

01 CASTEL VOLTURNO ADVANCED DESIGN STUDIO

edited by/a cura di Adriana Bernieri, Francesca Coppolino

Master's Program in Architecture
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Castel Volturno Laboratorio di Sintesi Finale
Corso di Laurea Magistrale 5UE in Architettura
Università degli Studi di Napoli Federico II
A.A. 2018-19

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Introduction

An educational and interdisciplinary comparison on a territory such as Castel Volturno represents, for the students in the last year of the Master's Program in Architecture 5UE, an important state of awareness, both from a design and professional point of view, and in the development of a particular sensitivity towards some places.

The publication collects the results of the work carried out during the 2018-2019 academic year, highlighting the powerful laboratory character that the survey area required. The structure of the book reflects, in fact, the experimental work carried out, starting with the exploration of some preliminary themes and methods, examined in the section "Essays"; continuing through the study of the "transepts" and the interaction with the people who inhabit these places; finally, working on assembling and defining a "synthesis" of data and investigations through the design proposals, described in the section "Projects". Proposals not intended as definitive outcomes and in conclusive terms, but as a set of inputs, discoveries, revelations and, therefore, continuously subjected to updating and mutation.

Scenarios of new possible meanings and new transformations are, therefore, the result of this work, composed of different levels of analysis linked to the multiple layers of "sensitivity" towards the places and to the design experimentation, deepened in relation to all levels, details, aspects connected to it.

Introduzione

Un confronto didattico e interdisciplinare su un territorio come Castel Volturno rappresenta, per gli studenti all'ultimo anno del corso di studi in Architettura 5UE, una presa di coscienza importante, sia dal punto di vista progettuale e professionale, che nello sviluppo di una particolare sensibilità nei confronti di alcuni luoghi.

La pubblicazione raccoglie gli esiti del lavoro svolto nell'arco dell'anno accademico 2018-2019, ponendo in evidenza il carattere fortemente laboratoriale che il territorio di indagine ha richiesto. La struttura del libro rispecchia, infatti, il lavoro sperimentale svolto, a partire dall'esplorazione di alcuni temi e metodi preliminari, esaminati nella sezione "Saggi"; proseguendo attraverso lo studio dei "transetti" e l'interazione con le persone che abitano questi luoghi; lavorando, infine, alla messa a sistema e ad una "sintesi" delle informazioni e delle indagini effettuate nelle proposte progettuali, descritte nella sezione "Progetti". Proposte progettuali non intese come esiti definitivi e in termini conclusivi, ma come insieme di input, scoperte, rivelazioni e, pertanto, continuamente sottoposte ad aggiornamento e mutazione.

Scenari di nuovi possibili significati e nuove trasformazioni sono, dunque, il risultato di questo lavoro, composto da diversi livelli di approfondimento legati ai molteplici strati di "sensibilizzazione" verso i luoghi e alla sperimentazione progettuale, approfondita rispetto a tutti i livelli, dettagli, aspetti ad essa connessi.



ESSAYS / SAGGI

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Projects for Castel Volturno.
General Masterplan (2019)

Drawing by A. Landi, V. Valentino

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Progetti per Castel Volturno.
Masterplan generale (2019)

Disegno di A. Landi, V. Valentino

Structuring an Advanced Design Studio within the Master’s Program in Architecture has a lot to do with setting mechanisms that a real urban project would require, starting from the choice of the theme which appears to be very important for many reasons. First of all, it is necessary to consider the different disciplinary components, integrated courses of the Studio, which are intertwined with the architectural design in all phases, bringing into play contents, arguments and methods. Renouncing a pre-constituted sequence – in order to pursue the construction of a plot with a circularity of contents – imposes the choice of a broad and articulated theme, able to positively deal with interferences at different levels. Design process is therefore unitary, yet multidisciplinary, open and problematic. For this complexity of actions and contents, Castel Volturno was considered as an adequate response in terms of experimental territory. In such a place, understanding the reasons for which a situation of civil, social, environmental and landscape crisis has been reached represents the first problem, in order to concretely outline proposals aiming to overturn the current state. Both sides are addressed according a design perspective: this appears to be the most significant contribution that the Design Studio methodology proposes and intends to convey.

Two conditions are then immediately clear and have been placed at the basis of the students’ work: on the one hand, the need to extrapolate, from the complicated general framework, a problem and a node in which the problem appears to be more explicitly expressed; on the other hand, at the same time, the awareness to face one single issue not as an isolated phenomenon, yet within a logic of correlation with further nodes and further difficulties. This scheme aims to demonstrate the impossibility of picking one single criticality of Castel Volturno, in a situation in which all the elements influence each other. In this way, it has been possible to define each student’s task in terms of urban and architectural design, for the construction of a broad and shared perspective of interpretation, together with all the disciplines of the Studio.

Meanwhile and with the progress of the work, a common approach has emerged, for the Studio as direct interlocutor to the differently involved subjects, called to give answers to the complex problems of Castel Volturno, according to political, social, infrastructural issues. Through this process, the students do not only carry out a synthesis of what was previously acquired, but progressively increase their radius of action. In fact, working on a procedural construction of the project, they were originally asked to tighten the area of action according to a multiplicity of variables, and, eventually, to progressively widen the field up again, in order to understand the correlations within a differentiated landscape.

La strutturazione di un Laboratorio di Sintesi finale nel Corso di Laurea Magistrale in Architettura ha molto a che vedere con i meccanismi di impostazione che un reale progetto urbano richiederebbe, a partire dalla scelta del tema che è molto importante, per vari ordini di ragioni. Bisogna innanzitutto considerare le diverse componenti disciplinari, moduli integrati del laboratorio, che si intrecciano con la progettazione architettonica in tutte le fasi, mettendo in campo contenuti, argomentazioni e metodiche proprie. La rinuncia ad una sequenza precostituita e la costruzione di un intreccio, di una circolarità di contenuti, impongono dunque la scelta di un tema ampio e articolato, in grado di mettere in gioco, su piani diversi, contenuti capaci di interferire positivamente ad una costruzione progettuale unitaria, anche se pluridisciplinare, aperta e problematica. A questa complessità di azioni e contenuti, si è ritenuto che potesse rispondere in maniera adeguata la scelta, come territorio di applicazione, di Castel Volturno. In questo luogo, si pone il problema di comprendere le ragioni per cui si è pervenuti ad una situazione di crisi civile, sociale, ambientale e paesaggistica, ma anche di delineare concretamente proposte per ribaltare la situazione. Entrambi gli aspetti, sono affrontati in un’ottica progettuale ed è questo l’apporto significativo che la metodologia adottata all’interno del Laboratorio ha proposto e vuole trasmettere. Sono allora subito chiare due condizioni, che sono state poste alla base del lavoro dei singoli studenti del Laboratorio: la necessità di estrapolare dal complicato quadro generale un problema e un nodo in cui tale problema appariva esplicitarsi in maniera più significativa; ma, nello stesso tempo, di affrontarlo non in maniera isolata, ma in una logica di correlazione con altri nodi e con altri problemi, nella impossibilità di separare una singola criticità di Castel Volturno da tutte le altre, in una situazione in cui tutti gli elementi si influenzano a vicenda. In tal modo, questi passaggi hanno reso possibile definire il compito del singolo studente nell’ambito della progettazione urbana e architettonica, nella costruzione di una prospettiva ampia e condivisa di interpretazione con tutte le discipline del Laboratorio. Parallelamente e con l’avanzare dei lavori, si è delineata una prospettiva di fondo del Laboratorio che, nel suo complesso, si propone come interlocutore diretto rispetto al quadro dei diversi soggetti politici, sociali, infrastrutturali, chiamati a dare risposte alle complesse problematiche di Castel Volturno. Attraverso questo procedimento, gli studenti del Laboratorio non solo effettuano un lavoro di sintesi di quanto precedentemente acquisito, ma incrementano progressivamente il loro raggio d’azione, lavorando ad una costruzione processuale del progetto dove prima si è chiamati a stringere rispetto ad una molteplicità di variabili e poi a riallargare progressivamente il campo per comprendere le correlazioni entro un paesaggio differenziato. Nella dimensione di un territorio dove l’abusivismo, la mancata integrazione



In the dimension of a territory where illegal construction, lack of integration for migrants, pollution (of various kinds), progressive abandonment take on a clear preponderance, the design process has necessarily to graft a loose-patterned mechanism. According to this, a complete form and a predetermined use of a preconceived area cannot be simply assigned: the project has to deal with the construction of a form that changes continuously, that accepts and recycles what exists, that opens up to multiple uses constantly changing its perimeter, incorporating what can be assimilated, giving up pieces not yet available for transformation and change. A loose-patterned action does not only concern the physical condition, but also the disciplinary framework, closely linked to the teaching experience of the Studio. Here, the “boundaries” of the different subjects are completely lost: from technological and environmental issues to landscape design and economic evaluation, the elements of the project are gradually defined, proposing and tracing new disciplinary unknown correlation paths.

A further aspect to pay attention to is the total freedom to which students have been exposed in choosing themes, spaces, functions, plots of any kind. This reveals to be very important from the point of view of student training and subjects then to a logical effort in relation to the project, trying to bring any intuition back to an architectural theme. Therefore, a very important strategy is also discussed from another point of view, trying to respond to the fundamental question of what architecture can do and what is the role of architecture within the theme of Castel Volturno. This process undoubtedly requires precision, competence and exhaustiveness of the answer, in terms of urban planning technique (where intersections with the Municipality’s ongoing planning activities arise) and in terms of architecture, appealing to an important concept regarding the contemporary responsibility of the project. Verticalisms in horizontality, anti-abandonment strategies, “condensers” where emptiness and limits have long been the best, environmental fragilities that becomes typological potentialities pursuing an architectural innovation, find room into individual and general design reasoning. Ultimately, the Design Studio 2018-2019 presents an open result, a design proposal to be delivered to the University of Naples “Federico II”, to the Department of Architecture, to the Municipality of Castel Volturno, as a work that seriously posed the problem of identifying possible directions of development, transformation and modification of a fragile and weakened territory, starting from the careful and conscious reading of the great elements of identification of the city, as well as of those small, tiny, largely forgotten details, whose urban reactivation could lead to enormous design and rebirth potentialities for the city of Castel Volturno.

dei migranti, gli inquinamenti, una situazione di abbandono progressivo assumono una netta preponderanza, il progetto deve necessariamente innestare un meccanismo a maglie larghe, dove non si può semplicemente assegnare una forma compiuta e un uso predeterminato ad un’area precostituita, ma si deve essere disposti alla costruzione di una forma che si modifica continuamente, che accetta e ricicla quanto esiste, che si apre ad usi molteplici e che cambia continuamente la propria perimetrazione, inglobando quanto può essere assimilato anche rinunciando a pezzi non ancora disponibili alla trasformazione e al cambiamento. L’azione a maglie larghe non riguarda solo la condizione fisica, ma anche la condizione disciplinare strettamente legata all’esperienza didattica del Laboratorio, nella quale i “confini” delle diverse discipline si perdono completamente: dalla progettazione tecnica, tecnologica e ambientale al landscape design e alla valutazione economica, sono via via definiti gli elementi di impostazione del progetto, che a sua volta propone percorsi di correlazione disciplinare assolutamente inediti. Un ulteriore fattore su cui porre l’attenzione è la totale libertà a cui gli studenti sono stati esposti nella scelta di temi, spazi, funzioni, intrecci di qualsiasi natura: aspetto che si rivela molto importante dal punto di vista della formazione degli studenti e che li sottopone ad uno sforzo di tipo logico in relazione al progetto, provando a ricondurre qualsiasi intuizione ad un tema di architettura. Si mette dunque in campo una strategia molto importante anche sotto un altro punto di vista, provando a rispondere all’interrogativo fondamentale di cosa può fare l’architettura e quale sia il ruolo dell’architettura entro il tema di Castel Volturno. Questo procedimento esige senza dubbio precisione, competenza ed esaustività della risposta, in termini di tecnica urbanistica (laddove insorgono intersezioni con le pianificazioni in corso di programmazione) e in termini architettonici, facendo appello ad un concetto importante che riguarda la responsabilità contemporanea del progetto. Verticalismi nell’orizzontalità, strategie dell’anti-abbandono, “condensatori” laddove vuoti e limiti hanno da tempo la meglio, fragilità ambientali che divengono potenzialità tipologiche in nome di una innovazione dell’architettura, fanno in questo modo capolino nei ragionamenti progettuali individuali e complessivi. Il risultato del Laboratorio di Sintesi 2018-2019 è in definitiva un risultato aperto, un ragionamento in chiave progettuale da consegnare all’Università di Napoli “Federico II”, al Dipartimento di Architettura, alla Municipalità di Castel Volturno, come un lavoro che si è posto seriamente il problema di individuare degli indirizzi di sviluppo, trasformazione e modificazione di un territorio fragile e indebolito, a partire dalla lettura attenta e consapevole dei grandi elementi di identificazione della città, così come di quelli piccoli, minuscoli, in gran parte dimenticati, ma dalla cui riattivazione urbana potrebbero scaturire enormi potenzialità di progetto e di rinascita per Castel Volturno.

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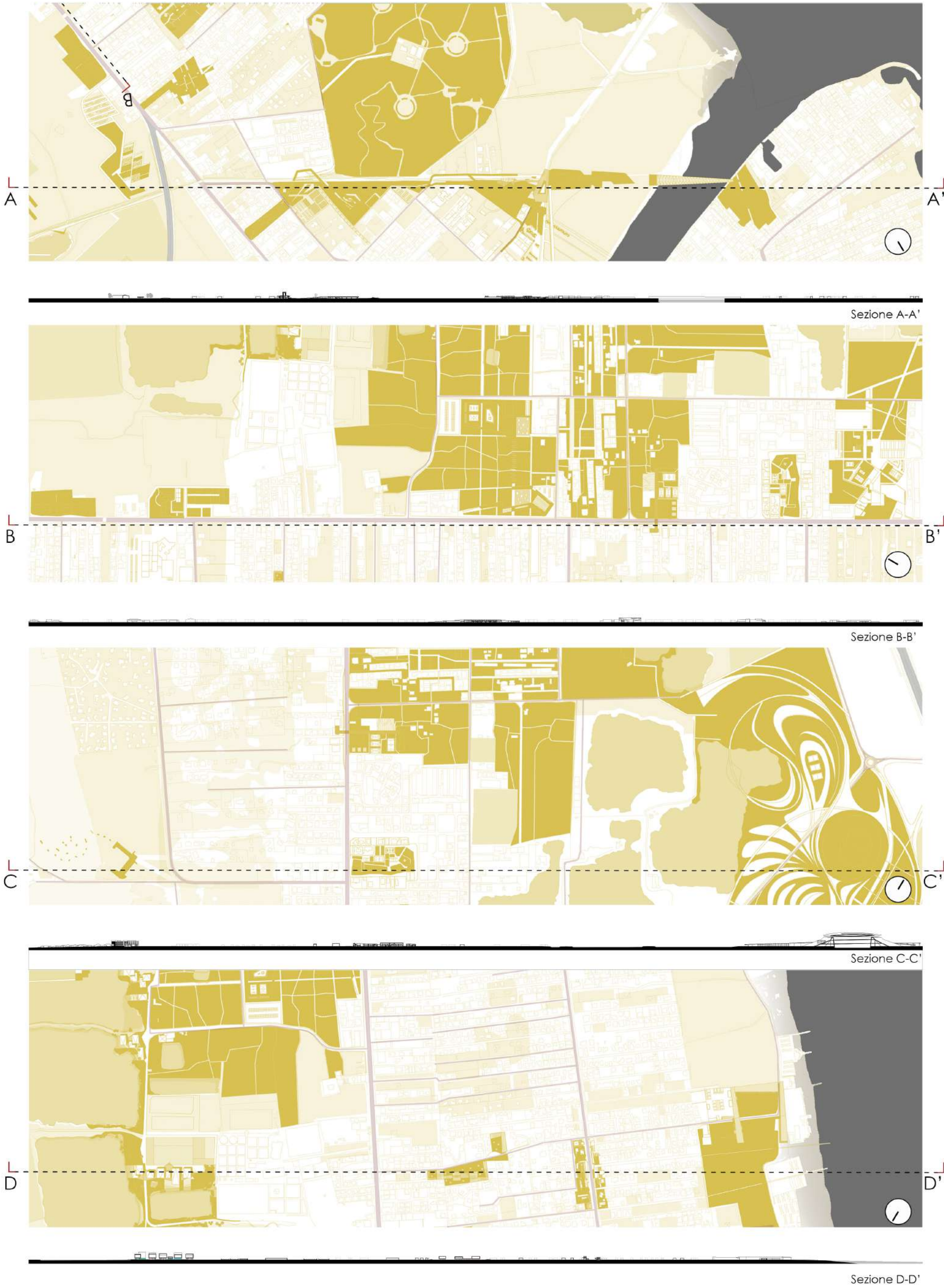
Projects for Castel Volturno.
Sections and Excerpts of General
Masterplan (2019)

Drawing by A. Landi, V. Valentino

Pagina seguente

Progetti per Castel Volturno.
Sezioni e stralci del Masterplan
generale (2019)

Disegno di A. Landi, V. Valentino



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One of the main challenges of the design studio was to make sense of a place – Castel Volturno – that for many reasons escapes the analytical grip of categories better working for the high-density city as a “readable space” – a collection of distributive patterns, urban morphologies, architectural typologies and historical stratifications that our students, living and working in the inner city, learn how to handle from day one when entering the School of Architecture in Napoli. Castel Volturno, at a first glance, appears as a “crazy collage” of physical patterns and objects, social processes and ecologies straddling on different time-space scales. If only addressed through cartographic knowledge and desk research, the place fails to give back the richness and complexity of its extremely irregular and heterogeneous urban form, stretched between local issues and global restructuring processes. The land is one of the leading districts for mozzarella production in the region, a farming area, and a former destination for mass tourism; at the same time, it’s a heavily polluted coastal system, a site of abandoned and dilapidated buildings, home to the largest Nigerian migrant community in Europe, and venue of the NATO headquarter for military operations in the Mediterranean and the Middle East.

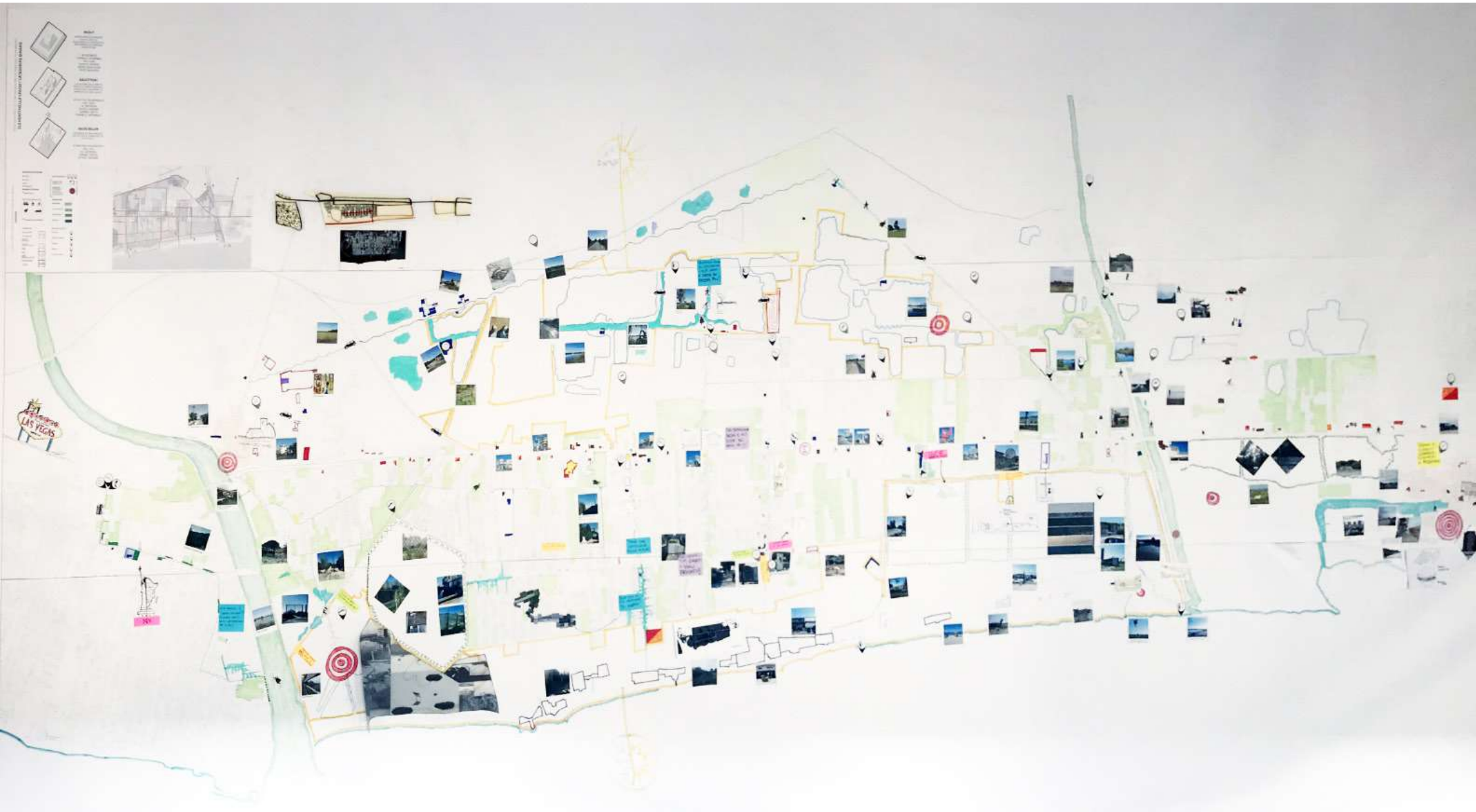
Our method to come to terms with this bewildering heterogeneity was to start the studio experience with a transect expedition, inspired by a growing body of knowledge in the field of landscape design that, drawing upon Alexander von Humboldt’s first transect in South America (Diedrich et al., 2014; Tietjen, 2018), engages with transverse sections of the territory to collect empirical data while providing a bodily experience of objects, community practices, conflicts, relations and transformative potentials of places. In a way, transect design is about giving up with zenithal knowledge and becoming immersed in the contingency and partiality of sections; it’s about suspending the powerful and yet reassuring guide of big pictures to grasp the finer grain of human-objects relations. Even more so when performing, as in our studio, traveling transects, «a dynamization of the transect method so that it allows mobile, relational and open-ended knowledge generation, by adding “traveling” to “transect” [...] a way to rigorously capturing material and immaterial site qualities through fieldwork while “designing” their interpretation in a journey encompassing field preparation, being in the field and refining field findings in various acts of thinking together» (Braae and Steiner, 2018).

As a pre-expedition tool, we provided students with a map displaying ten different transects in Castel Volturno, each of them identified both following common cartographic sense and addressing knowledge from other studies and our own experience of the place. Routes encompassed residential patterns, wetlands, sprawling

Una delle principali sfide del laboratorio di progettazione è stata quella di dare un senso ad un luogo – Castel Volturno – che per molte ragioni sfugge al controllo analitico di categorie che funzionano meglio per le città ad alta densità come “spazio leggibile” – una raccolta di modelli distributivi, morfologie urbane, tipologie architettoniche e stratificazioni storiche che i nostri studenti, vivendo e lavorando nella città consolidata, imparano a gestire sin dal primo giorno che intraprendono gli studi alla Scuola di Architettura di Napoli. Castel Volturno, a prima vista, si presenta come un “folle collage” di modelli e oggetti fisici, processi sociali ed ecologie a cavallo tra scale spazio-temporali diverse. Se indagato solo attraverso la conoscenza cartografica e le ricerche documentali, questo luogo non riesce a restituire la ricchezza e la complessità della sua forma urbana estremamente irregolare ed eterogenea, teso tra questioni locali e processi di riorganizzazione globale. Questo territorio è una delle aree trainanti della regione per la produzione di mozzarella, un’area agricola, e in passato una meta del turismo di massa; allo stesso tempo, è un sistema costiero fortemente inquinato, un luogo di edifici abbandonati e fatiscenti, sede della più grande comunità migratoria nigeriana in Europa e del quartier generale della NATO per le operazioni militari nel Mediterraneo e nel Medio Oriente.

Il nostro metodo per scendere a patti con questa stupefacente eterogeneità è stato quello di iniziare l’esperienza di studio con l’espedito del transetto, ispirato da una raccolta crescente di conoscenze nel campo della progettazione del paesaggio che, a partire dal primo transetto di Alexander von Humboldt in Sud America (Diedrich et al., 2014; Tietjen, 2018), si occupa di sezioni trasversali del territorio per raccogliere dati empirici e fornire un’esperienza corporea di oggetti, pratiche comunitarie, conflitti, relazioni e potenzialità trasformative dei luoghi. In un certo senso, il transetto di progetto consiste nel rinunciare alla conoscenza zenitale e nell’immergersi nella contingenza e nella parzialità delle sezioni; si tratta di sospendere la guida potente e tuttavia rassicurante delle grandi immagini per cogliere la grana più fine delle relazioni uomo-oggetti. Ancora di più quando, come è stato nel nostro laboratorio, attraversando i transetti si compie «a dynamization of the transect method so that it allows mobile, relational and open-ended knowledge generation, by adding “traveling” to “transect” [...] a way to rigorously capturing material and immaterial site qualities through fieldwork while “designing” their interpretation in a journey encompassing field preparation, being in the field and refining field findings in various acts of thinking together» (Braae e Steiner, 2018).

Come strumento di pre-spedizione, abbiamo fornito agli studenti una mappa che mostra dieci diversi transetti a Castel Volturno, ciascuno dei quali era stato identificato sia attraverso un comune senso cartografico che basandosi su conoscenze derivanti da ulteriori studi e dalla nostra esperienza del luogo. I percorsi comprendevano tessuti residenziali, zone umide, aree in espansione



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Traveling Transects Output
(2018)

Drawing by Design Studio
Students

Página siguiente

Risultato dei *Traveling Transects*
(2018)

Disegno degli studenti del
Laboratorio

areas and landmarks – as addressed in the official maps – as well as places we thought as relevant for social and political reasons (migrant housing, polluted areas, enclaves). Purposefully, all transects were traced on the map according to an abstract logic, even when crossing specific situations where we knew some (physical and social) interruption of the section would occur. The idea was to give students a trace they would then experience and re-design throughout their research expedition, well equipped with a methodological toolbox to manage the journey: participant observation protocols, sketched interviews, photographic surveys, questionnaires and, most importantly, their own body and perception actively involved in the traveling transect.

Travels can do wonders: students had the chance to interview people (residents, members of the African community, NGO workers, farmers, tourists, hunters and nature lovers), to survey urban space at a close distance, and to put themselves (their prejudices, their skills and worldviews) out in the field and realize that, in a landscape design experience, the researcher herself is part of the context, part of the problem as well as the solution. Back to the classroom, on a giant print of the transect map hanging on the wall, students started to place words, sketches, notes, little cardboard models, wool threads, photographs, and the like, transforming a bi-dimensional object into a collective installation bringing back emotions and findings from the travel to our common ground – the studio transect map. During classroom work, each student contributed, with her/his own empirical knowledge and personal sensibility, to re-trace the abstract transects of the first assignment and change them into actual routes of empirical knowledge. By doing so, each of them was able to identify a problem, a site, a network of relations, a possibility for change to work on through design.

Most importantly, the actual transects, as experienced and shared on the studio map, provided a novel understanding of a place that, as stated above, was more puzzling than ever when we began the studio. Multiple possibilities – to cross areas that, according to the official map, work just as enclosures; to realize how tight is self-confinement in the homes within sprawling areas; to discover a whole world of urban-rural relations out of the dominating one-way perception of the Domiziana, Castel Volturno main road – came into play through the assemblage of empirical research. Out of this shared design experience, each student was able to find motivation and drive to develop the main studio assignment: a complex project meant to both understand the place and provide a possibility for a better future.

e punti di riferimento – come indicato nelle mappe ufficiali – così come luoghi che abbiamo ritenuto rilevanti per motivi sociali e politici (abitazioni per migranti, aree inquinate, enclave). Volutamente, tutti i transetti sono stati tracciati sulla mappa secondo una logica astratta, anche quando attraversando situazioni specifiche sapevamo si sarebbe verificata qualche interruzione (fisica e sociale) della sezione. L’idea era quella di dare agli studenti una traccia di cui avrebbero poi fatto esperienza e riprogettato durante la loro missione di ricerca, ben attrezzati con una cassetta di strumenti per organizzare il viaggio: protocolli di osservazione partecipata, interviste disegnate, indagini fotografiche, questionari e, cosa più importante, il proprio corpo e la propria percezione coinvolti attivamente nel transetto itinerante.

I viaggi possono fare meraviglie: gli studenti hanno avuto la possibilità di intervistare persone (residenti, membri della comunità africana, lavoratori di ONG, agricoltori, turisti, cacciatori e amanti della natura), di sondare lo spazio urbano a distanza ravvicinata e di mettere se stessi (i loro pregiudizi, le loro abilità e visioni del mondo) sul campo e rendersi conto che, in un’esperienza di progettazione del paesaggio, il ricercatore stesso è parte del contesto, parte del problema così come della soluzione. Tornati in aula, su una stampa molto grande della mappa del transetto esposta al muro, gli studenti hanno iniziato a posizionare parole, schizzi, appunti, modellini di cartone, fili di lana, fotografie e simili, trasformando un oggetto bidimensionale in un’installazione collettiva che riportasse emozioni e scoperte dal viaggio al nostro campo comune – la mappa dello studio del transetto. Durante il lavoro in aula, ogni studente ha contribuito, con la propria conoscenza empirica e sensibilità personale, a ricalcare i transetti astratti del primo lavoro e a cambiarli in percorsi reali di conoscenza empirica. Così facendo, ognuno di loro è stato in grado di identificare un problema, un sito, una rete di relazioni, una possibilità di cambiamento su cui lavorare attraverso il progetto. Soprattutto, i transetti reali, come sperimentato e condiviso attraverso la mappa del laboratorio, fornivano una comprensione innovativa di un luogo che, come detto in precedenza, era più oscuro che mai quando abbiamo iniziato. Molteplici possibilità – di attraversare aree che, secondo la mappa ufficiale, funzionano solo come recinti; di realizzare quanto sia stretto l’auto-confinamento domestico in aree ad espansione incontrollata; di scoprire un intero mondo di relazioni urbano-rurali al di fuori della percezione prevalente che si ha della Domiziana, la strada principale di Castel Volturno, come di strada a senso unico – sono entrate in gioco attraverso l’assemblaggio di ricerche empiriche. Partendo da questa esperienza progettuale condivisa, ogni studente è stato in grado di trovare motivazione e impulso a sviluppare il principale compito richiesto dal laboratorio: un progetto complesso pensato sia per comprendere il luogo che per fornire la possibilità di un futuro migliore.



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Transects Map (2018)

Drawing by Design Studio
Students

Página siguiente

Mappa dei transetti (2018)

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The design studio on Castel Volturno explored the potentials of an integrated decision-making approach, where designing transects means thinking through complex values according to a multi-dimensional perspective, taking into account economic and no-economic values, use-values, non-use values and intrinsic values (Fusco Girard and Nijkamp, 1997) and their synergic and complementary relationships. Multiple values correspond to multiple forms of knowledge and express not linear relations and dynamics between knowledge and values and their interpretations within a self-feeding process, overcoming different kinds of limits, and having plural “insights” in order to formulate a “situated strategy” addressing a “situated decision problem” (Liew and Sundaram, 2009).

The students have been involved in the elaboration of strategic goals and site-specific actions able to generate new values from the plurality of knowledge and the peculiarity of the context: with its normative, spatial, temporal, cultural, social and cognitive features, the complex environment of Castel Volturno becomes the frame in which designing responses and behaviours can be shaped.

The integrated perspective considers evaluation as an activity embedded in the transects designing process (Deal, 2017; CATS, 2019), underpinning the dialogue between knowledge and values in order to translate such dialogue into the identification of relevant values and related meanings, the exploration of opportunities and the elaboration of alternatives; it measures possible impacts and effects while managing complex and multiple priority systems. The use of a combination of techniques penetrates and includes informal, “soft spaces” of decision, able to complement the more formal process, combining flexible and functional approaches with formal designing strategies, and considering decision support versus cooperation support.

The methodological framework applied explores the relation among knowledge mobilisation, values identification and the construction of spatial strategies, articulated into four phases:

1. recognising a decision opportunity – this phase is related to the definition of the problem situation and aims at highlighting the multiple dimensions of the context (spatial, geographic, economic, social, environmental, anthropologic and cultural) by analysing soft and hard data, elaborating specific indicators, and activating various forms of knowledge (explicit, systematized, experiential/practical-contextual, implicit) with respect to specific needs; the ultimate goal of this phase is to identify spaces for action representing opportunities for a synergistic local development;
2. specifying values – this phase aims at identifying the values embedded in the

Il laboratorio di progettazione su Castel Volturno ha indagato le potenzialità di un approccio decisionale integrato, in cui progettare transetti significa pensare attraverso valori complessi secondo una prospettiva multidimensionale, tenendo conto dei valori economici e non economici, dei valori d’uso e di non uso, dei valori intrinseci (Fusco Girard e Nijkamp, 1997) e delle loro relazioni sinergiche e complementari. I molteplici valori corrispondono a svariate forme di conoscenza ed esprimono relazioni non lineari e dinamiche tra la conoscenza, i valori e le loro interpretazioni all’interno di un processo che si autoalimenta, superando diversi limiti, e fornendo “prospettive” differenti per formulare una “strategia situata” che affronti “un processo decisionale localizzato” (Liew e Sundaram, 2009).

Gli studenti sono stati coinvolti nell’elaborazione di obiettivi strategici e di azioni *site-specific* in grado di generare nuovi valori dalla pluralità delle conoscenze e dalla peculiarità del contesto: con le sue caratteristiche normative, spaziali, temporali, culturali, sociali e cognitive, il complesso contesto di Castel Volturno diventa la cornice in cui si può dare forma a risposte e atteggiamenti progettuali.

L’approccio integrato considera la valutazione come un’attività incorporata nel processo di progettazione dei transetti (Deal, 2017; CATS, 2019), alla base del dialogo tra conoscenze e valori, al fine di tradurre tale dialogo nell’individuazione dei valori pertinenti e dei significati correlati, nell’esplorazione delle opportunità e nell’elaborazione di alternative; misura i possibili impatti ed effetti, gestendo sistemi prioritari complessi e multipli. L’uso di una combinazione di tecniche penetra e comprende l’informale, “spazi morbidi” di decisione, in grado di integrare il processo più formale, combinando approcci flessibili e funzionali con strategie di progettazione formale e considerando i sistemi di supporto alla decisione a sostegno della cooperazione.

Il quadro metodologico applicato esplora la relazione tra mobilitazione delle conoscenze, identificazione dei valori e costruzione di strategie spaziali, articolate in quattro fasi:

1. riconoscere un’opportunità decisionale – questa fase è connessa alla definizione del problema e punta a mettere in evidenza le molteplici dimensioni del contesto (spaziale, geografico, economico, sociale, ambientale, antropologico e culturale), analizzando dati *soft* e *hard*, elaborando indicatori specifici e attivando varie forme di conoscenza (esplicita, sistematizzata, esperienziale/pratico-contestuale, implicita) rispetto a specifiche esigenze; l’obiettivo finale di questa fase è quello di individuare spazi di azione che rappresentino opportunità di sviluppo locale sinergico;
2. specificare i valori – questa fase mira ad identificare i valori incorporati nella



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Pictures from Castel Volturno (2018-19) by Design Studio students

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Fotografie da Castel Volturno (2018-19) degli studenti del Laboratorio

activated knowledge; special attention is paid to capturing and exploring local complex social values, to explaining the situated frame and to disclosing existing objectives and any existing conflicts, by an institutional analysis and a stakeholders map, useful for the elaboration of rich pictures and the identification of preferences;

3. elaborating strategic alternatives – the action space is explored in terms of opportunities within a broader decision-making context able to deal with shared knowledge and values and fostering a network of plural micro-decisions in the light of local potential and criticalities;

4. identifying situated, incremental and feasible actions – this phase responds to the need for defining “preferable choices” arising from dynamic and flexible learning processes and expressing integration and complementarity between procedural strategies and transformative strategies, analysing the economic feasibility and the cooperation model among the different stakeholders involved, and including the time dimension in a dynamic perspective.

The identification of possible transformation opportunities for Castel Volturno territory becomes a way of making existing values explicit and, at the same time, elaborating new context-sensitive values. The evaluation techniques selected enabled an exploration which, whilst taking into account the different dimensions of a context did not compromise the richness of the knowledge framework to be constructed, testing the economic models to promote cooperative developments.

conoscenza attivata; particolare attenzione è rivolta alla captazione e all’esplorazione di valori sociali locali complessi, alla spiegazione del quadro locale e alla divulgazione degli obiettivi esistenti e di eventuali conflitti esistenti, attraverso un’analisi istituzionale e una mappa degli stakeholders, utili per l’elaborazione di quadri conoscitivi ricchi di informazioni e per l’identificazione delle preferenze;

3. elaborare alternative strategiche – lo spazio d’azione è esplorato in termini di opportunità all’interno di un più ampio contesto decisionale, in grado di affrontare le conoscenze e i valori condivisi e di promuovere una rete di micro-decisioni plurali alla luce delle potenzialità e delle criticità locali;

4. identificare azioni localizzate, incrementali e realizzabili – questa fase risponde alla necessità di definire “scelte auspicabili” derivanti da processi di apprendimento dinamici e flessibili e di esprimere l’integrazione e la complementarità tra strategie procedurali e strategie trasformative, analizzando la fattibilità economica e il modello di cooperazione tra i differenti stakeholders coinvolti, e includendo la dimensione temporale in una prospettiva dinamica.

L’individuazione di possibili opportunità di trasformazione per il territorio di Castel Volturno diventa un modo attraverso cui sono resi espliciti i valori esistenti e, allo stesso tempo, sono elaborati nuovi valori attenti alle specificità del contesto. Le tecniche di valutazione selezionate hanno permesso un’esplorazione che, pur tenendo conto delle diverse dimensioni di un contesto, non ha compromesso la ricchezza del quadro di conoscenze da costruire, sperimentando modelli economici per promuovere gli sviluppi cooperativi.

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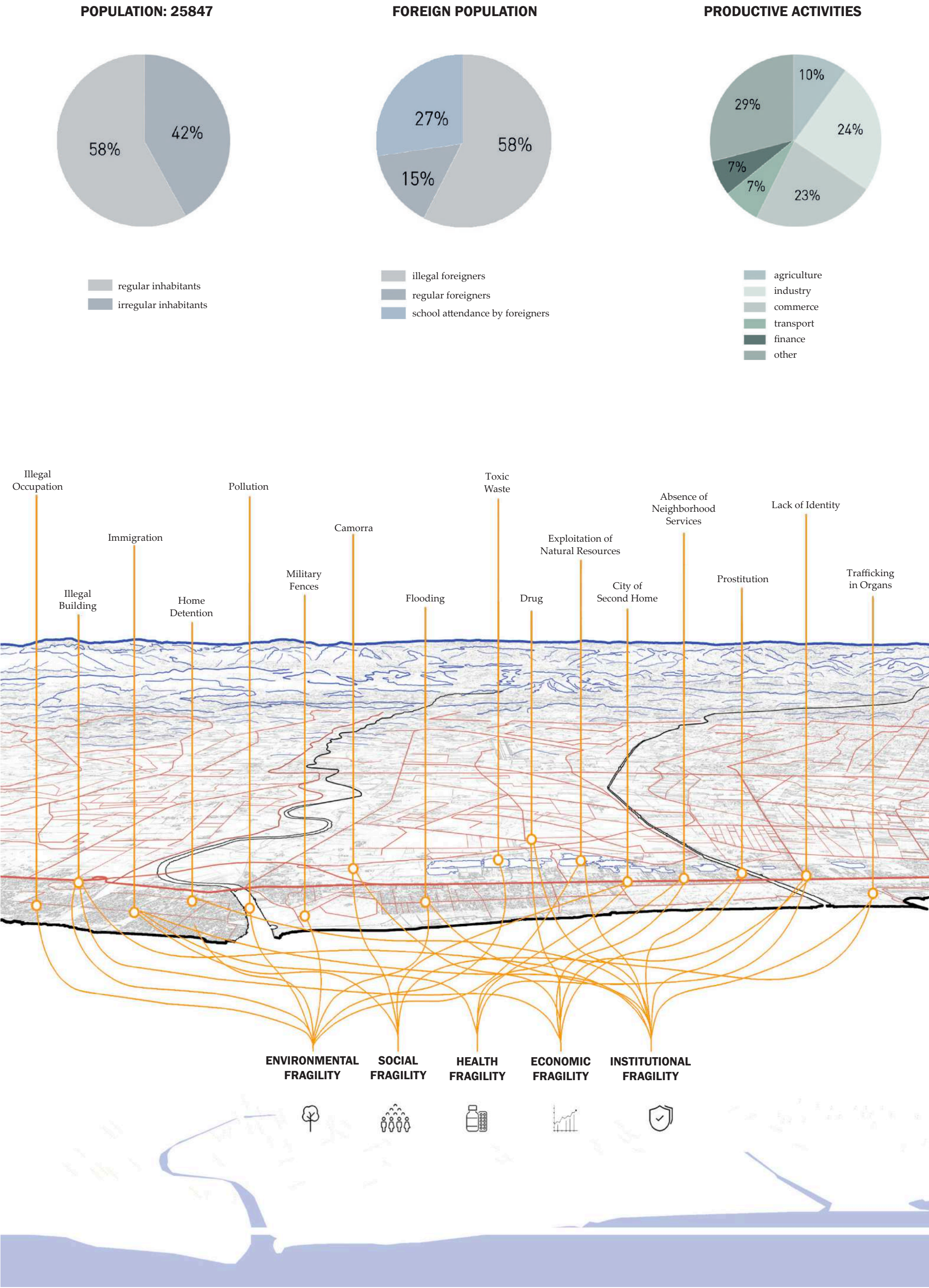
Diagrams about Population, Activities, Territorial Fragilities (2019)

Drawing by E. Barone, R. Dell’Erario, F. Esposito, M. Masi

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Diagrammi sulla popolazione, le attività, le fragilità territoriali (2019)

Disegno di E. Barone, R. Dell’Erario, F. Esposito, M. Masi



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The relationship between greenery and the buildings: the integration of green facades

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Il rapporto tra il verde e il costruito: l'integrazione del verde in facciata

Environmental issues are increasingly assuming a central role on a global, national and regional scale. In recent decades, guidelines and directives have been issued to counter human-driven climate change, starting with the 2009 Copenhagen conference and the United Nations conference (COP21). The European Institutions have set important goals for 2030, in relation to 1990, to reduce greenhouse gas emissions by 40%, improve energy efficiency by at least 32.5% and increase the use of energy from renewable sources. In a context of energy poverty and climate change, in which increasingly stringent objectives are set, the construction sector assumes particular importance, indeed, it is responsible for about 40% of CO₂ global emissions. In this regard, the European community since 2002 has taken steps to introduce the first measures and guidelines in terms of building energy efficiency with the EPBD Directive (Energy Performance of Building Directive) 2002/91/EU. The first European directive on building energy matters provides for the application of minimum requirements in terms of energy performance for both new buildings and existing buildings. With the EPBD Recast 2010/31/EU directive even more ambitious objectives have been introduced, establishing the achievement of the nZEB standard for all new buildings starting from 2021, and starting from 2019 for public ones. Directive 844/2018 extended this objective to existing buildings, both public and private, establishing that by 2050, all the building stock will have to comply the nZEB standard. At national level, the European Directives have been transposed and transferred into national legislation, respectively, with Law 90/2013 and Legislative Decree 48/2020, which together with Ministerial Decree 26/06/2015, implement the European requirements, and introduce calculation methods to define the parameters of energy efficiency, the containment of dispersions, passive cooling, and the use of energy from renewable sources.

In a global and national context of ambitious energy intentions, the project of new buildings and the redevelopment of existing ones must be aimed at reducing urban heat islands, satisfying new needs for thermal comfort, and containing energy demand. The projects developed for the municipality of Castelvoturno, are configured precisely in this perspective. Energy-saving and environmental sustainability, with particular attention to the use of energy from renewable sources, are the key features of the proposed projects. Starting from the building envelope, to contain the thermal energy dispersions between the inside and the outside, the opaque envelope, both horizontal and vertical, has been suitably insulated, preferring thermal insulation from the outside. In compliance with the thermal transmittance limits of the Ministerial Decree of 26/06/2015 for the climatic zone C, of which Castelvoturno is part, the choice of the thermal insulation was carried out based on the specific application, also evaluating the mechanical

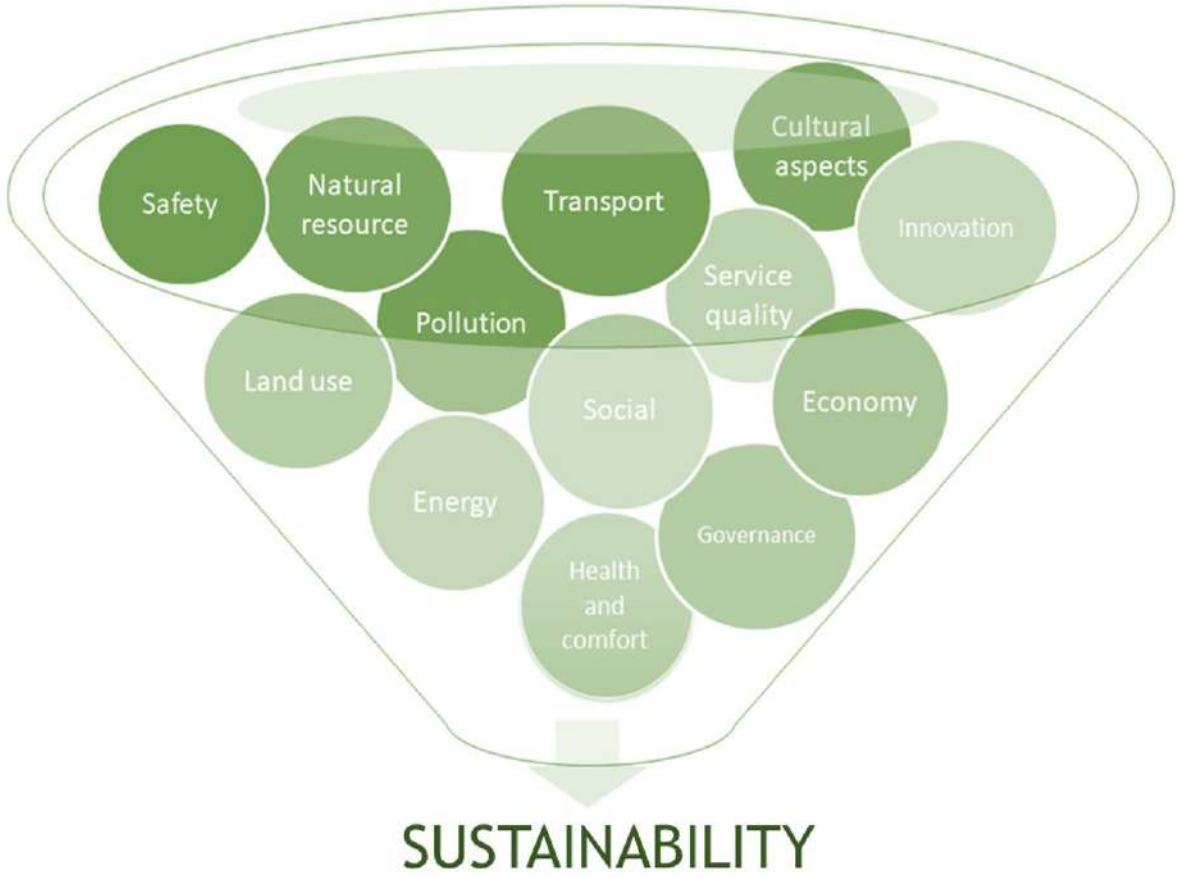
Le problematiche ambientali stanno assumendo sempre più un ruolo di centrale interesse a scala globale, nazionale e regionale. Negli ultimi decenni, sono state emanate linee guida e direttive per contrastare il cambiamento climatico determinato dall’uomo, a partire dalla conferenza di Copenaghen del 2009 e dalla conferenza delle Nazioni Unite (COP21). Le Istituzioni Europee hanno stabilito degli importanti traguardi per il 2030, in relazione al 1990, al fine di ridurre le emissioni di gas ad effetto serra del 40%, migliorare l’efficienza energetica almeno del 32.5% ed aumentare del 32% l’uso di energia da fonti rinnovabili. In un contesto di povertà energetica e di cambiamento climatico, in cui sempre più stringenti obiettivi vengono posti, particolare importanza assume il settore edilizio, che risulta responsabile di circa il 40% delle emissioni di CO₂ a livello globale. A tal proposito, la comunità europea dal 2002 si è attivata per introdurre le prime misure e linee guida in termini di efficienza energetica degli edifici con la Direttiva EPBD (Energy Performance of Building Directive) 2002/91/UE. La prima direttiva europea in materia energetica dispone l’applicazione di requisiti minimi in materia di prestazioni energetiche sia per edifici di nuova costruzione che per edifici esistenti. Con la direttiva EPBD Recast 2010/31/CE obiettivi ancora più ambiziosi sono stati introdotti, stabilendo il raggiungimento dello standard nZEB per tutti gli edifici di nuova costruzione a partire dal 2021, e a partire dal 2019 per quelli pubblici. La Direttiva 844/2018 estende questo obiettivo agli edifici esistenti, sia pubblici che privati, stabilendo che entro il 2050, tutti gli edifici del parco edilizio dovranno soddisfare lo standard nZEB. A livello nazionale, le direttive europee sono state recepite e trasferite nella legislazione nazionale, rispettivamente, con la Legge 90/2013 e il D. Lgs 48/2020, che insieme al DM 26/06/2015, rendono attuative le prescrizioni europee, e introducono metodi di calcolo per definire i parametri di efficienza energetica, il contenimento delle dispersioni, il raffrescamento passivo, e l’uso di energia da fonti rinnovabili.

In un contesto globale e nazionale di ambiziosi intenti in materia energetica, la progettazione di nuovi edifici e la riqualificazione di quelli esistenti deve essere volta alla riduzione delle isole di calore urbane, al soddisfacimento di nuove esigenze di comfort termo-igrometrico, al contenimento dei consumi energetici, ed i progetti sviluppati per il comune di Castelvoturno, si configurano proprio in quest’ottica. Il risparmio energetico e la sostenibilità ambientale, con particolare attenzione all’utilizzo di energia da fonti rinnovabili sono caratteristiche fondanti dei progetti proposti. A partire dall’involucro edilizio, al fine di contenere le dispersioni di energia termica tra l’interno e l’esterno, l’involucro opaco sia orizzontale che verticale è stato opportunamente isolato, prediligendo l’isolamento termico dall’ esterno. Nel rispetto dei limiti di trasmittanza termica del DM 26/06/2015 per la zona climatica C, di cui Castelvoturno fa



seal, the soundproofing performance, fire behavior, footfall resistance, transpiration, and resistance to atmospheric agents. The technological solutions adopted include also passive cooling strategies which contribute to improving the indoor microclimate of the building. The skillful use of greenery is very recurrent, both integrated into the façade and roof, and as a solar shading system. Green roofs and facades, indeed, exploit solar radiation to activate chlorophyll photosynthesis, and through evaporative cooling reduce the heat transfer between the inside and the outside of the building. In this way, in addition to decreasing the building’s summer and winter energy demand, they positively contribute to contrasting urban heat islands. Therefore, the naturalistic potential of the site has been fully exploited, enhancing the greenery and waterways that become an integral part of the designed solutions. To optimize the solar gain during the winter seasons, suitable passive solutions, such as continuous glass facades, and solar greenhouses have been proposed. During the winter, the solar greenhouse works both as a direct solar gain system and as an accumulation system, and with appropriate shadings, it is possible to avoid indoor excessive overheating during the summer seasons. In addition to passive technologies for the building envelope, each building has been equipped with appropriate plant systems which guarantee summer and winter microclimatic control. The most common systems, such as heat pumps and high COP refrigeration systems, have been coupled to systems for the conversion of energy from renewable sources. By considering the Legislative Decree 28/2011, for new constructions or renovations, to reach the nZEB standard, the energy demand of the building must be covered by systems powered by renewable sources, to the extent of at least: 50% for production of DHW and 50% of the sum of DHW and cooling and heating. To meet the nZEB standard, the use of energy from renewable sources was provided for each project, preferring photovoltaic systems and solar thermal systems. The building projects have taken into account all possible levers to reduce the building energy demand, namely: building envelopes with high energy performance, efficient plant systems, and integration of systems for the energy conversion from renewable sources. Through a multidisciplinary approach, all the designed solutions were evaluated according to the global sustainability of the interventions by integrating the buildings into the natural and urban context, evaluating sustainable solutions both in terms of costs and energy, without ever underestimating the livability of the spaces from the acoustic, visual and thermal comfort point of view.

parte, la scelta dell’isolante termico è stata condotta in base alla specifica applicazione, valutando anche la tenuta meccanica, il potere fono isolante, il comportamento al fuoco, la tenuta al calpestio, la traspirabilità, e la resistenza ad agenti atmosferici. Tra le soluzioni tecnologiche adottate rientrano anche quelle che mirano al raffrescamento passivo dell’edificio e contribuiscono a migliorare il microclima interno. L’utilizzo sapiente del verde è molto ricorrente, sia integrato in facciata e in copertura, che come sistema di schermatura dalla radiazione solare. Tetti e facciate verdi, difatti, sfruttano la radiazione solare per attivare la fotosintesi clorofilliana, e attraverso il raffrescamento evaporativo riducono lo scambio termico tra l’interno e l’esterno dell’edificio. In questo modo oltre a diminuire la domanda energetica sia estiva che invernale dell’edificio, contribuiscono positivamente a contrastare le isole di calore urbano. Dunque, le potenzialità naturalistiche del sito sono state sfruttate a pieno, valorizzando il verde e i percorsi d’acqua che diventano parte integrante delle soluzioni progettuali. Al fine di ottimizzare il guadagno solare durante la stagione invernale, opportune soluzioni passive, come facciate vetrate continue, e serre solari sono state proposte. Durante l’inverno, le serre solari, funzionano sia come sistema a guadagno solare diretto che ad accumulo, e con opportune schermature, è possibile evitare l’eccessivo surriscaldamento degli ambienti durante la stagione estiva. Oltre a tecnologie passive per l’involucro edilizio, ciascun edificio è stato dotato di opportuni sistemi impiantisci in grado di garantire il controllo microclimatico estivo ed invernale. I sistemi più comuni come pompe di calore e impianti frigoriferi ad elevato COP, sono stati accoppiati a sistemi per la conversione di energia da fonti rinnovabili. Tenendo conto del D. Lgs 28/2011, per nuove costruzioni o ristrutturazioni, affinché possa essere raggiunto lo standard nZEB, il fabbisogno energetico dell’edificio deve essere coperto da impianti alimentati da fonti rinnovabili, nella misura di almeno: 50% per la produzione di ACS e 50% della somma di ACS e raffrescamento e riscaldamento. Al fine di soddisfare lo standard nZEB, per ciascun progetto è stato garantito l’utilizzo di energia da fonti rinnovabili, prediligendo impianti fotovoltaici ed impianti di solare termico. La progettazione degli edifici ha tenuto conto di tutte le possibili leve per ridurre la domanda energetica, ovvero: involucri edilizi di elevate prestazioni energetiche, sistemi impiantistici efficienti e integrazione di impianti da fonti rinnovabili per l’approvvigionamento energetico. Attraverso un approccio multidisciplinare, tutte le soluzioni progettuali sono state valutate secondo la sostenibilità globale degli interventi, integrando gli edifici al contesto naturale ed urbano, valutando soluzioni sostenibili sia in termini di costi che di energia, senza mai sottovalutare la vivibilità degli spazi dal punto di vista del comfort acustico, visivo e termo-igrometrico.



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Sustainability requirements

Pagina seguente

I requisiti della sostenibilità

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The setting of the training and growth path of the students during Executive Design class within the Advanced Design Studio has mainly linked to the study, the deepening and the development of technical and technological aspects of the construction and, in particular, to the definition of features of compatibility and environmental interaction that the students designed buildings will guarantee. The peculiarities of the territory of Castel Volturno, have imposed a preliminary deepening on the morphological-environmental conditions of the territory and the different design sites, in particular on the possibility in the exploitation of natural resources and, at the same time, of local resources, such as raw materials for construction produced and marketed at Km 0.

The first phases of the knowledge process, aimed at the technological and environmental design of urban transformation interventions, see the start of phases of environmental characteristics analysis, also supported through the use of data and online resources related to the climatic and environmental characteristics of the place, and above all through the use of ICT tools (Ambrosini et al., 2018), capable of understanding both the current conditions and characteristics of places to natural elements, such as solar radiation and natural ventilation, but also natural elements such as vegetation and water elements (sea, rivers, water bodies and lakes, canals, etc.), and how the area of intervention will be modified downstream of the insertion of the building organism, through the optimal exploitation of the boundary conditions, to improve the perception of indoor and outdoor well-being for end-users, through designed actions with express compatibility and environmental sustainability.

The exploitation of local resources, innovative technologies and environmental compatibility have been the axioms that have guided the process of defining new building organisms, intervening/interfering immediately on the formal and morphological aspects of the architectural design, similar to what happens in the professional practice, where technological-environmental choices guide formal choices, having contributed to the optimization of volumetric forms about functional-spatial needs, to the correct orientation of buildings to make positive use of natural resources.

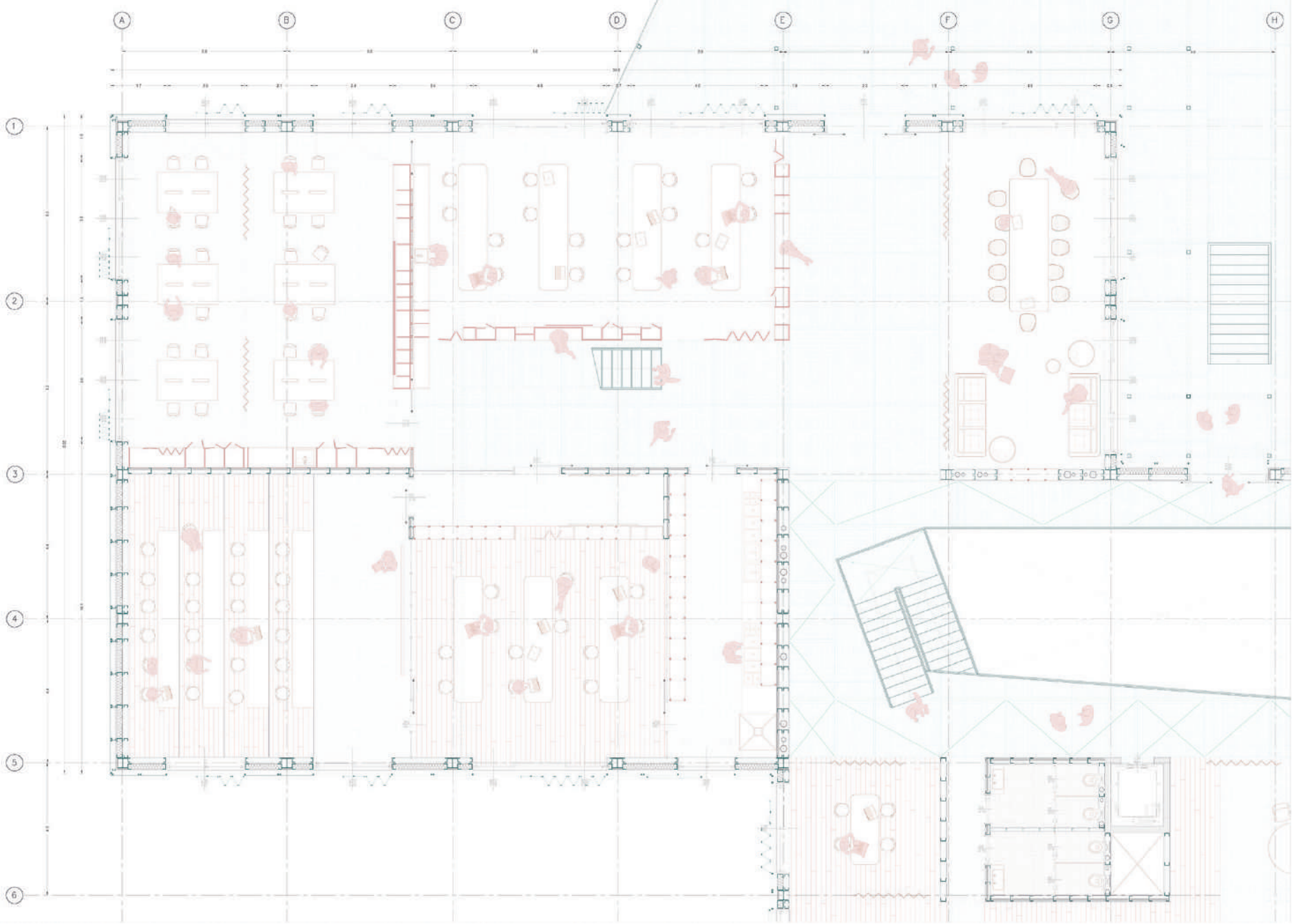
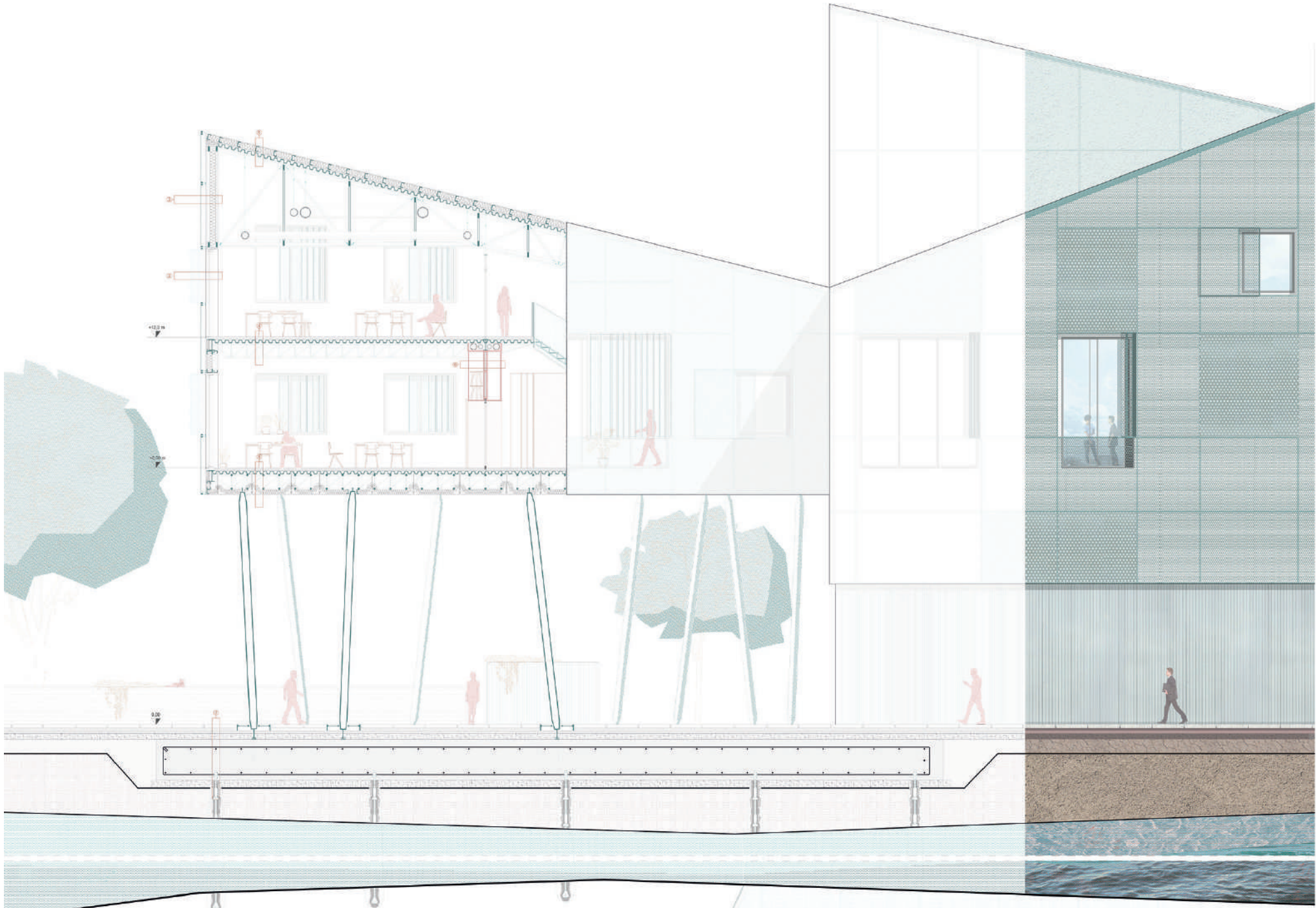
The ability to synthesise according to the different requests that contribute to the definition of an architectural project is developed by the students through a continuous comparison and reference with the architectural, urban, technological-environmental, energy, structural and evaluation aspects, placing the concepts of environmental sustainability and the containment of climate-changing gas emissions at the centre of the design process, taking into account the environmental impact that the buildings can have in all its phases, from construction to demolition,

L'impostazione del percorso di formazione e crescita degli allievi nel corso di Progettazione Esecutiva all'interno dell'Advanced Design Studio è legato principalmente allo studio, l'approfondimento ed allo sviluppo degli aspetti tecnici e tecnologici della costruzione e, in particolare, alla definizione di aspetti di compatibilità ed interazione ambientale che i nuovi organismi edilizi progettati dagli studenti dovranno garantire. Le peculiarità del territorio di Castel Volturno, hanno imposto un approfondimento preliminare sulle condizioni morfologico-ambientali del territorio e dei differenti siti di progetto, in particolare sulla possibilità nello sfruttamento delle risorse naturali, ed allo stesso tempo di risorse locali, quali ad esempio materie prime per la costruzione prodotte e commercializzate a Km 0.

Le prime fasi del processo di conoscenza, finalizzate alla progettazione tecnologico-ambientale degli interventi di trasformazione urbana, vedono l'avvio di fasi di analisi delle caratteristiche ambientali, anche supportate attraverso l'uso di dati e risorse on-line relative alle caratteristiche climatiche ad ambientali del luogo, e soprattutto attraverso l'uso di strumenti ICT (Ambrosini et al., 2018), capaci di far comprendere sia le attuali condizioni e caratteristiche dei luoghi in relazione agli elementi naturali, quali la radiazione solare e la ventilazione naturale, ma anche gli elementi naturali quali la vegetazione e gli elementi d'acqua (mare, fiumi, specchi d'acqua e laghi, canali, ecc.), sia come si andrà a modificare l'area d'intervento a valle dell'inserimento dell'organismo edilizio, attraverso lo sfruttamento ottimale delle condizioni a contorno, allo scopo primario di migliorare la percezione del benessere indoor e outdoor per gli utenti finali, attraverso interventi progettati con un'espressa compatibilità e sostenibilità ambientale.

Sfruttamento delle risorse locali, tecnologie innovative e compatibilità ambientale sono stati gli assiomi che hanno guidato il processo di definizione dei nuovi organismi edilizi, intervenendo/interferendo di fatto e fin da subito sugli aspetti formali e morfologici del progetto architettonico, analogamente a quanto accade nella pratica professionale, dove le scelte tecnologiche-ambientali orientano le scelte formali, concorrendo all'ottimizzazione delle forme volumetriche in relazione all'esigenze di tipo funzionali-spaziali, al corretto orientamento degli edifici allo scopo di sfruttare positivamente le risorse naturali.

La capacità di fare sintesi secondo le differenti istanze che concorrono alla definizione di progetto di architettura viene sviluppata dagli allievi attraverso un continuo confronto e rimando con gli aspetti architettonici, urbanistici, tecnologico-ambientali, energetici, strutturali e di valutazione, ponendo i concetti della sostenibilità ambientale e del contenimento delle emissioni di gas climalteranti al centro



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Project Out of Bounds. Living the limit, by E. Barone

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Progetto Out of Bounds. Living the limit, di E. Barone

passing through the management phases. This allows students to confront the production realities of materials and technological systems for building construction present on the national and local territory, and to opt for more conscious choices in terms of environmental impact, electing for solutions with less environmental impact, following the criteria dictated by national legislation in terms of energy containment and Minimum Environmental Criteria (C.A.M.), but also voluntary environmental assessment tools (LEED v.4, Green Building Council Italy, Itaca/iiSBE, Casaclima, etc.). The choice to follow requirements and indications coming from similar experiences and best practices, allows students to acquire concepts and apply them within the project, ensuring the achievement of regulatory standards, and at the same time to conceive interventions with a lear imprint towards environmental sustainability and energy containment throughout the life cycle.

In the context of the city Castel Volturno, the definition of environmental solutions and strategies for the open spaces was a challenge that each student had to carry out unconventionally, being most often highly naturalized spaces, in which the goal was mainly the exploitation of the intrinsic environmental characteristics of each area, in the difficult dichotomy between the need for necessary functional equipment and the conservation of the natural characteristics of the areas. The preventive deepening of the issues related to climate change issues in urbanized areas and, the concepts of the 2030 Agenda for sustainable development (UN, 2015) and best practices of urban regeneration in similar contexts, has facilitated students in the definition and local application of regenerative climate-adaptive design actions, which at the same time contributed to the creation of a broader and more widespread system on the territory capable of contributing to the increase in environmental and climate resilience.

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Design Studio's public discussions and final exam (2019)
Photos by A. Bernieri

Pagina seguente
Discussioni pubbliche e esami finali del Laboratorio di progettazione (2019)
Foto di A. Bernieri

del processo progettuale, tenendo conto dell'impatto ambientale che l'organismo edilizio potrà avere in tutte le sue fasi, dalla costruzione alla demolizione, passano per le fasi di gestione. Questo consente agli allievi di confrontarsi con le realtà produttive dei materiali e dei sistemi tecnologici per la costruzioni edilizie presenti sul territorio nazionale e locale, e di optare per scelte maggiormente consapevoli in termini di impatto ambientale, optando per soluzioni a minor impatto ambientale, seguendo i criteri dettati dalla normativa nazionale in termini di contenimento energetico e di Criteri Ambientali Minimi (C.A.M.), ma anche di strumenti di valutazione ambientale volontari (LEED v.4, Green Building Council Italia, Itaca/iiSBE, Casaclima, ecc.). La scelta di seguire requisiti ed indicazioni provenienti da esperienze analoghe e best practice, consente agli studenti di acquisire concetti ed applicarli all'interno del progetto, garantendo il raggiungimento degli standard normativi, e al contempo di concepire interventi con una chiara impronta verso la sostenibilità ambienta e al contenimento energetico nell'intero ciclo di vita.

Nel contesto della città Castel Volturno, la definizione delle soluzioni e delle strategie ambientali per il progetto dello spazio aperto è stata una sfida che ogni alunno ha dovuto portare avanti in maniera non convenzionale, trattandosi il più delle volte di spazi fortemente naturalizzati, in cui l'obiettivo è stato principalmente lo sfruttamento delle caratteristiche ambientali intrinseche di ogni ambito d'intervento, nella difficile dicotomia tra necessità di dotazioni funzionali necessarie e conservazione dei caratteri naturali dei luoghi. L'approfondimento preventivo dei temi relativi alle problematiche legate ai cambiamenti climatici nelle aree urbanizzate, i concetti dell'Agenda 2030 per lo sviluppo sostenibile (UN, 2015) e le *best practice* di rigenerazione urbana in contesti simili, hanno agevolato gli studenti nella definizione e l'applicazione locale di azioni di *regenerative climate adpative design*, che concorressero al contempo alla creazione di un sistema più ampio e diffuso sul territorio capace di contribuire all'aumento dei resilienza ambientale e climatica.



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3. S. Marini, *Nuove terre. Architetture e paesaggi dello scarto*, Quodlibet, Macerata 2010.
4. N. Emery, *Progettare, costruire, curare. Per una deontologia dell'architettura*, Edizioni Casagrande, Bellinzona 2010.

The Advanced Design Studio on Castel Volturno highlighted the most visible strata of the landscape that characterize this territory through the design actions. From the understanding of the faced issues, it emerged how the territory is configured as an extremely fragile heritage, whose fragility is due to various environmental, social, health, economic and institutional factors, which make it a place increasingly affected by abandonment processes and various types of “degeneration”.

The work done and presented here is not intended to be definitive, but mainly wants to provide a possible approach to the ways in which some problems have been identified and some attempts as design responses have been sought and formulated. According to a unified method, topics development concerning the overcoming of closures, multiple fences, spaces of abandonment and inaccessibility, almost non-existent – inconsistent – places characterized the strategic approach logics of the students. They had to choose and define their own field of design investigation, interfacing with real issues, much more complicated than those posed by a pre-established and well-defined theme.

The work’s phases described in these pages are characterized by a continuous scale variation and by different strategies that demonstrate a completely experimental approach to the territory. The traditional tools of the project are indeed challenged and recalibrated in order to imagine new futures, new directions for such a compromised territory. The paradox that is determined among the current decay, the presence of territorial landscape specificities and the reminiscence of a tourism that still has vaguely perceptible echoes, has been faced through a search for broken threads to be re-traced, re-signified, and therefore regenerated.

The projects could be read, rather than as didactic exercises, as levels of progressive “disclosure” of Castel Volturno. In fact, it has been shown how it is possible to get to know the city, with all its fragility and potentiality, its characteristics and details, through deep surveys. This goal can be pursued through a very careful and scrupulous work that holds together two parallel orders of things: on the one hand, the desire to outline future perspective for a “body” that is ill, unconscious; on the other hand, the awareness that this “revitalization” can only take place starting from impulses coming from the organism itself.

The public space was the leading actor of the Design Studio in the reconstruction of a community dimension made of sharing dynamics and new centralities. Starting from the recognition of the degeneration of some identified urban spaces, a project of regeneration was grafted through: “inhabited infrastructures”, which try to connect entire urban pieces on a large scale, as real newly conceived infrastructures which, overcoming the common definition of connective elements, become new spaces for sharing, for the intercommunity and for the neighborhood (such as in *Melting Path*,

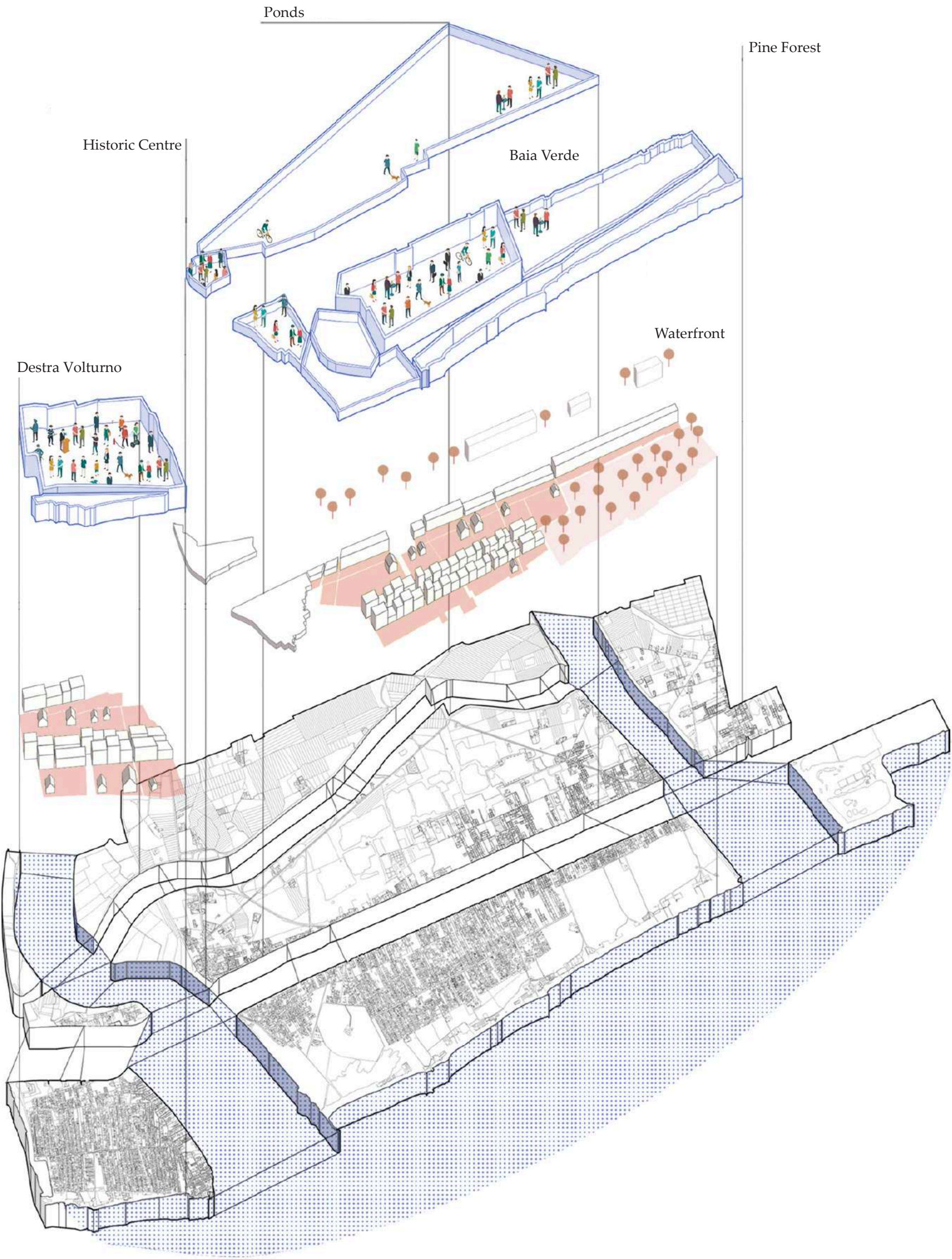
L’*Advanced Design Studio* su Castel Volturno ha posto in evidenza gli “strati più visibili” del paesaggio che contraddistinguono questo territorio attraverso l’operazione del progetto. Dalle problematiche affrontate, è emerso come il territorio in esame si configuri come un patrimonio estremamente fragile, la cui fragilità è assimilabile a diversi fattori ambientali, sociali, sanitari, economici ed istituzionali, che lo rendono un luogo sempre più caratterizzato da processi di abbandono e di “degenerazione” di vario tipo.

Il lavoro svolto e qui presentato non vuole porsi come definitivo, ma intende fornire principalmente un possibile sguardo sulle modalità con cui alcune questioni sono state rintracciate e poste, e alcuni tentativi di risposta progettuale sono stati ricercati e formulati. Logiche incentrate sullo sviluppo, in maniera unitaria, di temi riguardanti il superamento di chiusure, di recinti multipli, di spazi dell’abbandono e dell’inaccessibilità, luoghi inconsistenti, quasi inesistenti, hanno caratterizzato l’impostazione strategica degli studenti, che hanno dovuto scegliere e definire il loro personale campo di indagine progettuale, interfacciandosi con problematiche reali ben più complesse di quelle poste da un tema progettuale pre-costituito e ben definito.

Le fasi del lavoro raccontate in queste pagine sono caratterizzate da una variazione di scala continua e da strategie differenti che dimostrano un approccio del tutto sperimentale nei confronti del territorio. Infatti, gli strumenti tradizionali del progetto sono messi in discussione e ricalibrati al fine di immaginare nuovi futuri, nuove direzioni per un territorio profondamente compromesso e complicato.

Il paradosso che si viene a determinare tra la condizione di degrado attuale, la presenza di specificità territoriali e la reminiscenza di un turismo passato dagli echi ancora vagamente percettibili, è stata affrontata attraverso la ricerca di fili spezzati da rintracciare, rivitalizzare, risignificare, rigenerare. I progetti potrebbero essere letti, più che come esercitazioni didattiche, come livelli di progressivo “disvelamento” di Castel Volturno. Infatti, si è dimostrato come risulti possibile conoscere la città, con tutte le sue fragilità e le sue potenzialità, i caratteri e i dettagli che la contraddistinguono, attraverso l’indagine progettuale. Questo obiettivo è perseguibile soltanto attraverso un lavoro molto attento e scrupoloso che tiene insieme due ordini di grandezza paralleli: da una parte, la volontà di delineare prospettive future per un “corpo” da molto tempo malato, privo di sensi; dall’altra, la consapevolezza che tale “rianimazione” possa avvenire soltanto a partire da impulsi provenienti dall’organismo stesso.

Lo spazio pubblico è stato il grande protagonista del laboratorio nella ricostruzione di una dimensione comunitaria caratterizzata da dinamiche di condivisione e di nuove centralità. Dal riconoscimento della degenerazione di alcuni spazi urbani individuati, si è innestato dunque un progetto di



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Castel Volturno's enclaves and areas perception (2019)

Drawing by E. Barone, R. Dell'Erario, F. Esposito, M. Masi

Pagina seguente

Percezione delle aree e delle enclave di Castel Volturno (2019)

Disegno di E. Barone, R. Dell'Erario, F. Esposito, M. Masi

DETOUR. Turn the tour in a detour, Across the Line); “renewed rurality”, through the re-naturalization of the abandoned spaces, the recovery and the enhancement of the rural vocation, typical of some areas, which generate new ways of interaction between built and nature, new urban interfaces for production activities and new places for the care, both of the man and the environment (such as in *Re-Wine in the Wetland park of Castel Volturno, From urban to natural spaces, Starting from nature, NaturaCità*); “found domesticity”, on a smaller scale, through the re-use and the reconfiguration of urban spaces and existing buildings, of waste which gets “domesticated” and eventually transformed, acquiring a renewed value of urban domestic spaces and a more active dimension of everyday life (such as in *Domestic city. A strategy against sprawl, t + issue_from residual spaces to pokets for social interaction, Under Castel Volturno*); “complex edges”, which break the fences and patch urban fabric or open spaces, determining new borders of change, holding together multifaceted spaces of new public and private interactions (such as in *Living the limit, Out of bounds, A new touristic port*); “unfinished spatialities”, which trace the “uncertainty” as one of the essential values to think about transformation, through the definition of dynamic and always adaptable spaces, in continuous evolution and that appear to have multiple possibilities; spaces that reject any type of definitive configuration, since they are subjected to the variable of time (such as in *DXVCA Uncertainty as a value, Social Conne(a)ction, Designing horizons*).

The project methods here described are projected towards a same result, which is the configuration of new hybrid spaces of relations, towards the definition of a wider social, urban and landscape “state of connection”. These considerations demonstrate how – in order to be actually able to obtain improvements of the urban conditions and lifestyles of Castel Volturno – it is necessary to consider that all possible actions of transformation have to necessarily be centered on people. If people are the final aim of the design process, all Castel Volturno’s landscape “visible strata” could involve the human dimension, through a new harmony between nature and artifice.

rigenerazione di tali spazi attraverso la realizzazione di: “infrastrutture abitate”, che provano a connettere tra loro interi pezzi urbani, operando alla larga scala, ponendosi come delle vere e proprie infrastrutture di nuova concezione e che, superando la comune definizione di spazi connettivi, divengono nuovi spazi per la condivisione, per l’intercomunità e per il quartiere (come, ad esempio, in *Melting Path, DETOUR. Turn the tour in a detour, Across the Line*); “rinnovate ruralità”, attraverso la rinaturalizzazione di spazi abbandonati oppure attraverso il recupero e la valorizzazione della vocazione rurale propria di alcune aree, generando nuove modalità di interazione tra costruito e natura, nuovi meccanismi di interfaccia urbana della produzione e nuovi spazi per la cura dell’uomo e dell’ambiente (come, ad esempio, in *Re-Wine in Wetland park of Castel Volturno, From urban to natural spaces, Starting from nature, NaturaCità*); “ritrovate domesticità”, ad una scala più minuta, attraverso il riuso e la riconfigurazione di spazi urbani e/o edifici esistenti, di scarti, che vengono “addomesticati” e trasformati, acquisendo un valore rinnovato di spazio domestico urbano e una più viva dimensione di quotidianità (come ad esempio in *Domestic city. A strategy against sprawl, t+issue_from residual spaces to pokets for social interaction, Under Castel Volturno*); “bordi complessi”, che operano la rottura dei recinti, la ricucitura di isolati o di spazi aperti, determinando nuovi margini del cambiamento, che tengono insieme spazi complessi di nuova interazione tra pubblico e privato (come, ad esempio, in *Living the limit, Out of bounds, A new turistic port*); “spazialità incomplete”, che rintracciano nell’incertezza uno dei valori essenziali per pensare la trasformazione, attraverso la definizione di spazi mutevoli, in continuo divenire, spazi dalle molteplici possibilità, dinamici e sempre versatili, che rifiutano qualsiasi tipo di configurazione definitiva soggetta, di continuo, alla variabile “tempo” (come, ad esempio, in *DXVCA Uncertainty as a value, Social Conne(a)ction, Designing horizons*).

Le modalità di progetto qui descritte e riassunte si proiettano verso una stessa risultante che riguarda la definizione di nuovi spazi di relazione ibridi verso uno “stato di connessione”, sociale, urbana e paesaggistica di più ampio respiro. Queste considerazioni dimostrano come in realtà, per riuscire ad ottenere un miglioramento delle condizioni urbane e degli stili di vita di Castel Volturno, sia necessario tener presente che tutte le possibili azioni di trasformazione debbano necessariamente essere incentrate sull’uomo. Se l’uomo può essere considerato come il fine ultimo del processo progettuale, tutti gli “strati visibili” del paesaggio che contraddistingue Castel Volturno devono tornare a coinvolgere la dimensione umana, verso una nuova armonia tra natura e artificio.



