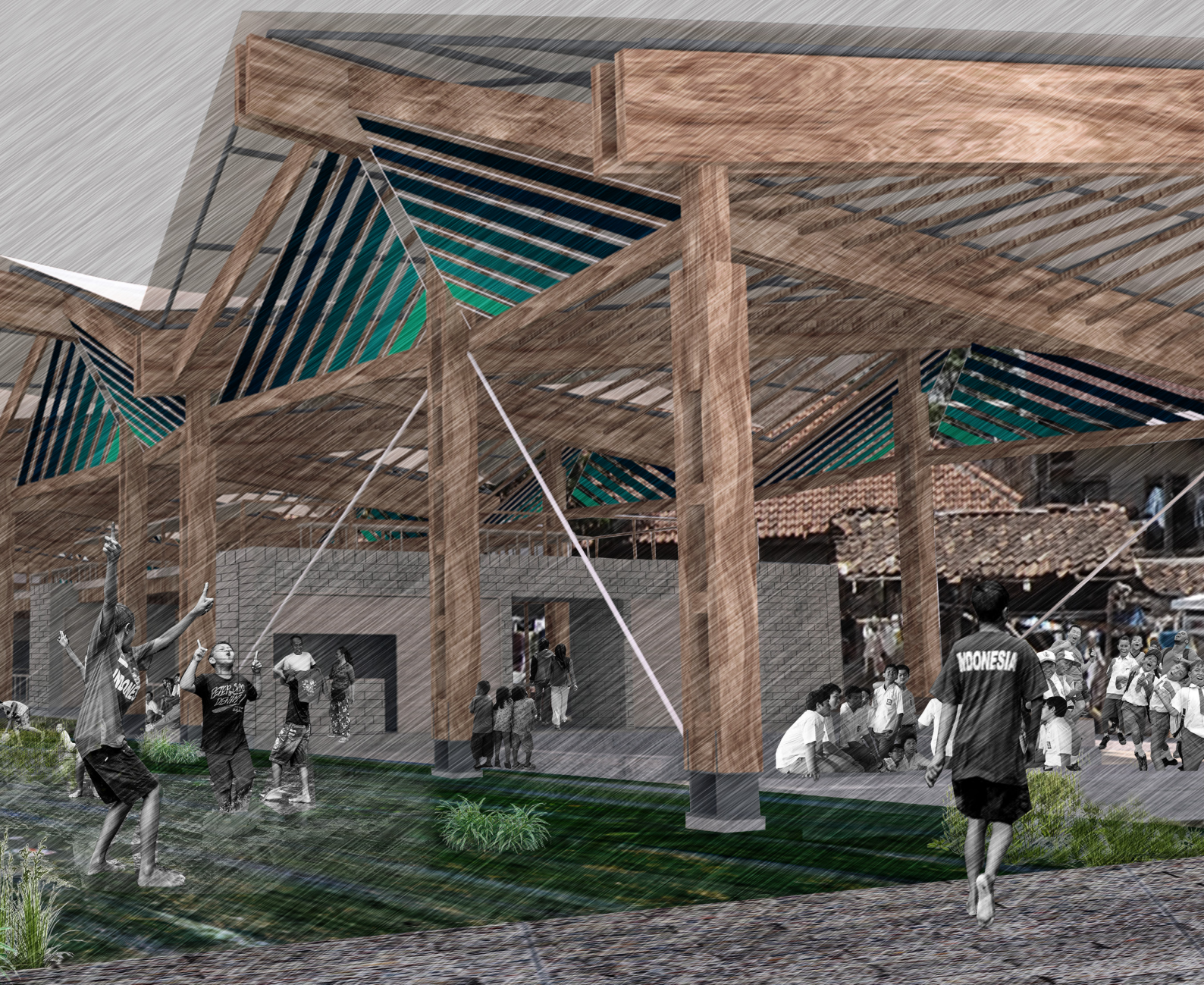
3. Anaerobic Filter



3. Reed Bed Gravel Filter



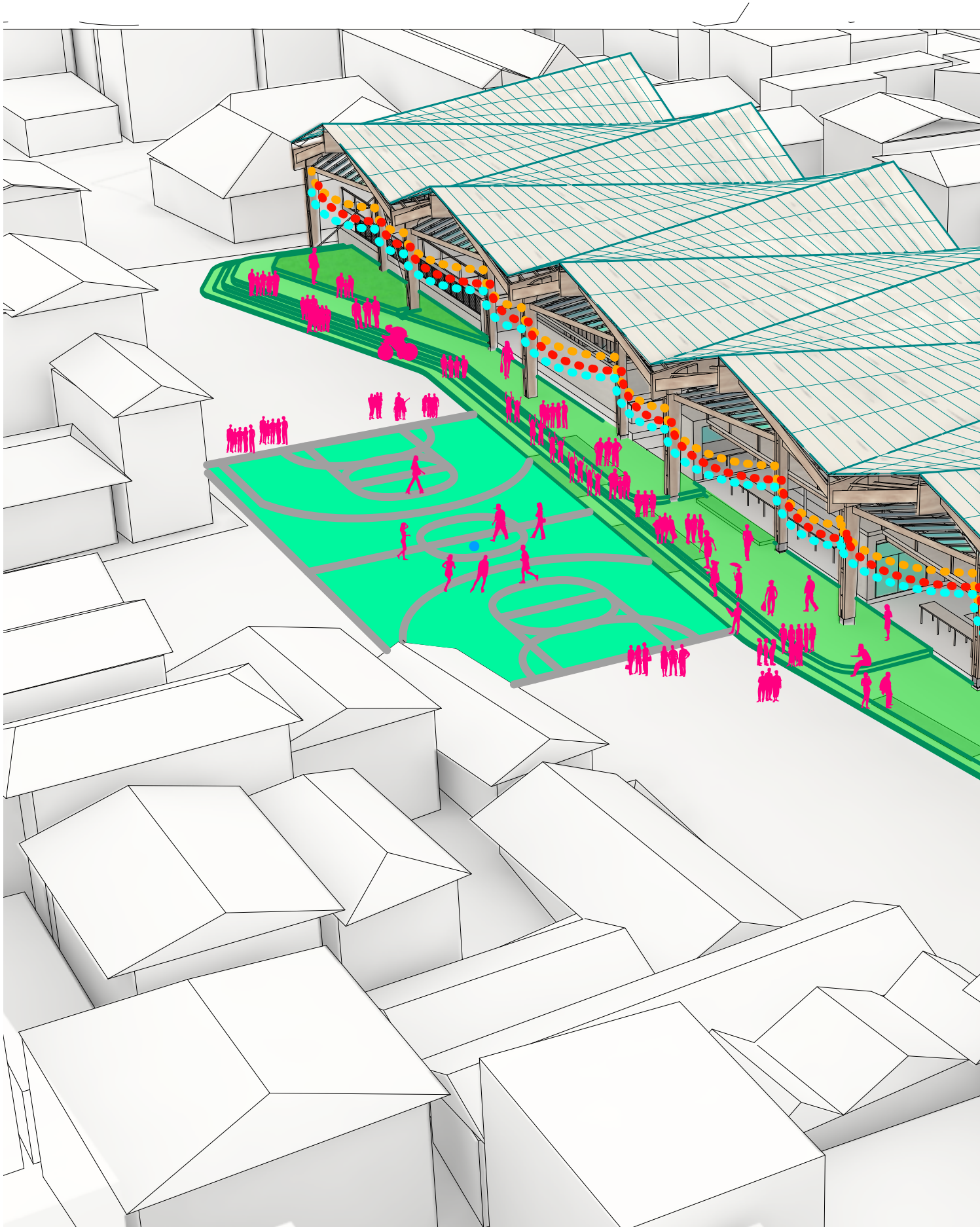