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Castel Volturno. Real
Landscape(s) Fragile Utopia(s)
Collage with frames of Castel
Volturno from the film “Dogman”
by Mario Martone (2018) and
drawings from the Advanced
Design Studio (2019)
Drawing by P. Miano, A. Bernieri,
F. Coppolino, B. Di Palma

Pagina seguente
Castel Volturno. Real
Landscape(s) Fragile Utopia(s)
Collage con frames di Castel
Volturno dal film “Dogman” di
Mario Martone (2018) e dai
disegni del Laboratorio di Sintesi
finale (2019)
Disegno di P. Miano, A. Bernieri,
F. Coppolino, B. Di Palma









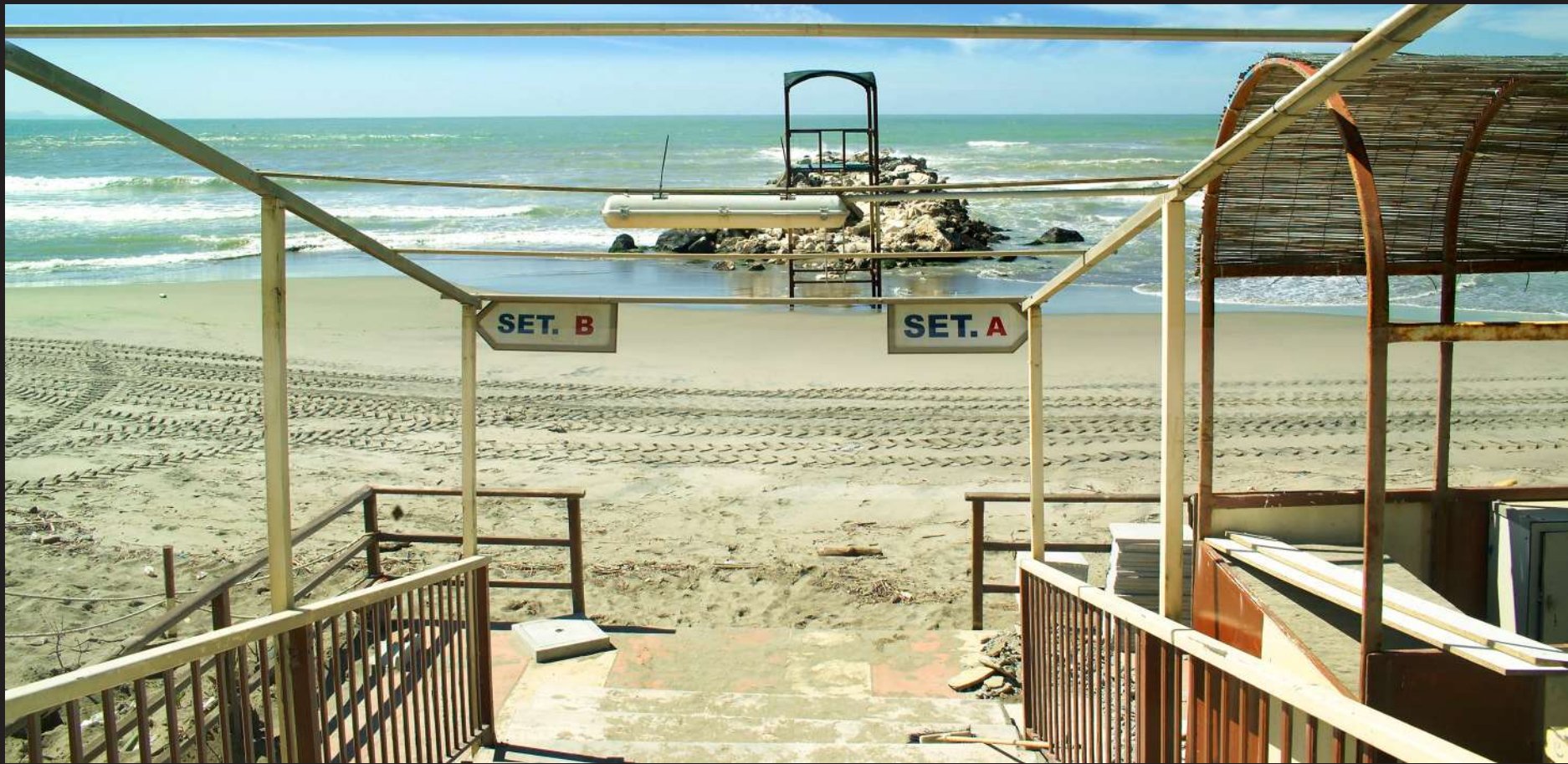








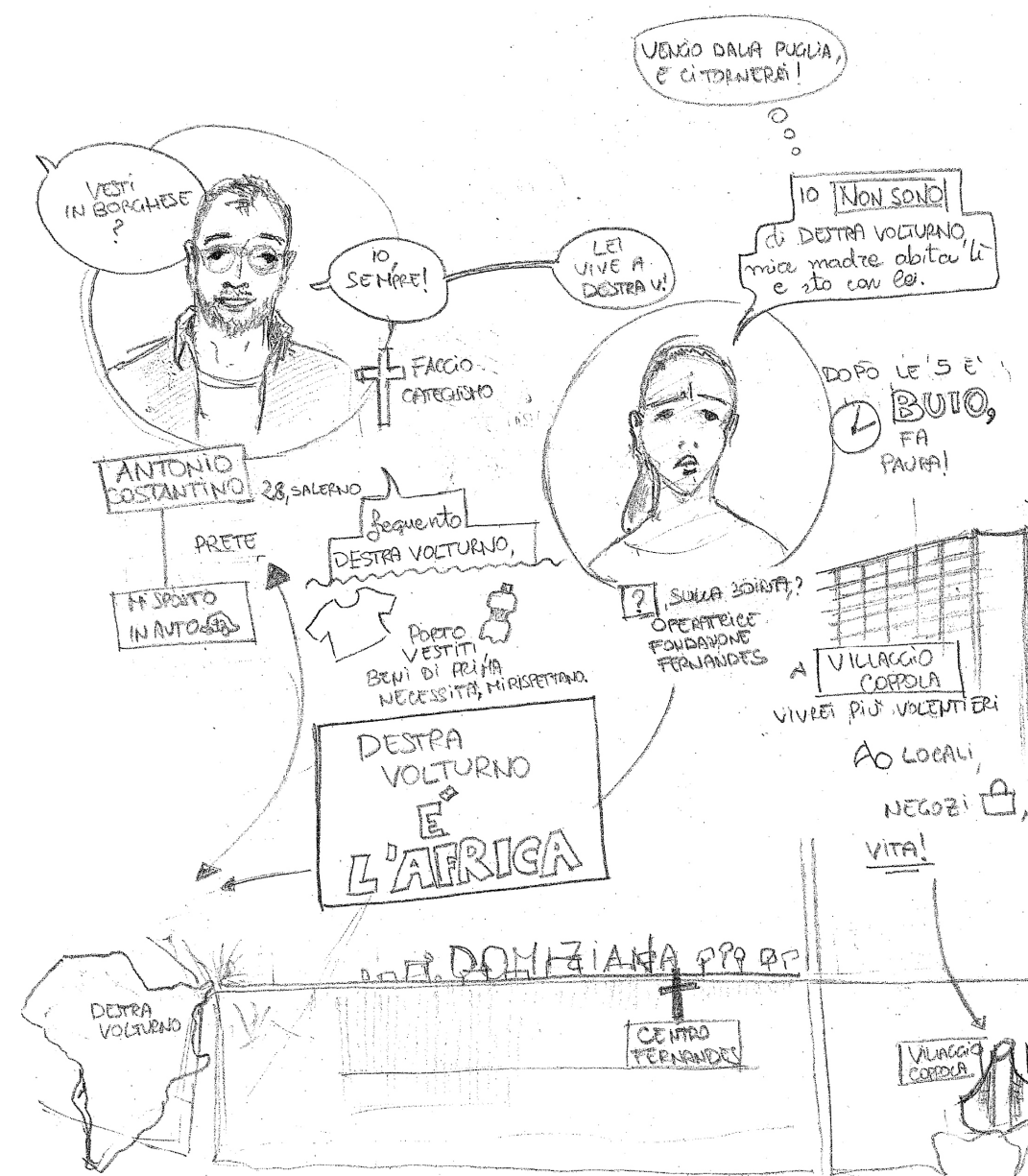




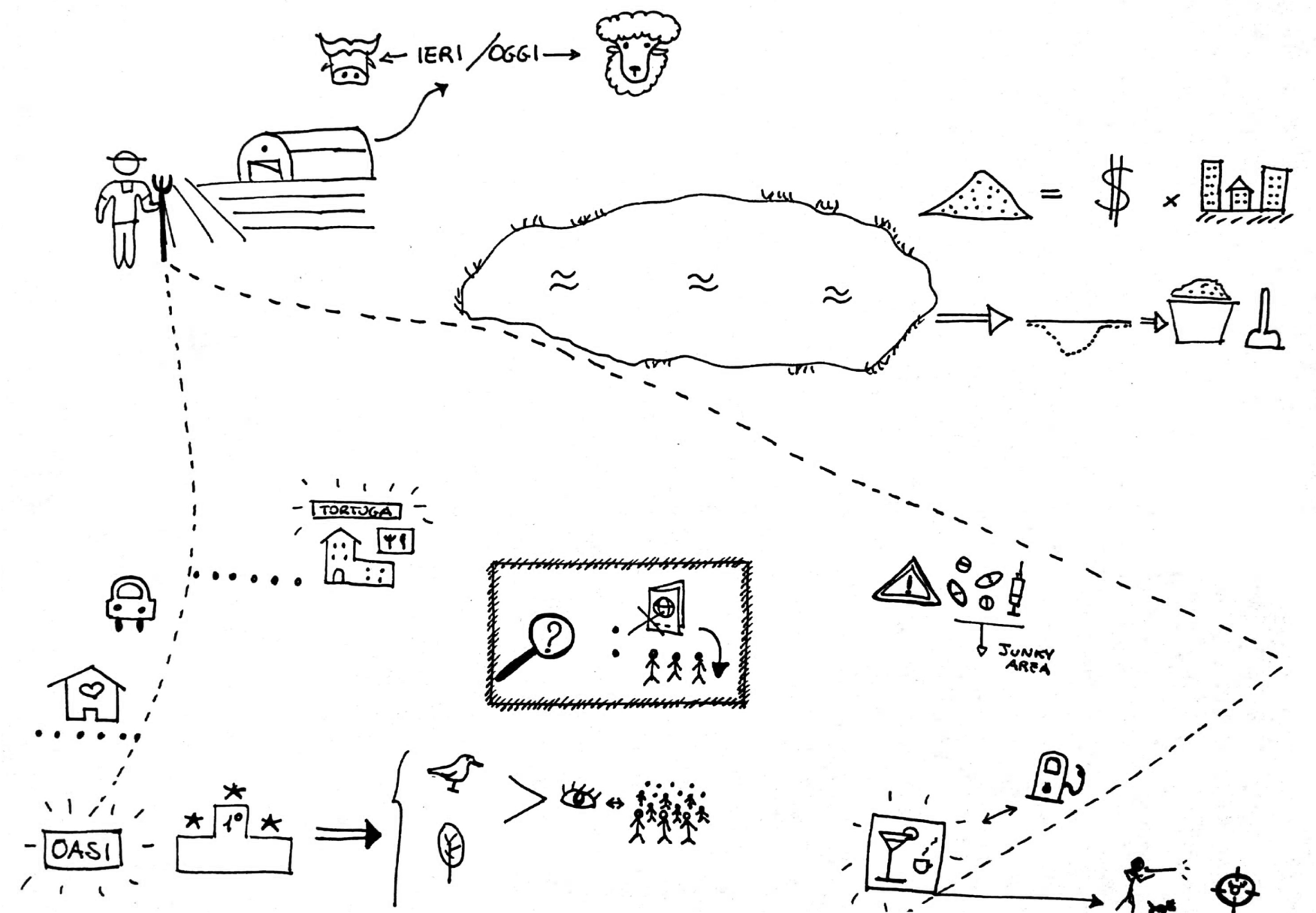




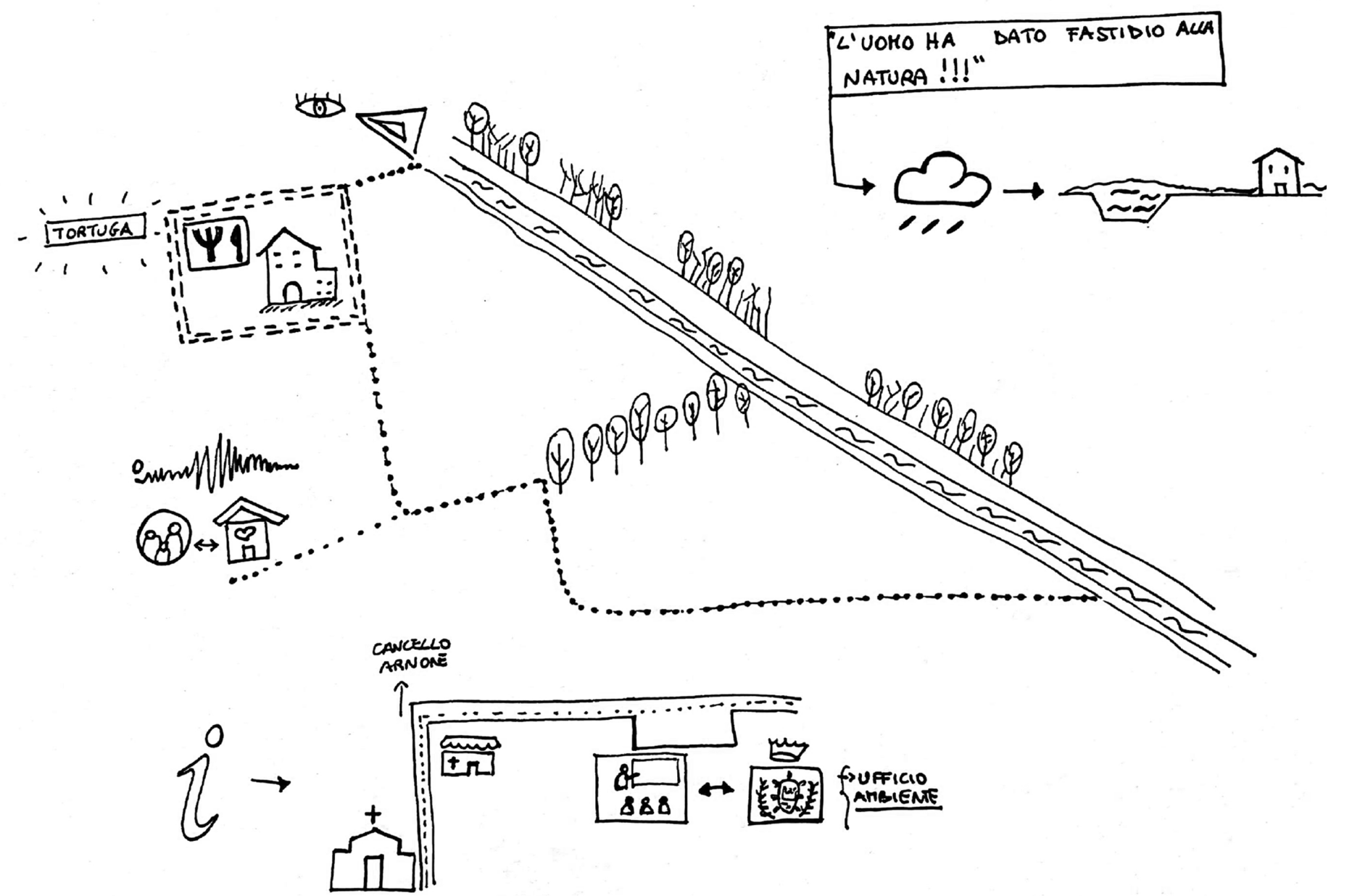




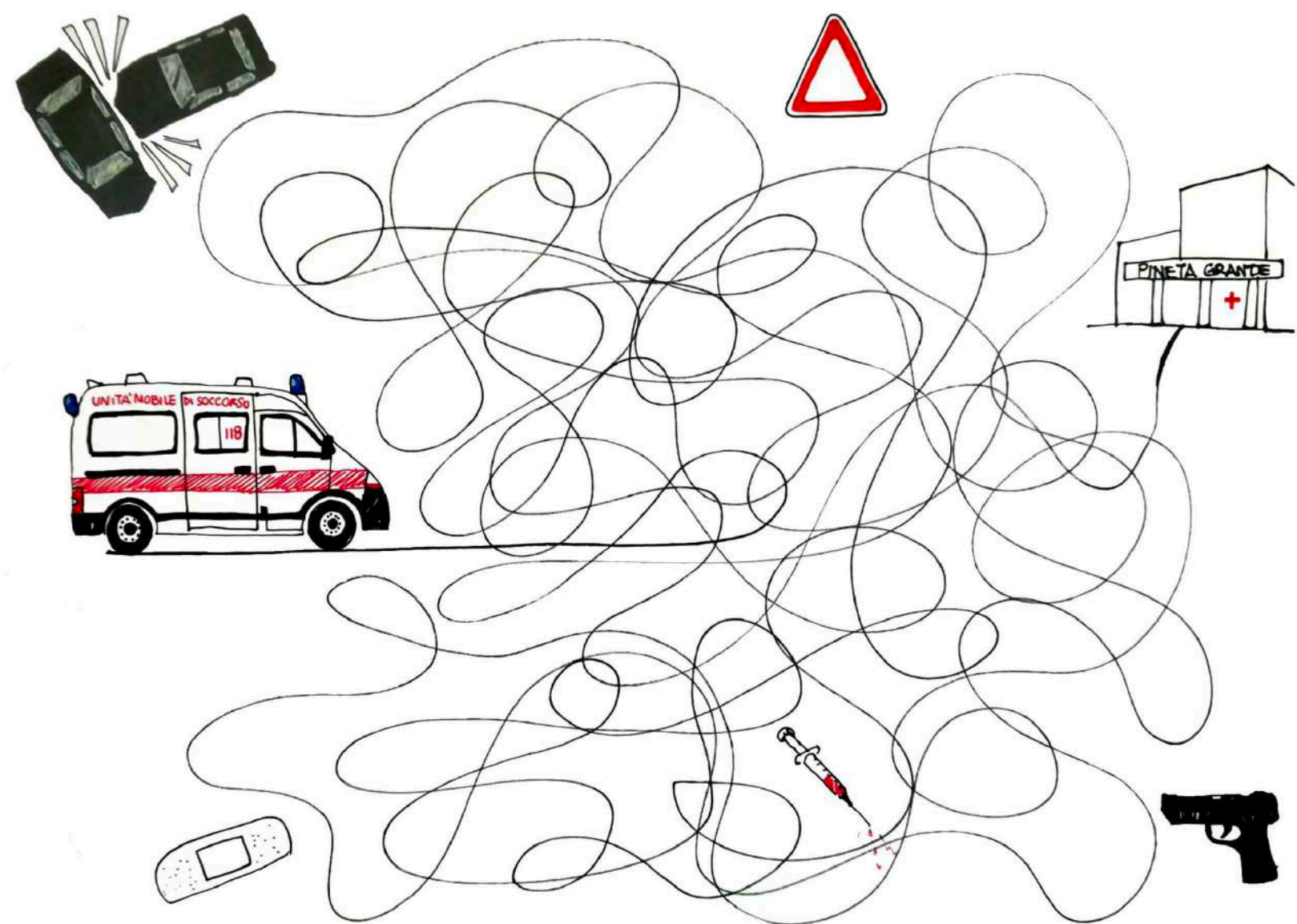
SKETCHED INTERVIEWS / INTERVISTE DISEGNATE



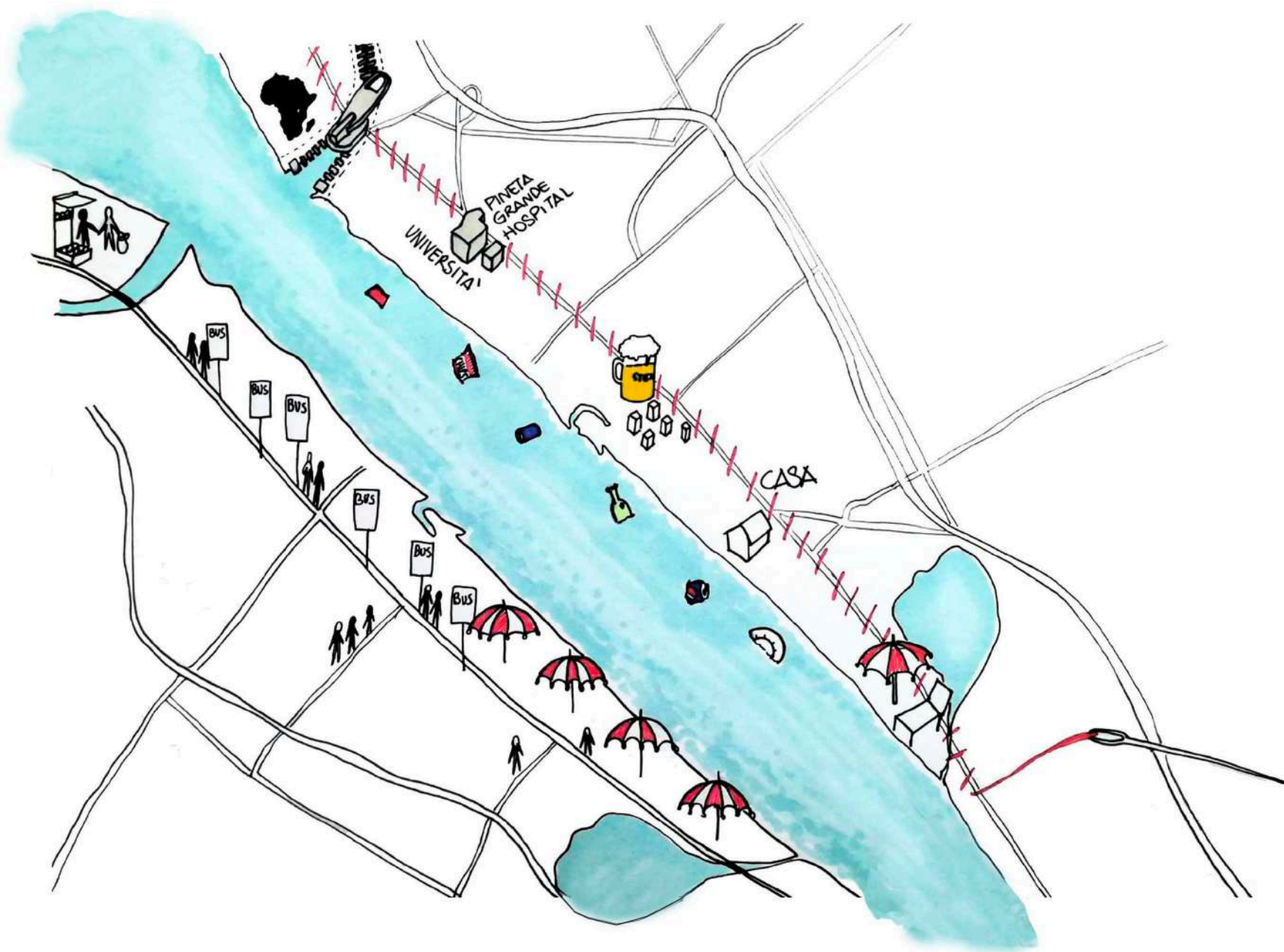
SAMPLE 3_40-YEARS-OLD MAN, FARMER / CAMPIONE 3_UOMO DI 40 ANNI, CONTADINO



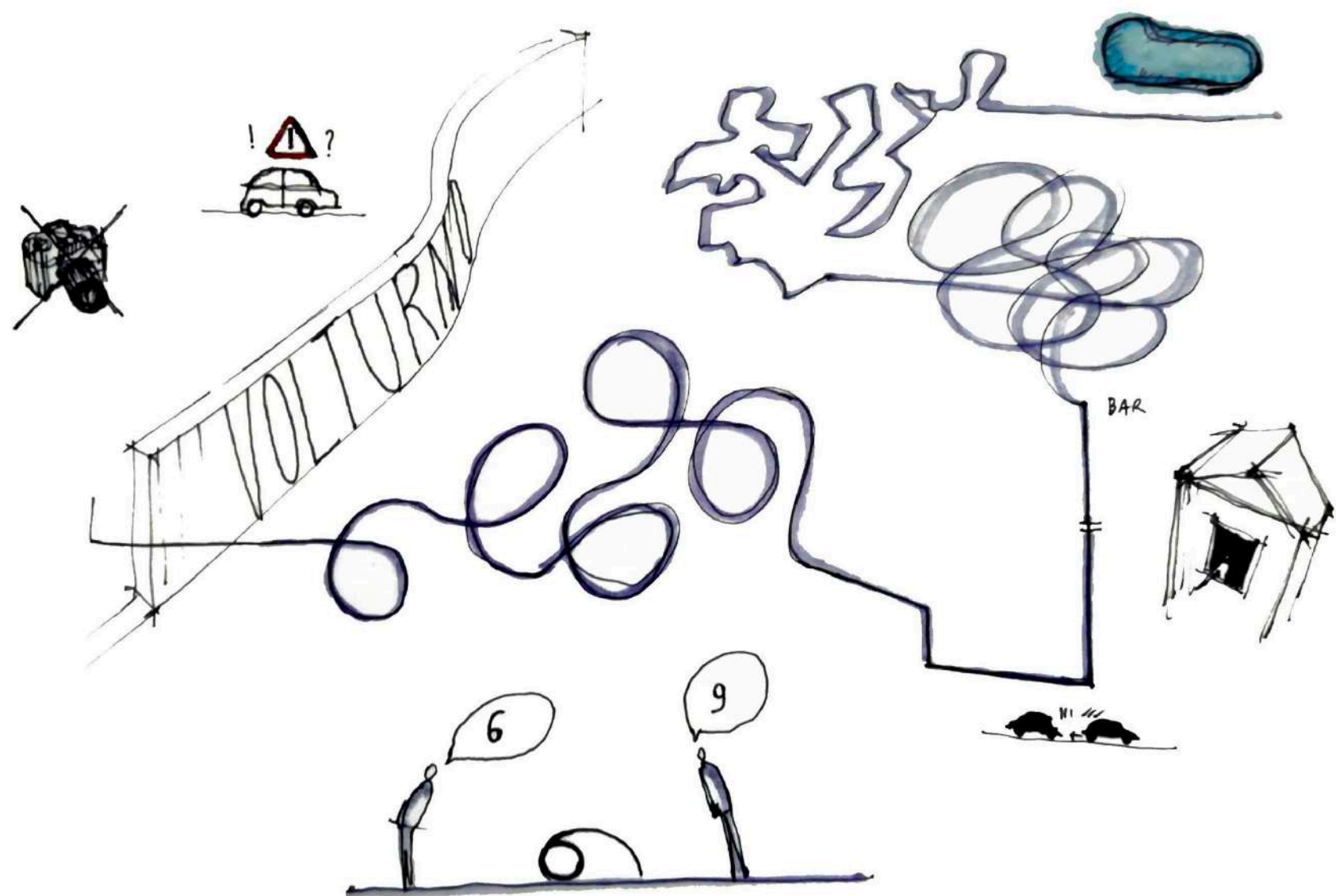
SAMPLE 4_70-YEARS-OLD MAN, RETIRED / CAMPIONE 4_UOMO DI 70 ANNI, PENSIONATO



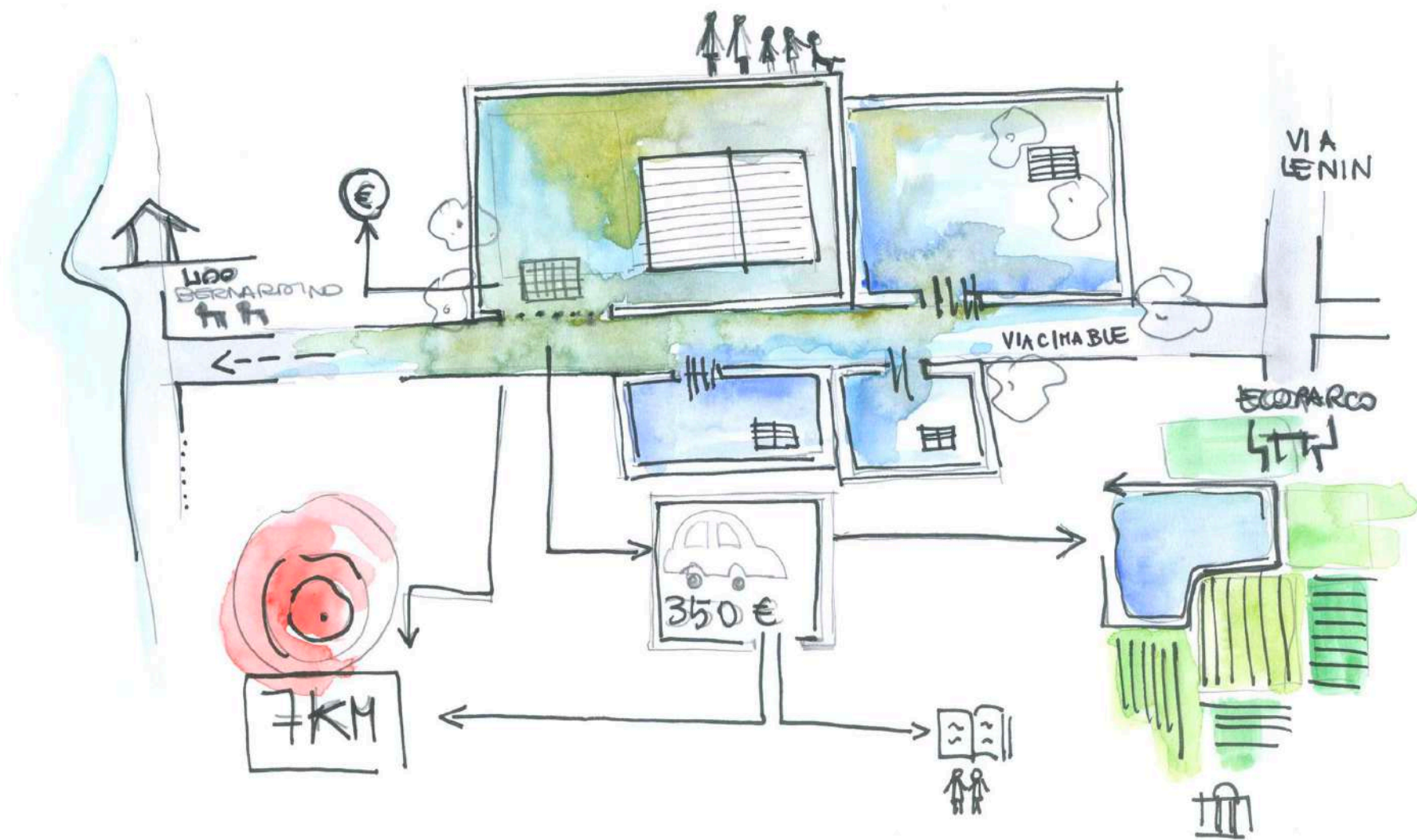
SAMPLE 9_45-YEARS-OLD MAN, NURSE / CAMPIONE 9_UOMO DI 45 ANNI, INFERMIERE



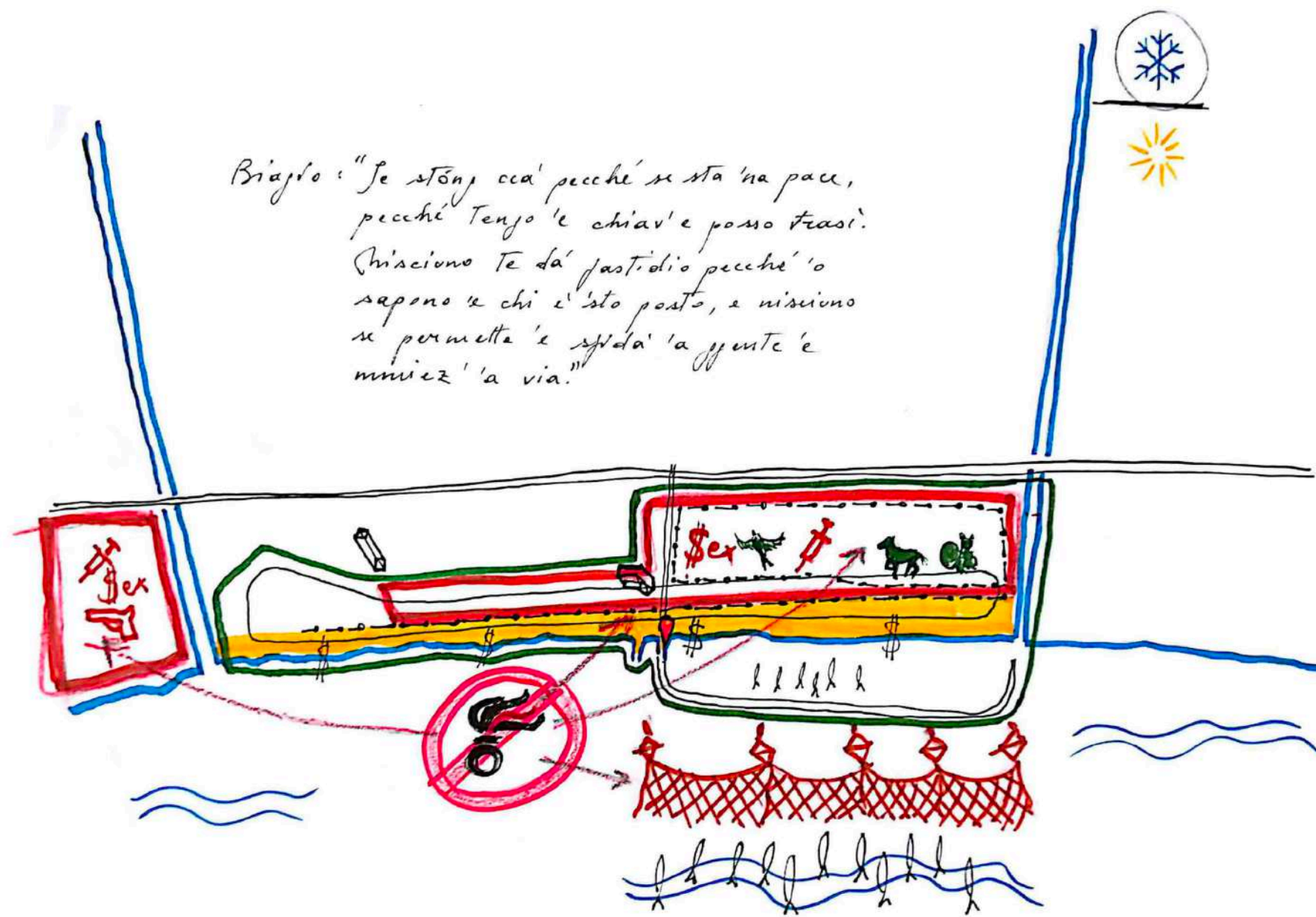
SAMPLE 11_25-YEARS-OLD WOMAN, STUDENT / CAMPIONE 11_DONNA DI 25 ANNI, STUDENTESSA



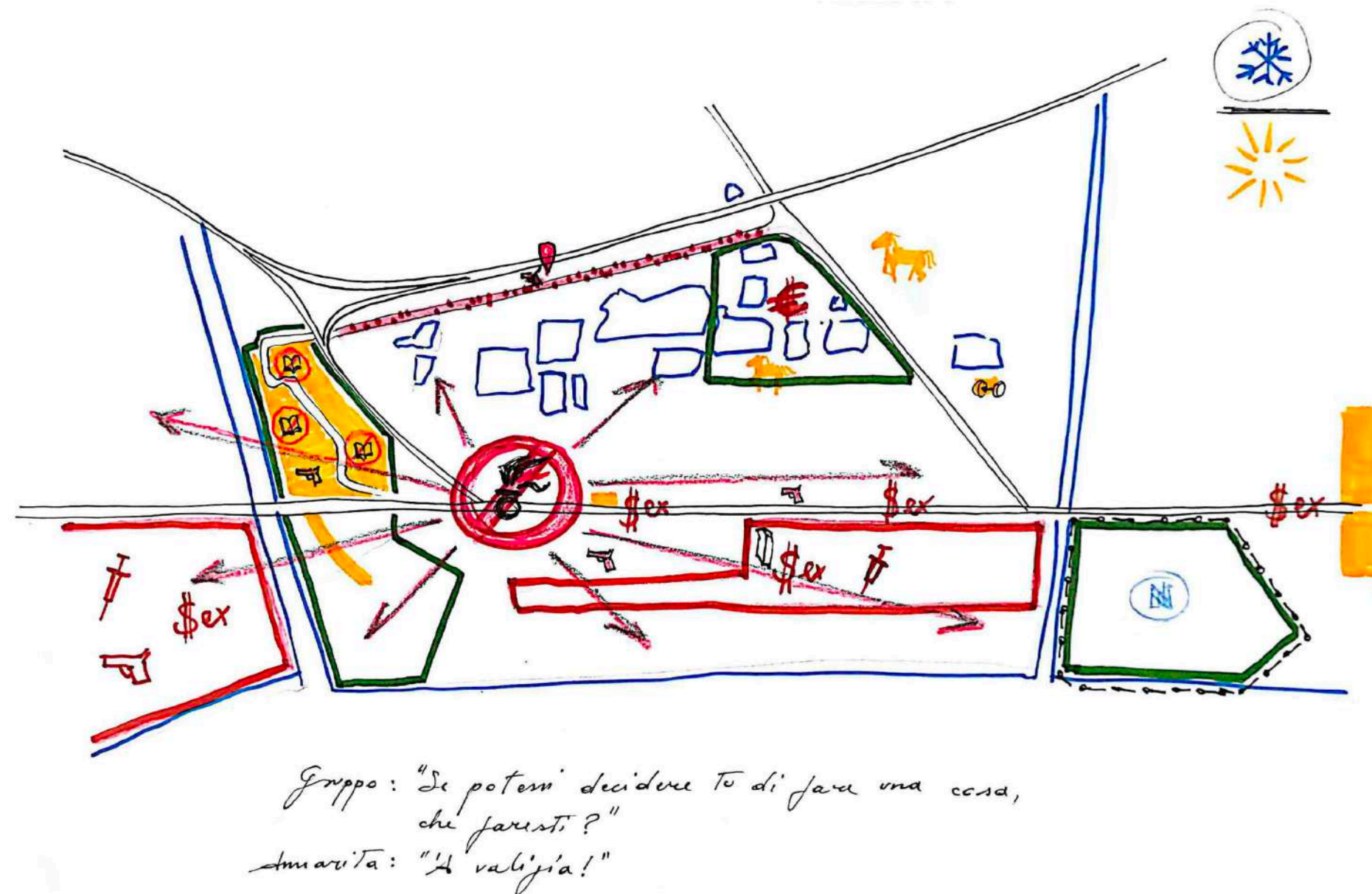
SAMPLE 10_24-YEARS-OLD MAN, STUDENT / CAMPIONE 10_UOMO DI 24 ANNI, STUDENTE



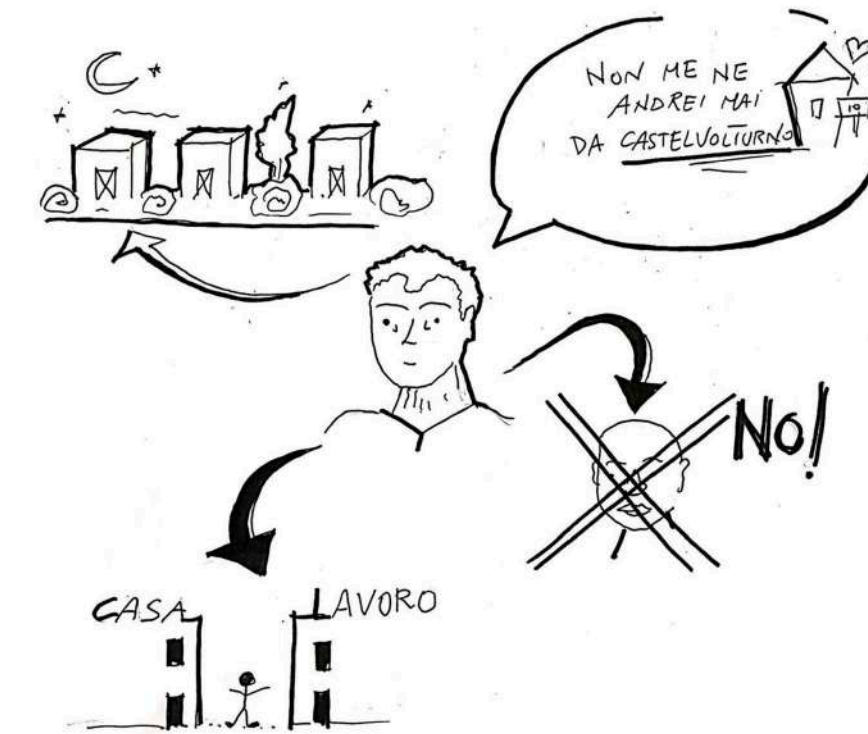
SAMPLE 12_50-YEARS-OLD MAN, WORKER / CAMPIONE 12_UOMO DI 50 ANNI, LAVORATORE



SAMPLE 13_48-YEARS-OLD MAN, FARMING WORKER / CAMPIONE 13_UOMO DI 48 ANNI, LAVORATORE AGRICOLO



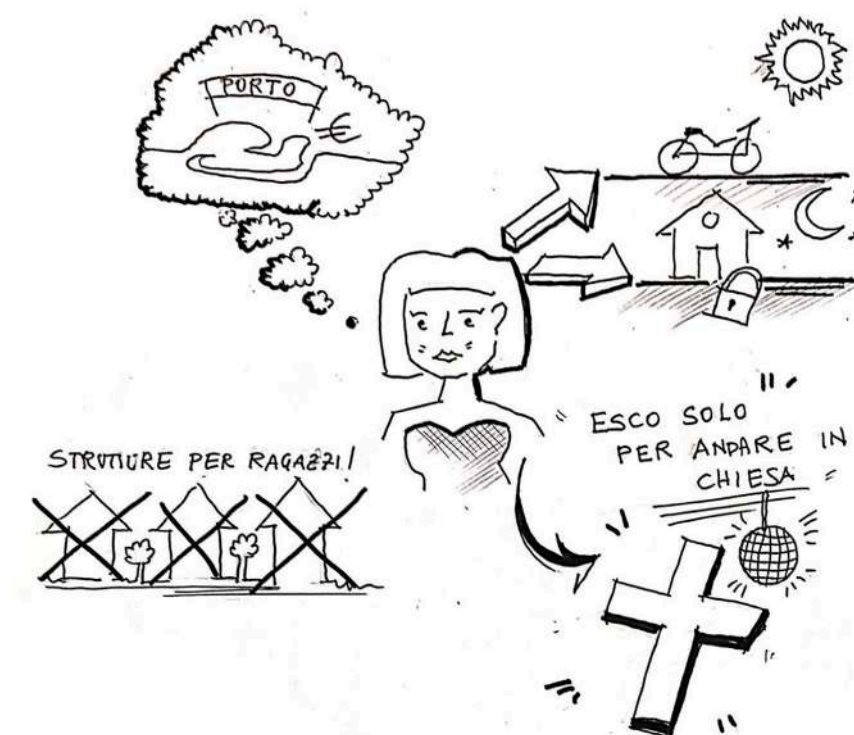
SAMPLE 14_29-YEARS-OLD WOMAN, EMPLOYEE "BAR DELLA Q8" / CAMPIONE 14_DONNA DI 29 ANNI, DIPENDENTE "BAR DELLA Q8"



SAMPLE 15_61-YEARS-OLD MAN, EMPLOYEE / CAMPIONE 15_UOMO DI 61 ANNI, IMPIEGATO

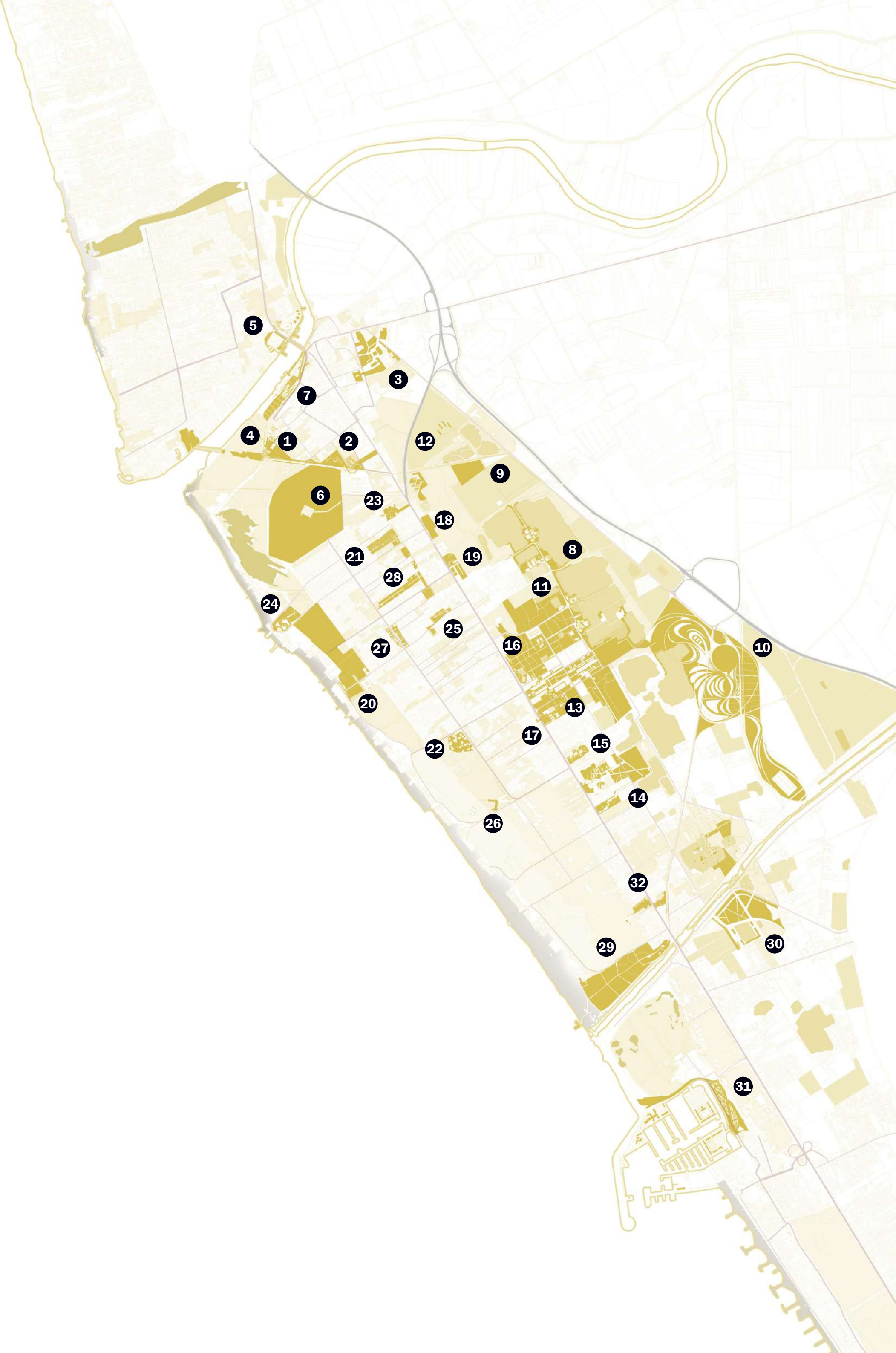


SAMPLE 16_43-YEARS-OLD MAN, DRIVER PARKING / CAMPIONE 16_UOMO DI 43 ANNI, PARCHEGGIATORE



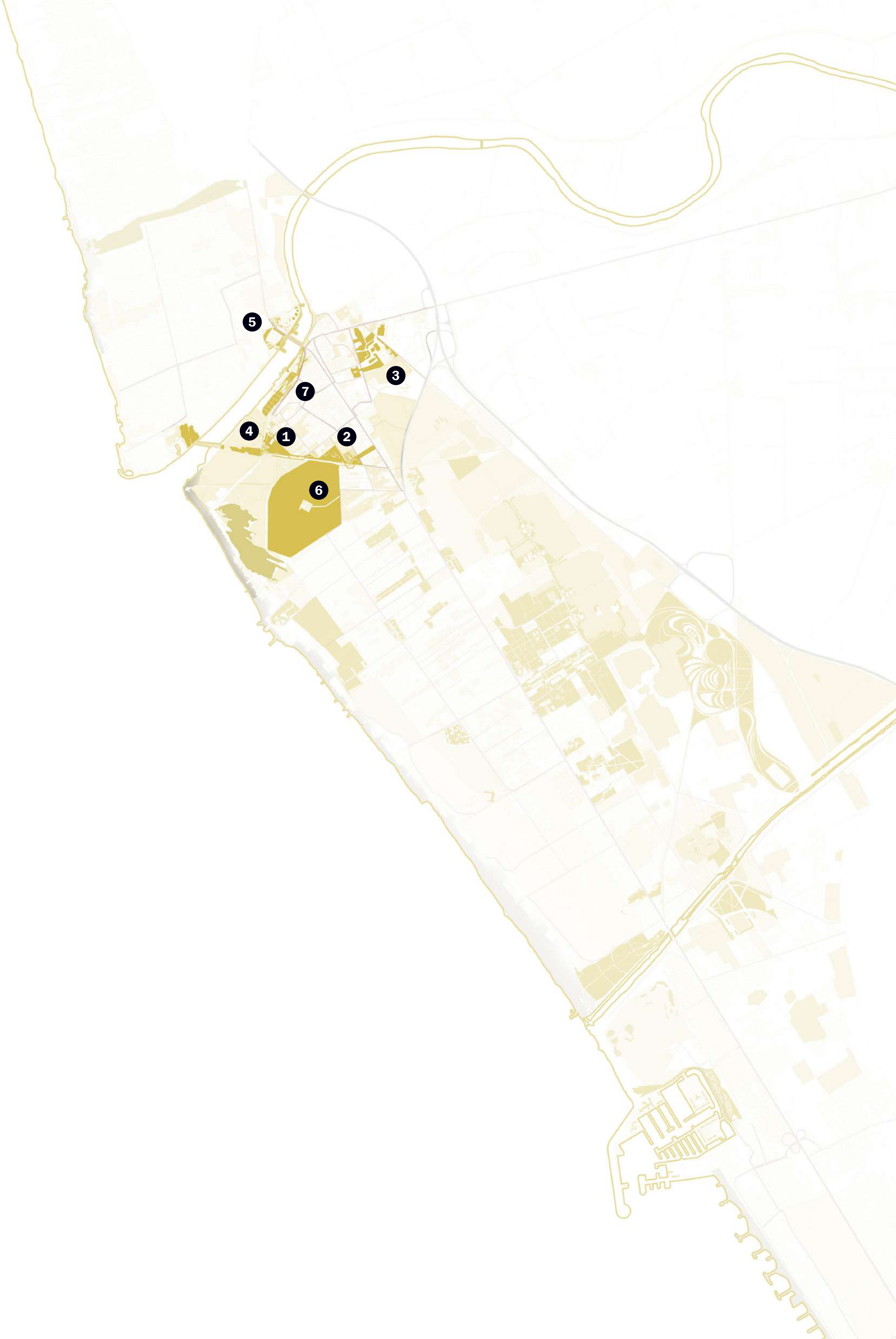
SAMPLE 17_55-YEARS-OLD WOMAN, CATECHIST / CAMPIONE 17_DONNA DI 55 ANNI, CATECHISTA





PROJECTS / *PROGETTI*

1. **From urban to natural spaces** Federica Amoddio
2. **NaturaCittè** Chiara Barone
3. **Castel Volturno learning neighbourhood** Patrizia Boldoni
4. **Across the line** Marilena Bosone
5. **DXVCA Uncertainty as a value** Simone Castaldi
6. **Brownfield Re-development** Vincenzo De Iulio
7. **Cycle center...e mo' pedala** Antonio Stabile
8. **Out of bounds** Erminia Barone
9. **Re-Wine in Wetland park of Castel Volturno** Luca De Simone
10. **SpArtimmacell** Mario Del Prete
11. **Nature embraces infrastructure** Gessica Pepe
12. **Reconnection Park** Silvia Romano
13. **EmergenCity** Greta Caliendo
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15. **An urban pole beyond the dense transverse development** Valeria Di Maio
16. **DETOUR. Turn the tour in a detour** Mattia Franceschetti
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19. **Living the limit** Francesca Spacagna
20. **Connection architecture** Chiara Colicchio
21. **Re-stitching** Daniela De Michele
22. **Public Pines** Francesca Del Vecchio
23. **t+issue_from residual spaces to pokets for social interaction** Rosachiara Dell'Erario
24. **Sport and nature. A new sports hall for Castel Volturno** Giannantonio Di Tuoro
25. **Social Conne(a)ction** Federica Esposito
26. **Under Castel Volturno** Domenico Illiano
27. **Domestic city. A strategy against sprawl** Maria Masi
28. **Through the wall** Annamaria Salzano
29. **Starting from nature** Jacquelin Chiarastella Buono
30. **Outside the Fence** Rosa De Rosa
31. **A new touristic port** Giovanni Di Costanzo
32. **Designing horizons** Maria Grazia Guastaferro



ALONG THE VOLTURNO RIVER AND THE VARICONI OASIS *IL LUNGO VOLTURNO E L'OASI DEI VARICONI*

- 1. From urban to natural spaces** Federica Amoddio
- 2. NaturaCittè** Chiara Barone
- 3. Castel Volturno learning neighbourhood** Patrizia Boldoni
- 4. Across the line** Marilena Bosone
- 5. DXVCA Uncertainty as a value** Simone Castaldi
- 6. Brownfield Re-development** Vincenzo De Iulio
- 7. Cycle center...e mo' pedala** Antonio Stabile



FROM URBAN_
_TO NATURAL SPACES



The project is developed between a wetland area and the large building fabric area of Castel Volturno; indeed it is configured as a strategic connection project between two areas of the city so different although they are so close. According to the Ministry of the Environment, the wetland in question, Oasi dei Variconi, is one of the 65 protected areas in Italy and one of the most at risk; it is known for birdwatching and it is characterized by numerous lakes and a low vegetation typical of the Mediterranean scrub.

The whole territory of Castel Volturno is characterized by many areas of this kind due to the presence of a very high aquifer and, for this reason, one of the purpose of the project is mitigating the flooding and water stagnation through collection and purification tank systems. Immediately close to the current access to the Variconi Oasis, the area is absolutely invisible from the Domitiana road and it can be reached only knowing how to get in through narrow streets that serve an undifferentiated fabric of villas. The potential of a project in this place is certainly about landscape, as it aims to solve some environmental issues and, at the same time, to regenerate the area across the Oasis. Following the development of a large slope that hinders visibility and prevents the

connection between the roads immediately adjacent to the wetland and the city, the project consists of a continuous sign that outlines the wedge suggested by the geometry of the site, and that it is configured as a large floor that can be experienced as a large panoramic terrace: symbolically it crosses the boundary established by the formal access gate to the Oasis in order to connect two very different and currently separate areas.

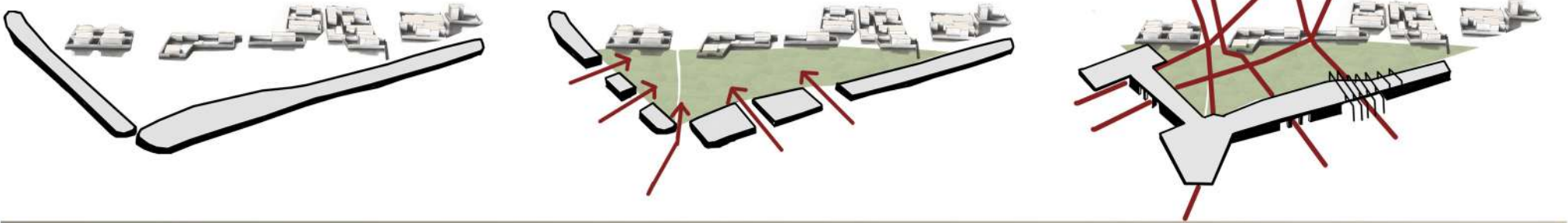
This coverage is marked below by a series of pillars, and in some strategic spaces, by a series of volumes that make up the buildings of the project. They are mainly two: one, with a more public character, is developed along a tomb canal, to be renaturalized, and performs various functions including an information point for the Oasis with its exhibition space, a refreshment stand, a reading room; the other, a guest house, consists of the rooms that turn out to be the only blocks built, and common spaces which are delimited by the outside only by a series of flexible wood panels. This system of elements defines a low infrastructure, with an average height of 6 meters, which accompanies the visitor to the access point of the park and beyond. The desire to work with the ground and to indulge the slopes and heights through

terraces, ramps and staircases, has allowed to achieve a low structure in close connection with the ground itself; the research and the experimentation, advanced at the same time with the elaboration of the most suitable solution, has facilitated the knowledge about problems linked to flooding, which enabled to propose an estimate of the quantity of mitigation elements to be foreseen in the project.

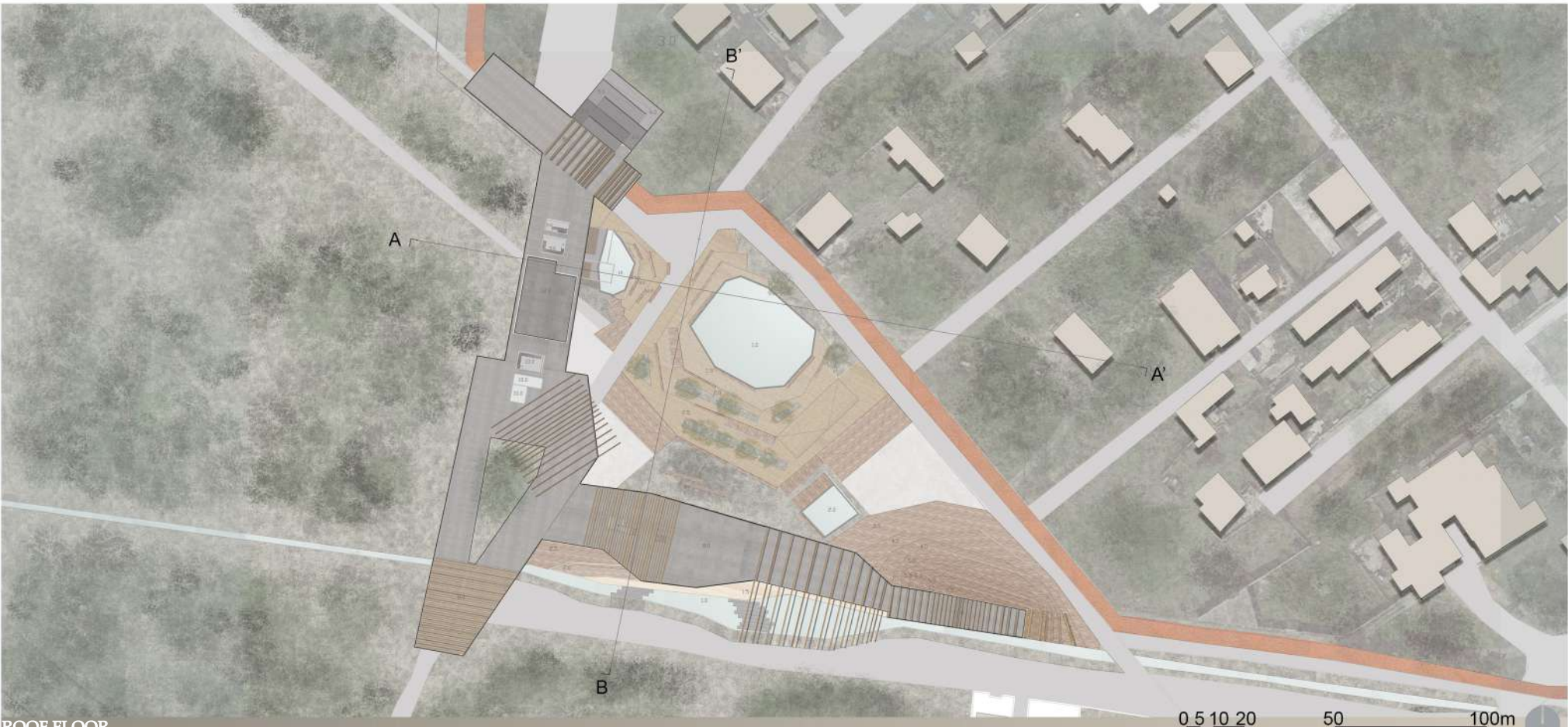
Moreover, from a social point of view, this research has also made it possible to ascertain that the great green lung of the oasis is today lived only by enthusiasts, and that turns out to be instead a black hole completely unknown to the inhabitants of the place; perception that has aimed to overturn through the development of a large landmark in the vicinity of the park and through the revaluation of many abandoned urban areas that accompany from Domitiana road to the Oasis. In this way, the project of access to this big underestimated wetland area becomes the end of a path that starts from that street of the city (Domitiana road) that is inevitably undertaken by visitors, but also by citizens themselves, fully integrated with the well-established urban fabric, and at the same time, with the inspiration to rejoin the coast through the Variconi Oasis.



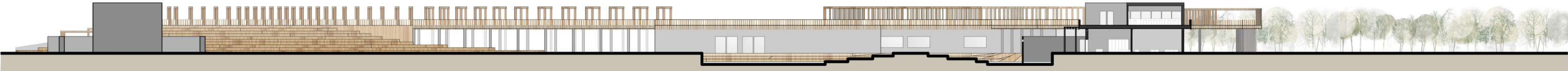
AXONOMETRIC OF THE CURRENT STATE



CONCEPT



ROOF FLOOR



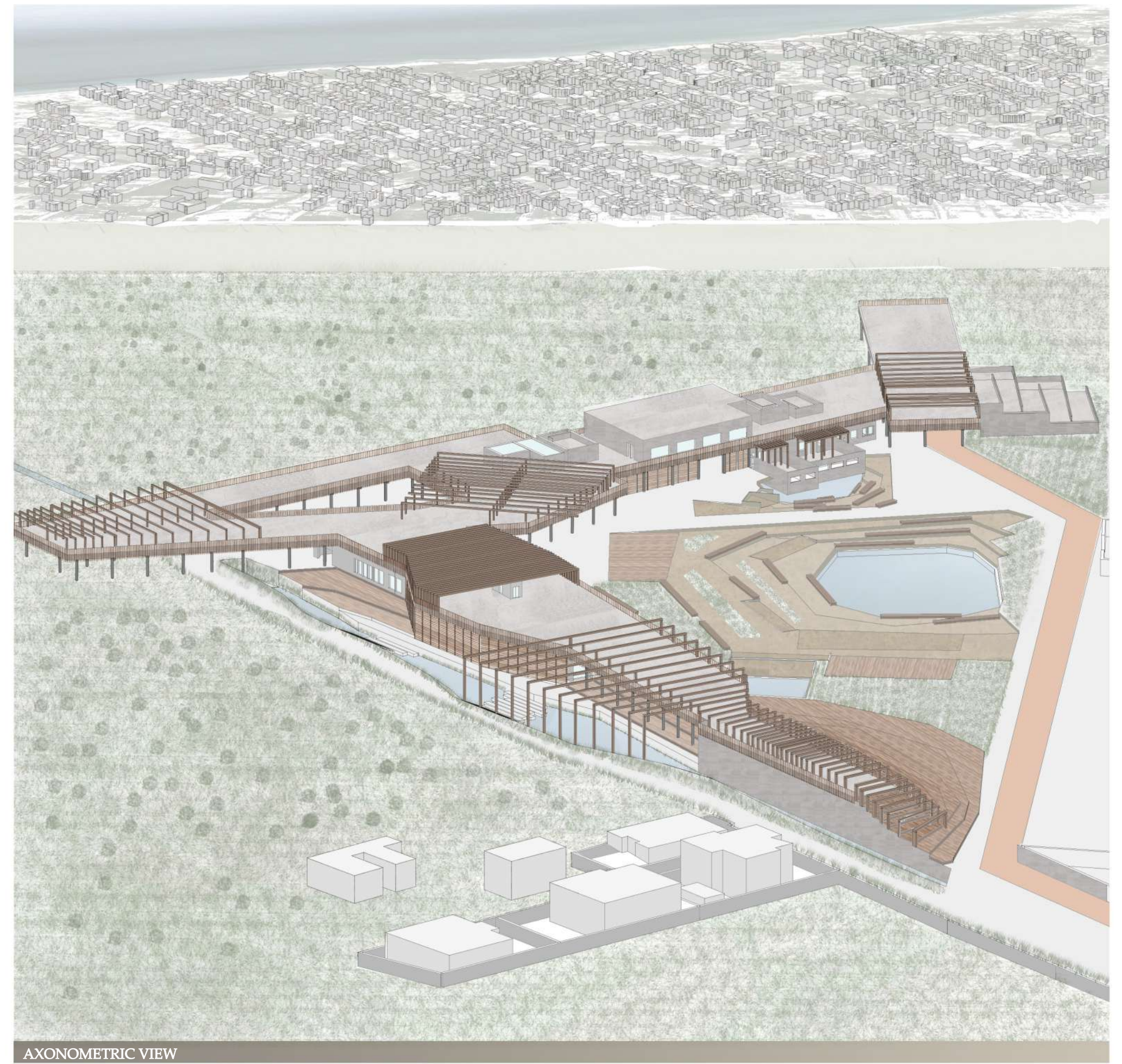
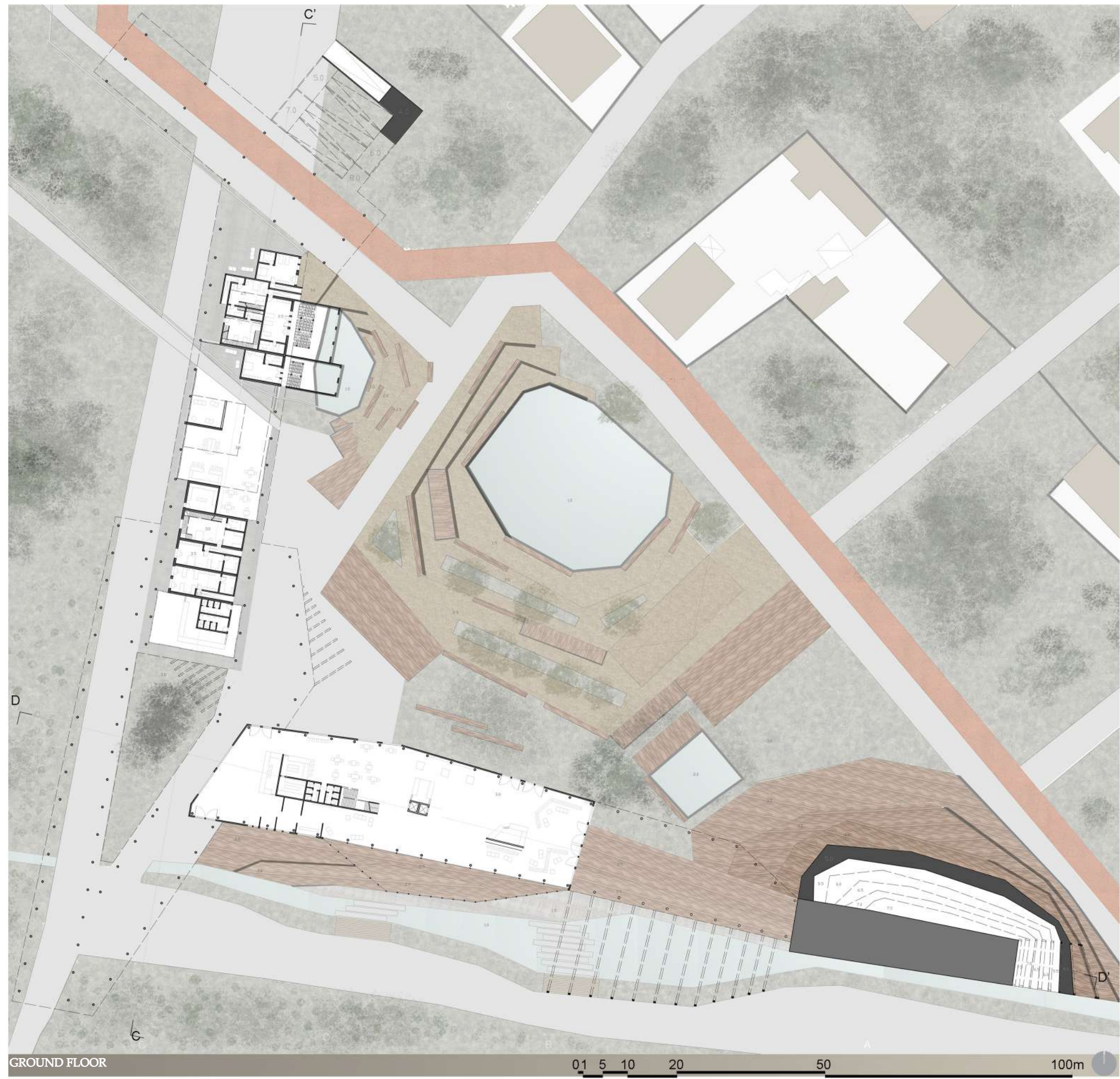
SECTION AA'

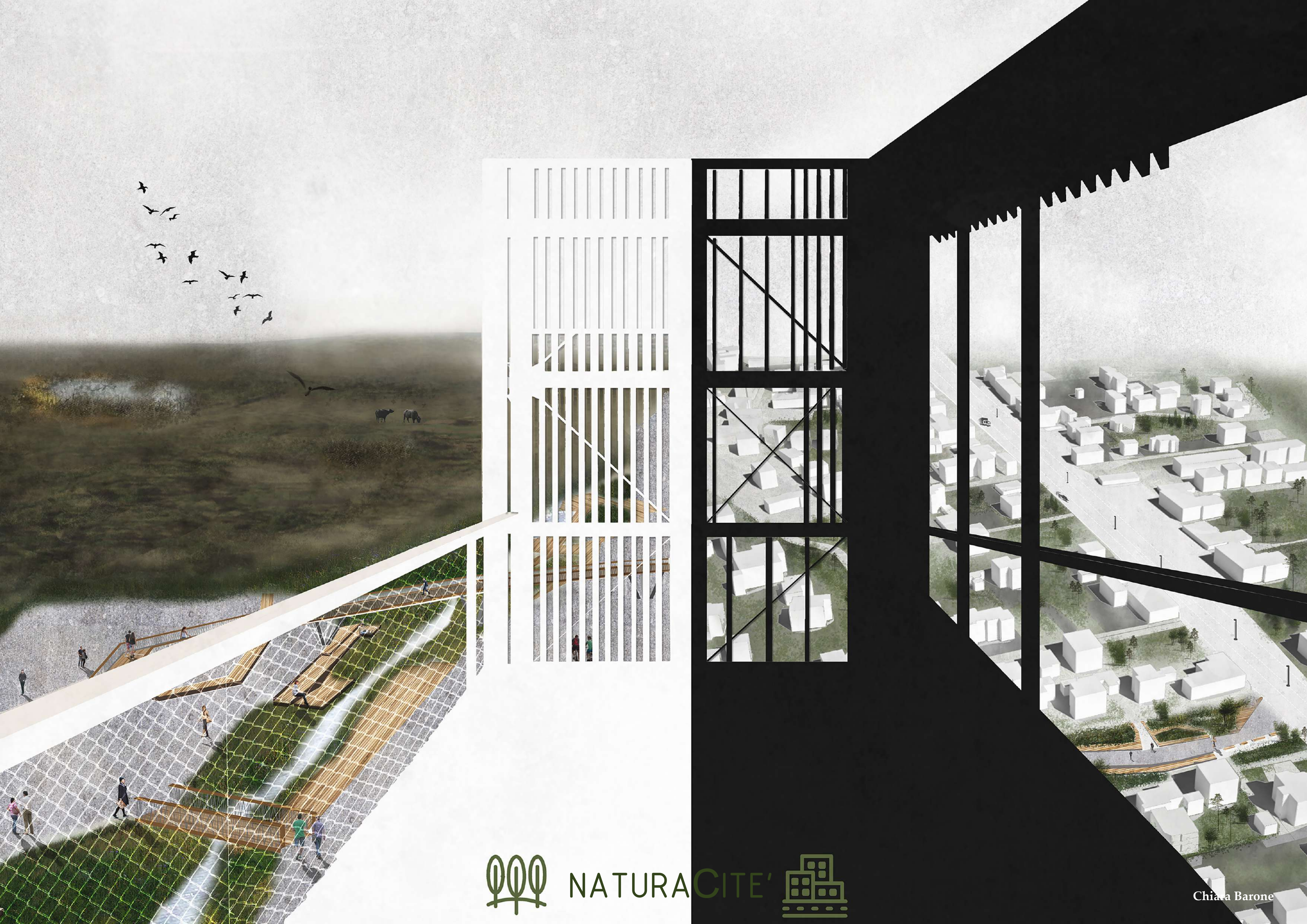
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SECTION BB'

SCALE 1:500





NATURA CITE'



Chiara Barone



Trasversal connection between city and nature.

The starting point for this project was a merge of cartographic and empirical knowledge of the municipality of Castel Volturno. Understanding this place, which seems on the map an almost random space, where everything appears secondary compared to the major longitudinal axis crossing the city, The Domitiana road-requires careful exercise in observation.

At a more careful analysis it appears evident , in fact , that Domitiana is only a part of this very complex territory, a fast axis that crosses the city without interfacing with the different realities that develop on its sides, such as the lake area, the asphalt ground of the urban fabric, the Mediterranean vegetation and, finally, the coast. The need to investigate the relationship between these different realities has led to the search for a transversal axis, which cuts all these parallel zones and creates a continuous connection. In particular, the traces of the ancient Fossapiena canal, once an important element for the proper disposal of water, which used to directly flow into the mouth of the Volturno, were investigated in order to make this transversal sewing. This canal belongs to a much wider hydraulic infrastructure, the Regi Lagni , connected in turn to the Macedonian canal, which runs along the lakes to the north. This system, however, was interrupted in recent times, when the Fossapiena canal has been graded in the point of intersection with the Domitiana road, blocking its natural flow, increasing the problem of flooding, and

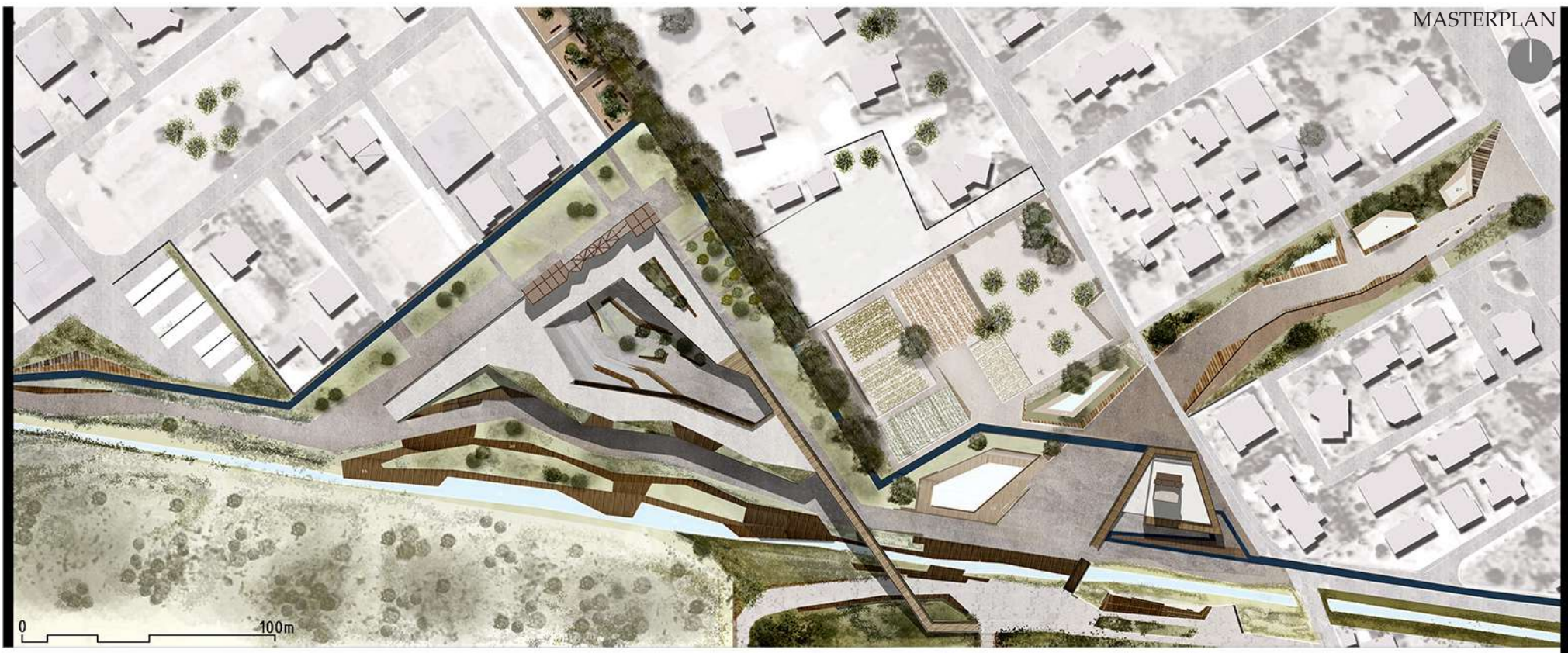
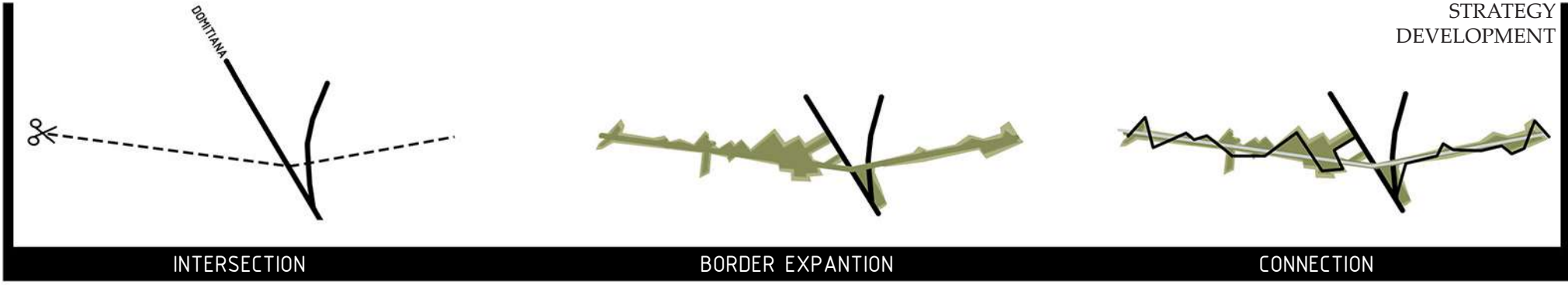
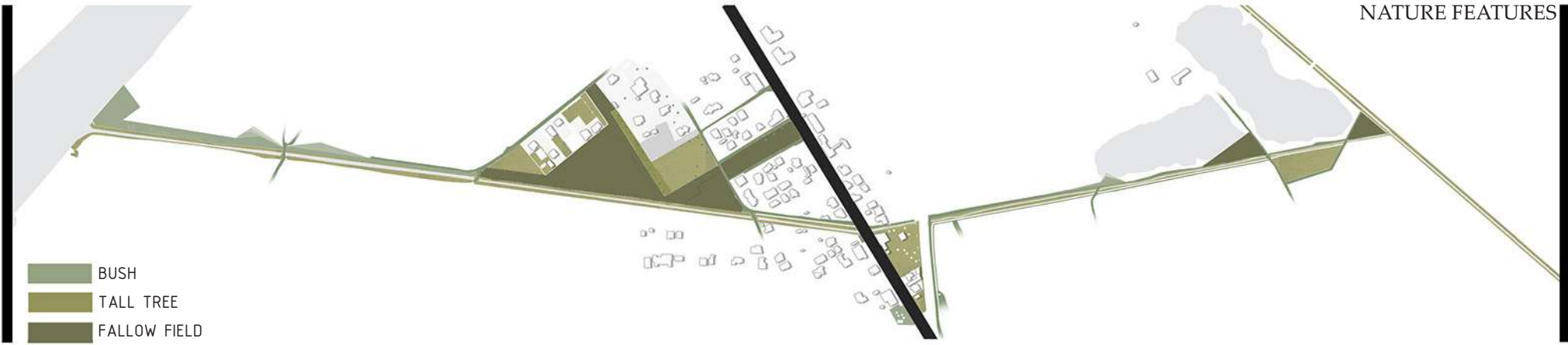
becoming itself a collection point for urban waste.

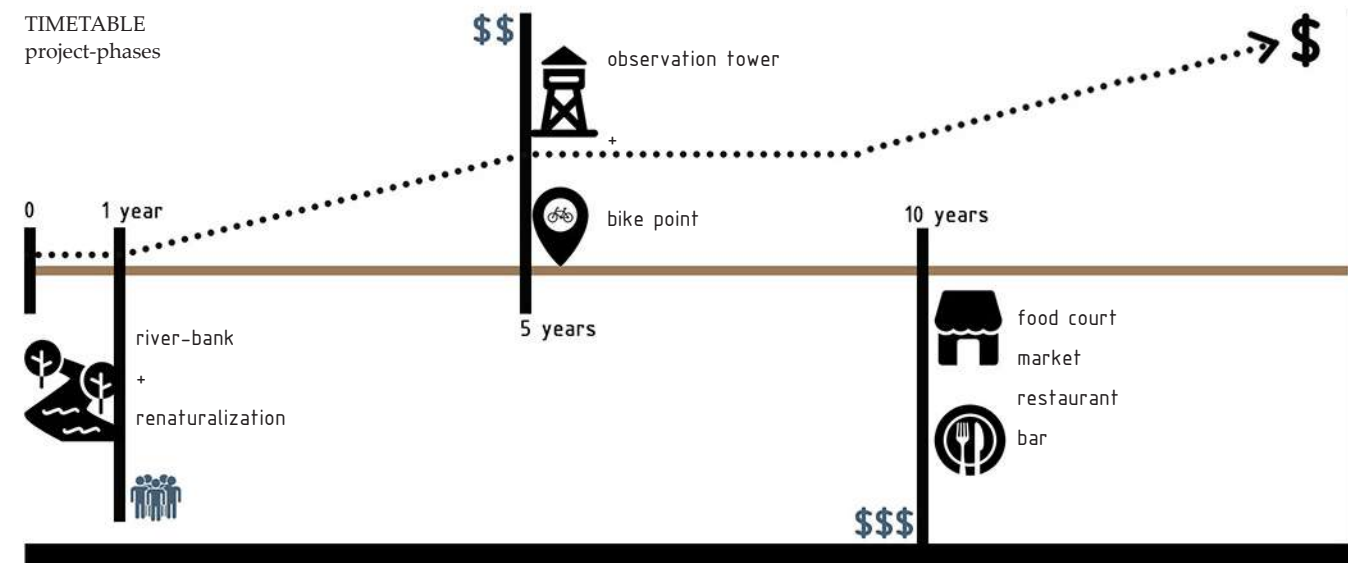
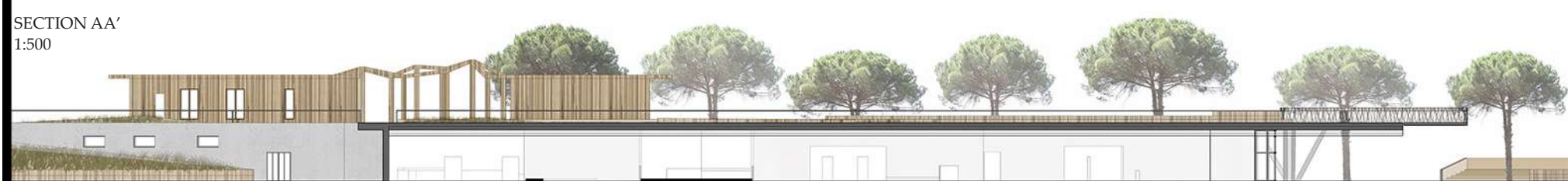
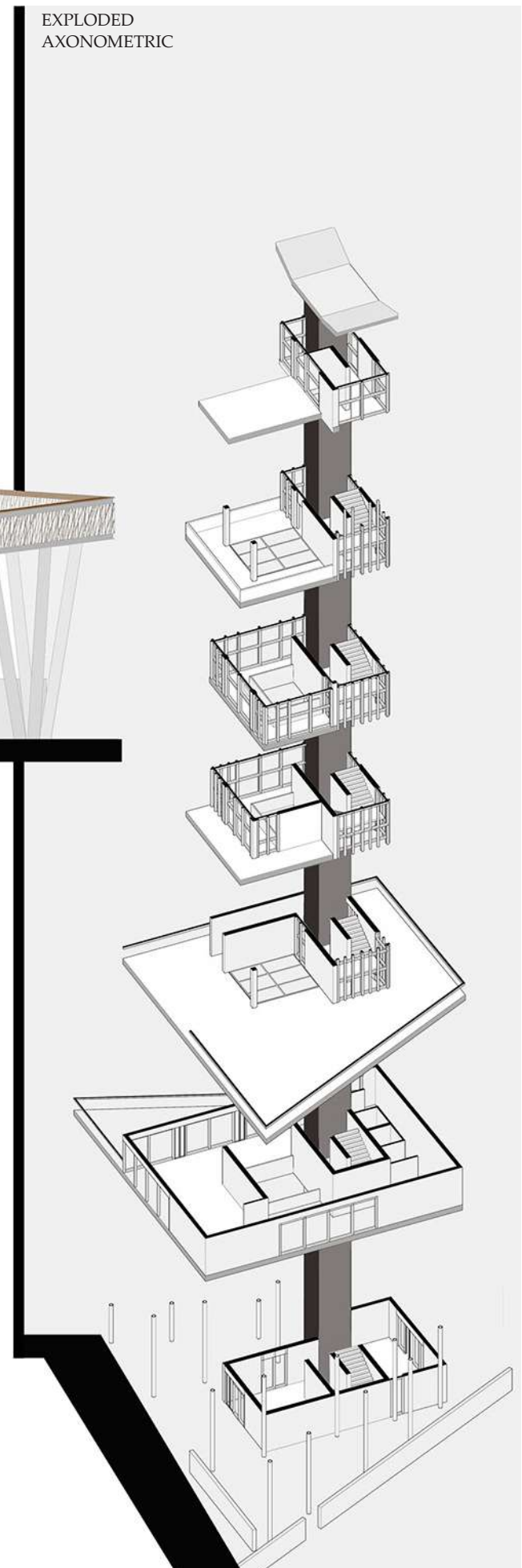
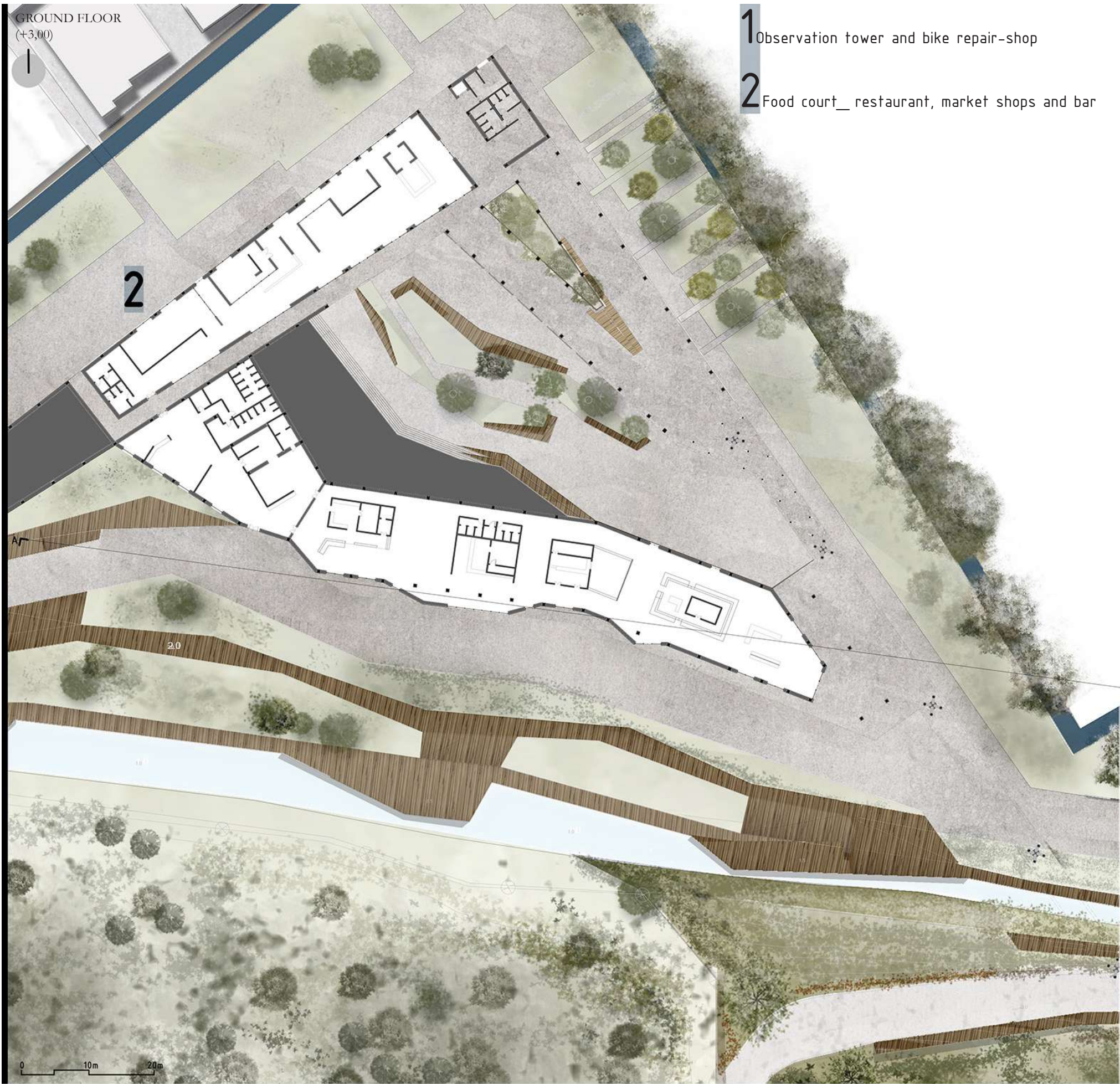
The idea starts from the will to solve these problems, operating in the first place a careful renaturalization of the Fossapiena river, so as to restore the natural and original path of the water. The architectural project therefore intervenes in support of the engineering and naturalistic work, with a usable river-bank, which can change the perception of the place, defining an identity space for the city of Castel Volturno. Therefore the desire to create a single linear urban park that crosses the entire territory and that, at the same time, offers services to citizens. The whole architectural intervention is thought as a process that is completed in successive phases.

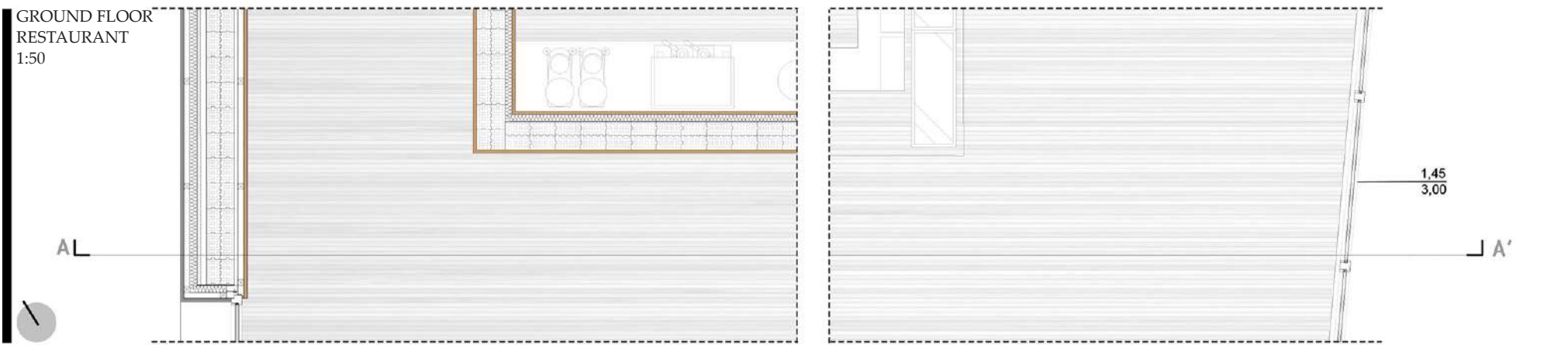
First of all, the development of the park, which is divided into a series of public green areas that are currently in a serious state of abandonment and degradation; then the construction of a landmark, which marks the main access to the park and which creates physical, but above all visual relationships with the Domitiana and with the Oasis of the Variconi, allowing a 360 degree high view. This reference element consists, in fact, in a wooden observation tower, of considerable height and open on all sides, which is grafted inside a concrete base, more massive, accommodating a bike-point and a bike repair-shop, a reference for the many cyclists who travel this place. To this first architecture clings a steel and wood

walkway that allows the crossing of the river, establishing a physical relationship between two parts of the city now defined as “rive droit” and “rive gauche”, and also the continuation of the pedestrian path that connects the first building to the second. The third phase involves the realization of another architectural element, which at the same time defines a relationship with the city and the canal, accommodating different functions, such as a food market, a restaurant, a bar, but also organizing coverage as an urban terrace. The references to local food and wine are the prerogatives of an intervention programme of a unitary character, in which the signs, tastes and smells of local traditions and cultures will be recognizable. This element also opens towards the tower and it is organized around a central court, which allows the entrance of nature inside, evoking the memory of the green which used to characterize that area.

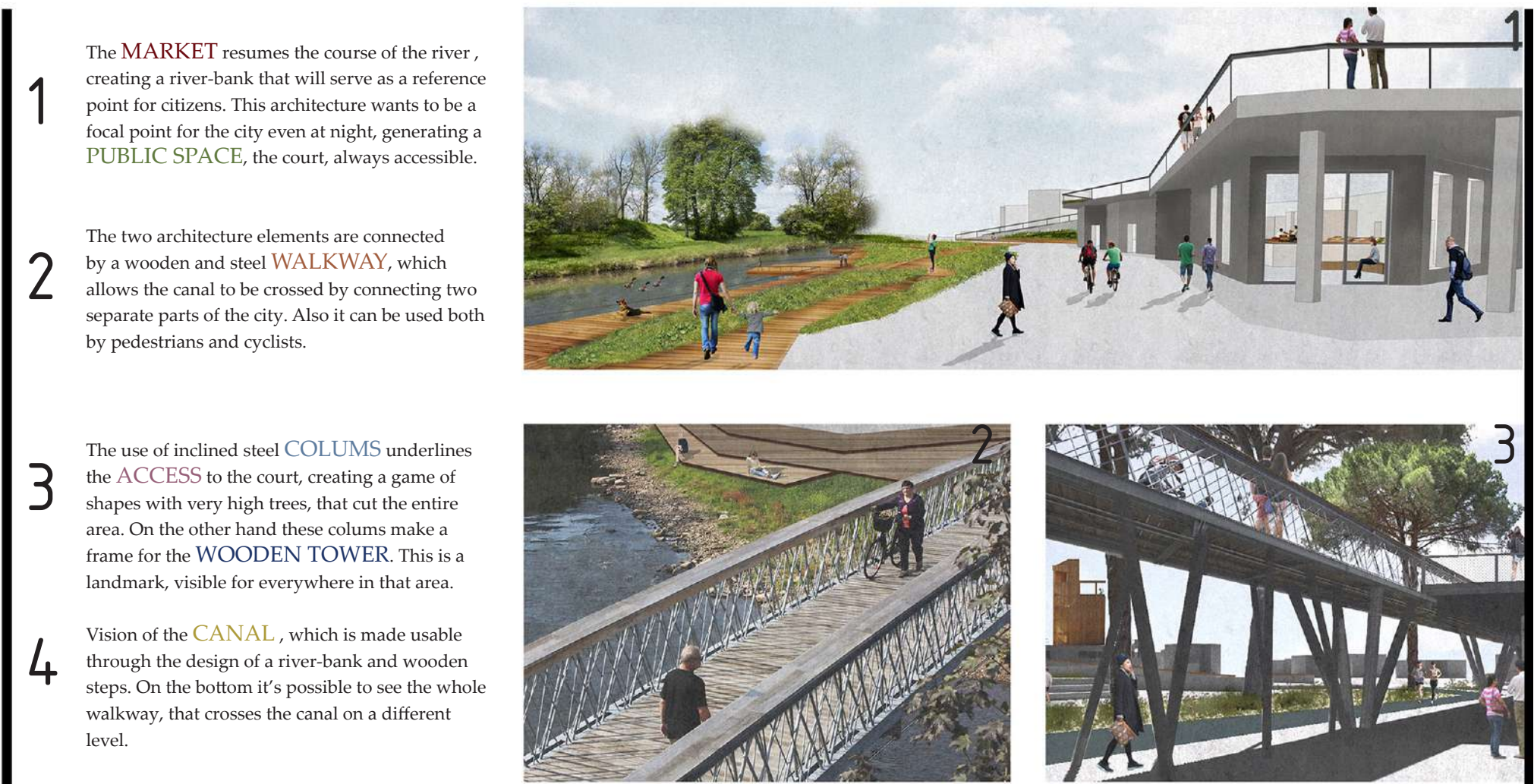
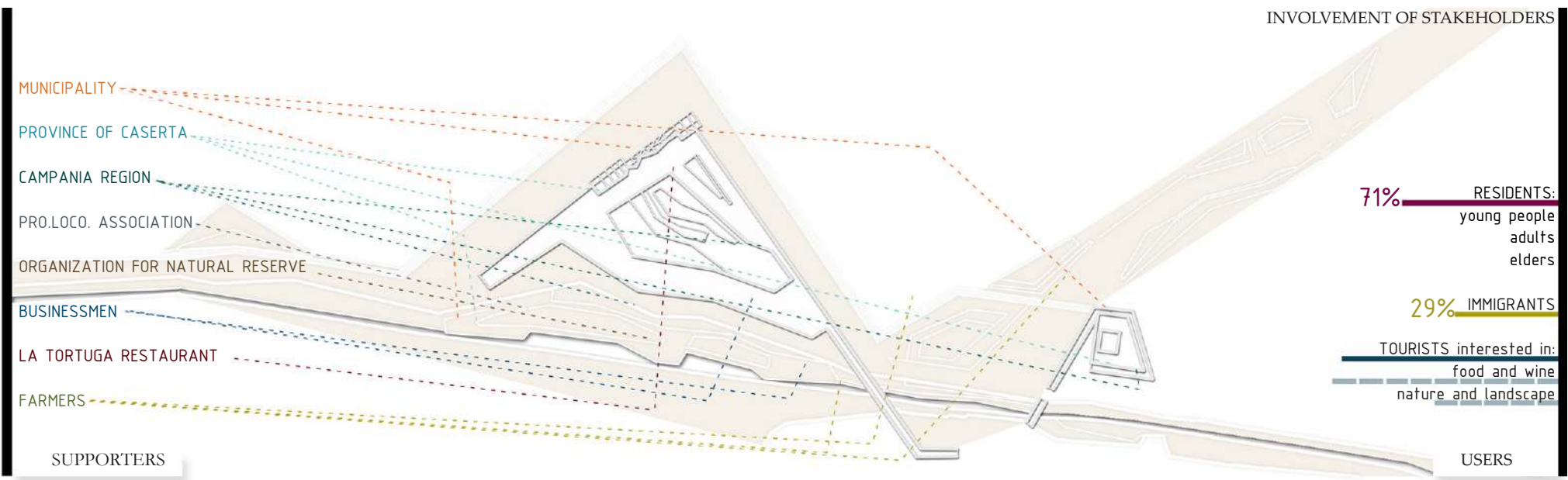
The objective of the project is to start again from the potential of the place, especially natural, with the desire to create public spaces and a renewed identity, that would allow the growth of a sense of place and become a point of reference for the different social groups resident in that territory. In addition, knowledge of the place from below, has allowed the development of an experimental architecture, which wants to field very different themes, trying to solve the problem in a non-ordinary way ,through the valorization of parts of the territory today completely forgotten, through the grafting of new relationships.







THERMAL ASSESSMENT	Thermal Load W/m²	Thermal Load tot. W	Loads diagram	COP/EER Wt/We	Absorbed electric energy kWh (1 hour of heating and cooling at rated conditions)	electricity energy fee €/kWh
SUMMER	129,82	102298,65	In summer there are both latent and sensitive loads	2,8	68,3	0,3
WINTER	-65,65	-51713,90	In winter the positive latent load is neglected	2,5	83,5	0,3



1 The **MARKET** resumes the course of the river , creating a river-bank that will serve as a reference point for citizens. This architecture wants to be a focal point for the city even at night, generating a **PUBLIC SPACE**, the court, always accessible.

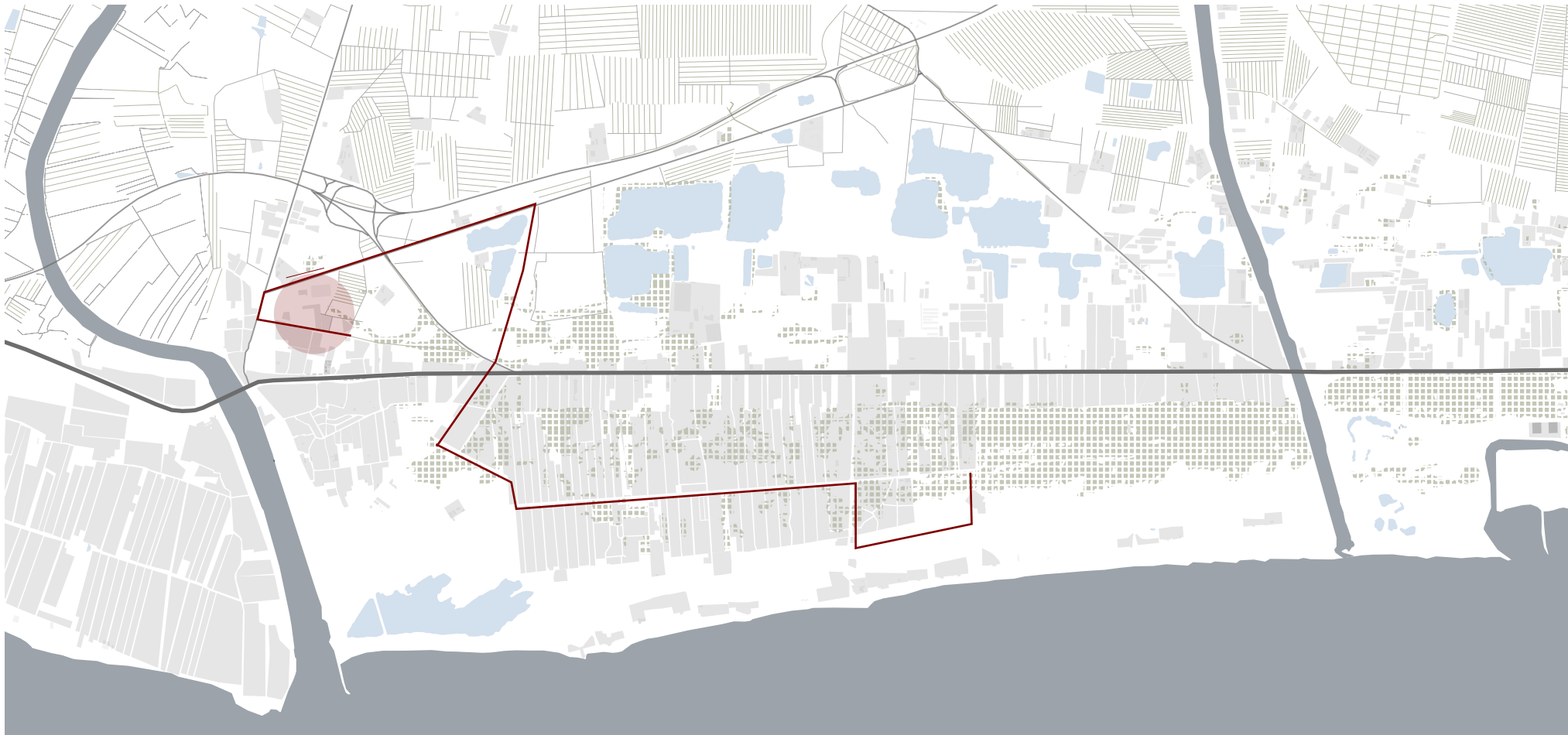
2 The two architecture elements are connected by a wooden and steel **WALKWAY**, which allows the canal to be crossed by connecting two separate parts of the city. Also it can be used both by pedestrians and cyclists.

3 The use of inclined steel **COLUMNS** underlines the **ACCESS** to the court, creating a game of shapes with very high trees, that cut the entire area. On the other hand these columns make a frame for the **WOODEN TOWER**. This is a landmark, visible for everywhere in that area.

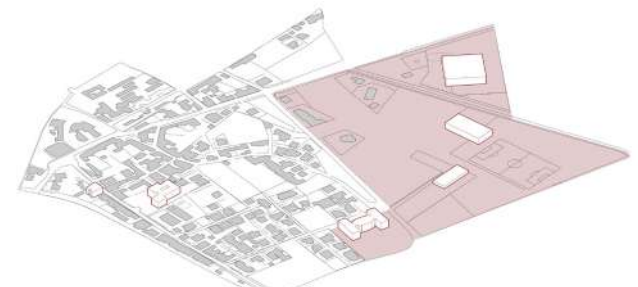
4 Vision of the **CANAL** , which is made usable through the design of a river-bank and wooden steps. On the bottom it's possible to see the whole walkway, that crosses the canal on a different level.

CASTEL VOLTURNO LEARNING NEIGHBOURHOOD

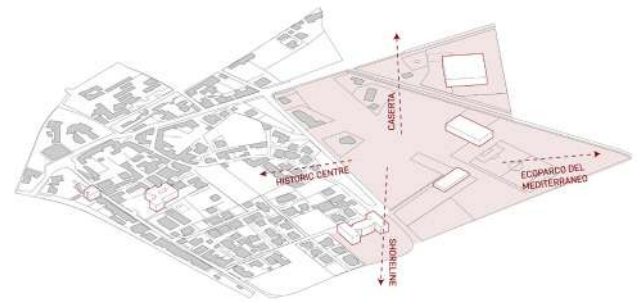




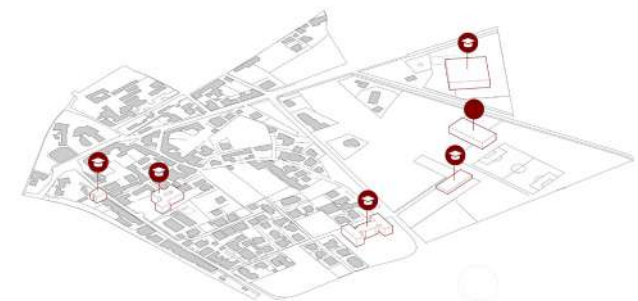
Localization of the project area



The project area is the heart of the urban regeneration of the historic centre of Castel Volturno as planned by the Regione Campania in the general masterplan of the city



The area is a strategic point for the city and from here all the most important surroundings are easily reachable



In the historic centre of Castel Volturno there is the majority of the educational structures located on the territory and most of them have their own sports field

«Se si vuole che la democrazia prima si faccia e poi si mantenga e si perfezioni, si può dire che la scuola a lungo andare è più importante del Parlamento e della Magistratura e della Corte Costituzionale»
Piero Calamandrei

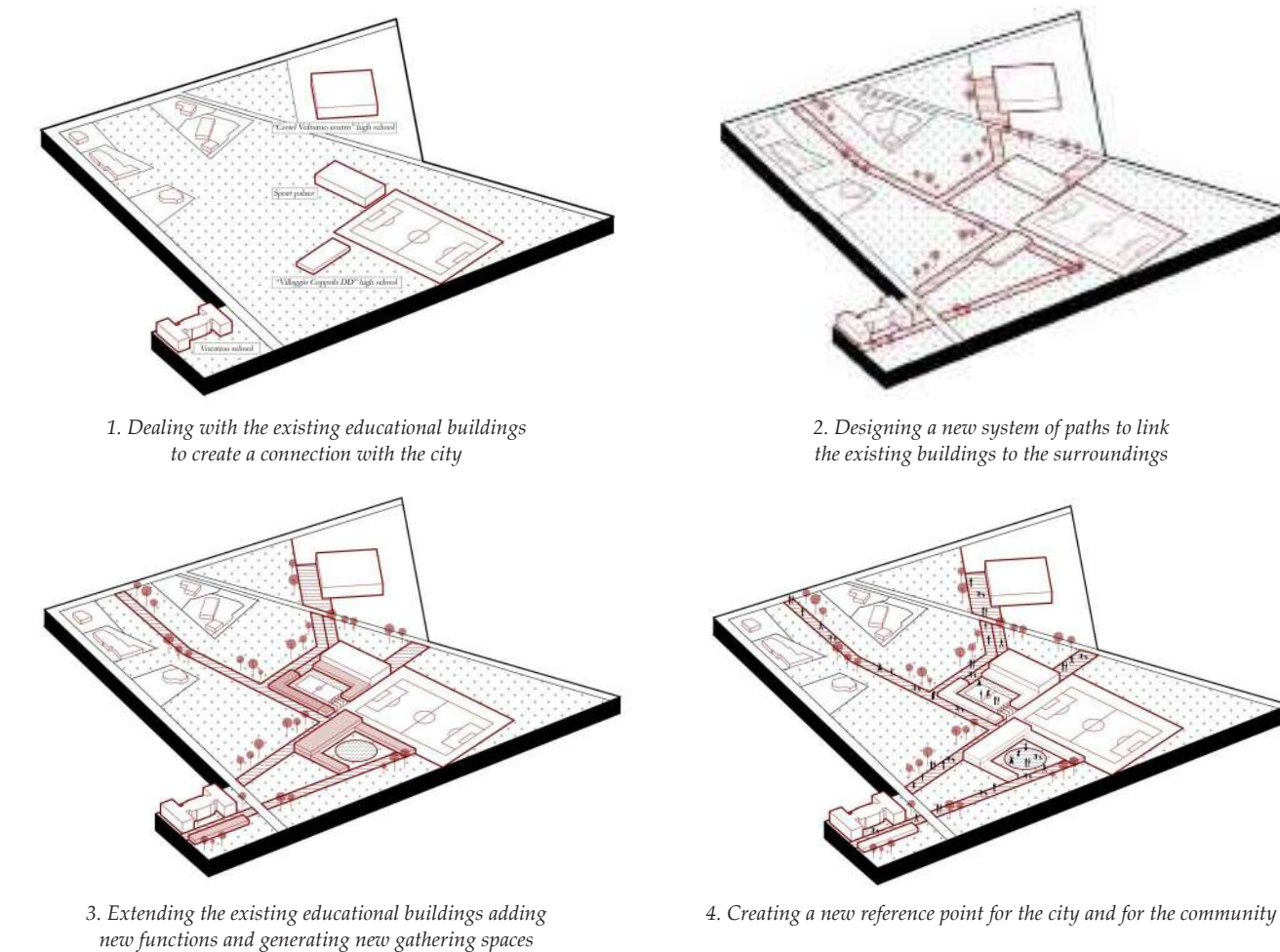
«Cultura non è possedere un magazzino ben fornito di notizie, ma è la capacità che la nostra mente ha di comprendere la vita, il posto che vi teniamo, i nostri rapporti con gli altri uomini. Ha cultura chi ha coscienza di sé e di tutto, chi sente la relazione con tutti gli altri esseri... cosicché essere colto, essere filosofo, lo può chiunque voglia»
Antonio Gramsci

The proposal consists of the creation of a learning neighbourhood in the area of the historic centre of the municipality of Castel Volturno. The project provides the extension of the two existing school buildings located in Via Giuseppe Garibaldi and Via Giuseppe Mazzini, and connects them to the sport building in Via Occidentale. It creates a new open system of pedestrian paths, bike lanes and green spaces that links the two ends of the project area and it generates a new reference point for the educational structures of the city and for all the citizens. The proposal is born from the idea that it's strongly necessary to rethink the role of school in everyday life. In fact, it's possible to restart from the suburbs: in those conditions of marginality and decline, a school has a key role in urban regeneration and redesigning school's buildings means creating spaces on a human scale. The school is meant as an open unit of the vast system of the city and it creates cultural and social dynamics, giving strength to the identity and the sense of belonging of each one. For an architect dealing with the creation of school buildings isn't only about designing forms but it includes a deep social reflection, especially in these situations of social decline. The aim is to translate in architecture the belief that an innovative approach towards the idea of school can start from the dialogue, nowadays quite inexistent, between the territory and the school itself.

How is it possible to reverse the trend and to establish a strong exchange between the school and the territory?
How is it possible to overcome the traditional idea of the school?

The learning neighbourhood of Castel Volturno includes new buildings that are supporting the existing educational structures and it is adding new spaces for the socialization. In this way, it is trying to promote the meeting of the different realities of the city. The aim is not only to provide appropriate spaces for the education but also to increase the liveability of these ones, so that the school can become a centre of gravity for the community. In this way the school becomes a civic centre from which new cultural, social and educational requests will be generated.

The two high school buildings are rethought and redesigned based on the idea of creating new flexible and polyfunctional spaces, that fit the necessities of the moment. The extension of the high school "Villaggio Coppolla DD" consists of additions of new areas, dedicated to group work and socialization, such as laboratories, a library and an auditorium. All the classrooms that once were located on the ground floor, are now on the new first floor. The ground floor of the school is open every day to everybody; the spaces that were once destined only to the students, now can be brought to life by the citizens. The extension of the vocation school includes a new building where the space is defined by work laboratories and a canteen, open to the students and to the people of the surroundings. The project provides also the extension of the sport building of Via Occidentale that has a huge relevance on Castel Volturno's social life. Rethinking about the role of school also brings to mind that sport is bringing people together. The sport building that once was separated from the schools, is now connected to them through new volumes that are hosting a canteen, a bar, changing rooms and service spaces for the audience. A new square is located behind the existing building and can host matches and events and can be used by the students during the break time. So, investing financial and designing resources on the school means not only taking action on the territory but also to modify the logics that have been diminished the school. Redesigning the school means giving answers to the request of the society and it means to be ready to the changes that we are facing. Therefore, we restart from the school to change what there is around us, just like to construct a strong and lasting we start again from the foundations.