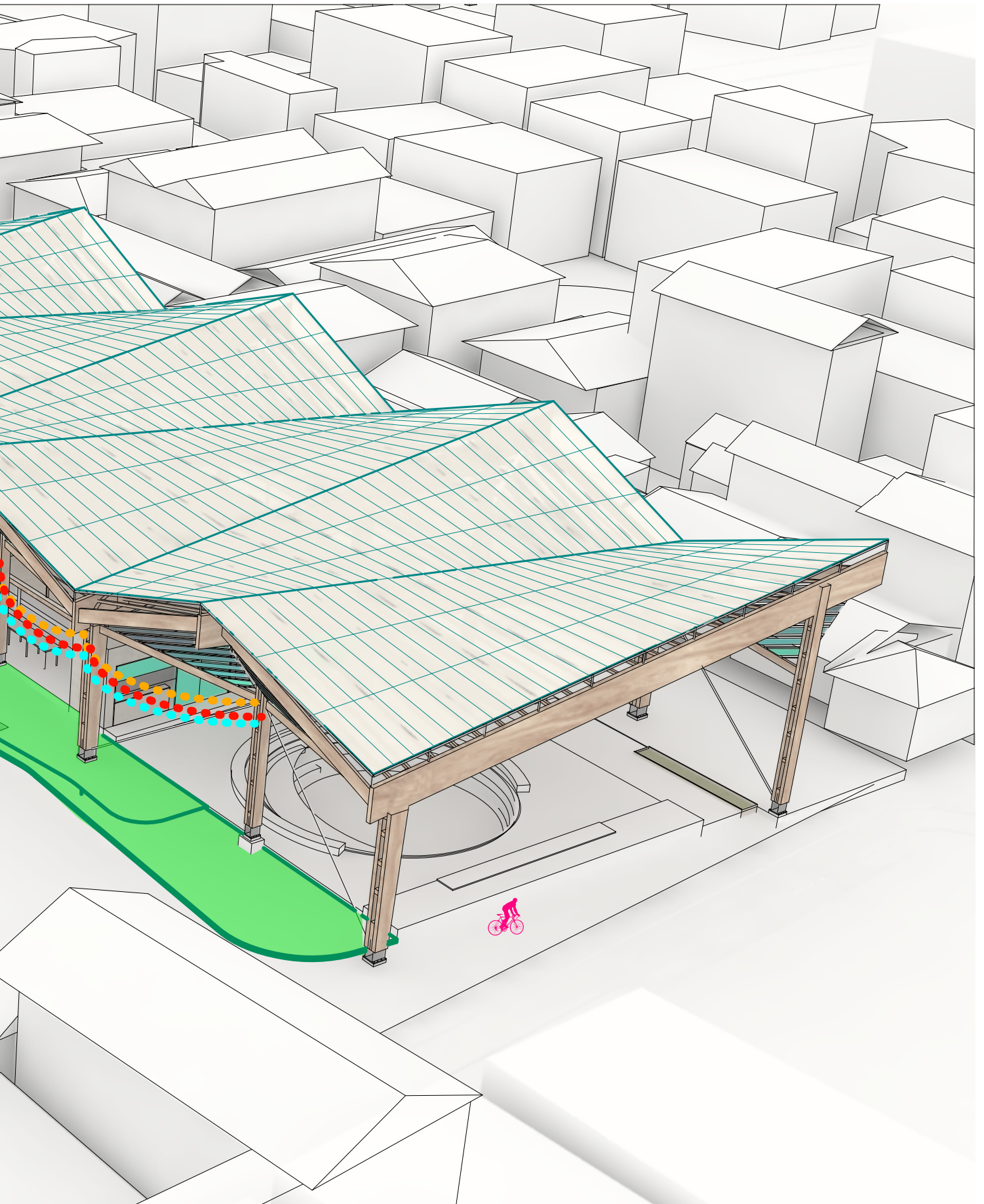


THE TRADITIONAL FUTURE

ACTIVITY LANDSCAPE

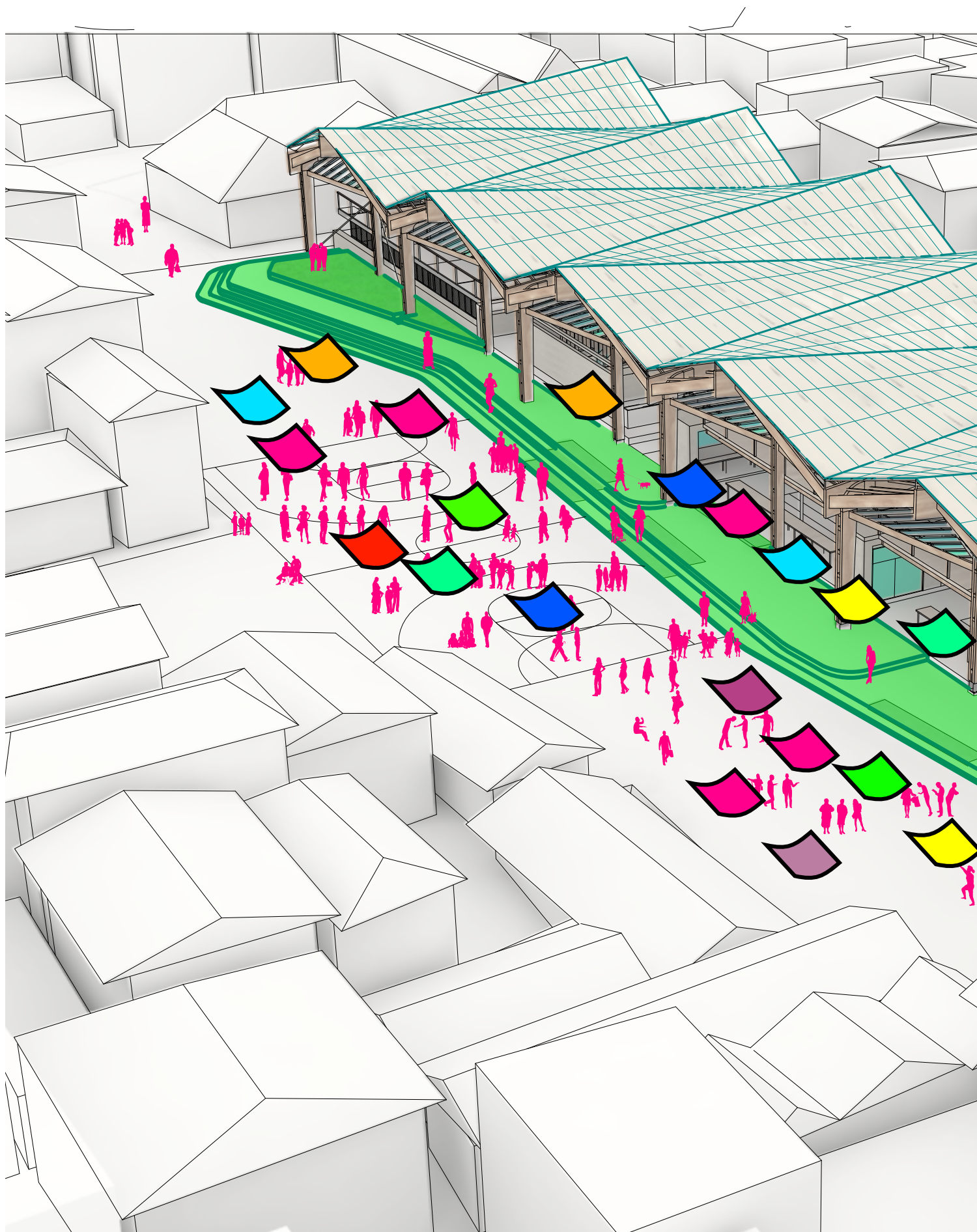
THE SOCIAL BUFFER

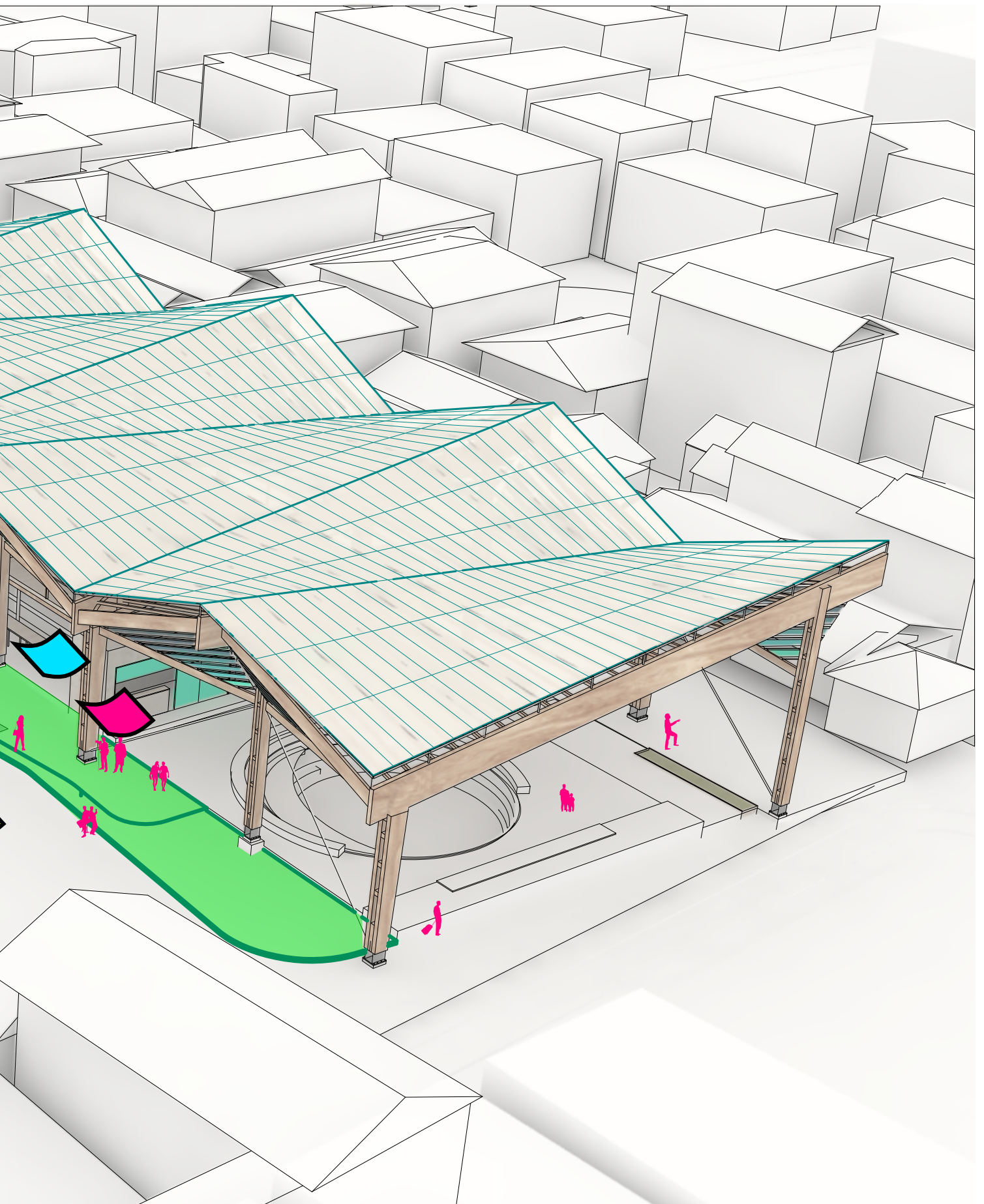






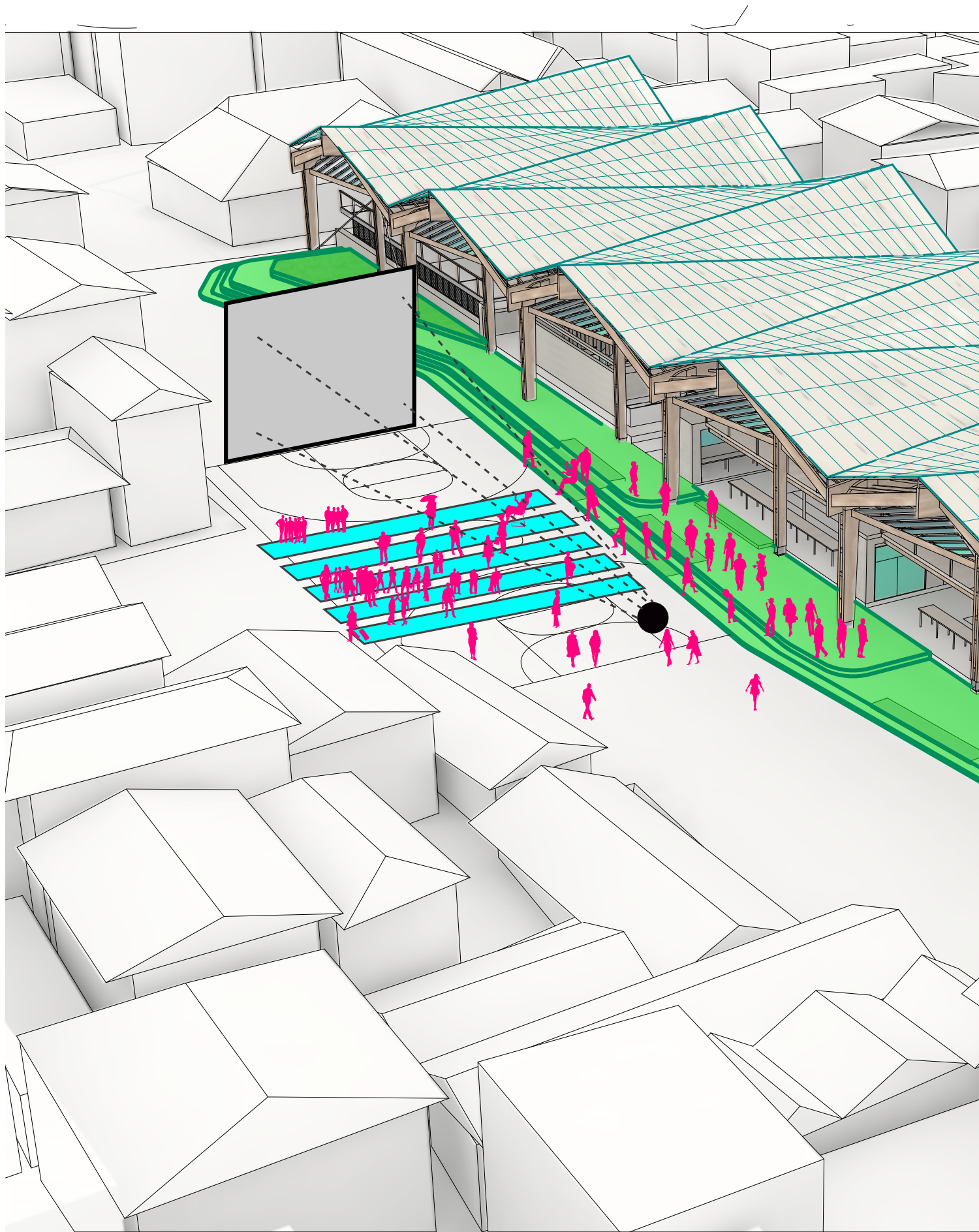


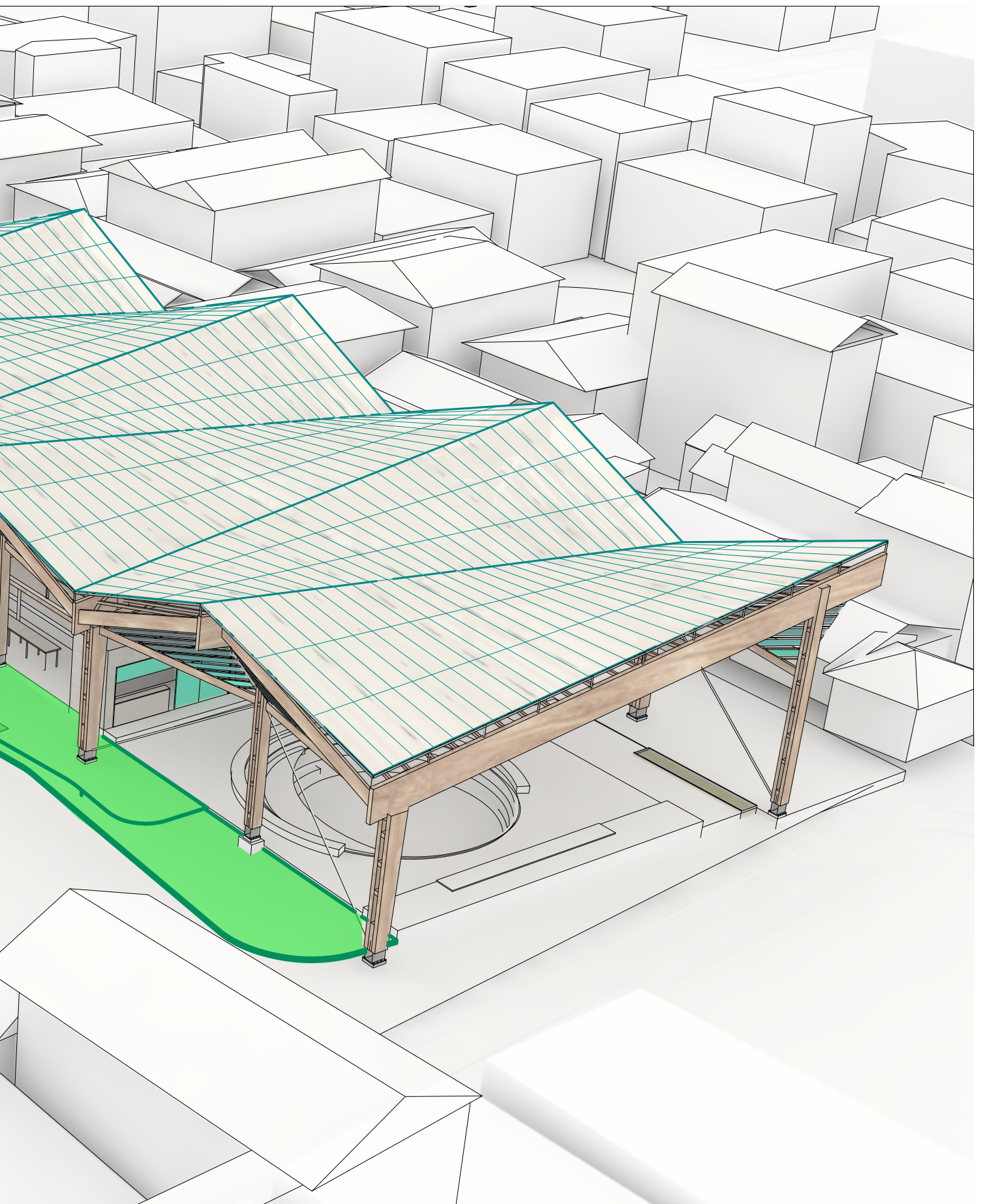