PROMOTERS
Comune di Castel Volturno
Regione Campania
Ministero dell'Istruzione
Istituto nazionale di documentazione, innovazione e ricerca educativa

OPERATORS
School's teaching staff
School's administrative staff
School's technical staff
Sport's technical staff
Sport's administrative staff

USERS
Students (14-19 years)
Locals (every age group)
Citizens in the area (every age group)



Concept



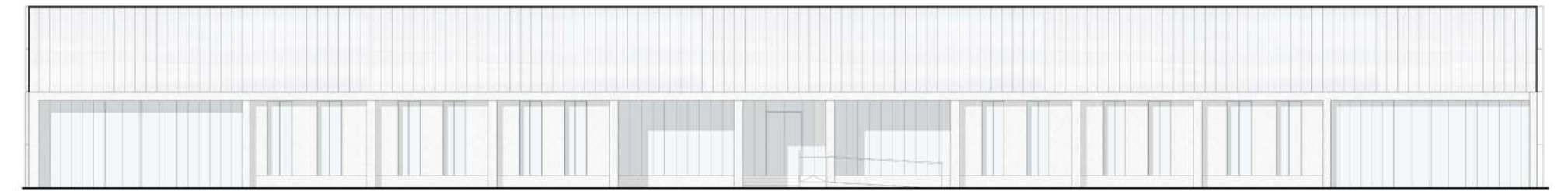
Masterplan



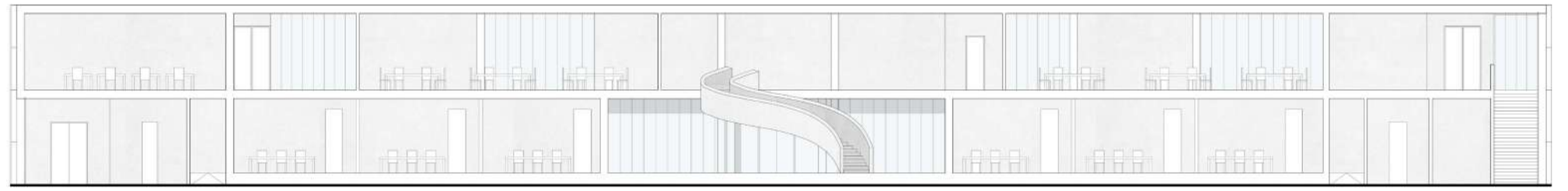
Extension of the high school_ground floor



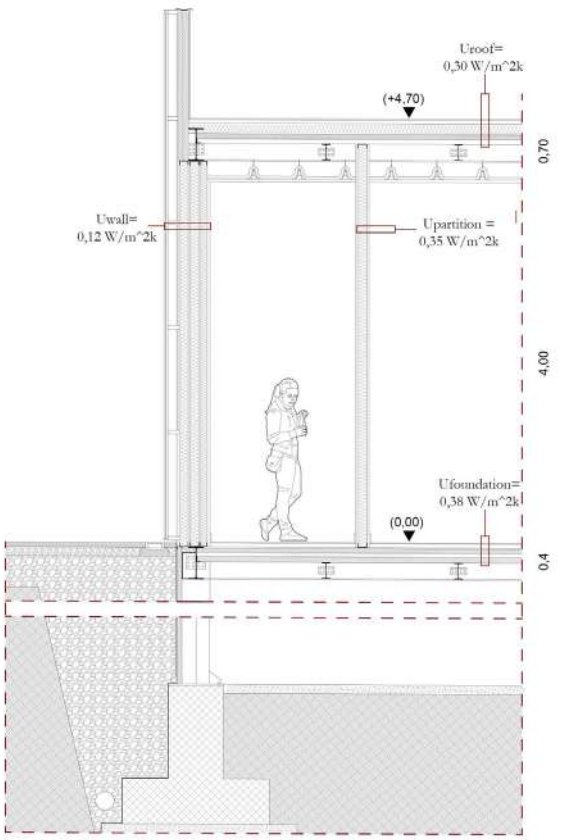
Extension of the high school_first floor



Northern elevation



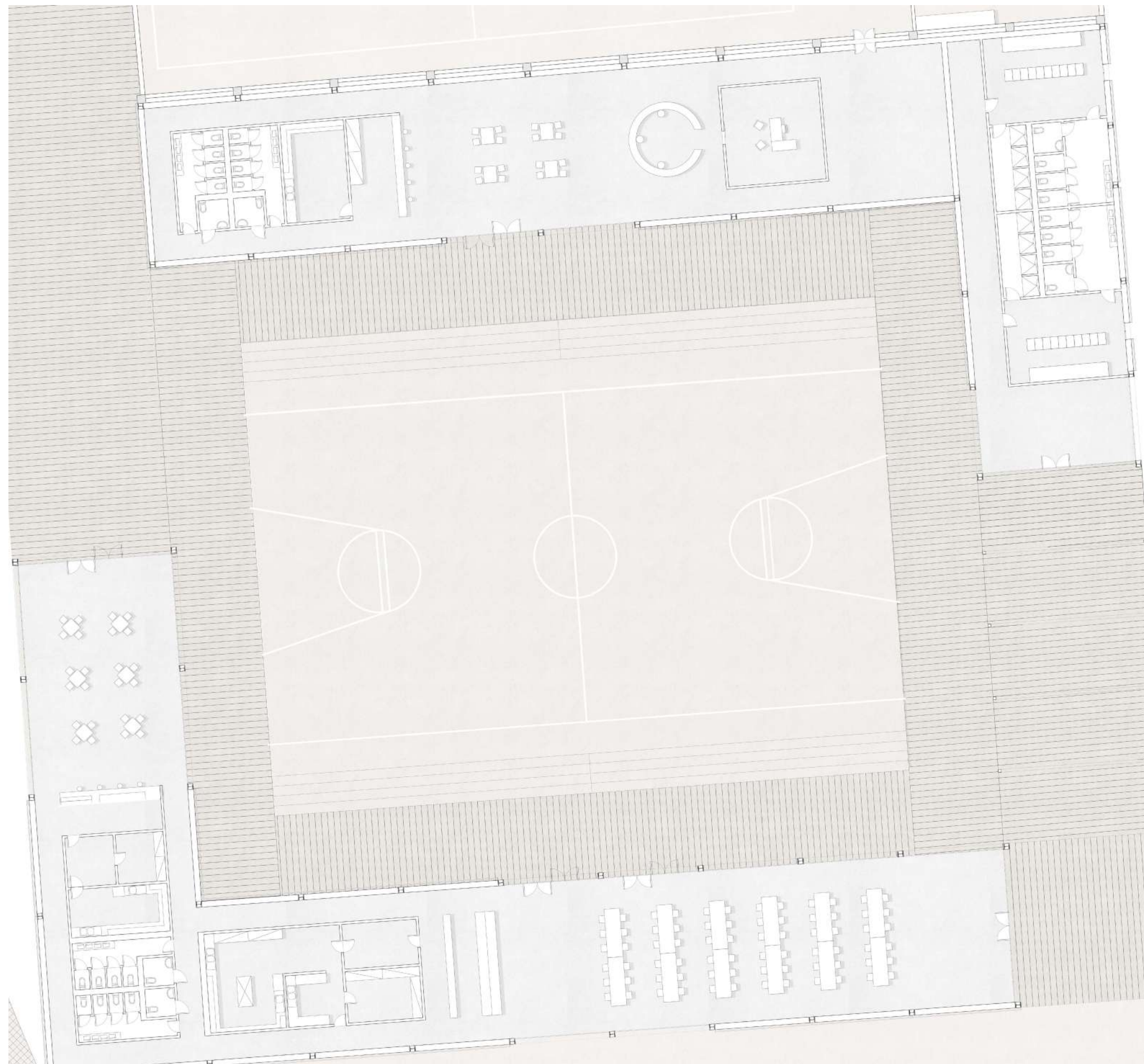
Section AA'



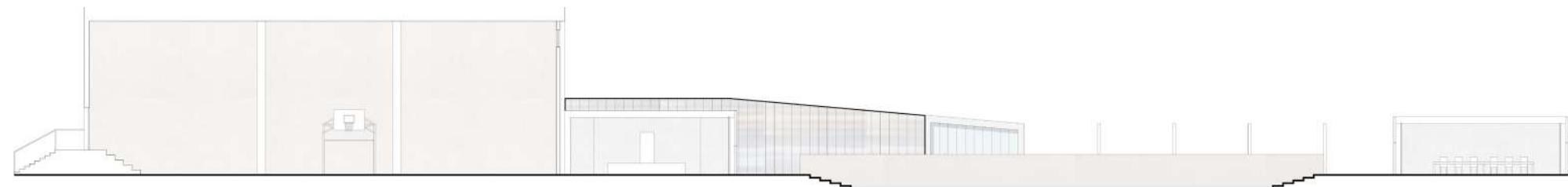
Technical detail_section_library_extension of the high school



Technical detail_west elevation_library_extension of the high school



Extension of the sport building/canteen _ ground floor



Section AA'



Section BB'



Hallway of the high school



Library of the high school



Rooftop of the high school

Water

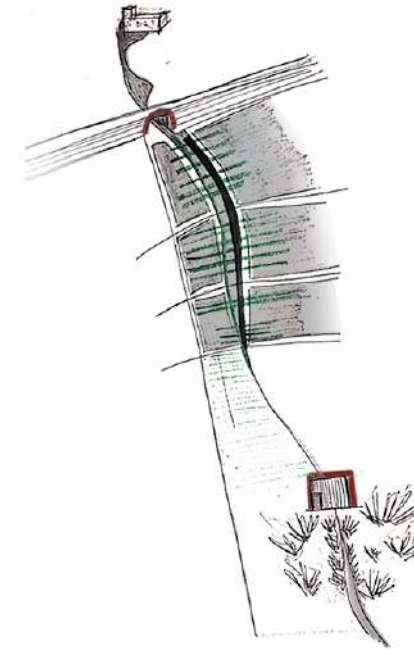
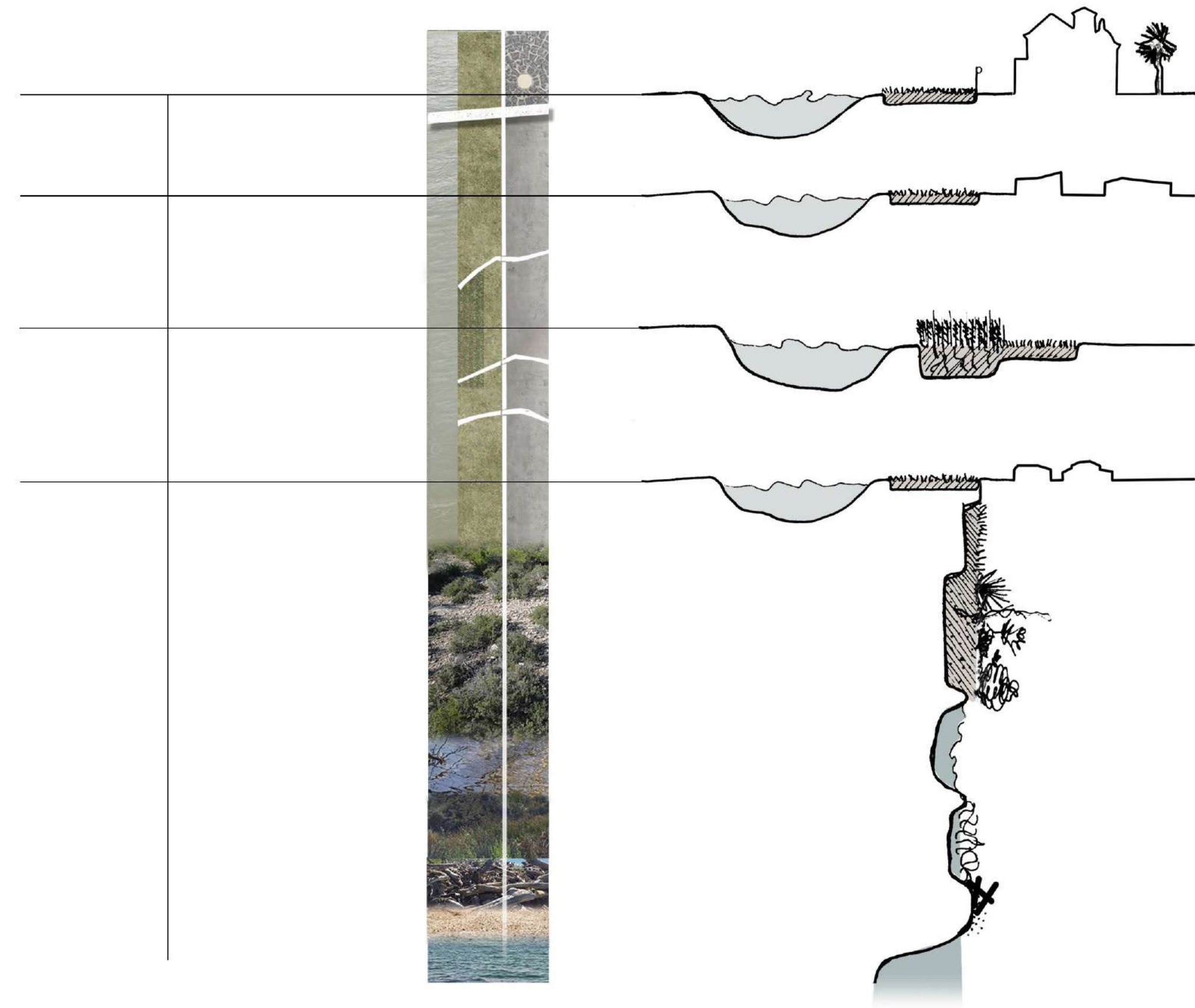
Relations

Soil

Across
the
line

Variconi Oasis

Old town



Castel Volturno and its great linear extension can be associated with a complex system of realities rather than to the image of one single city. The strong territorial and social heterogeneity are evident not only in the study of the cross-sectional area but also in the horizontal one. Among many different realities, a typical vertical sequence one could come across when analyzing the territorial cross-section, is the following: large agricultural areas, urban fabrics built in a completely uncontrolled and unmanaged way, pine forests, residential areas, wide segments of Mediterranean scrub, parking, beach, sand and finally sea. In the longitudinal direction, moreover, the Domitiana road is an example of versatile passage. Because of its extension along the most various business organizations, it is a catalyst of utterly different environments and social fragments. Following the express way up to the historical heart of the city, the situation is strikingly different, unfolding more urban dimension. The grey asphalt is replaced by a stone floor, the roadsides are furnished with chairs and street lamps and also the relationship between the citizen and the commercial activities, for example a bar or a hardware store, regains a more human dimension and identity. The design process, among all territorial sections, starts right from the historical center, because it is undoubtedly the most important place, a tangible piece of history from which one could learn to recover the sense of belonging in a rampant chaos. However, if the design stopped only at the nucleus of the city, equivalent to a point compared to extension of the territory, probably it would never trigger any change in the urban fabric. This is why the benefit of the project design lies in the transition from a one-dimensional point to a two-dimensional line, recalling the course of the Volturno River to the immense natural surface of the territory. This natural area, hosts countless plant varieties of the Mediterranean scrub, prosperous due to the favorable climate and soil type. This connection between history, water and soil is nothing more than the story of a community that needs to recover identity and integration. In this regard, the architectural system represents the connection among the previously mentioned points: while on one hand it hosts all the activities already existing along Via dei Martiri di Castel Volturno, such as fishing, boat storage but especially the local market, on the other hand, the project aims at the full recovery of the Variconi Oasis. Here, a real Expo Center of

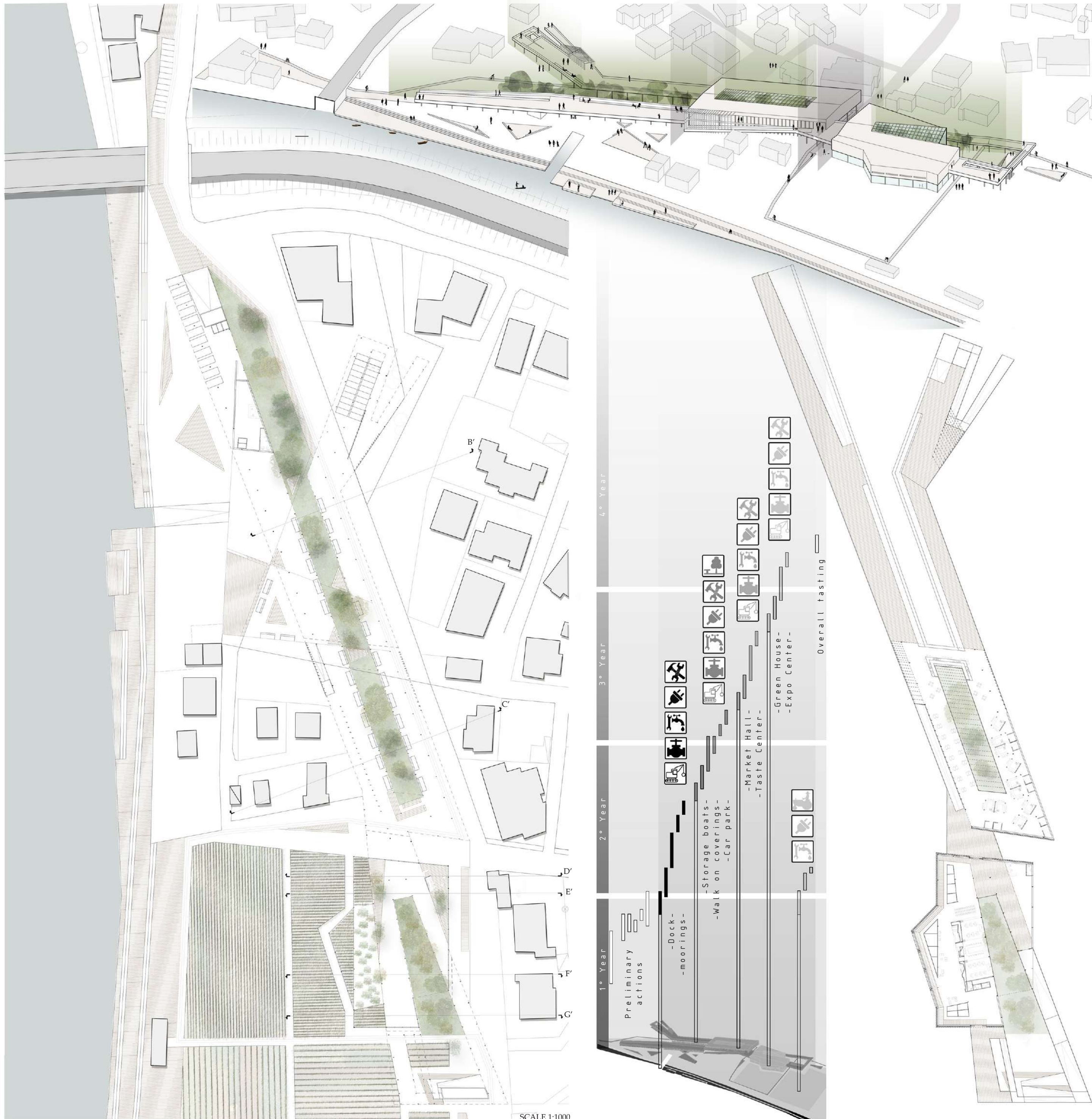
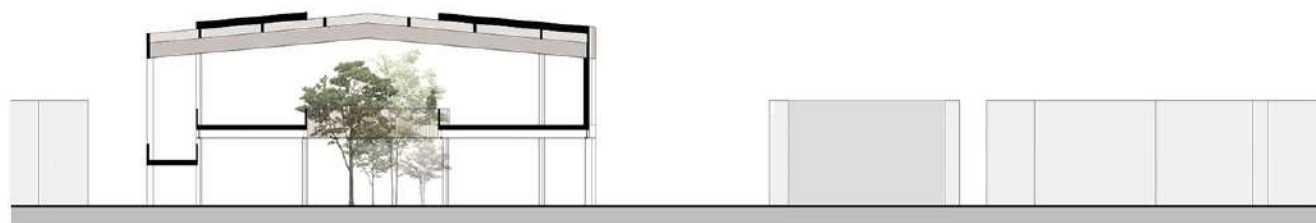


Across the line

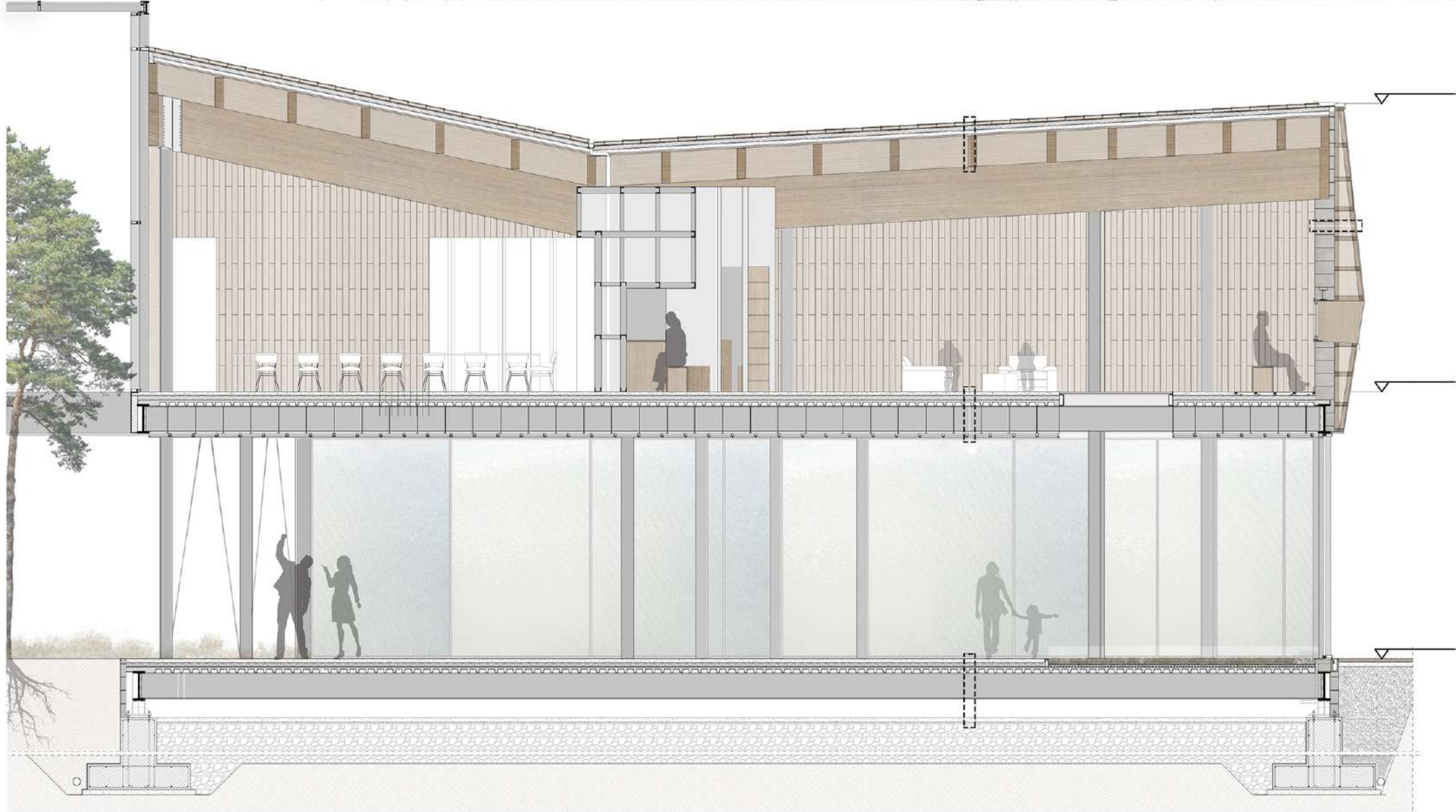
the Mediterranean scrub is designed to raise awareness and educate citizens and tourists, often unaware of the enormous richness of the territory. The project becomes catalyst of transversal flows, coming from the center and converging towards the access to the Oasis and, at the same time, longitudinal flows, between the contemporary residential area and the riverside. From the architectural research point of view, the connection between the elements of study materializes through a physical and conceptual line that thickens and becomes a covered Market. Designed with a circular and integrative approach, the local market does not follow a strict linear and sectoral trend, like the original market, but rather expands radially. This is in fact, a road known and recognized by the people of the territory for the weekly recurrence of a market where the cultures of migrants and

citizens, as on rare occasions, cohabit peacefully by buying and selling culinary and other kinds of products. Subsequently, the covering continues and becomes "the entrance" to the waterfront at the intersection points with the road paths of the facing urban area, until entering the inner part of the exhibition center, where the large greenhouse on the ground floor overgrows the first floor, leaving the place to the native vegetation with tall trees. Finally, the project culminates in the terrace floor that faces in the direction of the Oasis, as an allusion to the dunes, an historically privileged area where one can admire the horizon and the sea. This last project fragment connects again with the road below, thus the itinerary becomes a real reconnection journey, producing a new quality of the space and offerings an exceptional view of the city and above the city.

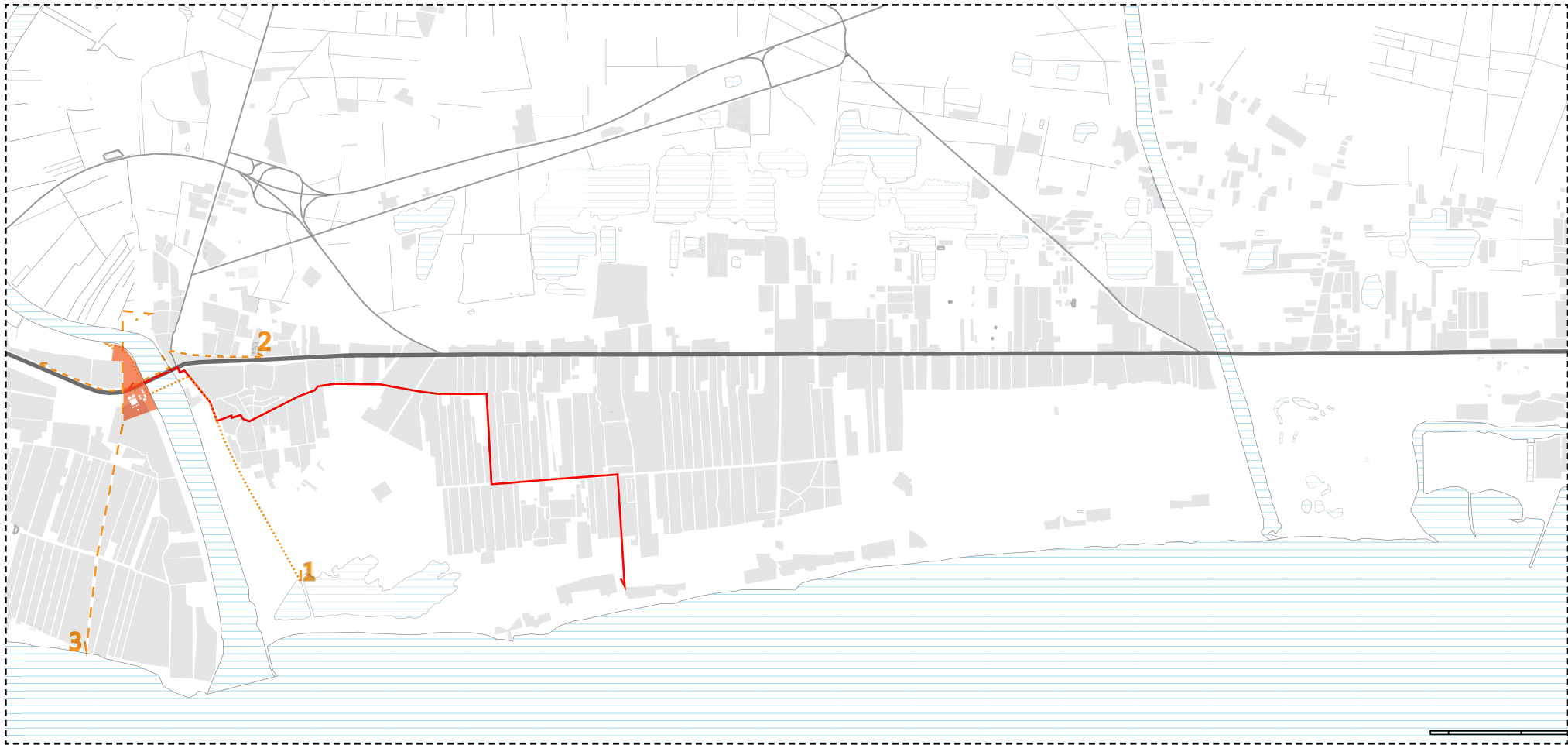




SCALE 1:1000





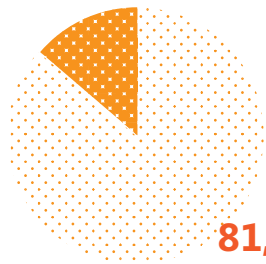


The proposal starts from the verification that Census data are quite useless, for this place, since more than half of its inhabitants are “invisible”, and numbers vary a lot according to different socio-political conjunctures. Can we design for the Nigerian community if migrant flows could change direction, quality and intensity over a few years?

Recreation. The only way to operate is to work with uncertainty, that is to provide architectural organisms capable of dealing with social shifts, movement, change and recreation. The design experience starts with an empirical work conducted as a research expedition along a transect, a path arbitrarily determined with the aim of exploring and reconfiguring the place throughout a bodily design experience. The project site was chosen at the meeting point between the Domiziana and the Voltorno river, in front of the Historic Center. It’s a sort of “midland” between two extremely different realities: on the one side we have Destra Voltorno, the African ghetto entrapped between the sea, the river and the Domiziana. On the other side we have the Historic Center of Castel Voltorno, probably the last bequest of the town’s roots. The transect given to us as an assignment was splitted into three more interesting paths that intersect each others in the project area. Each of these new transects intercepts catalytic areas from which three thematic routes and pedestrian paths depart and cross over the Voltorno with the aim to “break through the walls of the ghetto”.

Percentage of irregular residents

58%



Regular foreigners vs irregular immigrants

81,7%

Incidence of foreign residents over the past 30 years



Source: 8Mila Census

Transect 1, Purifier Park: joining the pine forest and the Oasi dei Variconi, the project is thought as the final stop of a naturalistic/sport path occupying the space of the Purifier through the design of the soil and the installation of sports gear, outdoor gyms, floating pools and playgrounds. **Transect 2, DXVCA (Destra Voltorno Cantiere Aperto – Destra Voltorno Open Working Site):** the project encompasses the educational and religious facilities in the Historic Center empowering them on the other side of the Voltorno providing support spaces for extracurricular activities, performative arts, a theater, a library, spaces for workshops and an open-air church. **Transect 3, Destra_Castello (Right_Castle):** the project create a cycling and pedestrian path along Via Voltorno and extend it through the project area and the river, joining it to the new dock and then to the reused-Castle in order to generate a central urban axis perpendicular to the Domiziana that connects Via Gramsci with the Historic Center. It will also be possible to modify the configuration of the floating elements according to the needs in three different combos.

Found shape. The proposal is structured in three phases, following the metaphor of the development phases of an application. **Beta.** The goal is to start immediately placing functions on the territory using ephemeral structures, namely construction scaffolding, which immediately provide the community with frameworks and evaluate their effectiveness in the early stages of the project.

Transect 1, Purifier Park

- the Stairway consists in a pedestrian infrastructure assembled with construction scaffolding that starts from the level of the Purifier Park and reaches the level of the bridge;
- the Aviary hosts the birds of the Oasi dei Variconi shifting the naturalistic experience of the park into the urban area, blurring the boundaries between the natural and the built space;
- the Box is a covered gym built entirely with construction scaffolding in which the gears for gymnastics and calisthenics are not inside the structure but are part of the framework itself.

Transect 2, DXVCA;

- the Parasite Bridge offers spaces for library, workshops and cafés obtained by inhabiting the space under the Domiziana driveway bridge, generating a pedestrian corridor backed against the bridge that connects the Historic Center to DXVCA;
- the Open Church is a space for outdoor religious functions organized in a stepway in scaffolding, too, which connects the Park to the

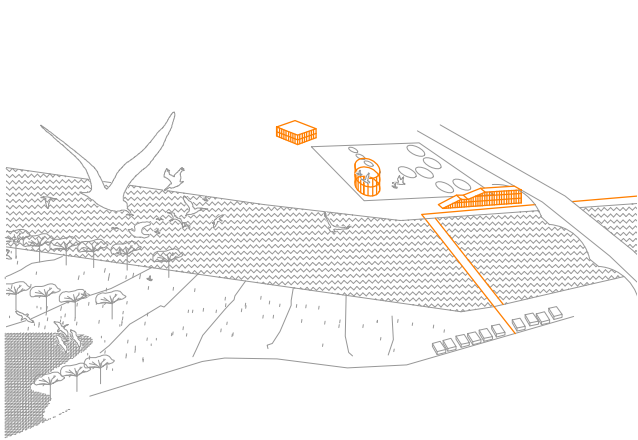
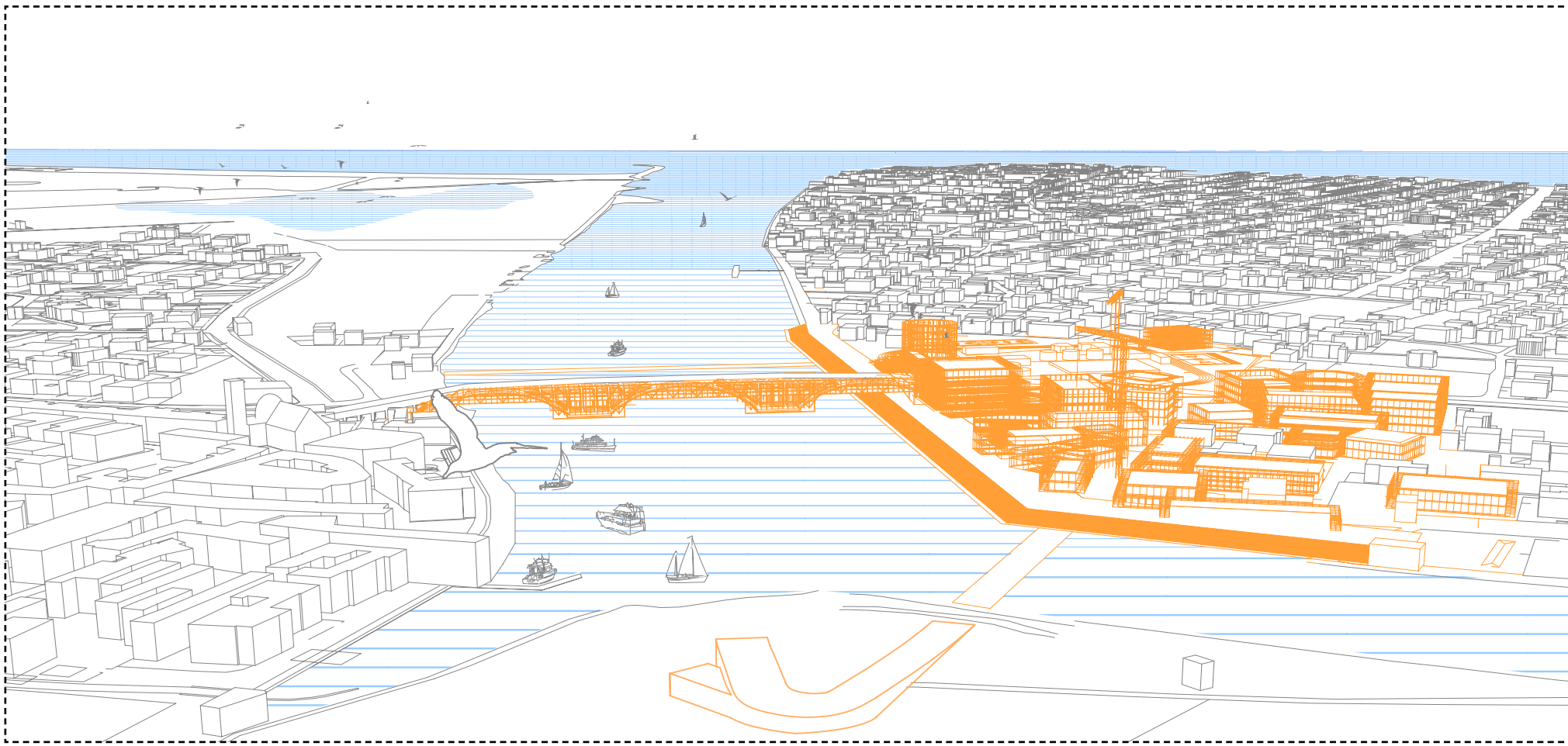
urban space of DXVCA.

- the Shakespearean Theater is an open theater built in construction scaffolding formed by a series of closed loggias that surround an open-air space, where the ticket price is only 1 euro and you can sit on the floor to watch the show. **Alpha.** After One year, it is possible to evaluate what the project had brought to the area: if there are aggregation spaces, if architecture becomes a space of marginalization or inclusion, if the supports respond to the actual needs of the community or if vice versa there are still activities that have never been hosted, or if, even worse, the site remains empty and unused. In such cases it is still possible to dismantle the architectures and rethink them easily thanks to the modularity and simplicity of execution of the construction scaffolding.

When all the architectures brings the desired results in terms of inclusion, vivacity and dialogue between the banks, then it’s possible to build the final projects, where the scaffolding of the construction site itself is inhabited and empower the virtuous phenomena that are already taking place. The definitive buildings rise from the ephemerals and enhance them, so that architecture no longer has a given shape, but a shape found during the experiments tried out in the beta phase.

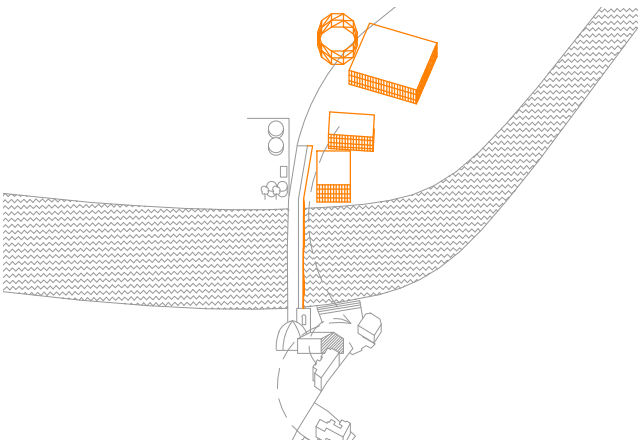
Nevertheless, the ephemeral project is not free from the perceptive qualities that an architectural project should be: the perceptive map shows how perception connects the new fabric to the totems of the castle, the bell tower, the dome, the bridge and vice versa. The building site is an architectural project yet. **X.** Architecture is built, but we can’t say in what form it was found (x, our unknown). For the scaffolding, it will be the community that decides whether to dismantle them, rethink them or leave them as they are: a sort of losing-formwork of architecture, a constantly changing and re-creating organism-platform. In this sense, the scaffolding behaves as a “human infrastructure” that links different groups of buildings and strengthens their program by providing platforms, screening, balconies and bioclimatic greenhouses.

The value of uncertainty. Castel Voltorno is a difficult territory, torn by deep conflicts. However, it really has the potential to become an example of a multicultural metropolis of the future, but this cannot be achieved if we don’t embrace uncertainty as a value. Only in this way we could aim to build a truly contemporary, creative city, rhetorical for nothing, real and utopian at the same time.



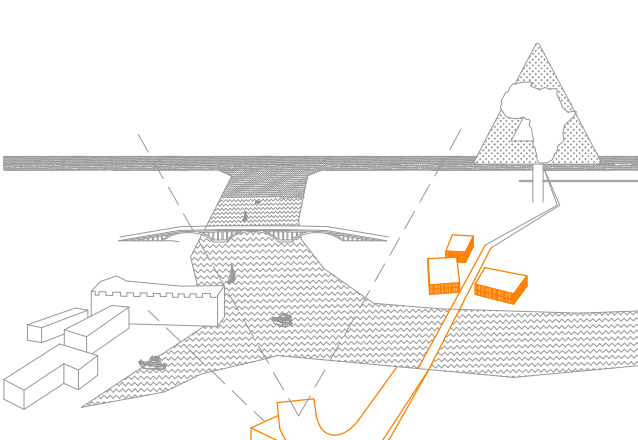
Transect 1: Purifier Park

It reads in continuity Variconi’s Oasis and the weekly market and gives to this path a open park occupying the purifier.



Transect 2: DXVCA

It starts from the edicational and religious facilities in the historic center and empowers them on the other side of Voltorno.



Transect 3: Right_Castle

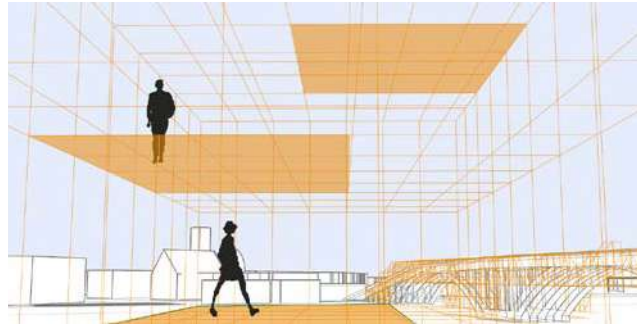
It takes the direction of Via Voltorno at Destra Voltorno and makes a powerful urban axis that dialogues with the new dock and the reused Castle.

GENERATIVE IDEAS



Recreation

“The New Babilonian wander through the sectors of New Babylon in search of new experiences, as in still unknown environments. Without the passiveness of tourists, but fully aware of the power they have to act on the world, to transform it, to recreate it.” Like the New Babilonian for Constant Nieuwenhuys, the migrant human being is not only intrinsically nomadic, but his survival instinct drives him to creativity and aggression that need to be channeled into their living spaces.

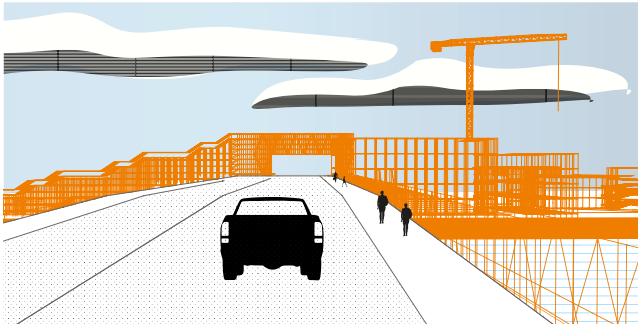


Constant Nieuwenhuys – *New Babylon, La città nomade*; Nautilus; february 2017 (extract from Libero Andreotti e Xavier Costa, *Theory of the dérive and other situationist writings on the city*; Museu d’Art Contemporani de Barcelona, 1996)



Heterotopia

“There are also [...] real places, [...] a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted. Places of this kind are outside of all places, even though it may be possible to indicate their location in reality.” Up, the very first collage shown in the laboratory represent the Plug-in City by Peter Cook appearing on the bridge on the Voltorno like a manifest of incrementality and changeability.

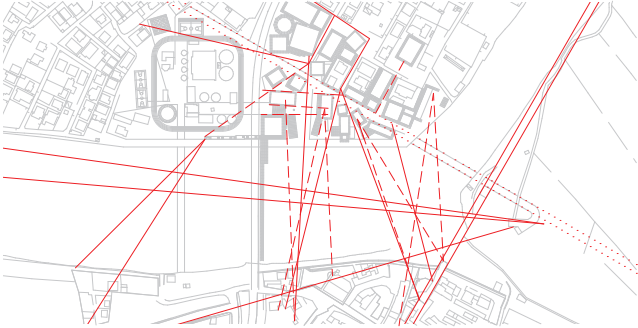


Architecture/Mouvement/Continuité, October, 1984; (from the lecture of Michel Foucault, *Des Espace Autres*; March 1967; Translated from the French by Jay Miskowicz)

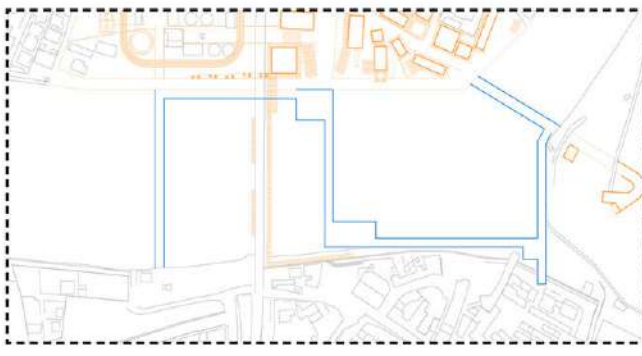
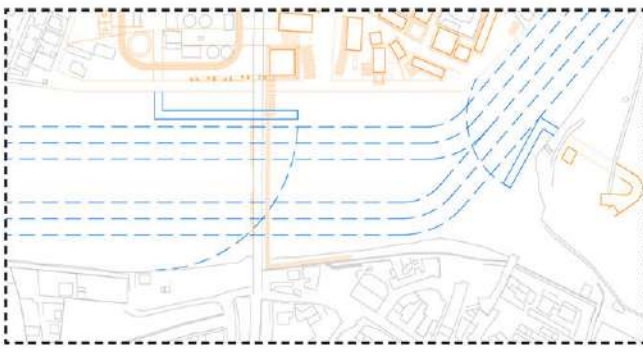
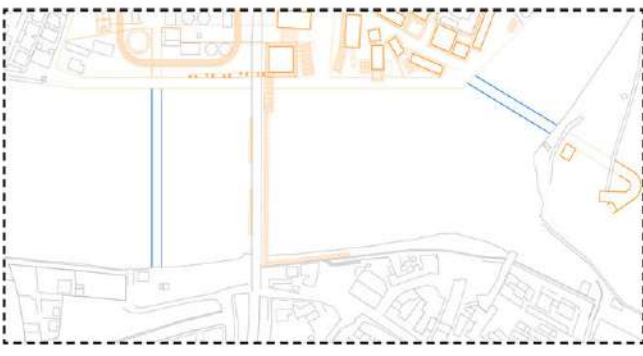
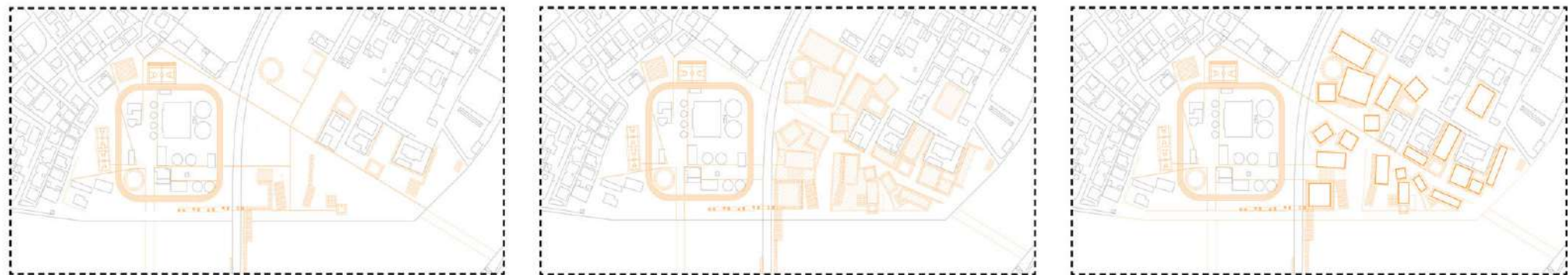


Found form

All the project is against the creation of finished architectural “objects” in the way Anne Lacaton talks about them, to start to see the city as a living organism, “a problem of density and intensity of events that require platforms, supports and settings but not they are never completely determined by these.” Relations, perceptions, events and programs are the construction material of the project. The perception map (undo) explore the perceptive relations between DXVCA and the totems of the Bell Tower, the Dome, the Castle.



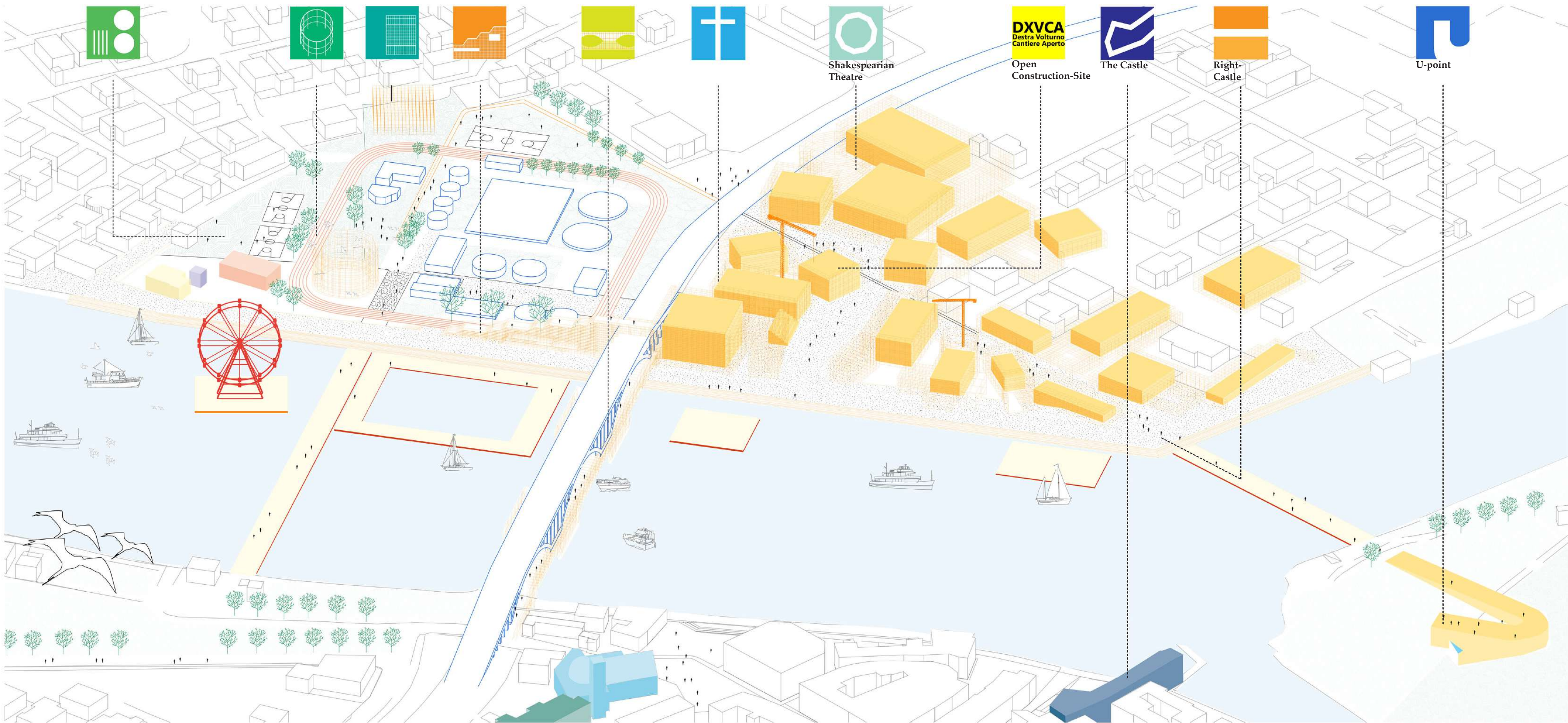
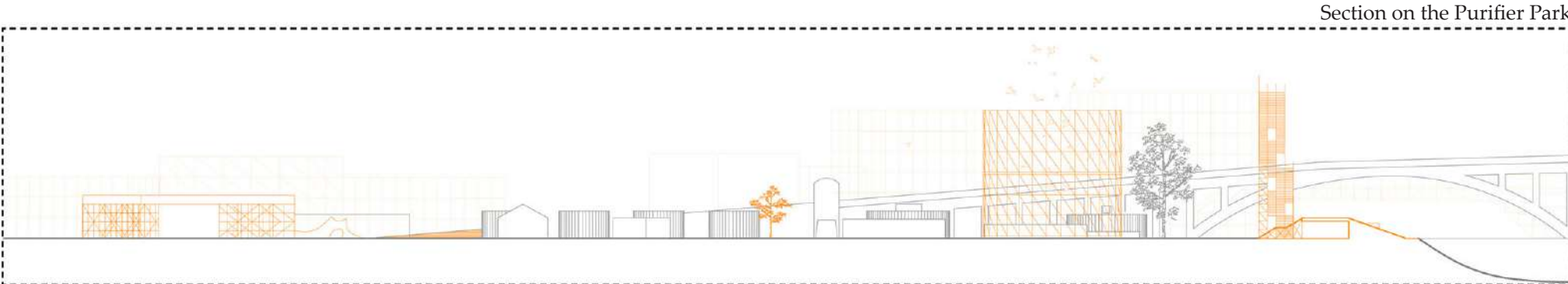
Subversion and Indifference: The Architectural Strategies of Lacaton & Vassal, Mauro Palamini and Pietro Pezzani (“San Rocco: Indifference”, 7, Summer 2013)

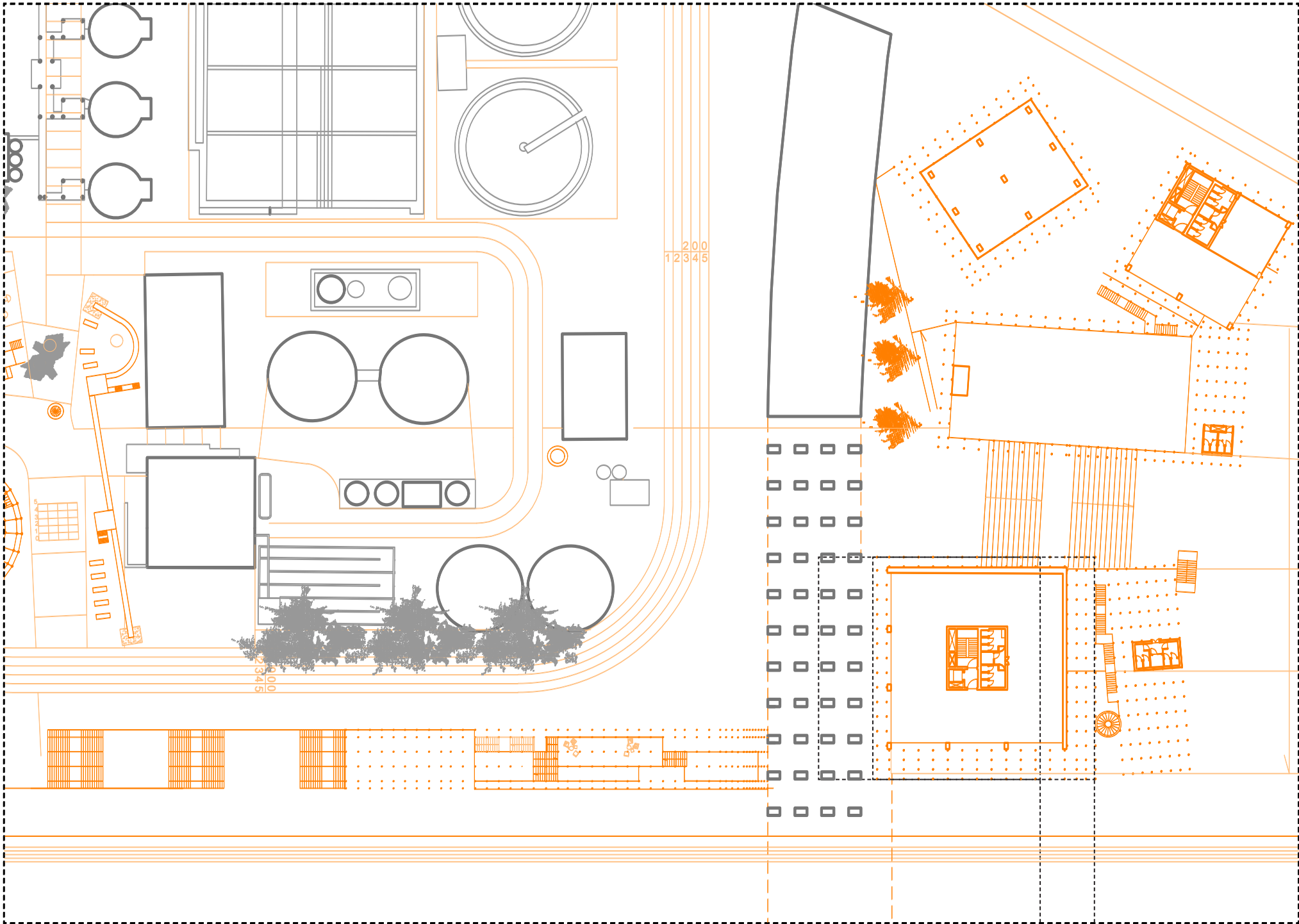


Combo 1: base
It enforces the relations of the three transects providing two floating platforms that connects the Variconi's Oasis to the Purifier Park and the axis from Via Voltorno to the Castle.

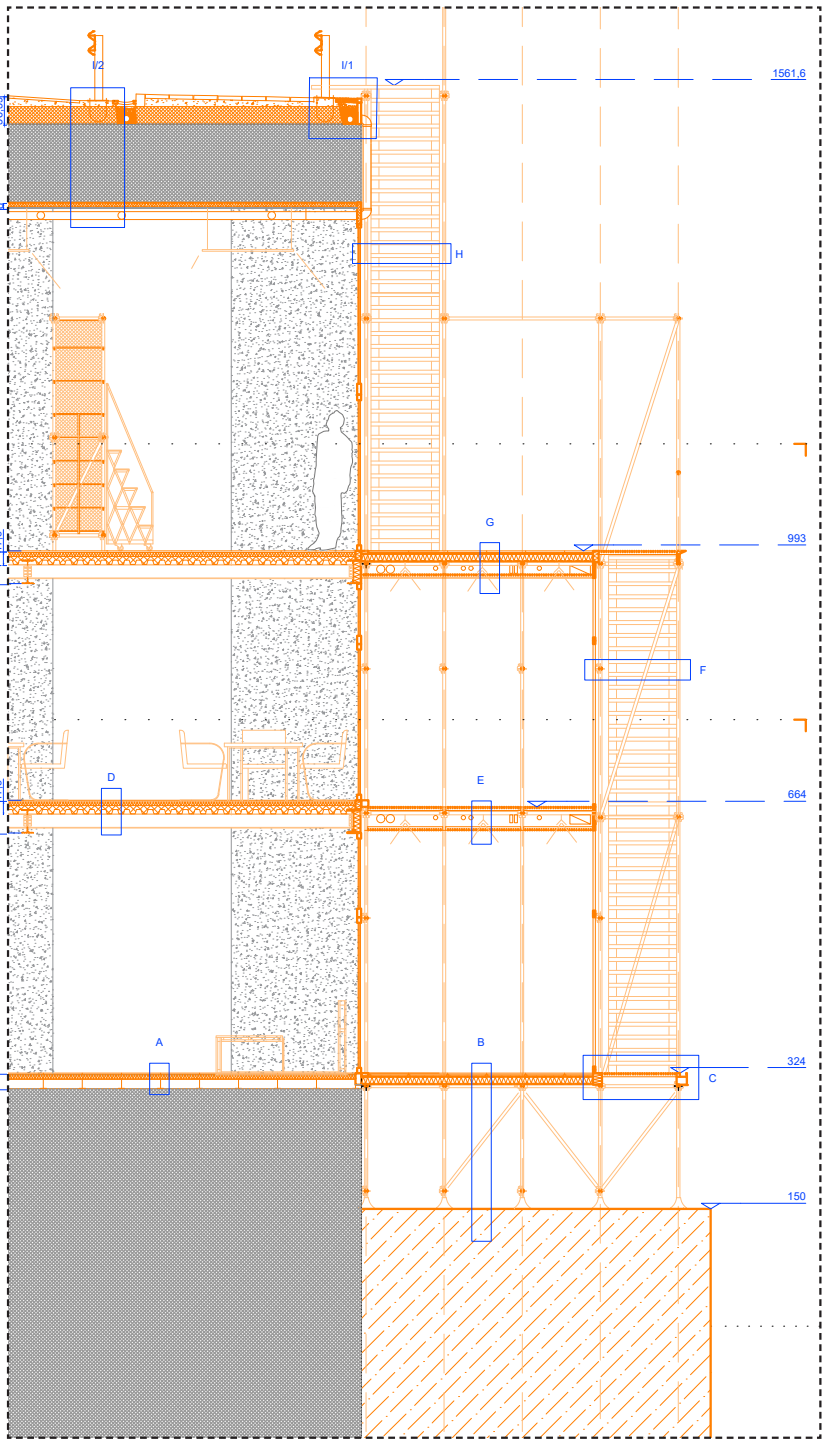
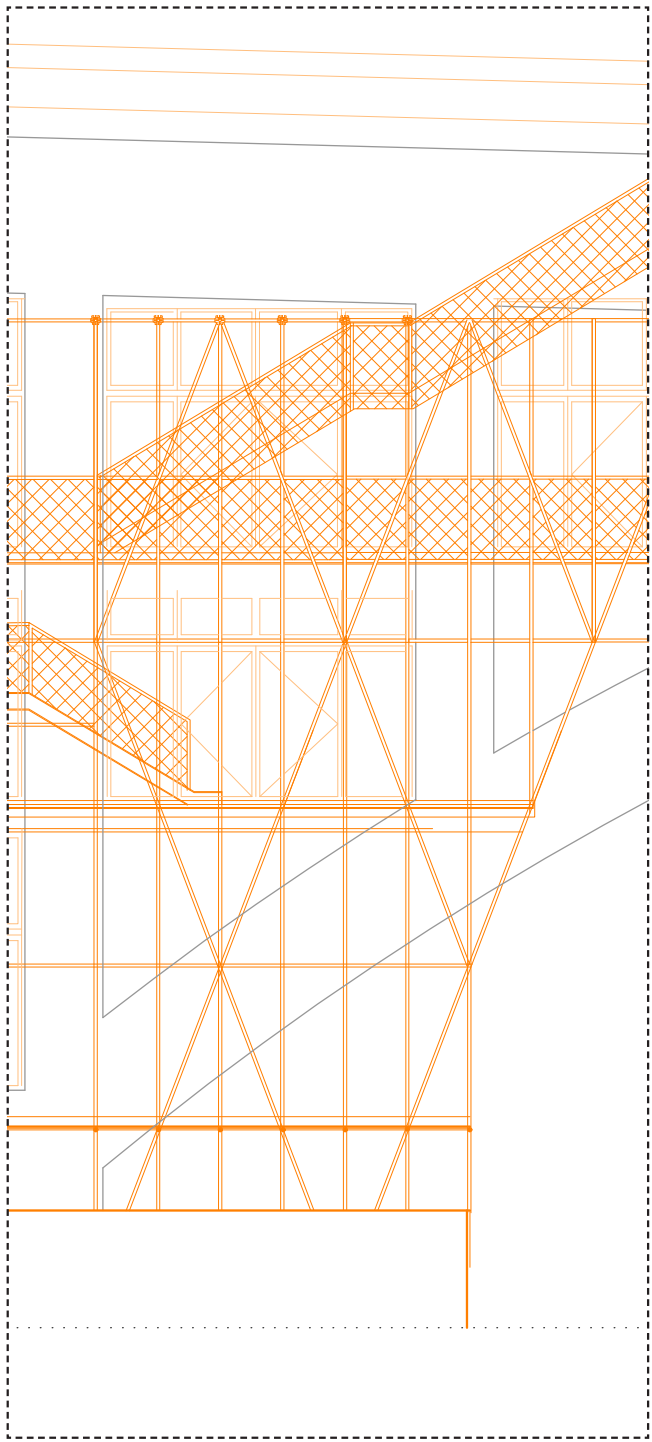
Combo 2: sports
It frees the navigability of the Voltorno opening it to rowing competitions and creating some secondary ephemeral docks. This empower the sports offer of Castel Voltorno and works together with the educational facilities on the Left bank.

Combo 3: events
It empowers the walkable waterfront creating a path that connects the U-Point, the Castle, the square of the historic center, DXVCA, the Purifier Park and the market in one gesture. It provides large floating platforms that can be used for exhibitions, fairs, shows and so on. It's the more touristic of the three.



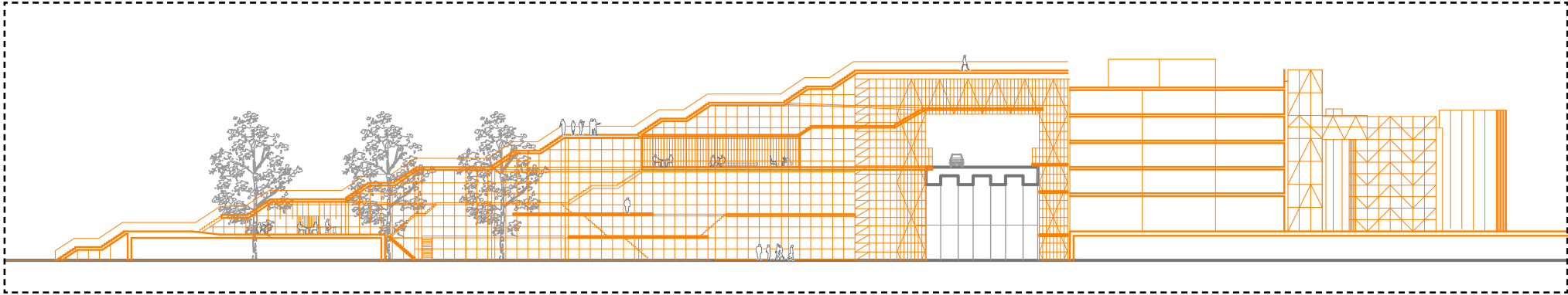
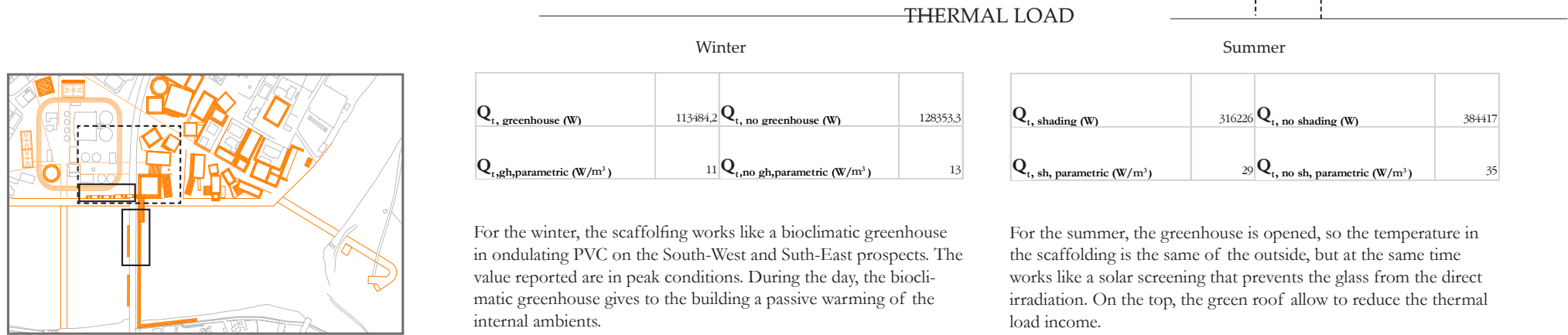


The connection joint between The Stairway, The Bridge, DXVCA and the Purifier Park.

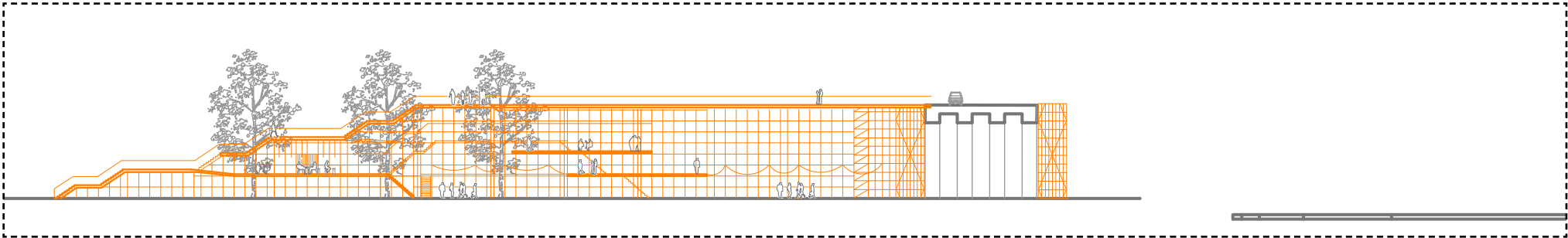


- A. Solaio PT su ponte
- 1. fondazioni ponte in ca
- 2. montanti per pavimento
- 3. pannello osb 0.9 cm
- 4. lana di legno 5 cm
- 5. TNT
- 6. pavimento flottante
- B. Solaio PT, ponteggio
- 7. blocco in os
- 8. sistema di ponteggio Layher
- 9. pannello OSB
- 10. guaina bitume-polimero
- 11. lana di roccia
- 12. guaina bitume-polimero
- C. Canale di gronda
- 13. Profilo scatolare con
- isolante insoffiato
- 14. Orsogrill
- 15. sistema di scale in alluminio
- 16. Canale di gronda in
- alluminio
- 17. Scossalina
- D. Solaio intermedio
- 12. profilato IPE 18
- 13. lamiera grecata
- 14. getto in dis armato
- 15. barriera al vapore
- 16. lana di legno 5 cm
- 17. pavimento in resina
- E. Solaio intermedio ponteggio
- 18. Orsogrill
- 19. impianti
- 20. sistema di ponteggio Layher
- 21. Orsogrill
- F. Chiusura ambiente serra
- 22. scale in orsogrill
- 23. profilo IPE per scala
- 24. sistema di ponteggio Layher
- 25. infisso in PVC ondulato
- G. Solaio di copertura ponteggio
- 26. orsogrill
- 27. sistema di ponteggio Layher
- 28. pannello OSB 0.9 cm
- 29. barriera al vapore
- 30. lana di legno 8 cm
- 31. guaina bitume-polimero
- 32. Int
- 33. distanziatori
- 34. 7
- H. Chiusura trasparente
- 35. Vetro camera basso
- emissivo
- 36. sistema di scale in alluminio
- in Orsogrill
- I/1. Copertura/marciaiede
- 37. canale di scolo
- 38. profilo scatolare
- 39. cassetto per canale
- 40. drenaggio
- 34. Inerti a grana decrescente
- 35. orsogrill
- 36. calcestruzzo armato
- 37. massetto di pendenza
- 38. piastra in acciaio
- 39. guardrail
- 40. pavimentazione marciapiede
- in pietra
- I/2. Copertura/stradale
- 41. osb
- 42. barriera al vapore
- 43. isolante lana di roccia
- 44. cemento armato ponte
- (preesistente)
- 45. cemento armato
- 46. massetto pendenza 2%
- 47. asfalto
- 48. cassetto per canale
- 49. Inerti a grana decrescente
- 50. griglia di scolo

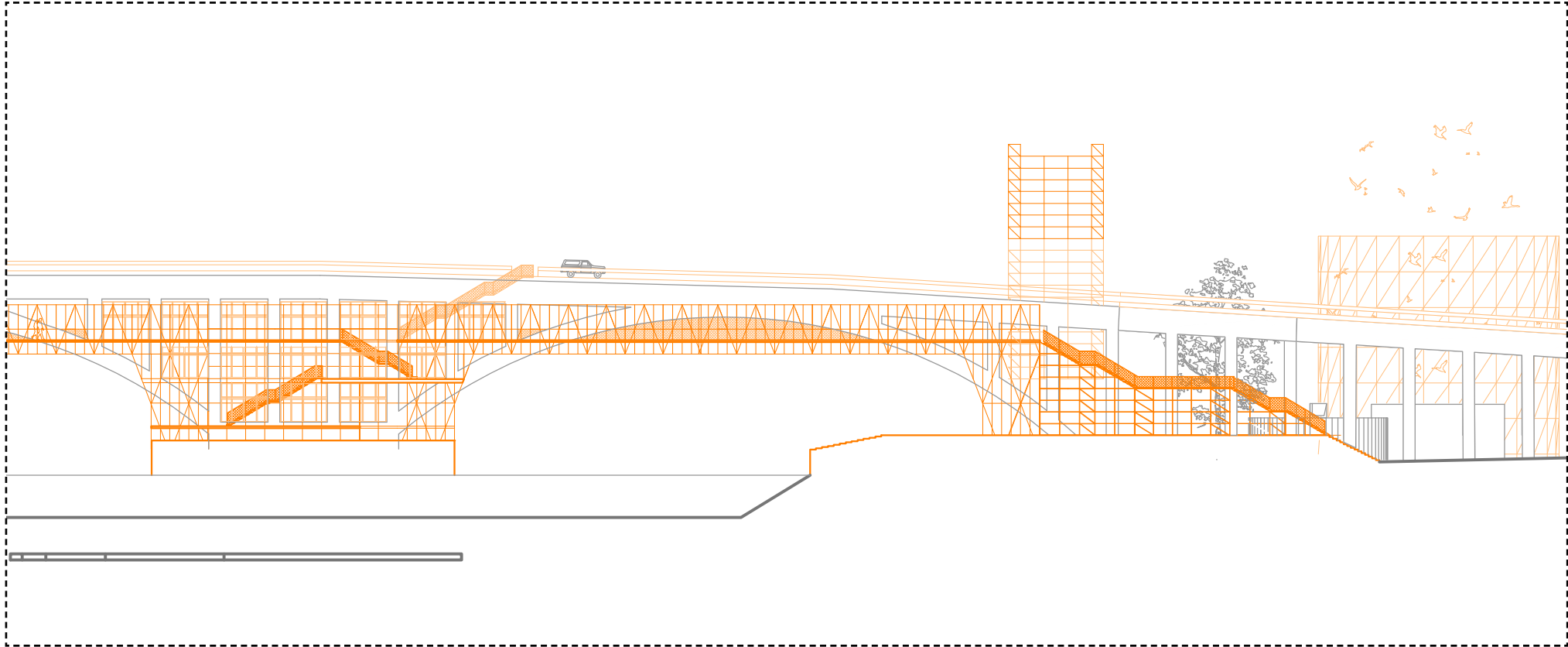
Parasite Bridge, technological section and prospect



X phase
The Stairway connects the Park, the Bridge and the garden roof of the new building of the library.

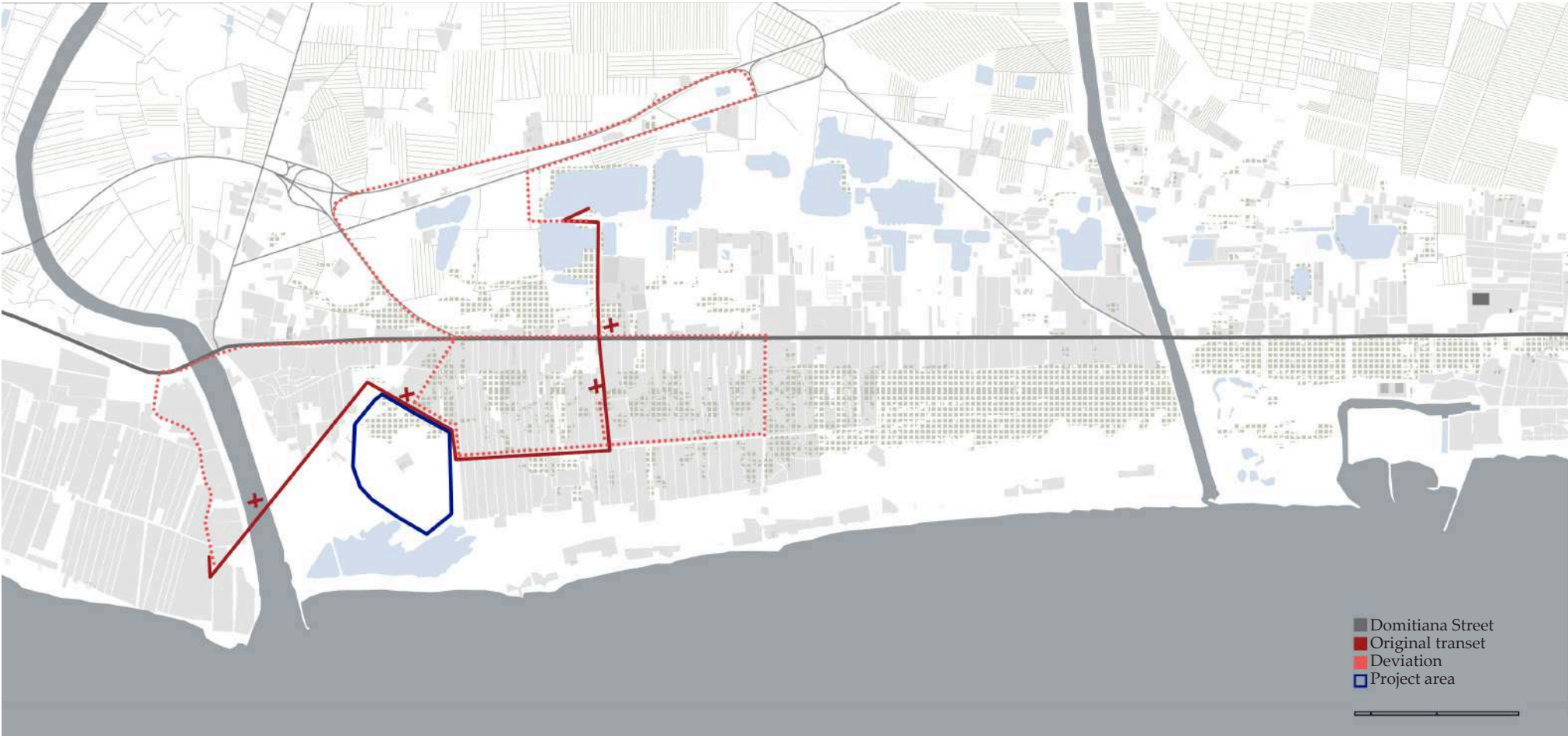


Beta phase
The Stairway connects the area of the Purifier Park to the bridge, hosting markets and cafés.



Parasite Bridge, section

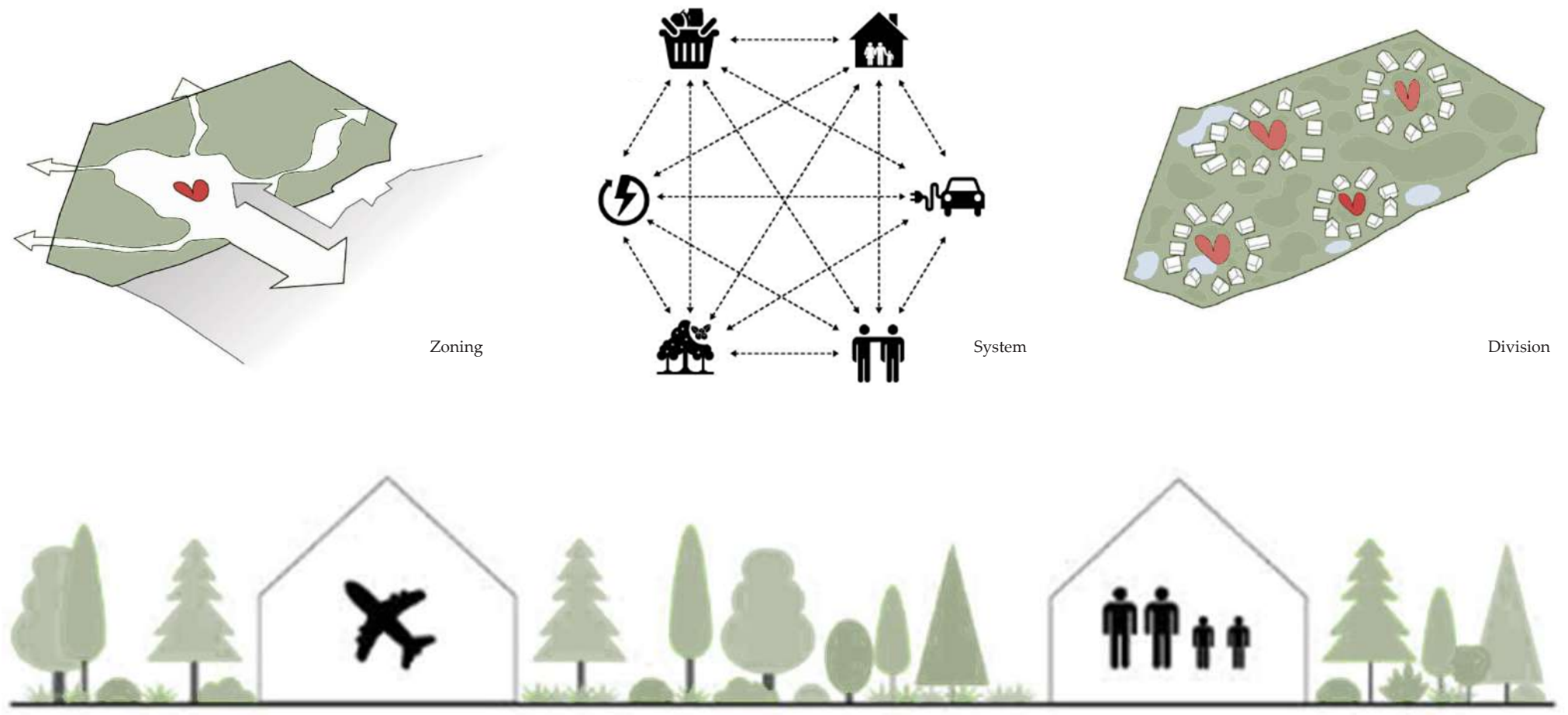




The project is the result of a research on brownfields redevelopment. Brownfields include post-industrial waterfronts, former military bases, airports, rail yards, and other abandoned sites that often suffer from environmental contamination and degradation. Worldwide, brownfields are often the best sites for redevelopment and regeneration. The area on which I made my research is the former NATO Base of Castel Volturno, a 40 hectares property adjacent to the Oasi dei Variconi. In the past, Italian Town Plans classified military areas in “F” category as “areas designated for equipment and special character systems”, while in the new generation Plans military areas are almost always identified as “areas of transformation” offering a wide and diverse range of redevelopment options in terms of both new buildings and preservation of existing structures. The project aims to promote tourism and business while supporting sustainable development goals.

The military buildings are preserved as for scale, context, and history, but are thoroughly transformed into a museum. Adapting the program to the buildings to preserve their texture and scale, the existing structures generate spaces that challenge conventional notions of what a museum should look like, do, and be, serving as a catalyst for widespread rethinking of this building type. The massiveness of the buildings and the complex, with interlocking courtyards, bridges, and walkways, offers the opportunity to experiment with open spaces, structural elements, and connections. To this repertoire, I’m adding three new buildings, a large exhibition pavilion, an auditorium, and a library, so that this project represents a genuine collection of architectural spaces in addition to its holdings in art. It is not a preservation project and not a new architecture. Two conditions that are usually kept separate

here confront each other in a state of permanent interaction, offering an ensemble of fragments that will not congeal into a single image, or allow any part to dominate the others. For the large green area around, the project includes ingeniously elaborated reclamation plans and a preservation of what remains, trees and paths, with the addition of others. Trees offer shaded areas while paths, once used to reach satellite antennas, are now used to reach temporary architectures. The area is divided into three parts in relation to the context, a part of public gardens, a part of wilderness and a part of green areas for agriculture and livestock. Also important is the relationship with Via Domitiana, a high-speed road in Castel Volturno, with two road connections, a main connection, along a roundabout, with green areas and parking lots and a pedestrian and bicycle connection parallel to the previous one, where there was a tributary of the Volturno river.

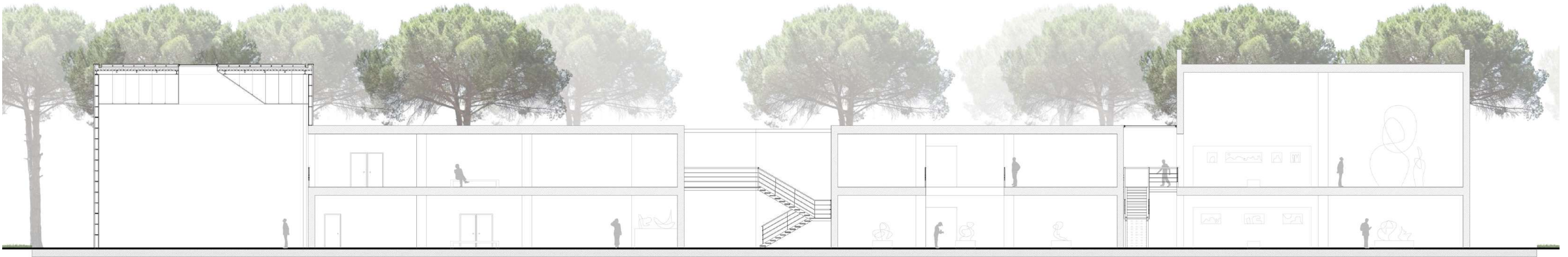




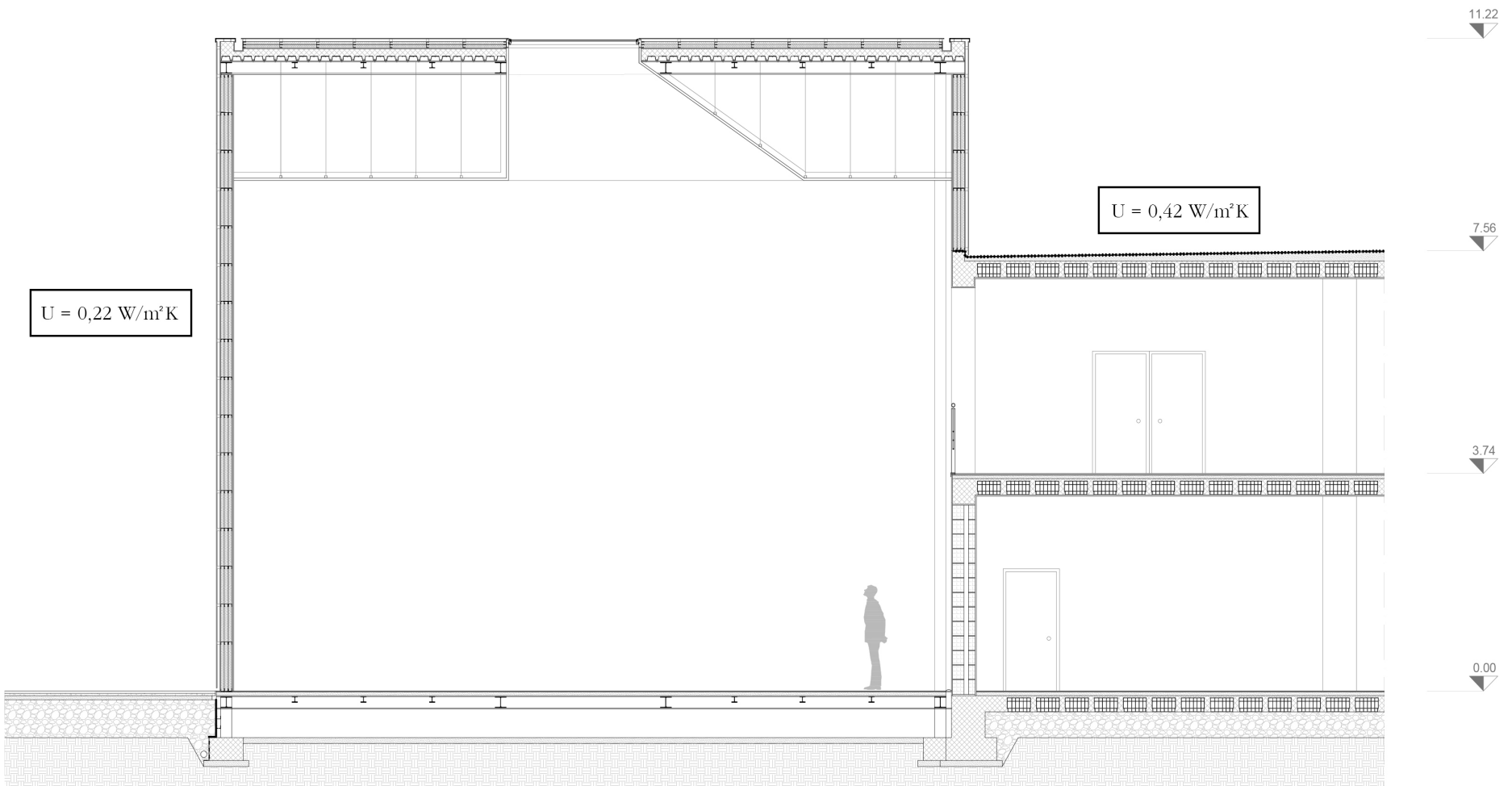
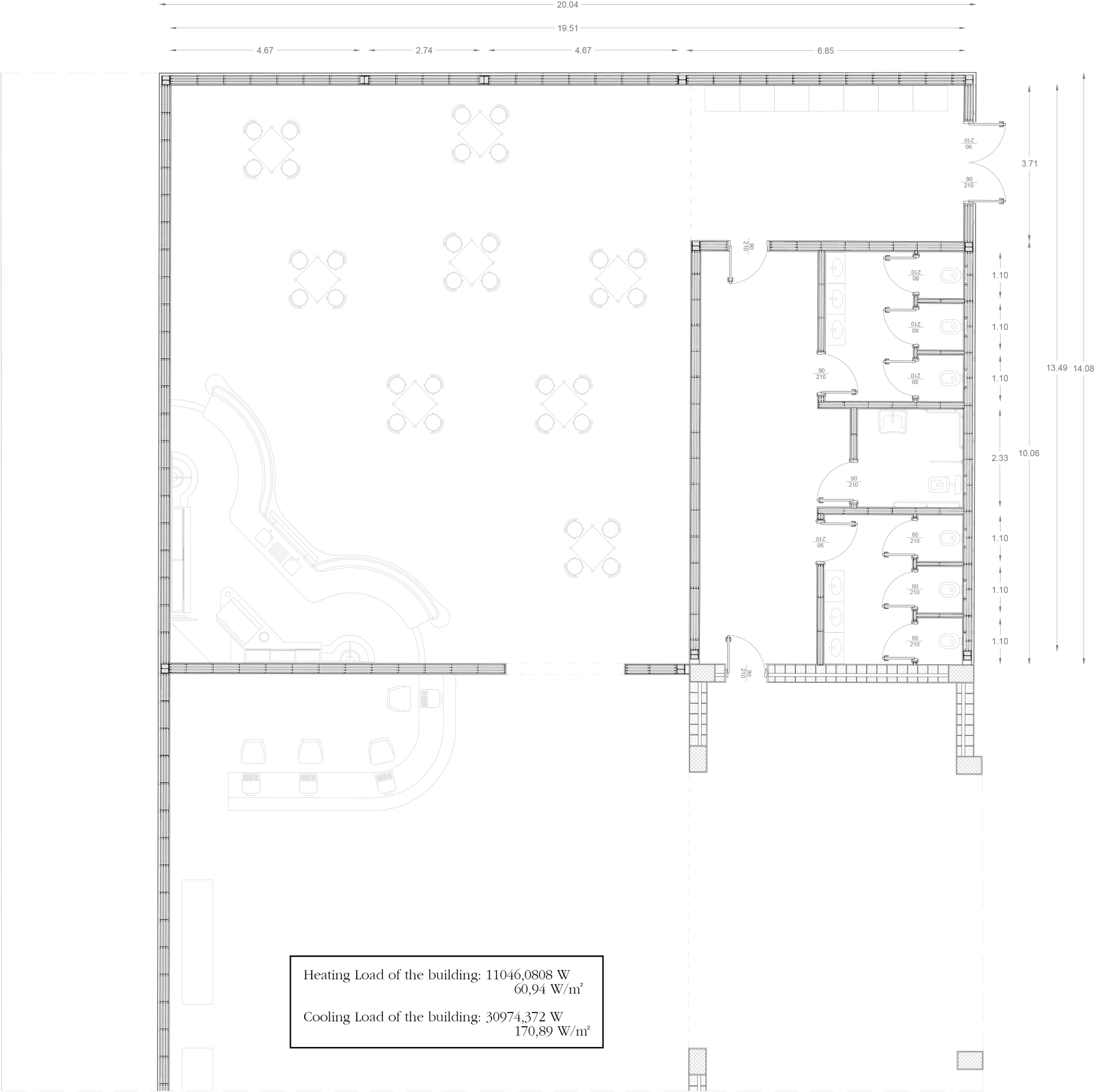
Ground floor

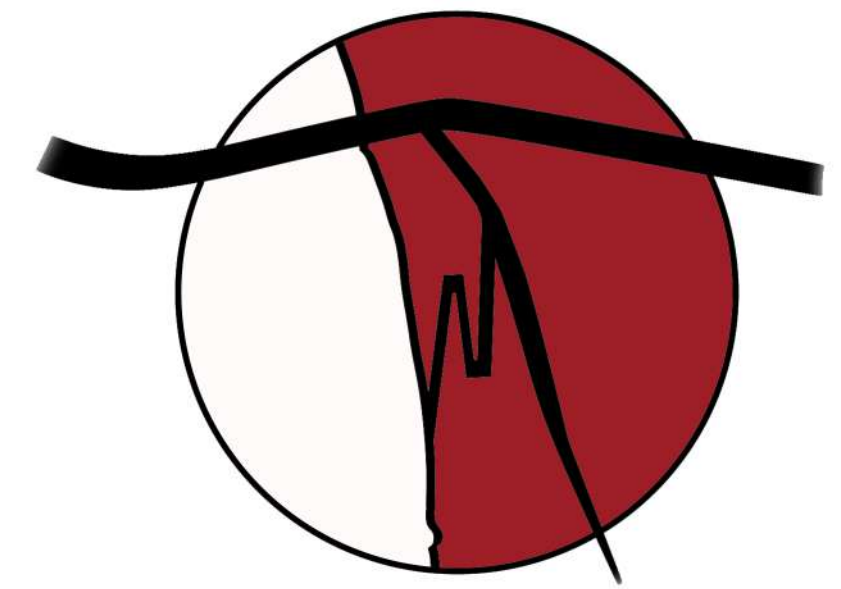


First floor



Section





CYCLE CENTER

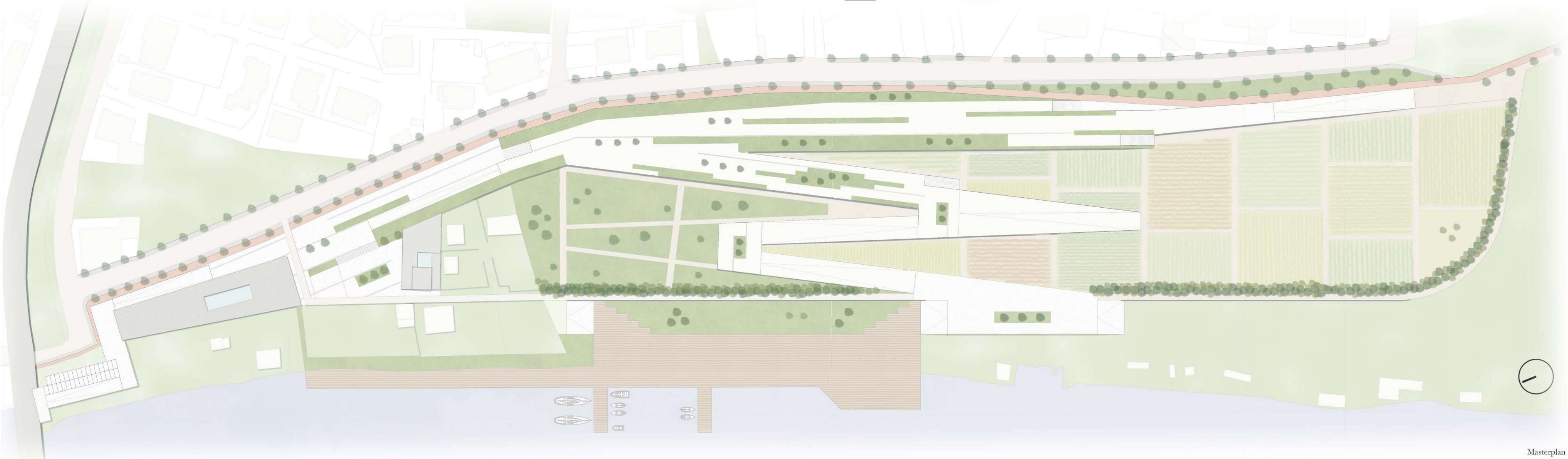
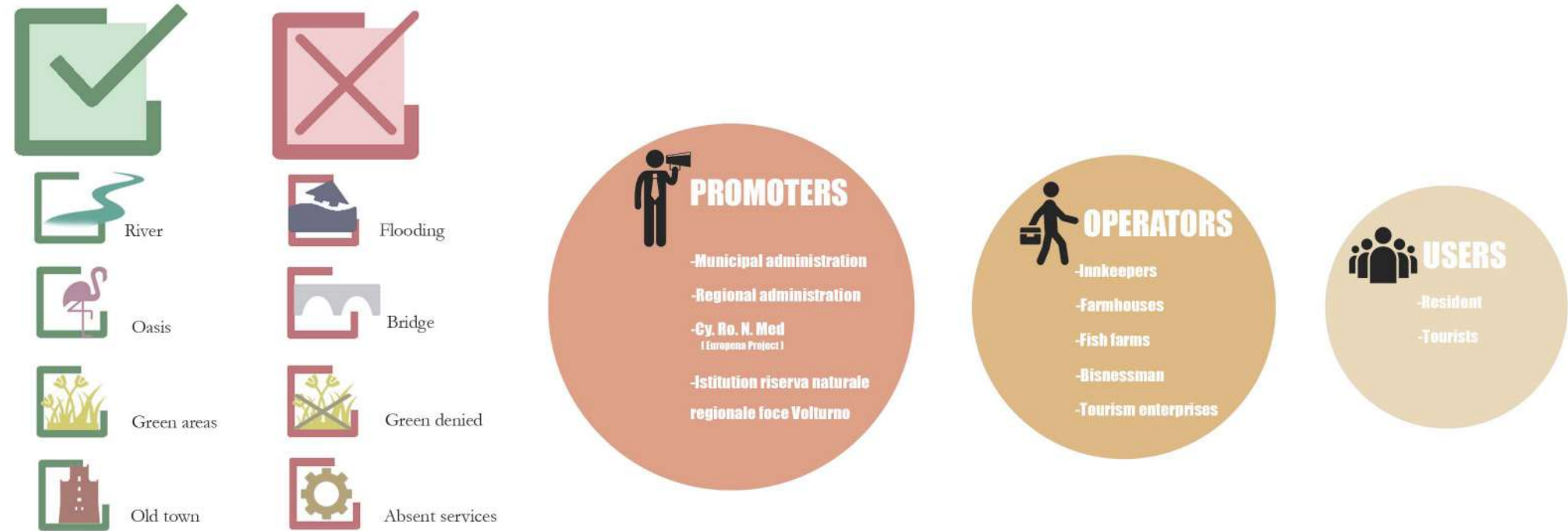
.... e mo' pedala

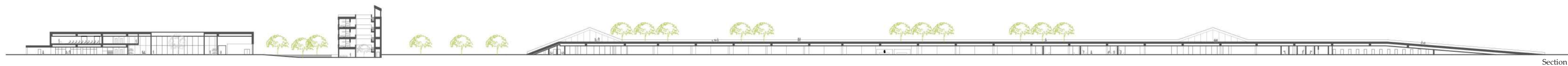


The Cycle Center project is inspired by a design which is in progress in the area: the Cy.Ro.N.Med. It proposes the development of Italian bike tourism, based on the reuse of existing routes and buildings to create a network of national cycle paths that connects several Italian cities. In this network is also included the Domitiana Road, which crosses the city of Castel Volturno for 25 km. With the Domitiana as a starting point, the Cycle Center project create a new city center, and also a new bike line system which connects all the main tourist attractions of the city with the everyday life places. The green areas, that the bike route meets along its path, are transformed and designed as rest areas, characterized by shelters and lookout architectures, to admire the natural landscape.