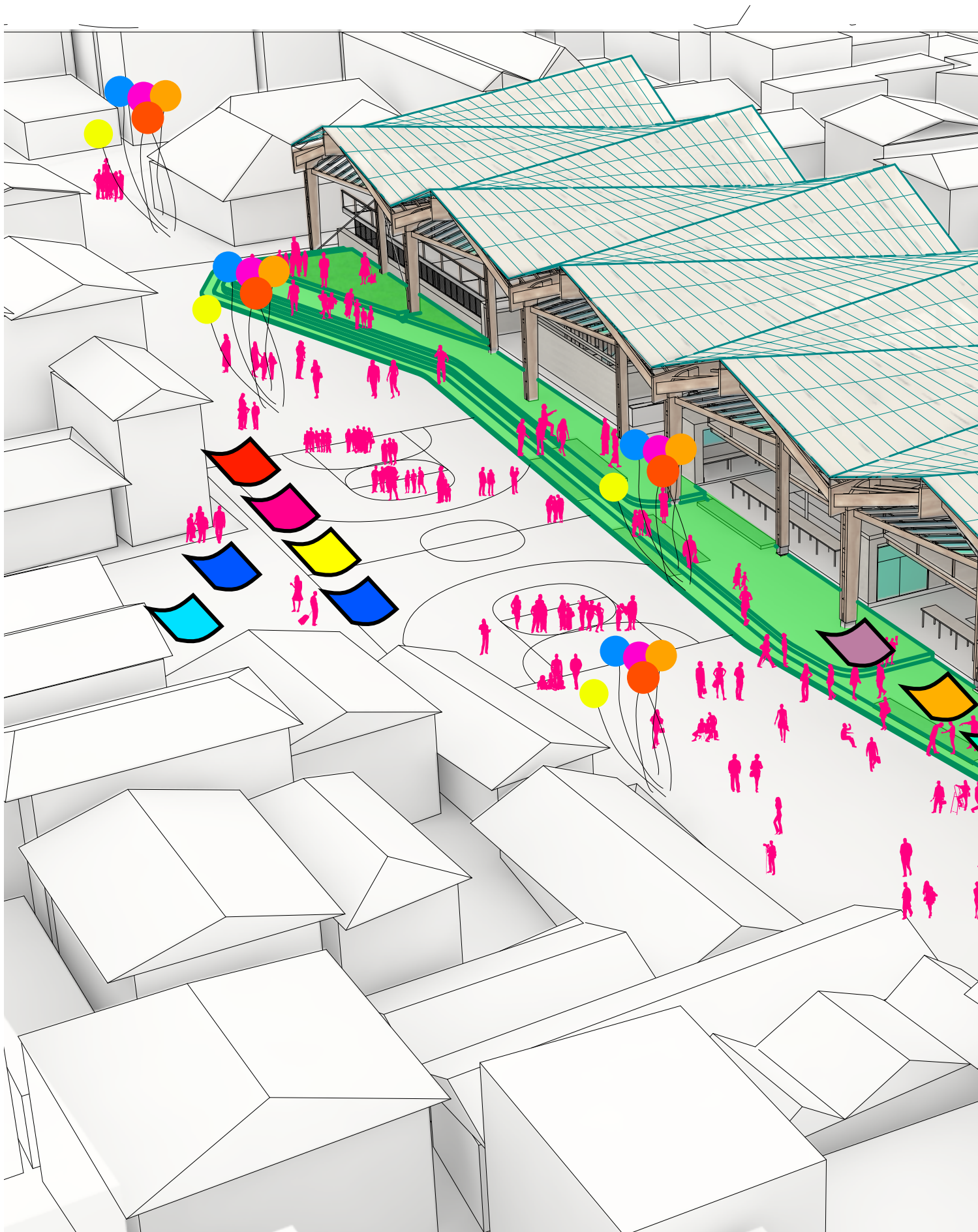


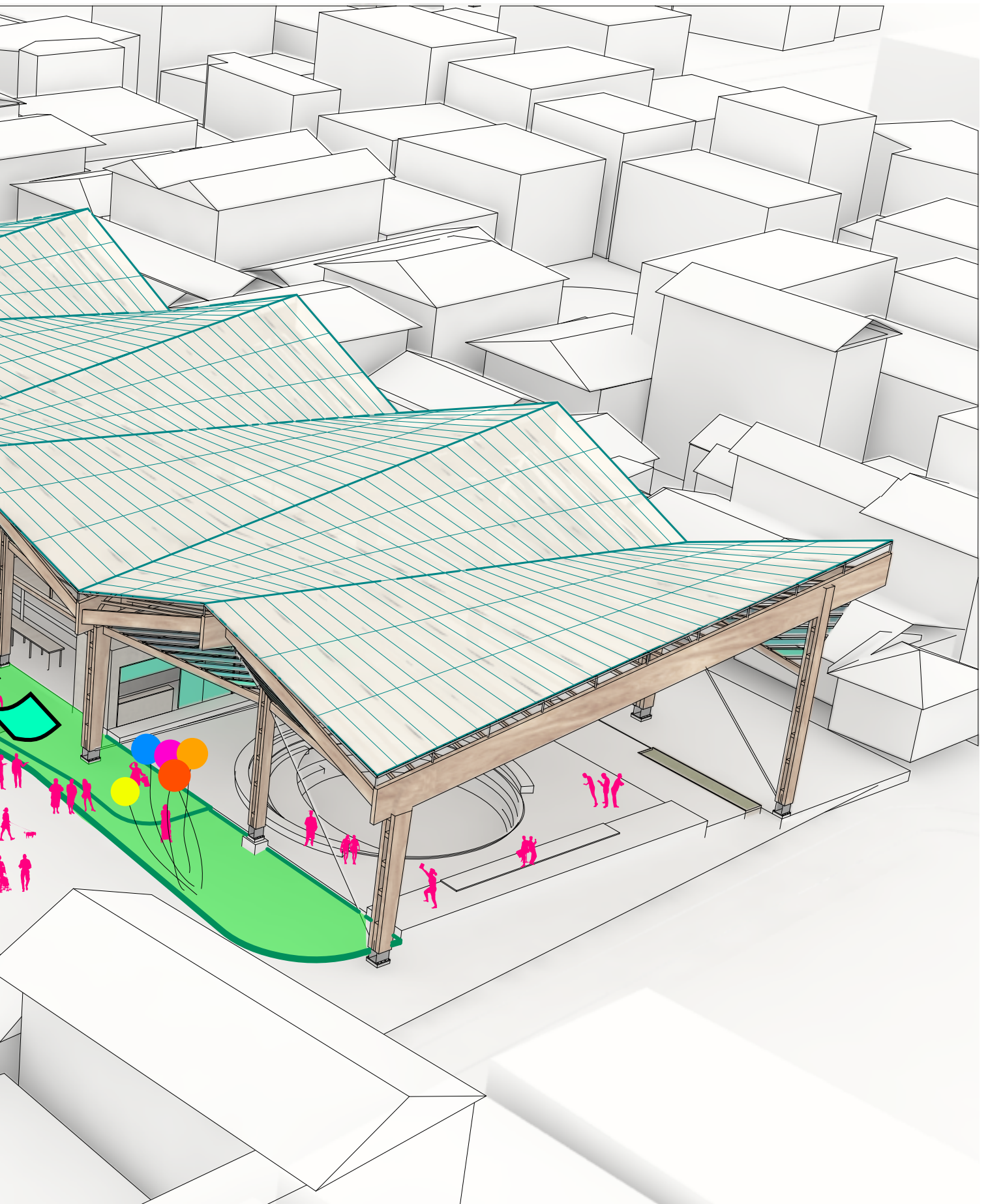








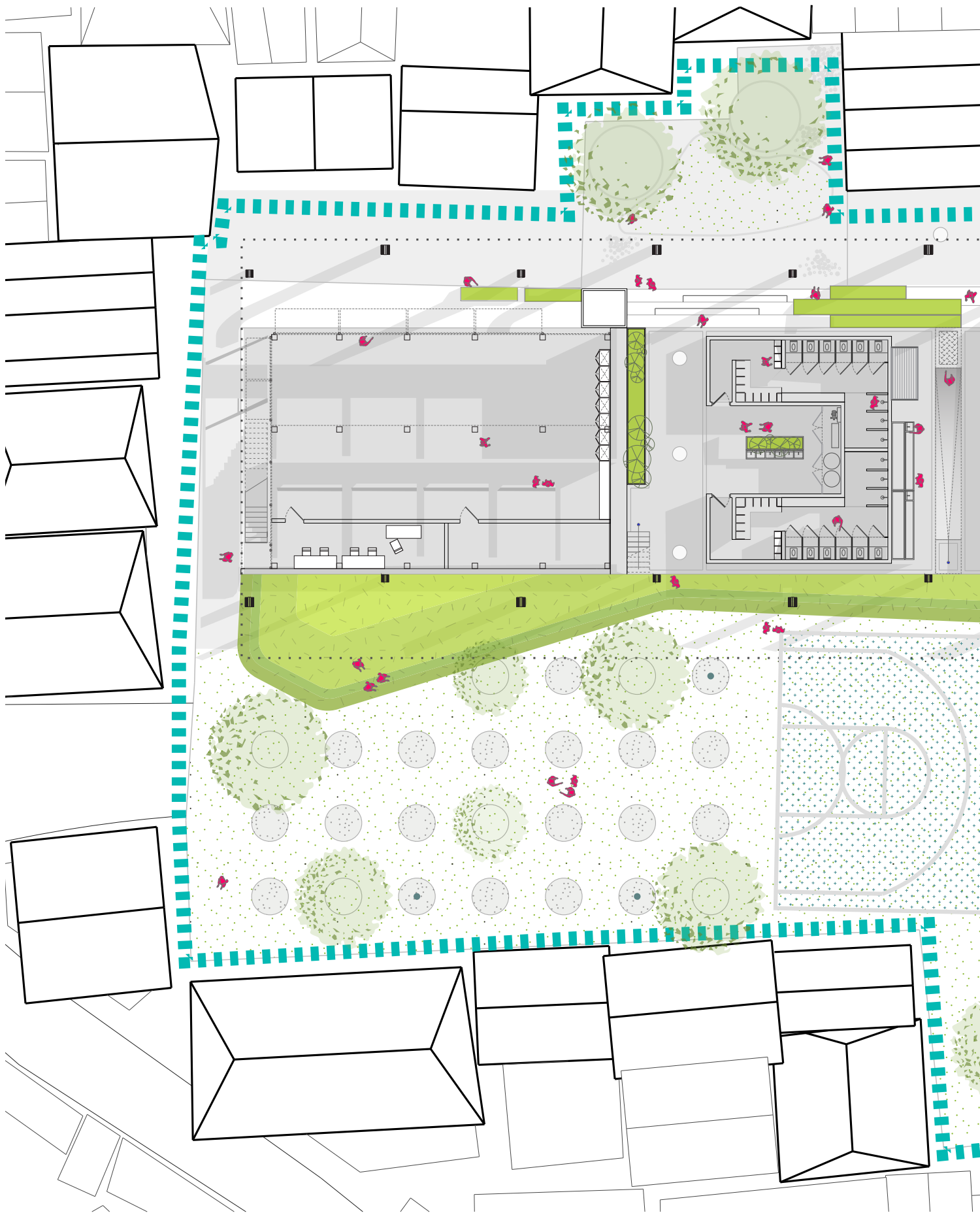




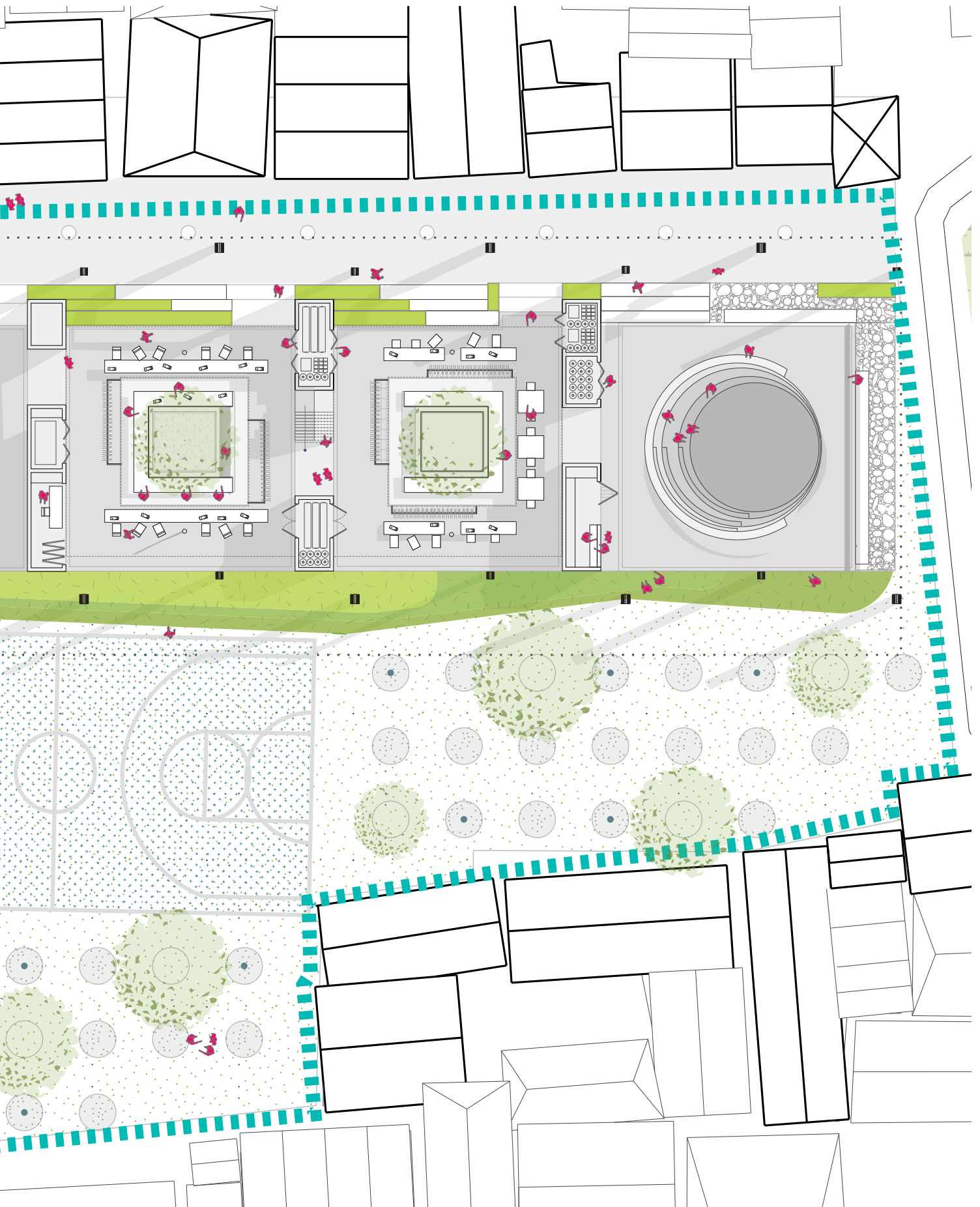
THE TRADITIONAL FUTURE

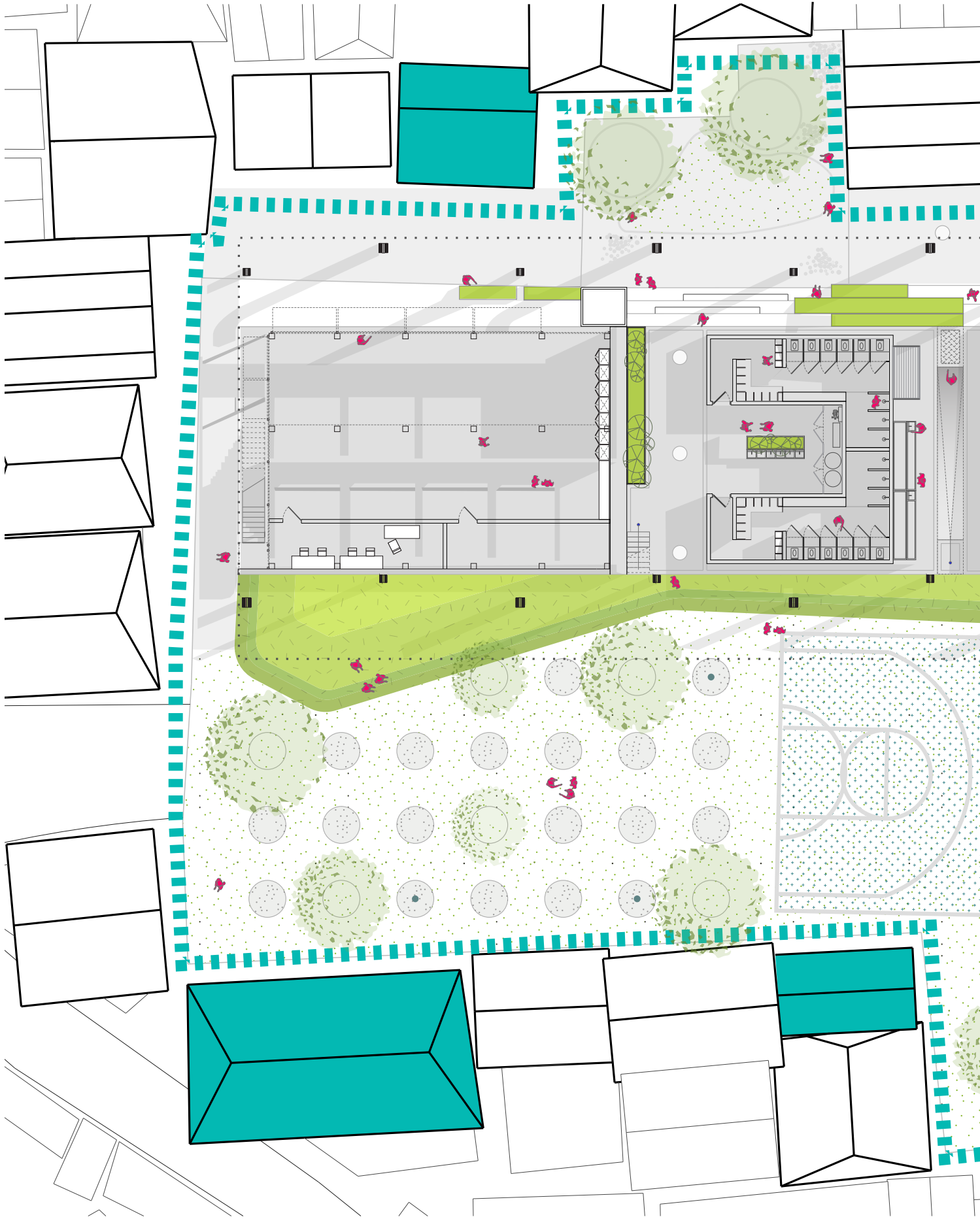
THE SLH AND THE PERIMETER

ECONOMIC ACTIVATION