The site, where the Cycle Center project, is quite critical, as it is 5.60 m under the main axis of the Domitiana Road. At this same point the road meets the left bank of the river Volturno, which divides the city into two parts: right Volturno and Castel Volturno, where all the main activities of the community, such as the weekly market, are happening. The difference in altitude is poorly resolved by a not so visible and small staircase, which is not the best solution especially for those who travel by bike, and it leads to Via dei Martiri di Castel Volturno, the road that houses the weekly market and, through several abandoned green spaces on the side of the river Volturno, ends to the Oasis of Variconi. At the same time, the green area in its current state of abandonment, which stands

as a wall between the weekly market road and the riverbank, both physically and visually, is a more than fertile ground for the design of a new tourist center, for its implicit tourist potential due to : the Oasis and the coast to the south, the river Volturno to the west and the old town to the north, and its capacity as a social connector due to the unstable presence of the market, which becomes the maximum place of integration between inhabitants and immigrant communities. The new tourist center is composed of three buildings, a Bike Station, a Guesthouse, and a Covered Market, characterized by systems of ramps and stairs that connect the Domitiana with the river Volturno, a new square and green areas intended for urban and agricultural park.

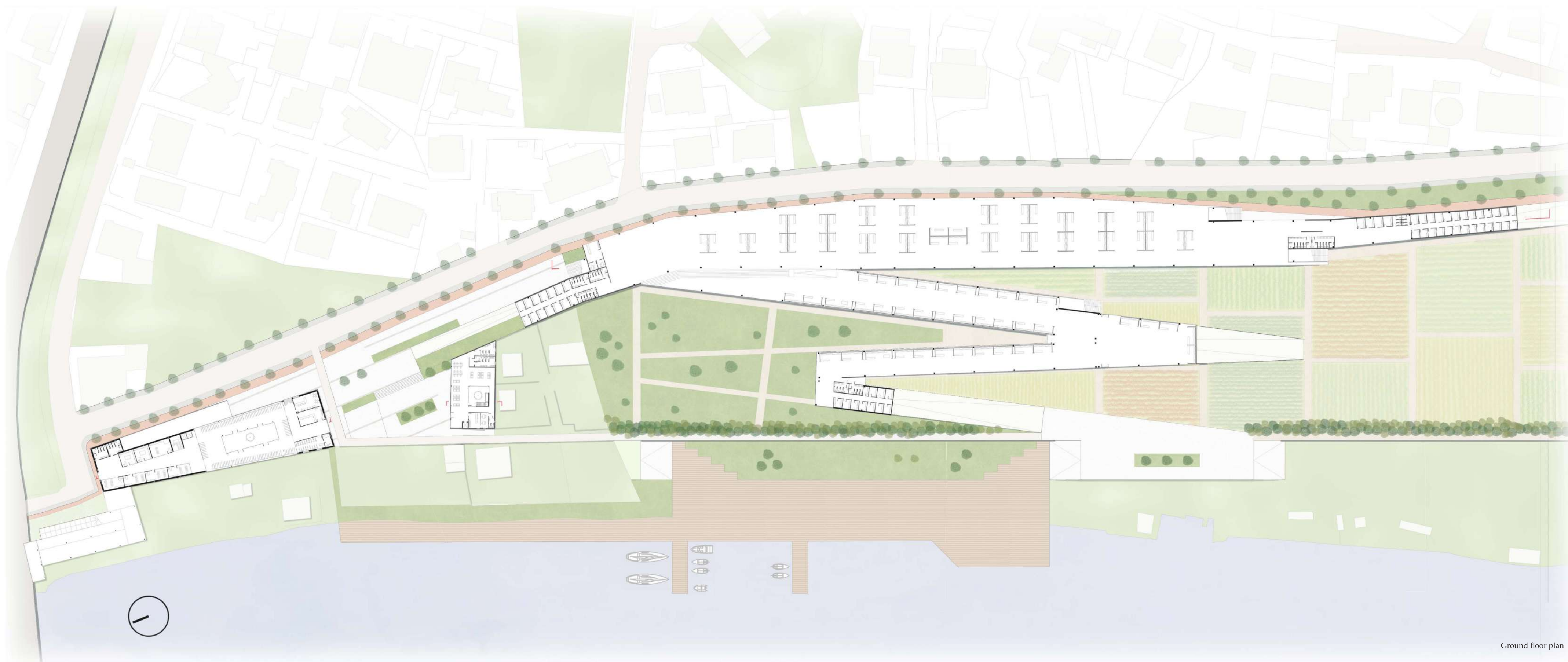




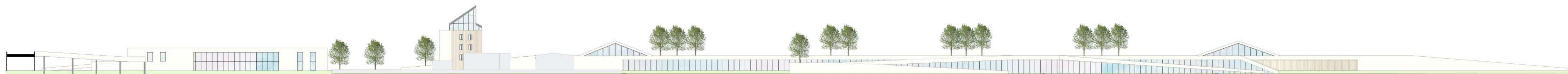
Section



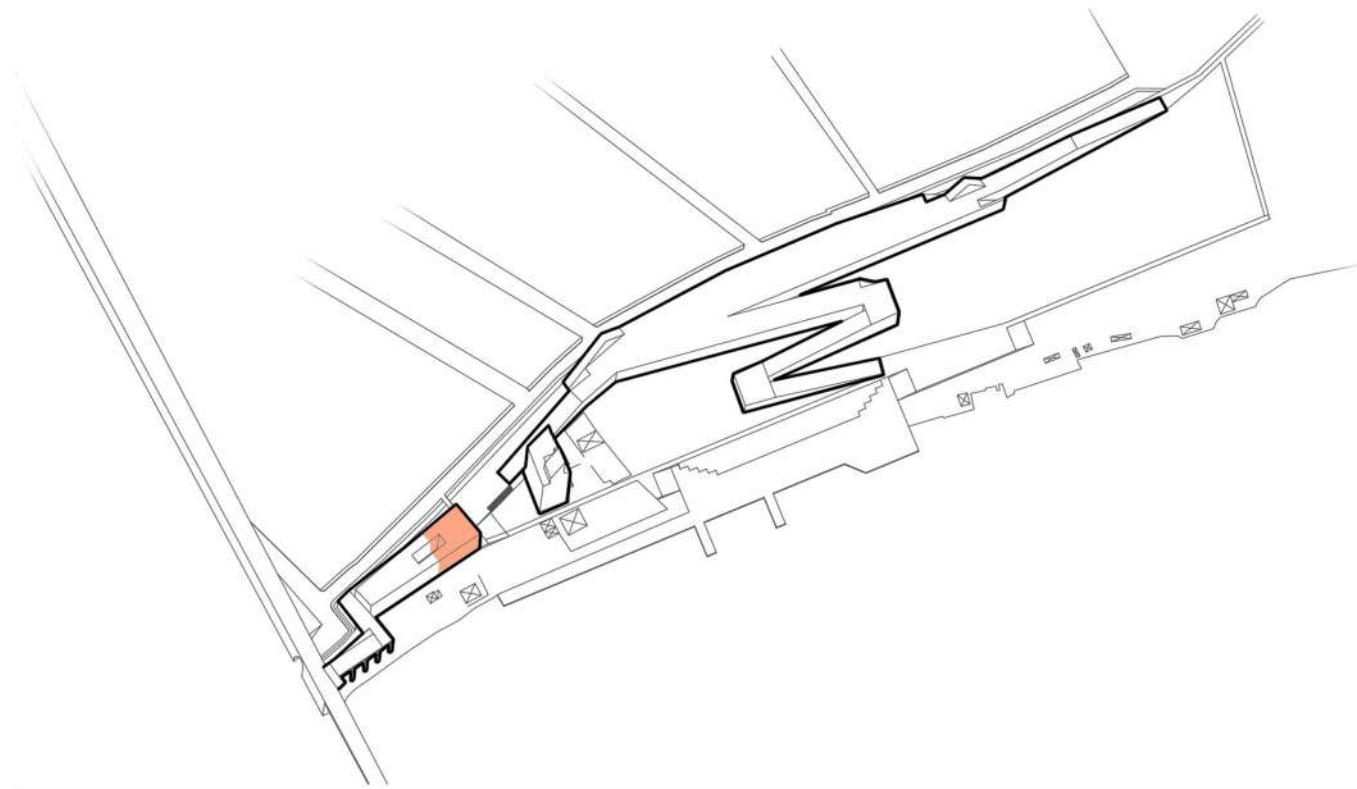
East front



Ground floor plan



West front



Winter heating load of parking's area of Bike Station

$$41,5 \text{ kW} = 9,6 \text{ W/m}^3$$

Summer cooling load of parking's area of Bike Station

$$- Q_s = 26,7 \text{ W/m}^3$$

$$- Q_L = 5,1 \text{ W/m}^3$$

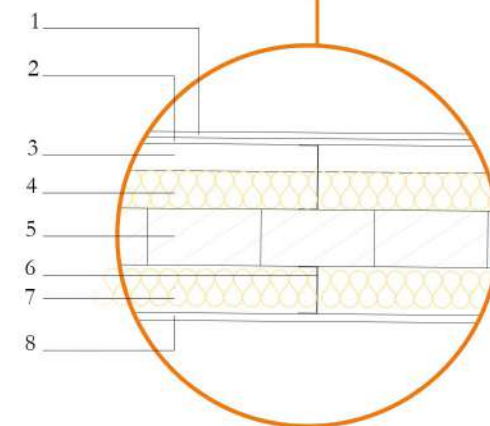
$$- Q_{\text{tot}} = 138,5 \text{ kW} = 31,9 \text{ W/m}^3$$

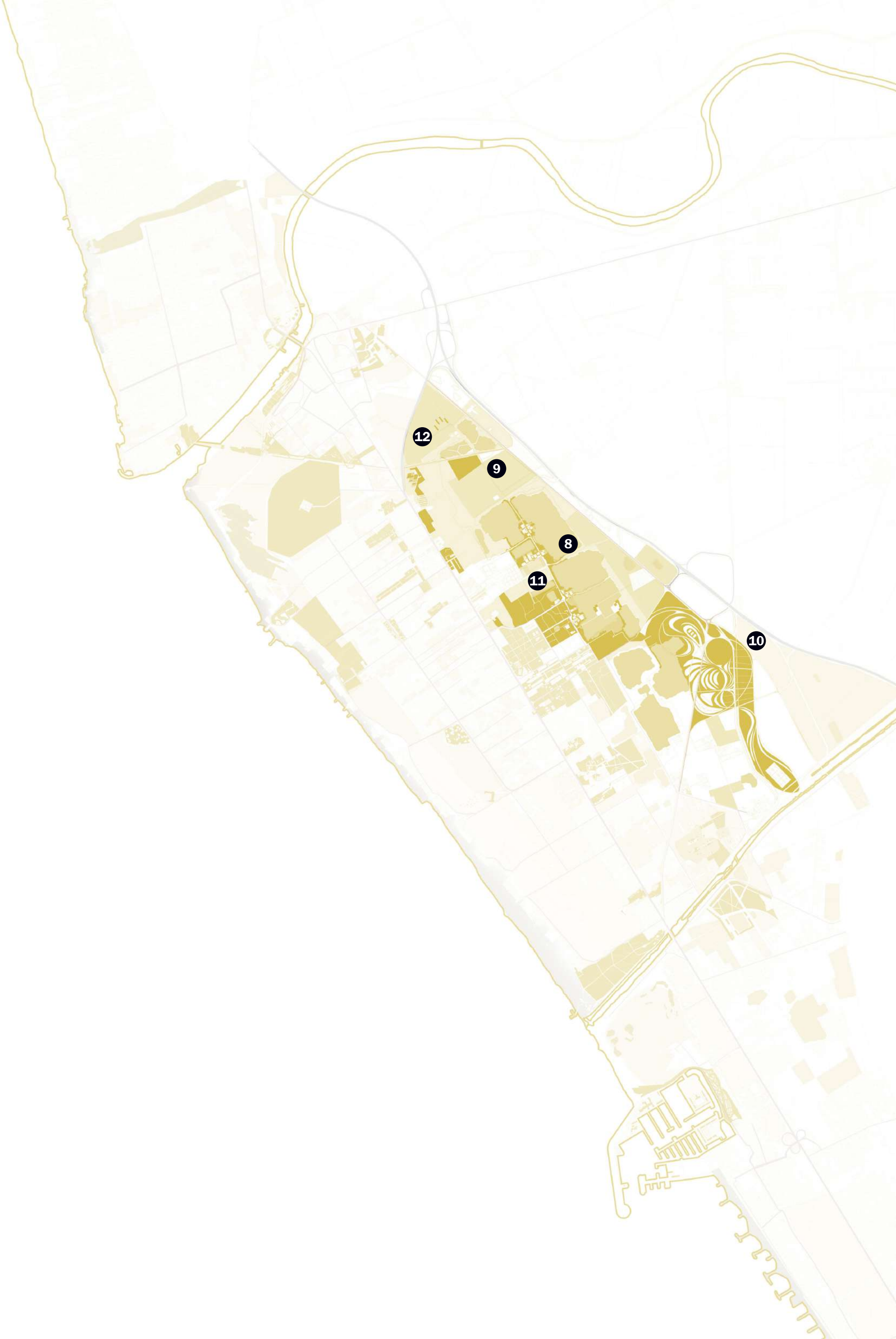


$$U = 0,14 \text{ W/m}^2 \text{ K}$$



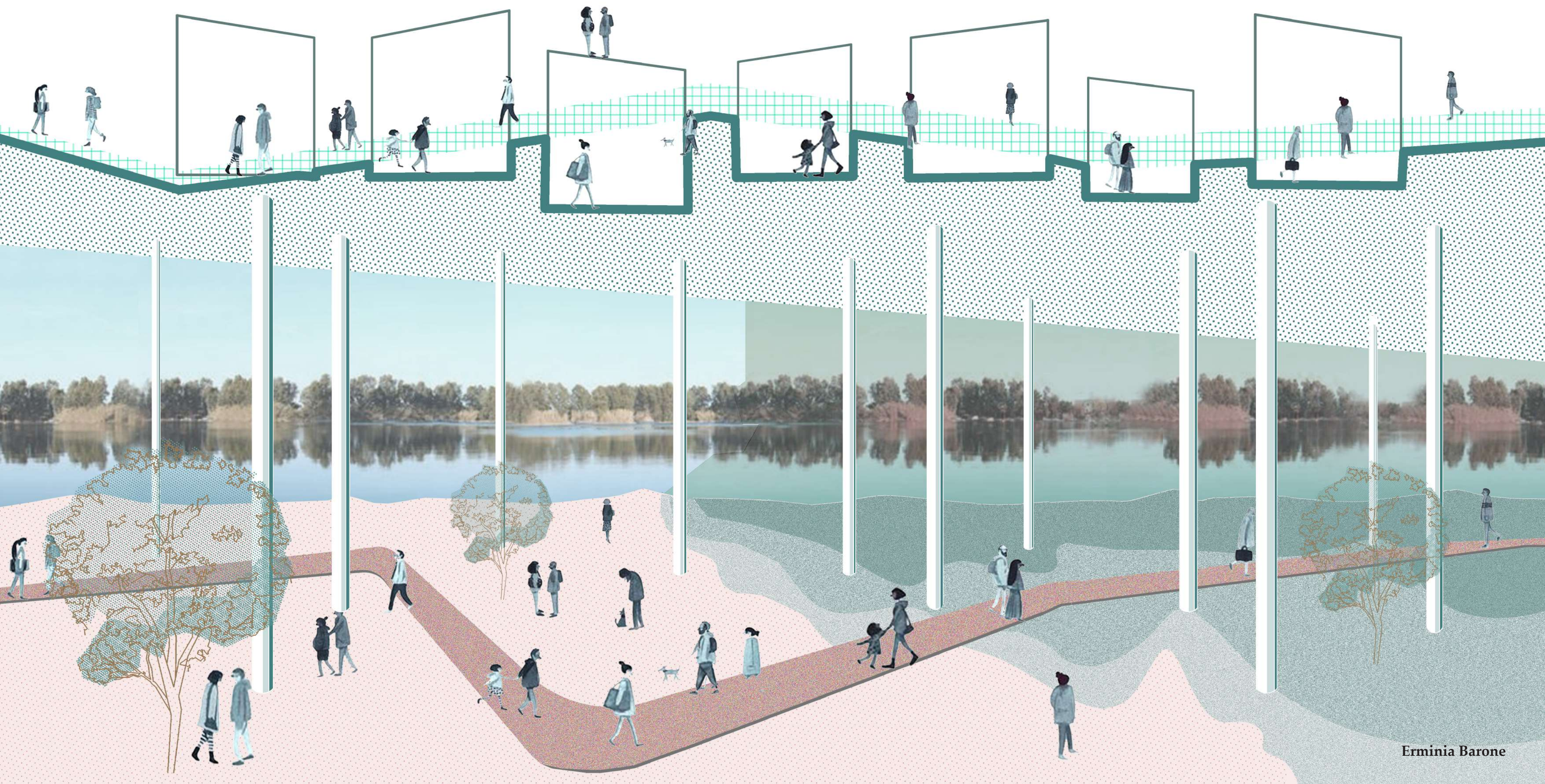
- 1 - Wood fiber panel, s 1.6 cm
- 2 - Perforated plywood panel, s 1.6 cm
- 3 - Air gap, s 7 cm
- 4 - Rock wool insulation, s 10 cm
- 5 - Perforated brick blocks, s 15 cm
- 6 - Metal frame
- 7 - Rock wool insulation, s 12 cm
- 8 - Acquapanel cement board. s 2 cm

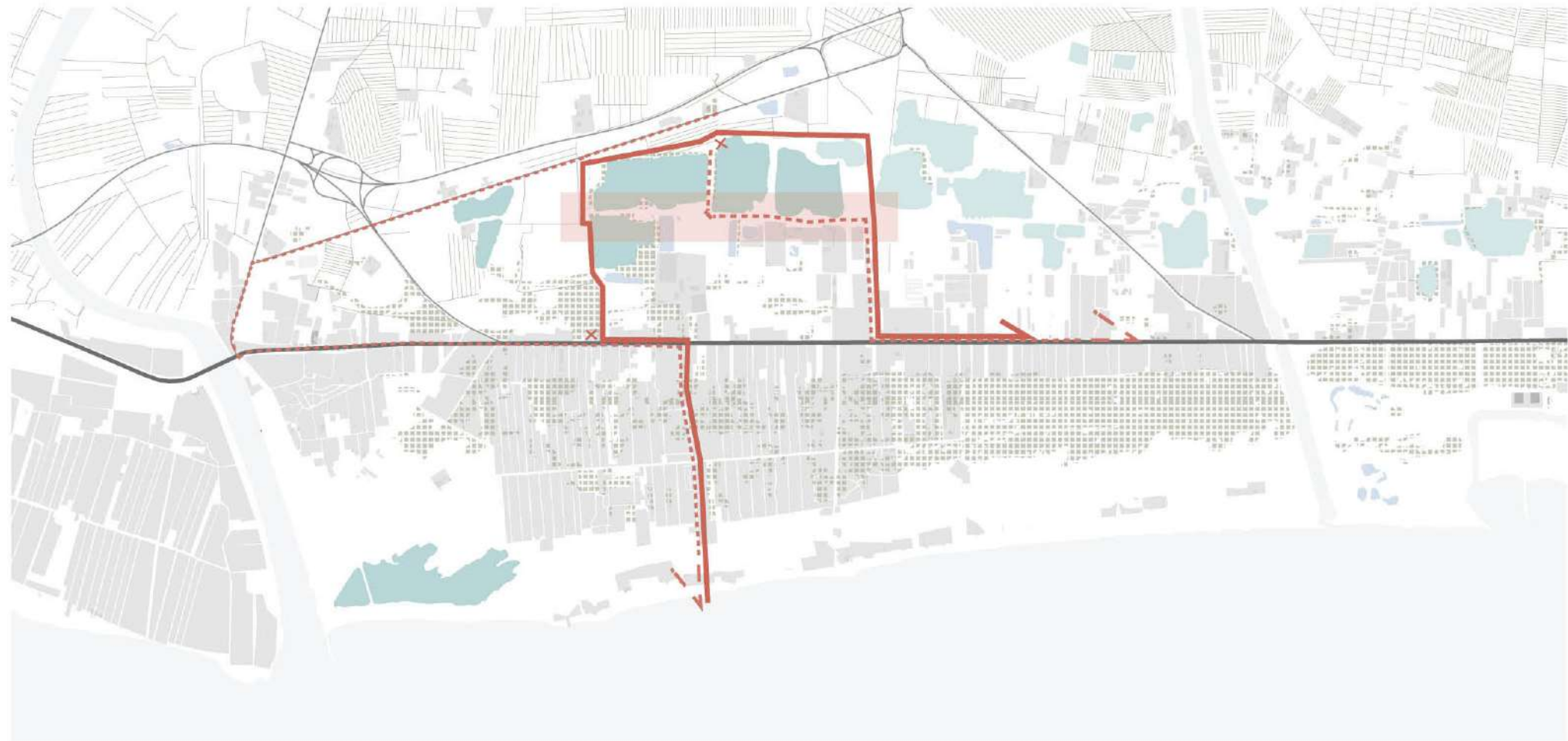




LAKES AREA AND THE NORTHERN BORDER
L'AREA DEI LAGHETTI E IL CONFINE NORD

- 8. Out of bounds** Erminia Barone
- 9. Re-Wine in Wetland park of Castel Volturno** Luca De Simone
- 10. SpArtimmacell** Mario Del Prete
- 11. Nature embraces infrastructure** Gessica Pepe
- 12. Reconnection Park** Silvia Romano





“OUT OF BOUNDS, LIVING THE LIMIT” is a project that aims to the redevelopment of a wetland area in Castel Volturno with a high naturalistic value, currently forgotten and abandoned. Once part of the Campania Felix, then a place of illegal activities, the lakes of the area now have become a symbol of crime and degradation for a city that is already fragile in its urban layout.

Luxuriant lacustrine nature, a succession of fresh and clean water mirrors separated from each other by a few meters, are the scenario of this project. If we cross-connect with the sea directly below these ex-sand quarries, located behind the Domitiana, the linear development of the city would break. The connotation of the site as a limit and boundary for the city would be lost and, at the same time, would allow the fruition of a public asset currently denied by a large number of local people. The project wants to be a source of attraction, especially for people who live in the city, creating interaction and contact where there is only fragmentation.

By placing the area with a naturalistic vocation within the system of parks and natural areas of the whole Domitian Coastline (eg. Oasi dei Variconi, Pineta, Foce Volturno, Regi Lagni) a wider parenthesis could be opened up in the optics of a large project related to the entire park system. This strategy may generate a feeling of identity compared to the heterogeneity of the built area.

The project is articulated in a multilevel organization based on the degree of usability. At the water level, on the entire area of the ponds, the urban park works for leisure and recreation. It has been designed to incorporate and take advantage of the seasonal phenomenon of flooding. The controlled overflow tanks allow accessibility throughout the year and in any climatic condition, creating a landscape positively susceptible to small variations in the water level, in an ever-increasing multiplication of water mirrors. Also below this point of view, the limit becomes a resource and water is no longer a source of danger or discomfort but of wonder and amazement.

In addition to refreshment points and indoor paths, at the same level of the park, there are all the accesses to the buildings, which raise eight meters above the ground. Along this line the project aims to maintain at ground level the public functions, which are additional services for the park.

The architectures standing above are organized into according to four focal points spread over the entire length of the natural system. They have different functions, all inherent to the theme of education and pedagogy at different levels, and to the subsequent insertion into the work environment (“Tecnico Ambientale” high school, research laboratories, school of trades, rentable offices and laboratories, co-working spaces and a commercial area with rentable shops). The four focal points are articulated, due to the presence of water, in multiple pile-dwellings raising on pilots with the appearance and technology of industrial buildings to have wide span. At eight meters, a walkway connects all the blocks that are included in a single building. The metal mesh connects them in a single system, like a metal spider web.

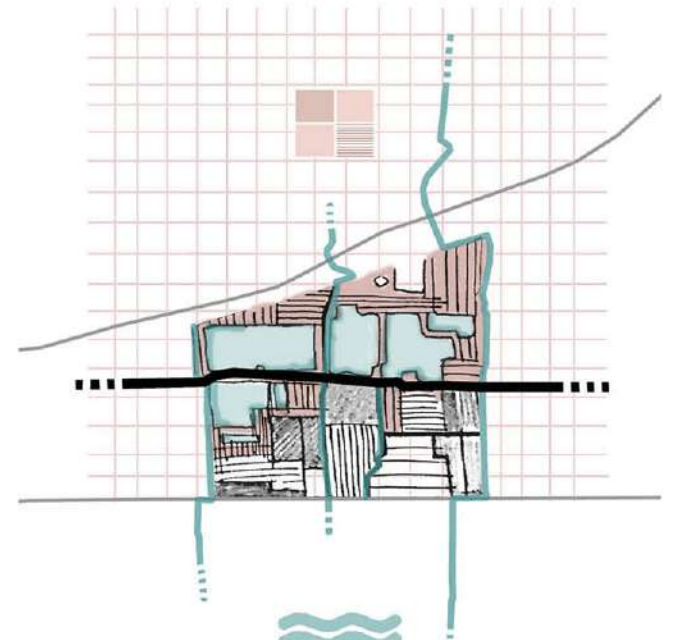
The façade made of steel, the strongly inclined roofs and the pilotis, strongly characterizing the overall image of the system, give recognition to the entire project.

The internal landscape is informal, composed of generous distributive spaces that can be used for different events. The choice of a structure that allows wide spans, which is itself a well-defined formal choice, makes the project an architectural matryoshka, a series of boxes no longer tied to the internal mesh of the pillars. The school theme and the space of learning is also addressed with the desire to go beyond the limits, in particular not the limit of the city itself or water, but the historical concept of the classroom. The space consists of a flexible, programmatically indeterminate surface, that breaks with the typical character of the school (which tends to compact form and program) to offer a spatial experience capable of accommodating the pedagogical changes which take place.

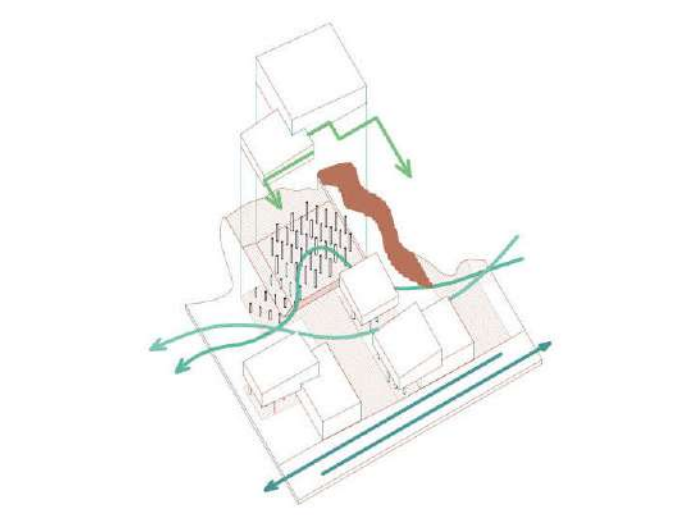
CONCEPT
Urban scale



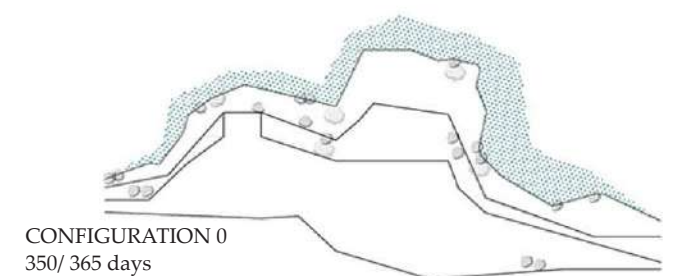
Green areas reconnection



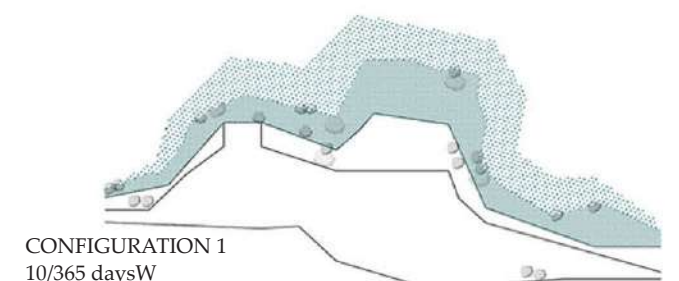
Trasversal connection from the fields to the sea



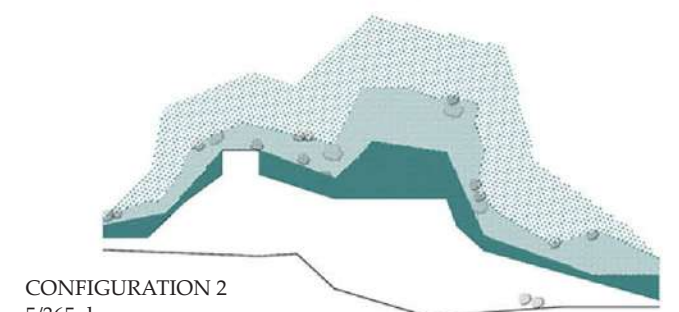
Industrial layout, pile dwelling and paths



CONFIGURATION 0
350/ 365 days

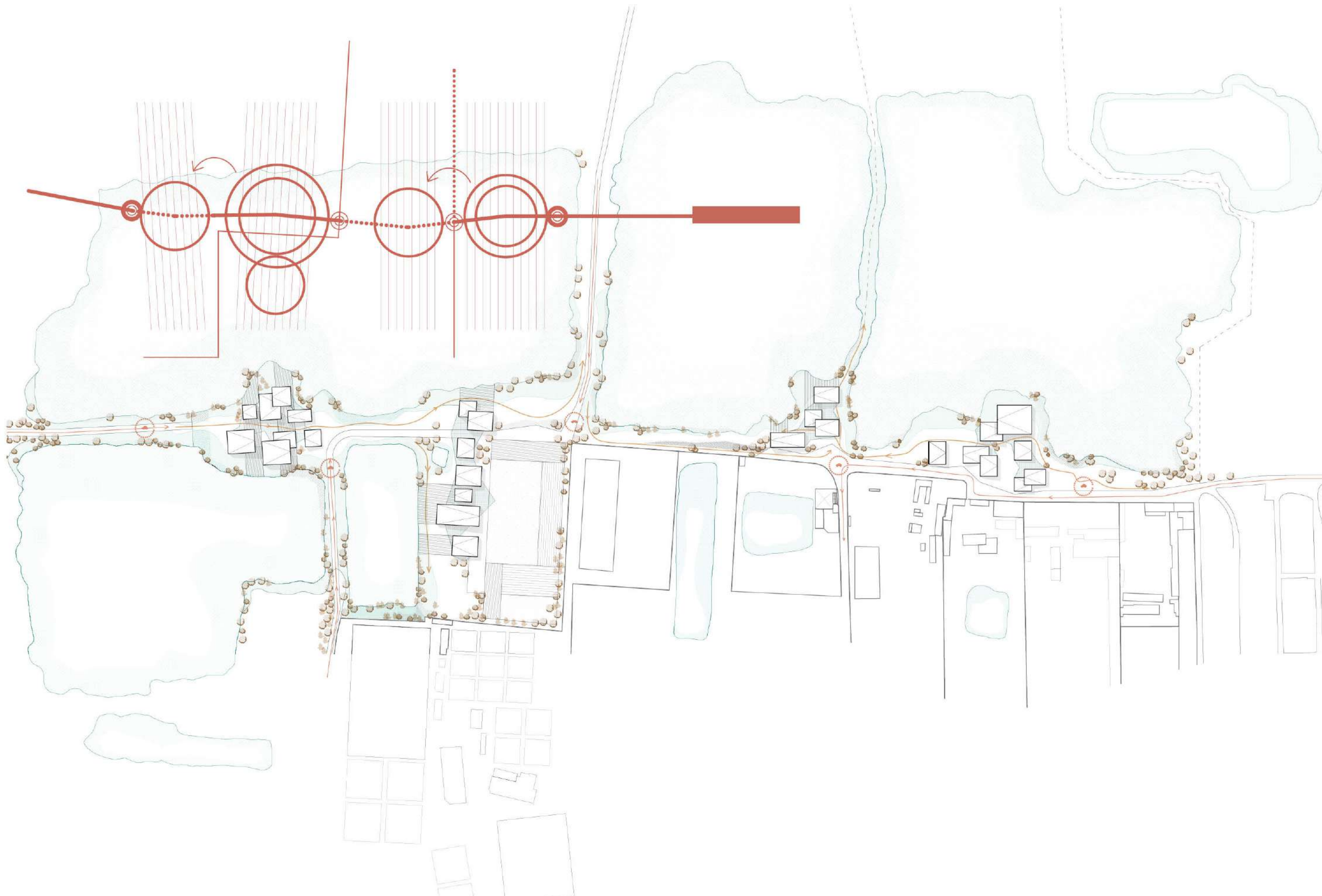


CONFIGURATION 1
10/365 daysW

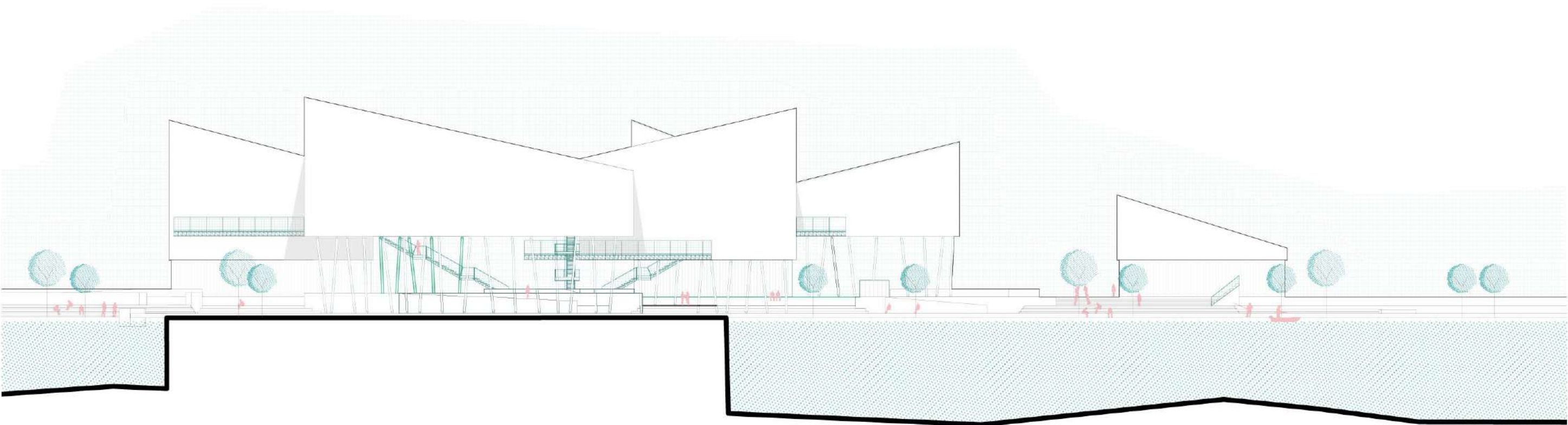


CONFIGURATION 2
5/365 days

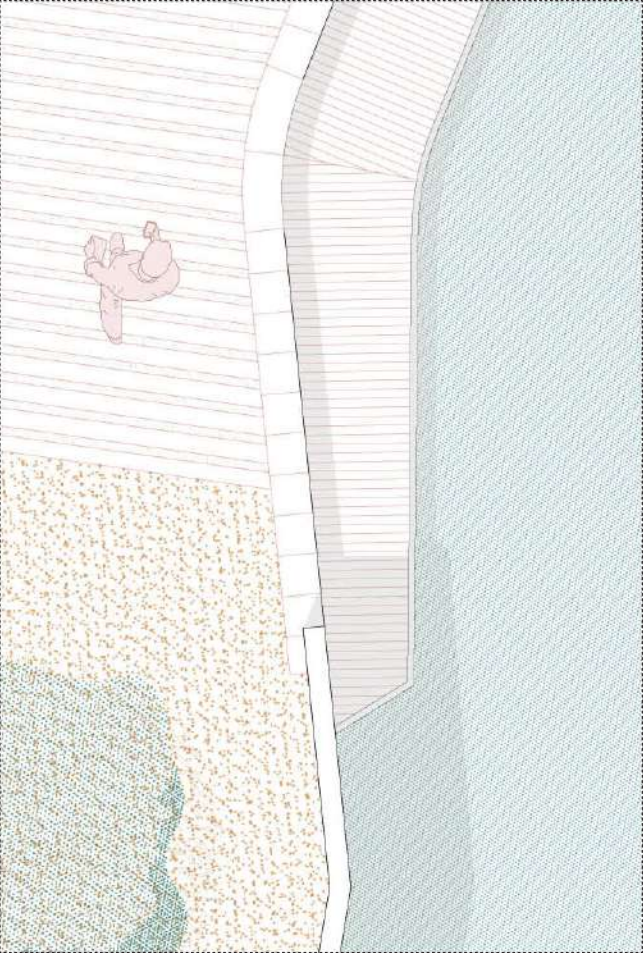
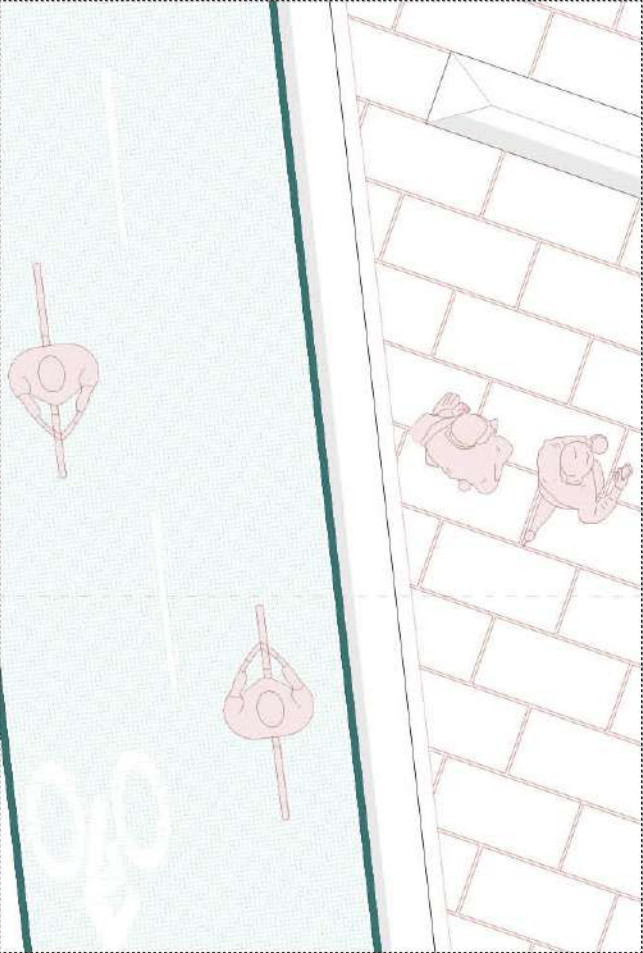
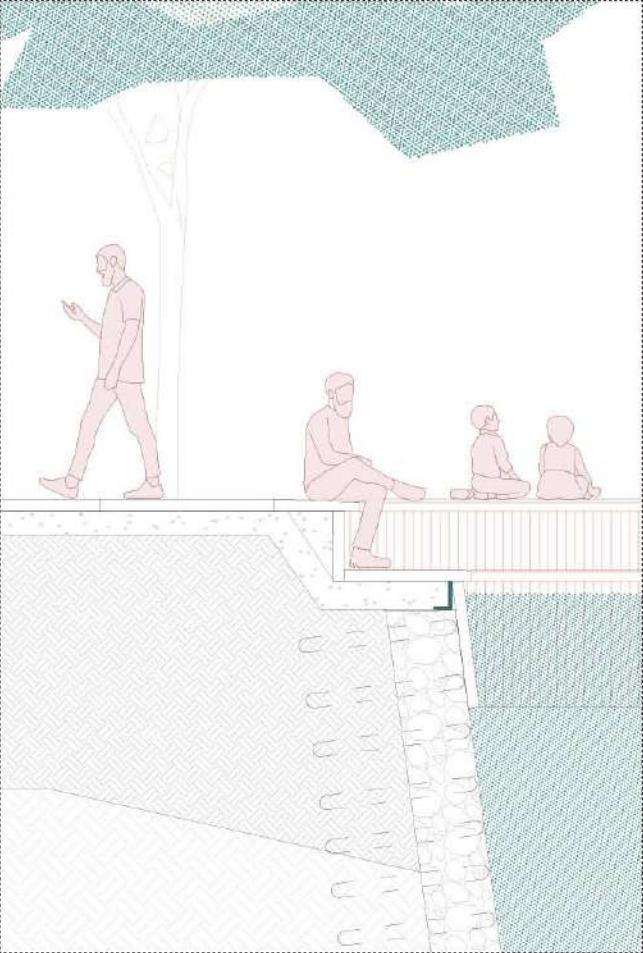
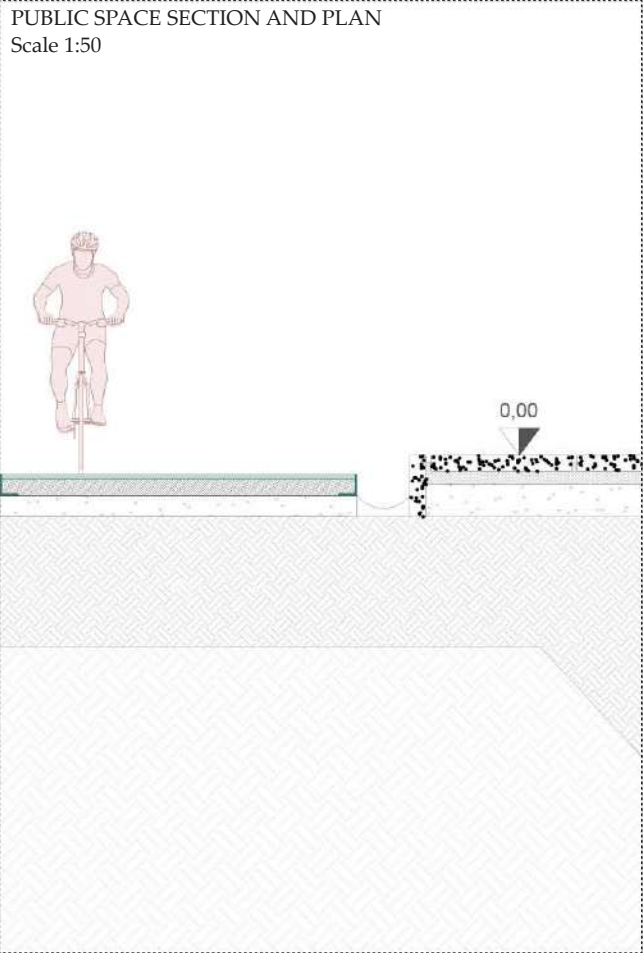
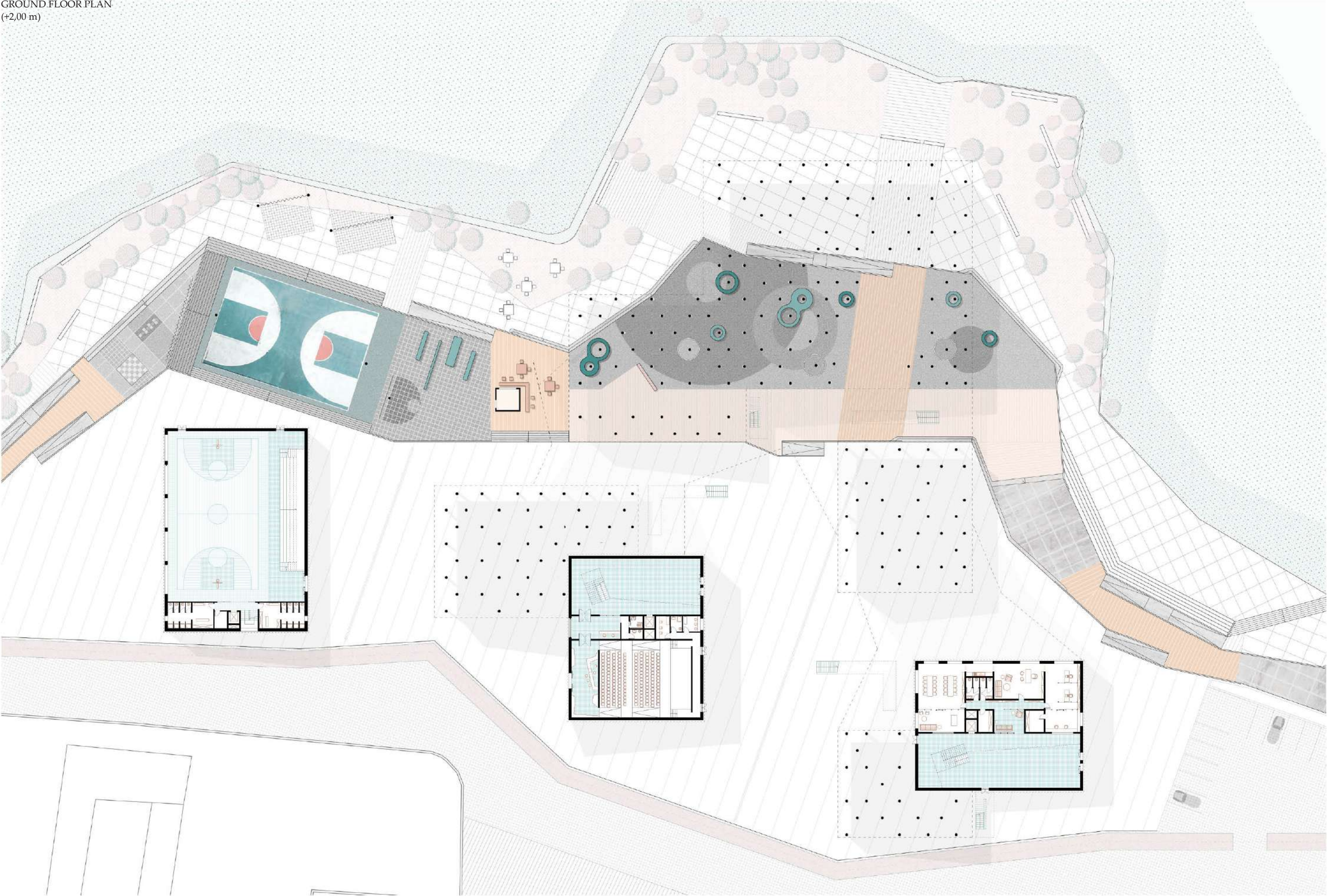
Water tanks configurations depending on the rain depending on the amount of rain during the year.



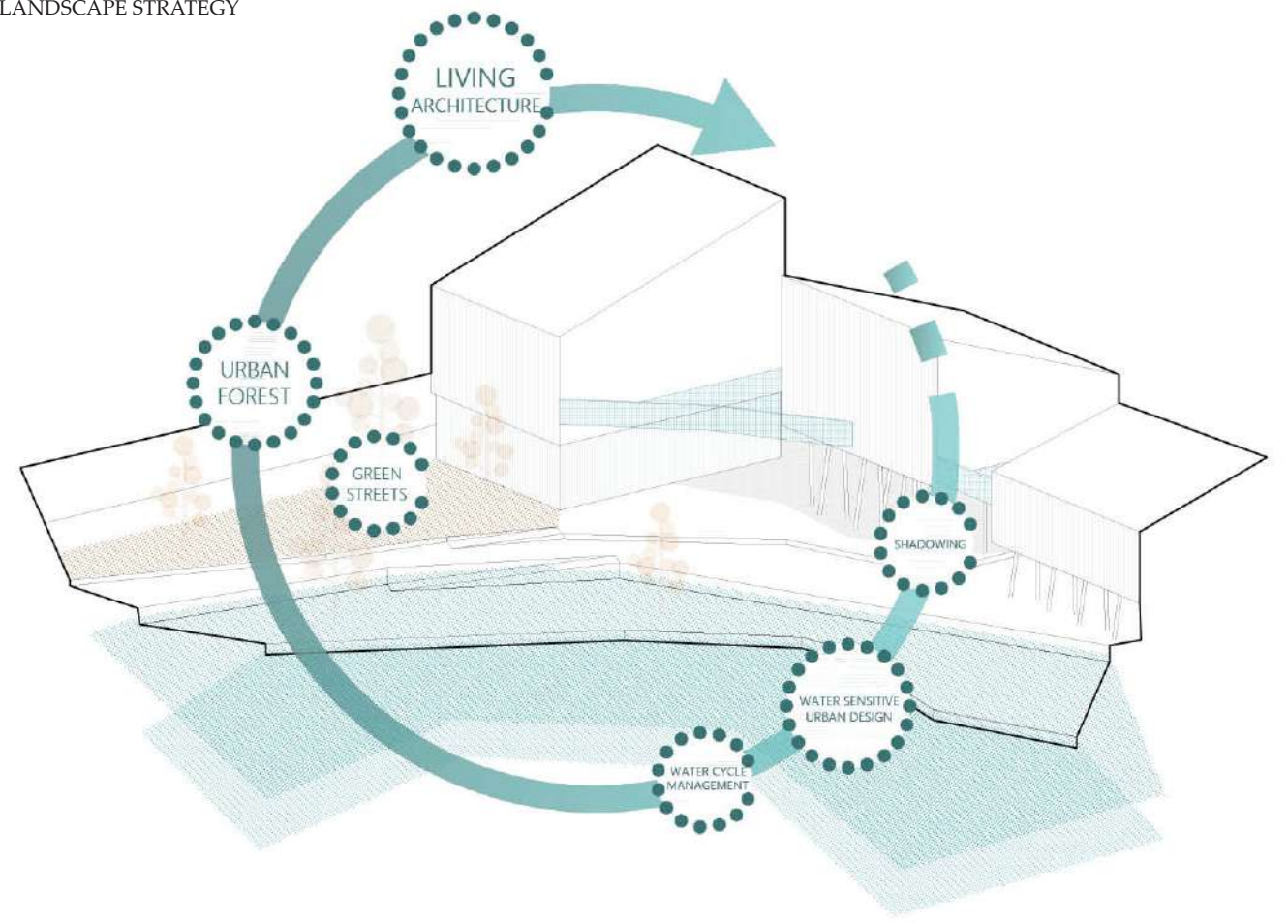
“Tecnico Ambientale” HIGH SCHOOL
WATERFRONT FACADE

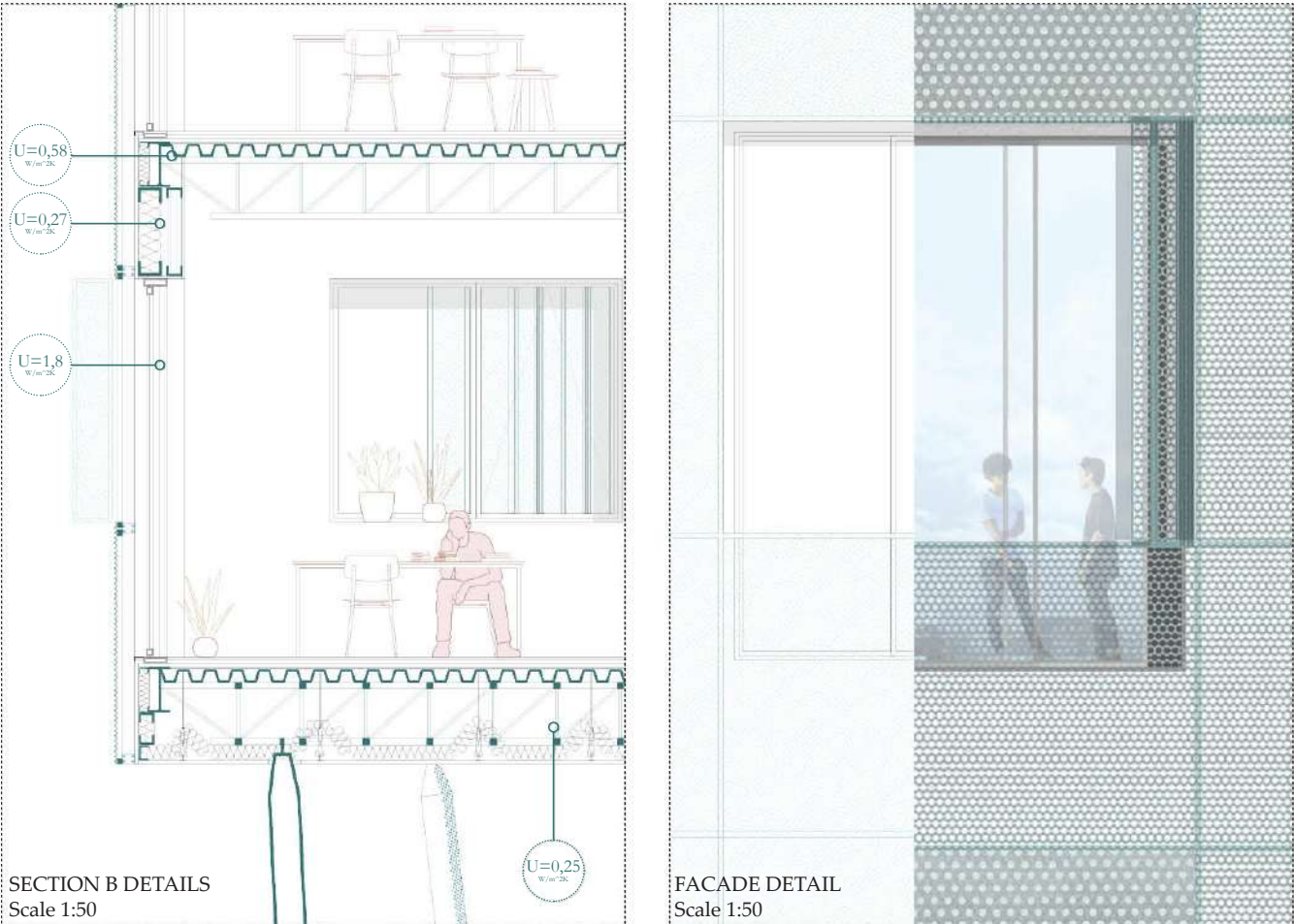
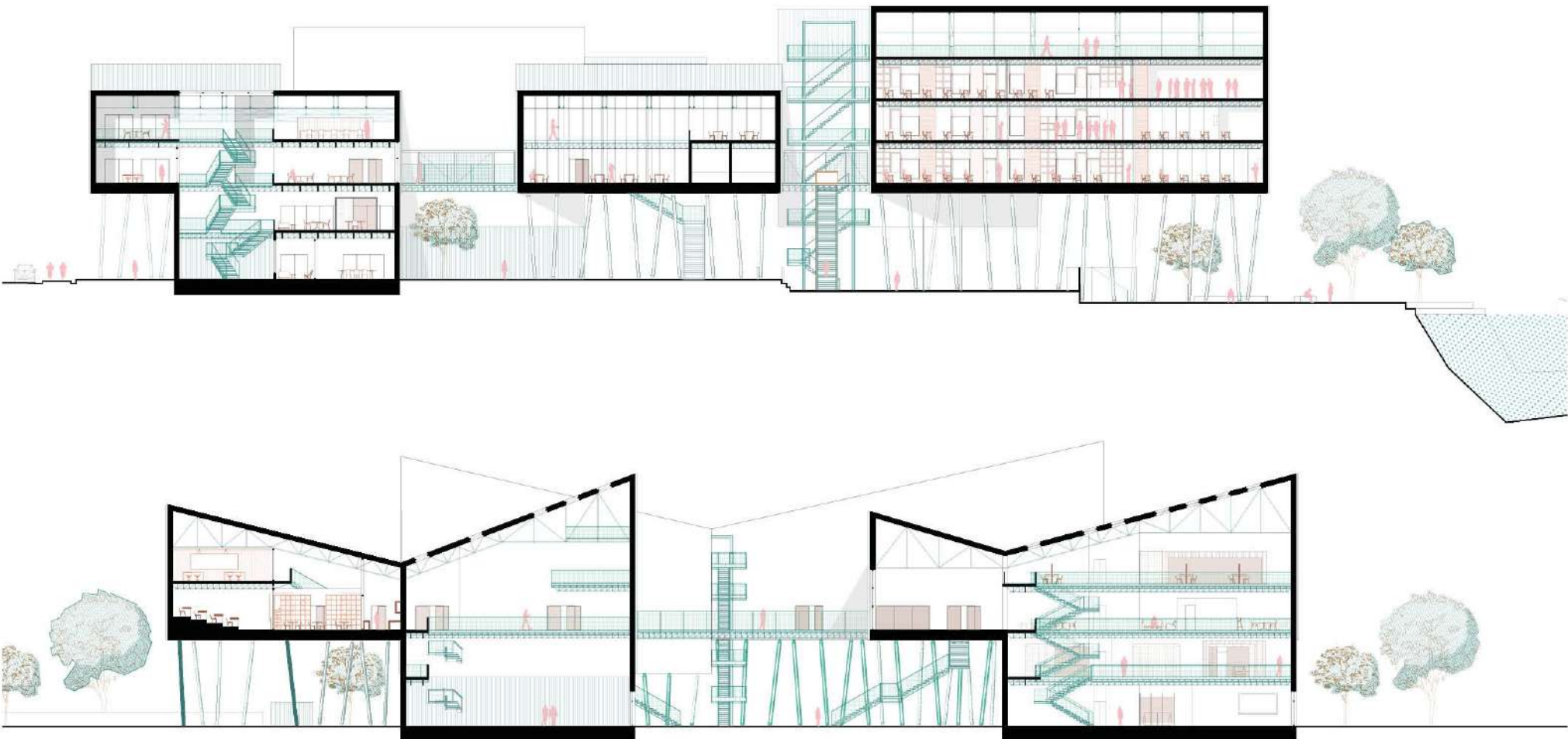


GROUND FLOOR PLAN
(+2,00 m)



LANDSCAPE STRATEGY





WINTER HEATING AND SUMMER COOLING LOADS

Summer cooling load at the peak

ROOMS	Q tot (W)	Q (W/m^2)
Connections	29649	139,90
Lab. 1	8138,67	111,79
Lab. 2	9870,41	114,93
Lab. 3	9474,63	143,36
Lab. 4	20619,82	130,01
Auxiliary lab.	3649,32	130,57
	81401,85	130,62

Winter heating load at the peak

ROOMS	Q tot (W)	Q (W/m^2)
Connections	17073,65	80,56
Lab. 1	3949,51	54,25
Lab. 2	5466	63,65
Lab. 3	5226,41	79,8
Lab. 4	7350,83	81,15
Auxiliary lab.	1947,81	69,69
	41014,21	65,81

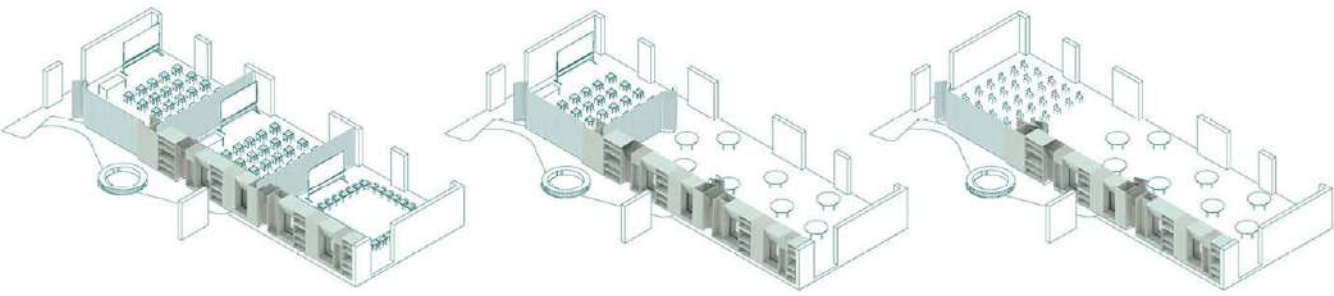
FINANCIAL STRATEGY



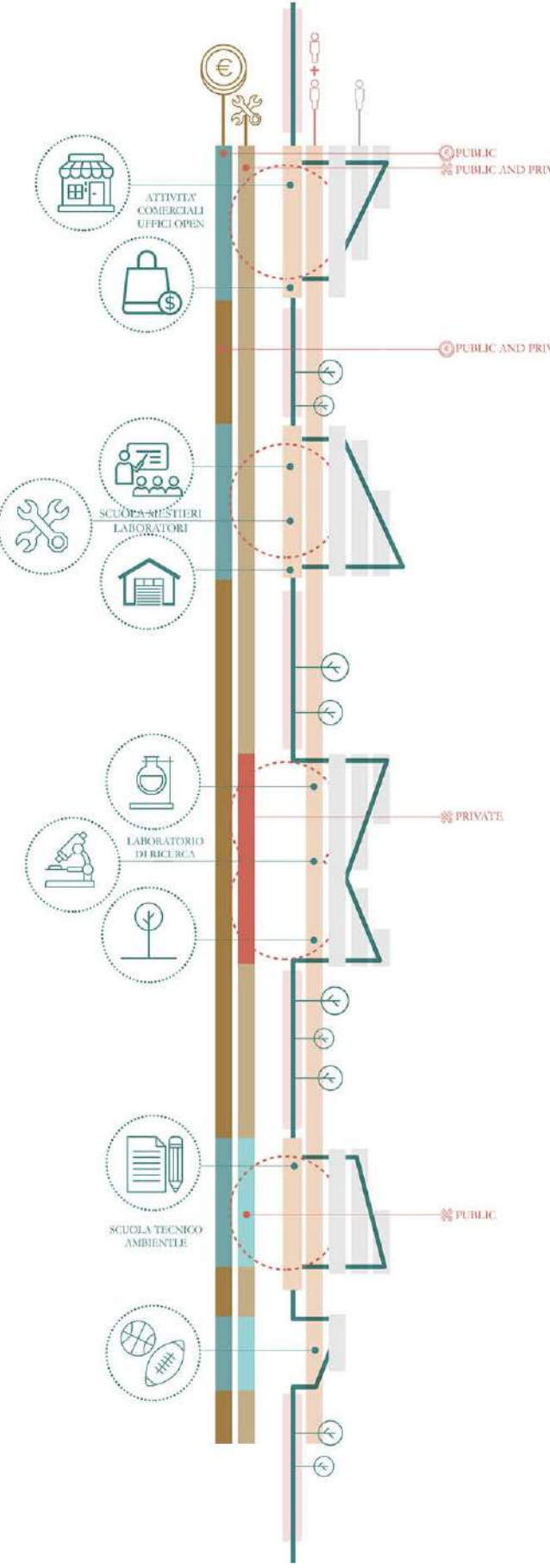
THE INNER SPACE
FORMAL AND INFORMAL LANDSCAPE



THE DIDACTIC SPACE: THE CLASSROOM

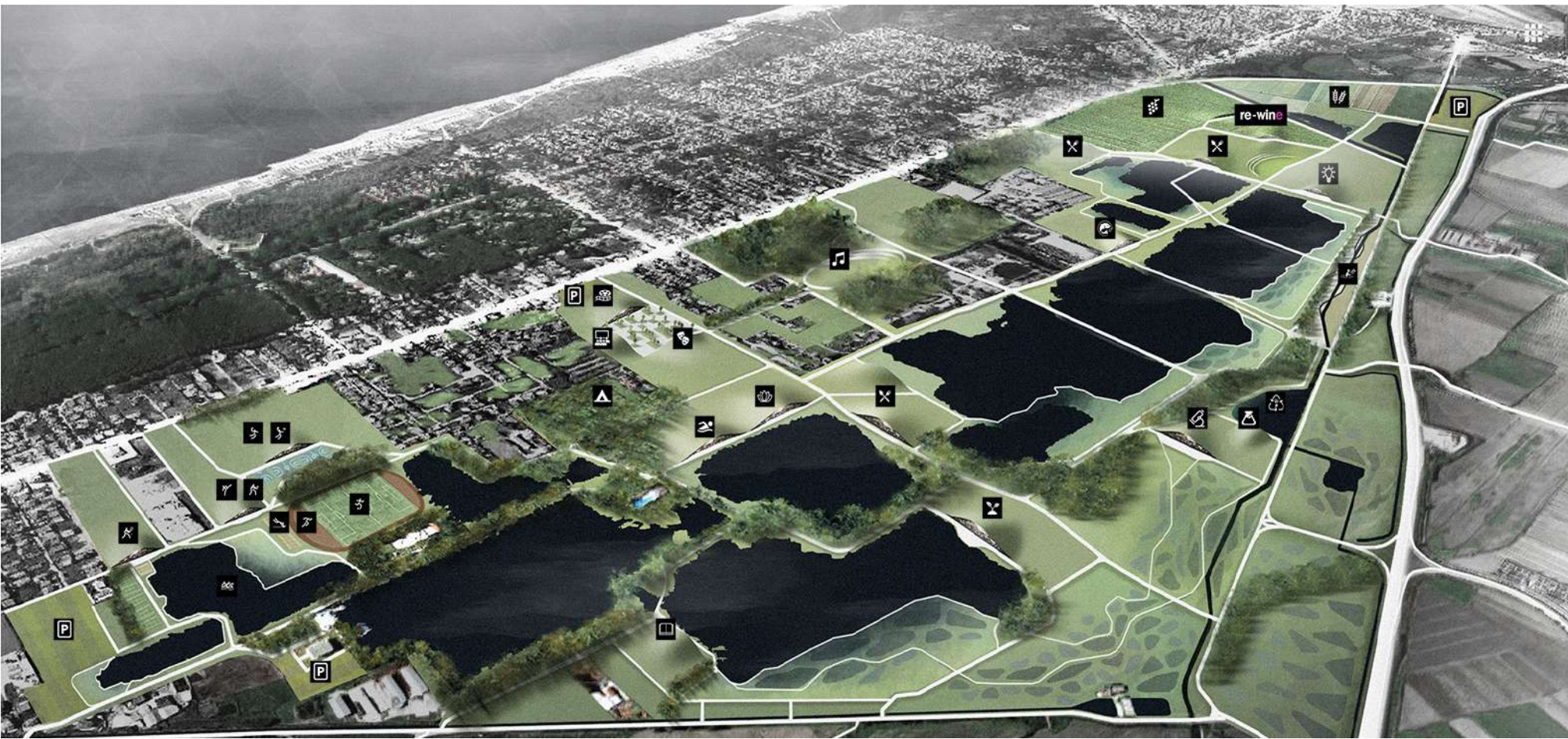


THE IN-BETWEEN SPACE:
THE ATRIO AND THE CORRIDOR



re - wine
| re - wind |
in
Wetland park
of Castel Volturno





Because of its geologic and hydro-geologic nature, the “laghetti”s area, in Castel Volturno’s hinterland, suffers from frequent flooding and overflow during the rainy season that will probably get worse in the future due to climate change and global warming.

In the absence of a strategy to control these phenomena, the area works as a physical interruption in the relationship between the urban and the rural landscape, as a wilderness inter-zone.

The goal of the project, in line with the current urban plan of Castel Volturno, is to transform the area into a tourist park.

For this to happen, an adaptive strategy is in play aiming at water management through the full use of existing sand pits, enhancing them in a logic of minimum intervention. The operation is therefore to shape the soil near the water basins in order to create controlled overflow reservoirs.

In this way, the soil and the natural vegetation are preserved, allowing different habitats to evolve over time. The biodiversity is improved through the addition of species native to wetlands. This enrichment, particularly of species that provide food for birds and other small wild animals, increases biodiversity.

Parallel to the environmental management effort, the functional program of the park is organized into five thematic areas: sport, culture, accommodation, production and wildlife.

The strategic layout of the different park areas places those with a more urban vocation next to the domiziana route, in tight proximity with the residential and commercial context. The production areas, designed to create a filter with the hinterland, are in close relation with the agricultural system, and the naturalistic one, aimed at managing the environmental emergency of flooding.

This functional heterogeneity features the Wetland park project as a possibility for a multitude of private investors who, according to a method of cooperation and public-private partnership, would contribute to the realization of the park.

The project consists, first and foremost, of the production of infrastructural and micro-infrastructural devices within the park system, in order to hold all parts together and offer the possibility of moving from one area to another without perceiving real borders, which are merely programmatic. A slow-mobility system enhances the human scale perception of space, which is the walk.

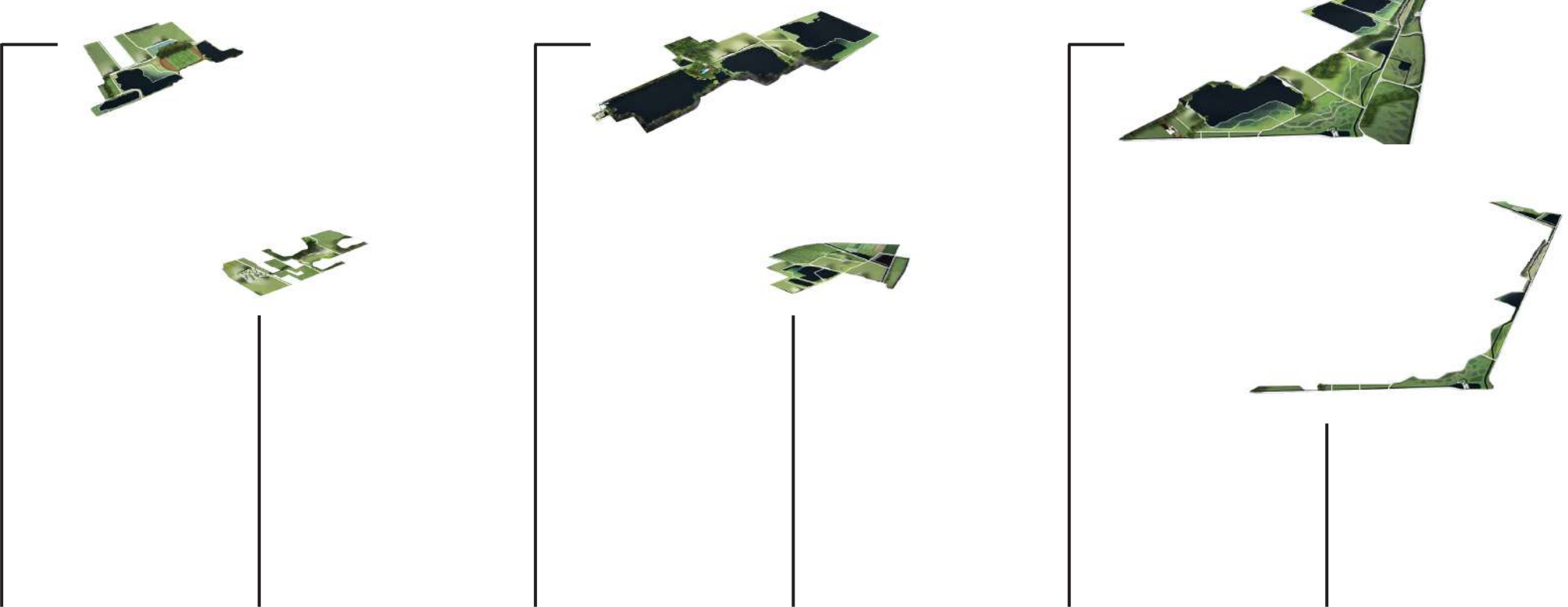
In respect of the landscape and complying with the local master’s plan, the design solution for the structures serving the park is the hypogaeum, being the landfill a potential resource and not a waste, in line with an ecological criterion of soil management.

Thus a series of constructive possibilities are distributed in a uniform manner throughout the park, giving space to visions such as hypogean pools, playgrounds and gyms, research centers, and wine cellars; visions that create a network of attractors within a mesh that does not change its strongly naturalistic character.

Wetland park becomes a way to generate a virtuous series of operations to solve environmental problems in a distributed fashion, where by environment we do not mean only the evolution of natural systems according to scientific parameters, but a whole within which man is immersed, lives, exists, inhabits. And it is in the Latin etymology of inhabit, “habere”, “to have”, that the project wants to provide meaning and purpose: to have a place, to feel its own, to strengthen the identity of the territory, and to take care of it.

An ecology that intervenes on human behavior, which becomes culture and not a performance goal.

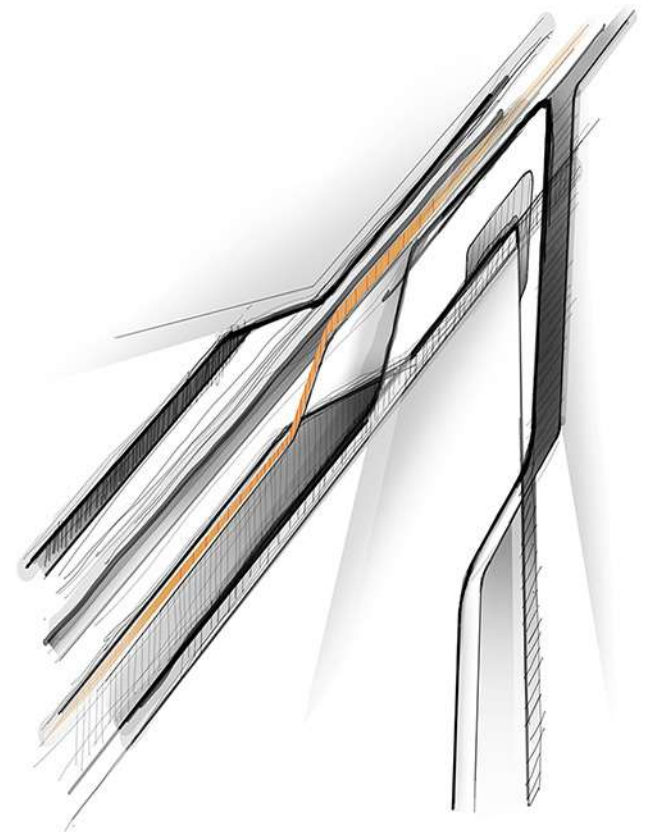
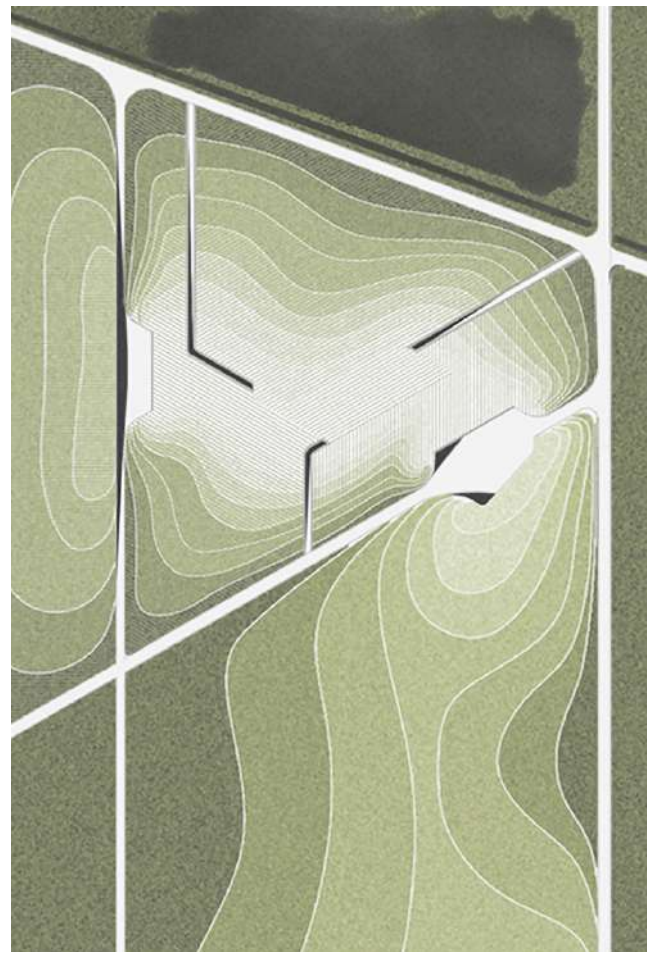
“A resilient landscape as a space project for the regeneration of a critical environmental and territorial context”.



Sports area	Culture area	Accommodation area	Productivity area	Naturalistic area	Riverbank area
Tennis court indoor and outdoor Volleyball court indoor and beachvolley court outdoor Basketball court indoor and outdoor Football court Athletic court Kayak, sailing and boating track	Theatre Cinema Conference room Culture square Outdoor arena theatre	Plana Resort Tenuta Pavoncelli Health center Swimming pool indoor Camping Restaurants on the lake	Re_wine winery Winery house and shop Fish farm Agricultural fields Agricultural innovation hub Restaurant on the lake Workers’ canteen	Restored wetland Wetland paths Biologic research center Park observation center Library Water slowing tank Purifier	Wet riverbank Dry riverbank Water playground



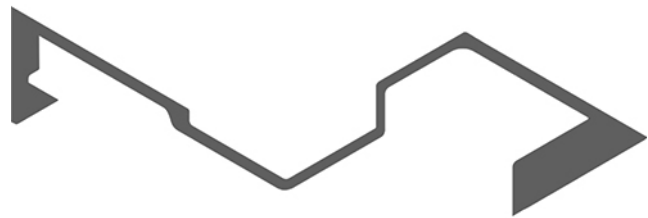
1. Existing lakes emergency
2. Controlled overflow reservoir
3. Infrastructural and micro-infrastructural devices
4. Identification of building areas
5. Re-naturalization with herbaceous plantings
6. Planting of species for phytodepuration



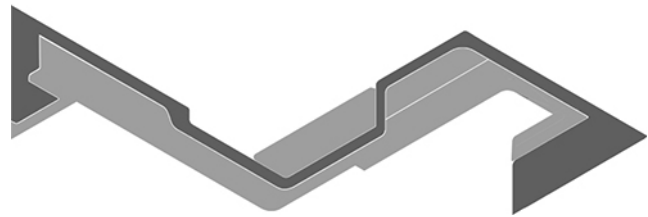
Visual concept



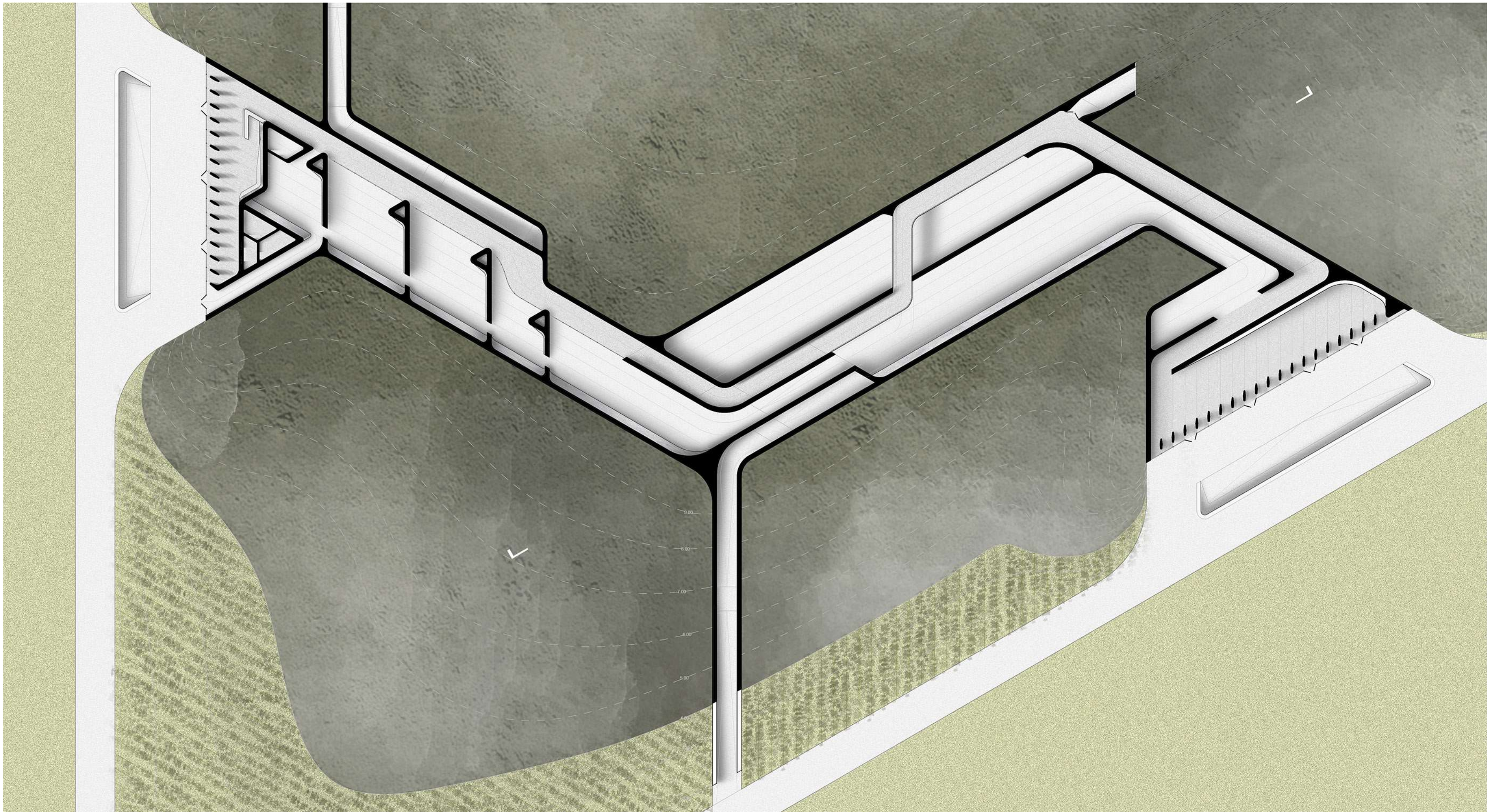
Wine making process spaces



Touristic walk space



Fusion of the spaces

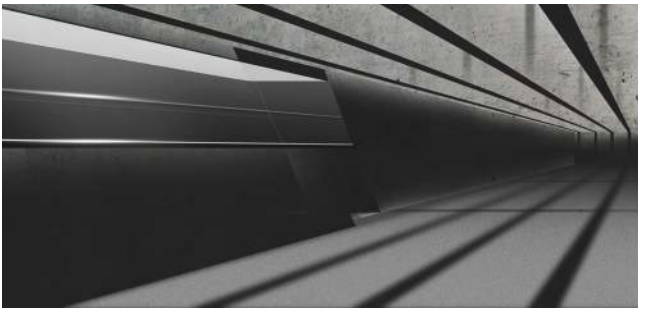


The Re_wine winery project is contextualised within the Wetland park in the production area, in the northern head of the park. The strategic choice to place the winery in the northernmost part is due to the possibility of direct crossing of the state road through the existing vehicular underpass, to connect the new production area to the agricultural system of the hinterland. The winery wants to become a strong nucleus for the local economy and at the same time an attractive center for the city community, trasforming itself into a gathering place, and the

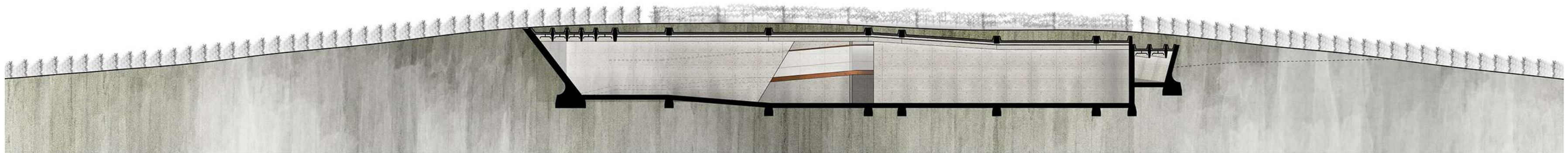
national and international community giving the possibility to host world-class enogastronomic events. The design concept is therefore the fluid fusion between the spaces of the two different moments and of the two uses of the buliding: processing and tourism. Metaphorically, the fluid spatiality tells the transformation process in wine making, in the same way bringing the grapes and the visitor to a “fermentation” and an improvement of oneself. The structural roofing system, designed to

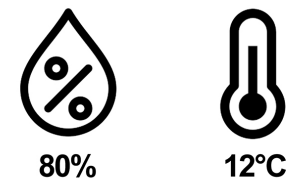
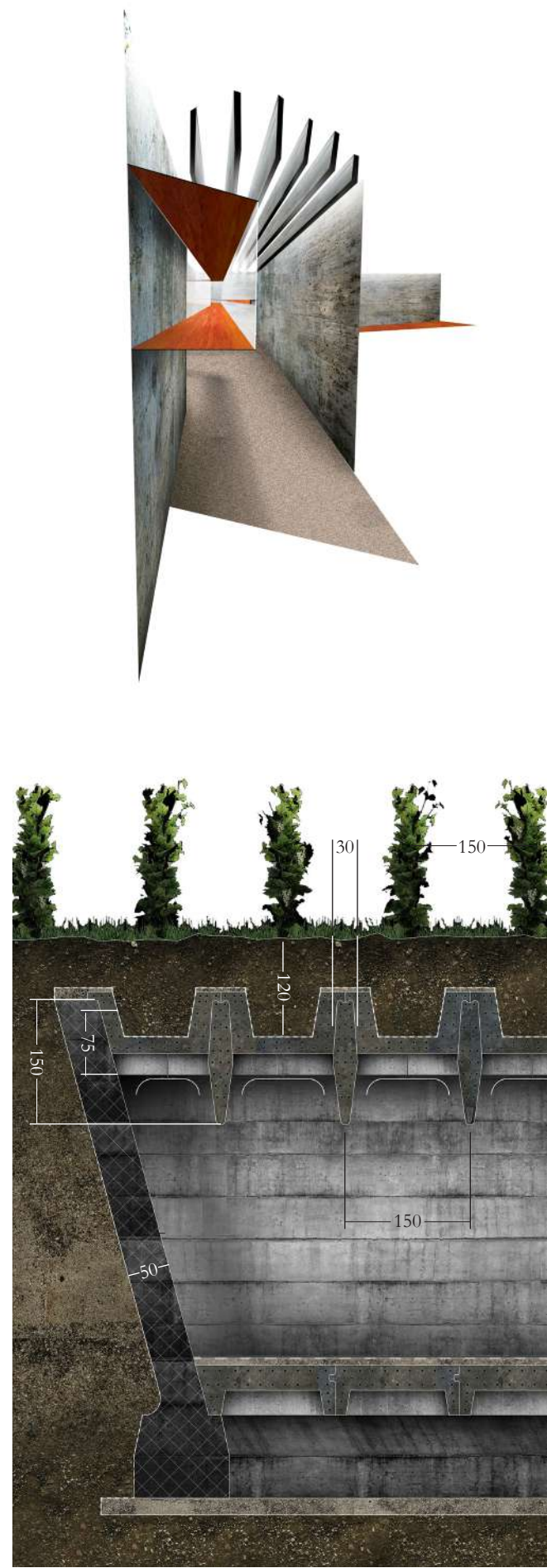
hold these events hypogeum, in greater contact with the land, synonymous with genuineness and belonging to the place, is designed with a strong directionality that accompanies the fluid longitudinally, and that it is itself a virtual reference to the vineyard, to the paths between the rows, to the light filtered by the vines. In this way structure, function and meaning merge smoothly into a single solution that is enriched and highlights the fourth dimension, which the architecture project shares with the winemaking process: time.

“Like water, metaphor of life, people flow underground to re-emerge in the sunlight”.

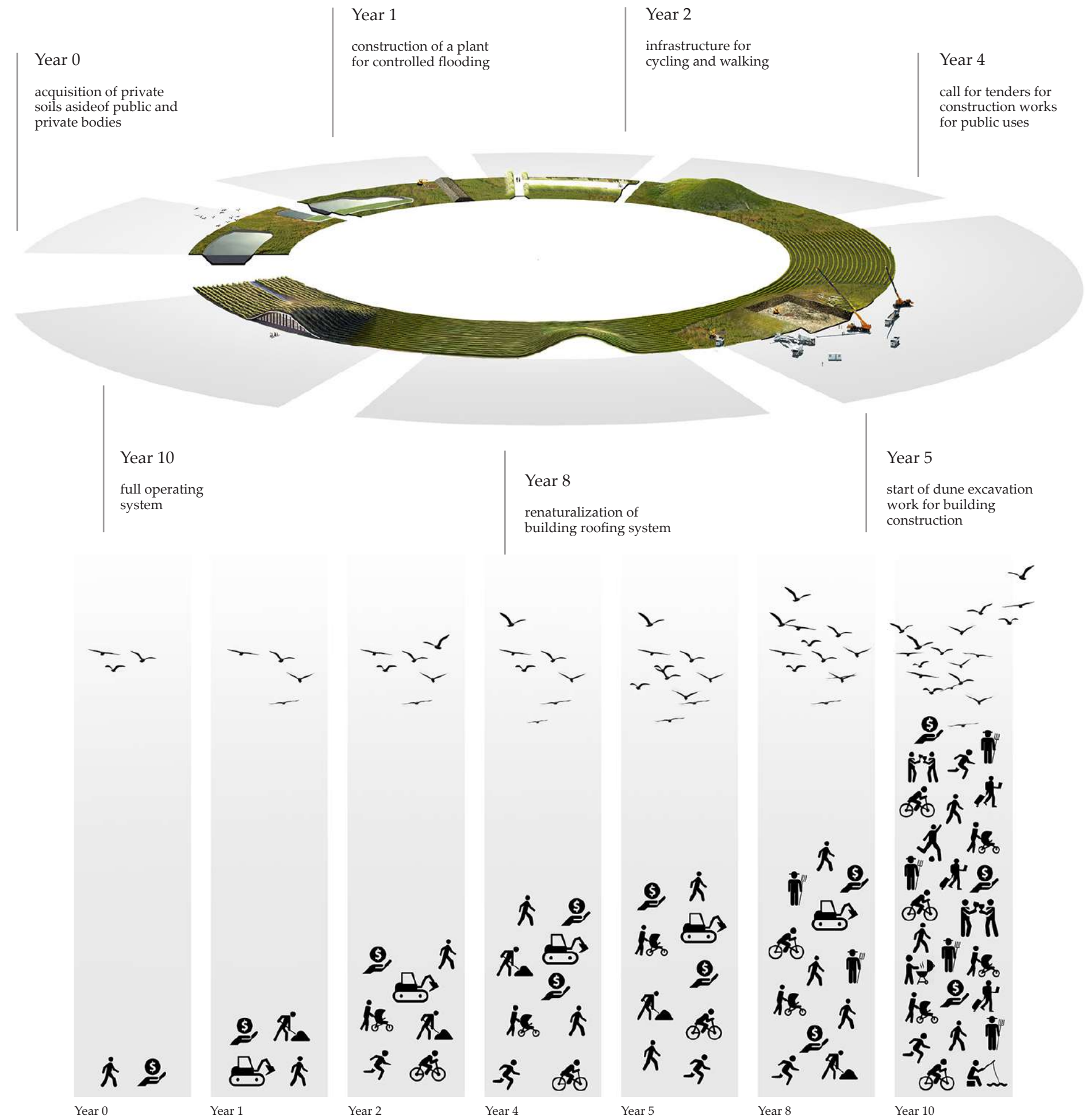
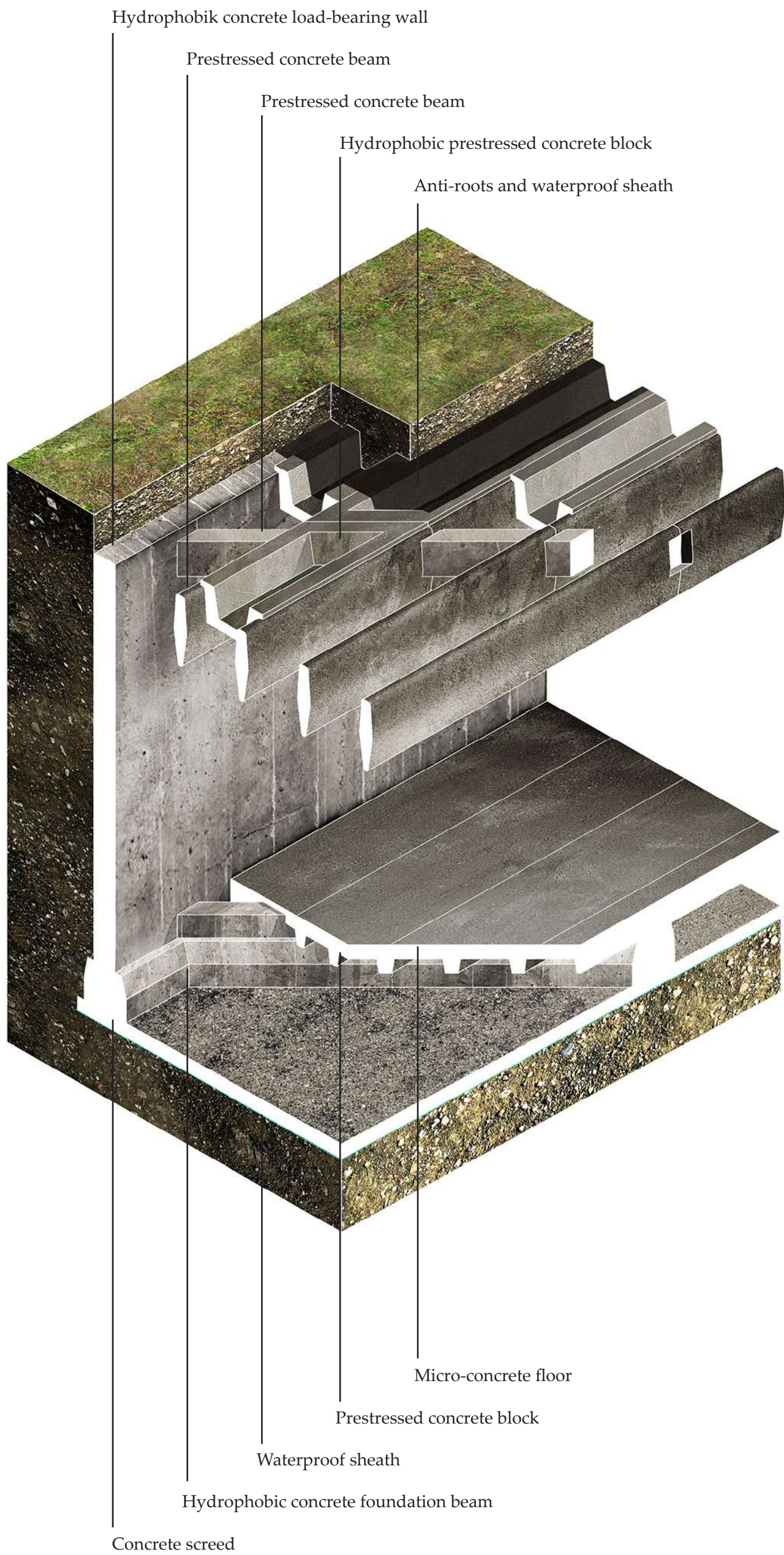


View of interior spaces and soft lighting





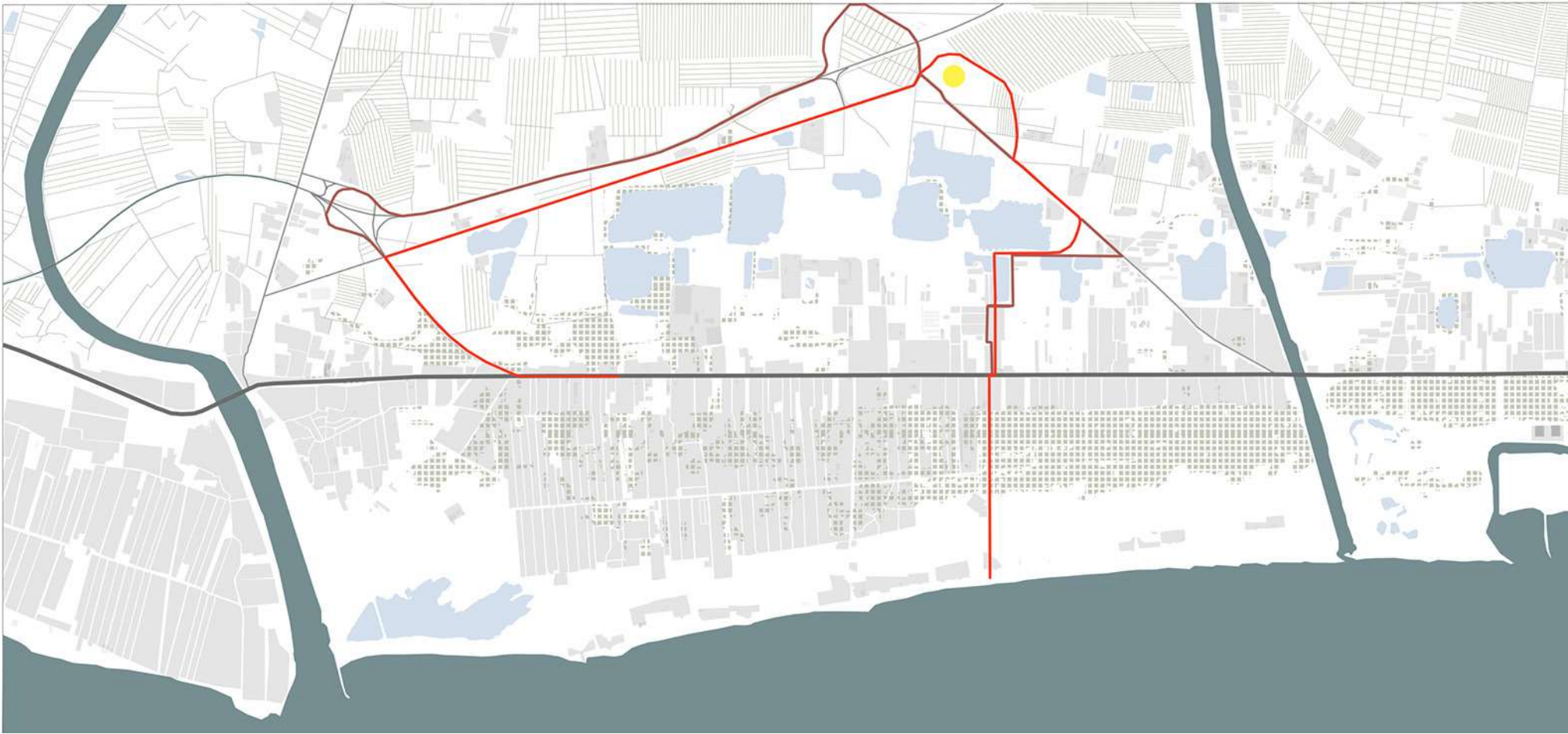
For the Re_wine winery there is no need for environmental comfort but must meet 12-14°C temperature requirements and 80% humidity to achieve good results in the processing of oenological products.



SPARTIMMACELL

sport as a means of social inclusion

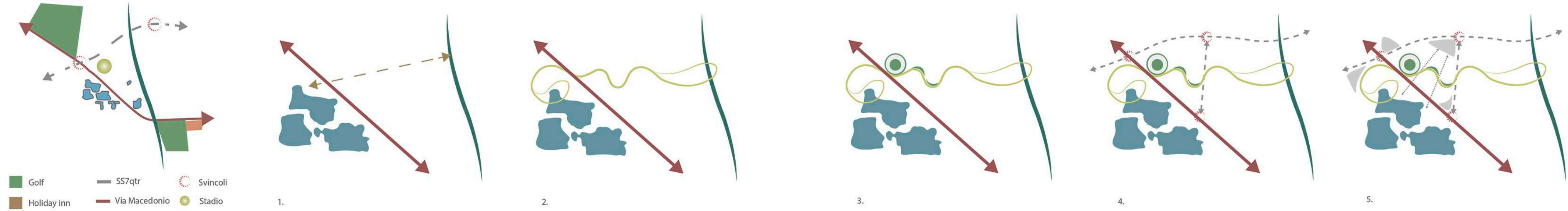


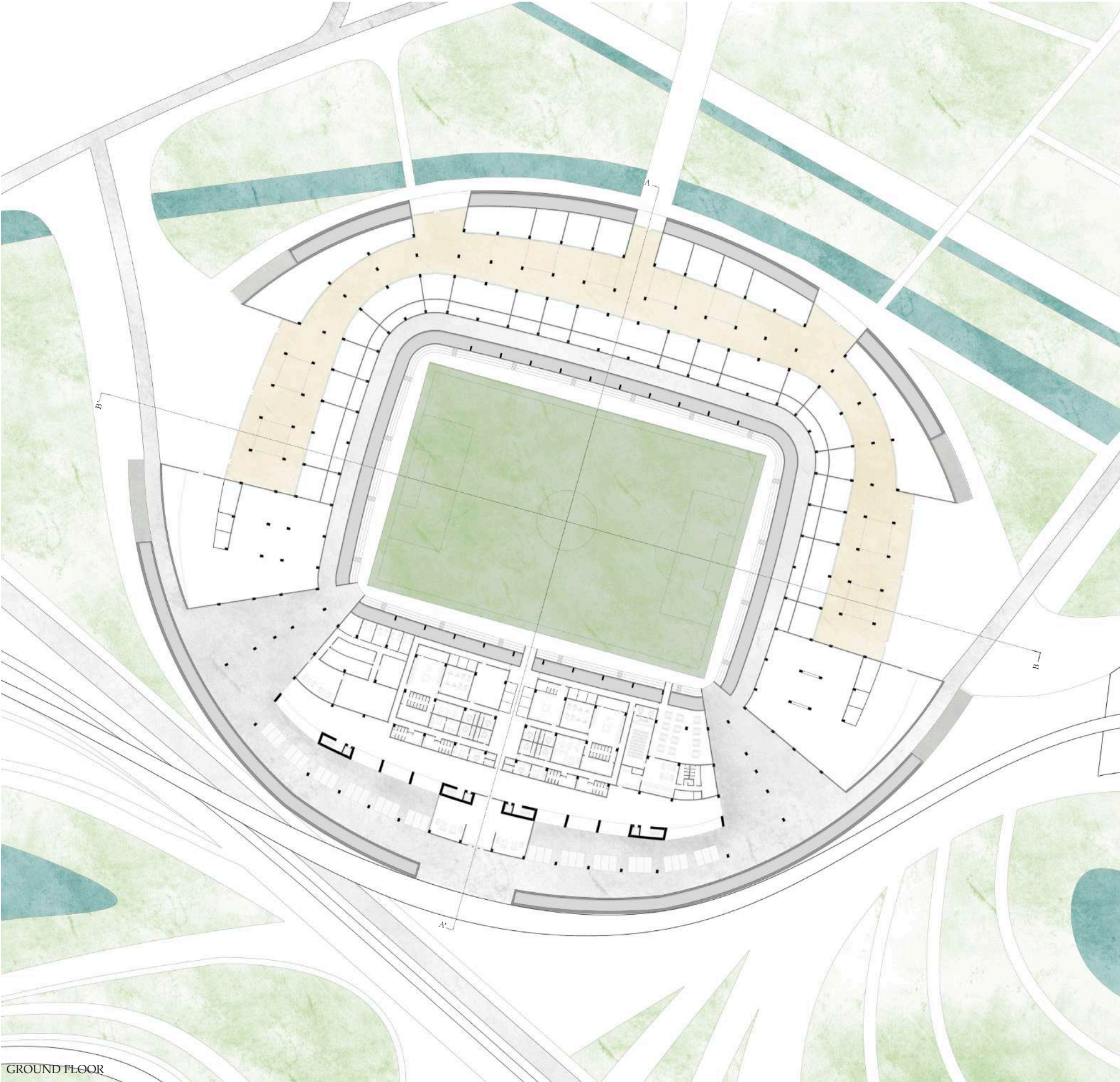


Over the last few years, the leisure and entertainment sectors have undergone a radical change that characterized the new “generation” of sports facilities. In particular, the stadium is now configured as a complex organism, no longer characterized by the presence of few functions, but responding to variously articulated requirements like environmental quality, safety and multi-functionality. The design of sports facilities, therefore, plays a strategic role within urban dynamics to improve the service system for the entire community. Sport is also a fundamental practice on an emotional and social level, as it provides a multidimensional, dynamic, and playful environment for educational and training purposes. Sports language is universal, it overcomes boundaries, languages, religions, ideologies and has the ability to unite people by creating bridges and promoting dialogue and acceptance. In recent years, the need of the SSC Napoli to build its own stadium has led to a list of possible areas, including Castel Volturno , the site of the team’s training sessions. A stadium is worth tens of millions of euros each year. Placing the stadium in a context such as Castel Volturno would serve as a starting point for regenerating a territory with great potential. It would be a manifesto, the rediscovery of the entire area;

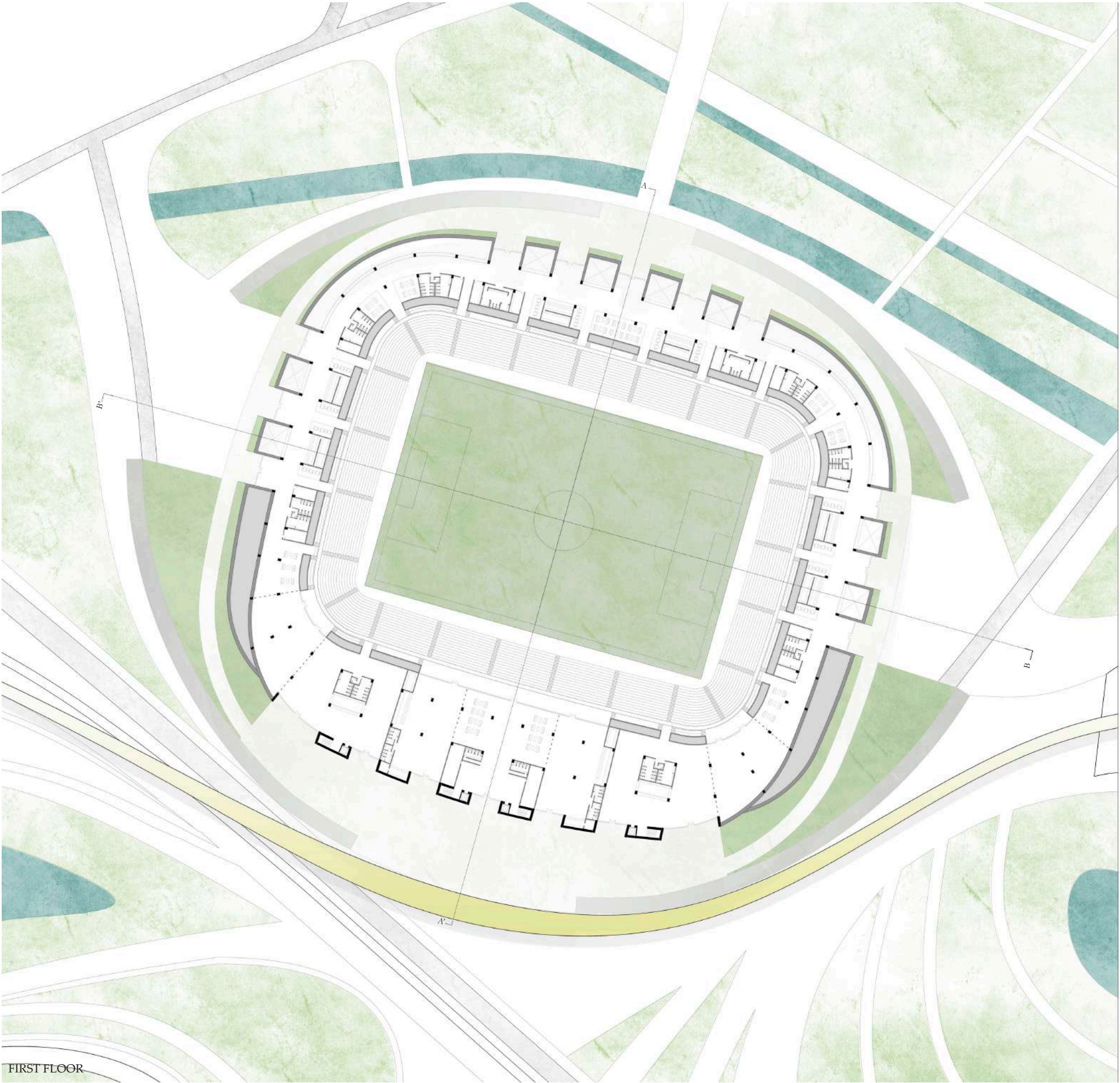
would trigger new flows and encourage new investors. A club owned stadium is a practice that in Italy is only in its infancy, but already has strong roots in Europe. The present project therefore starts from the analysis of Castel Volturno, where sport, besides representing a playful moment, becomes a real means of social redemption. The area identified for the new stadium of Naples soccer team with an adjoining sports park is at the junction of the SS7qtr road, in the area that goes from the lakes to the Regi Lagni, a canal system of land reclamation crossed by a transversal road that connects the new stadium site and a future golf course (zone “la piana”) coupling the existing golf course right across the current sports center of the team. The entire system is articulated in a light infrastructure that crosses 3 elements and connects the area of the lakes to the Regi Lagni, reaching various altitudes. The project welcomes, by re-elaborating them, the complex and multiple instances of the Castel Volturno cultural panorama, “testing” the architecture of the “stadium-landscape” with respect to a specific genius-loci: a complex urban, natural and social landscape governed by the paradox and from opposites. From these observations a poetic of compromise was born. Everything is conceived as a place where sport

can be experienced by everybody, from children to professionals, a stadium that from the east takes on the appearance of a hill integrating itself into the rural landscape, to then turn out to be an arena in all respects if you look at it from the west . Furthermore the large roof, projected towards the sea, gives a sense of lightness and wholeness to such an articulated structure. The stadium rests on a podium connected in turn to a footbridge that crosses other spaces for outdoor events and other structures in the park that welcome citizens throughout the year. The stadium is configured not only as the place where sport events takes place but also as a hub of collective services and spaces for encounter and entertainment. A place where the complex contemporary society can find its sublimation by establishing a new system of relations, both symbolic, economic, commercial and cultural. This new way of conceiving the stadium is closely connected with the new conception of contemporary public space, which rejects the separation between spaces of a different nature, leading to living places in internal-external, private-public continuity. The functions designed for the stadium respect the canons of a contemporary stadium, guaranteeing excellent visibility and new ways to live the spectator experience.

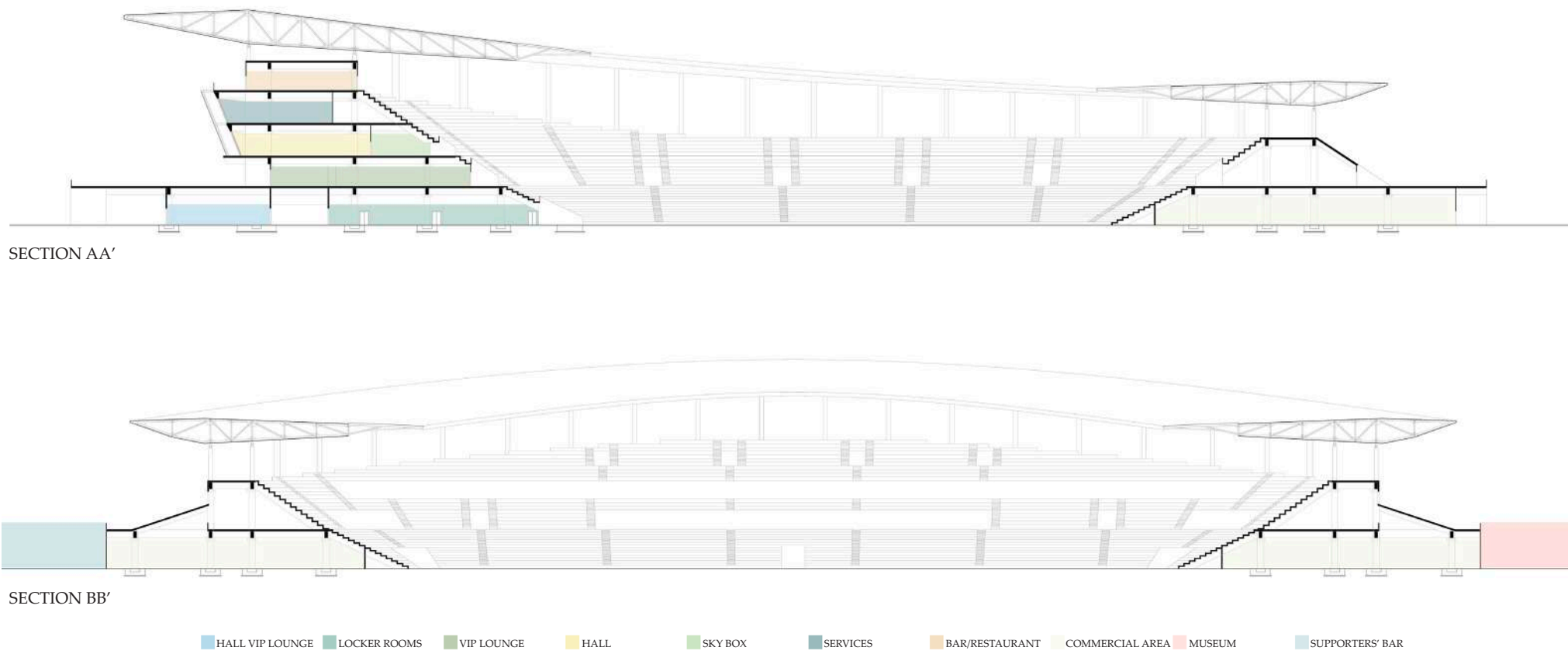




GROUND FLOOR



FIRST FLOOR



SECTION AA'

SECTION BB'

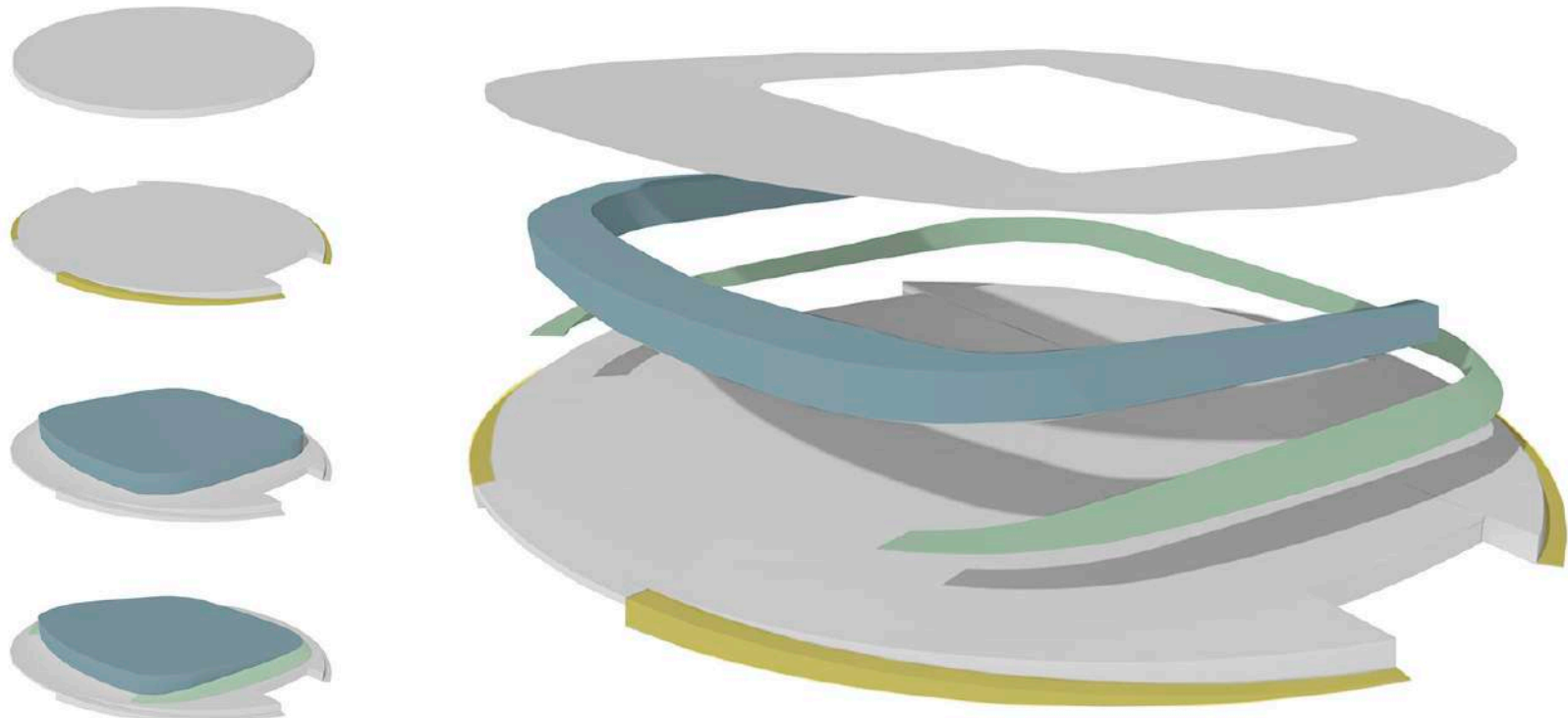
- HALL VIP LOUNGE
- LOCKER ROOMS
- VIP LOUNGE
- HALL
- SKY BOX
- SERVICES
- BAR/RESTAURANT
- COMMERCIAL AREA
- MUSEUM
- SUPPORTERS' BAR

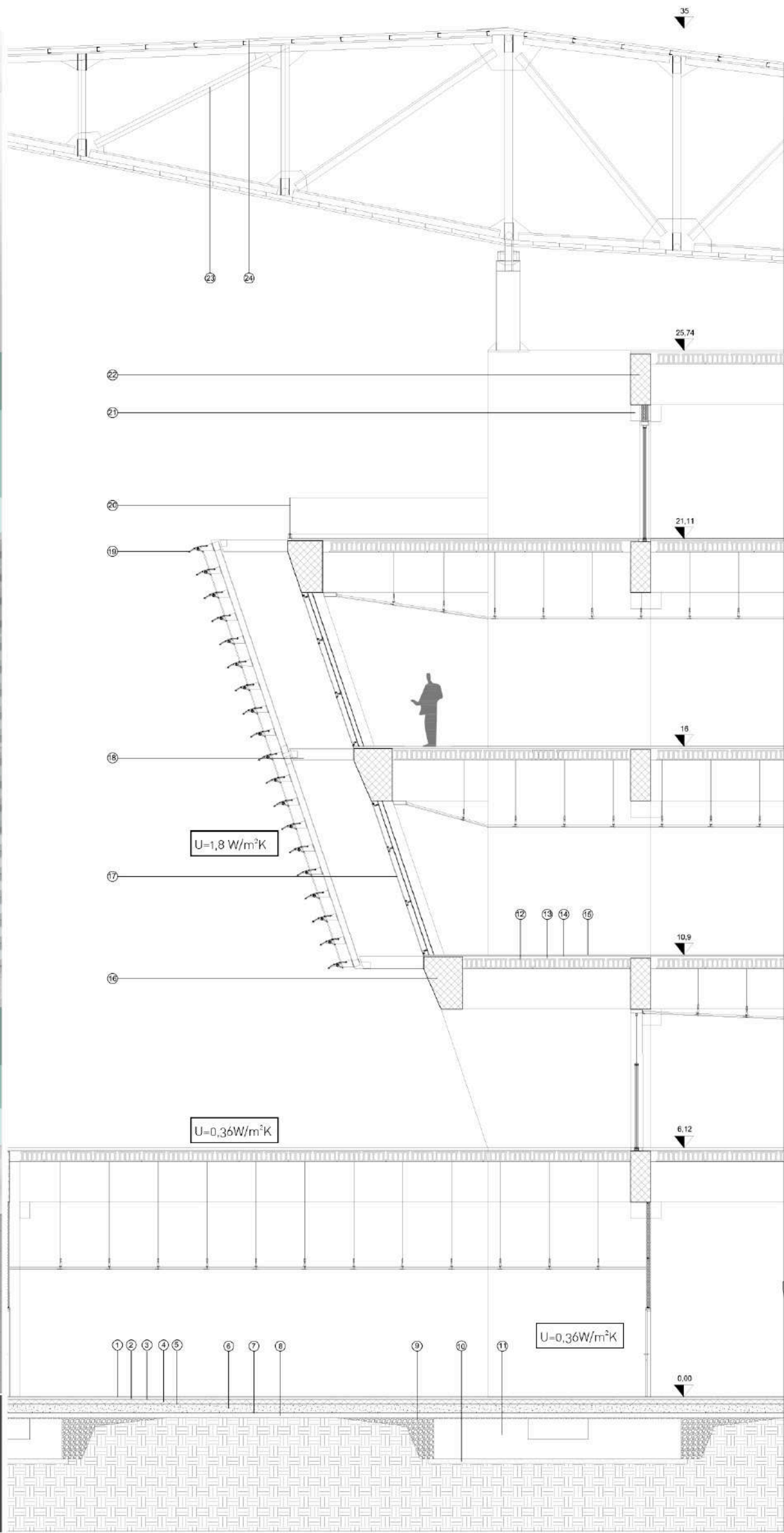
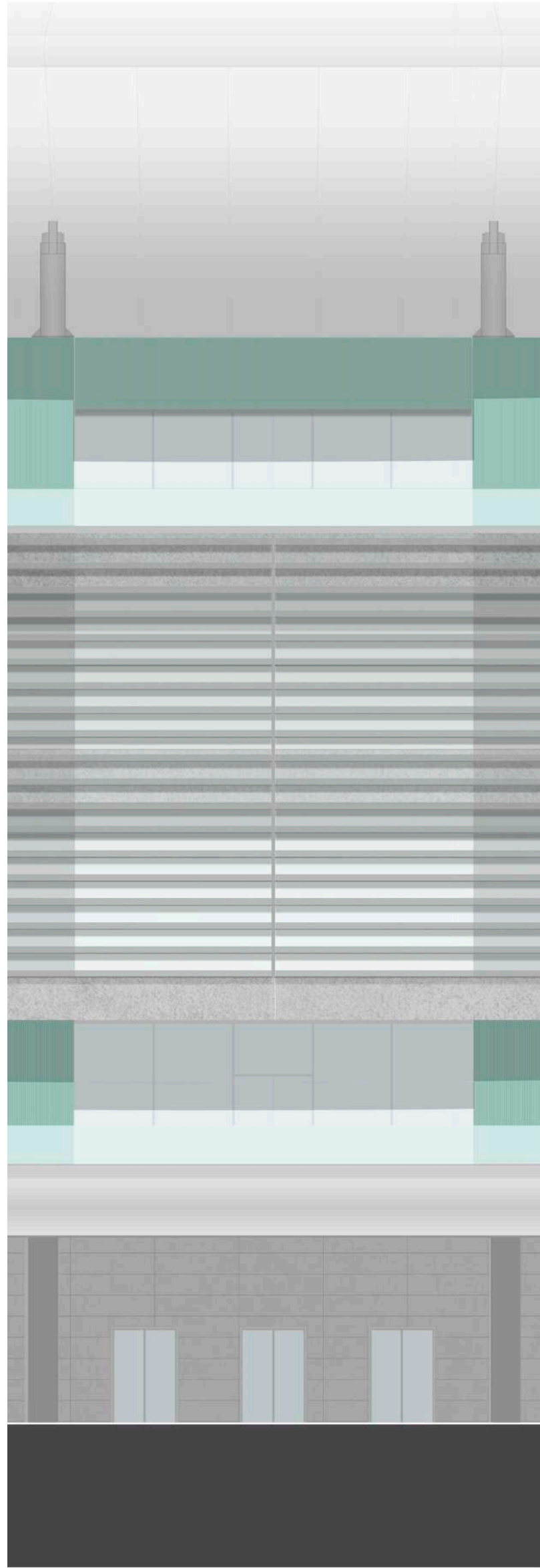
1 podium

2 access ramps

3 arena

4 green roof

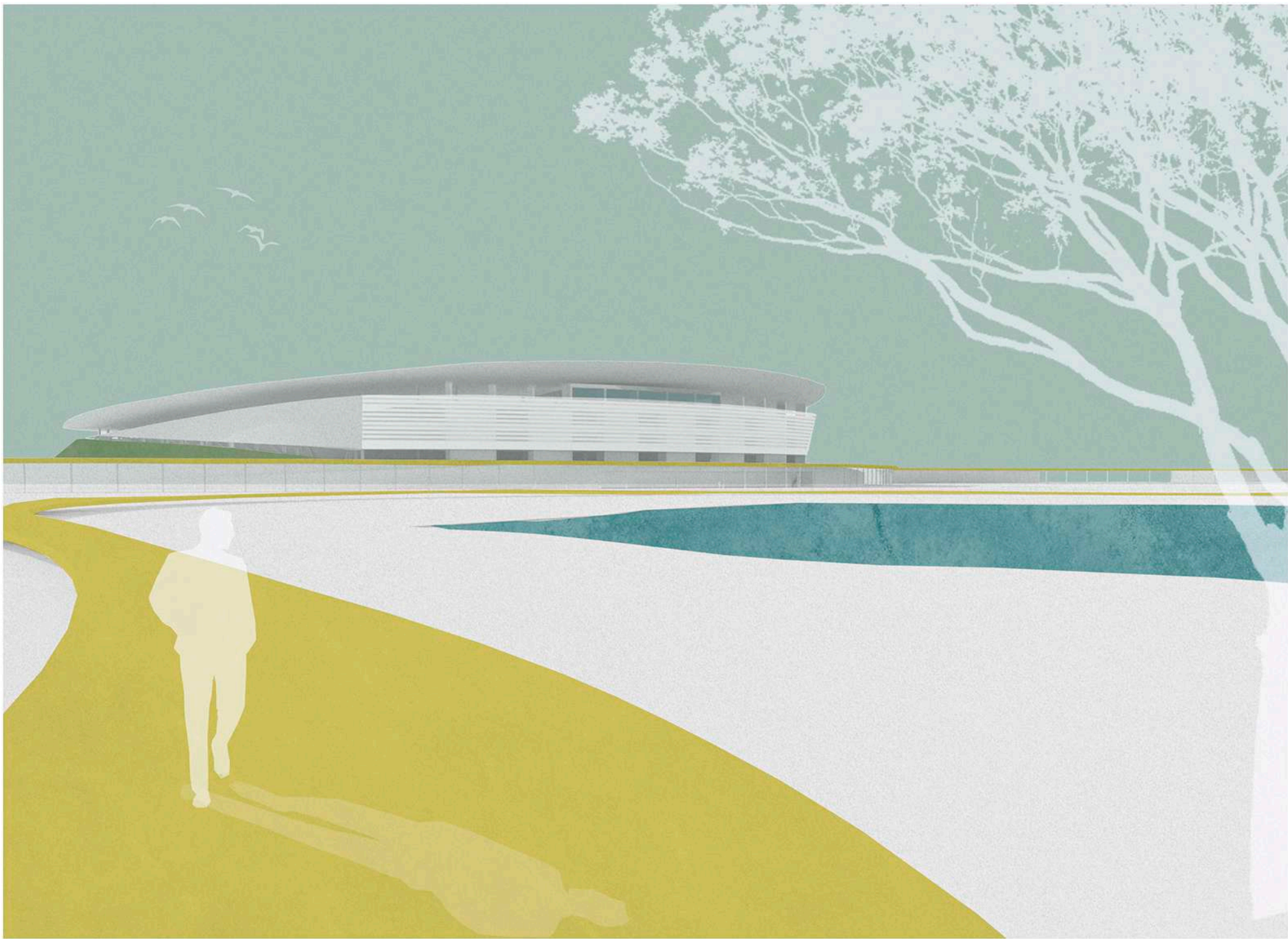




- 1 colored polished concrete flooring
- 2 self-leveling plant screed
- 3 steam flow control layer
- 4 thermal insulation
- 5 four-layer vapor barrier
- 6 reinforced concrete slab
- 7 draining layer in TNT
- 8 leveling layer in sieved and compacted sand

- 9 drainage with pebbles and gravel decreasing size
- 10 lean concrete
- 11 foundation slab
- 12 multi-hole prestressed panels
- 13 collaborating insole
- 14 waterproofing and insulation
- 15 flooring
- 16 reinforced concrete beam cast on site

- 17 paneled glass with spider joints
- 18 steel profile
- 19 sunshade in perforated aluminum
- 20 balustrade in glass and aluminum
- 21 shelf
- 22 prefabricated concrete beam
- 23 truss beam profile
- 24 polycarbonate panels



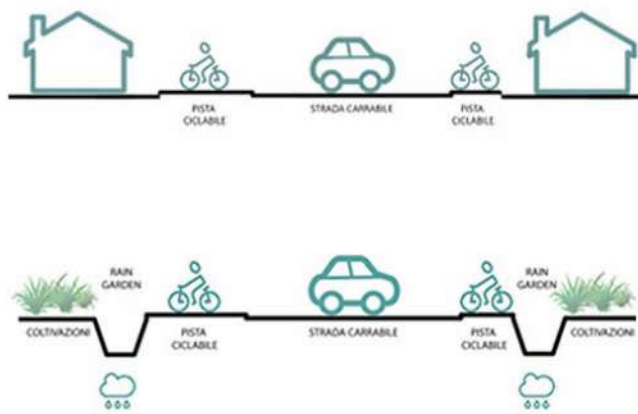


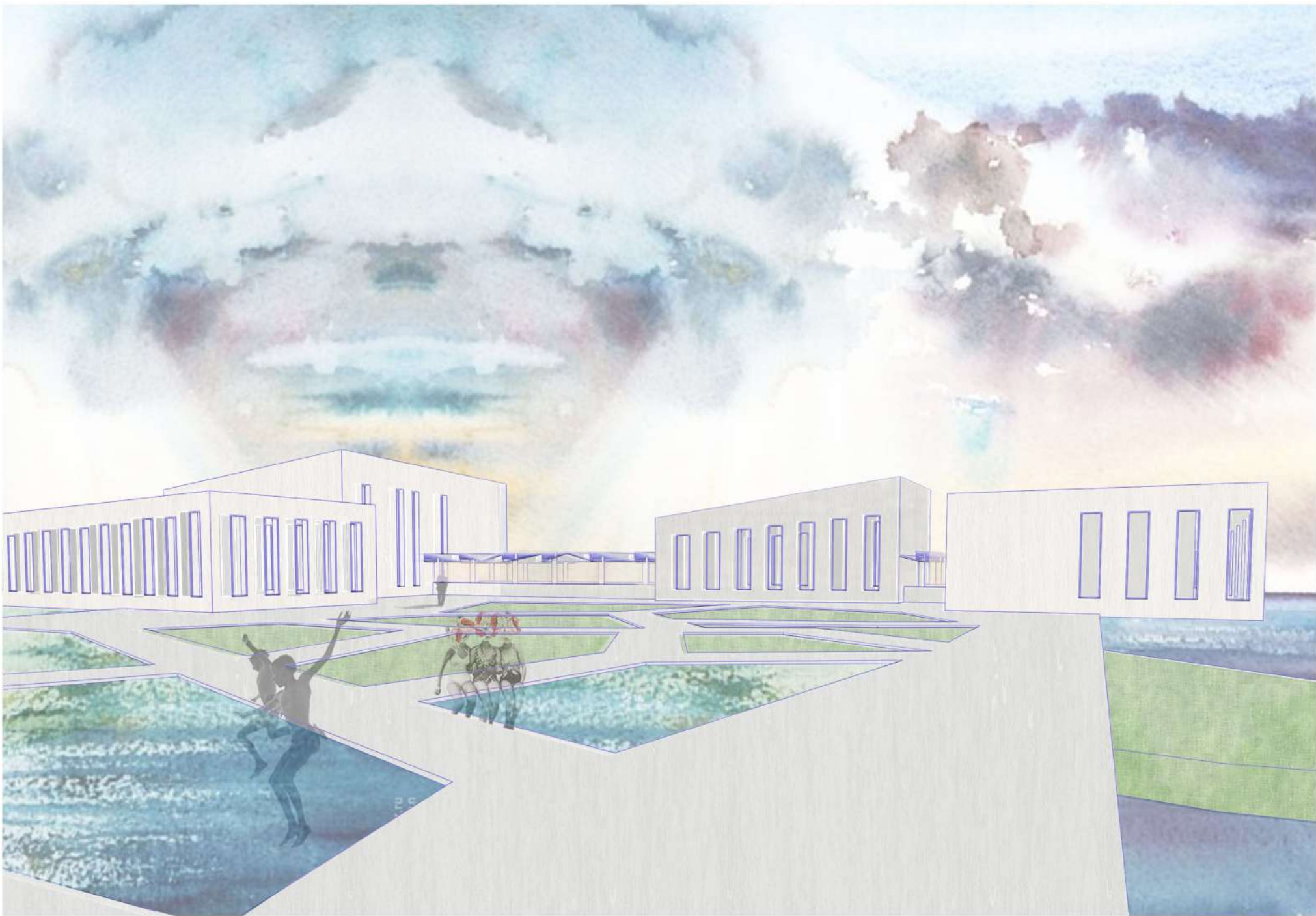
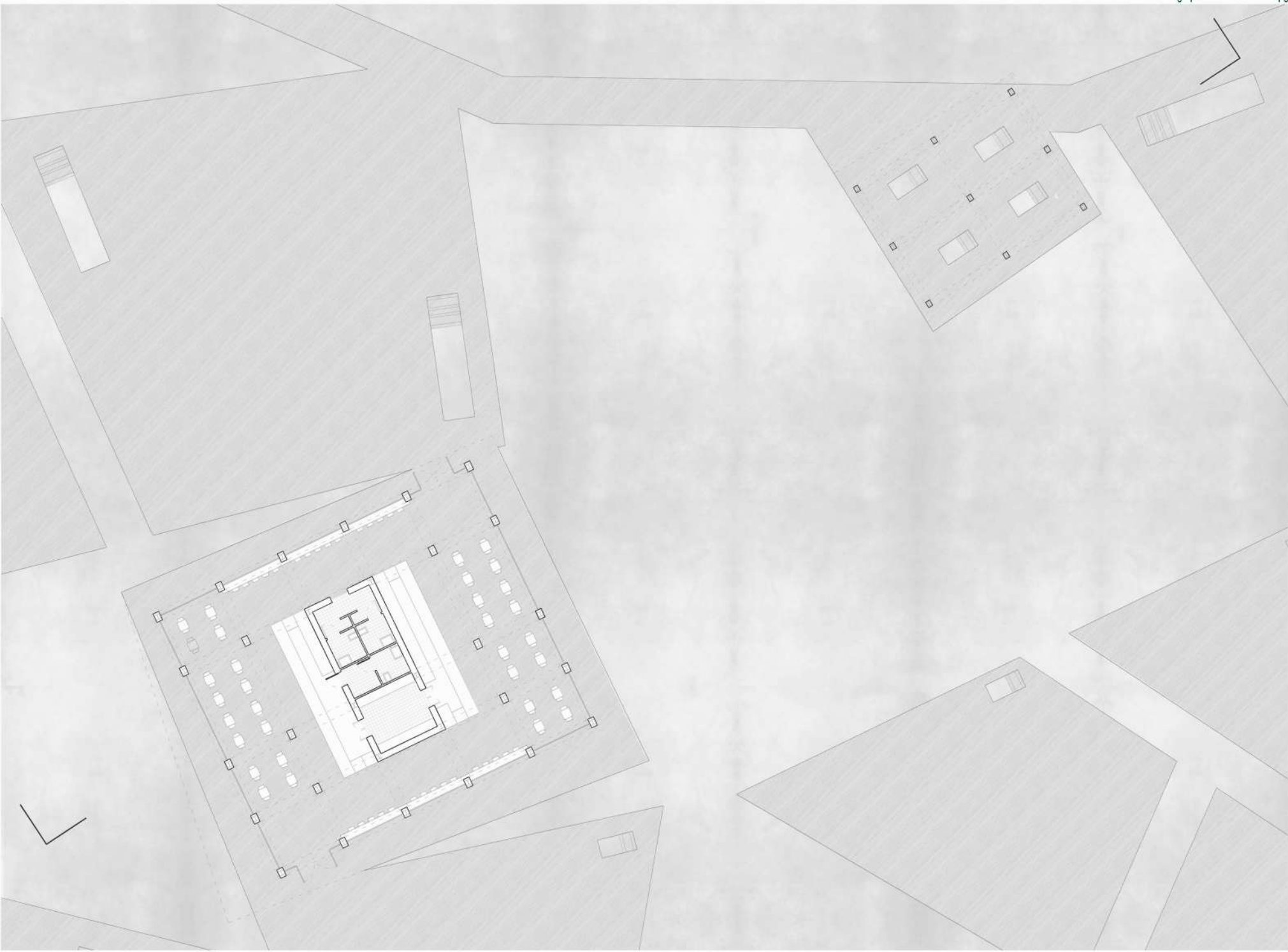
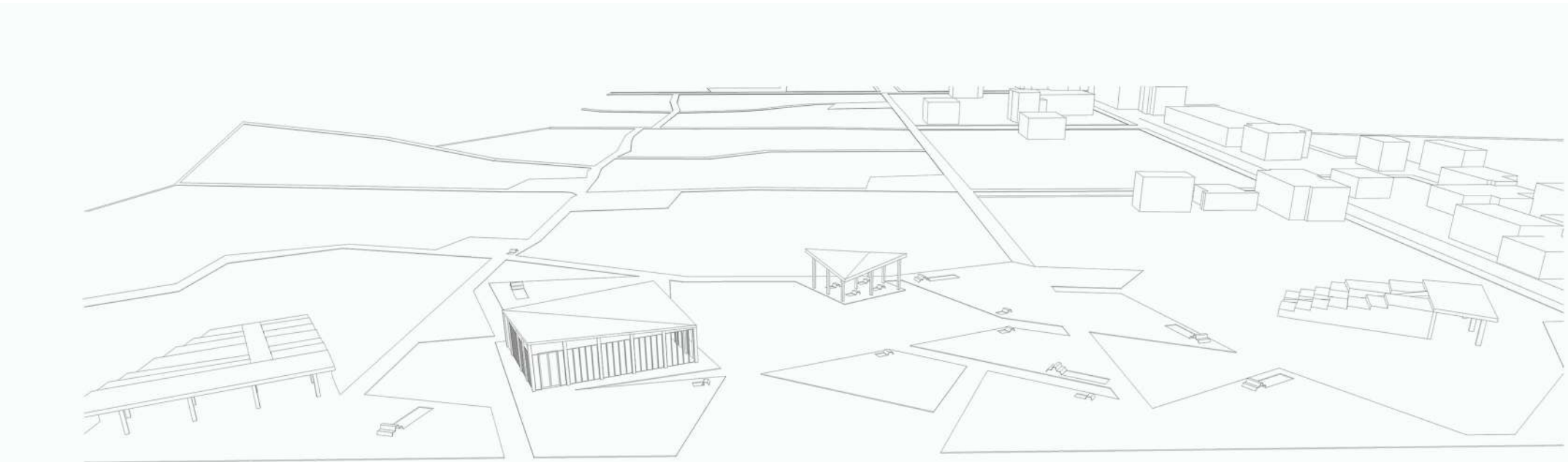
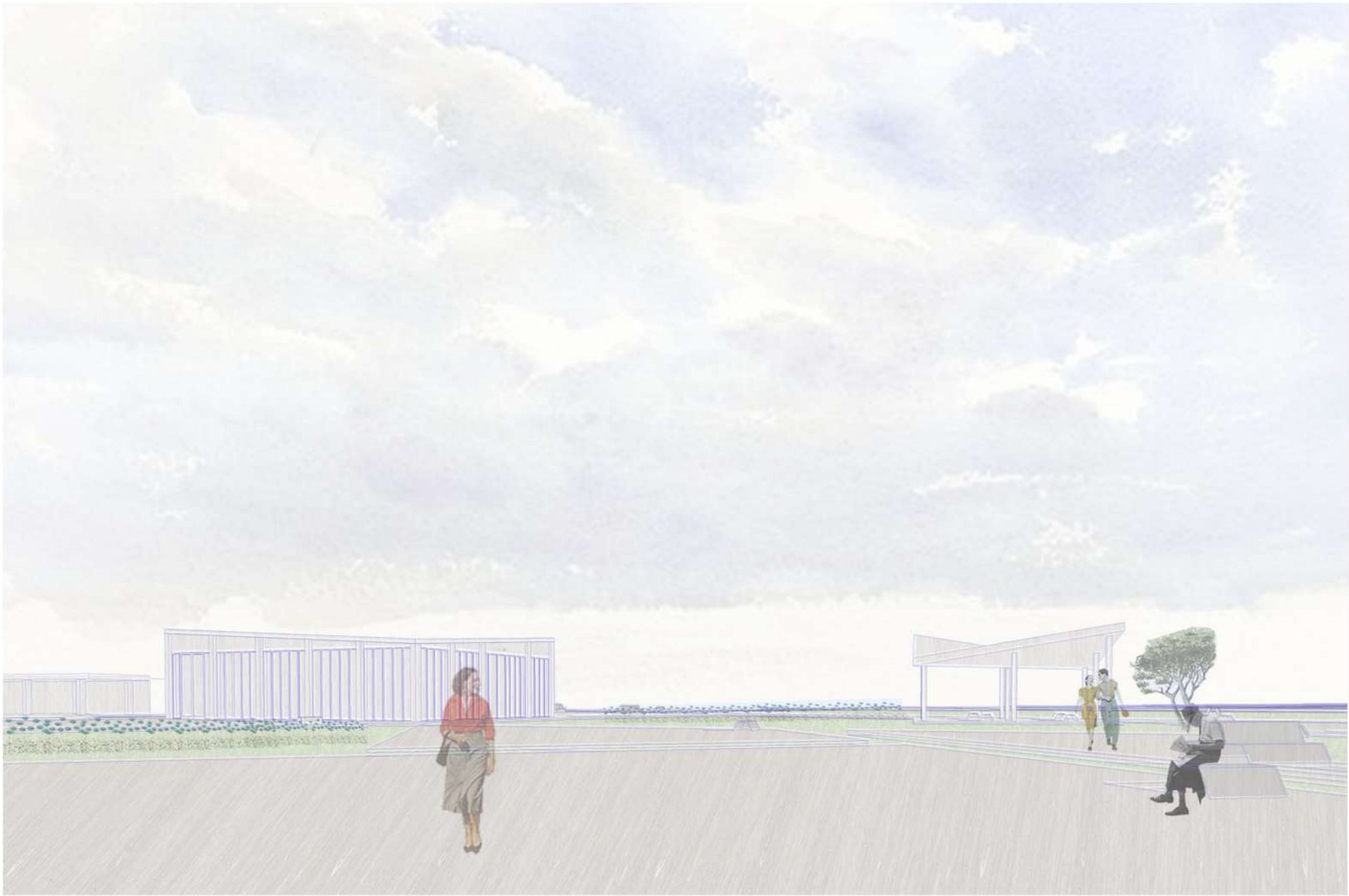
NATURE EMBRACES INFRASTRUCTURE

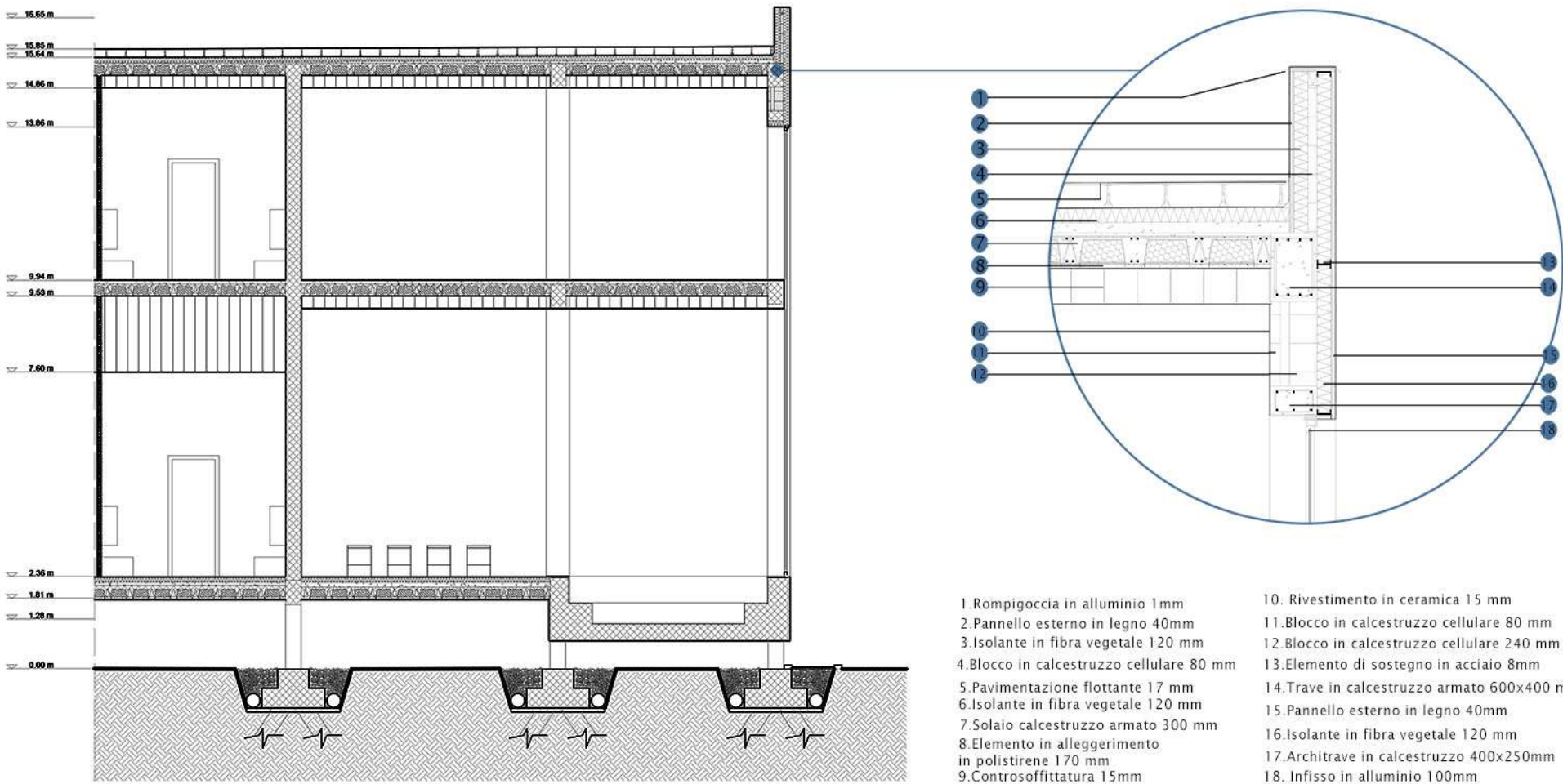
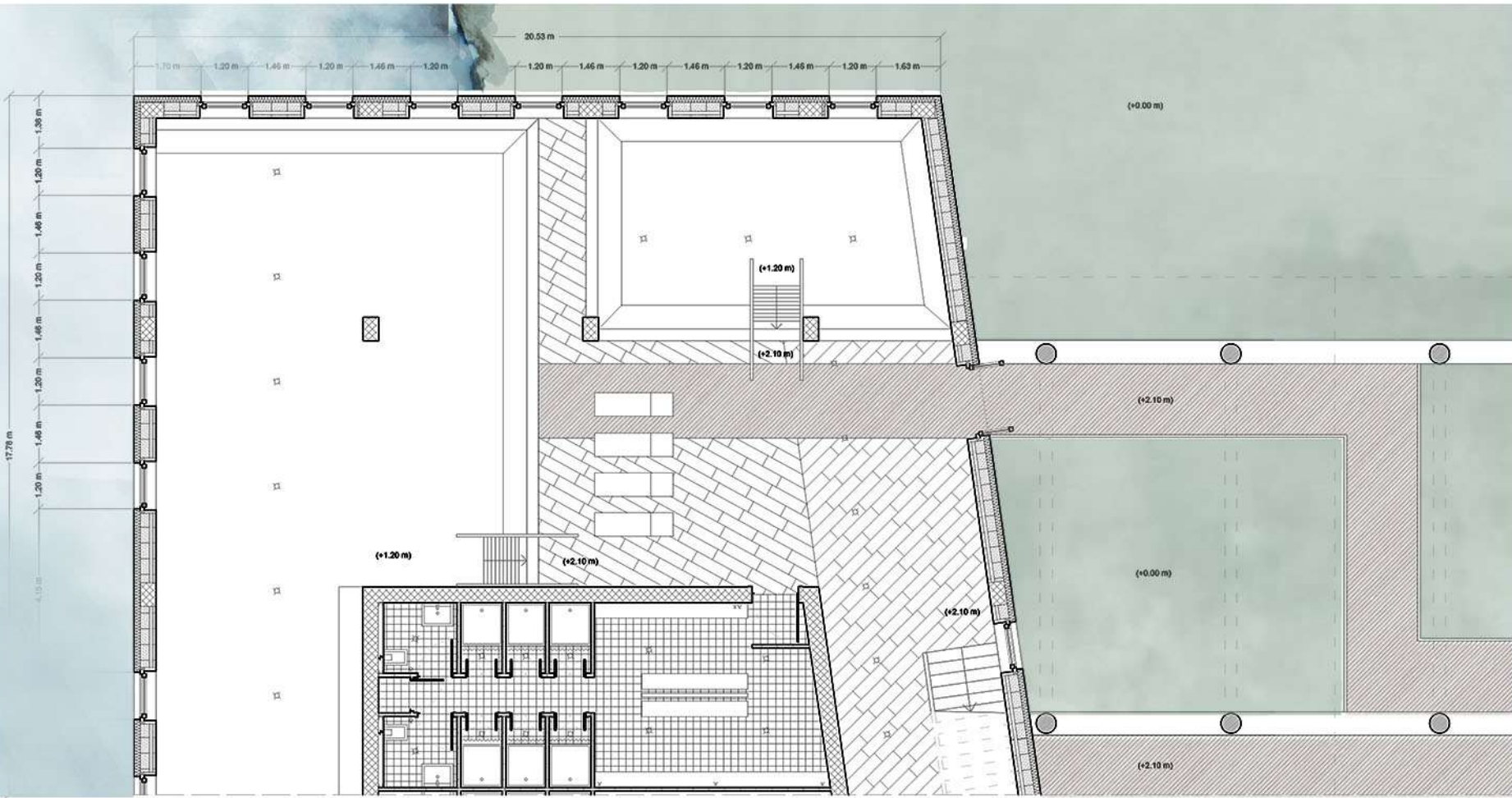
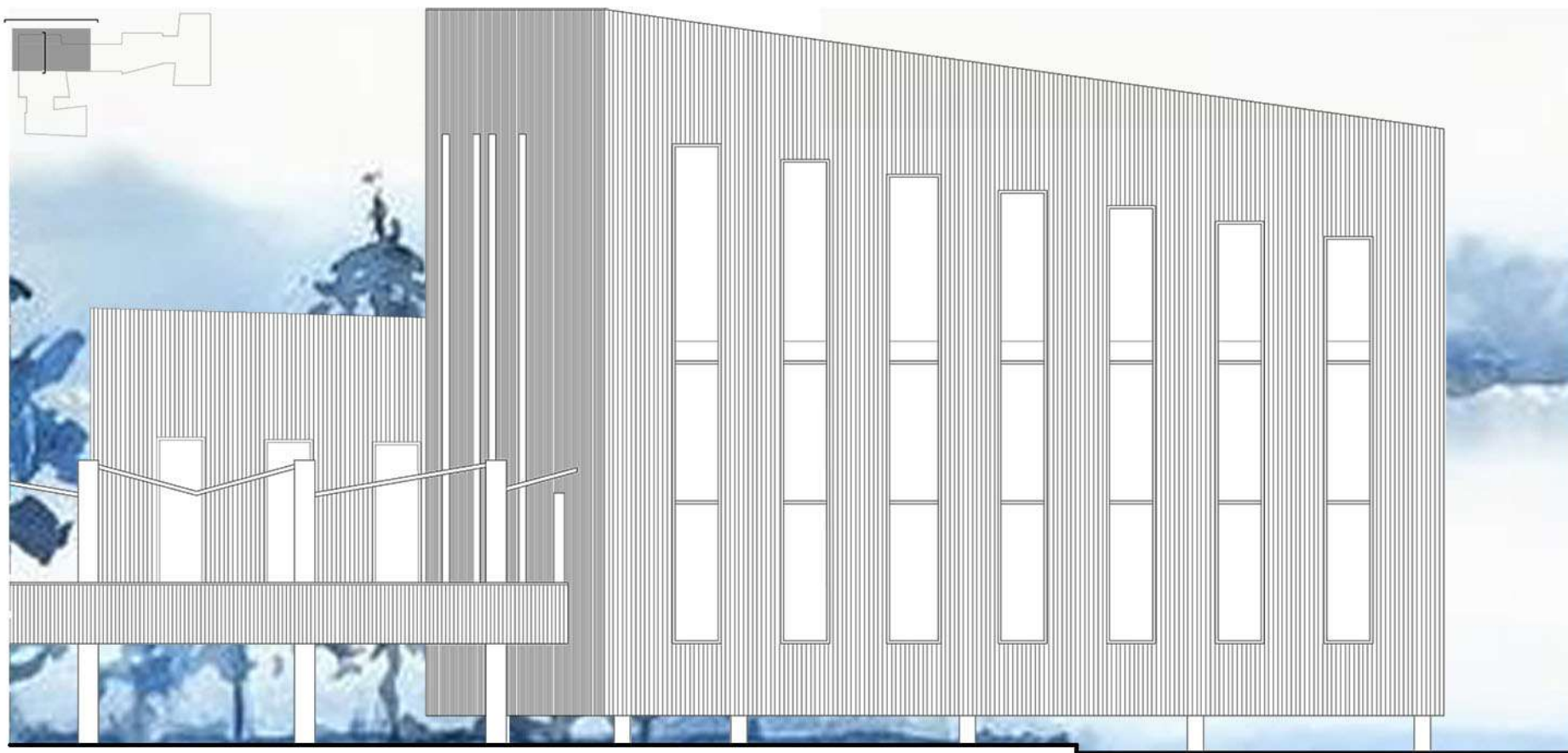
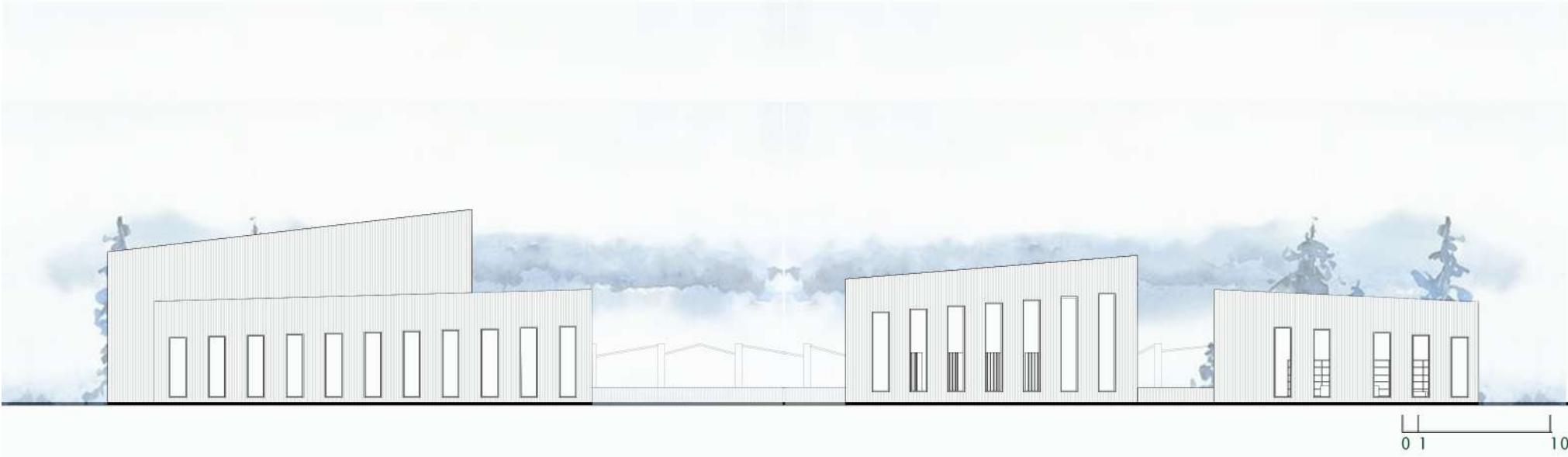
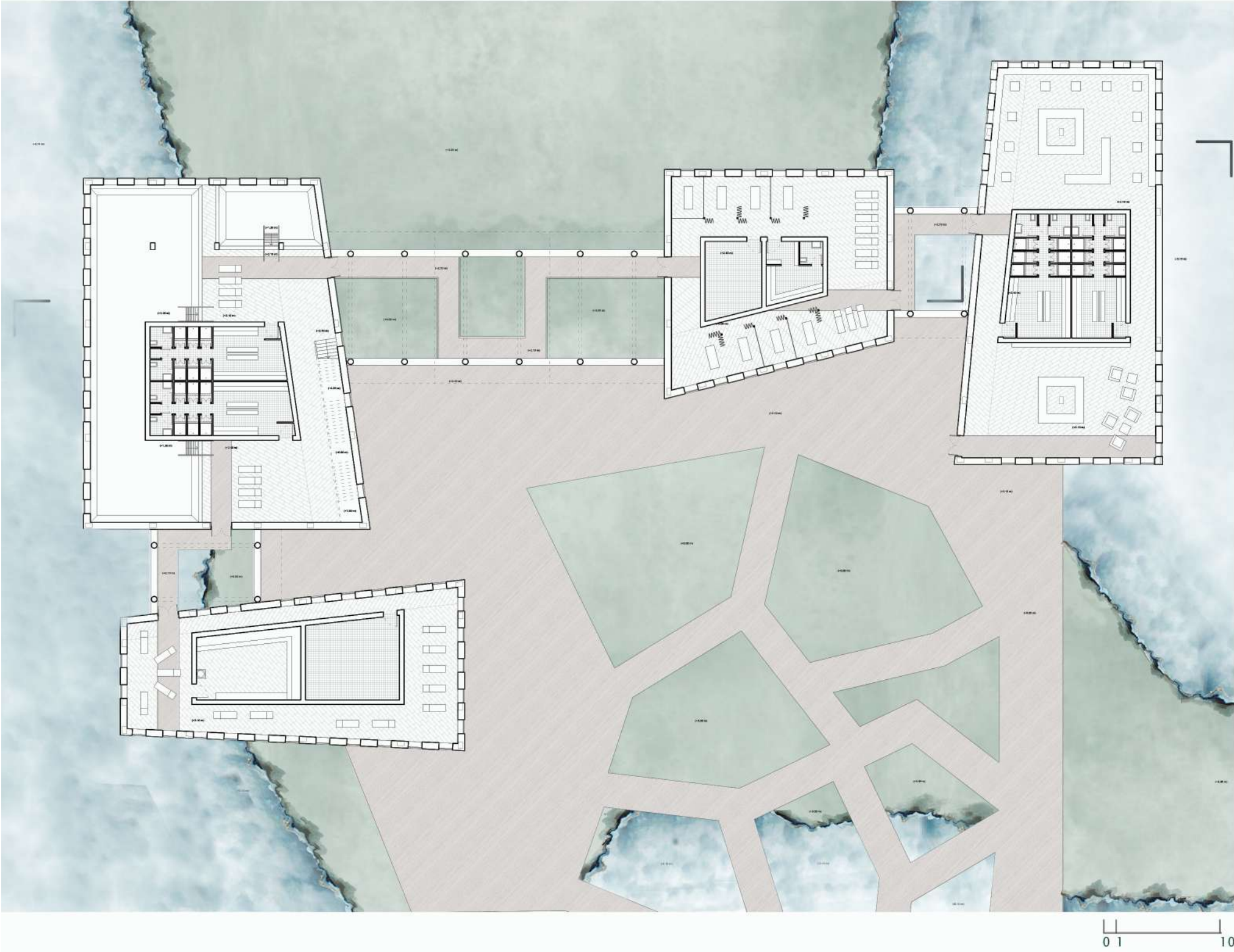
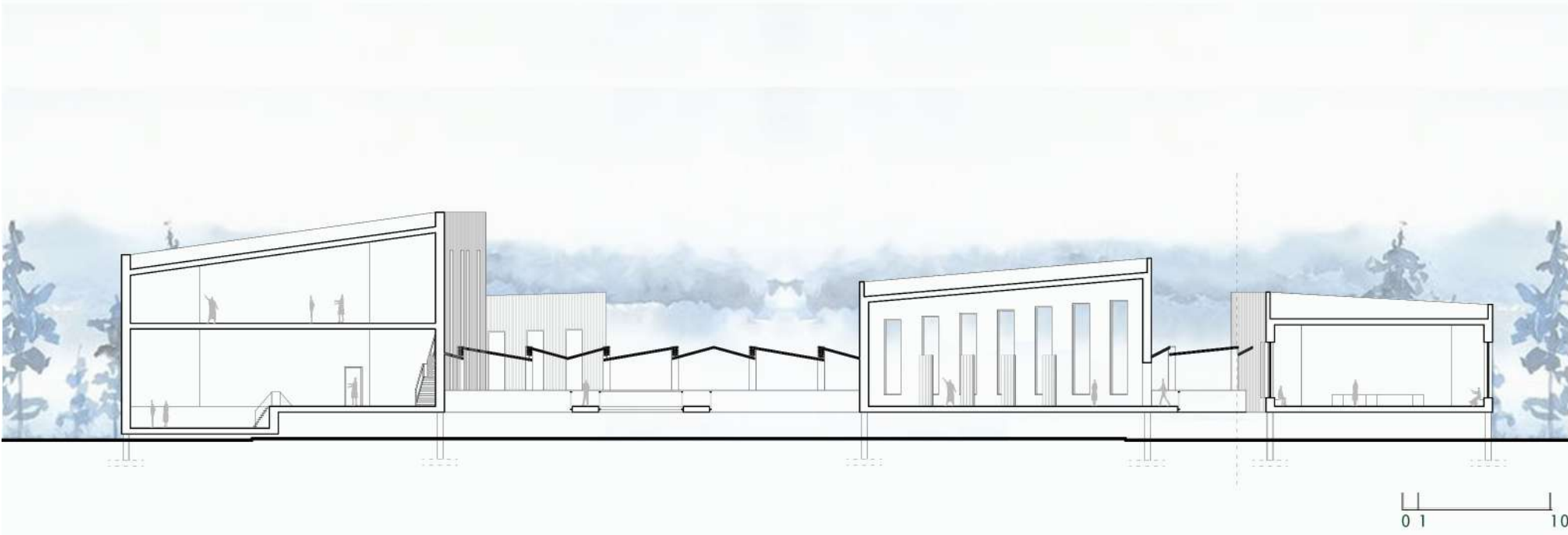


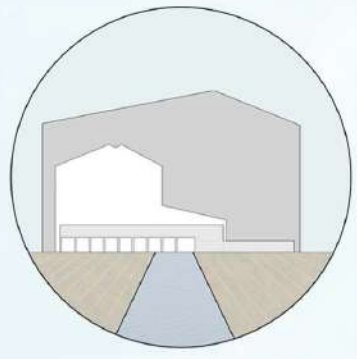
The area of intervention extends into the municipality of Castel Volturno and aims to connect the coastal area to the Variconi Natural Park and the entire landscape system of the municipality, making the city permeable, located in the middle, where in some cases it appears to be uninhabited or illegally inhabited. Moreover, some ISTAT analyzes carried out on the territory resulted in a high concentration of immigrants who are employed for work in the fields not only in the neighboring areas, but real seasonal migrations are carried out to places where there is a greater search for very low cost staff. The project therefore aims to regularize these people, by including them in a production chain, which ranges from the cultivation of medicinal herbs, to their processing and storage and their use in a center to produce personal care. The planning of the agricultural area wants to move towards a biological and eco-compatible type of agriculture and therefore it could find sources of funding in the “Programma di Sviluppo Rurale 2014-2020”, or draw on the Project “Ambiente ed Ecologia”, which encourages development of agro-industrial companies, giving a non-repayable grant of 50% for minimum investments of three million. This type of project can be addressed by different economic subjects, both private and public, or from a partnership perspective. The project idea envisages the redevelopment of the natural areas present in the landscape of the municipality, through a normal connection network to Via Domiziana, implemented through the insertion of new parking areas and new routes for slow mobility. With this new infrastructure it is intended to connect the Variconi oasis system, the dunes, the beach and the lush pine forest, which will be enhanced in the Park project, with the ponds area, which derive from it. From the surfacing of the superficial aquifer, placed on average no more than 1.5m from the ground level, following

the excavation of the sand occurred in ancient times. The connection through this new mobility guarantees the union between the coastal part and the inner part, giving back to the users a more naturalistic landscape. A path dedicated to slow-mobility is inserted between the abusive edifices and this is possible thanks to the location of these villas set back from the road surface and it is possible to remove soil from private property and use it for the route thanks to the urban planning instrument of equalization. Once in Via Domiziana, you go into a different context; going from a widespread abusive building to a rural landscape, constituted in fact by abandoned fields, which in a redevelopment perspective will be redesigned and converted into fields where to start a cultivation of medicinal plants, which will then be treated and packaged inside the plant present in situ. With this new treatment the area will receive a new definition of agricultural landscape. Furthermore, the wide availability of soil allows a greater articulation of the slow-flowing infrastructure, articulated between the various fields and even extends, becoming a large threshold platform that allows entry to this new landscape reality. In this initial part of the project, which acts as an entrance to this new way of experiencing the city, the construction of a rest and refreshment point and the provision of a bike-sharing service is planned. Proceeding along the route, you reach the area of the ponds where a large platform, which this time is not resting on the ground, is instead a stilt, where in some places you can see the underlying presence of artificial ponds. Along the contour line is the building containing the wellness center, four pavilions connected to each other, within which it is possible to have the conception of the the border between earth and water. Thus, an architecture that focuses on the care of the body and well-being, and a close connection with the nature that surrounds it.



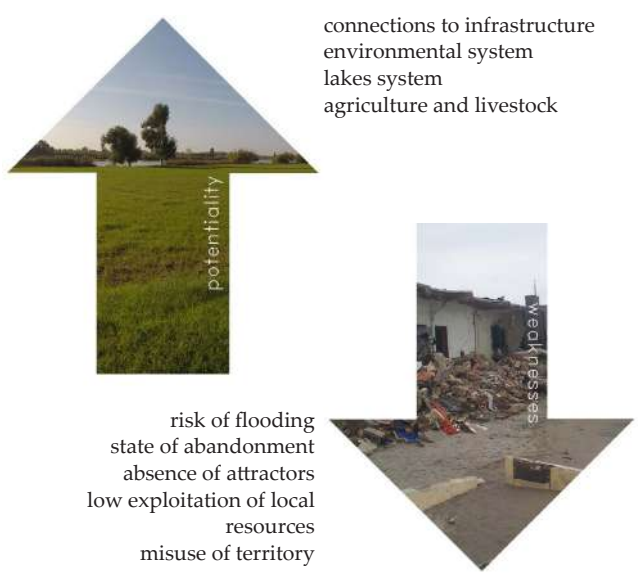
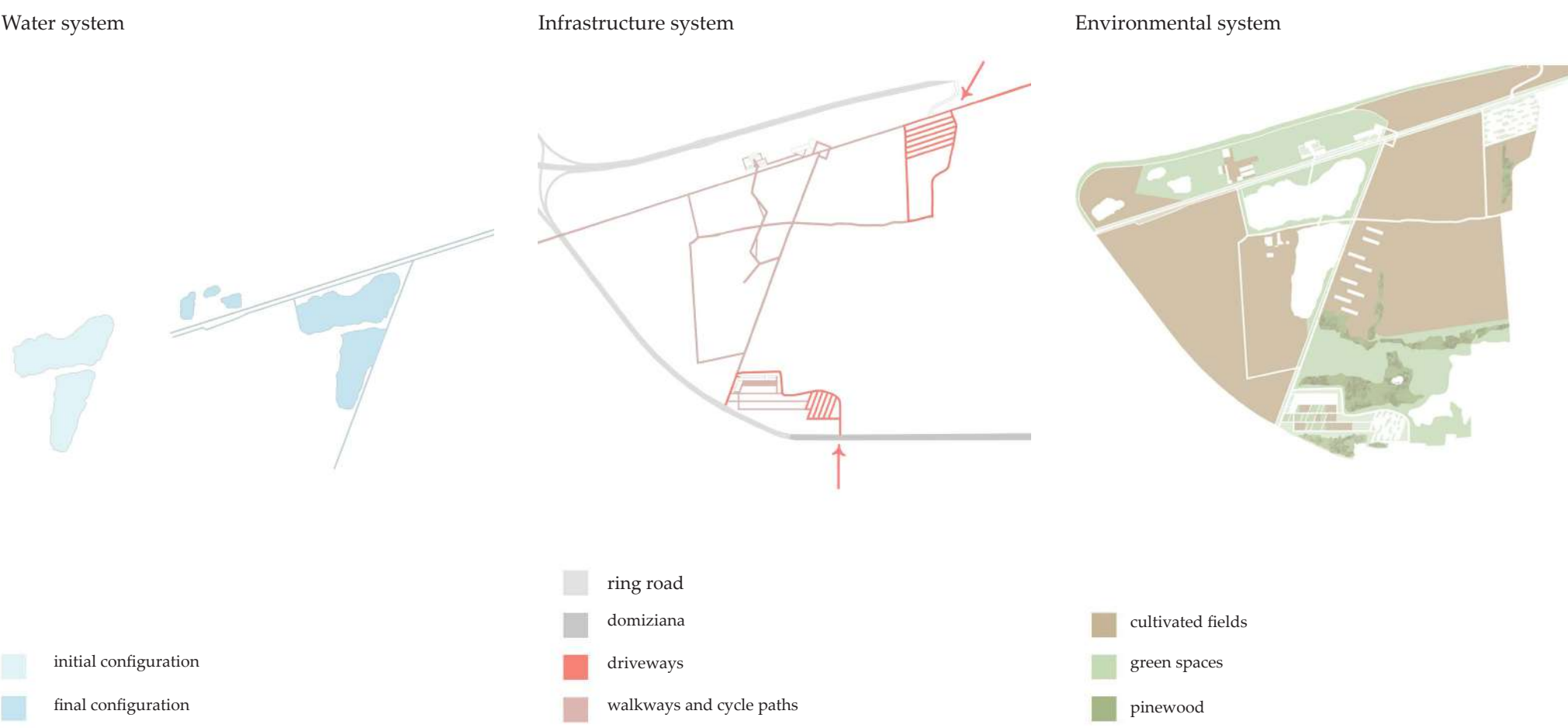






Reconnection Park

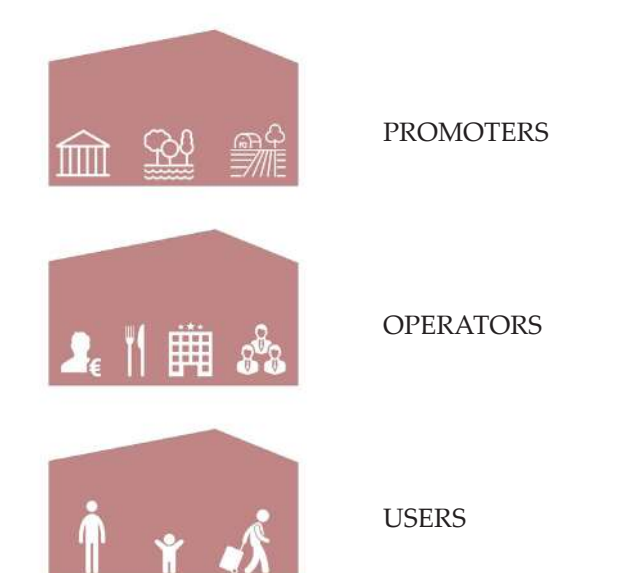




The project is located in the area of the lakes near the Fossa Piena canal in Castel Volturno. The area is particularly interesting for the environmental system of the lakes, for the fields with farms and pine forests, and, especially, for its location in the between of two main routes: the ring and the Domiziana. The central idea of the project was born immediately after the first site inspection. The lack of enhancing the beauty of the natural landscape led to the idea of a productive and multifunctional agricultural park. The design focuses in particular on two points of the park: the entrance from the Domiziana road and the one from the ring road.

Inside the park, the rich environmental system has remained untouched while the agricultural greenhouses have been built and the water system of the lakes has been revised, with the opening of the old canals that are now buried.

The architectural design is limited to connecting these two entrances with pedestrian and cycle paths crossing the lakes. As far as the area



behind the domiziana is closed, the main idea is about an ex-novo design that keeps together several functions such as covered market, bike sharing, conference room, event and tasting space, urban garden and picnic or rest areas. The main building is made up of an elongated block covered by an asymmetrical pitched roof, which houses the market and conference room. The next block is in line with the road and, with its portico, houses the entrance and a bike sharing. The blocks surround the urban garden and the green area. This last area is directly connected to the second one by a pedestrian and cycle path that runs along the Fossa Piena canal.

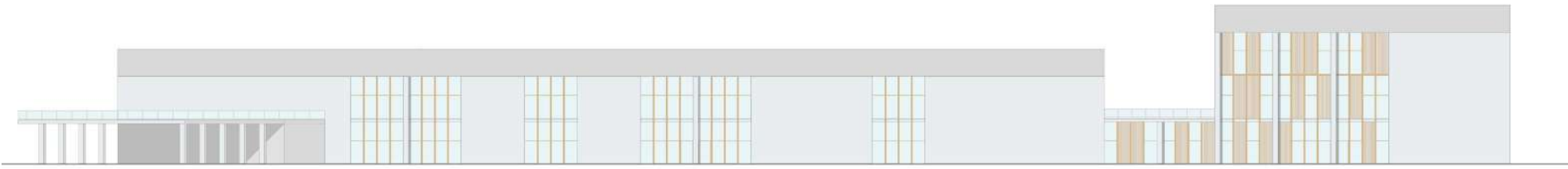
The second area is the closest to the ring road and therefore has different users and different functions. In this case, the project houses an ex-novo guesthouse and the re-design of old ruins of the countryside to have a restaurant, a literary cafe and an event room. The guesthouse, which is attached to the road, has a glazed basement with common spaces.

Municipality of Castel Volturno
Region Campania
"Ecoparco del Mediterraneo"
Institution "Riserve Naturali Regionali Foce Volturno - costa di Licola e Lago Falciano"
Farm "In piena aria"
Farm "Luise"
Dairy "Schiavone"
Businessmen
Innkeepers
Restaurateurs
Farms
Event organizers

Citizens
Tourists

At the upper floor the rooms and other common areas are arranged, underneath a portico serves as a bike sharing. The guesthouse is aligned with the old ruins and is connected to them by a road. The ruins are currently abandoned and have double-pitched roofs almost completely destroyed. The design of these buildings is about the reconstruction of the roofs and the consolidation of the walls through steel pillars on which the new roof will stand.

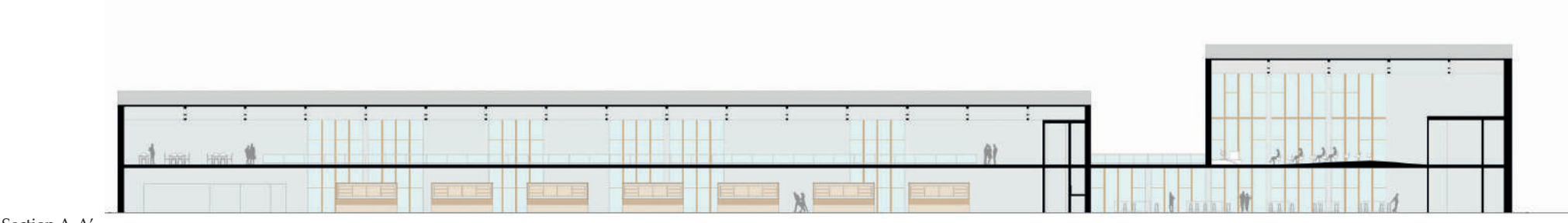
The main goal of the design is to re-evaluate an area rich of landscape potential that is abandoned. In this way the agricultural park, with its associated functions, becomes an attraction for the inhabitants of Castel Volturno, for the entire province and for tourists who can take advantage of different services and enjoy the natural beauty of the place. This could be a starting point to rethink the requalification of the entire municipality which is a very complex territory, with many problems, but at the same time full of potential.



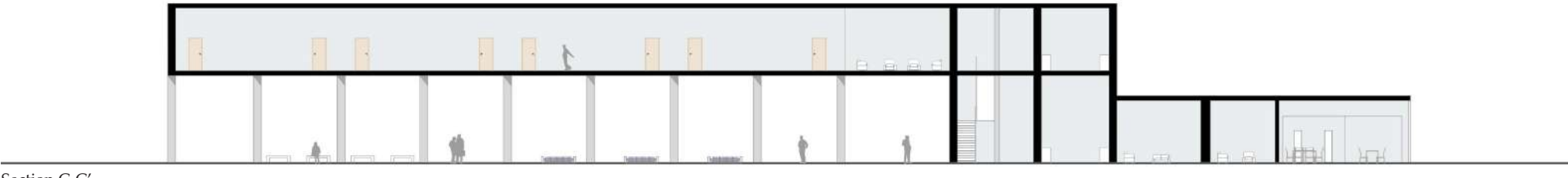
South front



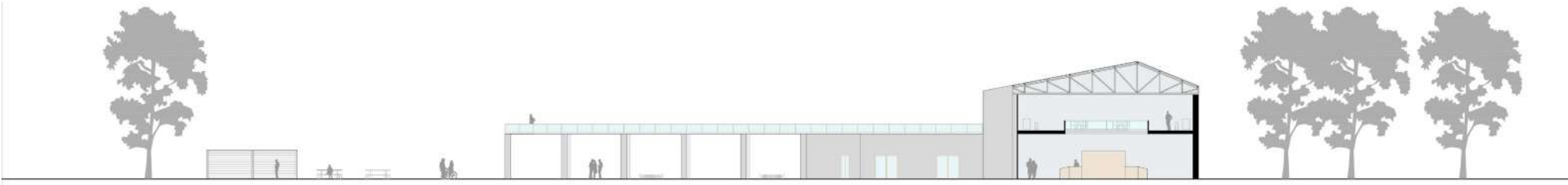
North front



Section A-A'



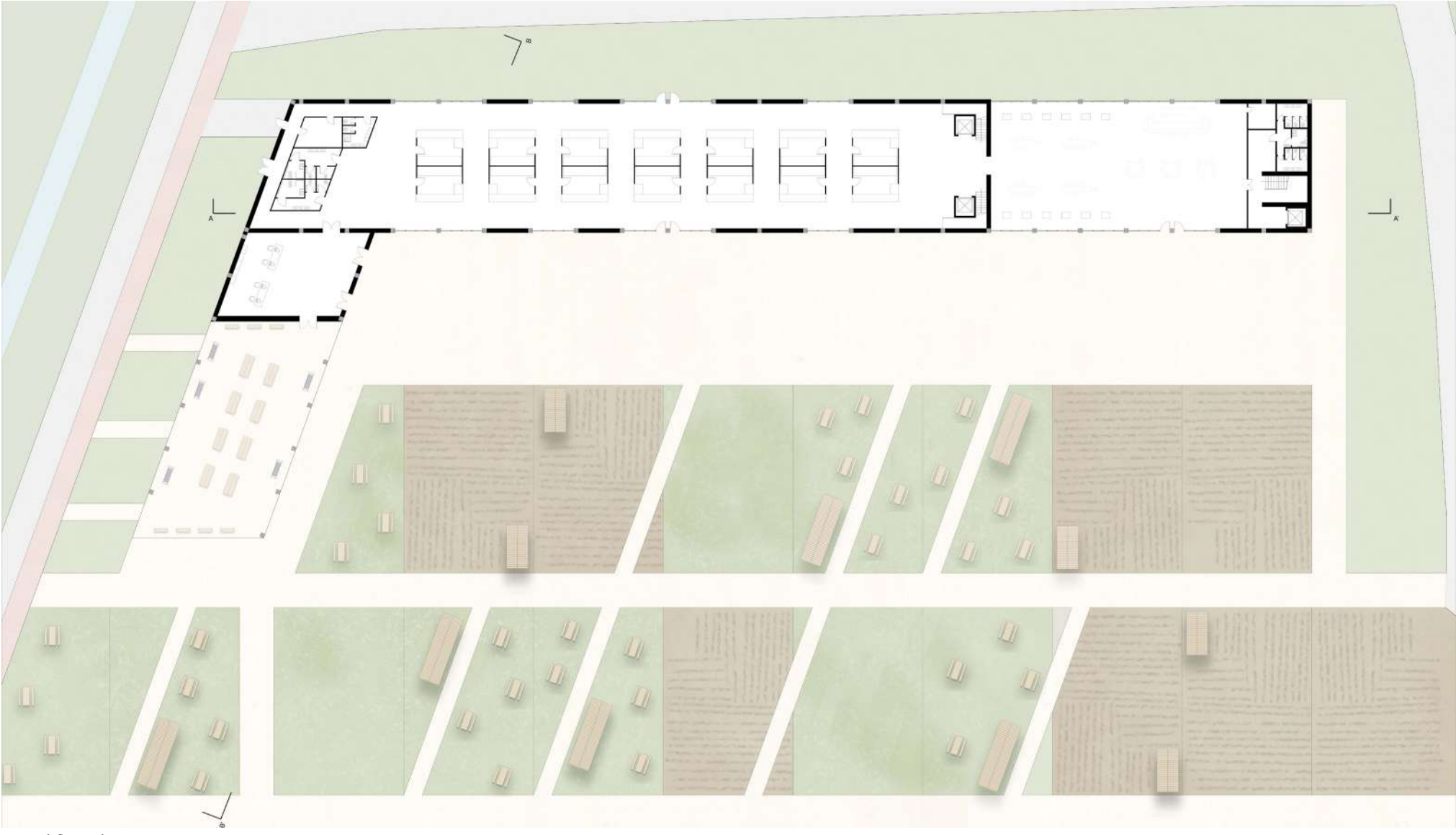
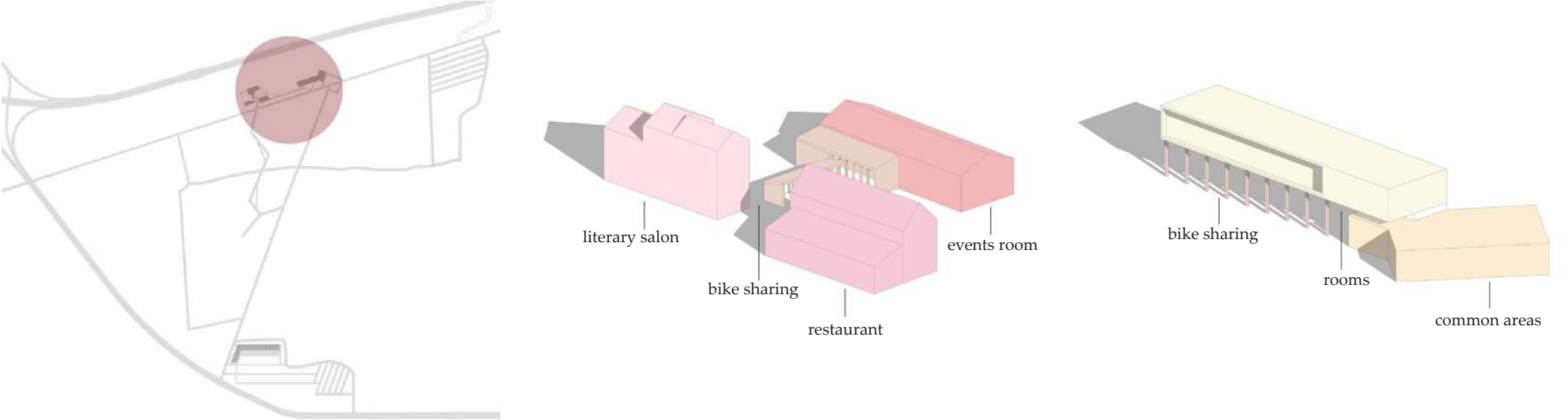
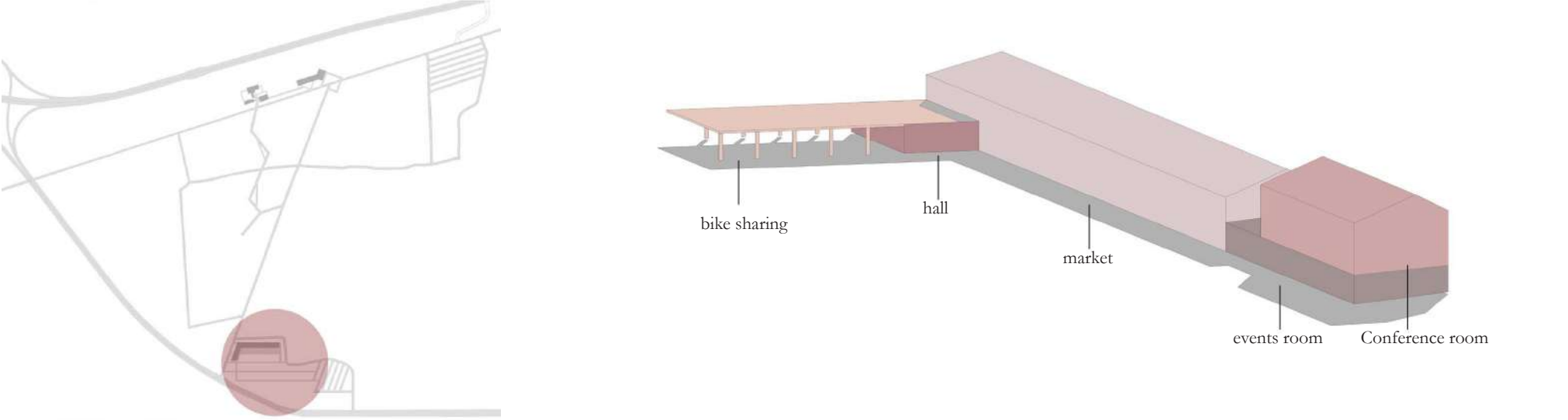
Section C-C'



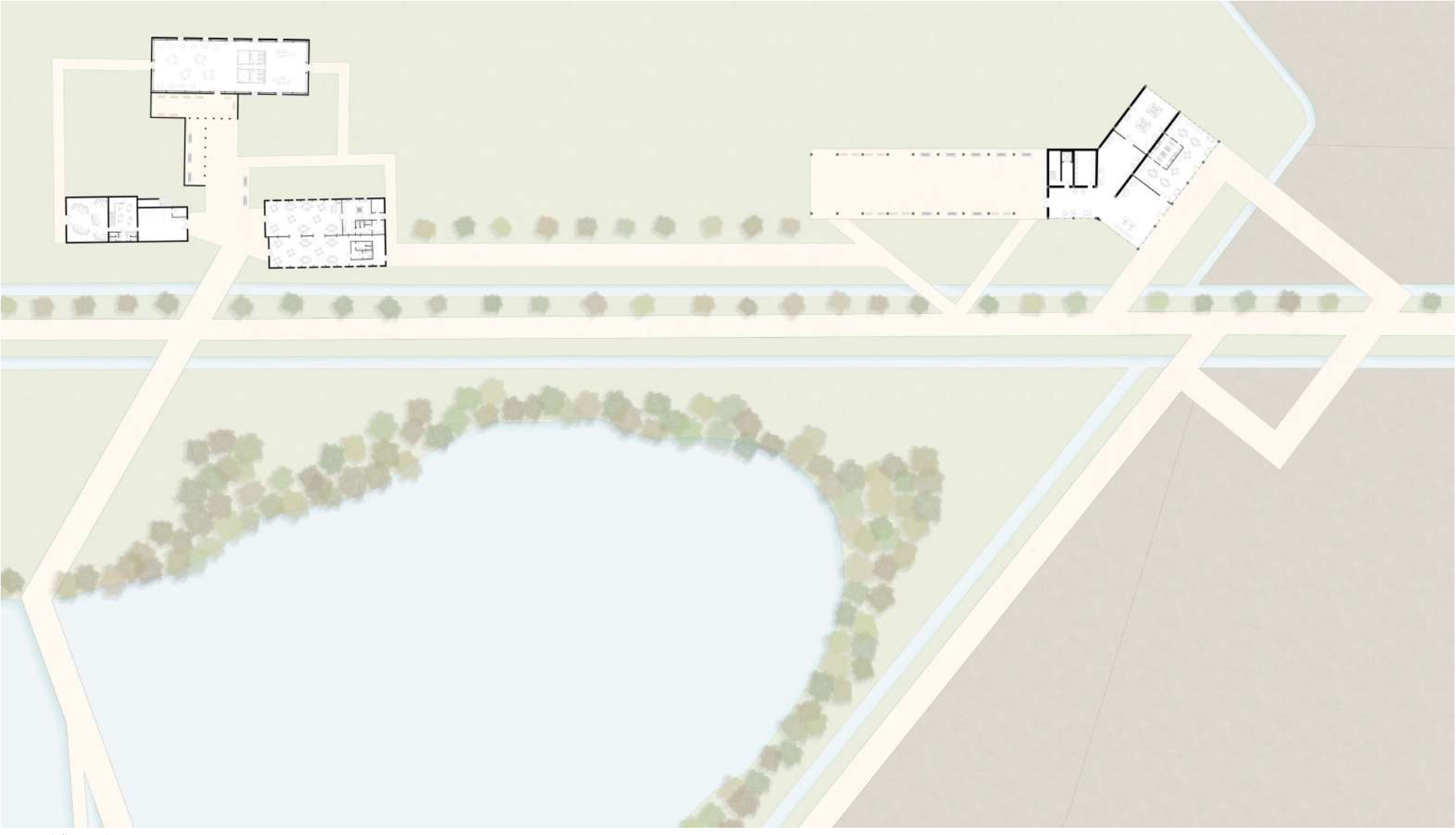
Section B-B'



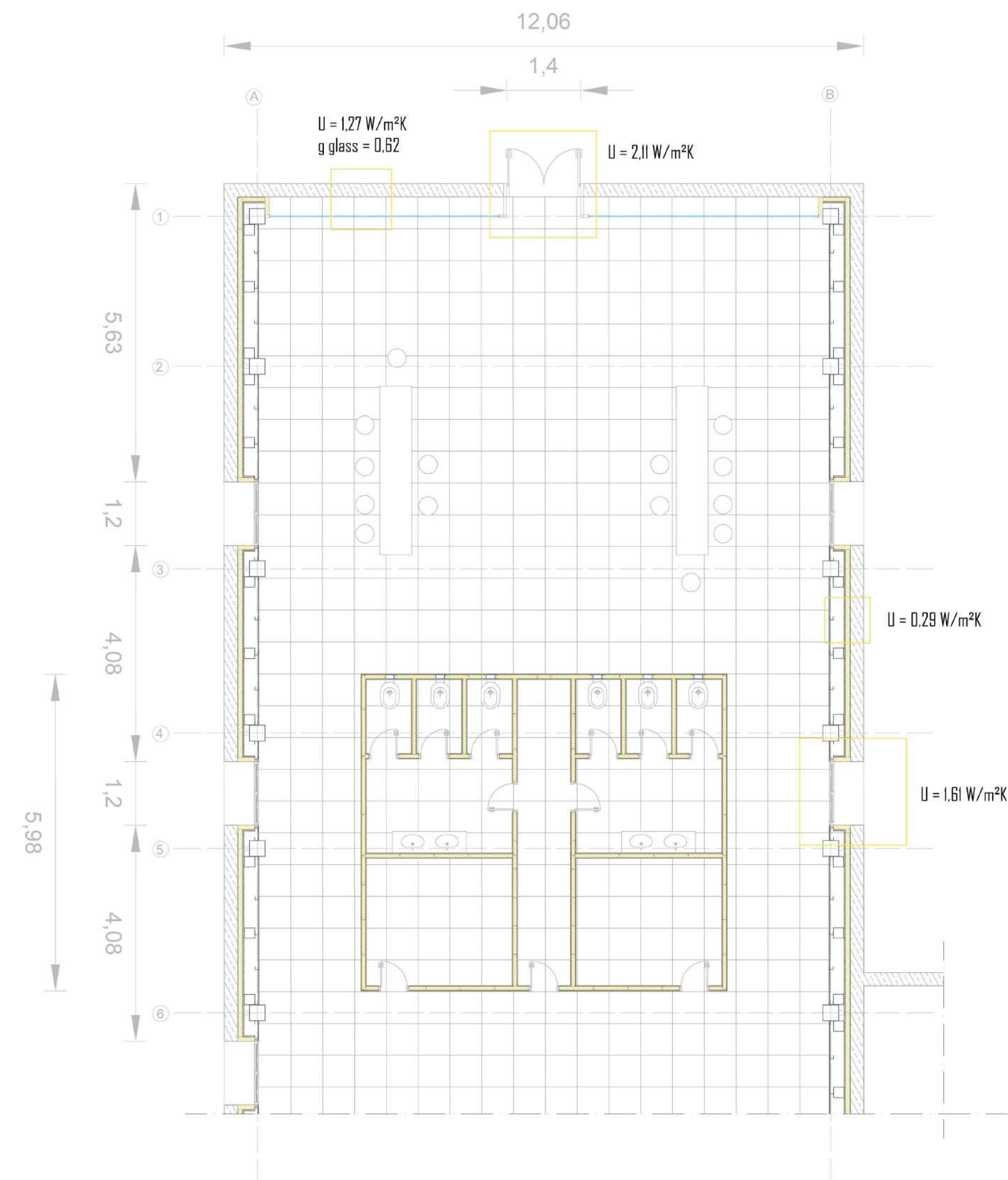
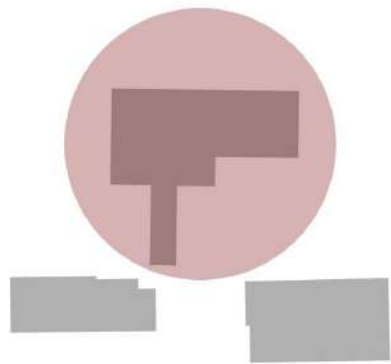
South front



ground floor plan

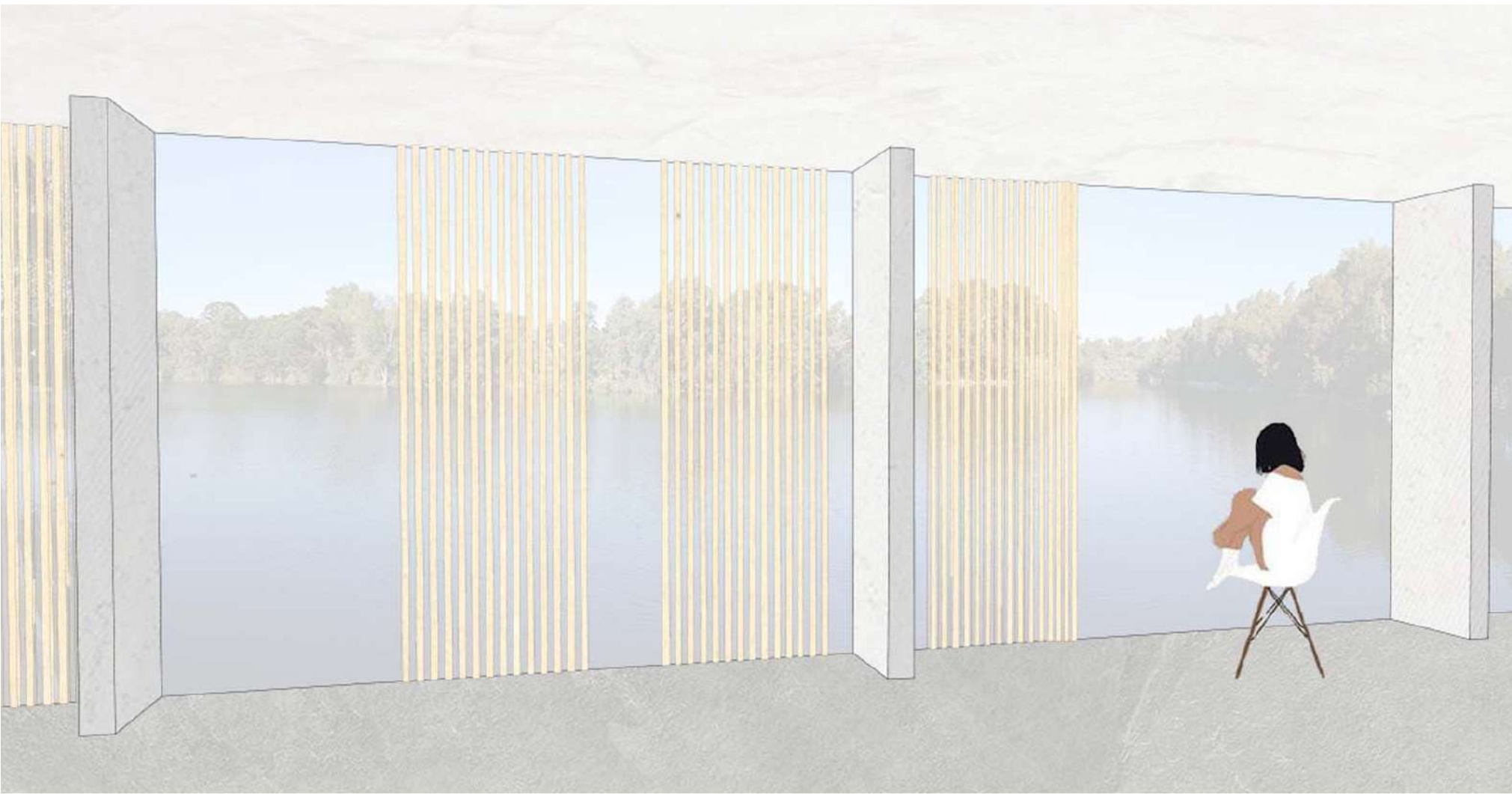
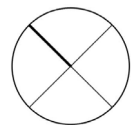


Ground floor plan



HEATING LOAD AT THE WINTER PEAK
 $Q_{\text{TOT}} = 27,6 \text{ kW} = 11,5 \text{ W/m}^3$

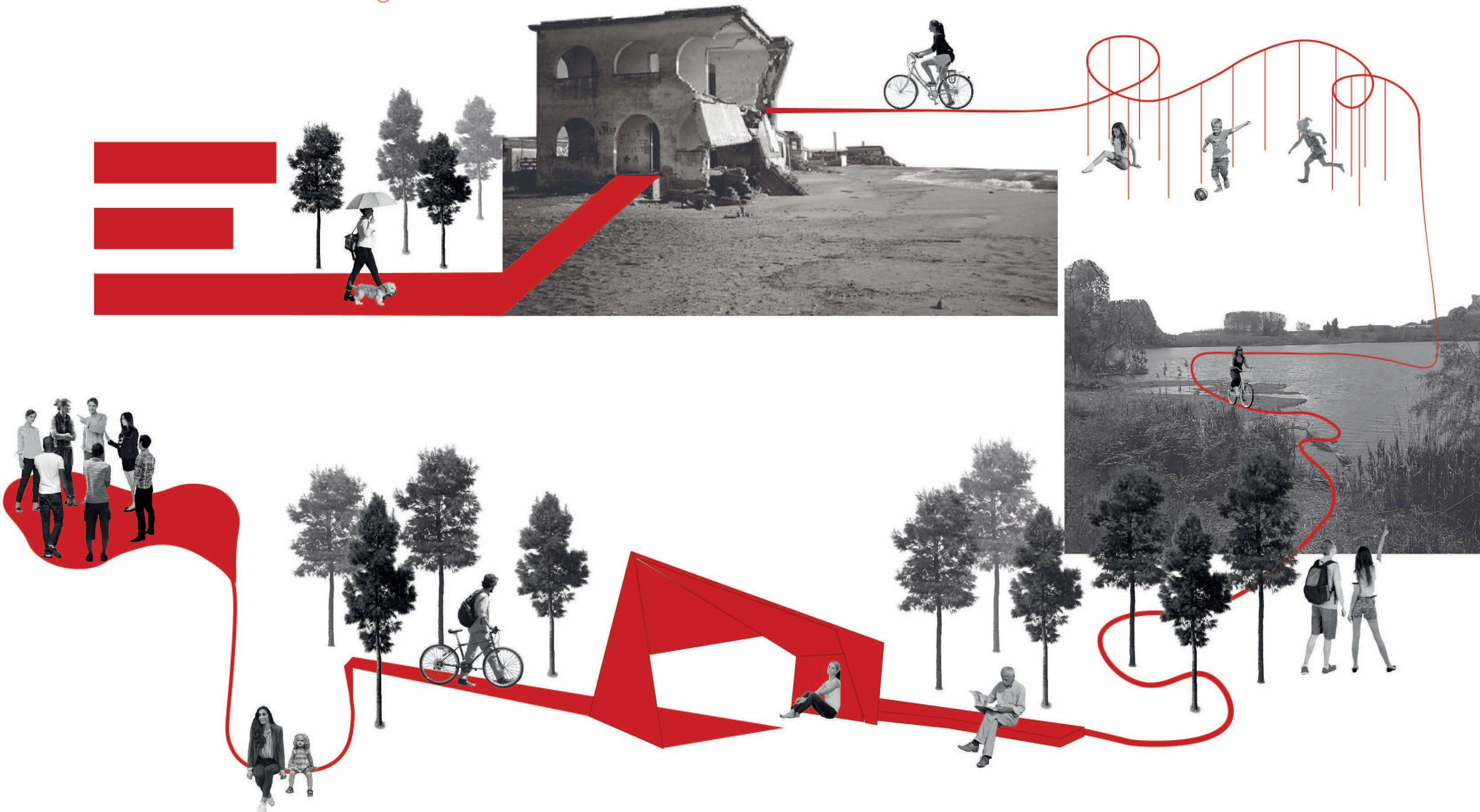
COOLING LOAD AT THE SUMMER PEAK
 $Q_{\text{TOT}} = 49,3 \text{ kW} = 20 \text{ W/m}^3$
 $Q_s = 30,1 \text{ kW} = 12,5 \text{ W/m}^3$
 $Q_t = 19,2 \text{ kW} = 8 \text{ W/m}^3$





THE DOMITIANA *LA DOMIZIANA*

- 13. EmergenCity** Greta Caliendo
- 14. Melting path** Federico Di Lorenzo
- 15. An urban pole beyond the dense transverse development** Valeria Di Maio
- 16. DETOUR. Turn the tour in a detour** Mattia Franceschetti
- 17. Recovered Link** Marika Riello
- 18. Food In – Green Out** Luigia Sagliano
- 19. Living the limit** Francesca Spacagna



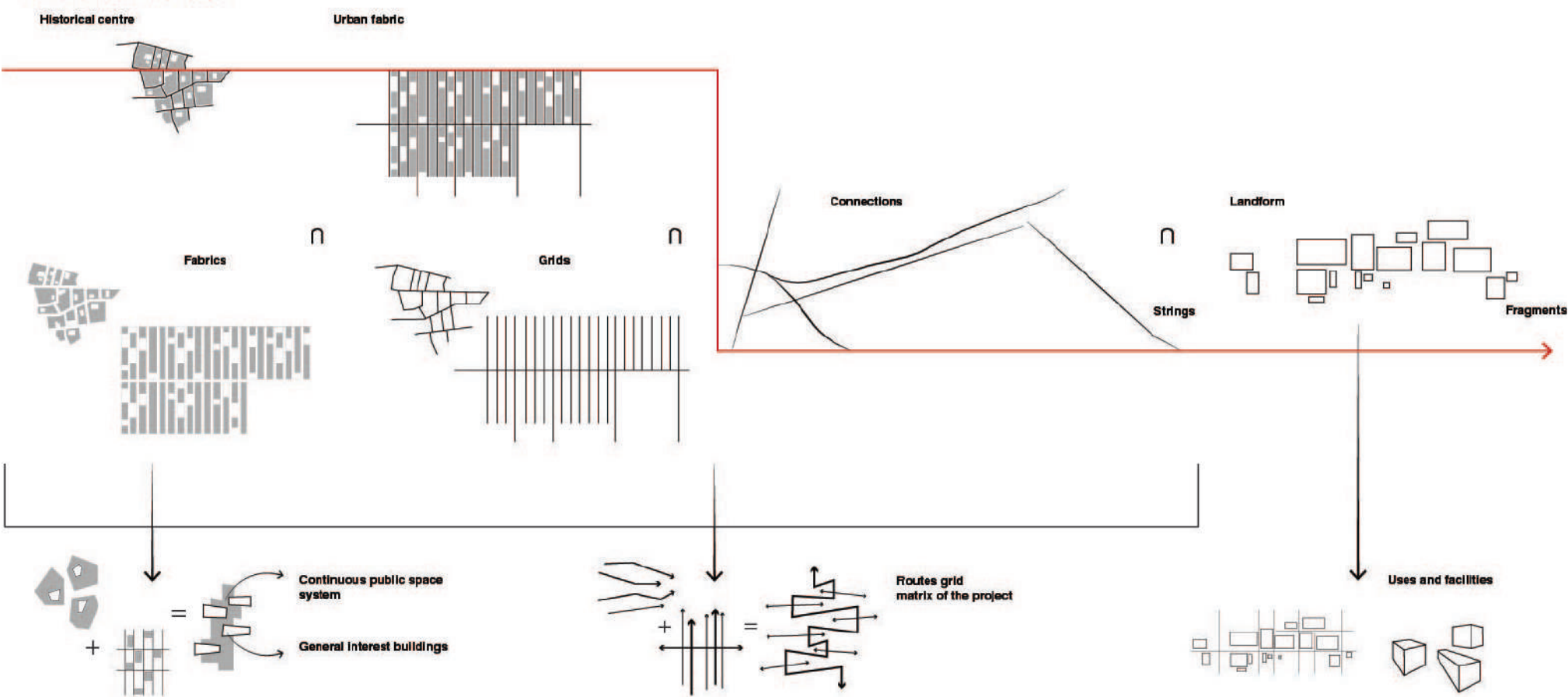


In our survey of Castel Volturno we came to realize how important Emergency, a global humanitarian organization that recently established here a health-care and emergency center, can be for migrant people based in the area. With this in mind the project's aim is to support the work of Emergency creating a new facility, wich constitutes a path of care, intended both as health care for people, providing support and assistance and promoting social integration, and as care of urban space, through the rigeneration of abandoned areas and urban voids, and the reuse of properties confiscated to criminal organizations and abandoned or unfinished buildings, enabling and densifying public space. The project envisages a sequence of sites along the head project of a city-sea riconnection route, unfolding through the main places in Castel Volturno: the historic centre, the ponds, the pinewood and the beach. The creative process starts from understanding the territory's morphological features and develops a decostruction and recomposition process of urban materials. This materials are the irregular grid of the historic centre, the regular grid of the urban fabric on the coast, the routes north of the via Domiziana, the landscape of the ponds. The intersection of these different forms generates

a new route which constitutes the matrix of the project and identifies a continuous public space system. The route starts from the Emergency health care center, and, as a red thread, passes through different spaces and connects different buildings. This thread becomes the unifying architectural element covering the whole project area. It provides different functions and perceptions of the landscape, accommodating a mix of uses related both to the social and health care system (daily clinics, counseling center, socio-medical orientation, extended care units), and to leisure, relax, social integration, events, in order to make more attractive and livable that part of the city. This route configures itself both as a cycling path and as a pedestrian path, which at different heights crosses the existing buildings to retrain. This red thread materializes in a linear landscape installation in fiberglass, which assumes different shapes, becoming bench or coverage, and runs alongside the pedestrian path. The route is the generating element that identifies new spaces with new public functions: urban gardens, a public park and playground areas, a thematic garden of Mediterranean vegetation. The project area is constituted by four different areas situated along an axis, in which three poles are located. The first pole is the principal

one and is the closer to the Emergency center, is the "health care pole" and is dedicated to health care, with all facilities for medical and social care designed as three new buildings. The main one is a two storey building, provided with a central courtyard. The second pole is the "health education pole" and is dedicated to health information. It includes four pre-existing buildings, of which two are properties confiscated to criminal organizations and the other two are unfinished and abandoned buildings. These buildings are being retrofitted, and subjected to a remaking of the facades and to a rearranging of interior spaces, to host the new functions. These functions are exhibition halls, conference and public meeting rooms, study halls, coworking spaces, a library and a mediatheque, and a nursery school. The third pole is the "health care residency pole". It is the one furthest from Emergency centre and includes seven abandoned and unfinished buildings, which are being retrained and destined to housing, to accommodate people who need specific medical care. Finally, the route ends in the pond area, which marks the entrance to the existing Laguna Volturno Park. Here the route becomes a foot bridge over the waterway with platforms for rest and refreshment.