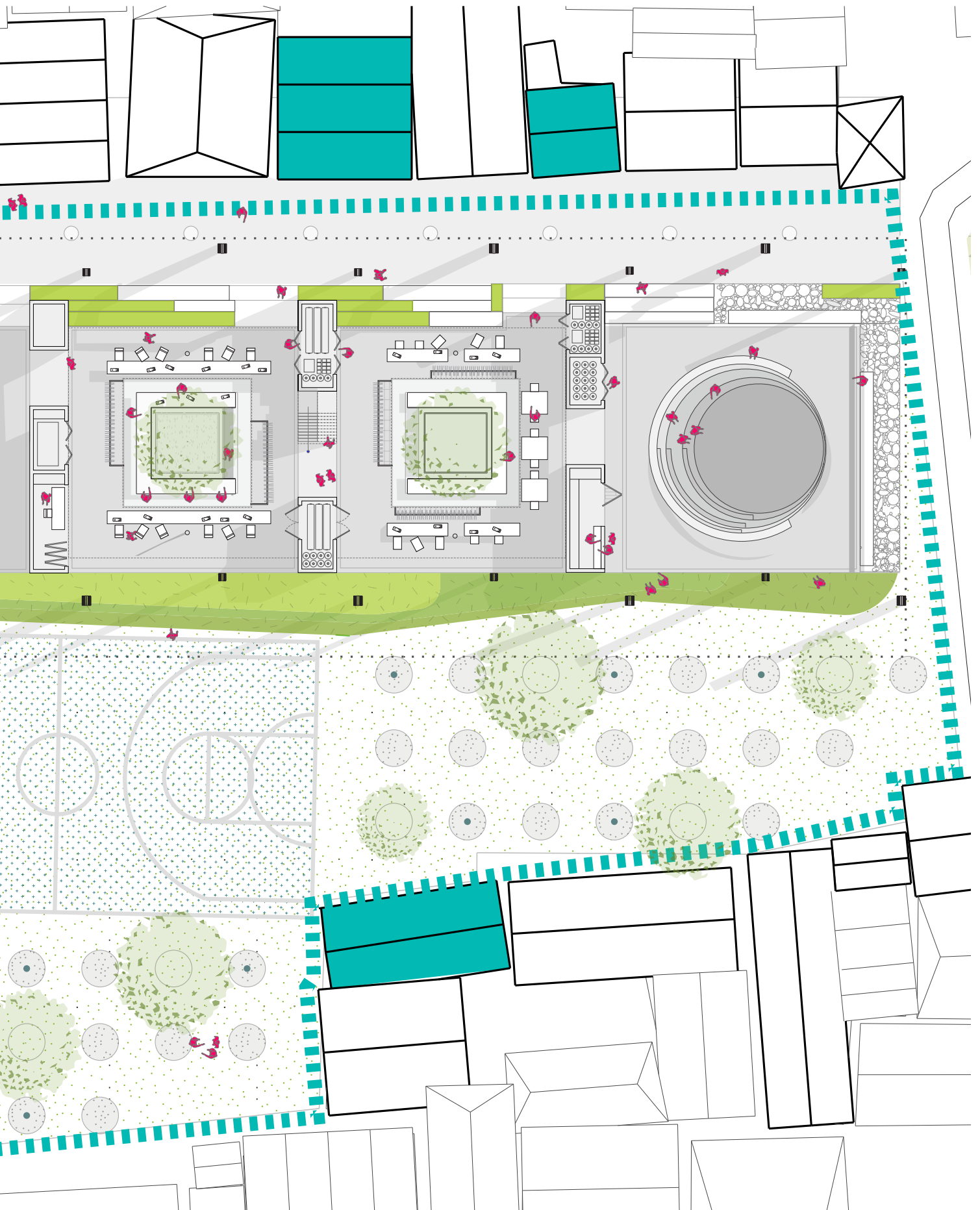


PROGRAMME PLACING





BORDER ACTIVATION



SITE



BORDER ACTIVATION



PROGRAMME INSERTION