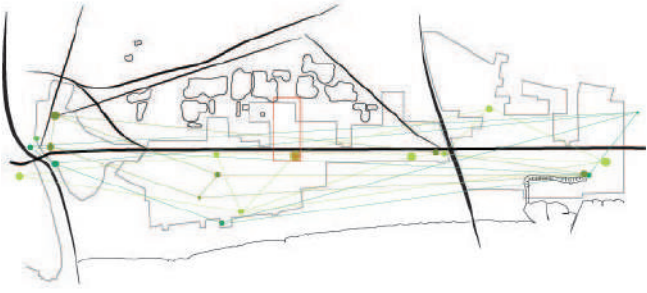
URBAN MATERIALS



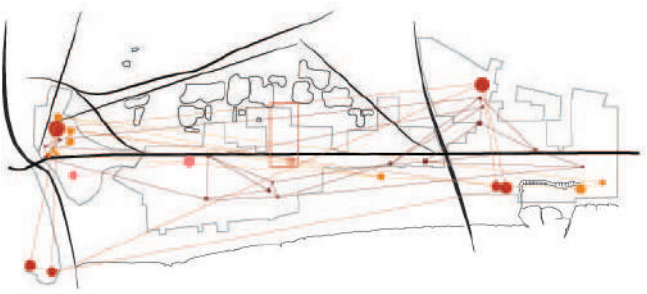
REAL USES



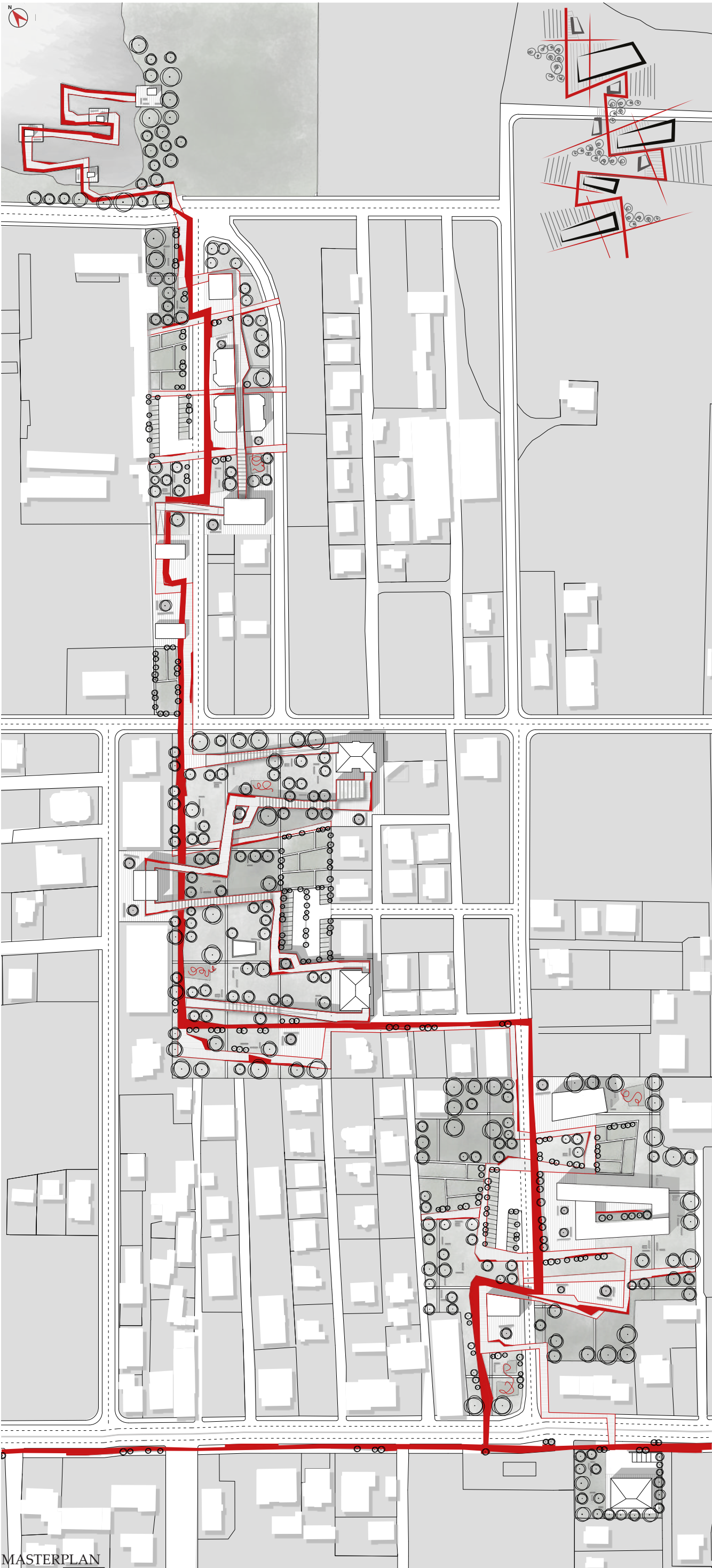
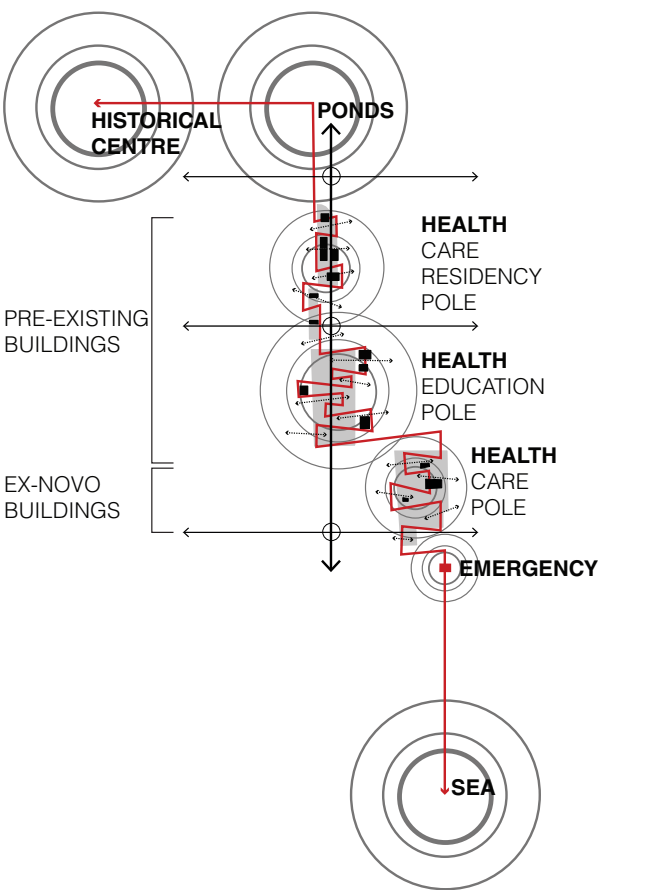
- SEIZED PROPERTY
- ABANDONED/UNFINISHED BUILDINGS



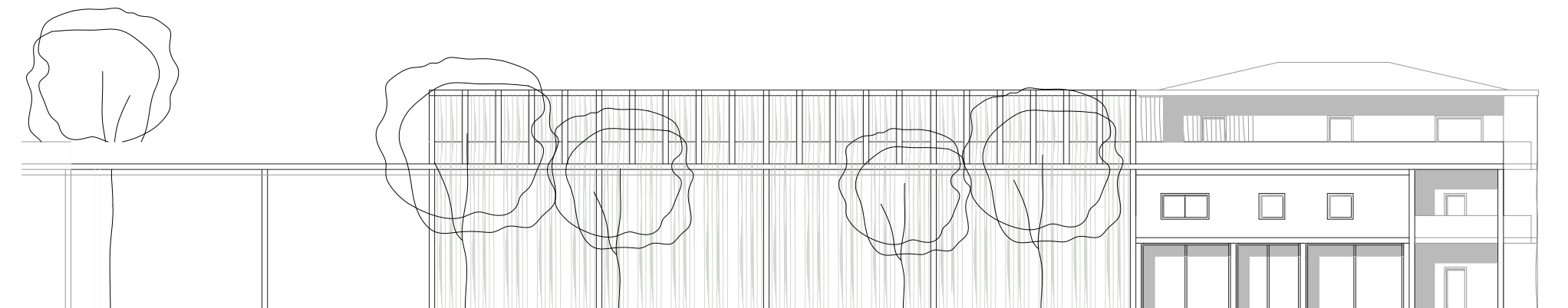
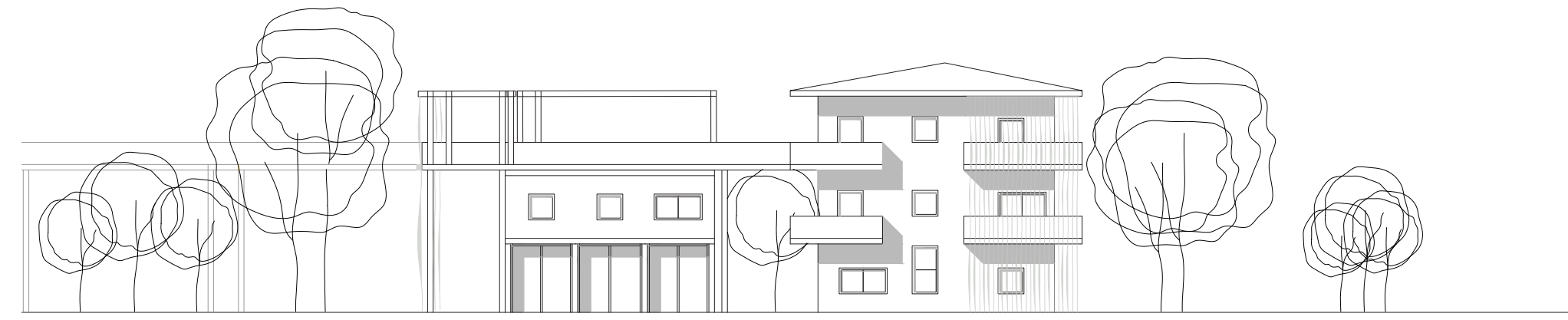
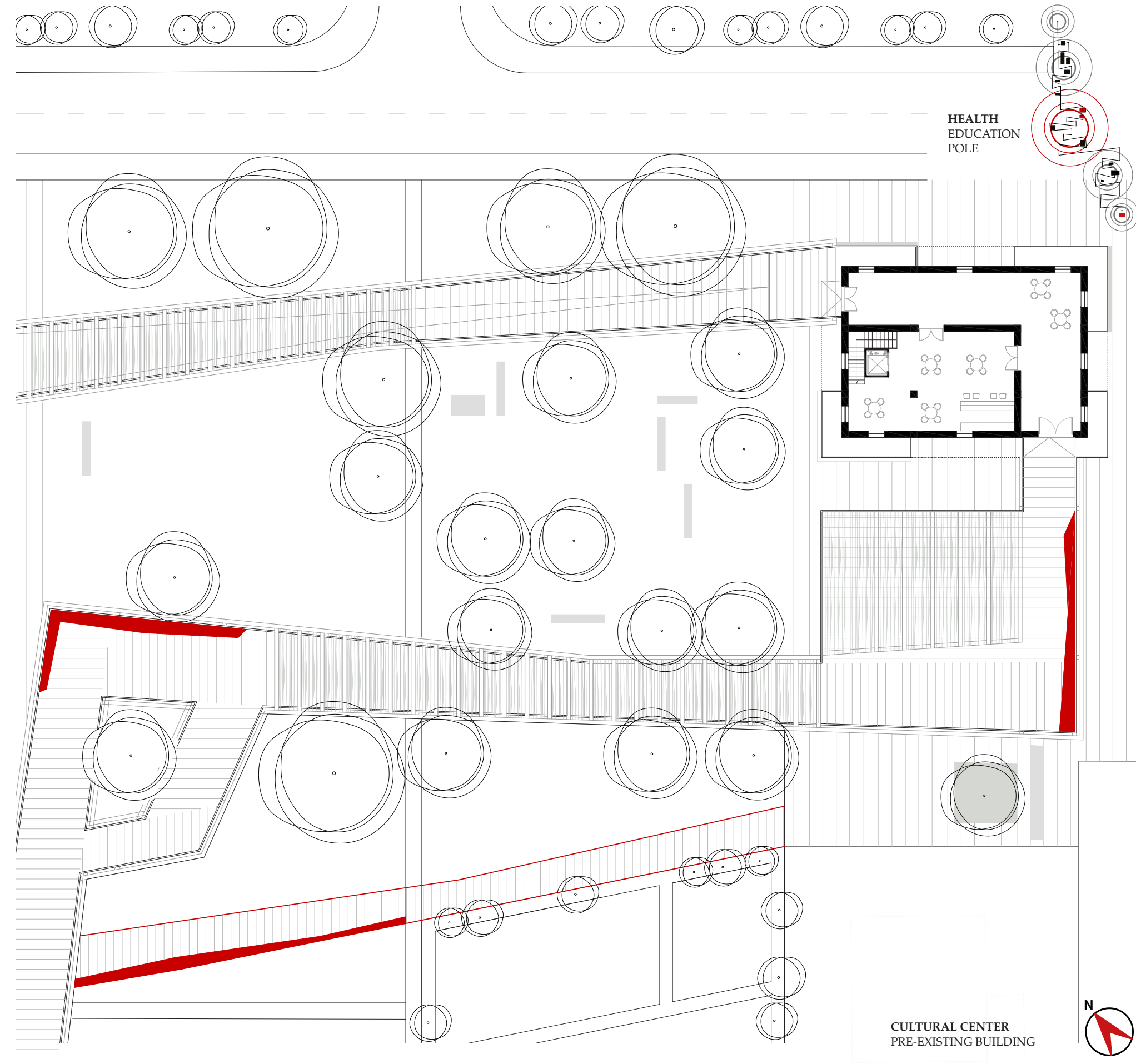
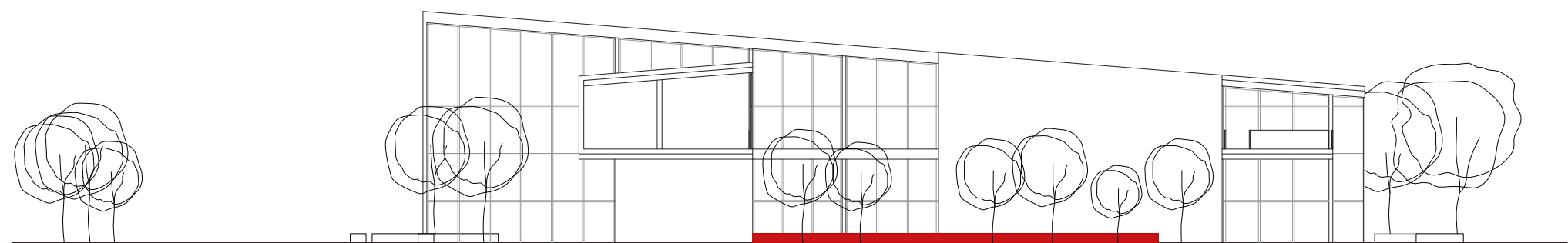
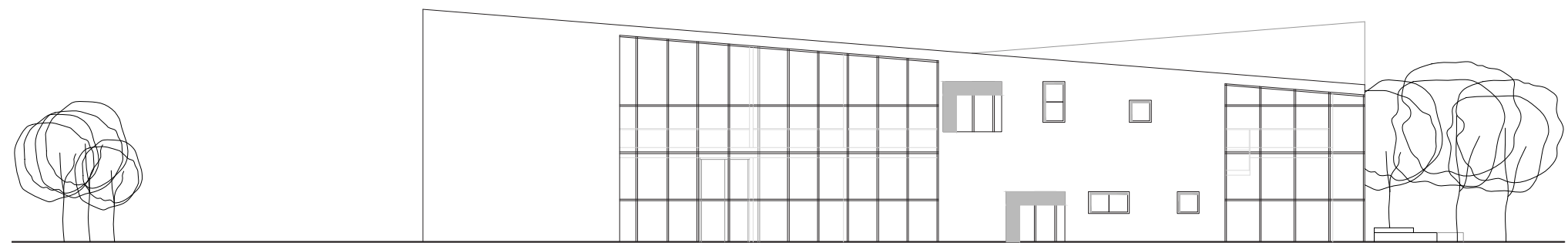
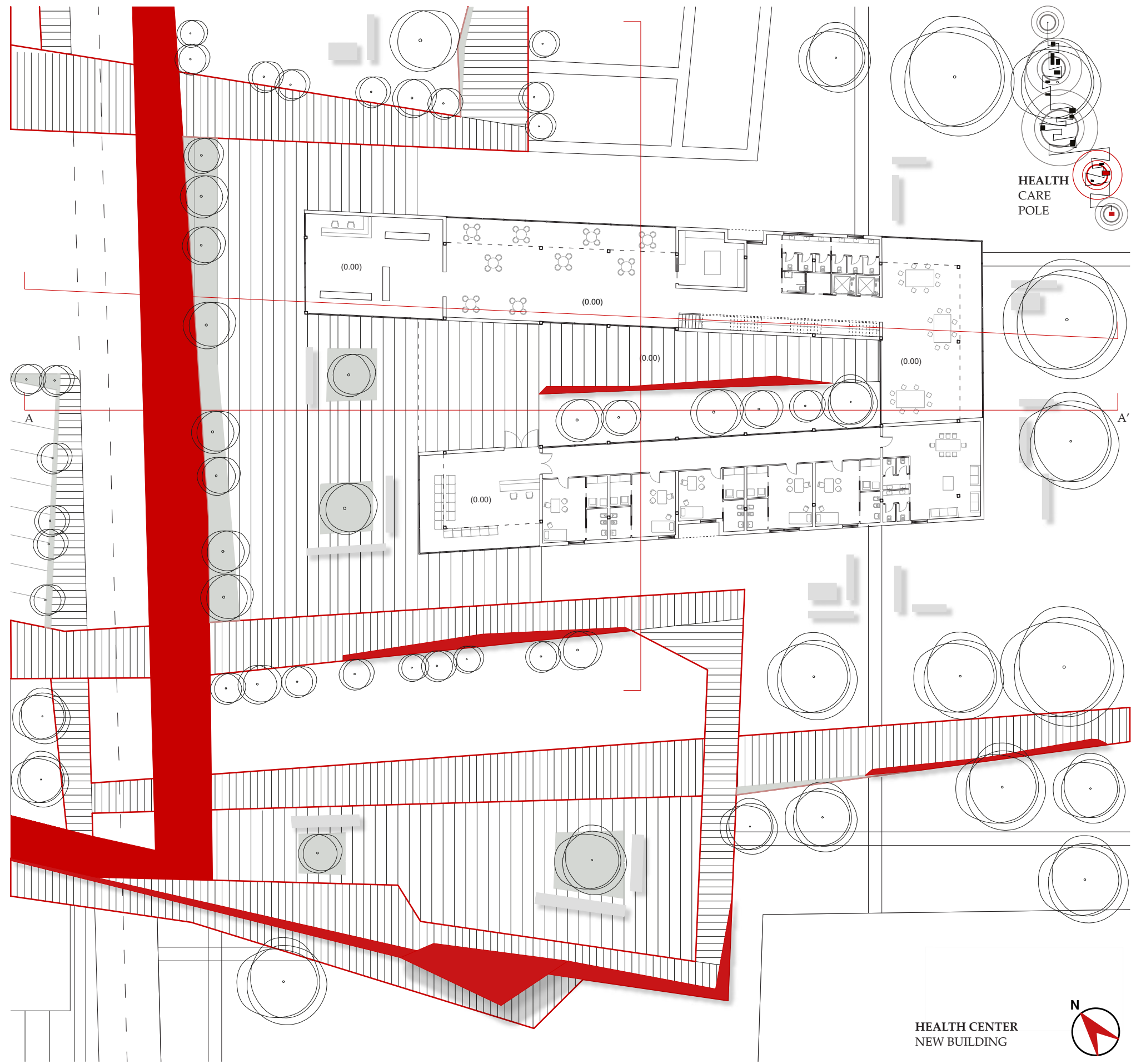
- ASSOCIATIONS
- Educational, sportive, recreational
- Cultural
- Social welfare and healthcare
- Environmental and civil commitment

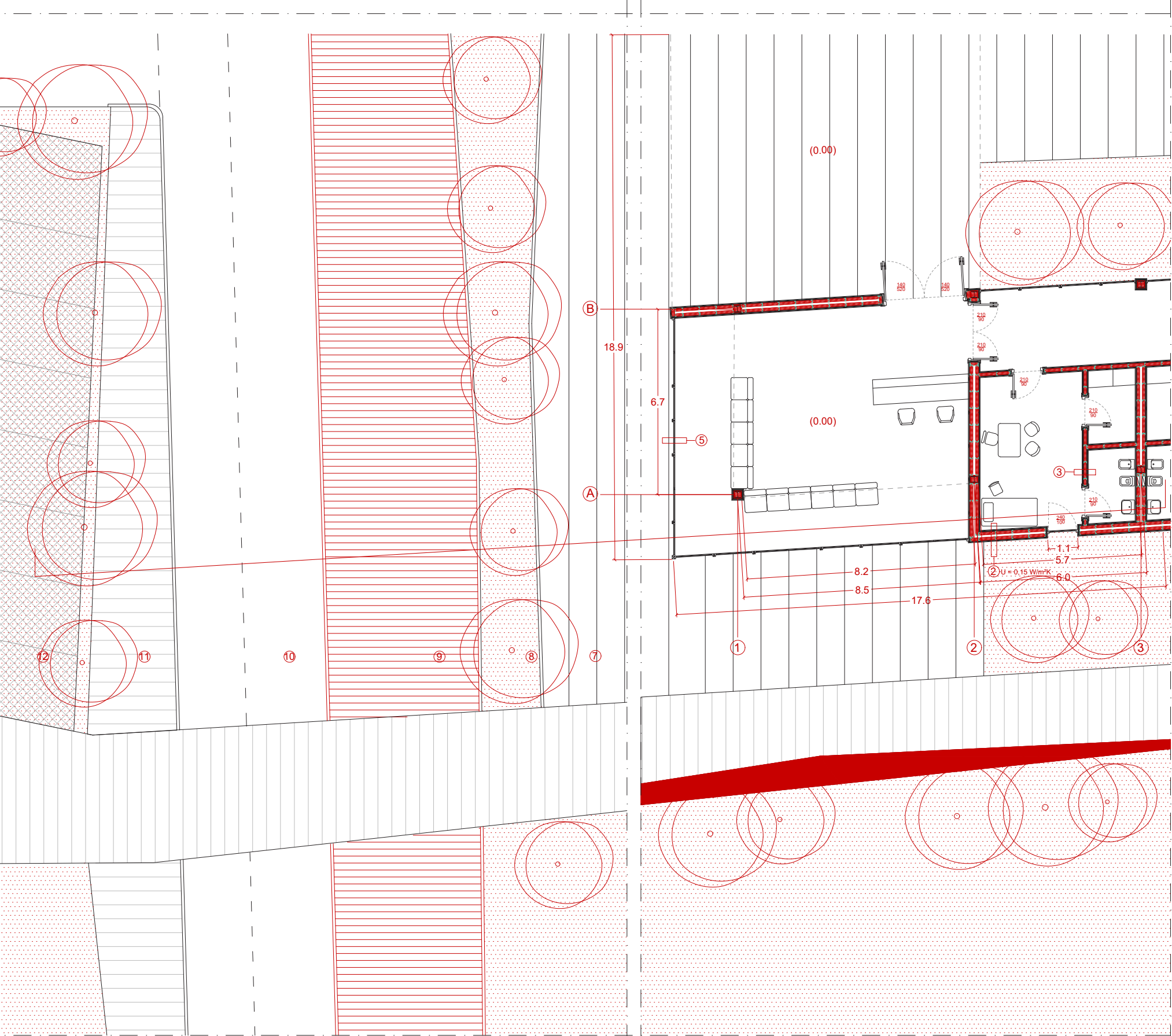


- FACILITIES
- Educational
- Religious
- Health care
- Sport

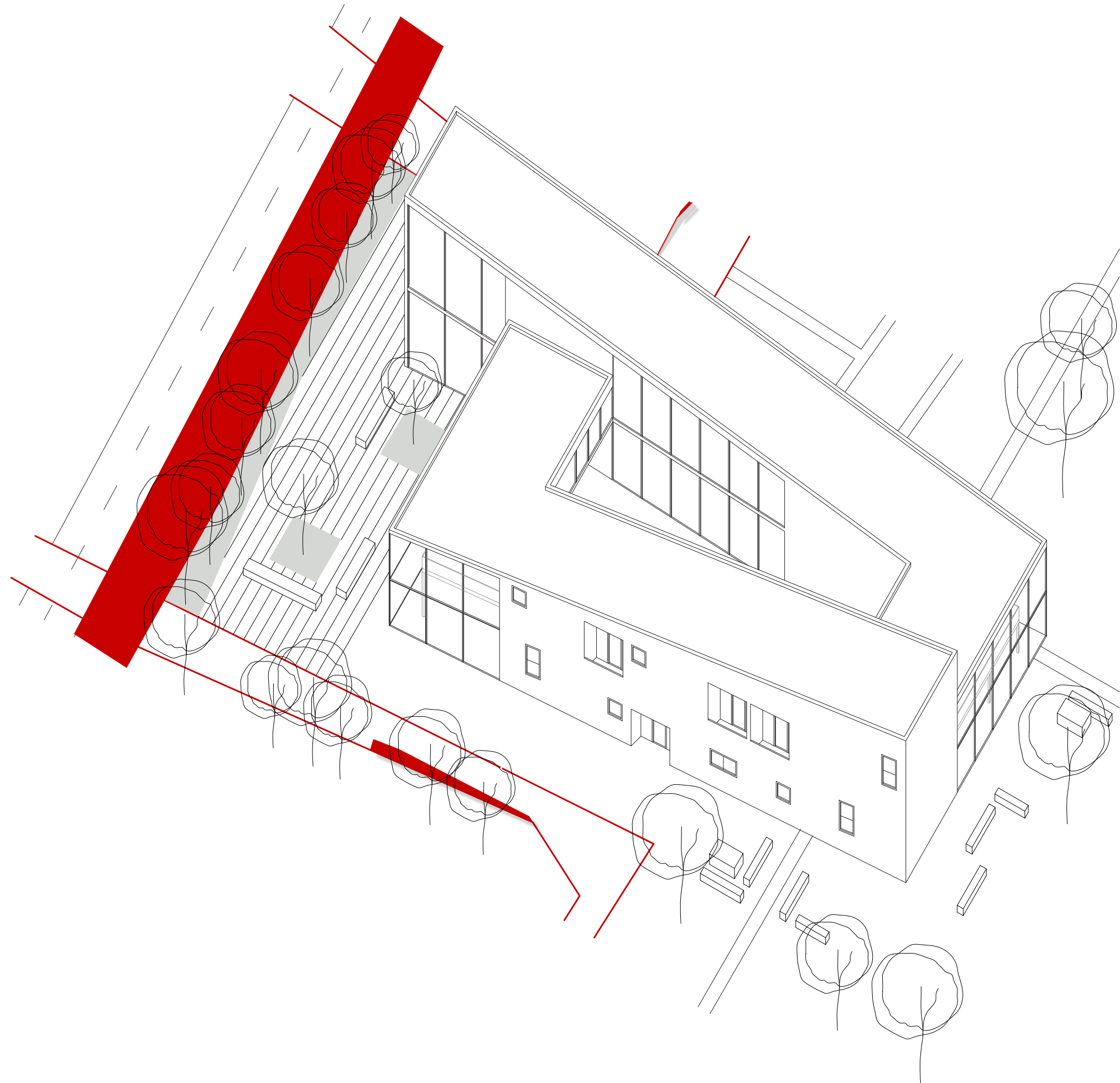
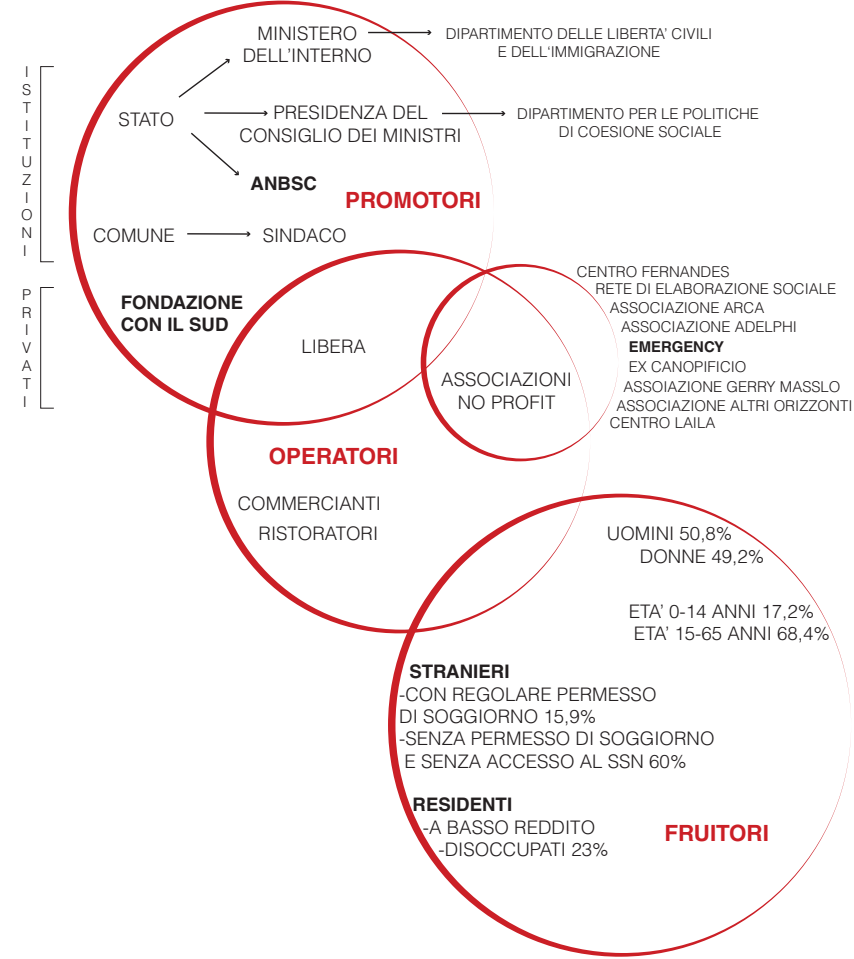
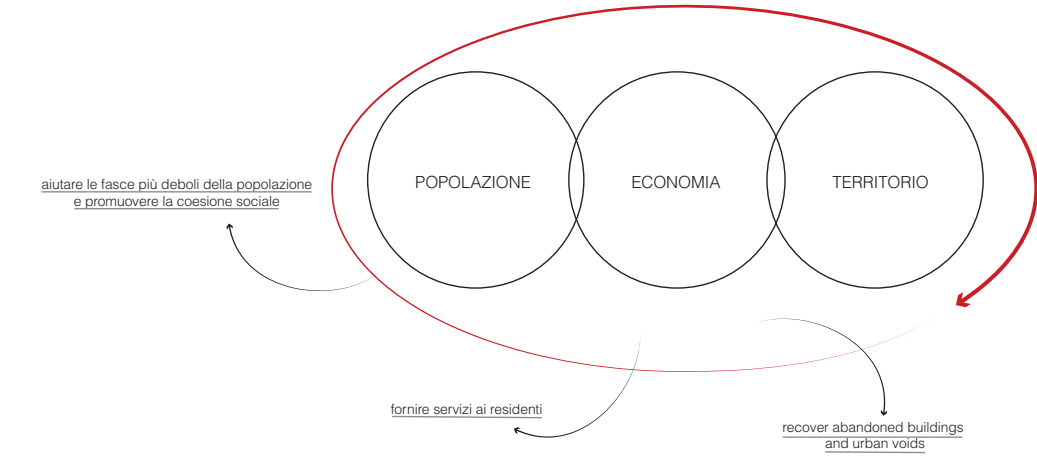
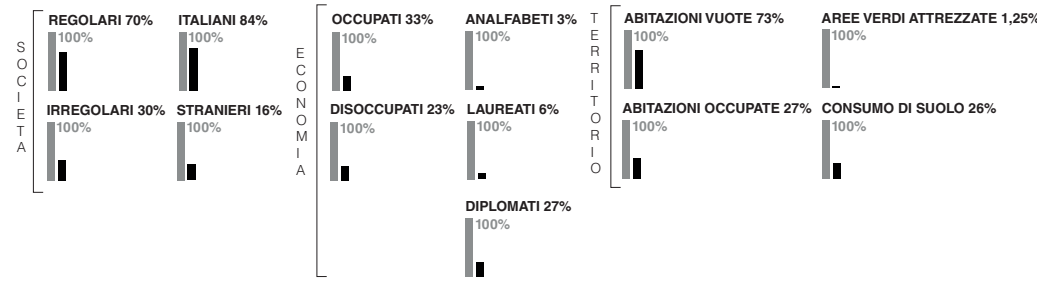
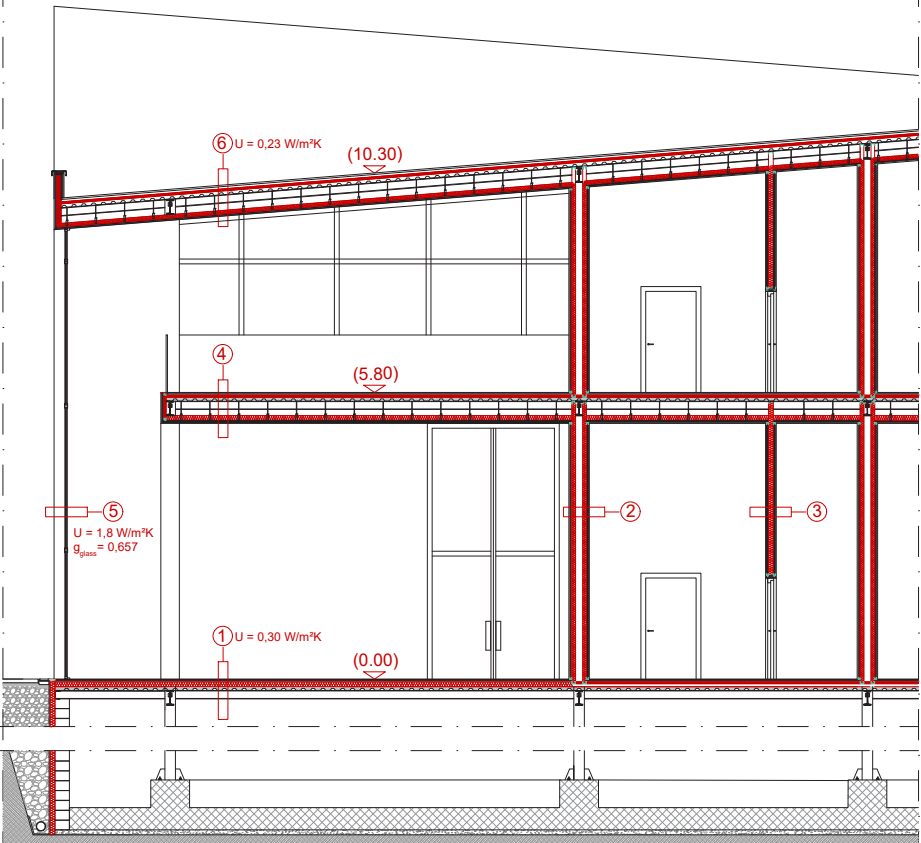
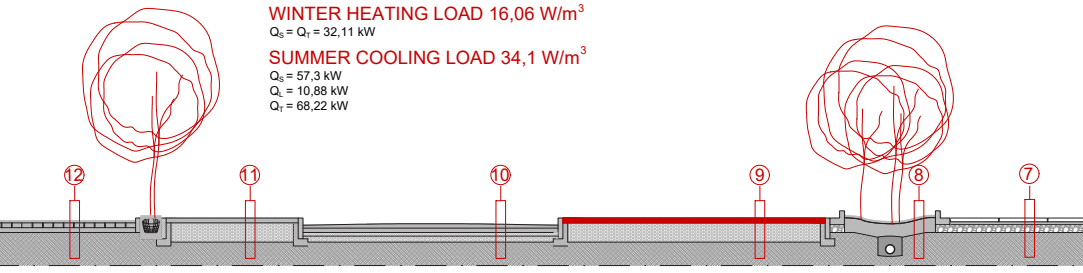


MASTERPLAN

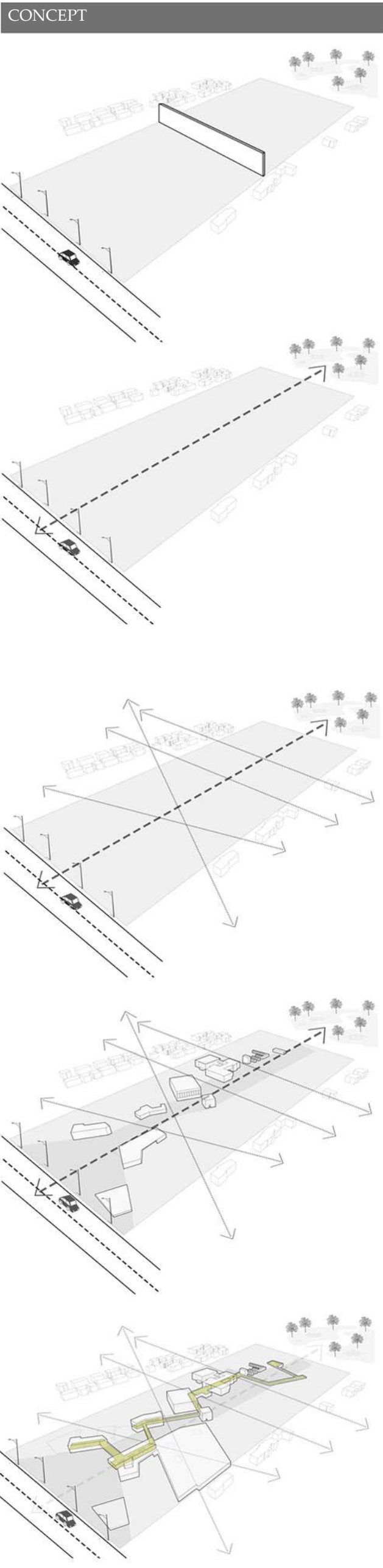
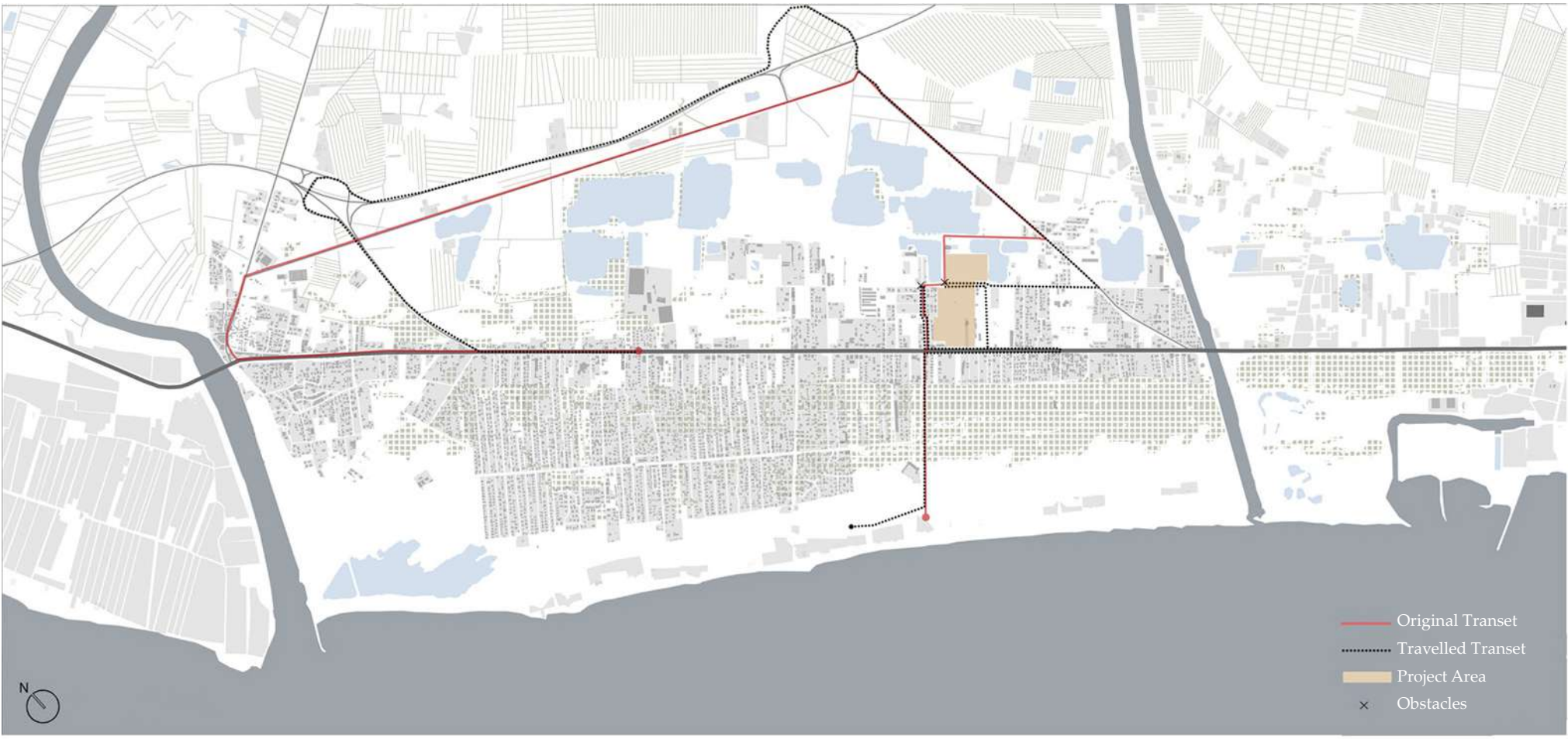




- 1 SOLAIO CONTROTERRA
trave IPE-lamiera grecata-clis-isolante-barriera al vapore-massetto-sottofondo-pavimento
- 2 PARETE ESTERNA
intonaco-cartongesso-barriera al vapore-isolante-camera-d'aria isolante-cartongesso-pannello in cls fibrorinforzato
- 3 PARETE INTERNA
intonaco-cartongesso-isolante-cartongesso-intonaco
- 4 SOLAIO PIANO TIPO
intonaco-cartongesso-isolante-trave principale IPE160-lamiera grecata-getto in cemento-isolante-sottofondo-massetto-pavimento
- 5 VETRATA
infilasso strutturale a taglio termico
- 6 SOLAIO DI COPERTURA
intonaco-cartongesso-isolante-camera d'aria-trave IPE-lamiera grecata-clis-isolante-barriera al vapore-massetto-guaina-pannello in cls fibrorinforzato
- 7 PAVIMENTAZIONE ESTERNA IN CLS
terreno coispato-ghiaia-massetto-pavimentazione
- 8 RAIN GARDEN
terreno coispato-ghiaia-bioretenition soil
- 9 PISTA CICLABILE IN MISTO GRANULARE
terreno coispato-sottofondo in misto granulare-cordoli in pietra-pavimentazione
- 10 STRADA CARRABILE
terreno coispato-sottofondo in misto cementato-strato di conglomerato bituminoso-strato di collegamento in conglomerato bituminoso-sede carrabile in asfalto
- 11 PERCORSO PEDONALE IN CALCE STABILIZZATA
terreno coispato-sottofondo in misto granulare-cordoli in pietra-pavimentazione
- 12 PARCHEGGIO IN PAVIMENTAZIONE SEMIPERMEABILE
terreno coispato-ghiaia-compatta-letto d'appoggio di sabbia e terriccio-elemento alveolare in polietilene ad alta densità-prato







From the first glance, travelling in speed with the car Via domitiana, you can see contrasting phenomena not immediately clear. The quantity of elements, whether natural or artificial, the relationships that are triggered between these same elements and the intricate social situation, create dynamics difficult to investigate using traditional instruments. The shape of the town of Castel Volturno, clinging to a long black line of asphalt that holds together a series of heterogeneous aspects, in reality, not being deceived by its physical continuity, conceals a highly segregated space, where the fence, the physical and social barrier, take over and change the way we see space. In this regard, investigating the territory closely, with an eye completely immersed in society, is almost necessary to avoid the risk of intervening with an architectural project that does not take into account such complexities.

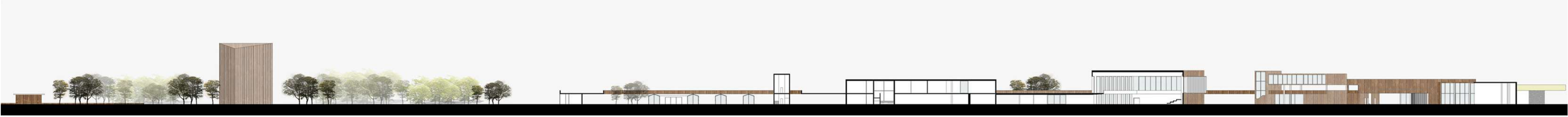
Starting from the revealed potentialities, like the park of the lakes, the oasis of the Variconi and the long coastline, the project is grafted in a space adjacent to the domiziana using a “bottom-up” strategy, which taking on particular issues, manages to meet a wider demand. This process leads to the design of a non-traditional infrastructure, which is not

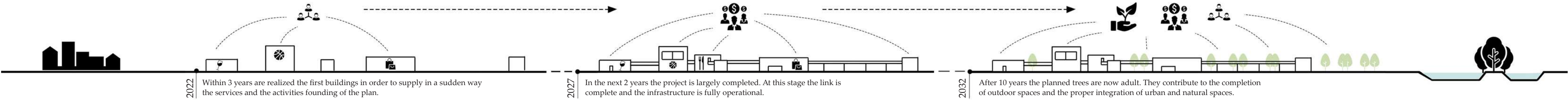
a road but a passage on several levels with the aim of connecting the domiziana to the naturalistic area immediately behind generating a real entrance to the park. It is a physical link between the two systems and a social link between the different realities encountered. In this perspective, the outer space assumes the function of space of aggregation and sharing, becomes the binding element not only between the different functions provided by the project, but especially between the spaces of the city and the new spaces of the project, creating a system well integrated with the context and calibrated according to the specific needs.

The two warheads of the system, the city and the park, are reconnected through a series of functions designed according to the context in which they are located. A service station is grafted on the house and like a sort of manifesto announcing what is behind it, attracts attention and pushes the visitor to stop and enter. The wine-bar and the bike point are the functions that most respect the urban vocation of the domiziana, because the former creates a point of encounter and aggregation through an open space, free and informal, the second seeks to respond to the needs of a city that is often forced to use the bicycle as a means of

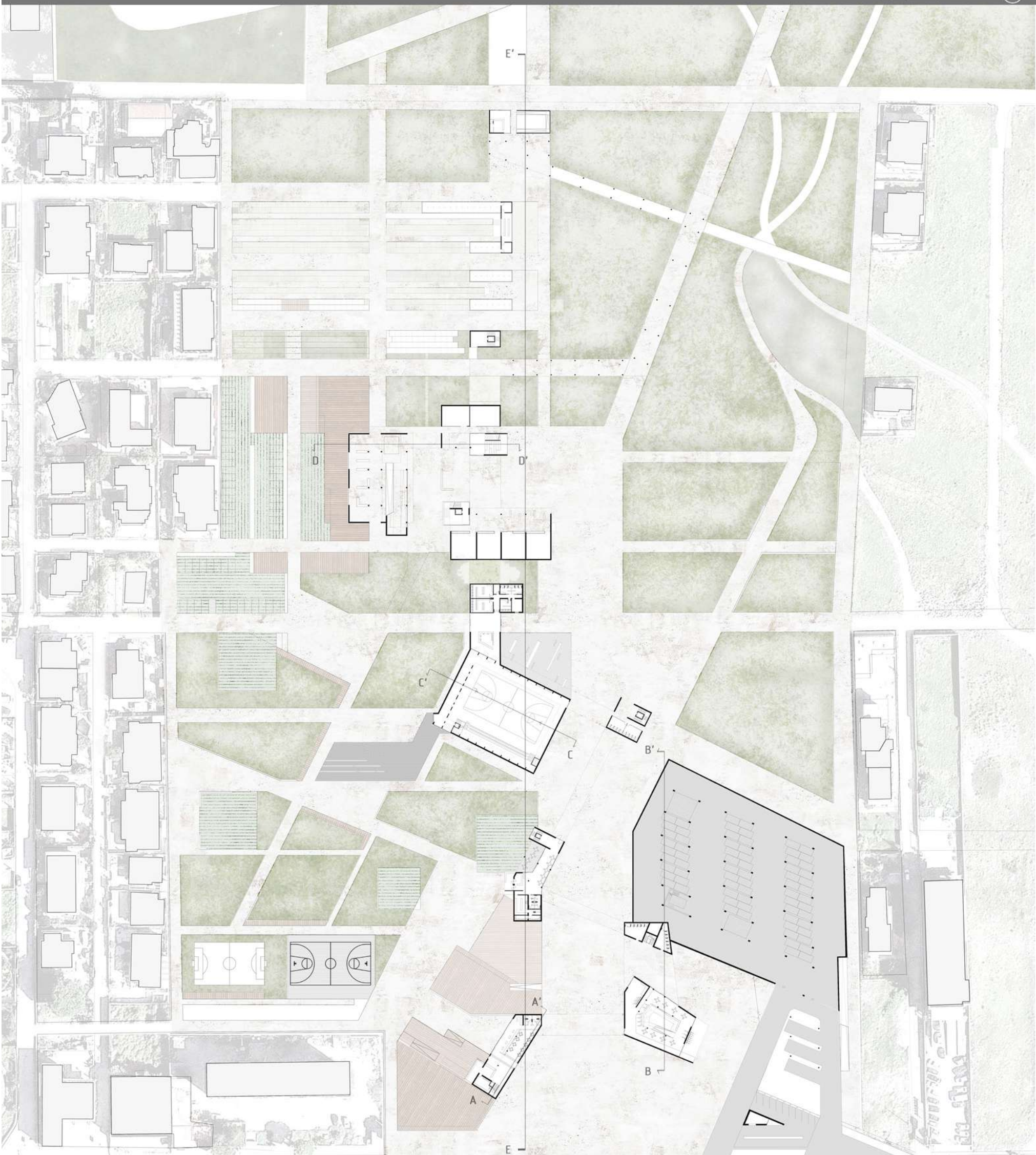
transport. The restaurant and the following commercial area, closely connected with greenhouses and gardens, activate a production chain that aims to enhance the resources of the park, promoting its specificities. Capturing the strong agricultural and dairy vocation of the town of Castel Volturno, these spaces are promoters of social dynamics that enhance the specificities of the place, making them recognizable even on an extra-urban scale. Finally, the sports hall is thought as a support to initiatives that in practice have contributed to enhance the city of Castel Volturno and that have made multiculturalism (often obtusely seen negatively) a strong point and the pretext to win some battles with a social background.

Approaching an intricate reality like Castel Volturno, requires a different effort, certainly greater than an ordinary situation. Faced with situations of strong spatial and social unbundling means making well-balanced choices, which if for some features maintain a strong relationship with the place, on the other hand, they become courageous and innovative, with the will to change the cards on the table without distorting the present situations, which, despite the difficulties, conceal a strong original or acquired identity.

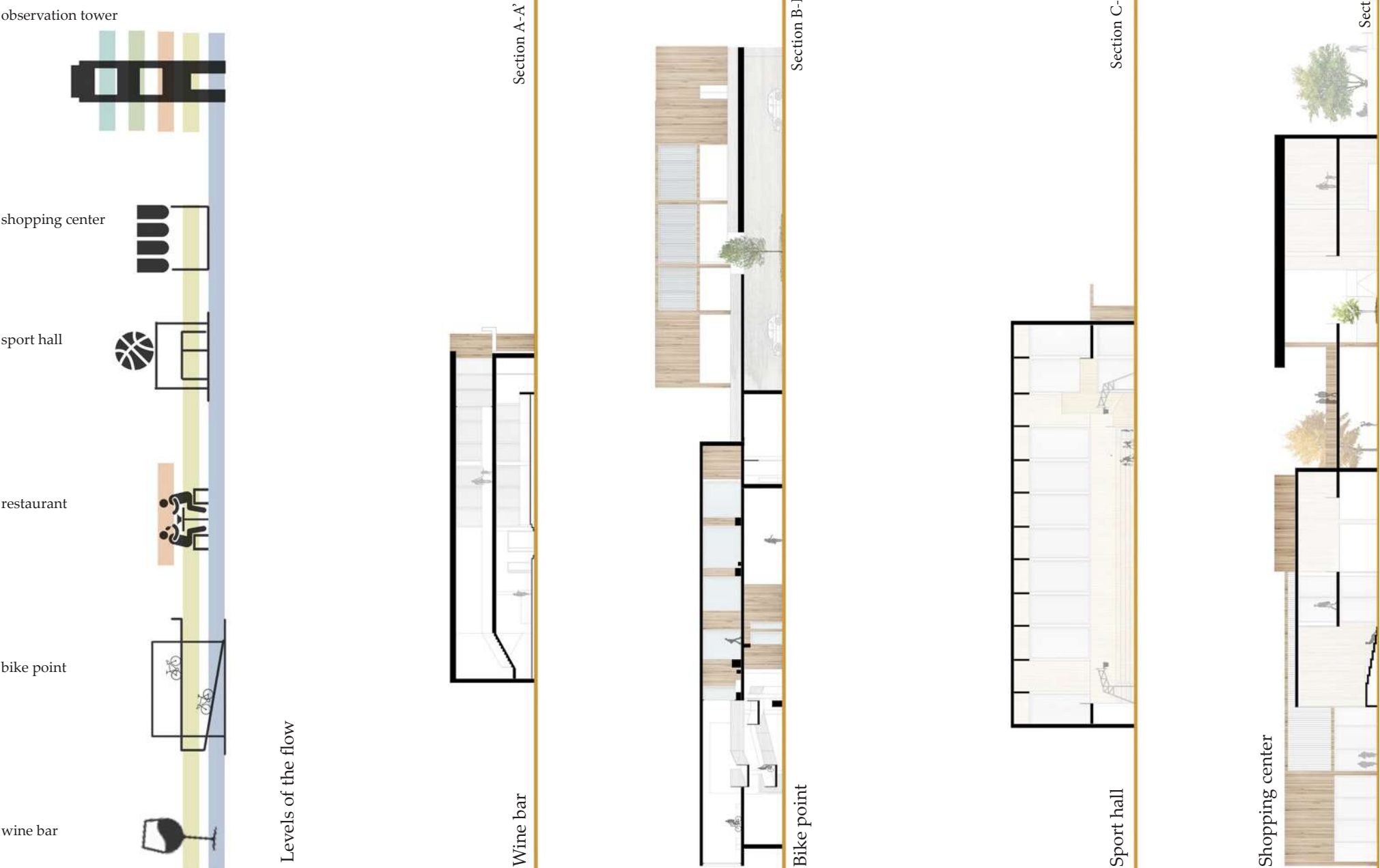




GROUND FLOOR



AXONOMETRY

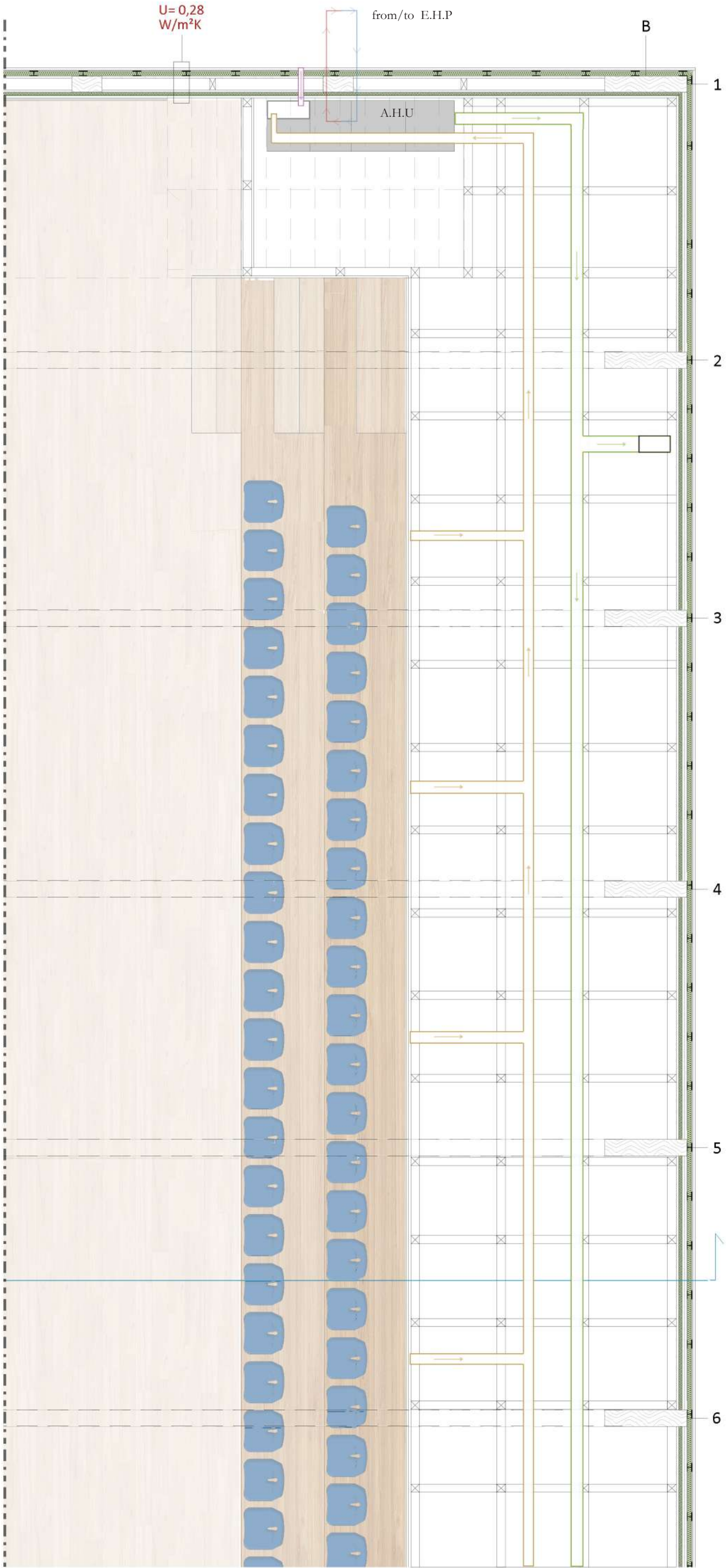


SECTION E-E'

PIPELINE SCHEME

- Supply duct
- Recirculation duct
- Outdoor air extraction duct
- Air handling units

SUMMER	WINTER
Amount of air to supply	Amount of air to supply
14,24 kg/s	14,24 kg/s
Amount of outdoor air	Amount of outdoor air
5,97 kg/s	5,97 kg/s
Amount of recirculation air	Amount of recirculation air
8,27 kg/s	8,27 kg/s
Air supply temperature	Air supply temperature
15 °C	34 °C



The aim of the project is also to reconnect two highly segregated space systems. The "park of lakes" with its innumerable potentialities can act as an attractor. In this regard, the project fits harmoniously into the natural spaces, marking the passage between the city and nature.

The infrastructure in its path takes different forms that lead to different ways of living space. The numerous functions have the aim of creating a catalyst, a new reference point, now indispensable for the city of Castel Volturno.

The first buildings on the Domitiana have a predominantly urban character, both from a functional and spatial point of view. The first buildings are a wine bar and a bike point. They, joined by a walkway, give life to a real entrance that creates a break in the rigid urban system and starts the route.





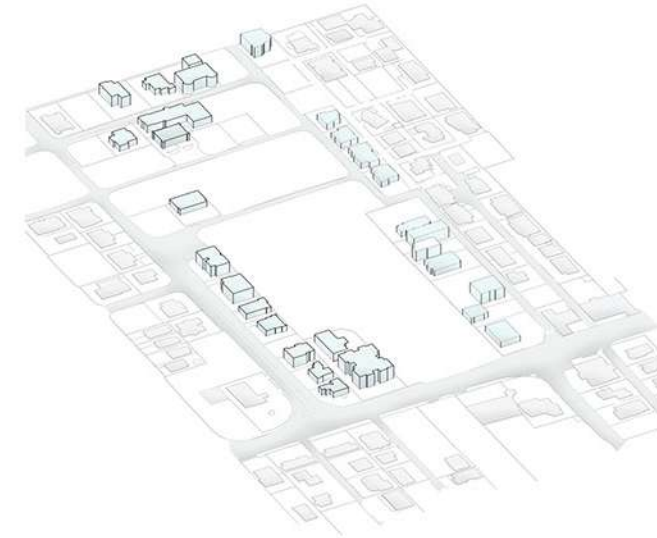
AN URBAN POLE BEYOND THE DENSE TRANSVERSE DEVELOPMENT



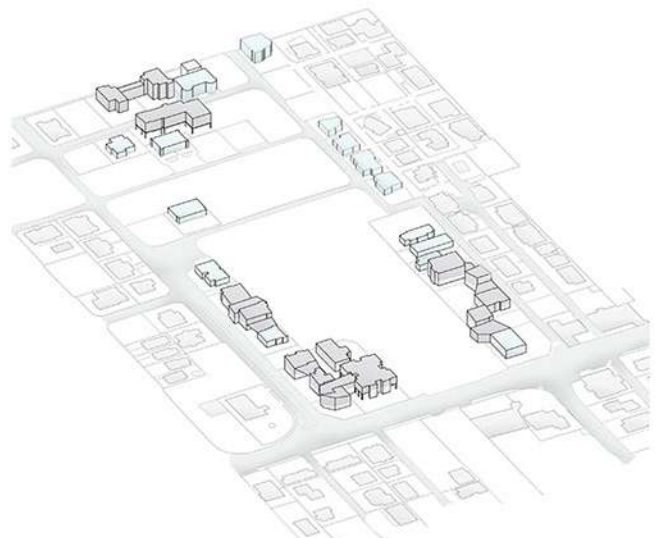
Valeria Di Maio



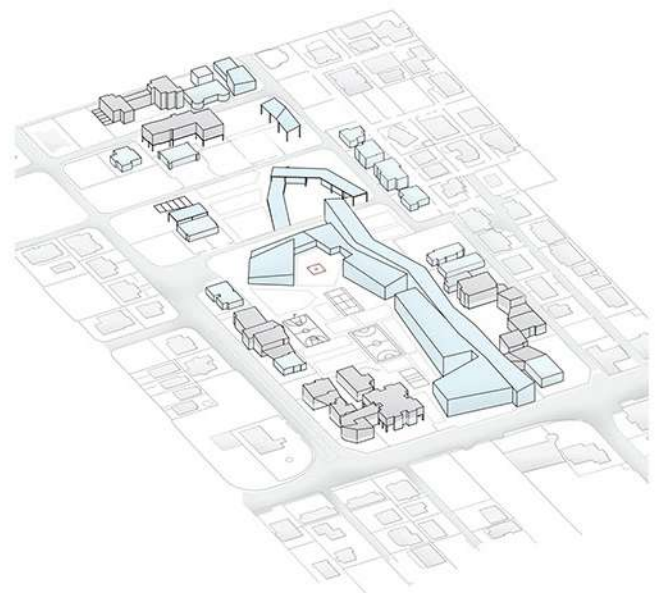
CURRENT STATE



PROXIMITY EQUALIZATION

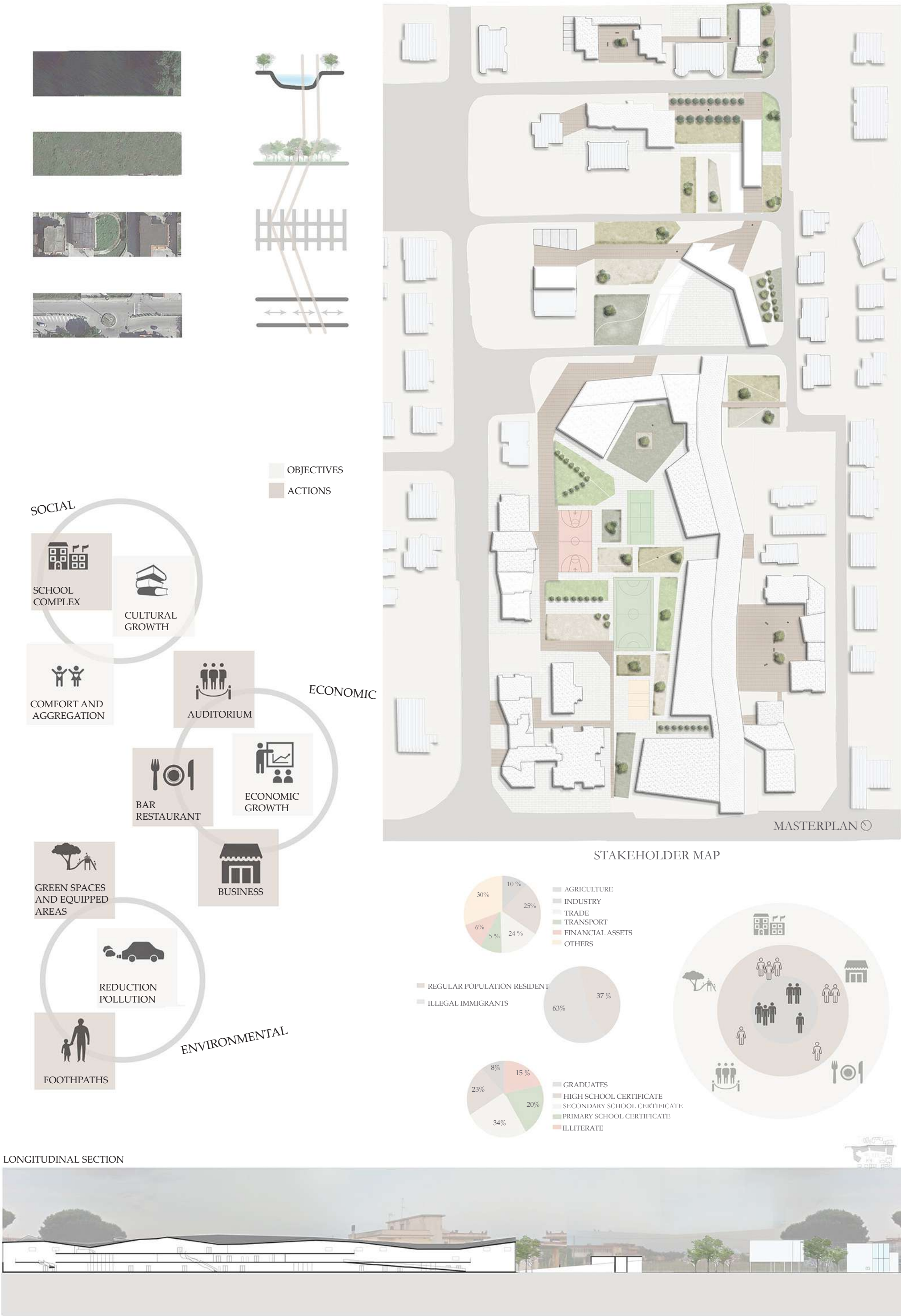


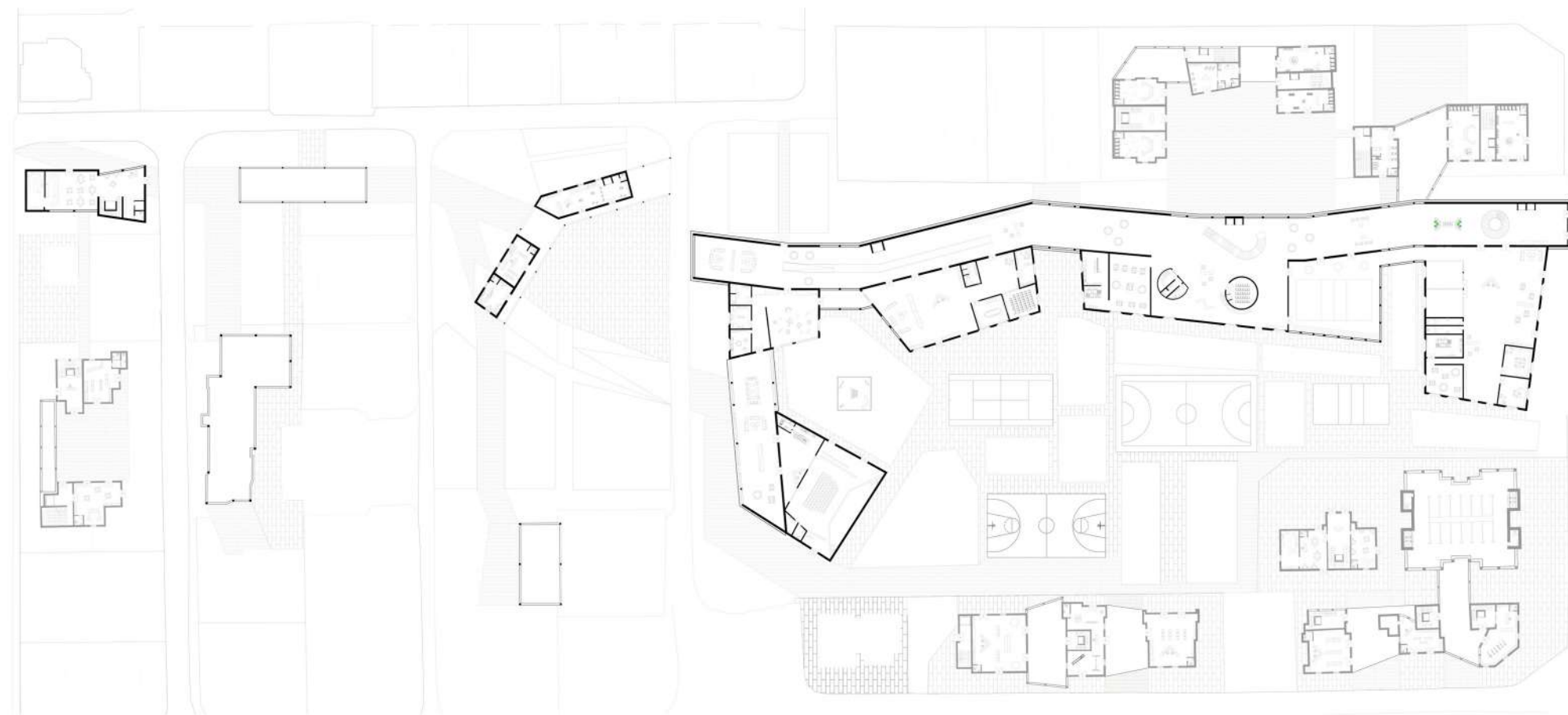
SCHOOL COMPLEX



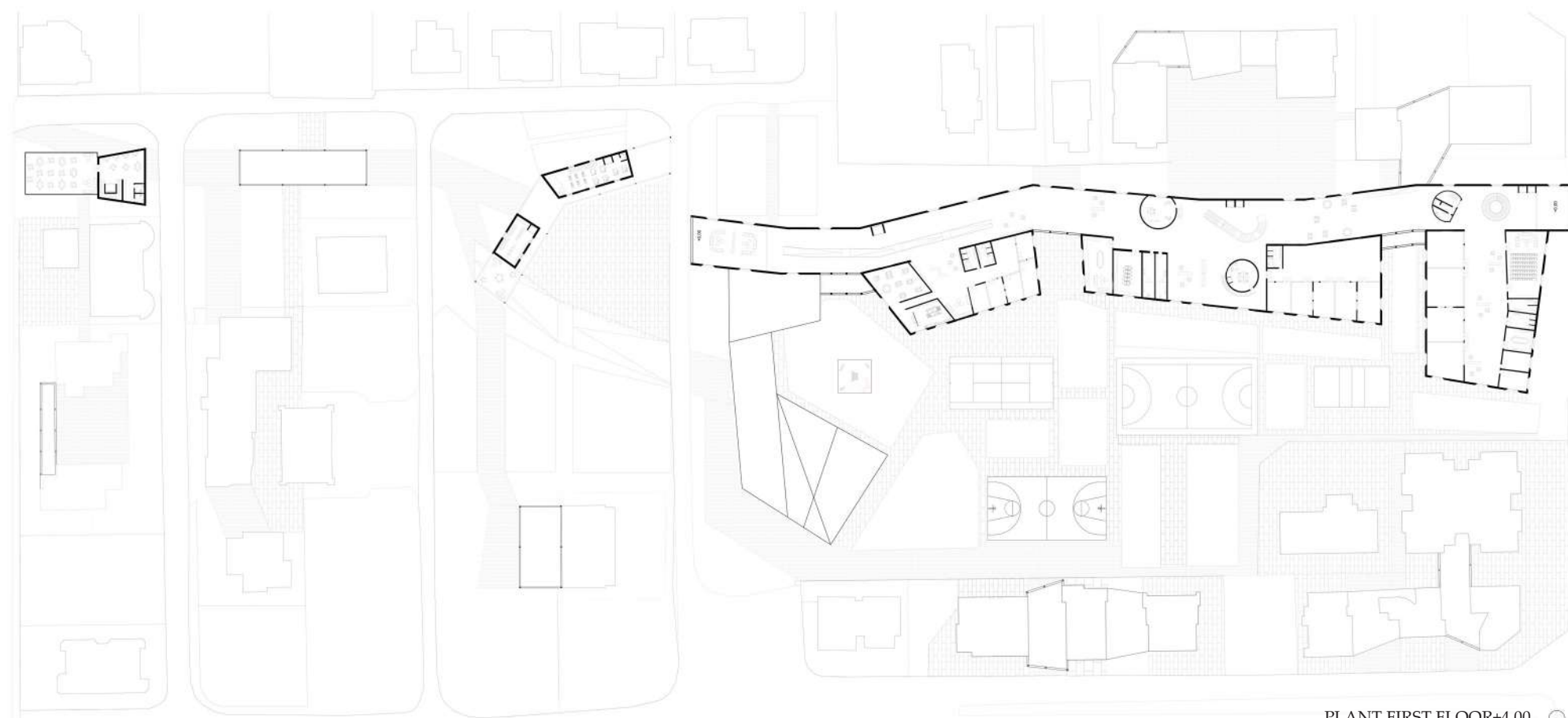
The first feeling that I have lived when the site of Castel Volturno has been proposed for our design project elaboration was of strong capture. A territory so deeply degraded is perfectly suited to every form of rehash, that could eliminate or at least reduce the effects of degrade and abandonment. The Municipality of Castel Volturno corresponds to the interpretation of the steriotipo of the place been born by a dwarfish nucleus and developed around an only big road axle constituted by the government road 7 quaters (street Domitiana), in spontaneous and uncontrolled way. The general planning project is today still in progress of approval. Also from the social point of view, the events of Castel Volturno are not homogeneous. In fact, over time, groups of families coming from Naples joined the original local population. In addition, soldiers from the nearby NATO base and a community, mainly African, rooted with increasing intensity in the last twenty years. Therefore, the social issue is unavoidable, given the absolute need for infrastructures, consequence of the scarce endowment of collective public services, confirmed by the citizens interviewed on the subject. The starting point derives from the observation that the only available structure located just along the domitiana street was a Emergency reception centre. The ensuing reflection has led to the consideration of the needs of educational, health, welfare and in general of all the services that need to be provided to a population by the public administration. In particular, the testimonies collected through the interviews have highlighted the extreme hardship suffered by families who, due to the absence of educational institutions of any order and degree in the vicinity of the area studied, are forced to accompany their children in the neighbouring municipalities. This urgent need, together with the identification of an available site and with a particularly suitable configuration to develop a wide-ranging intervention, convinced me to converge towards a design theme centred around a series of school buildings with public spaces, in various ways grafted and interwoven with existing agglomerations. The project foresees the overcoming of the transversality of domitiana, with vertical

elements that join the fast flowing part constituted by domitiana itself, with the more built up one, reaching the more natural one (system of lakes) thus characterising a system consisting of three different interconnected areas. The School Campus is located next to the domitiana, with first grade secondary school, primary school, kindergarten and kindergarten (0-3 years old). They have been designed with geometric shapes that enhance the dynamism of the buildings in the direction that leads to the natural corner of the site. The buildings forming the school complex are connected through a block, whose architectural design reflects the style of the buildings connected. Also the alternating development of the inclined planes of the roofs, together with a suitable chromatic coupling of the facades with the roofs themselves, provides greater fluidity to the educational buildings. The project theme does not end in the didactic strand, providing a not less important series of structures for public services, constituted of a library with long-term opening, a series of outdoor sports equipment, an auditorium, a block of educational workshops, a naturist covered path and a restaurant, located near the lake area. This second group of buildings has the objective of creating, together with the part of the school complex, usable beyond the teaching time an attractive node, to be considered in all respects an urban pole. The feasibility of carrying out the project described above also arose from the possibilities offered by urban planning rules, in particular from the so-called proximity equalization. This instrument was used, in this case, to improve the road level of certain existing buildings by introducing a series of commercial activities meeting the primary needs of families, allowing as counterpart for private properties the cant of a percentage of the existing built. The result is a design path designed to meet the needs of buildings for public functions, but which in the course of its development has made me aware of the need to provide space to meet needs not limited to a single function and for a limited time during the day, but which could include a use designed to meet the needs of other population groups, not only children, thus creating a sort of public urban park available to the whole population.

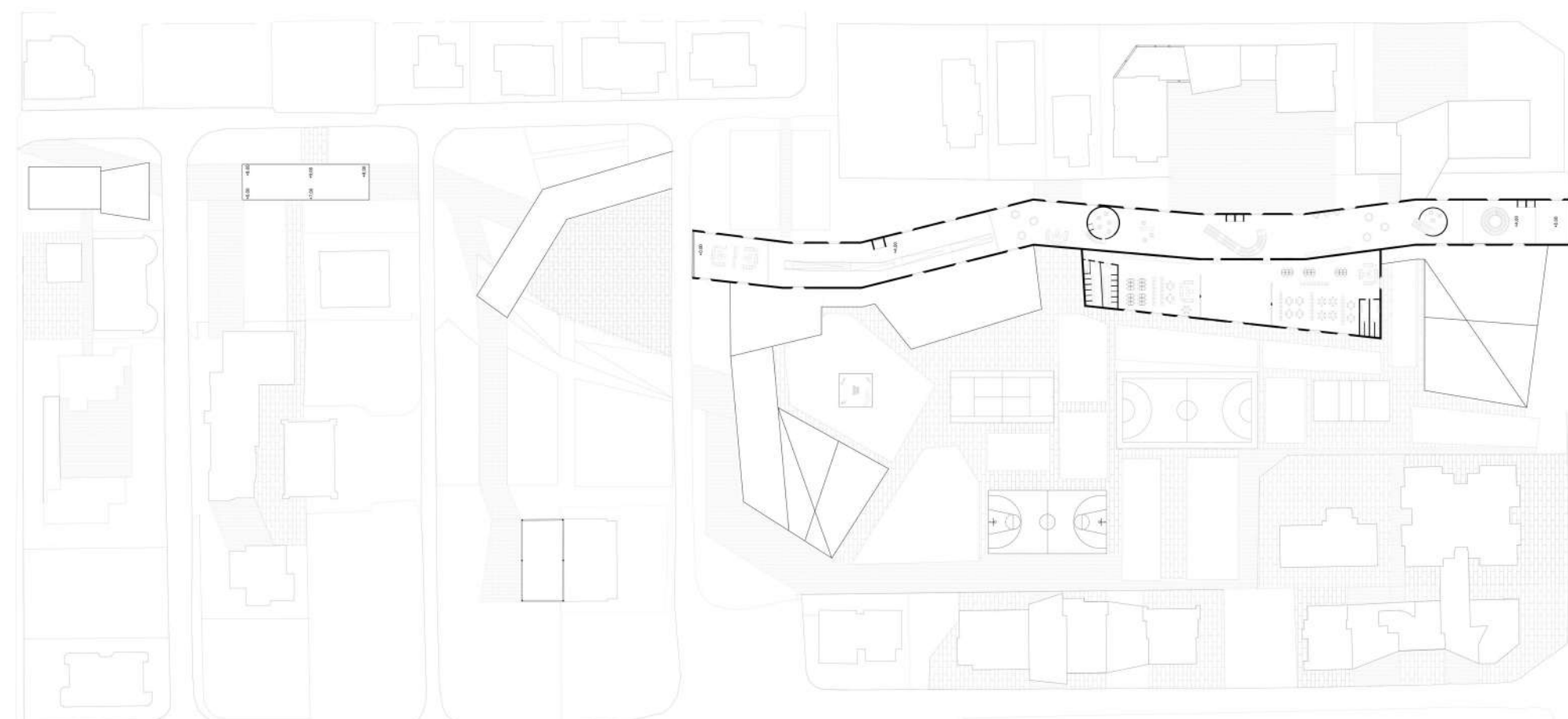




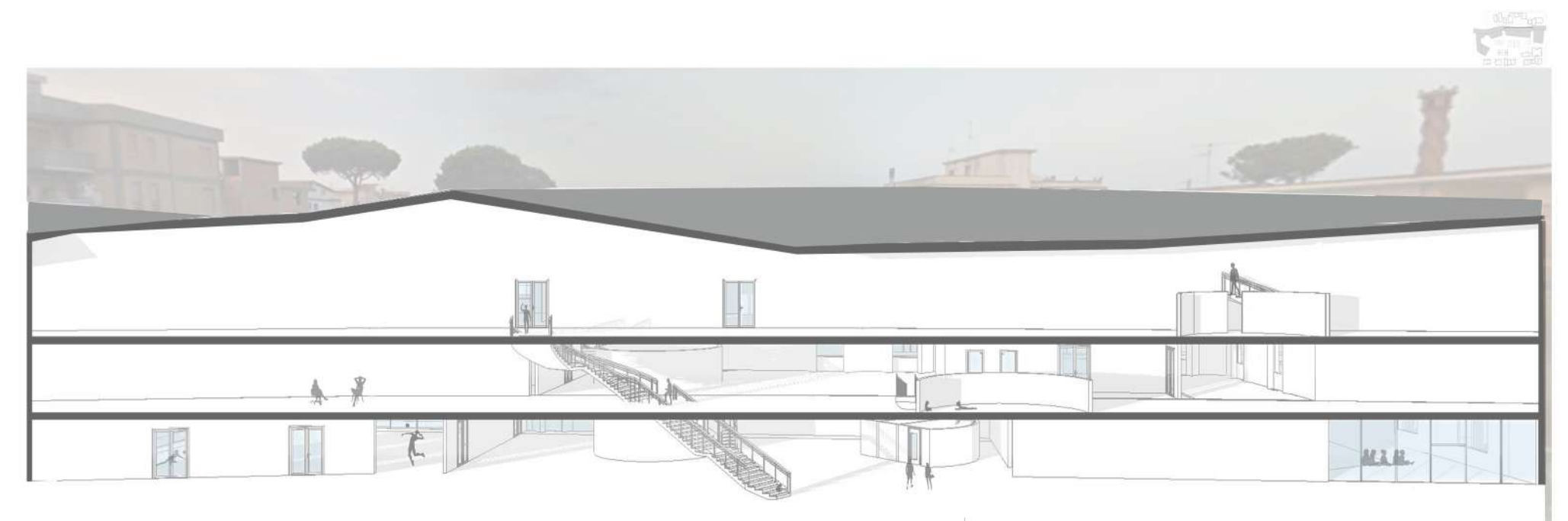
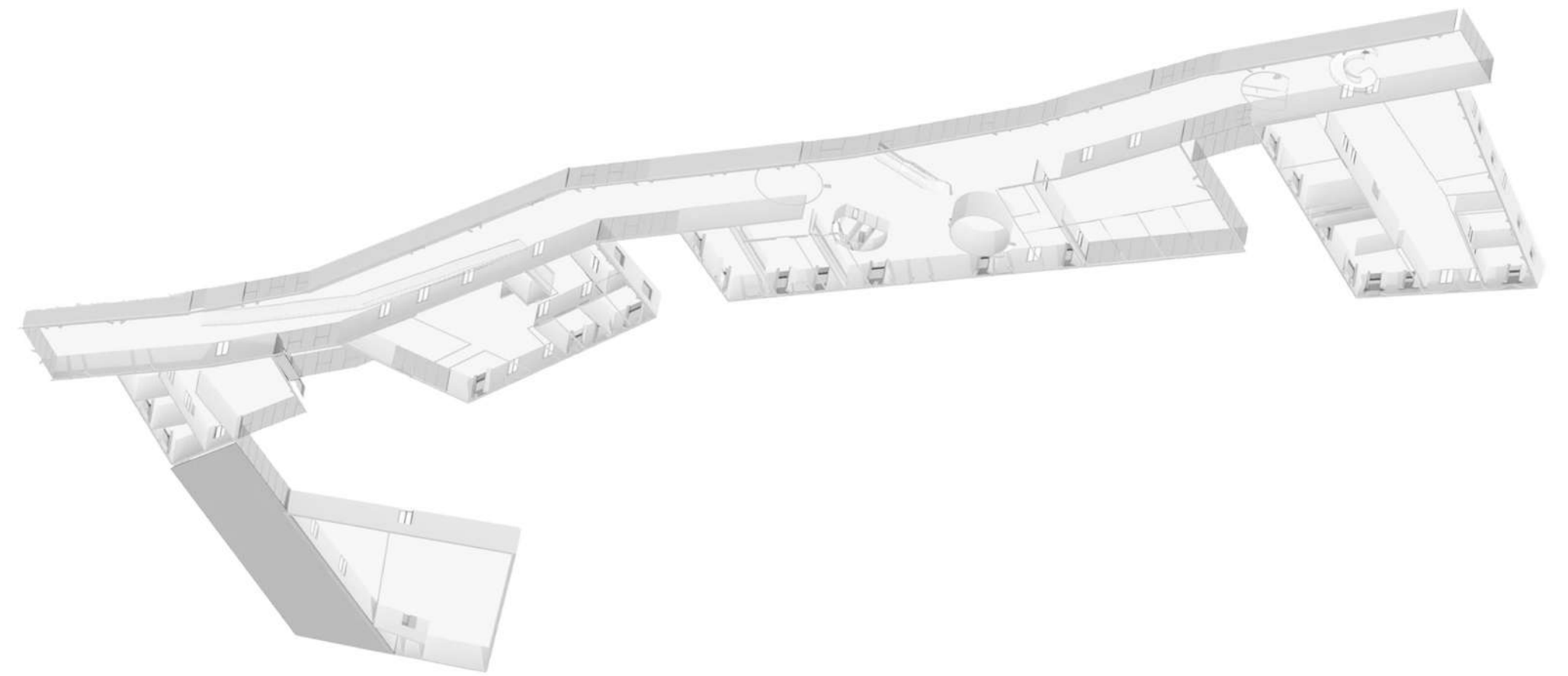
PLANT GROUND FLOOR +0,00



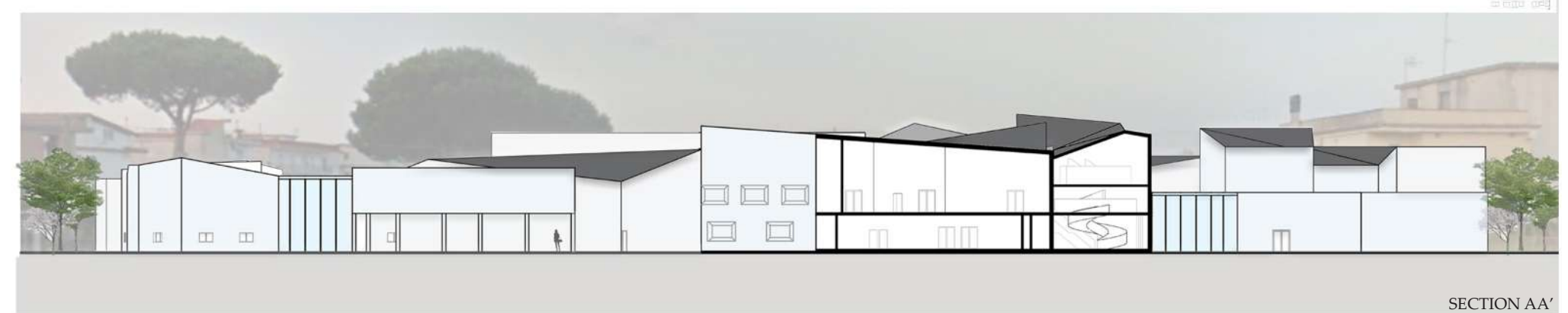
PLANT FIRST FLOOR +4,00



PLANT SECOND FLOOR +7,50



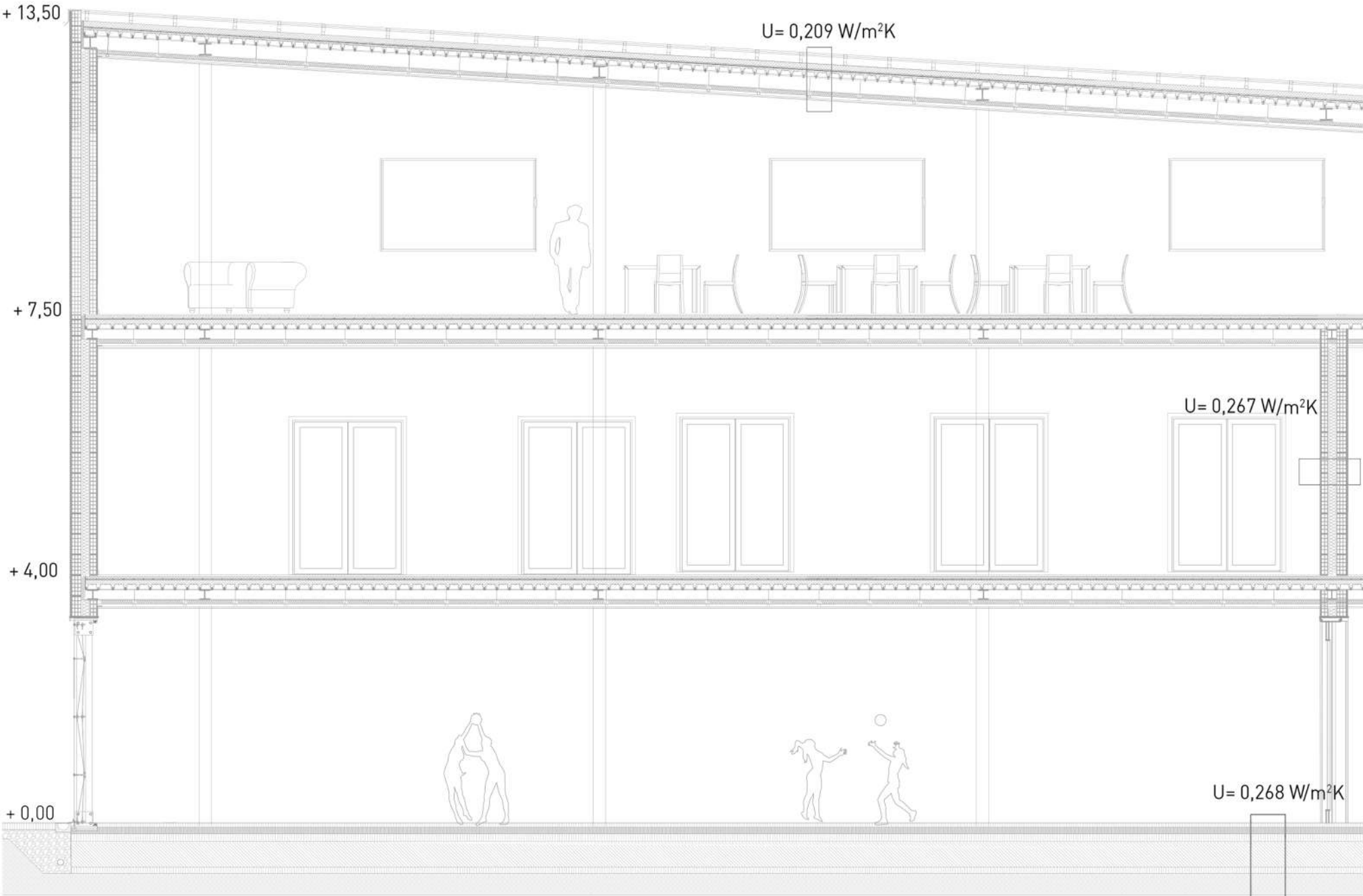
PERSPECTIVE SECTION - PRIMARY SCHOOL



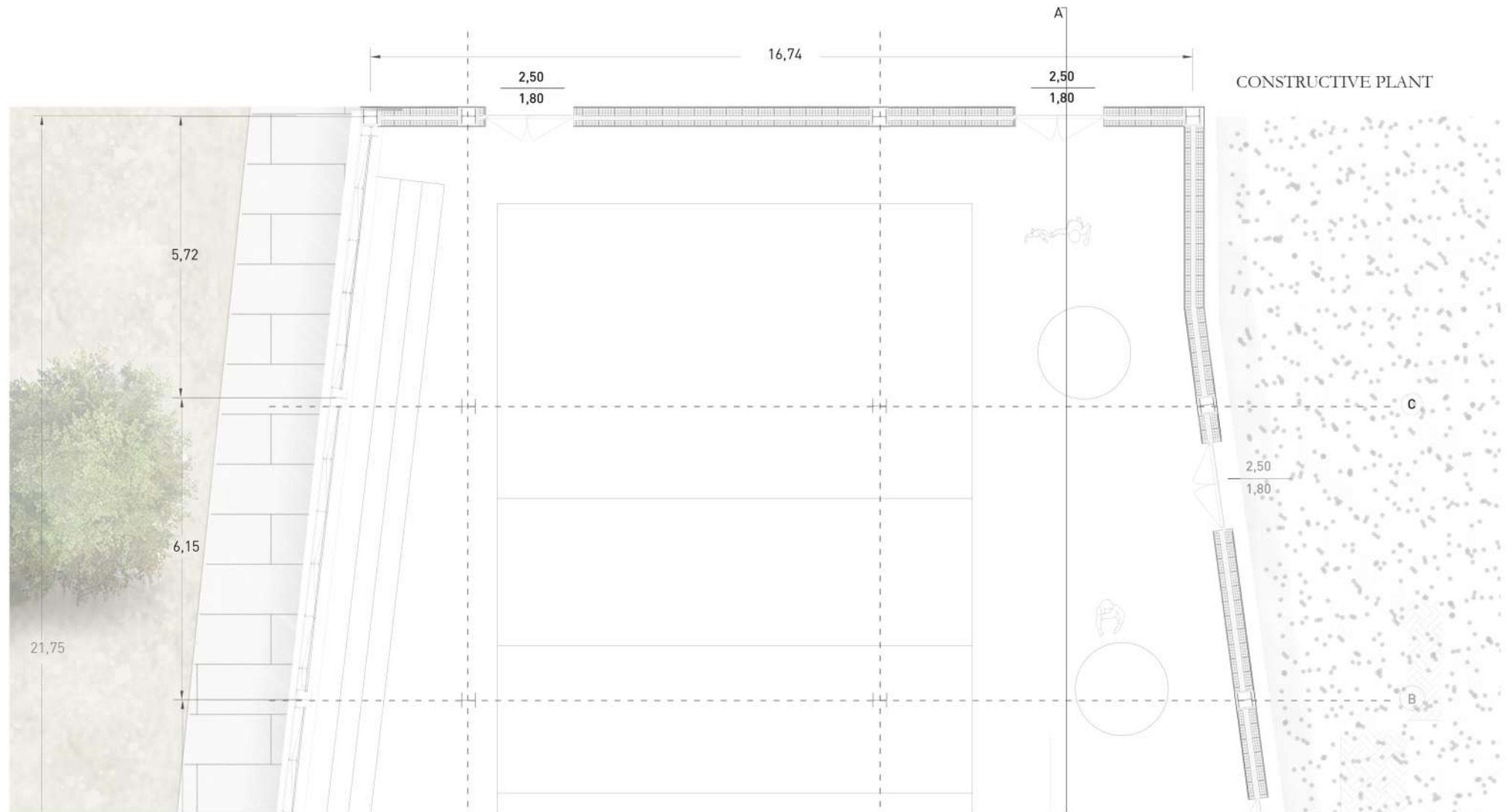
SECTION AA'



SECTION BB'



CONSTRUCTIVE SECTION



CONSTRUCTIVE PLANT

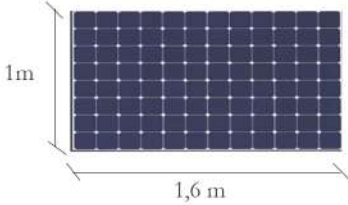
HEATING LOAD AT THE WINTER PEAK

21 kW \Rightarrow 41 W/ m²

COOLING LOAD AT THE SUMMER

67 kW \Rightarrow 150 W/ m²

AIR HANDLING UNIT \Rightarrow	4320 m ³ /h
ELECTRIC HEAT PUMP	
COOLING CAPACITY \Rightarrow	134 kW _{TH}
EER \Rightarrow	3,14
HEATING CAPACI- \Rightarrow	121,1 kW _{TH}
COP \Rightarrow	3,36



29 x CRYSTALLINE PANEL
TOTAL 10,34 kW_{EL}



COEXISTENCE OF INNOVATION AND PRE-EXISTENCE

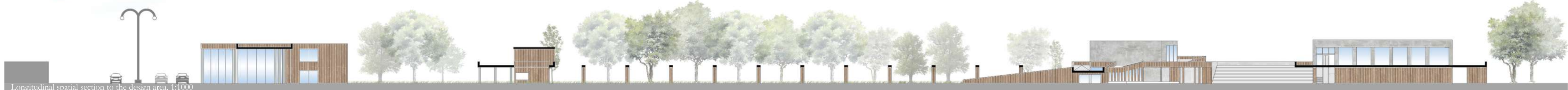
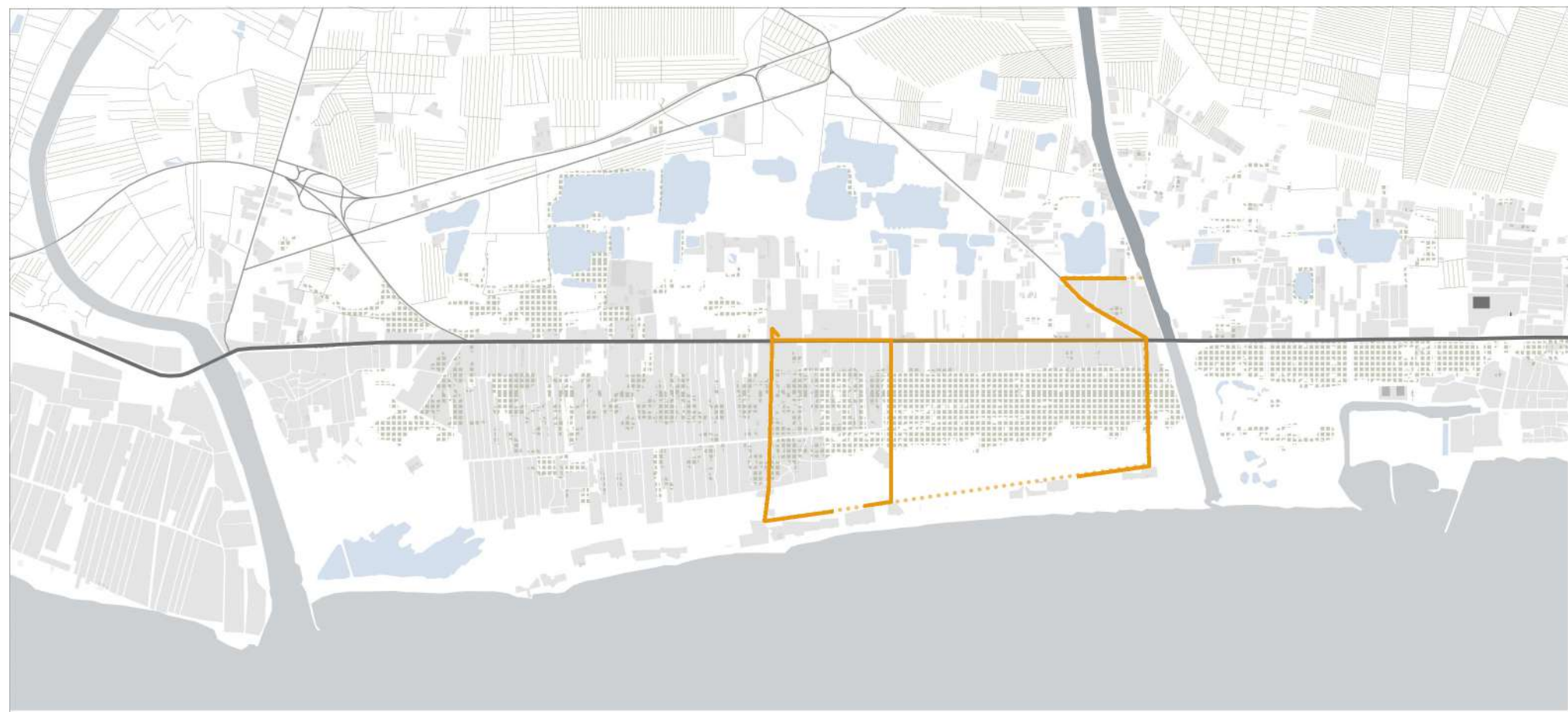
VERTICAL CONNECTIONS



EXTRACT FROM THE EQUALISATION RESULT







Longitudinal spatial section to the design area, 1:1000

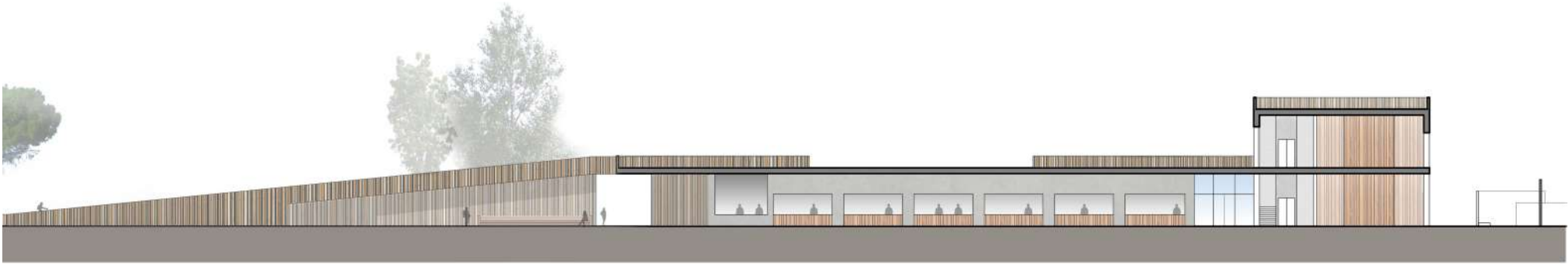
Castel Volturno rises along the “via domiziana”, a road that has strongly influenced the layout and development of the western territory of our urban region. The domiziana is an axis of functional connection of the entire coast which, locally imprints a rigid cut separating the coastal area from the agricultural one of the hinterland. This separation has been accentuated over the years by a widespread illegal building along the coast, with a strong cementification that made the soil waterproof and obstructed the relations between the coast and the hinterland; by illegal spillage of waste into the hinterland that has generated degradation and abandonment, and by the phenomenon of irregular immigration that has altered the social balance of the city. Castel Volturno is what we could call a non-traditional territorial reality, which is why the design approach was preceded by a non-traditional cognitive investigation. In particular, all Top Down strategies have been discarded, very little effective in such enigmatic and heterogeneous contexts, to follow criteria more similar to the bottom-up method, namely, a more empirical knowledge, strongly anchored to the specificities of the territory and which makes them the key to an adequate and coherent general approach. The aim of Detour is the deviation of the linear flow of Domiziana, through the composition/grafting of a cyclo-pedestrian infrastructure in strong conceptual and physical opposition with respect to the current development of the city, triggering a crossing-over, new relationships between the “parallel realities” of Castel Volturno, which now are segregated and without connection. The area of intervention therefore had necessarily to position itself along the Domiziana for satisfy some strategic requirements: have physical contact with the driveway axis to facilitate exchange of relationships, have immediate visibility and form a building curtain at the edge of the road axis. These requirements, cross-referenced with territorial constraints and the areas identified by the instrumentation

provincial urbanism as “Territori negati con potenzialità insediativa”, have vehicled the choice of the most favorable area. The project consists of a part “Soft”, characterized by a linear market that is configured as a ramp-roof-building provocatively placed in parallel to the Domiziana; challenges the rigid axiality of the road, bending, drilling and changing altitude in relation to the context, reconfiguring a complex and dynamic front. The architectural element in steel and wood wants to be a “urban service”, incorporating under the ramps Bike-sharing and Bus-stop, hosting in its interior multiethnic kitchens and food shops, arranging in the open-covered spaces architectural elements that can function as seats or stalls at the local market. Then there’s the “Hard” part, composed by three principal buildings and some others small services gravitating around a large open space, in a position diametrically opposite to the lot chosen, which is projected towards the area of the ponds. The buildings are: an Auditorium-cinema in concrete and steel, characterized by an overhang of about 20 meters that accommodates under a covered square and defines an additional access to the area design; a sport hall completely in steel structure that includes the pedestrian infrastructure and finally an agro-food market/exhibition space with similar structure to the linear market, that is in steel structure and wood paneling, which welcomes the sliding of the connecting gangway that holds together the whole project. Also the open space in the project play a fundamental role: green areas facilities and urban gardens in the vicinity of the built-up parts, cultivated fields in support of activities agro-food and themed gardens that are the glue between the two built-up poles. In conclusion, the design intervention is a provocation, the architectural expression of the lack of man-made services and infrastructures that enhance the territory and provide a adequate response to the multiple needs of the town of Castel Volturno.

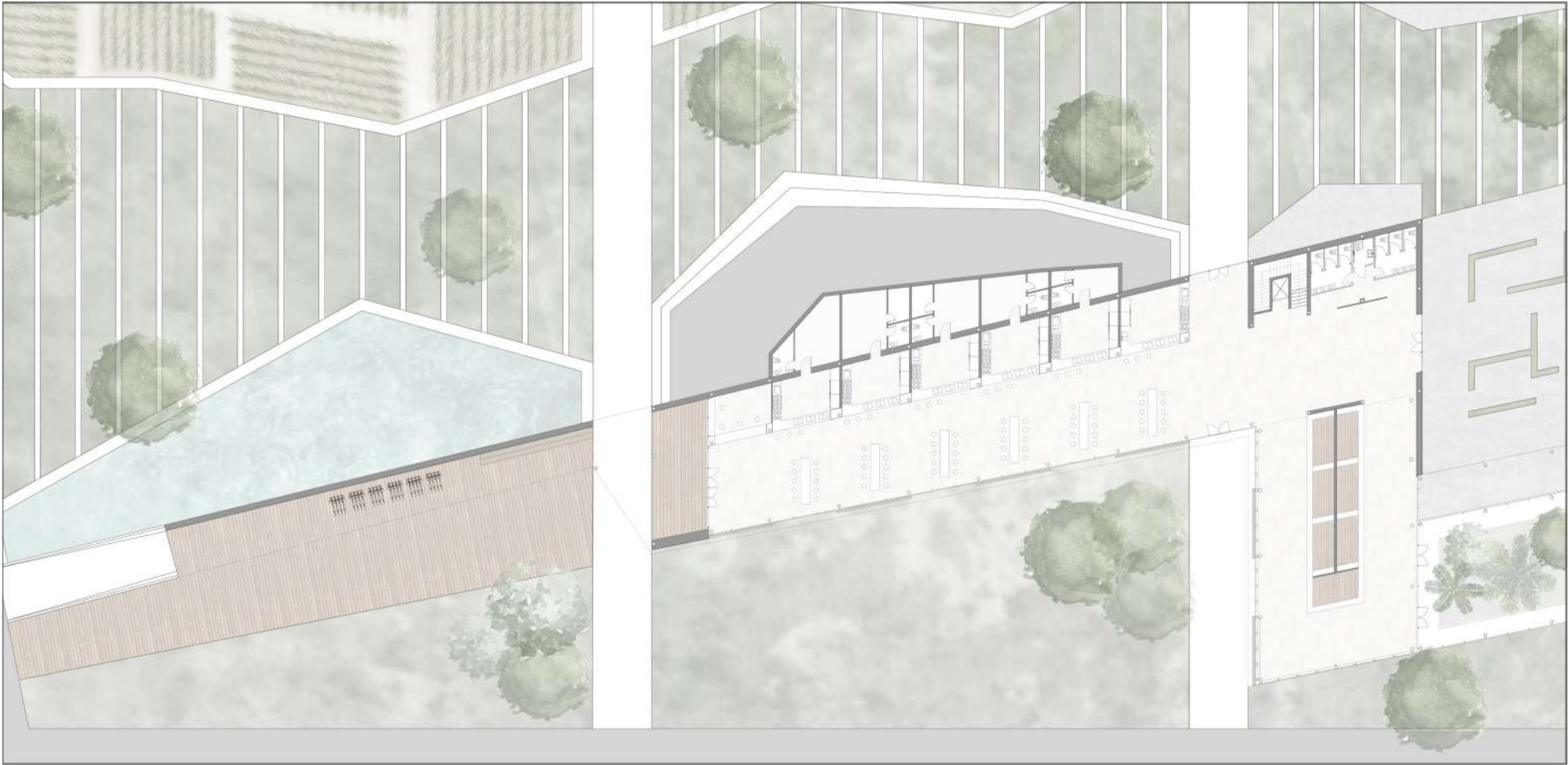




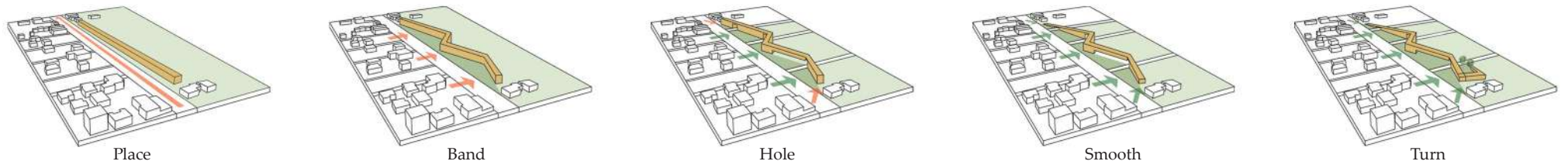
Building-ramp-platform front, 1:500



Section, 1:500



Plan, 1:500



Compositive scheme building-ramp-platform

Key-plan

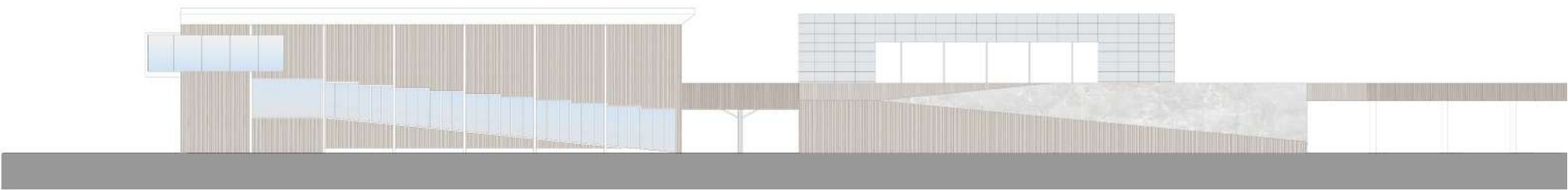
Genesis of the design composition

1 2 3 4 5

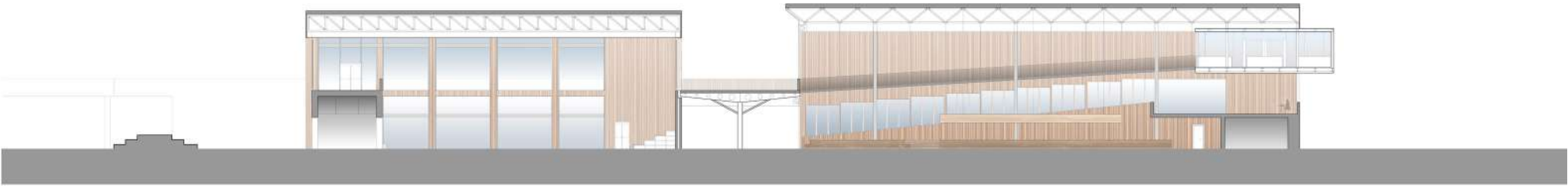
Compositional phases

1. Identification of the potential urban connection space
2. Sign of connection
3. Sign of the existing urban fabric
4. Reconfiguration of the connection sign on the urban fabric
5. Configuration of open spaces in relation to the built-up area

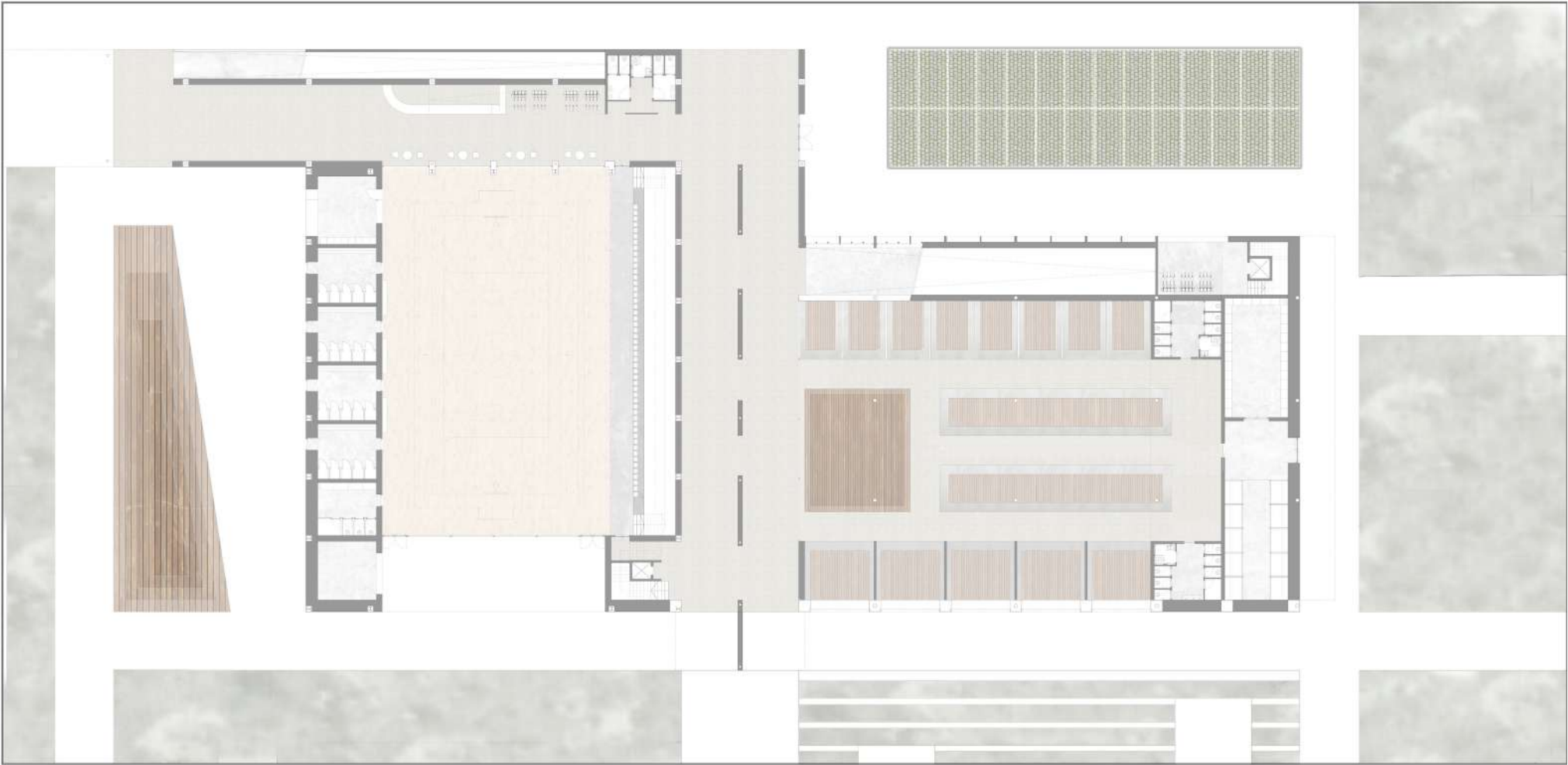
CENTRO STORICO VIA DOMITIANA VILLAGGIO COPPOLA



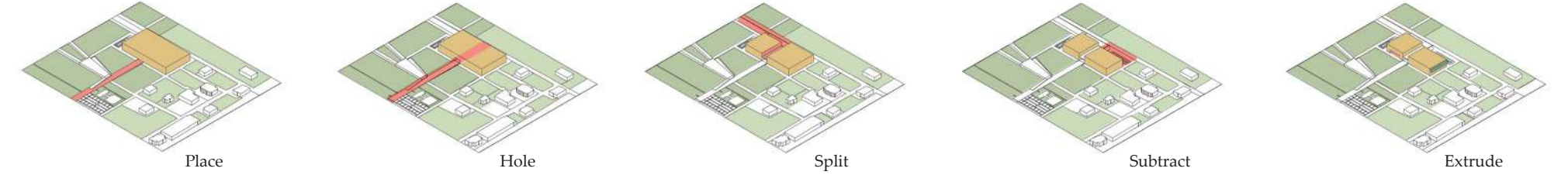
Sport-hall and covered market front, 1:500



Sport-hall and covered market section, 1:500



Plan, 1:500



Compositive scheme sport-hall and covered market

Study on project drainage flooring

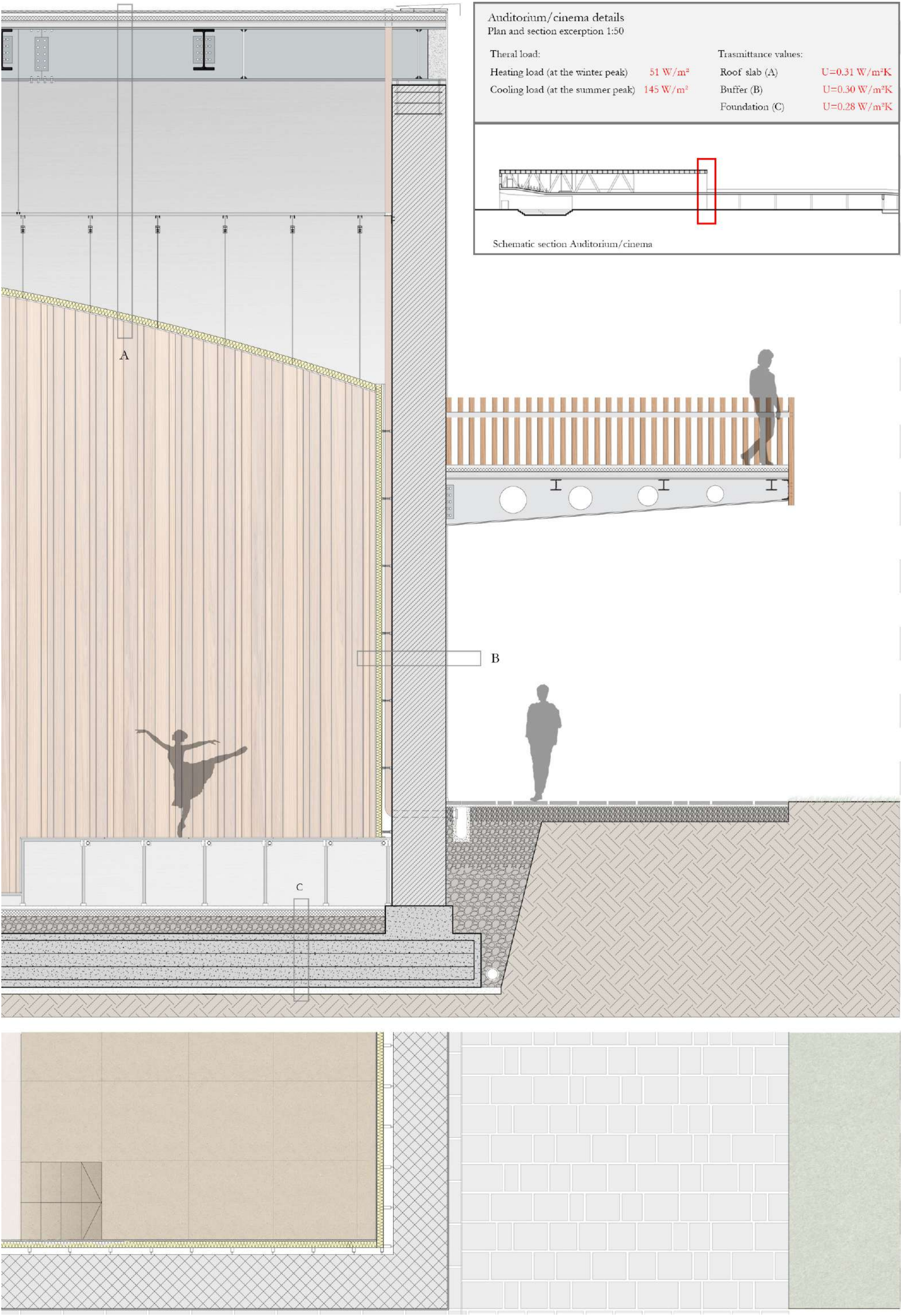
Relax Walk Break Bike Car Service

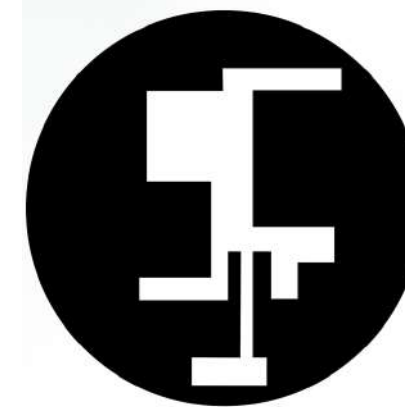
Functional axonometric scheme

100% green 100% permeable	75% green 100% permeable	50% green 100% permeable	0% green 100% permeable	25% green 100% permeable	0% green 100% permeable
------------------------------	-----------------------------	-----------------------------	----------------------------	-----------------------------	----------------------------

Legend

- Multi-ethnic Market
- Greenhouse
- Info-point, food-shop
- Info point, bike-sharing
- Cinema, Auditorium
- Locker room, coffee bar
- Distribution gallery
- Sport hall
- Covered Market, Cooking School
- Covered connections





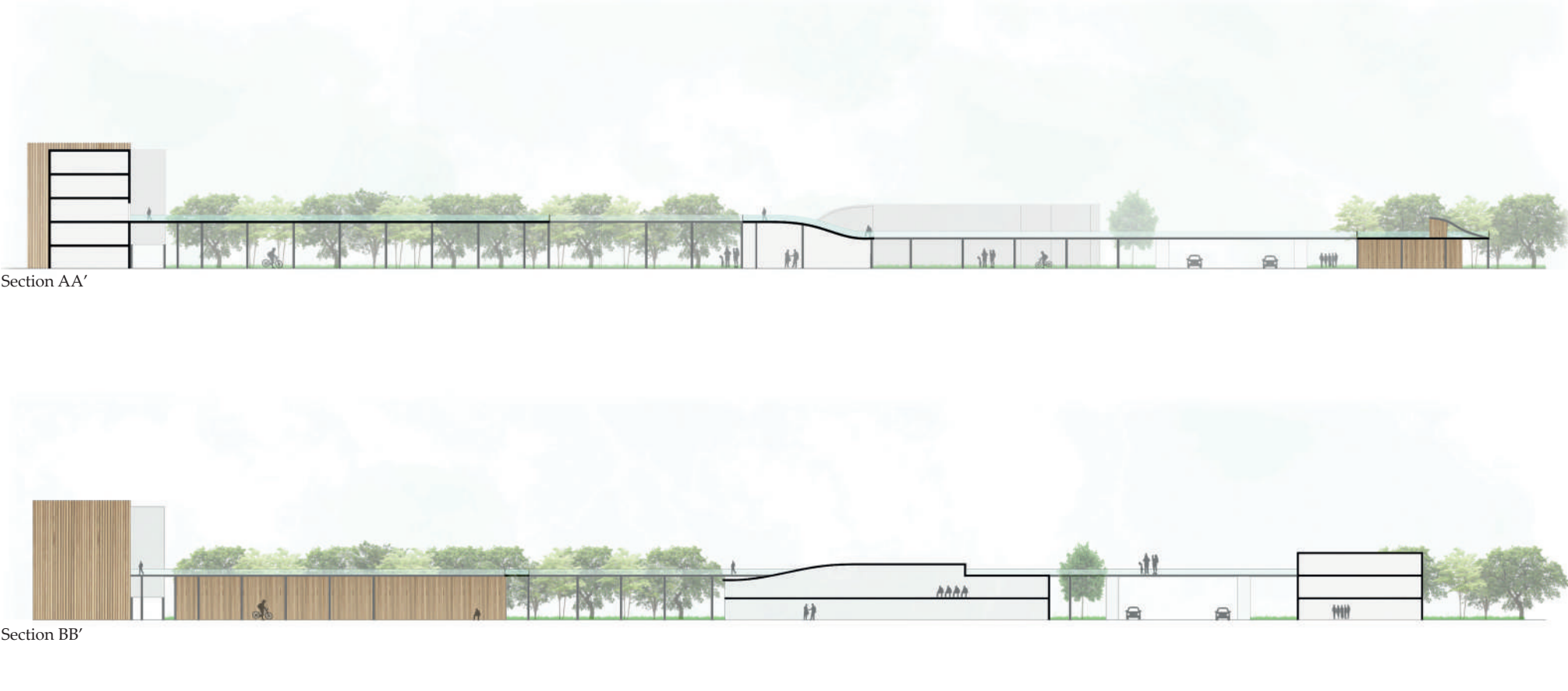
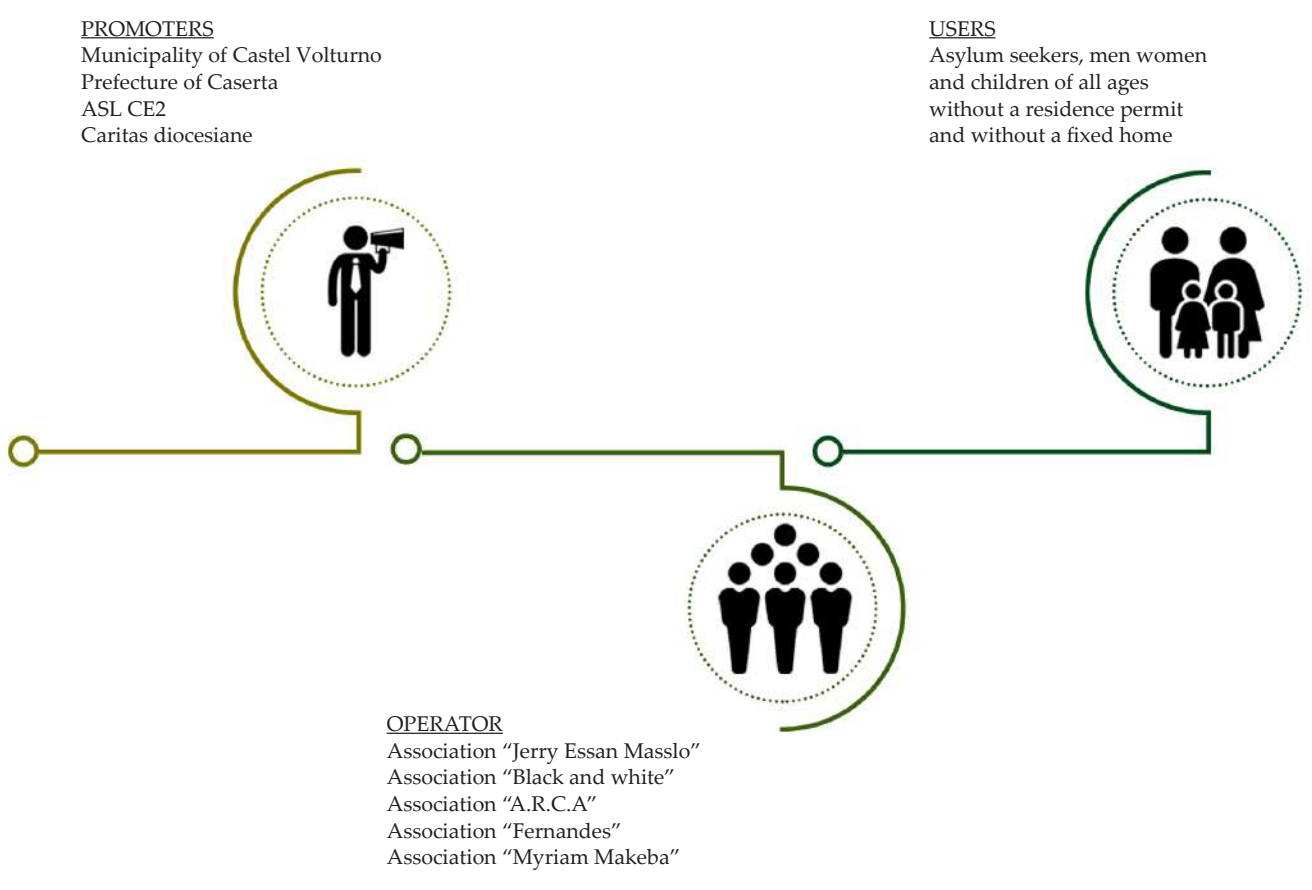
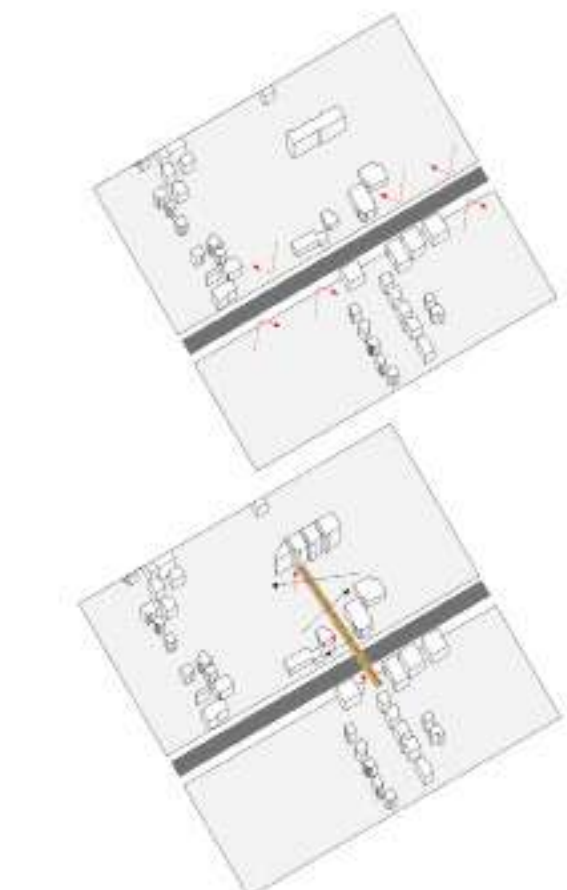
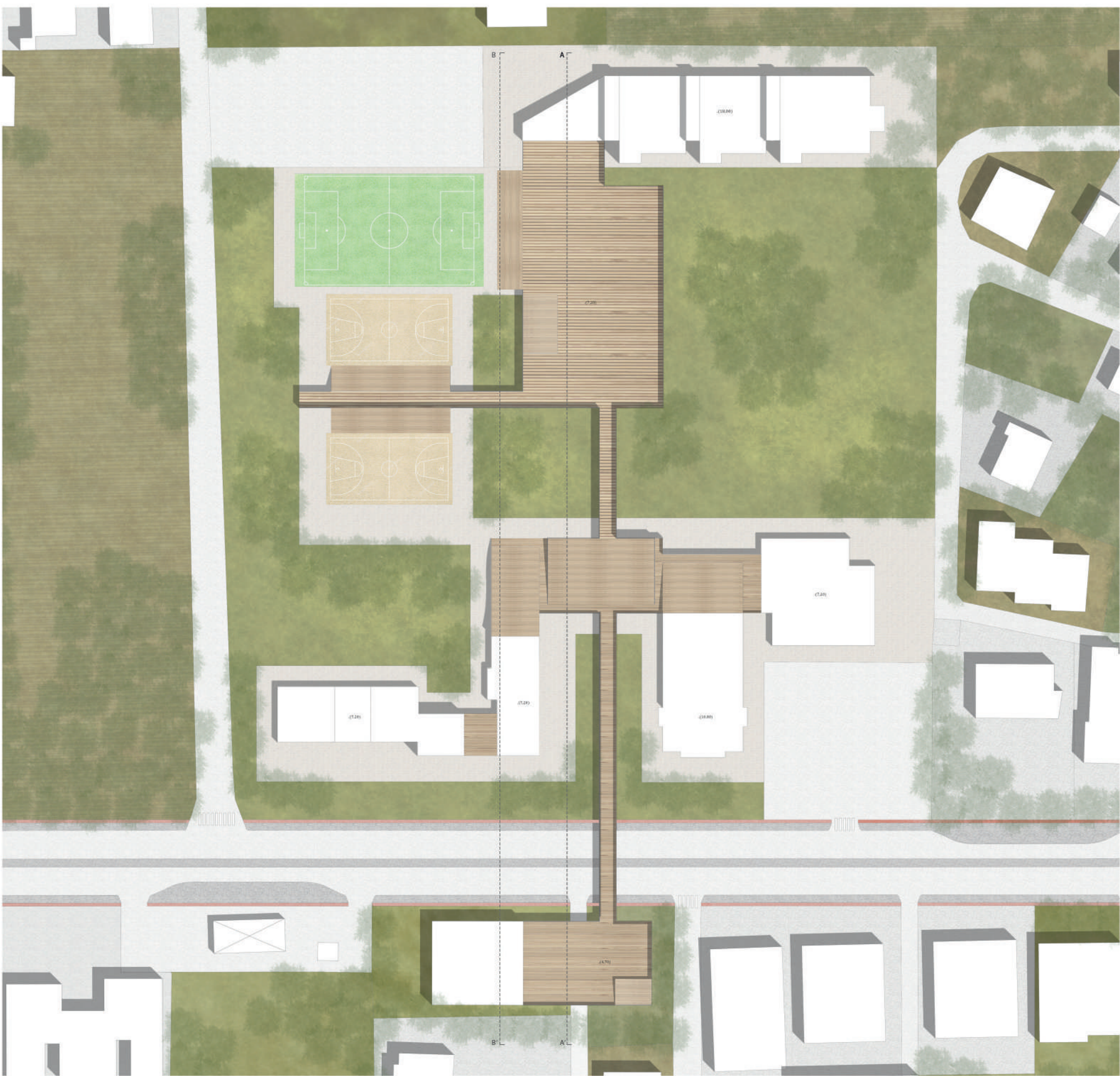
Recovered Link

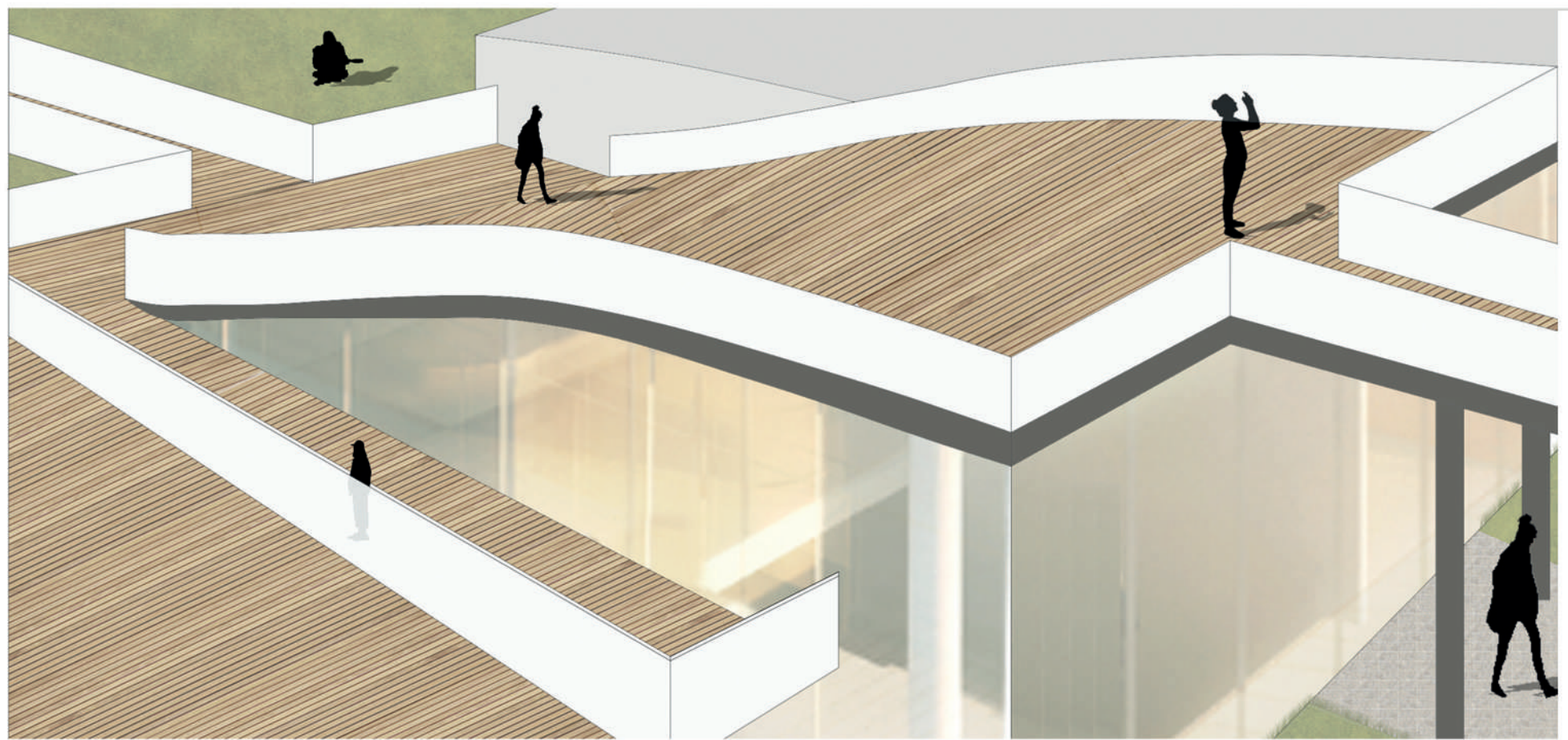
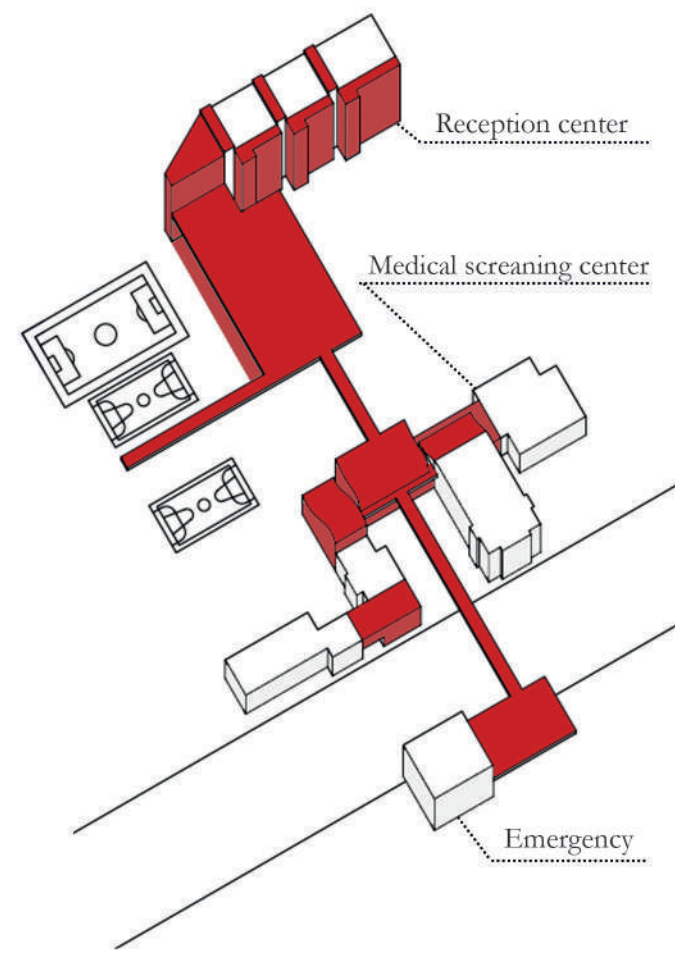
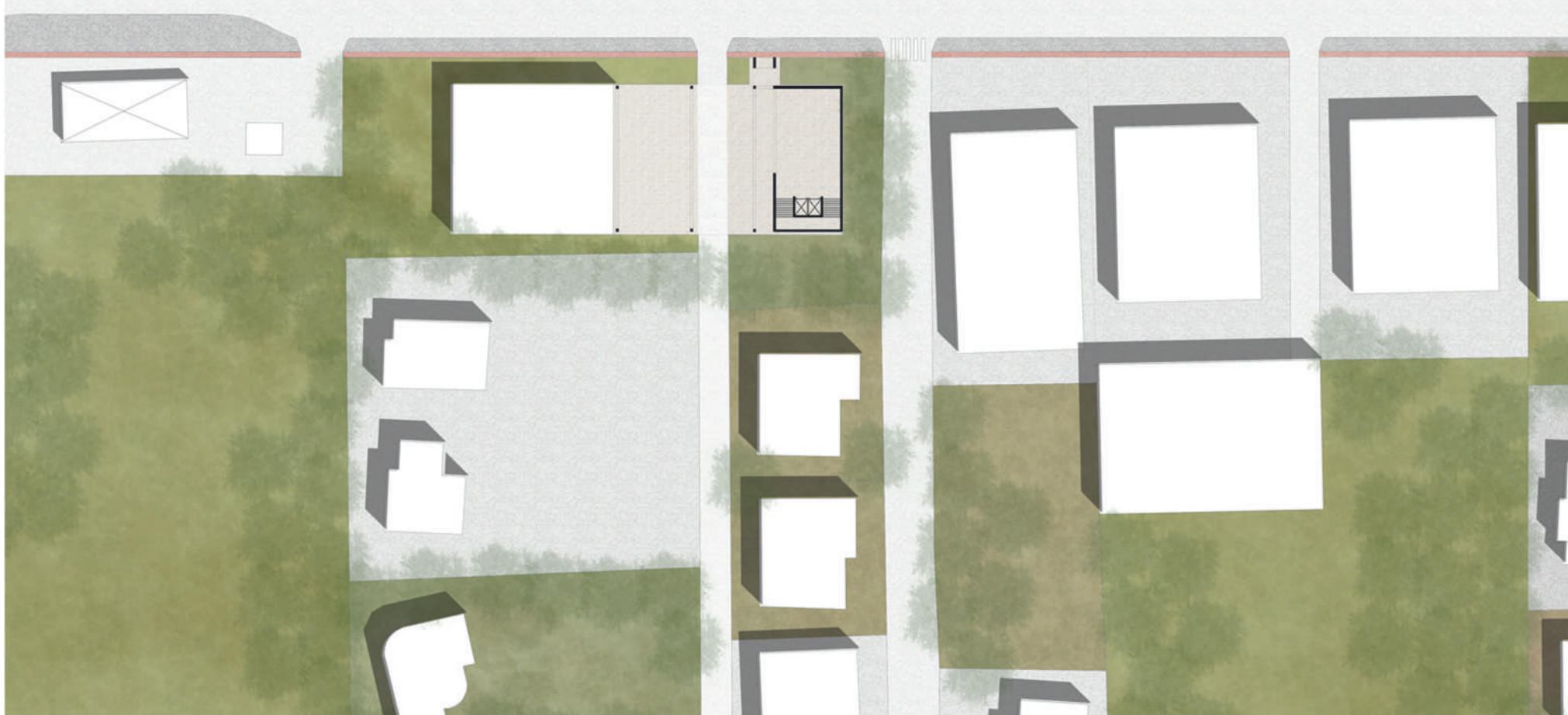
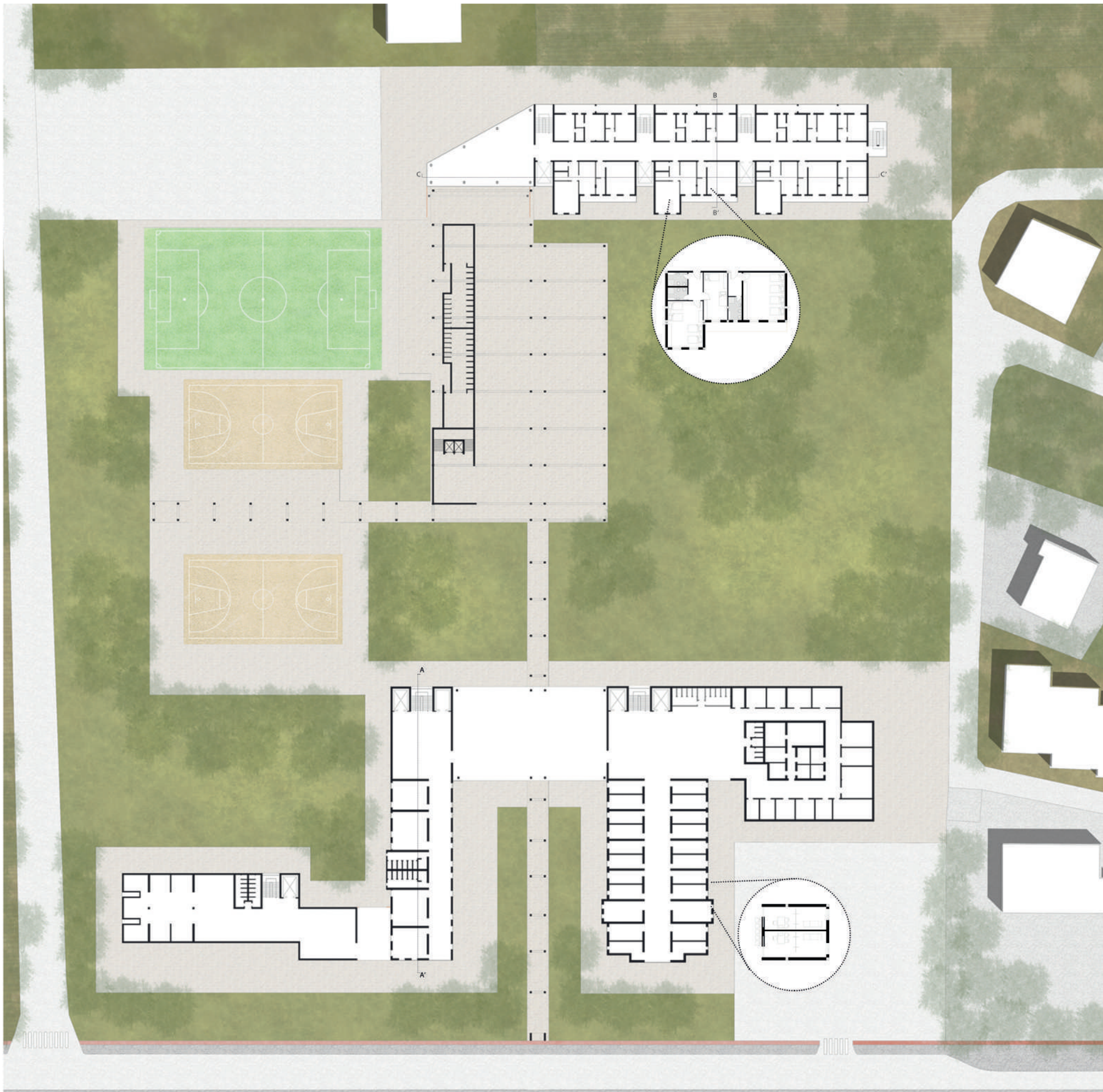




The goal of the design is to solve two main aspects which have emerged in the preliminary analysis phase. The first one is the large number of immigrants in the area of Castel Volturno and the second one is the Domiziana road, which is a dangerous and degraded place. The project starts with the research of space for a new urban development proposal, feasible in term of time and money and with growth opportunities that take into account a certain segment of the population in socially useful spaces. On one hand the design proposes the annexation in the local context of hospitality centres to take care of the new inhabitants. On the other hand, the goal is also to start a process of regeneration, recovery and revitalization of disused areas or currently with other uses. The design solution is to create a first aid center connecting the two sides of the Domitiana street. After having analyzed all the hospitality centres for immigrants in Castel Volturno, I decided to focus on the area in front of the existing emergency center. This area suits better to a modular system building that can be replicated in other areas of the city. It provides first and second hospitality in structures with specific functions for a maximum integration of refugees, who are called to collaborate in the

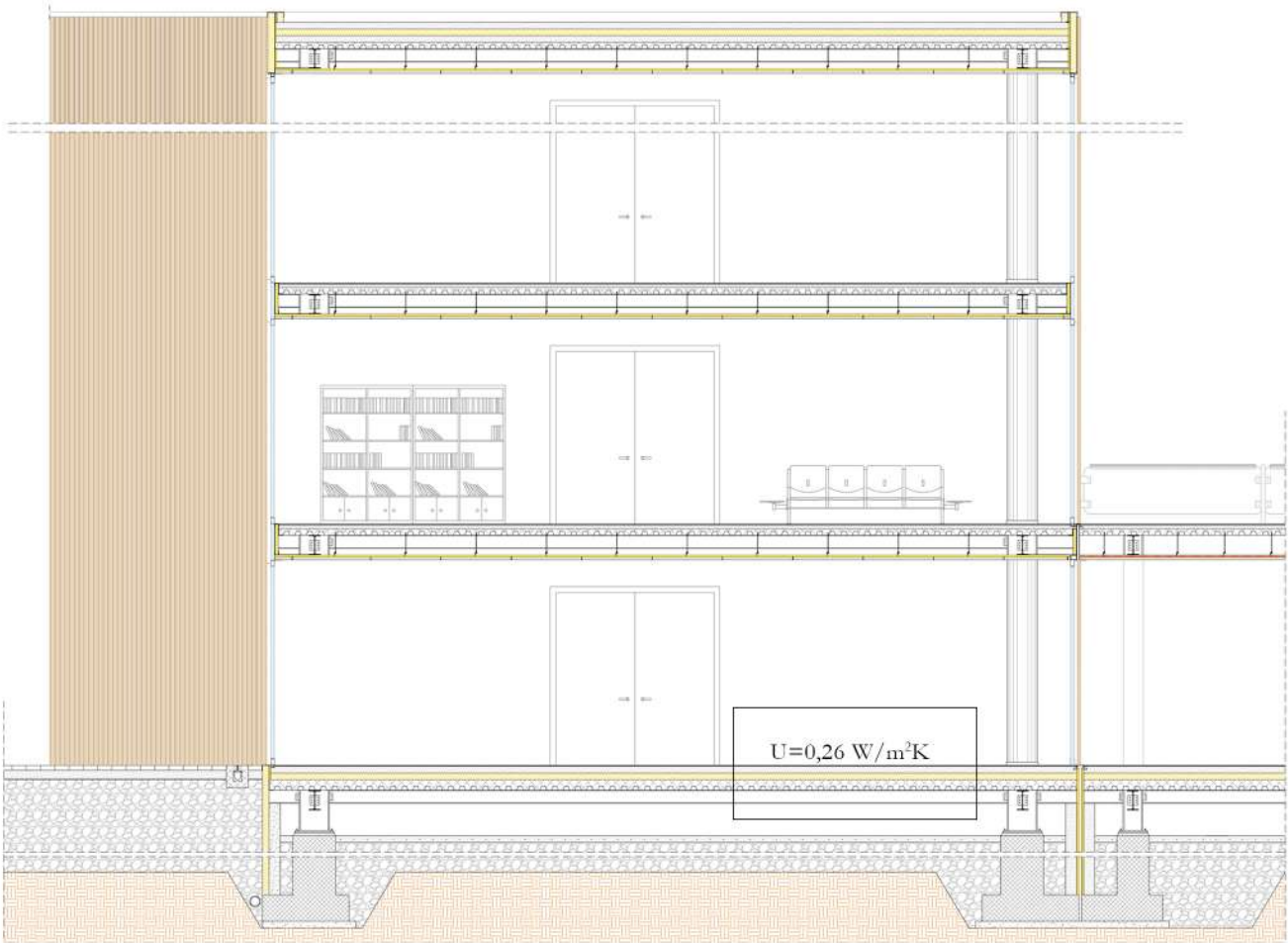
center itself. The idea is to create an “Hotspot” for medical screening to observe immigrants from a medical point of view. The design is limited to restore the existing and neglected buildings, reconfiguring the internal space and creating blocks that act as horizontal and vertical connections. Associated with the Hotspot there is also an “Hub” system for first reception, which houses immigrants for a maximum of 30 days, the bureaucratic time in theory needed to complete the practices of requesting protection. For the structure of the reception center the reconfiguration is of both interior and exterior spaces and the demolition of all vertical closures which are replaced with new functions. Also in this case, additional elements have been designed, including balconies and a new connection to the existing building which serves as an access and community place. All these buildings are connected with each other and with the Emergency center, thus overcoming the crossing of the Domitiana, through a walkway which doesn’t have just a simple role of distribution but it becomes an integral part of the square by hosting spaces for rest, seats and trees.



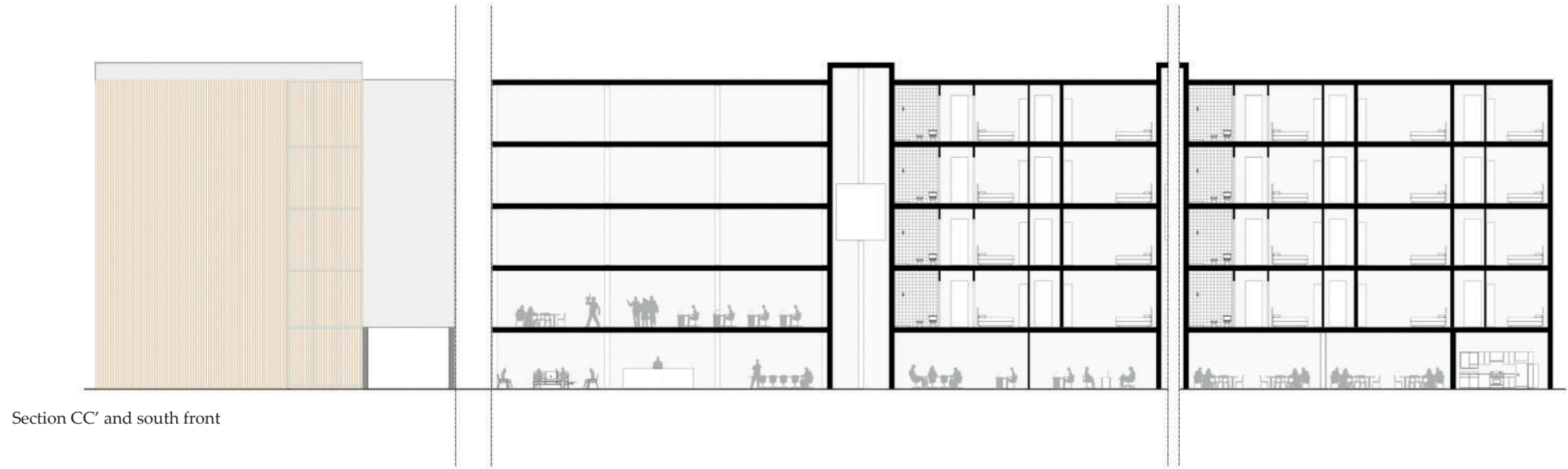




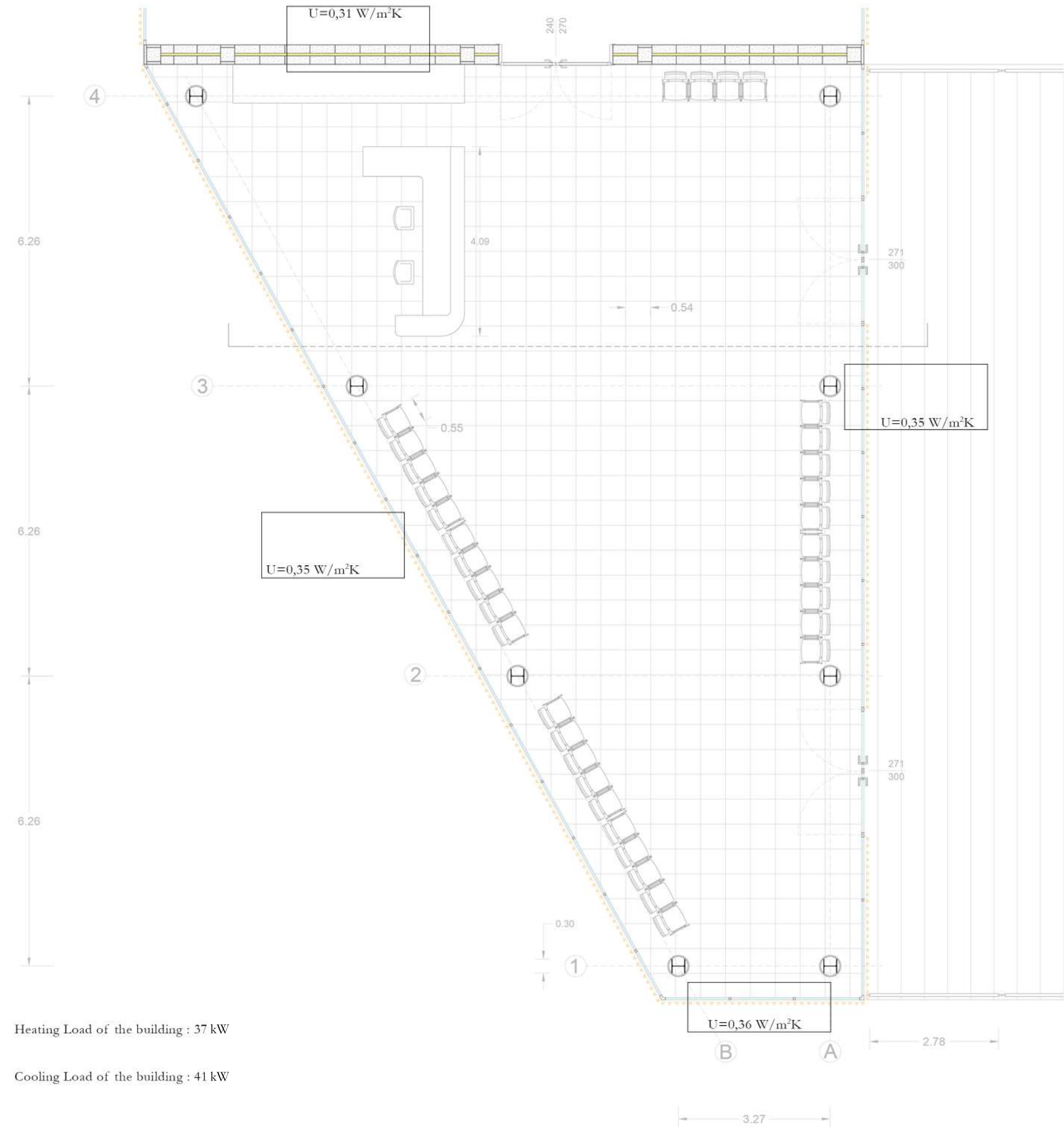
Section BB' and west front



The curtain wall is shaded with solar slats, g factor= 0,05



Section CC' and south front

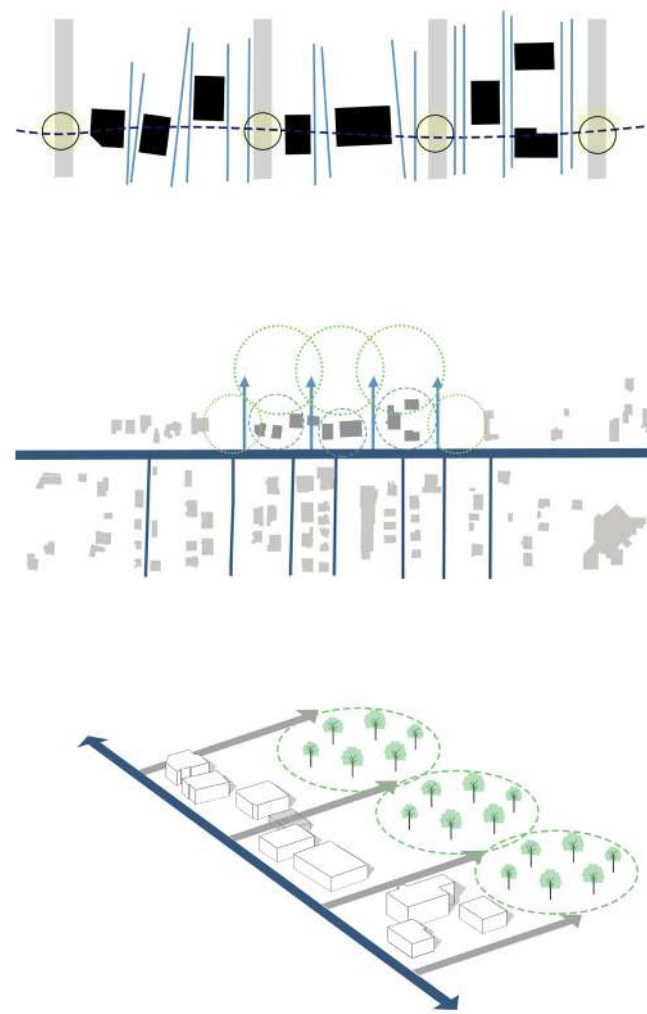
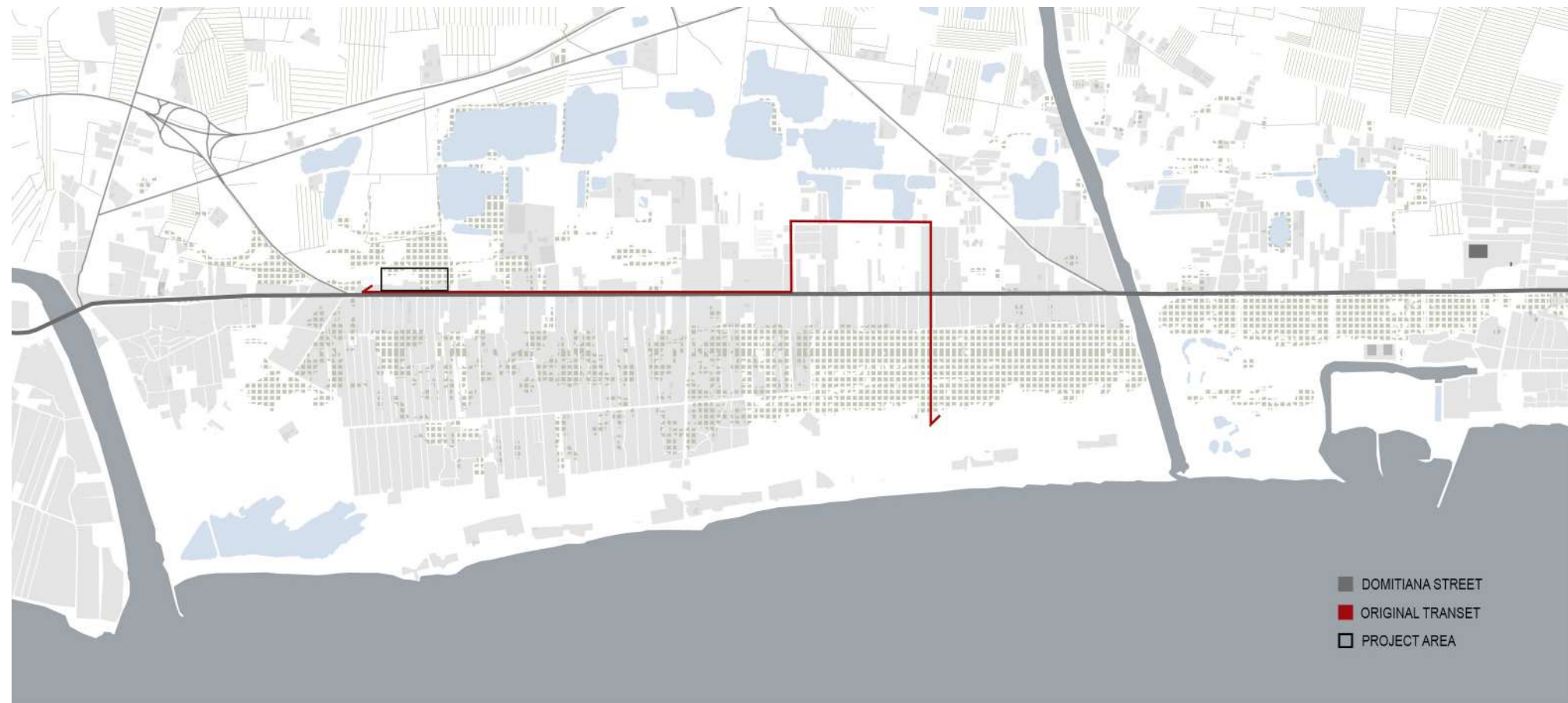


Heating Load of the building : 37 kW

Cooling Load of the building : 41 kW

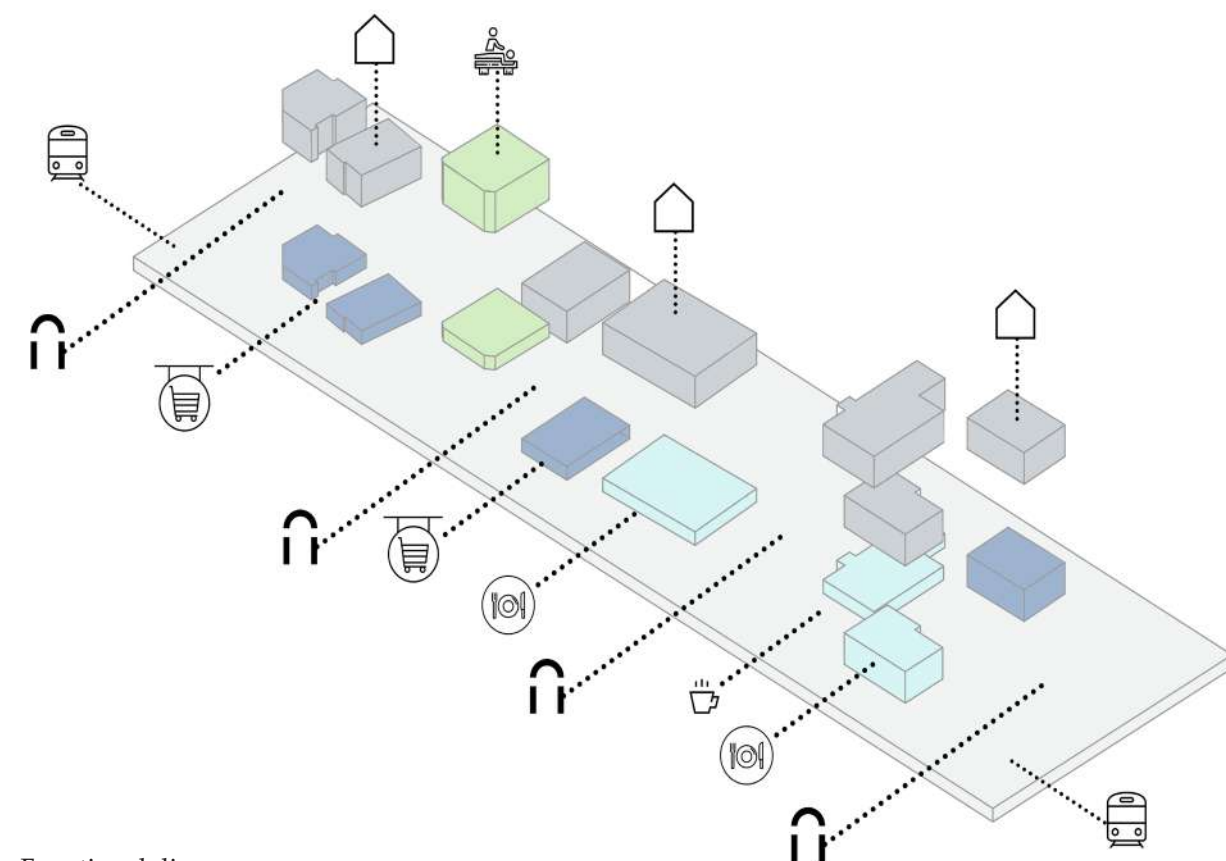






The lot chosen as the project area is located close to the Domitiana and the ponds. Considering the particular conditions of urban degradation that characterize vast settlements present in the municipal territory of Castel Volturno, it is evident that the new buildings will have to represent the main instrument, also economic, for the implementation of the strategies, placing at the center integrated recovery and new construction interventions characterized by a strong public building component. The set of cognitive analyzes and growth scenarios allow defining a coherent framework of guidelines also for the purpose of determining the need for space for productive activities. The transformation of the intervention area close to the Domitiana and the areas denied with settlement potential and environmental potential, foresees a visionary turning point in a socially congested residential area. The imminent conversion process will bring the area from contextual isolation to become a different, green and integrated part of the surrounding neighborhood. The project's objective is the economic and tourist development of Castel Volturno; from a degraded to an attractive area. The project strategy is to aggregate the nine buildings in the lot, with the intention of opening the entire settlement system to the public with four new road accesses at those

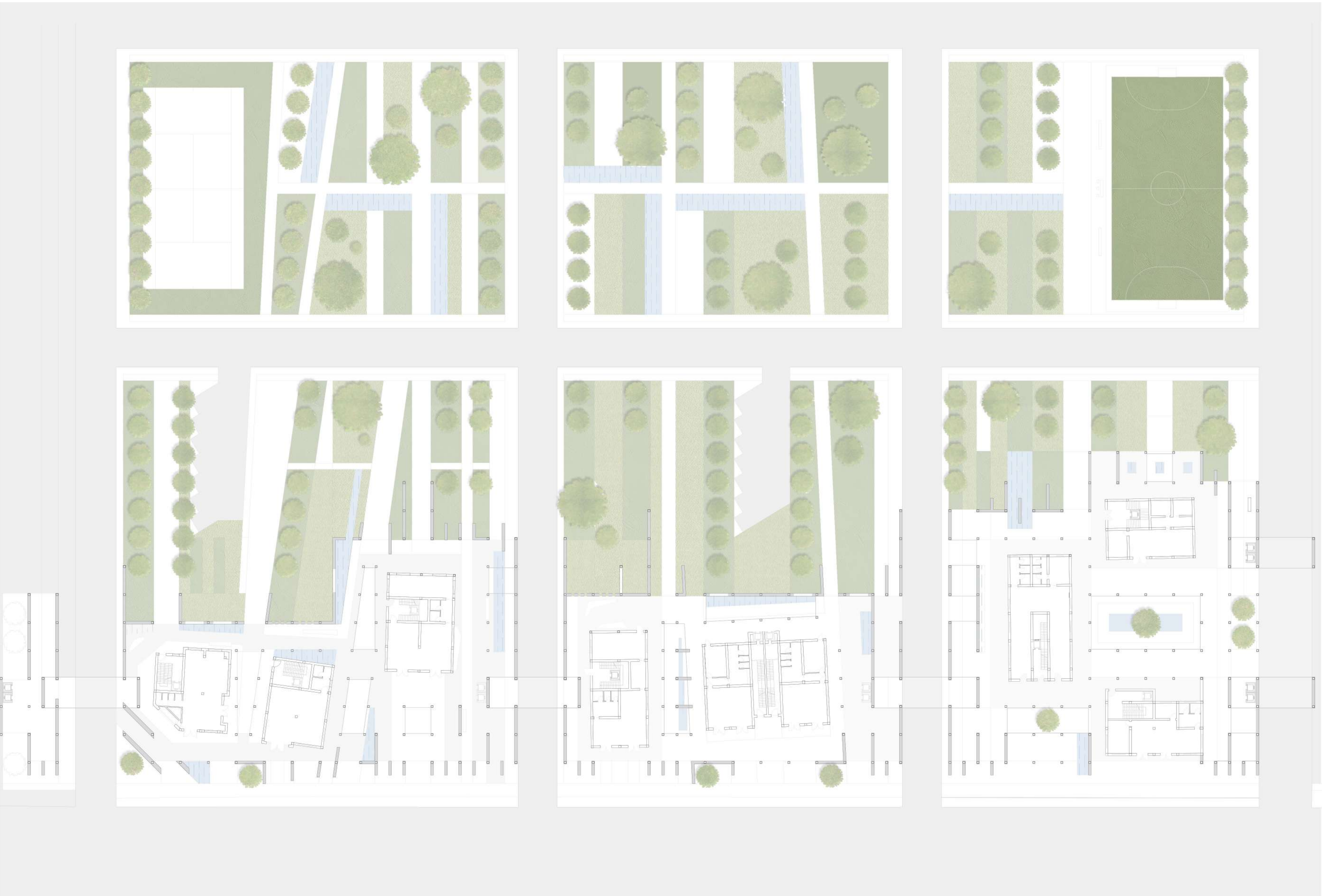
latent spaces that were considered important to open the Domitiana towards the green inner part of the city. Thus identifying three interconnected nucleuses with a series of paths. The intent is to make the contemporary architecture distinguishable, with the aggregation of the existing buildings that define the entire base part destined for commercial use where the masonry walls make up the space and follow their positions buildings that create continuity. The entire project therefore makes use of a completely public basement and a more private upper part, where the two languages that distinguish and characterize the façade that makes up the entire façade on the Domitian stand out. On the sides of the entire body in question, two bus stalls have been placed, the whole set-up includes a series of cycle and pedestrian paths, behind which the whole body has been designed for green spaces active for residents and visitors. The main theme is the landscape in relation to the city with a focus on related productive activities, linked to the buffalo supply chain with the incentive of new jobs and which takes into account the activities of transformation and marketing of typical local products, thus rethinking the urban space to welcome the sense and the new demand for well-being situations linked to the agricultural landscape.



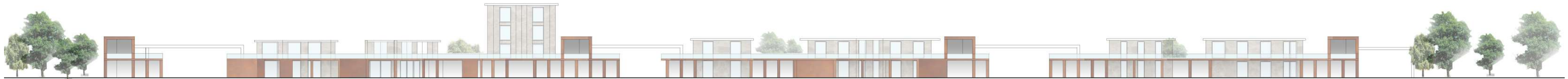
Functional diagram



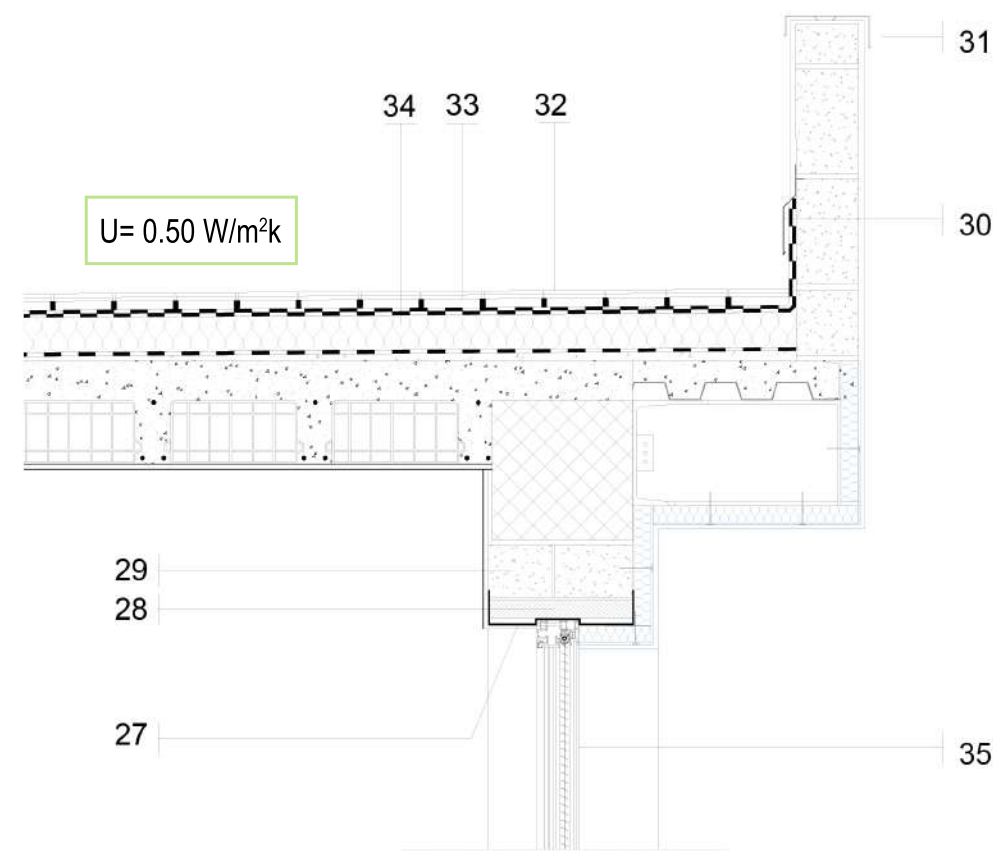
Masterplan



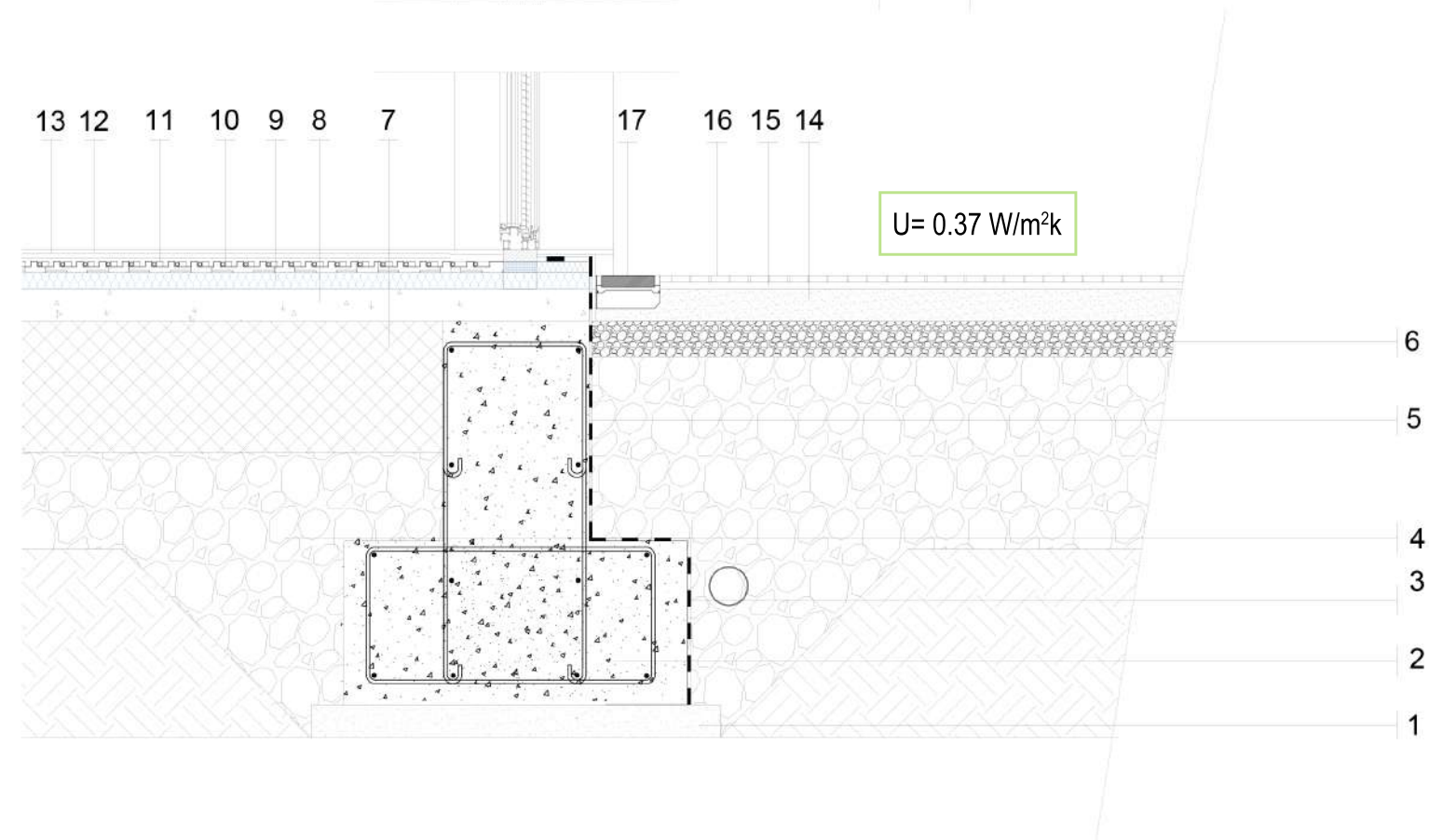
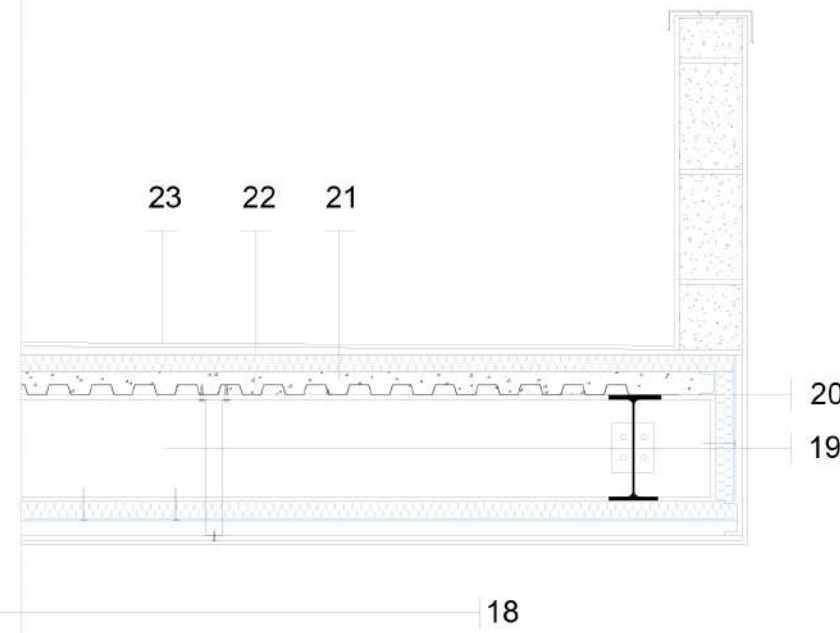
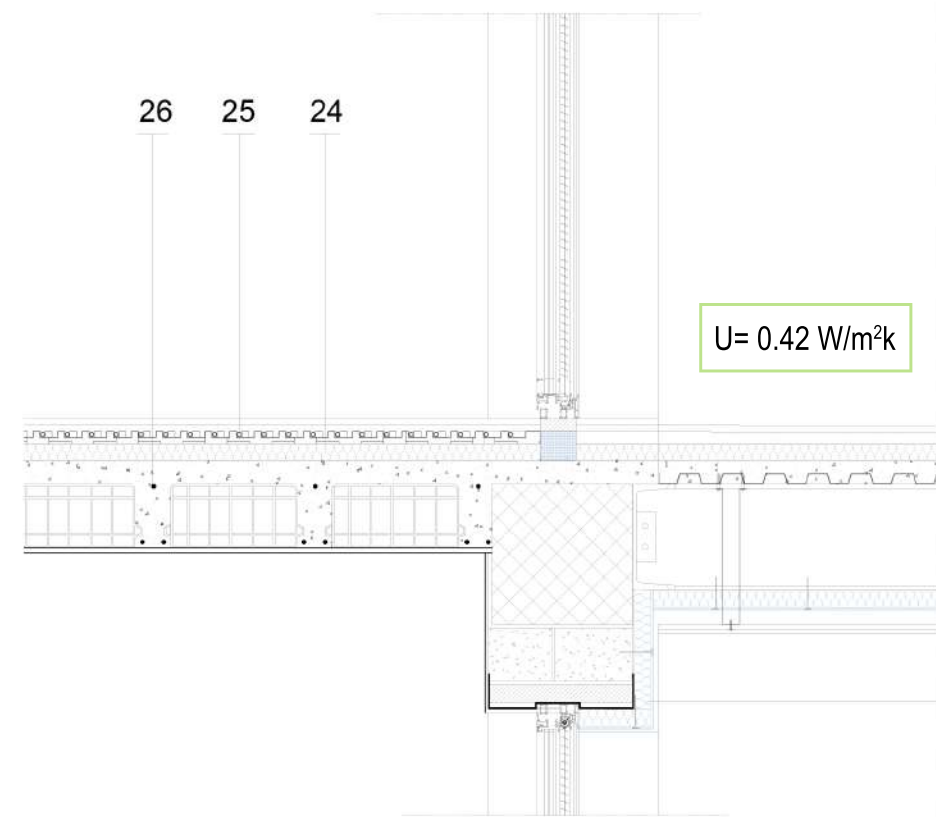
Ground floor plan



Front



1. Concrete masonry sp. 10 cm;
2. Foundation plinth;
3. Waterproofing sheath for foundation plinth sp. 1 cm;
4. Resistant soil;
5. Waterproofing Sheath;
6. Drainage pebbles;
7. Foundation slab in reinforced concrete sp. 40 cm;
8. Concrete screed, th. 10 cm;
9. STIFERITE GTE sp. 5 cm;
10. Radiant panels;
11. Leveling screed sp. 1 cm;
12. Cement mortar sp. 1 cm;
13. Porcelain stoneware flooring sp. 2 cm;
14. Leveling screed sp. 10 cm;
15. Mortar for outdoor paving sp. 2 cm;
16. Non-squared stone flooring sp. 2 cm;
17. Harpo slot channel;
18. Corkpan cork coat sp. 6 cm;
19. upn beam;
20. Corrugated sheet;
21. Leveling screed;
22. Flooring mortar;
23. Outdoor flooring;
24. Stiferite gle sp. 5 cm;
25. Radiant panel;
26. Reinforced concrete slab;
27. Steel upright;
28. Concrete girder;
29. Cellular concrete blocks, Gasbeton;
30. Stone flashing sp. 2.5 cm;
31. Metal flashing;
32. Paving TWIN FLOOR L sp. 2.2 cm;
33. NESITE fixed flooring supports h 2.5 cm;
34. Corkpan cork insulation sp. 10 cm;
35. Schüco Verbundfenster AWS 120 CC.SI sp. 10 cm

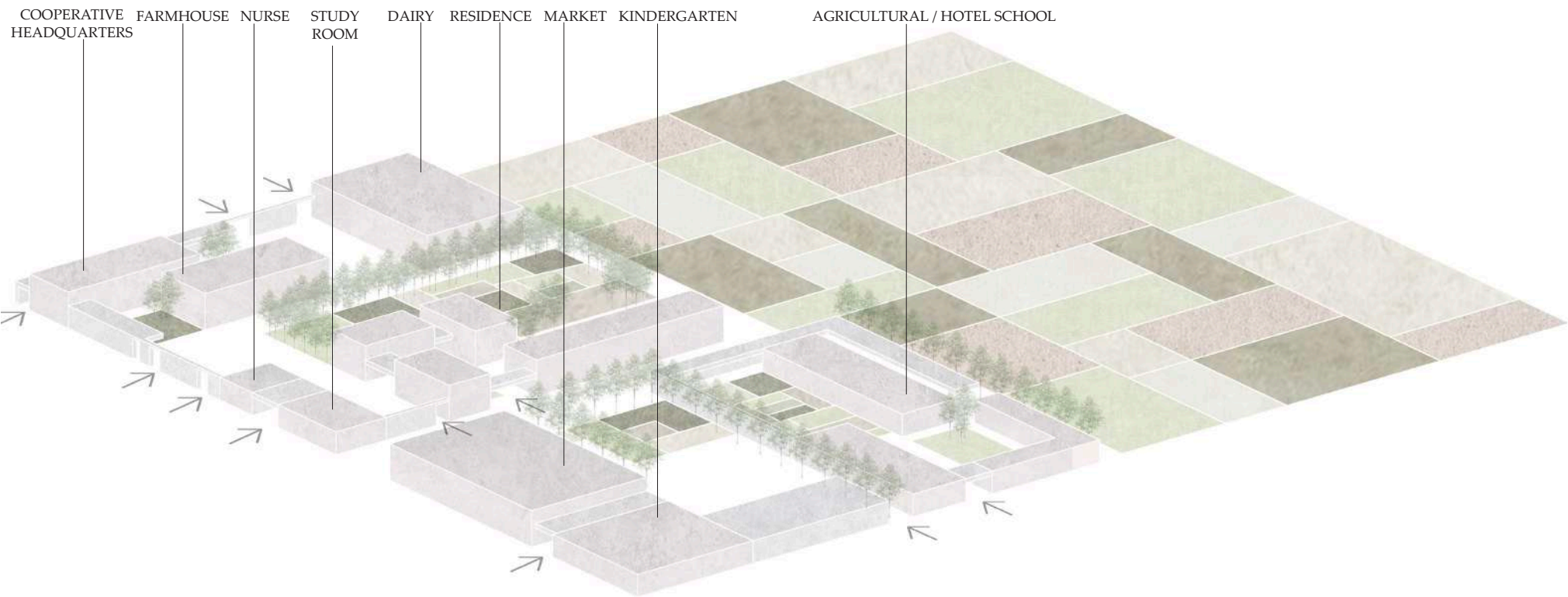
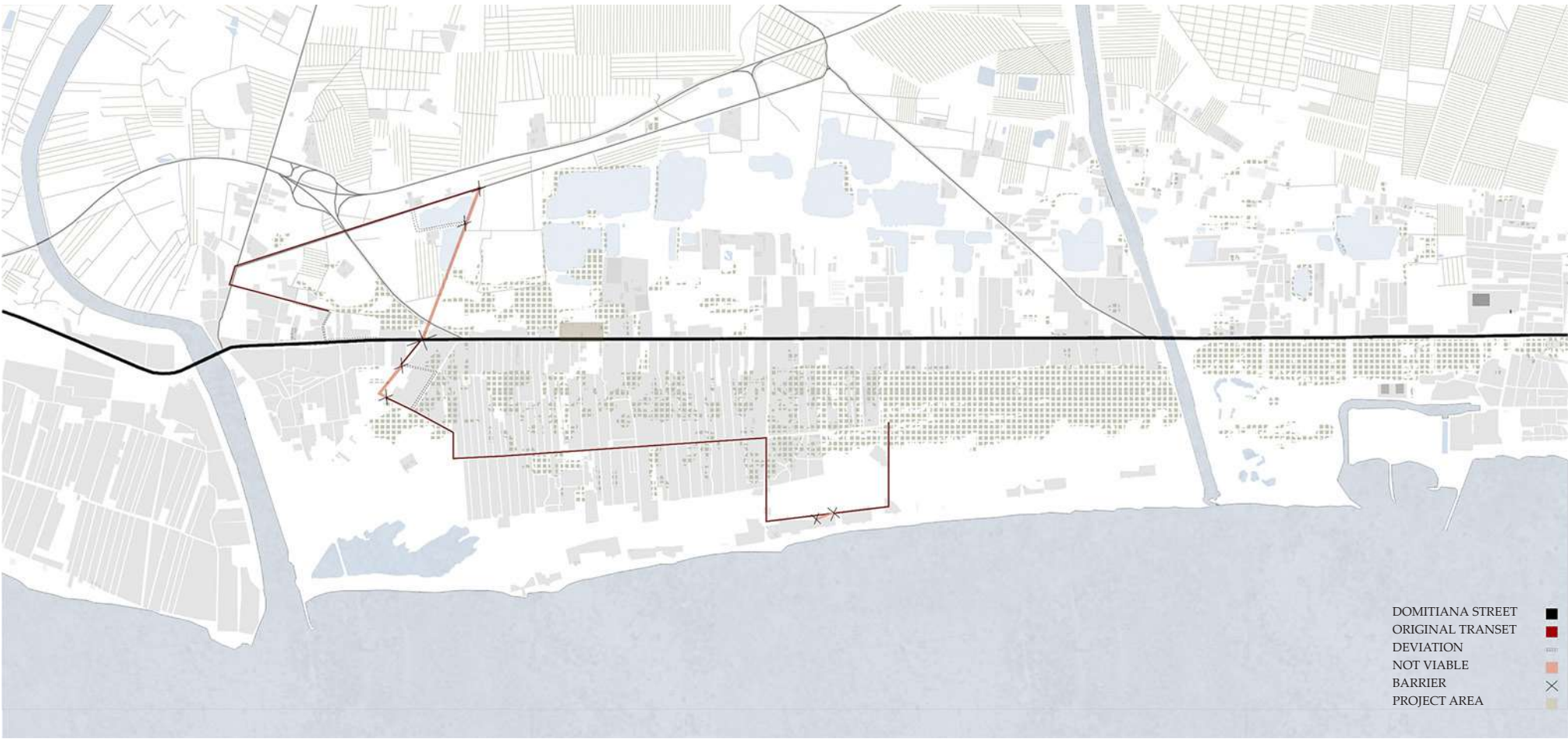




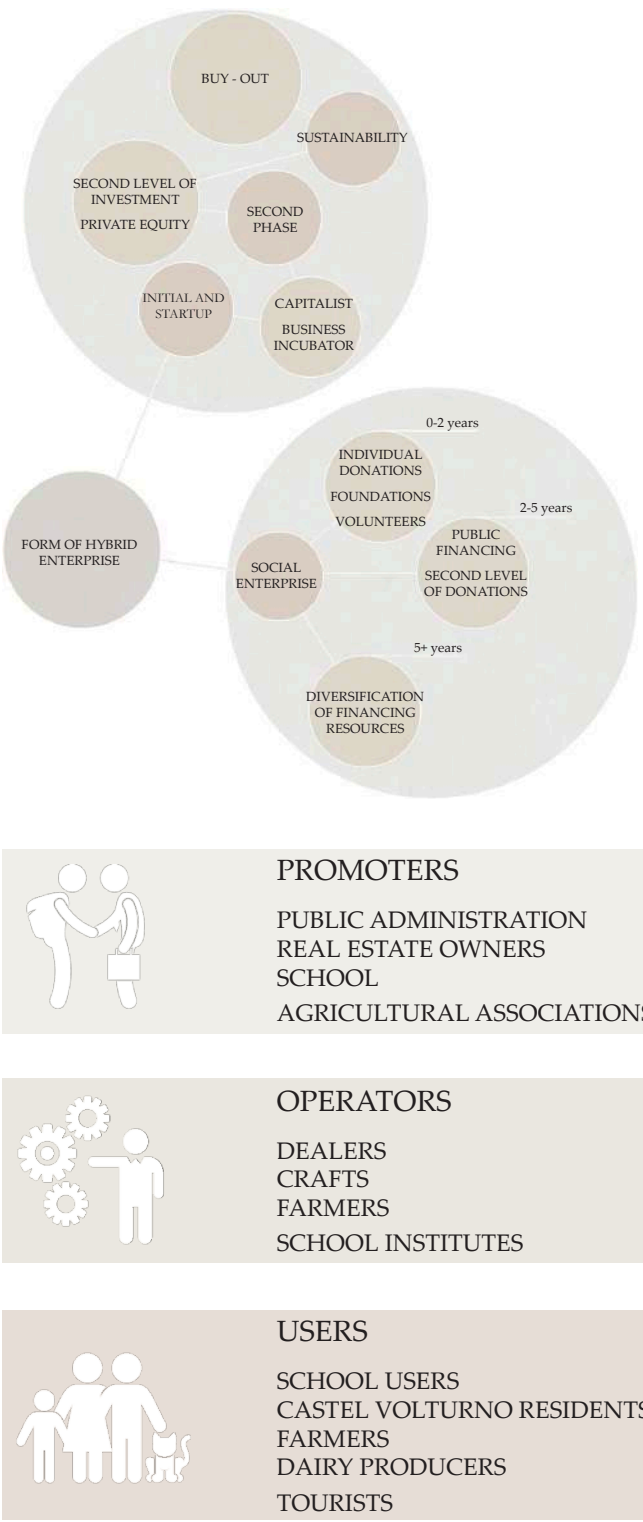
LIVING THE LIMIT

The fence is the place where the limit becomes a building, the borderline of change





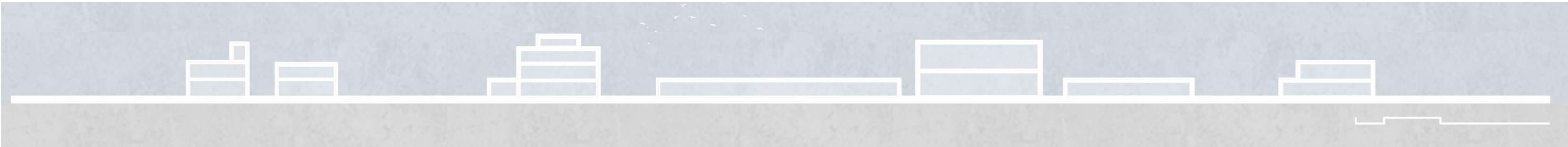
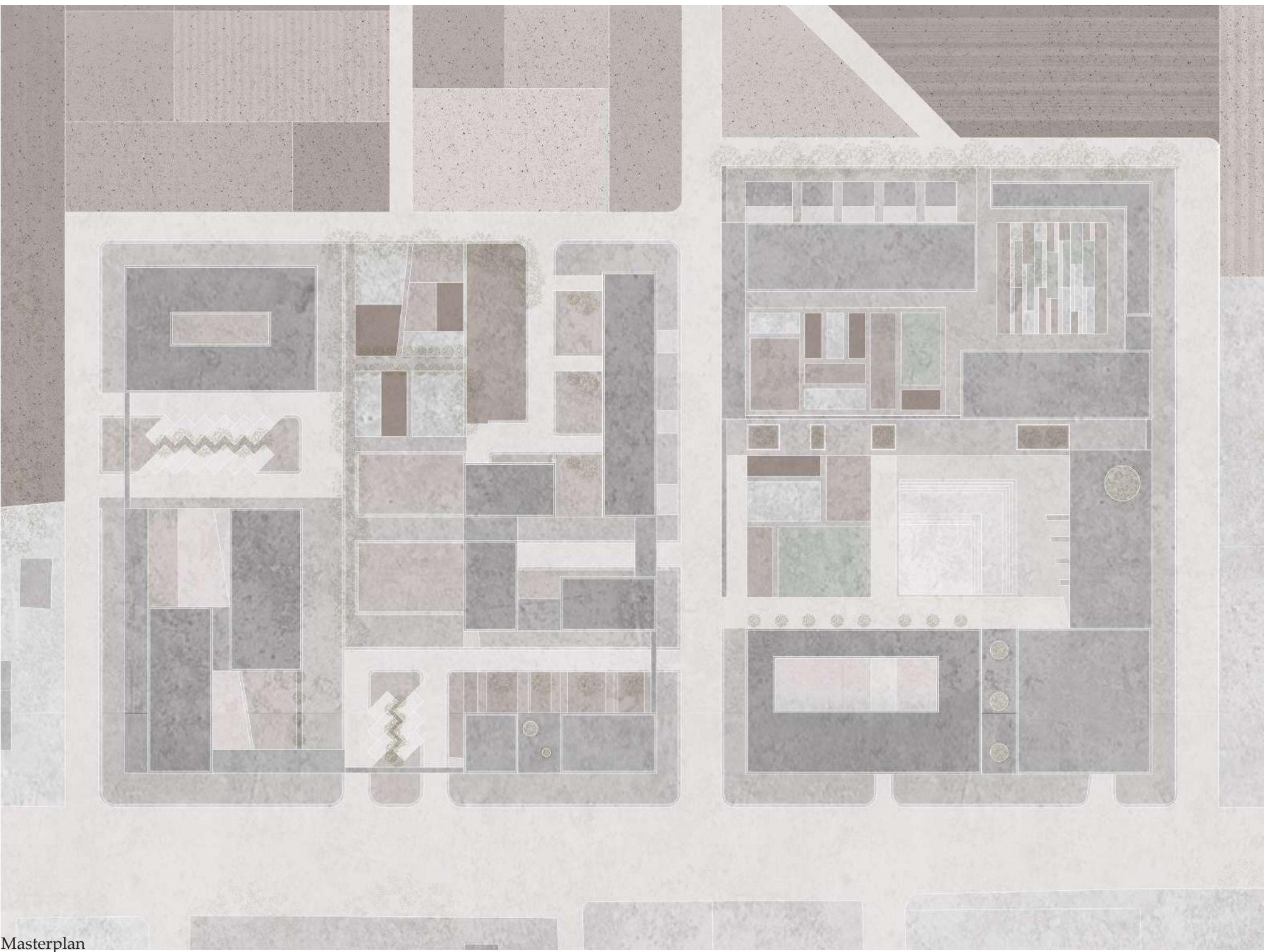
Morphological reading



“Enclosure (to be fenced): A limited space enclosed by clearly visible elements of delimitation and protection. In architecture the term is often reserved to indicate a well defined space”. Encyclopedia Treccani

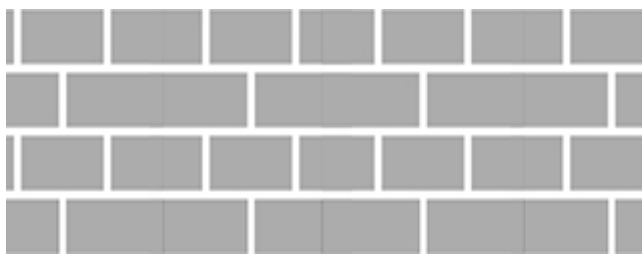
The fence is the place where the limit becomes a building, the borderline of change. For those who experience it from within, it is a circumscribed space that goes beyond the context that surrounds it. It makes the viewer part of an enigmatic atmosphere, since it is reserved for those who have the privilege of being able to live it; instead for the one who is outside the fence, stimulated by curiosity, he observes that limit by imagining what can happen inside it and where it can be accessed. The goal of a fence is to show a world opposite to the urban façade and to lead anyone who crosses its thresholds in a contrasting world detached from the trends of the context. The idea is to recreate a new limit through the fence paradigm, thus giving ample space to the design of the void, which takes on a fundamental role in my design proposal. Through the morphological survey of the territory and the study of the prevalent building typology in the municipality of Castel Volturno, I perceived the concept of limit on two different scales. This has been detected on a human scale by the fences of single-family homes, the same type more widespread in Castel Volturno; on an urban scale by individual blocks and natural limits. The wall, the base, the roof, the street furniture and the flooring become the essential elements to understand the dialogue that the boundary, enclosed, maintains with those who visit it. It becomes a container of spaces, from the pure and clear form to an out-of-scale dimension with respect to the context, which nevertheless aspires not to exclude, but to intrigue, to bring closer and, finally, to welcome visitors inside. Place and container of functions: a dairy company that is also a place to learn a trade, which favors the reception and care in the broadest sense, in particular the care of people,

the land and nature. The wall expands, thus becoming thick, modulating and mediating the relationship between the outside and the inside, between public and private, between full and empty, between anthropic and natural. The concept of fence has a tendentially introverted character, almost wary of what delimits it, wants to detach itself from the atmosphere that is lived in that place, for this it has often been considered generator of ghettos and enclaves. Starting from this meaning of the term I tried to develop it in the architectural language in a positive sense, becoming an added value to the project. It is not correct to distort a territory by eliminating the elements that characterize it, neither architecturally nor ethically; it must be respected trying to transform the critical points into positive factors. This is why in the project everything contained in the enclosure is never declared, but only reported, stimulating the imagination, intriguing, approaching and finally welcoming the viewer. Since ancient times the limit was seen as a test of strength by the hero who had to overcome physical and mental thresholds that made him epic in the stories. The limit is the place that shows the qualities of people: one can remain indifferent to it or be attracted by the curiosity to know what is there, make a decision and then cross it. But courage must not be taken only as a value, it can also be dictated by the unconsciousness of not being afraid. If we reflect in architectural terms the great limit has always been the wall, starting from the fortified walls up to the most famous Wall which changed the face of Berlin. The limit is therefore a very important tool, not only for its physical strength, but above all for the symbolic aspect and the value we want to give to a space. The wall then transforms the space and the people who live there, the role of architecture is to coordinate the right relationship between inside and outside and not leave indifferent those who are out of the limit, even force it to make the decision to enter.