NEW PERIMETER PROGRAMME

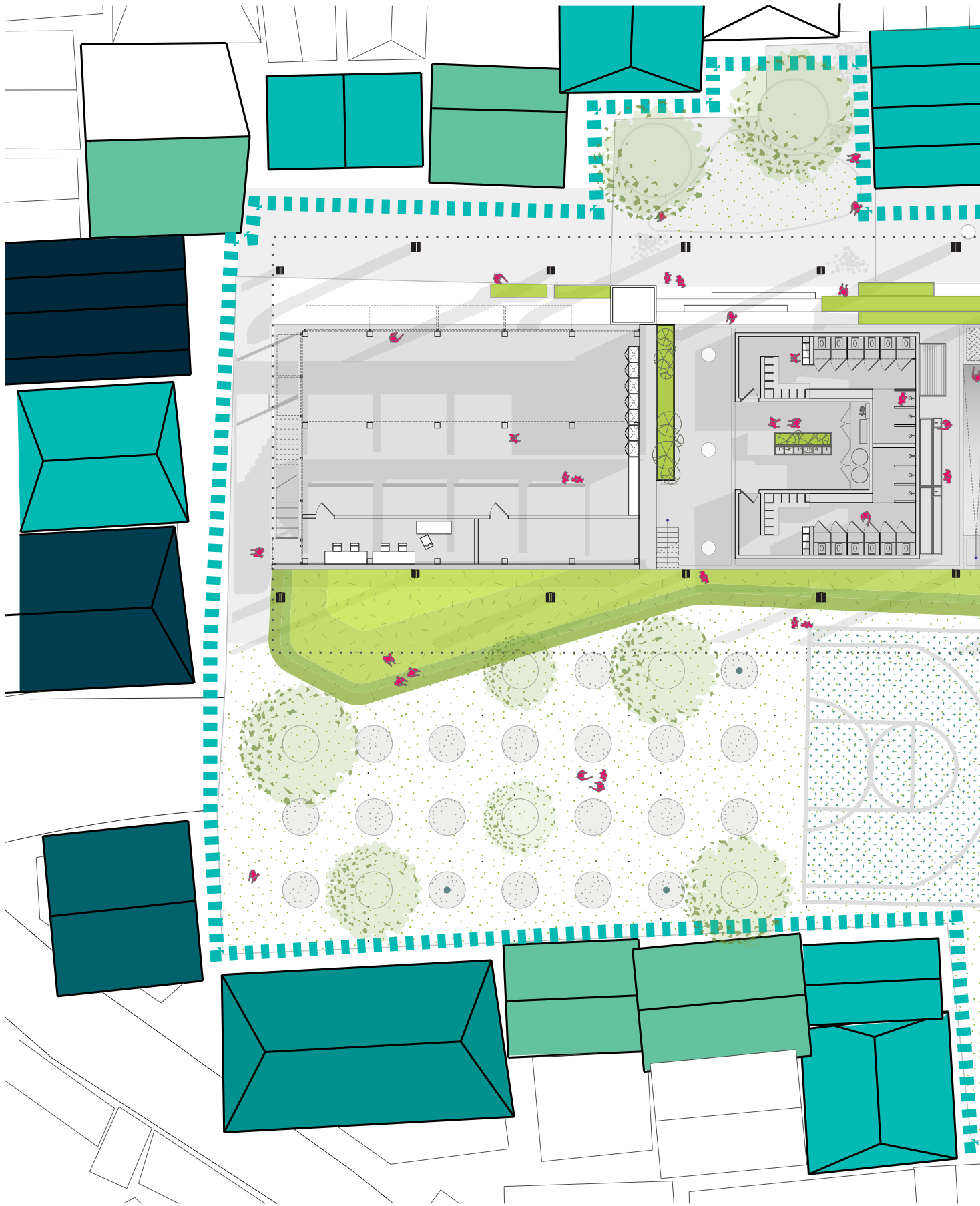


RESPONSE TO HUB NEEDS

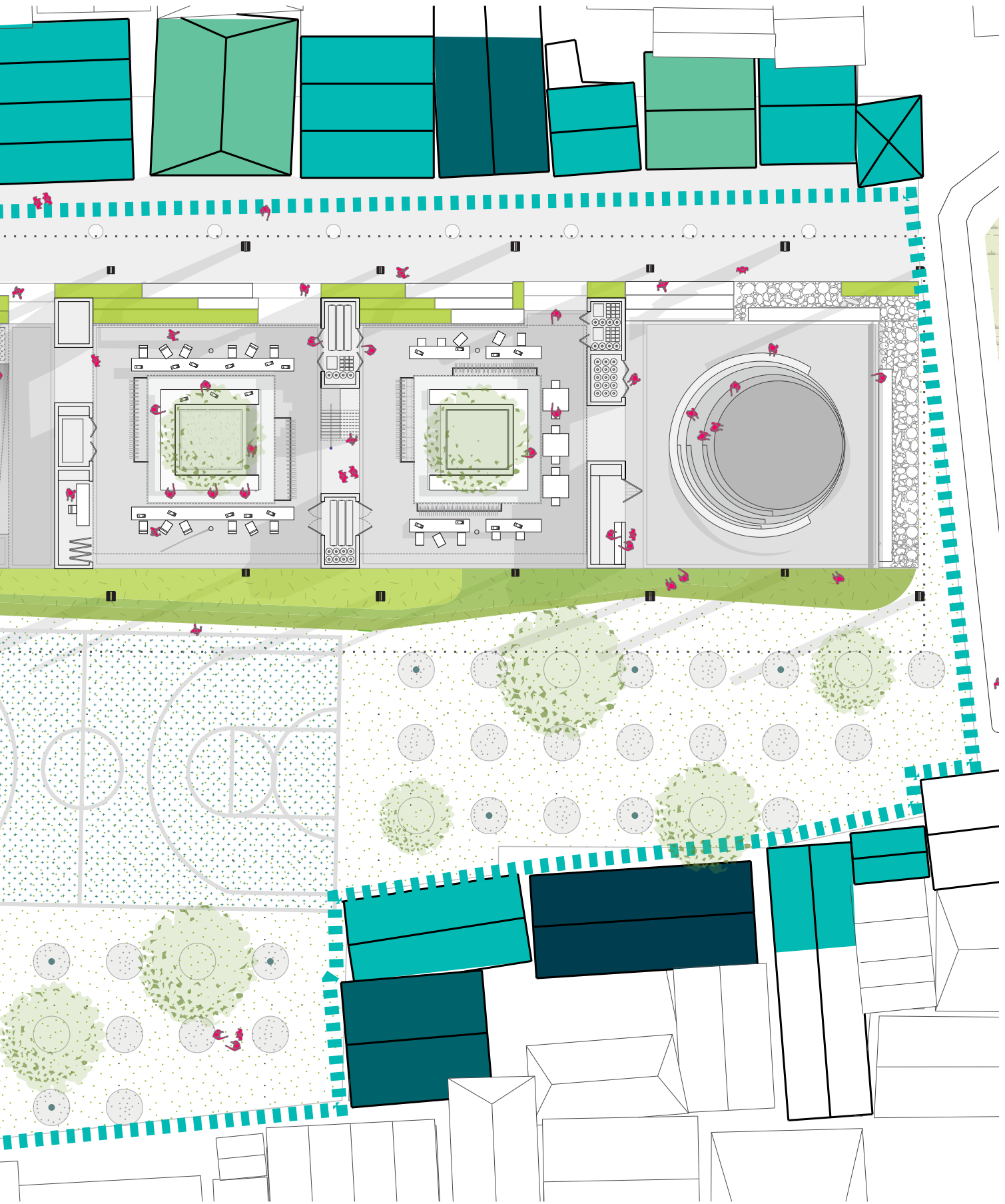


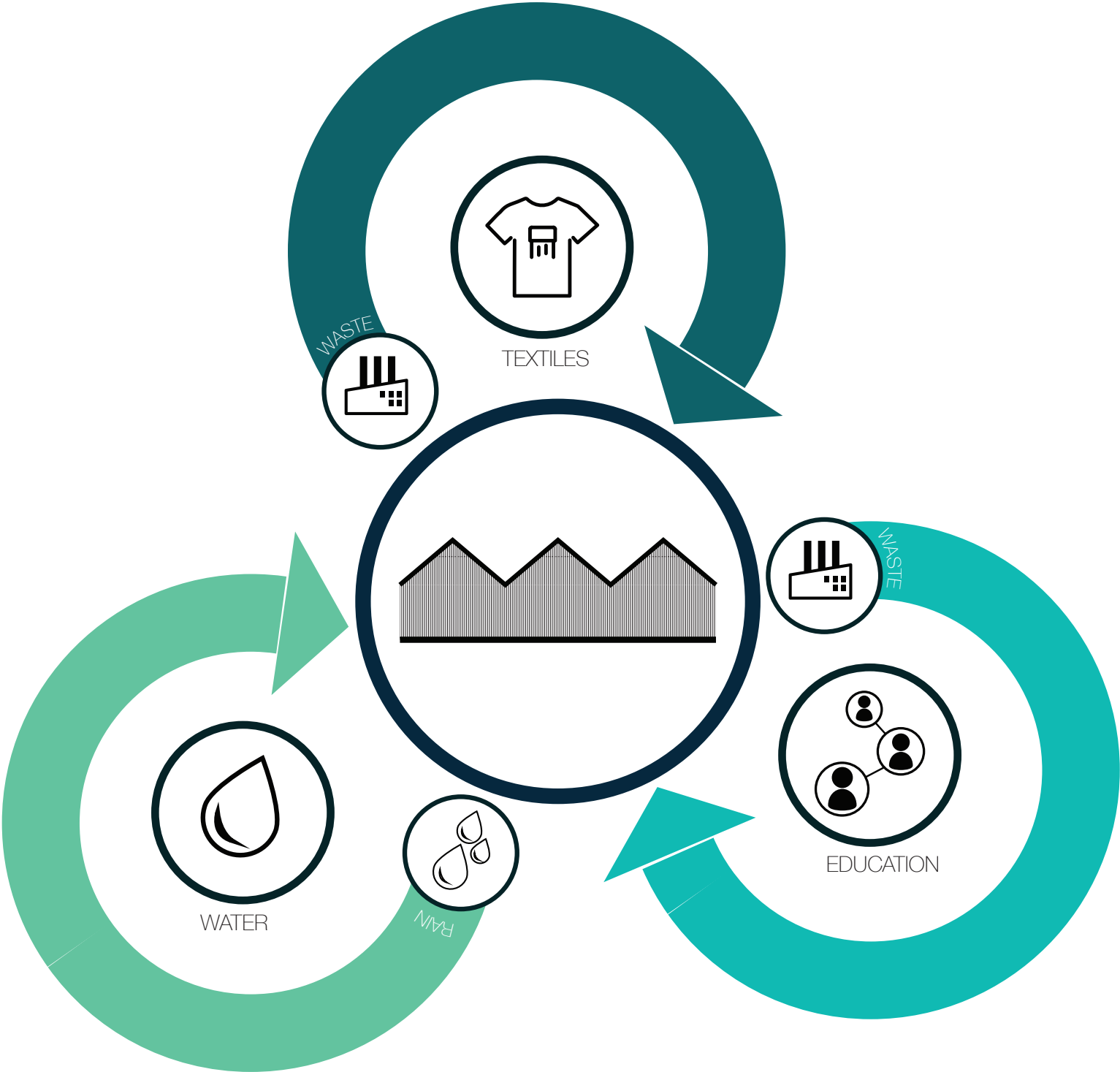
ACTIVATION SPREAD





FULLY ACTIVATED BORDER





THE TRADITIONAL FUTURE

AND THE SECOND LIFE HUB