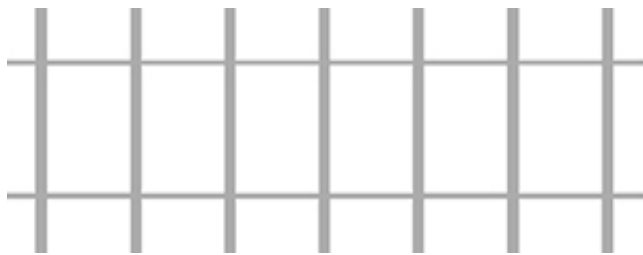




INSIDE | OUT



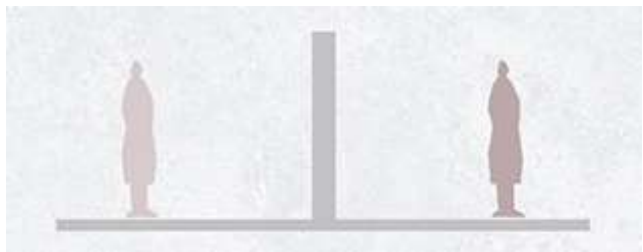
PUBLIC | PRIVATE



ANTHROPIC | NATURAL



Ground Floor Plan



WALL

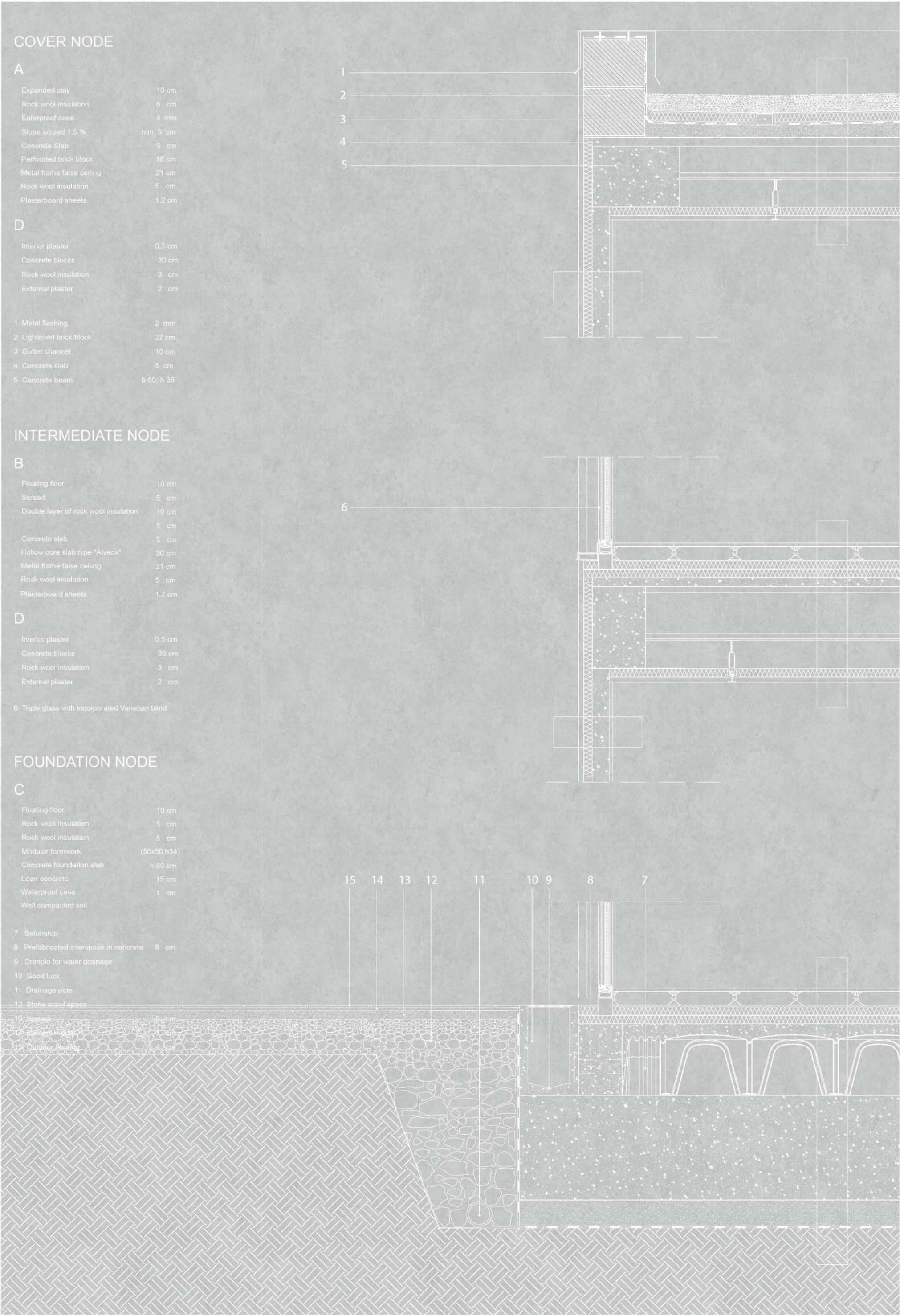


COVERAGE



FLOORING





COVER NODE

A

Expanded clay	10 cm
Rock wool insulation	6 cm
Eaterproof case	4 mm
Slope screed 1.5 %	min. 5 cm
Concrete Slab	5 cm
Perforated brick block	18 cm
Metal frame false ceiling	21 cm
Rock wool insulation	5 cm
Plasterboard sheets	1.2 cm

D

Interior plaster	0.5 cm
Concrete blocks	30 cm
Rock wool insulation	3 cm
External plaster	2 cm

1 Metal flashing	2 mm
2 Lightened brick block	27 cm
3 Gutter channel	10 cm
4 Concrete slab	5 cm
5 Concrete beam	b 60; h 35

INTERMEDIATE NODE

B

Floating floor	10 cm
Screed	5 cm
Double layer of rock wool insulation	10 cm
Concrete slab	5 cm
Hollow cone slab type "Alveox"	30 cm
Metal frame false ceiling	21 cm
Rock wool insulation	5 cm
Plasterboard sheets	1.2 cm

D

Interior plaster	0.5 cm
Concrete blocks	30 cm
Rock wool insulation	3 cm
External plaster	2 cm

6 Triple glass with incorporated Venetian blind

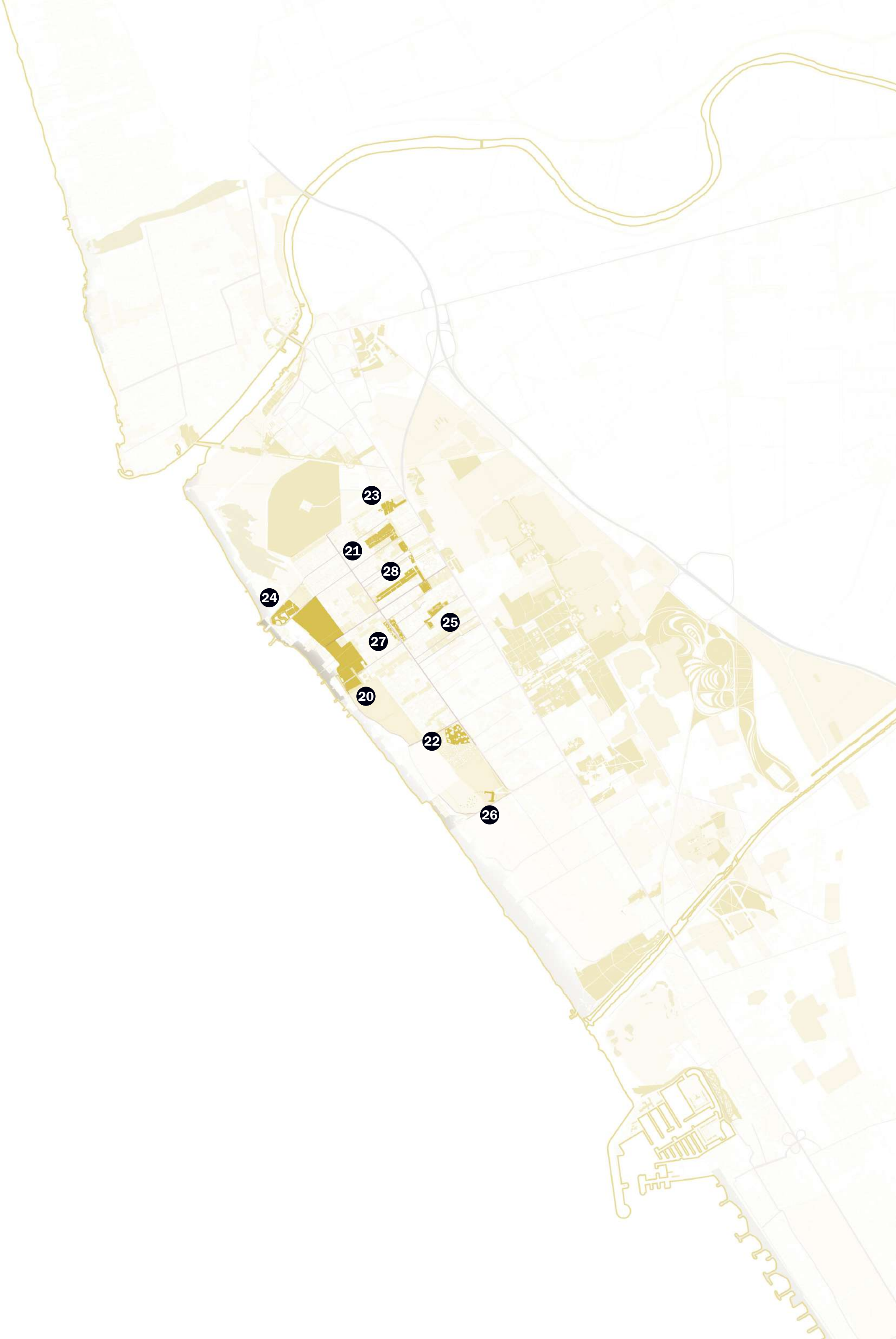
FOUNDATION NODE

C

Floating floor	10 cm
Rock wool insulation	5 cm
Rock wool insulation	5 cm
Modular formwork	(50x50/h34)
Concrete foundation slab	h 60 cm
Lean concrete	15 cm
Waterproof case	1 cm
Well compacted soil	

7 Betonstop	
8 Prefabricated interspace in concrete	8 cm
9 Drenolo for water drainage	
10 Good luck	
11 Drainage pipe	
12 Stone crawl space	

13 Screed	5 cm
14 Stone crawl space	
15 Outdoor flooring	5 cm

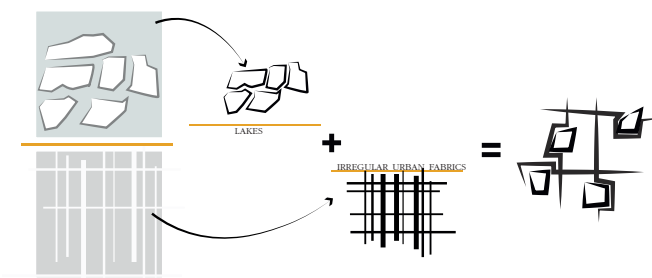
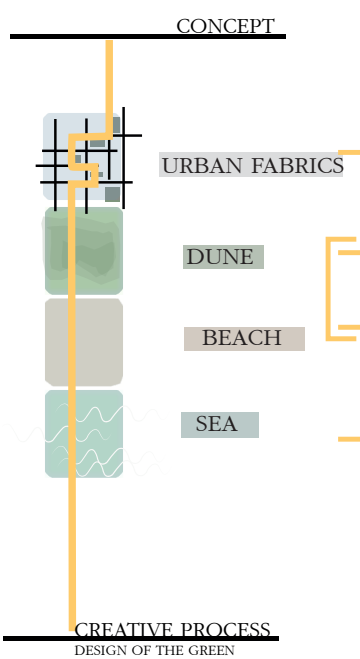
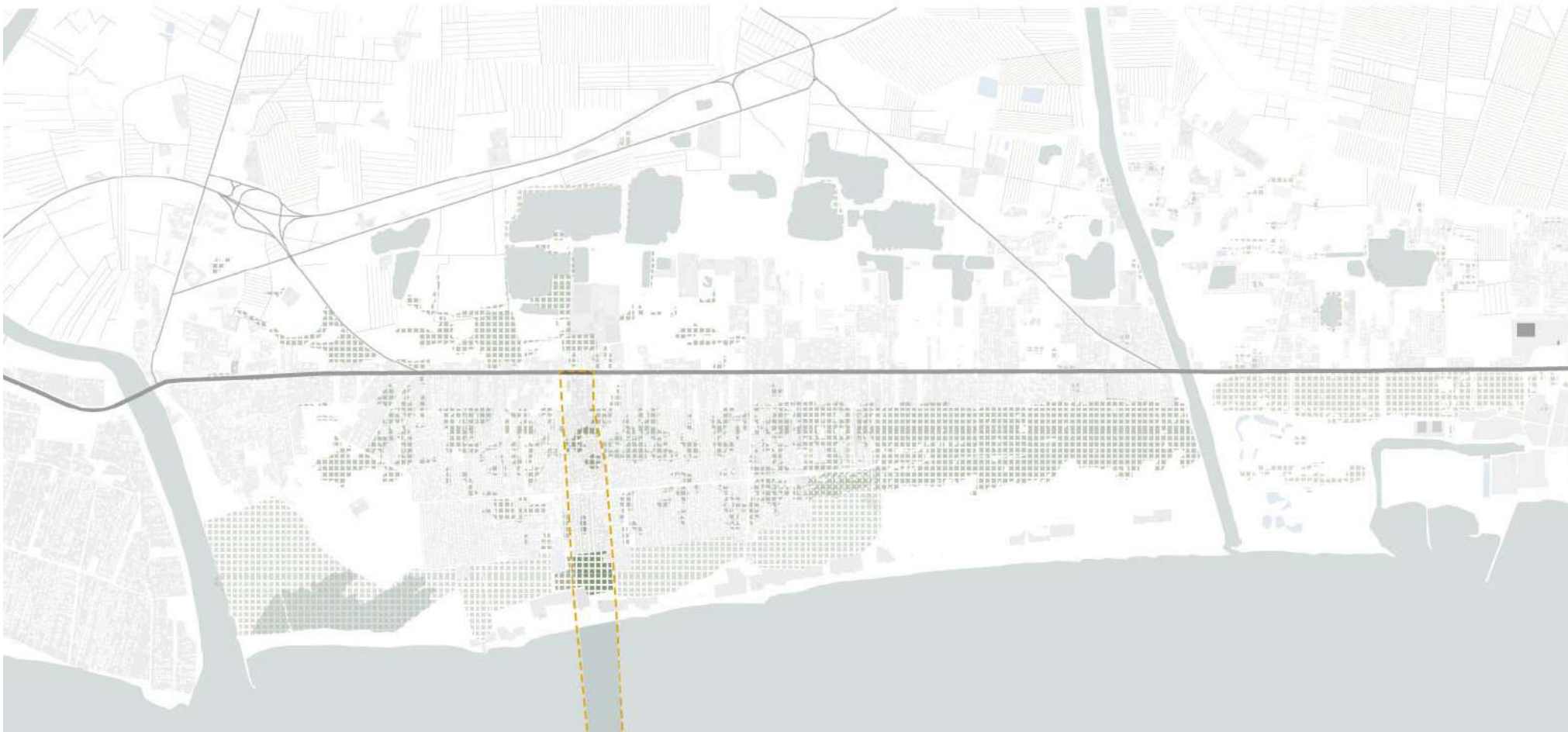


HOUSING AREA AND THE COASTLINE
IL TESSUTO ABITATIVO E LA COSTA

- 20. Connection architecture** Chiara Colicchio
- 21. Re-stitching** Daniela De Michele
- 22. Public Pines** Francesca Del Vecchio
- 23. t+issue_from residual spaces to pokets for social interaction** Rosachiara Dell'Erario
- 24. Sport and nature. A new sports hall for Castel Volturno** Giannantonio Di Tuoro
- 25. Social Conne(a)ction** Federica Esposito
- 26. Under Castel Volturno** Domenico Illiano
- 27. Domestic city. A strategy against sprawl** Maria Masi
- 28. Through the wall** Annamaria Salzano

CONNECTION ARCHITECTURE





In a territory rich of natural and cultural resources such as Castel Volturno, in which many potentialities have become criticalities due to neglect and degradation, points of strength must be found in order to start redevelopment. Baia Verde, located on the shoreline of Castel Volturno, is a neighborhood organized into parallel strips: the lakes, the “Domiziana” road, the housing fabric, the dunes, and the sea. These strips are separated from one another and work more like barriers than integrated urban parts.

Thanks to a preliminary fieldwork, it has been possible to identify a major contrast in the area: in the urban fabric there is a widespread presence of green abandoned areas (both private and public) and the lack of public spaces properly designed and managed as such. The main goal of the project is to connect the “strips” starting from the Domiziana up to the sea, providing new public spaces and green areas.

Starting from the main road, a series of pedestrian and cycle paths have been designed to connect the green areas, the shore and the sea. The project focuses, more specifically, on one block, chosen as an example to be extended to the whole area. The path web changes depending on the context that it intercepts.

Analysing the morphological characters of the area two main elements, one natural and one artificial, have been identified: the lakes and the irregular urban fabric. The merging of these two figures provides the matrix of the project: a line that serves as a pedestrian and cycle path running along canals that, entangled with green spaces, reduce the risk of flooding in the urban area. Moving on, across the urban fabric and the

dune, the vertical paths intersect the horizontal ones coming from the Variconi’s oasis (one of the well consolidated green areas); between the two strips the path becomes a building, generating an expansion of the road.

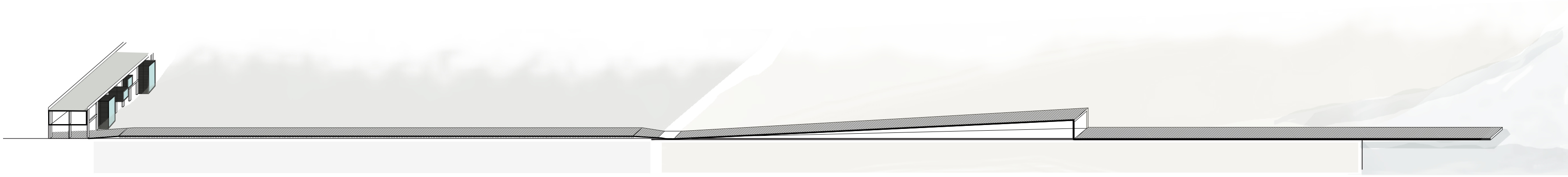
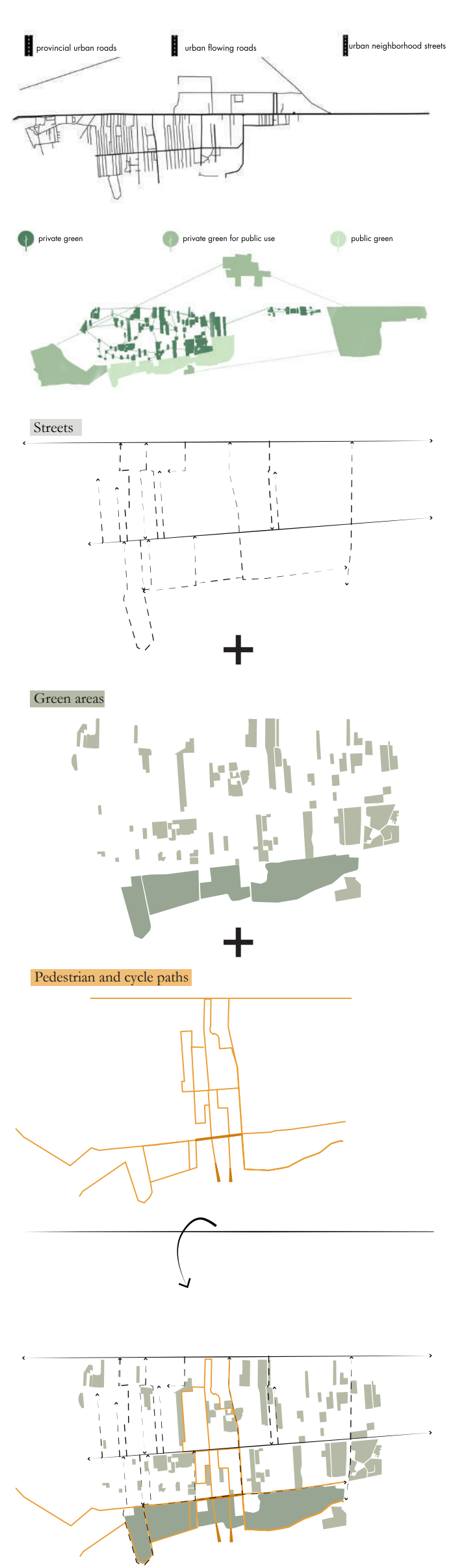
The building is made up of a main steel structure, covered in concrete, that follows the road line, while in the central part perpendicular to the main North-South axis some prefabricated cubes are inserted in the main structure. The building is organized in three levels, the ground floor is permeable, marked by the pillars network of the main structure and by some cubes that reach the ground floor. Here there is the restaurant area and some local product stores. At the extremities of the building, there are the main entrances, that lead through a ramp to the first floor.

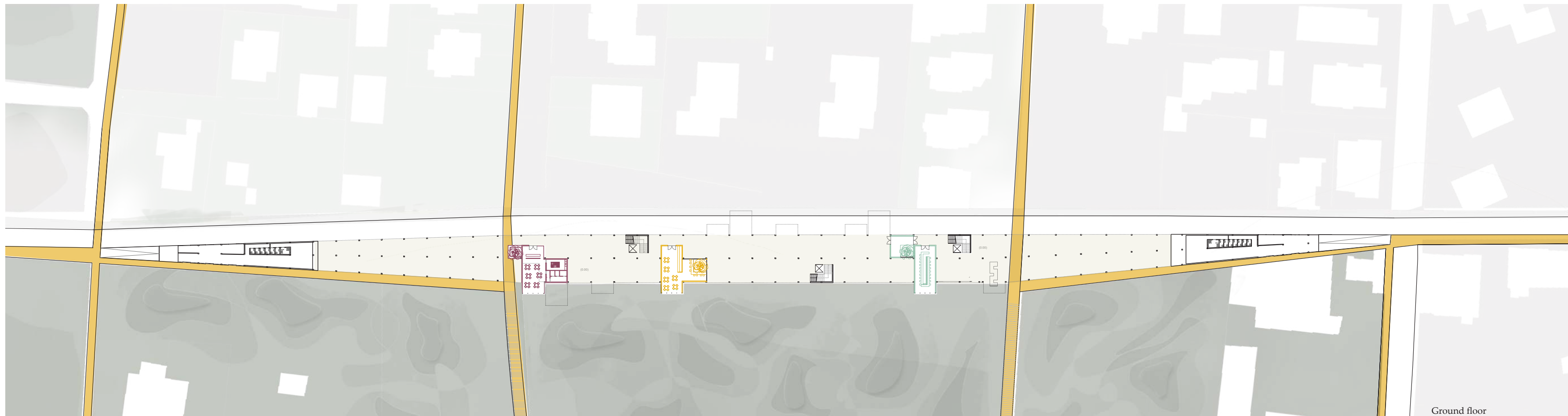
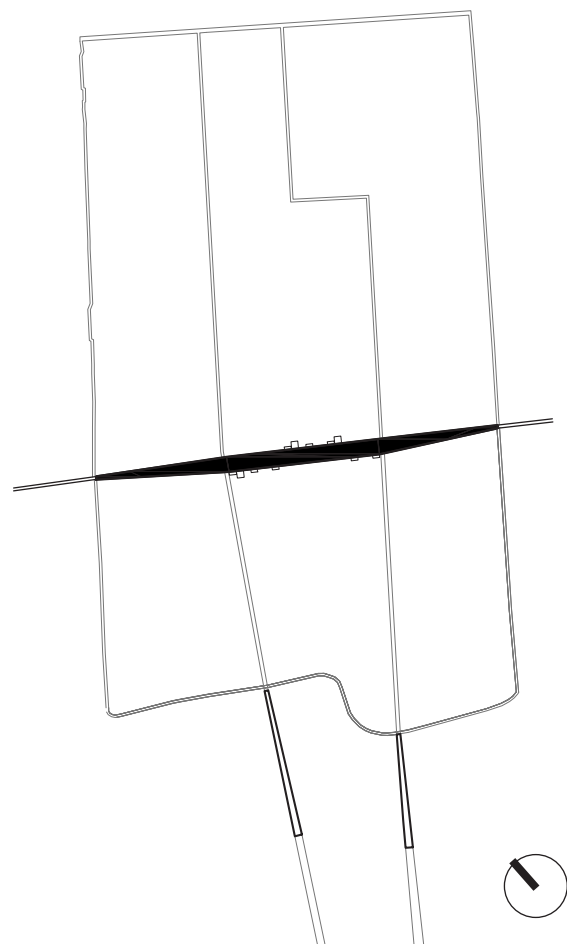
On the first floor the main functions of the building are displayed, dealing with basic services to the local community provided by volunteer associations: health care, sport and culture.

These three functions enter the building like separate and autonomous bands, characterized by the prefabricated blocks. The connection between each function is a path that meets along its way the stairs blocks located between any band.

At the ground floor the structure is crossed by pedestrian and cycle paths that lead from the urban fabric to the dune. Above the dune the path becomes a suspended walkway, to minimize the impact on the natural environment.

When it meets the shore, the path becomes a terrace overlooking the sea while underneath on the sand there are some bathing facilities. In the end the path becomes a pier, finally reaching the sea.





ASSOCIATIONS
health associations
sport associations
cultural and enviromental associations



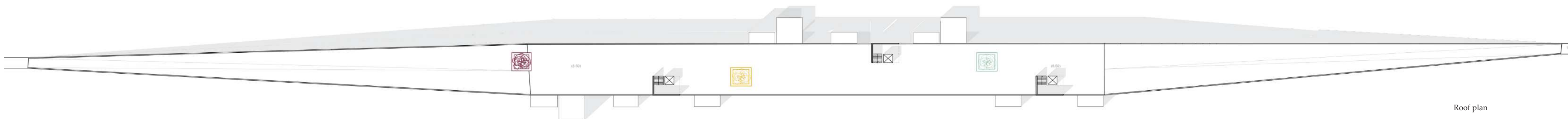
SPORT

CULTURE

Ground floor



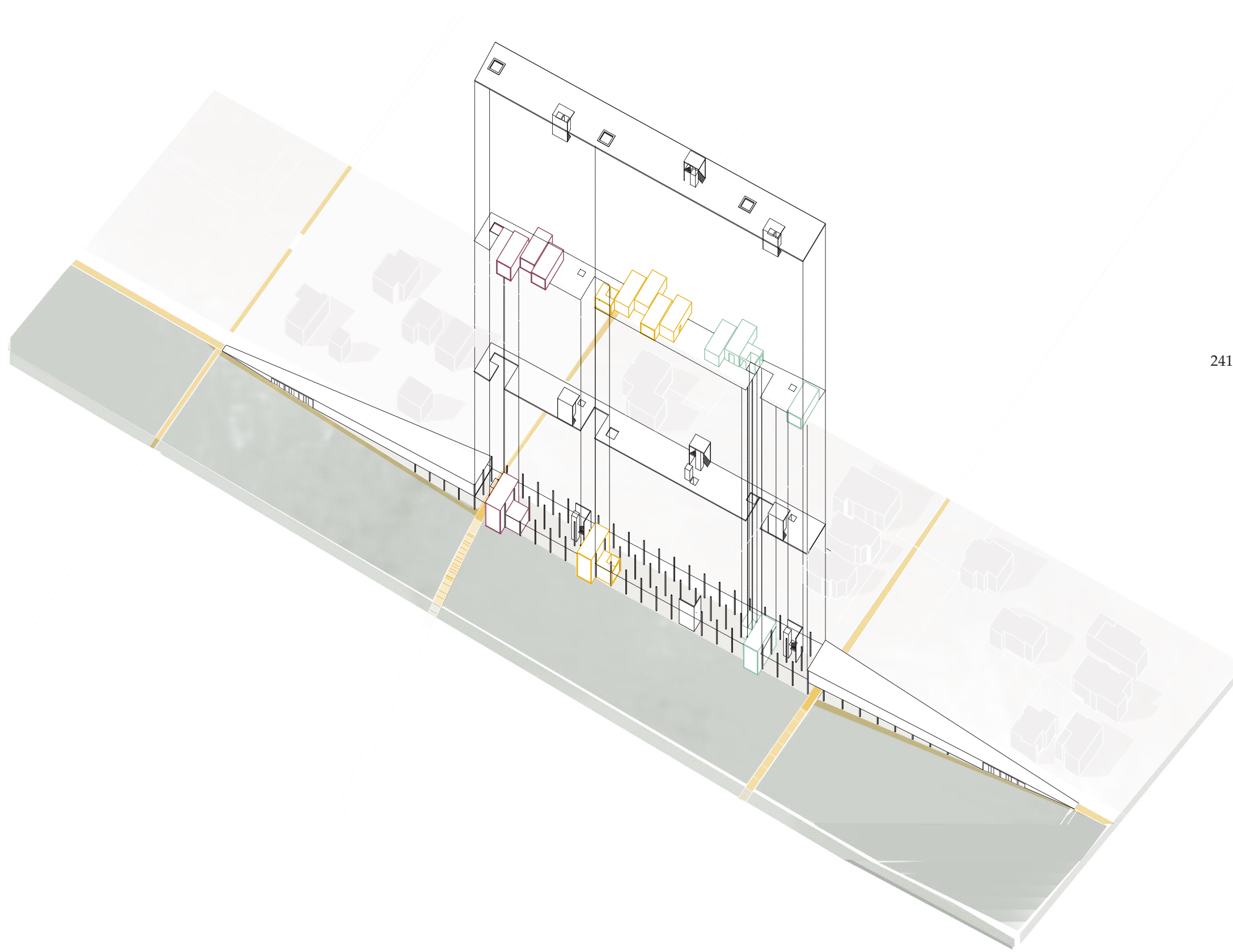
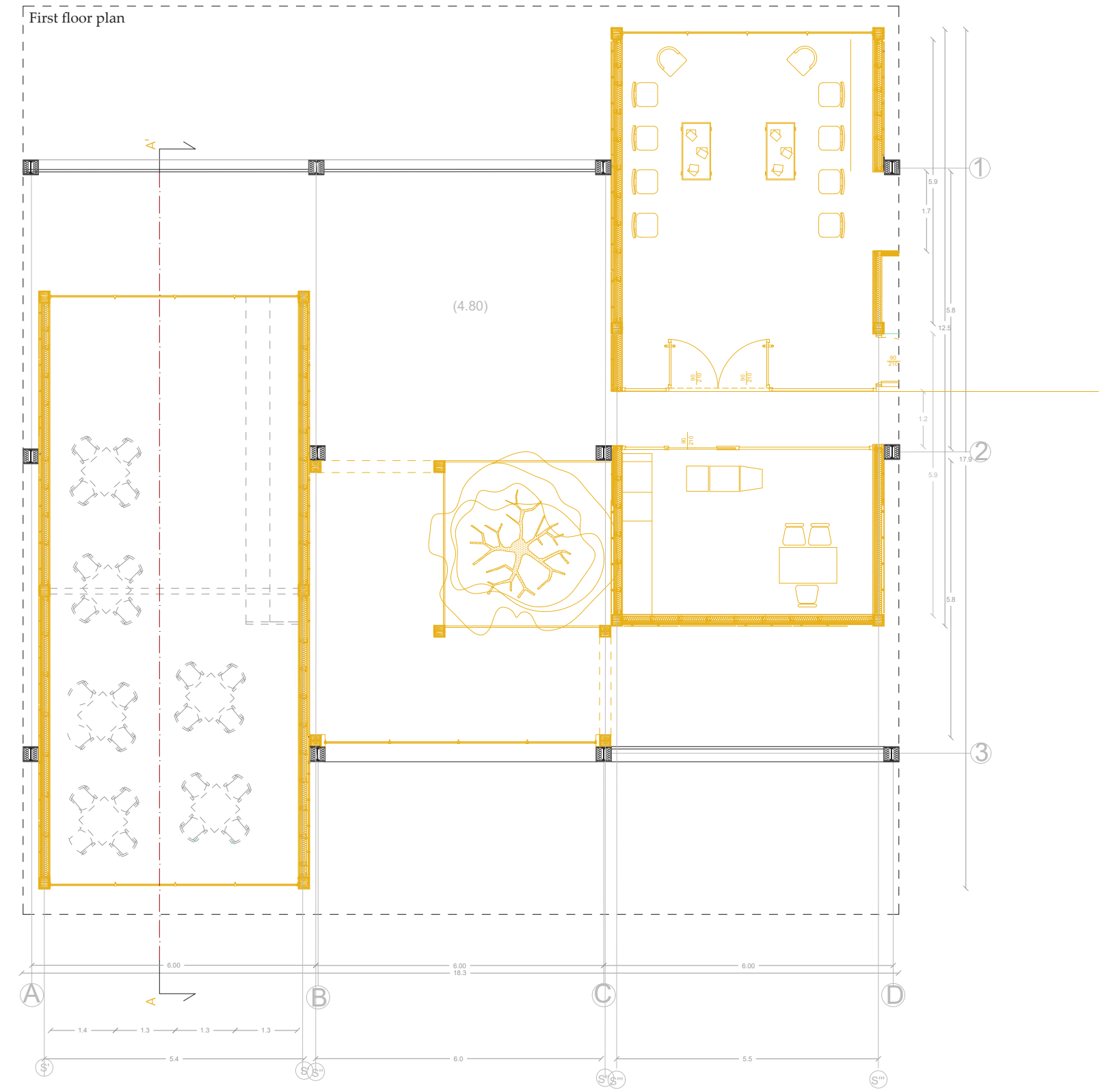
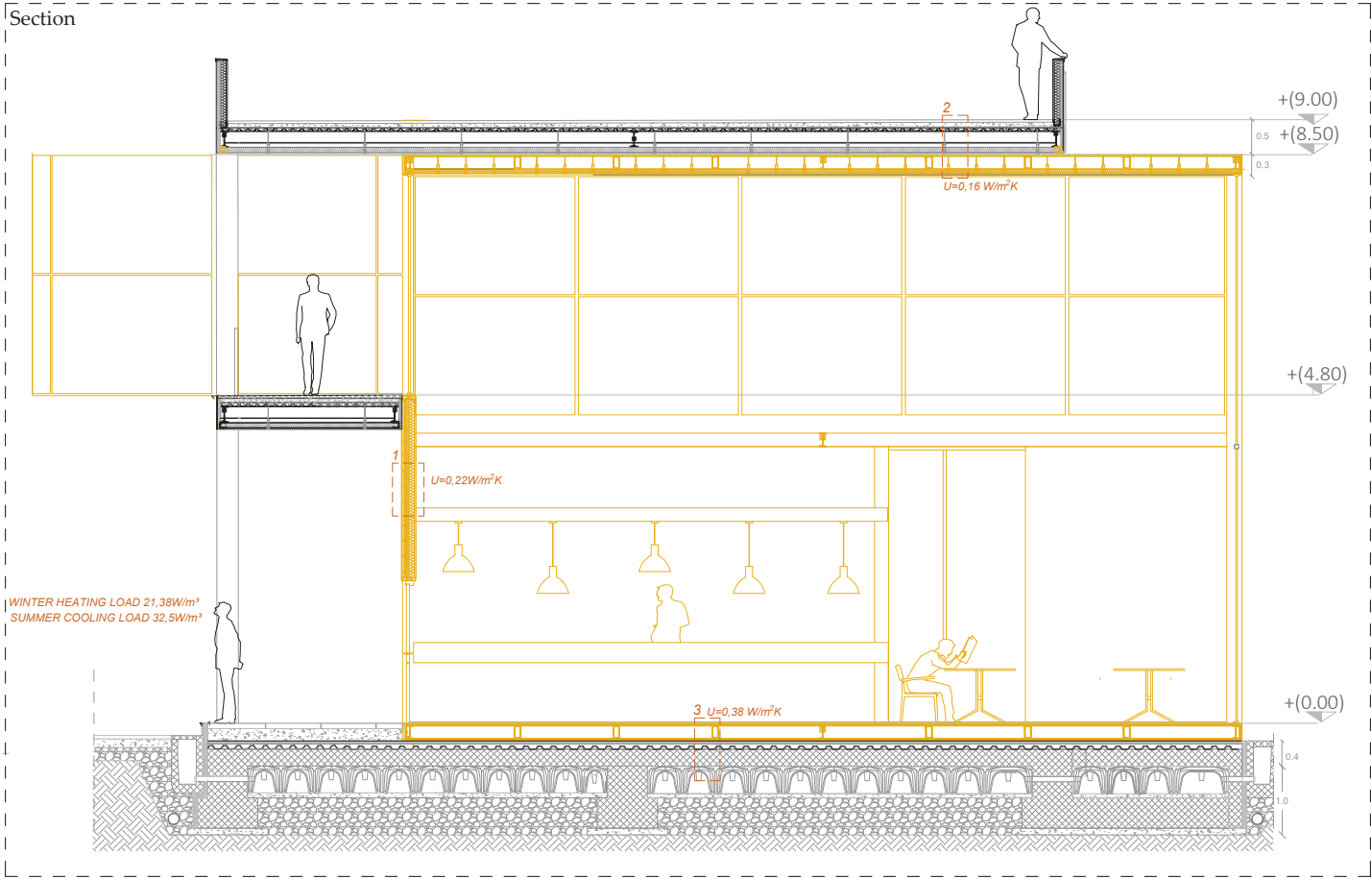
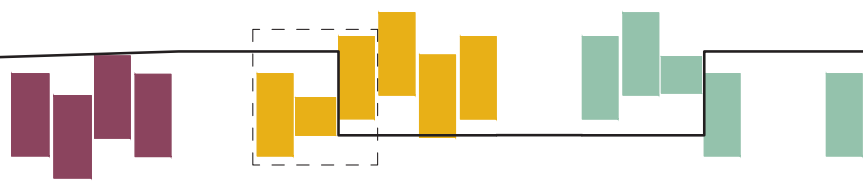
First floor plan

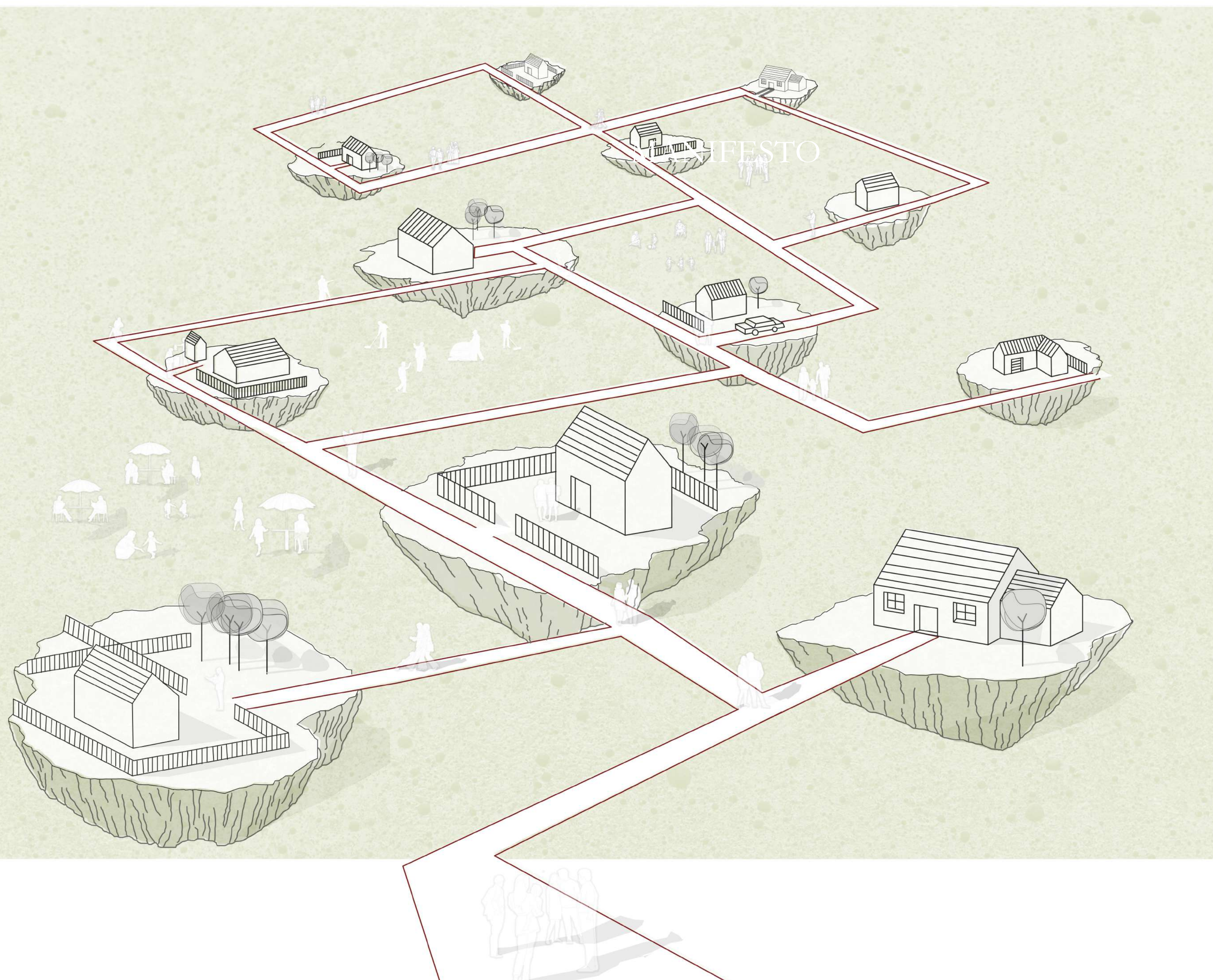


Roof plan



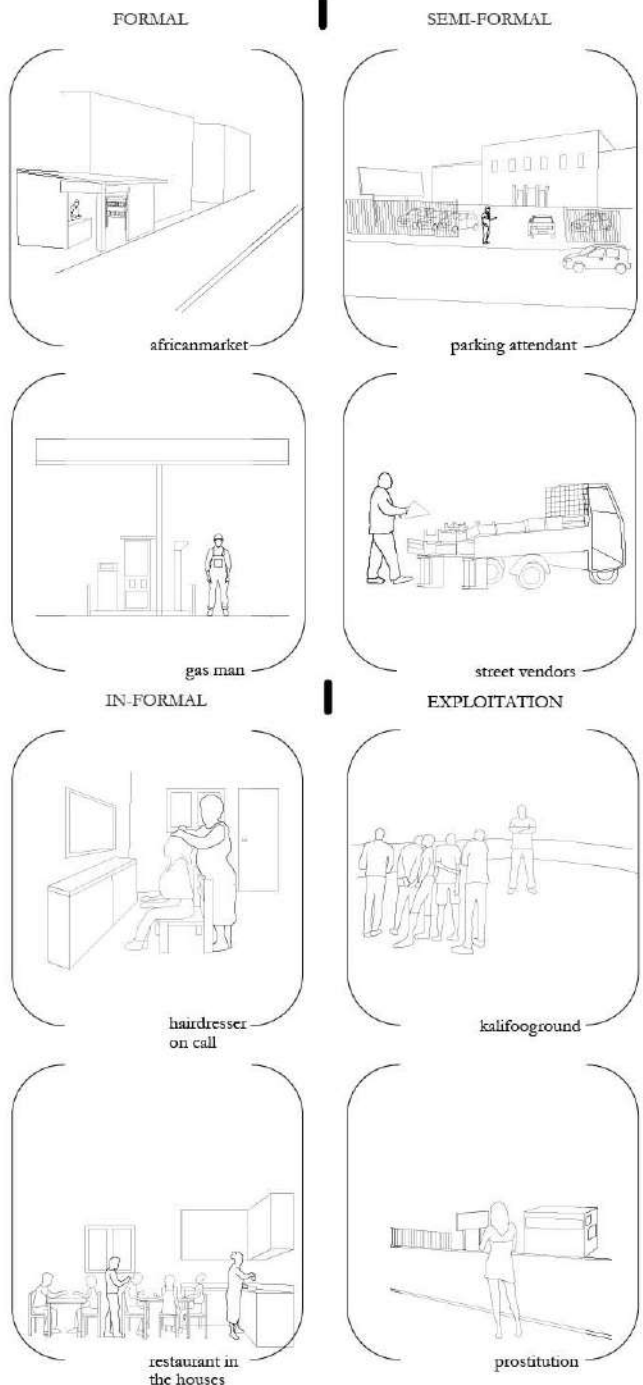
Southern elevation



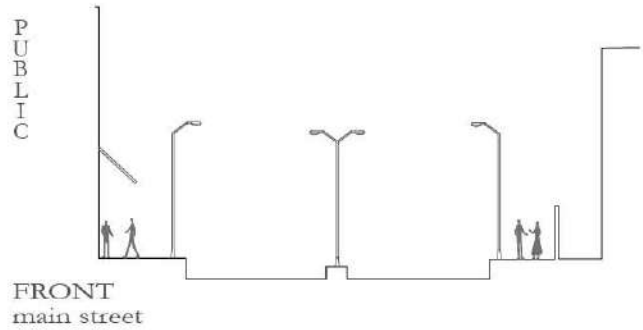




WORKING IN CASTEL VOLTURNO

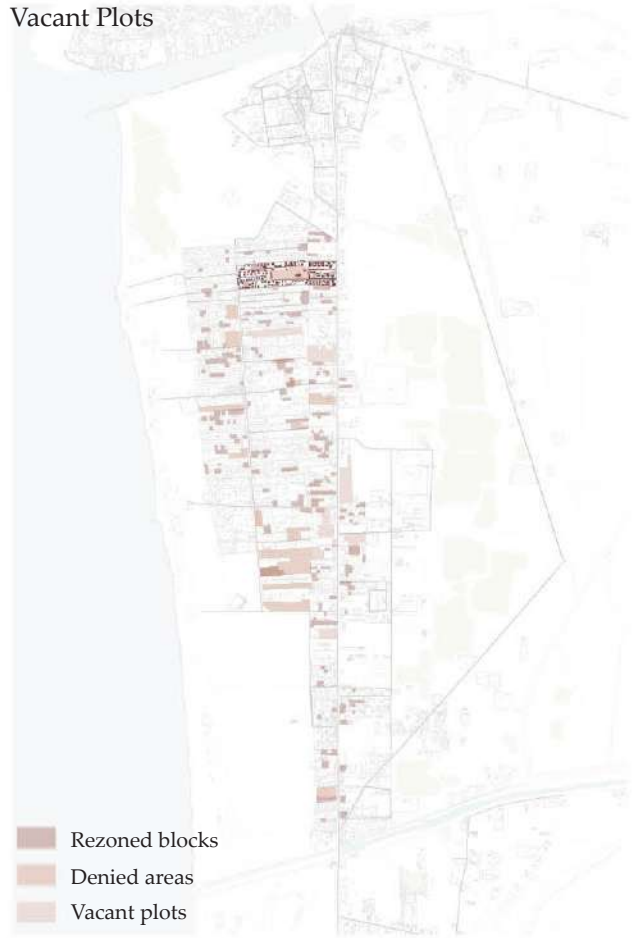
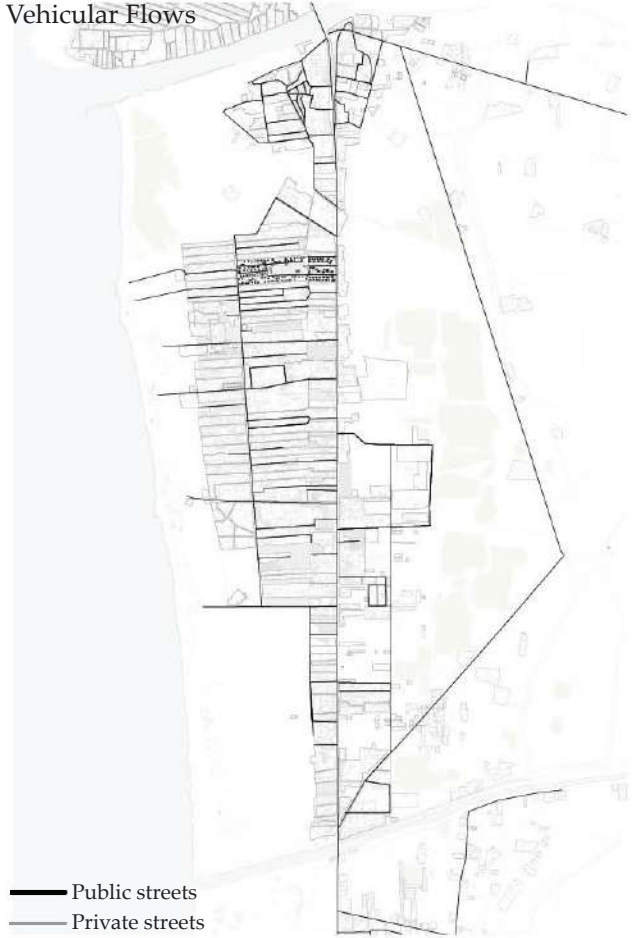
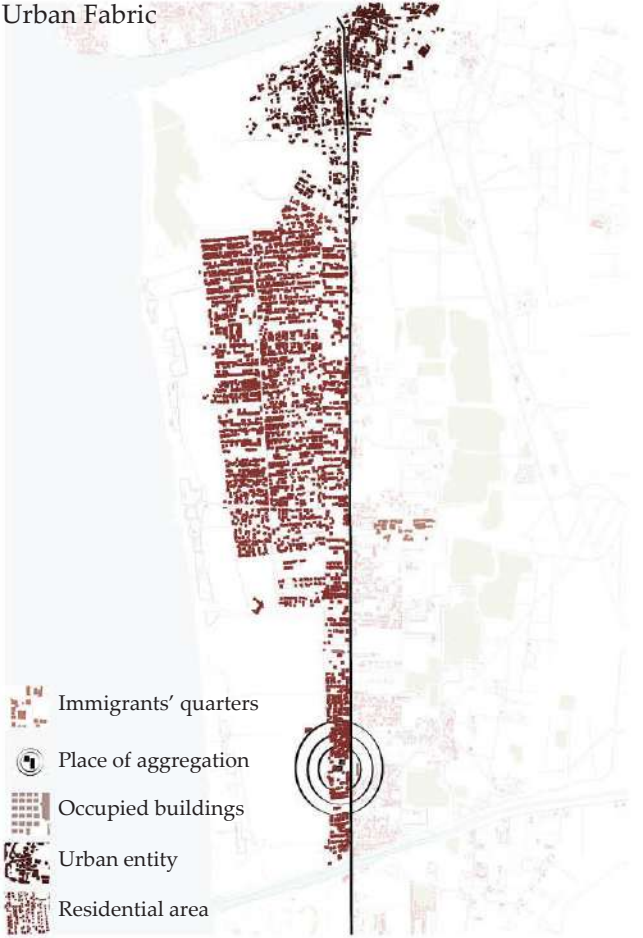
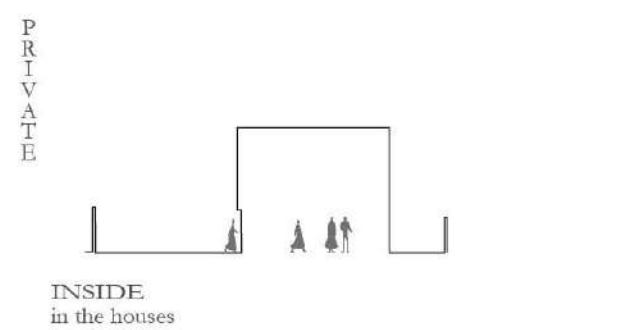


From: "MERIDIONE Sud e Nord del mondo, MIGRANTI AFRICANI DI CASTEL VOLTURNO", Valerio Petrarca.

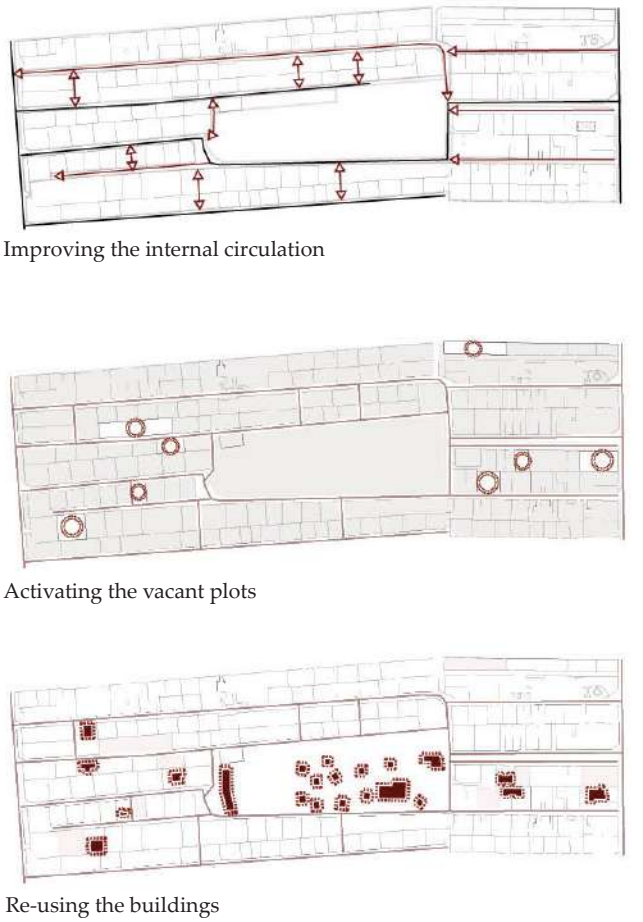


The town of Castel Volturno is like a ribbon unfolding on both sides of a main road, the Domiziana. This infrastructure also serves as the main meeting place for the diverse populations of this municipality, roughly 50,000 inhabitants (according to unofficial data), half of which migrants (many of them irregular). The area is characterized by a strong environmental, functional and social degradation and is plagued by numerous problems: squatter houses, material decay of the housing stock, organized crime, unemployment. These problems afflict a large part of the population amplifying the social contrasts already present. Between the historic center and the Villaggio Coppola (a former residential neighborhood on the shore, now mostly abandoned and decaying), we have the large coastal strip of Baia Verde (a former resort area), the urban sprawl of Castel Volturno, resulting from uncontrolled building of vacation homes started in the 1950's. The project focuses on this area, characterized by the monotonous repetition of streets, isolated houses, vacant plots and abandoned houses, to engage urban regeneration. The absence of services, except for some commercial activity located on Lenin Avenue, and of aggregation places makes this a bedroom neighborhood where housing and social degradation make the most vulnerable population groups (of both immigrant and resident population) more susceptible to irregular activities. Also, the accessibility to the neighborhood is very limited due to the privatization of most of the avenues that connected the Domiziana with Lenin avenue and the beach. This closure accentuates the isolation of every element in relation to the context and favors an introverted form of housing. A type block has been chosen to trigger an

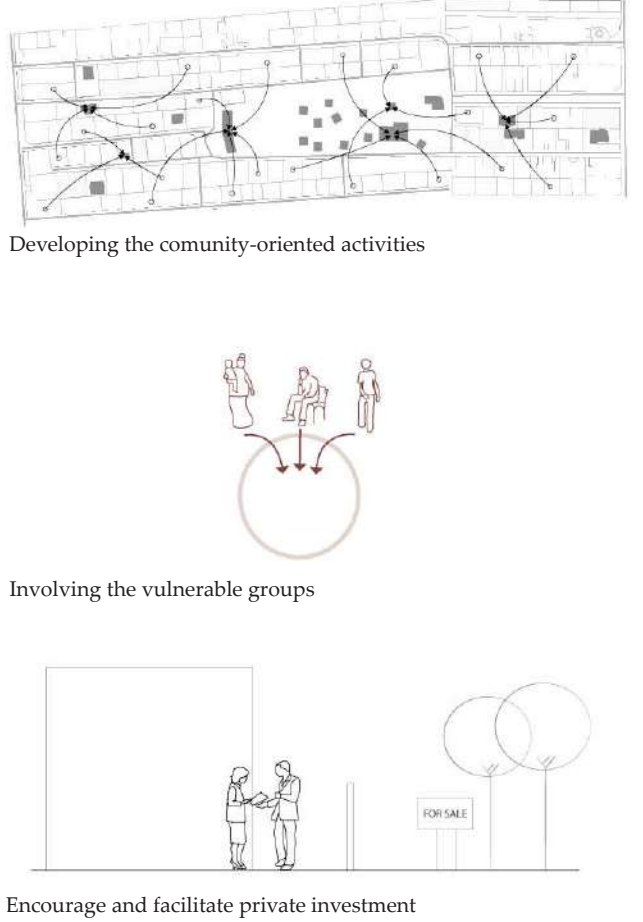
incremental regeneration process replicable in the whole Baia Verde. It is characterized by the presence of numerous empty blocks and a large abandoned area, where there are ruins in reinforced concrete immersed in the vegetation and in what remains of the ancient pinewood. In this area the project aims to improve urban quality through the reactivation of vehicular flows in all existing streets and the construction of new ones, the redesign of empty blocks through rezoning compensation and finally the reuse of abandoned buildings to provide the area with collective services. Parasitic architecture is the first strategy to intervene on existing buildings to adapt them to new functions and return them to citizenship. As a result, a series of punctual interventions of regeneration in the rezoned blocks is held together by a mesh of open spaces connected to each other through pedestrian and biking paths. The second strategy focuses on the activation of the economic potential of the area through the development of community-oriented activities, the involvement of the most vulnerable groups and the encouragement of private initiative. For this purpose, among the reused ruins one is dedicated to hospitality and support of the migrant population, with vocational training and working courses while another building is dedicated to job-training. The last strategy to be implemented is the one of social cohesion, which is currently made difficult by the widespread degradation in which the population lives and at the same time by the total absence of places of aggregation. For this purpose, the central area of the project has been turned into a large public park where, through the transformation of abandoned buildings, services and social residences coexist in order to eliminate barriers and the separation and isolation of private space from the public one.



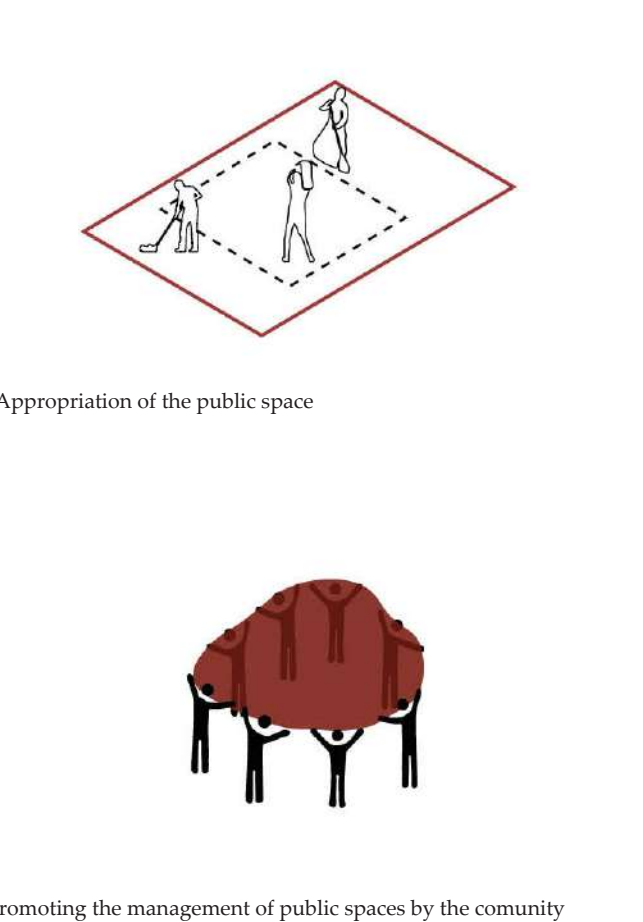
STRATEGIC LINE 1:
Improving Urban Quality



STRATEGIC LINE 2:
Activating the Economic Potential

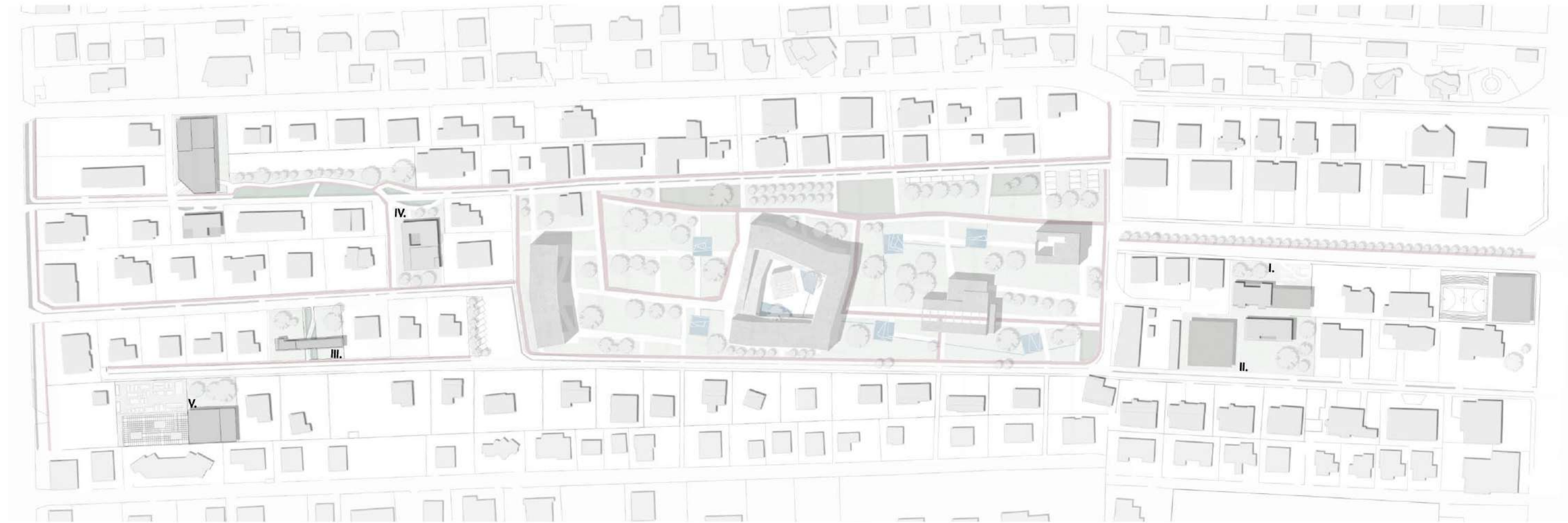


STRATEGIC LINE 3:
Valuing Social Cohesion

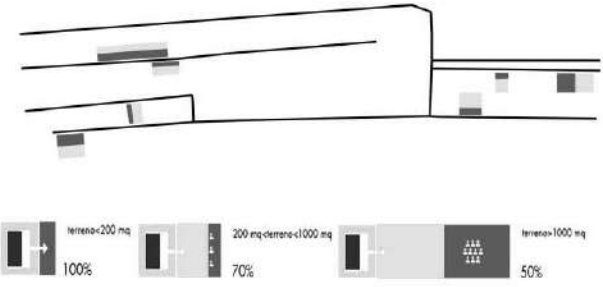


STAKEHOLDERS

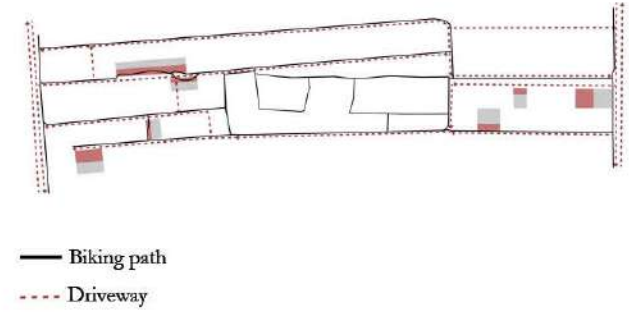




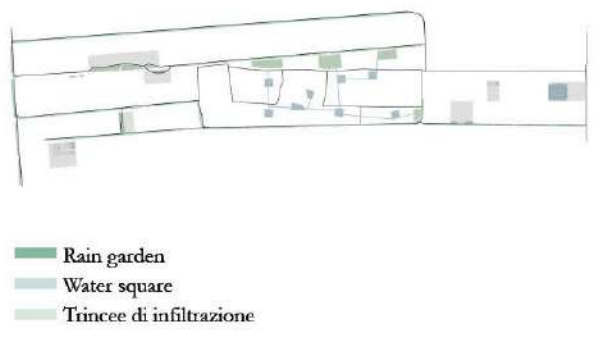
Rezoning Compensation



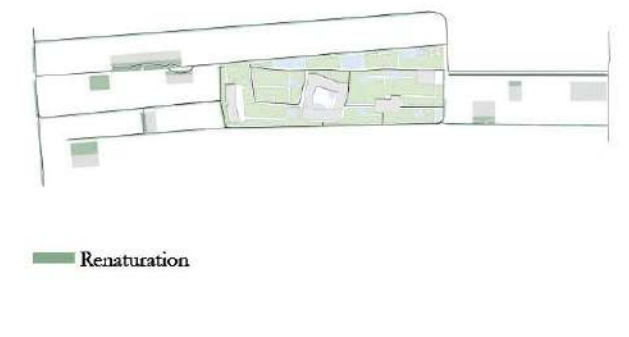
Mobility



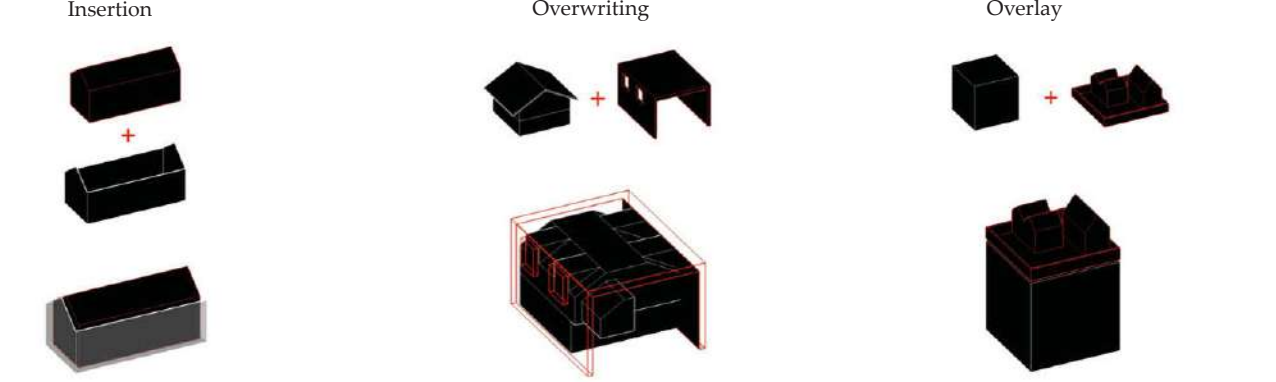
Sponge Areas



Green Areas



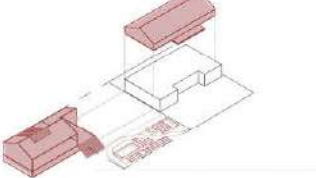
Parasitic Architecture



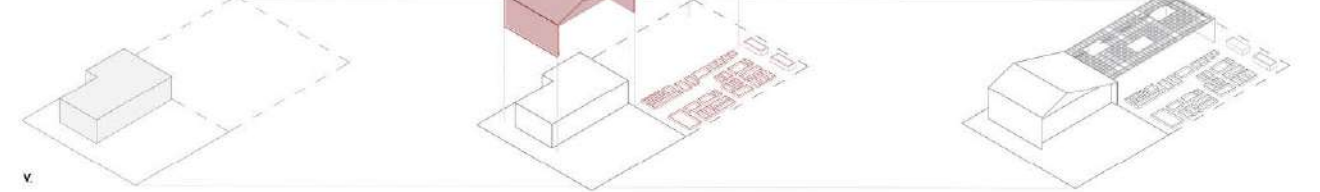
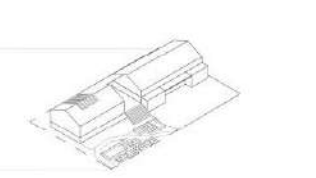
Existing

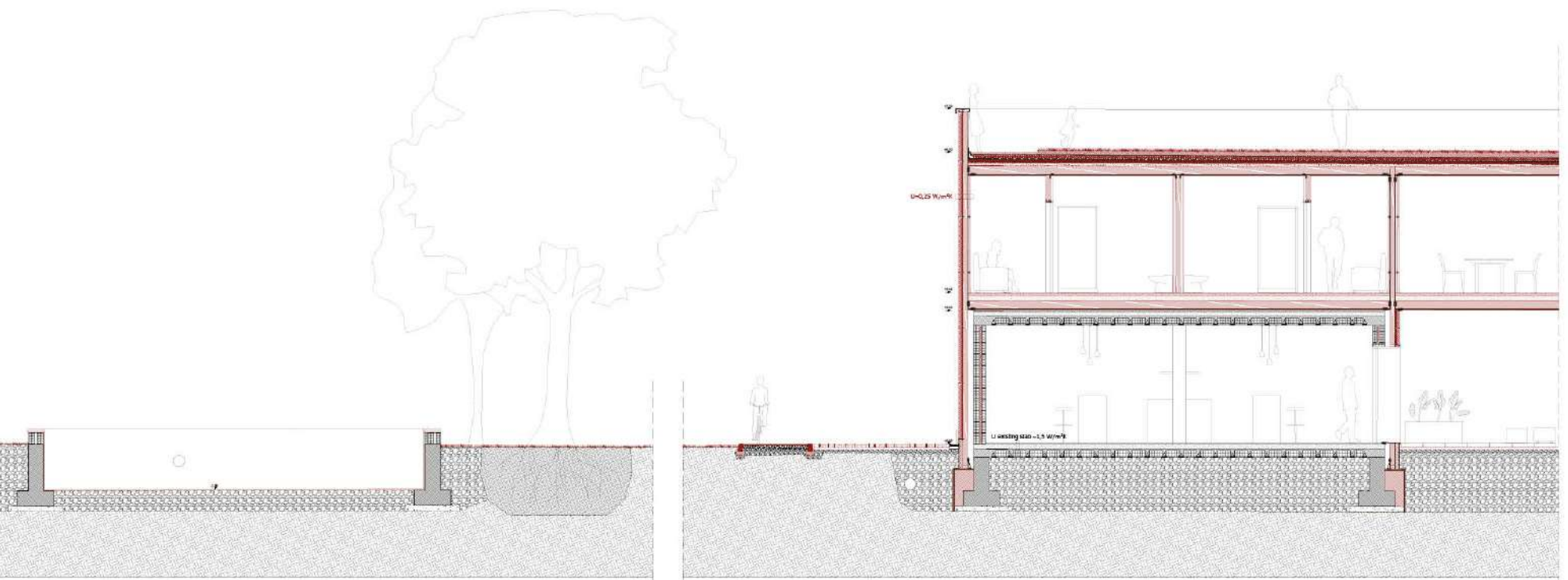
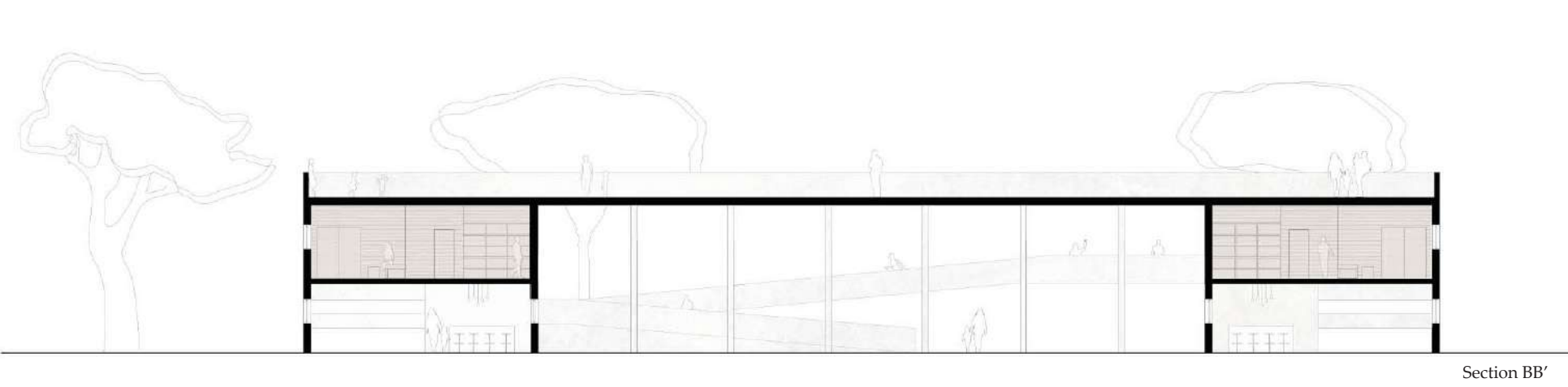
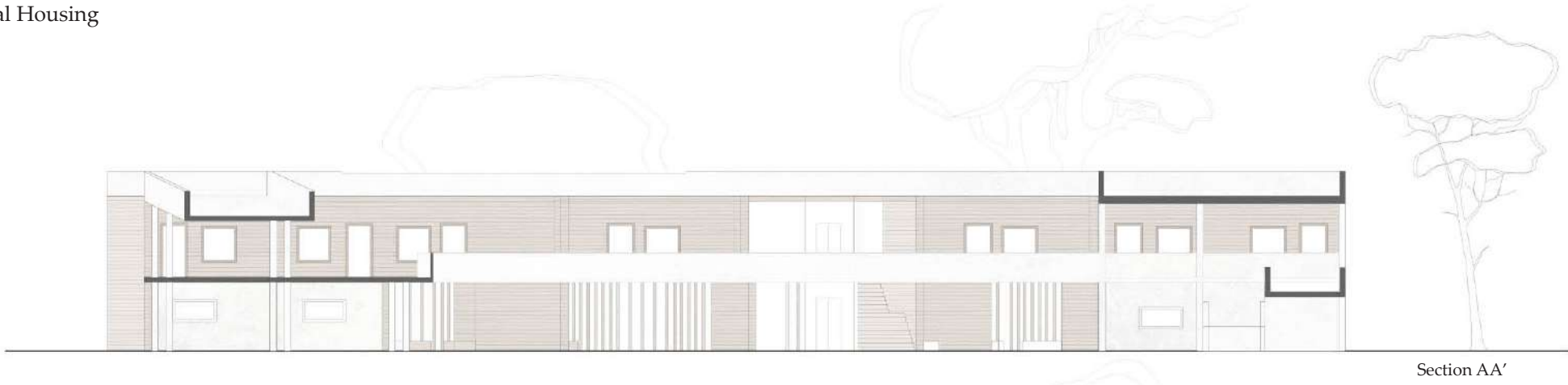


Addition

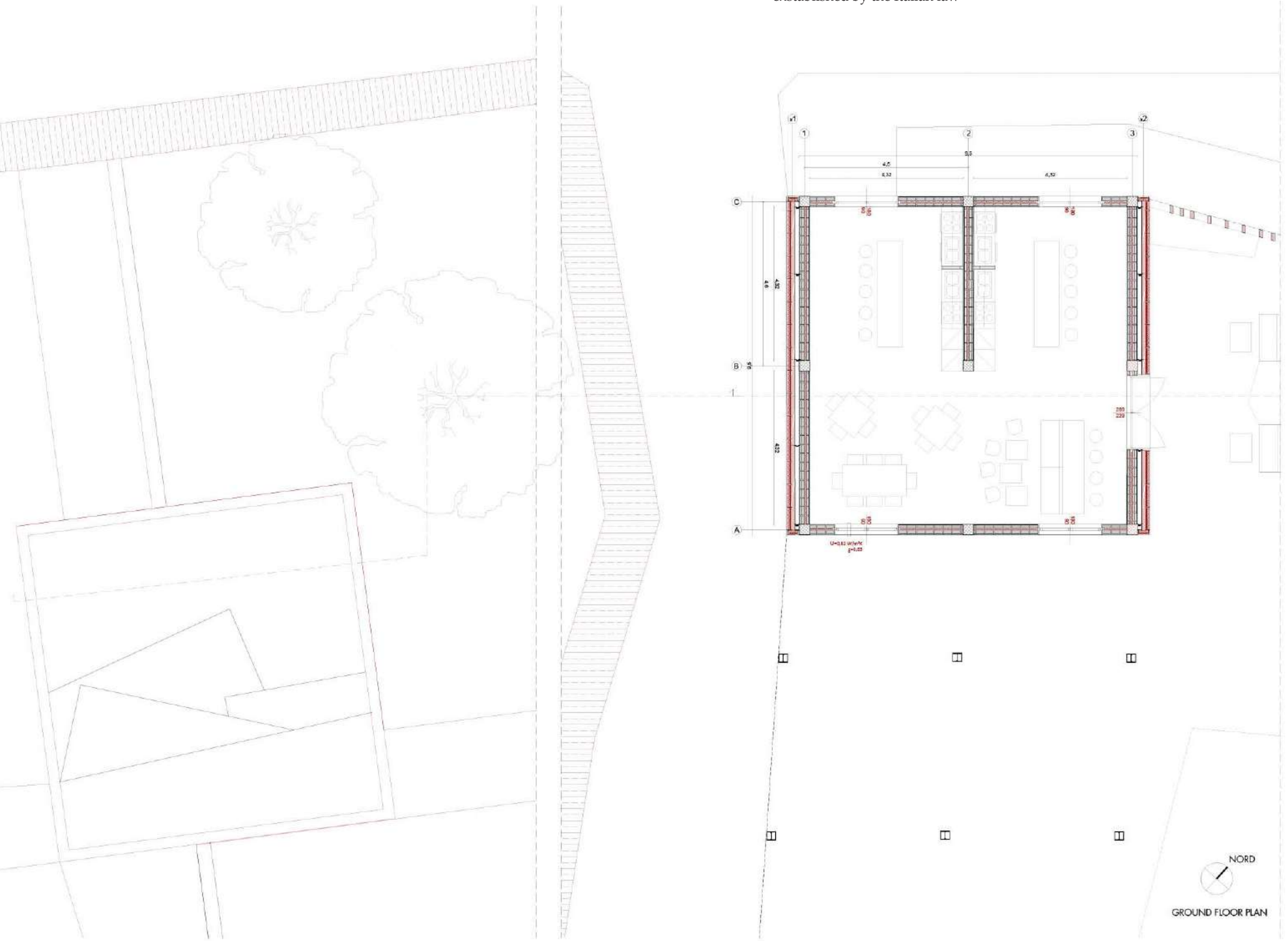


Project

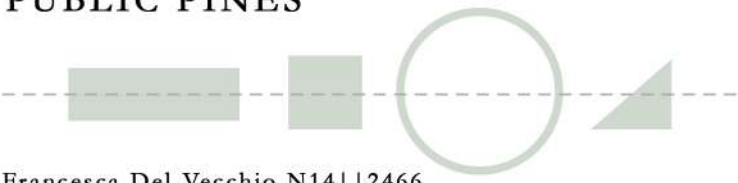




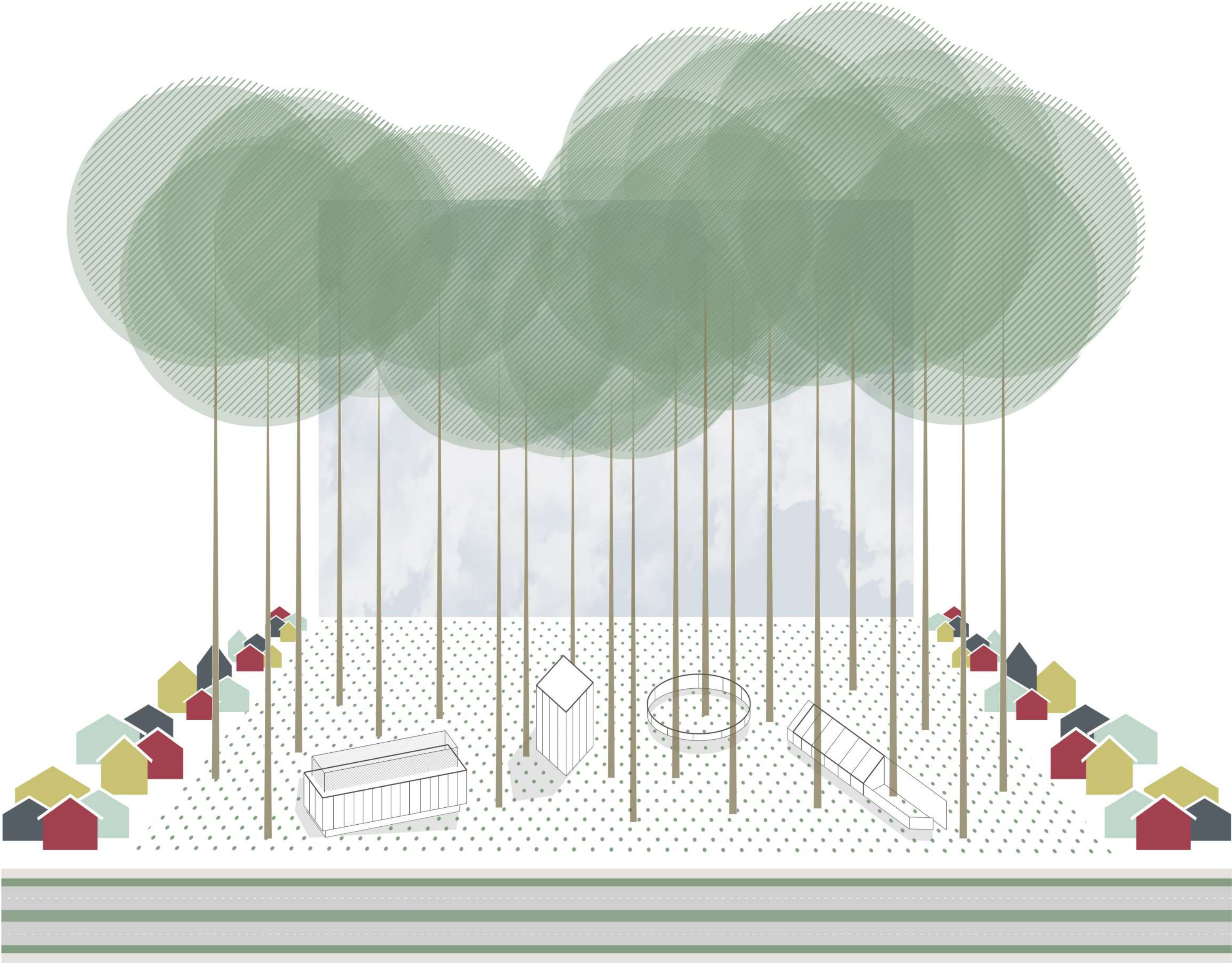
- The wall of the existing building, made with a double layer of hollow bricks, has been retrofitted with 7 cm of insuflated perlite
- The building thermal envelope fulfills the minimum performance criteria exstablished by the Italian law

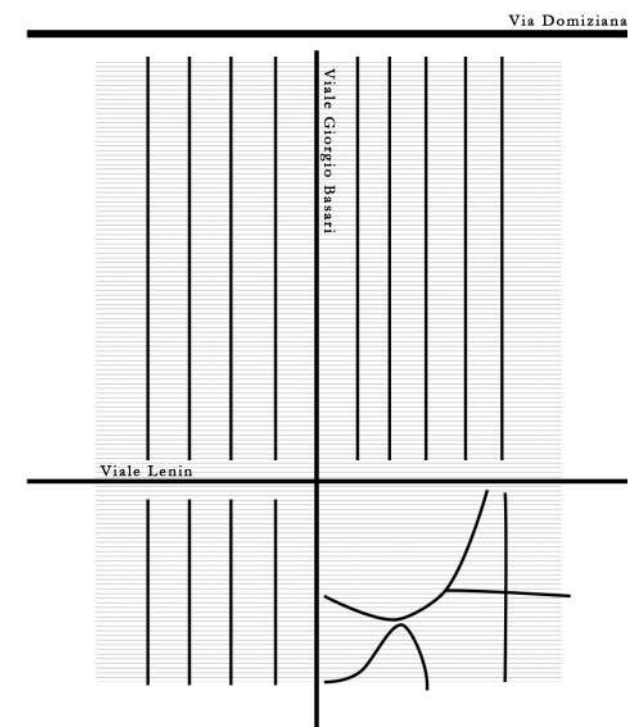
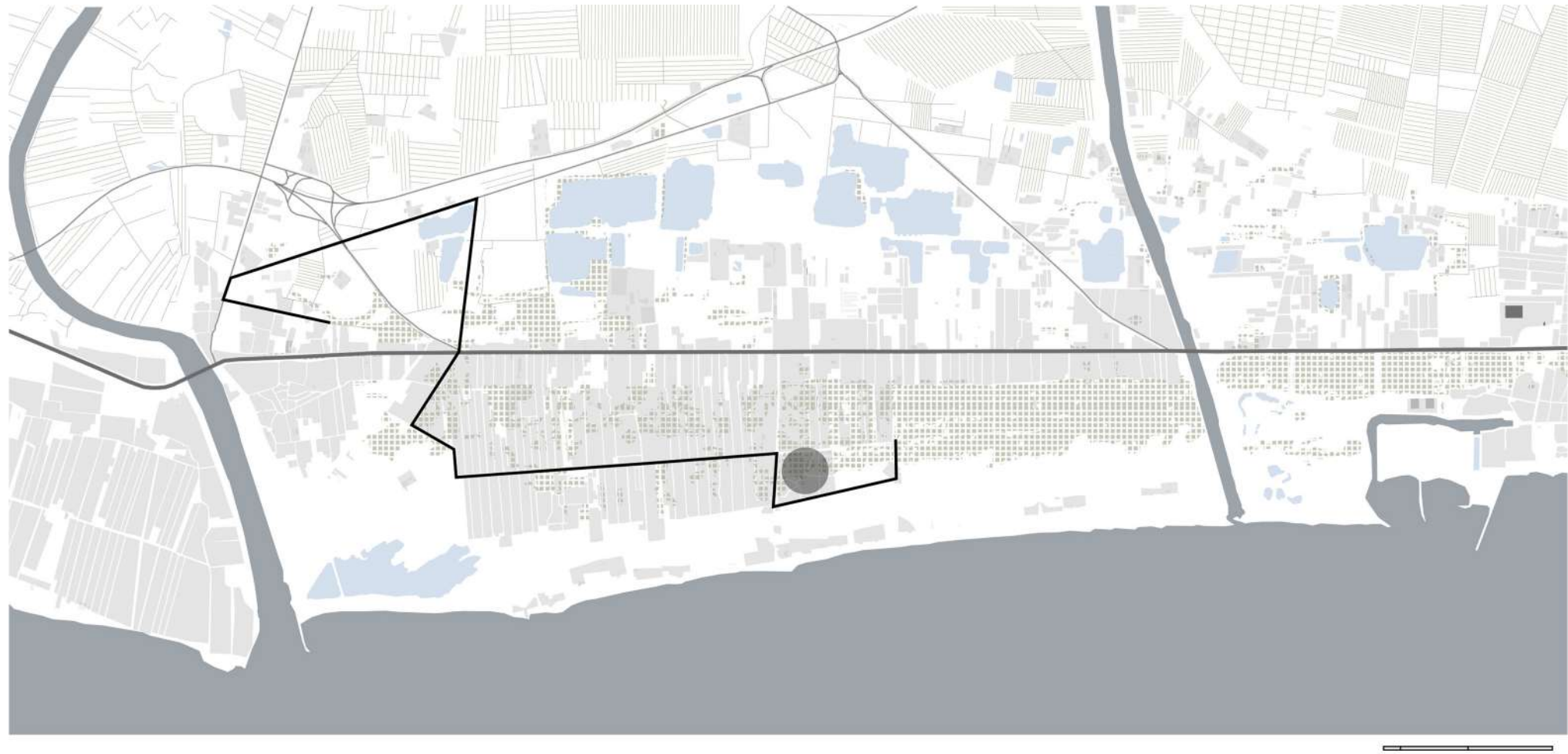


PUBLIC PINES

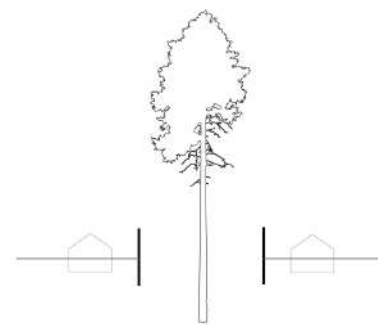


Francesca Del Vecchio N14 | |2466

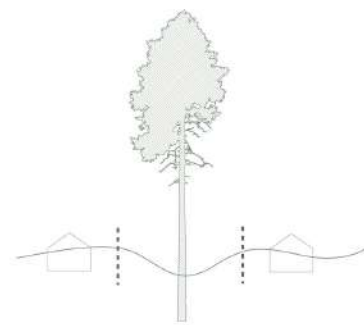




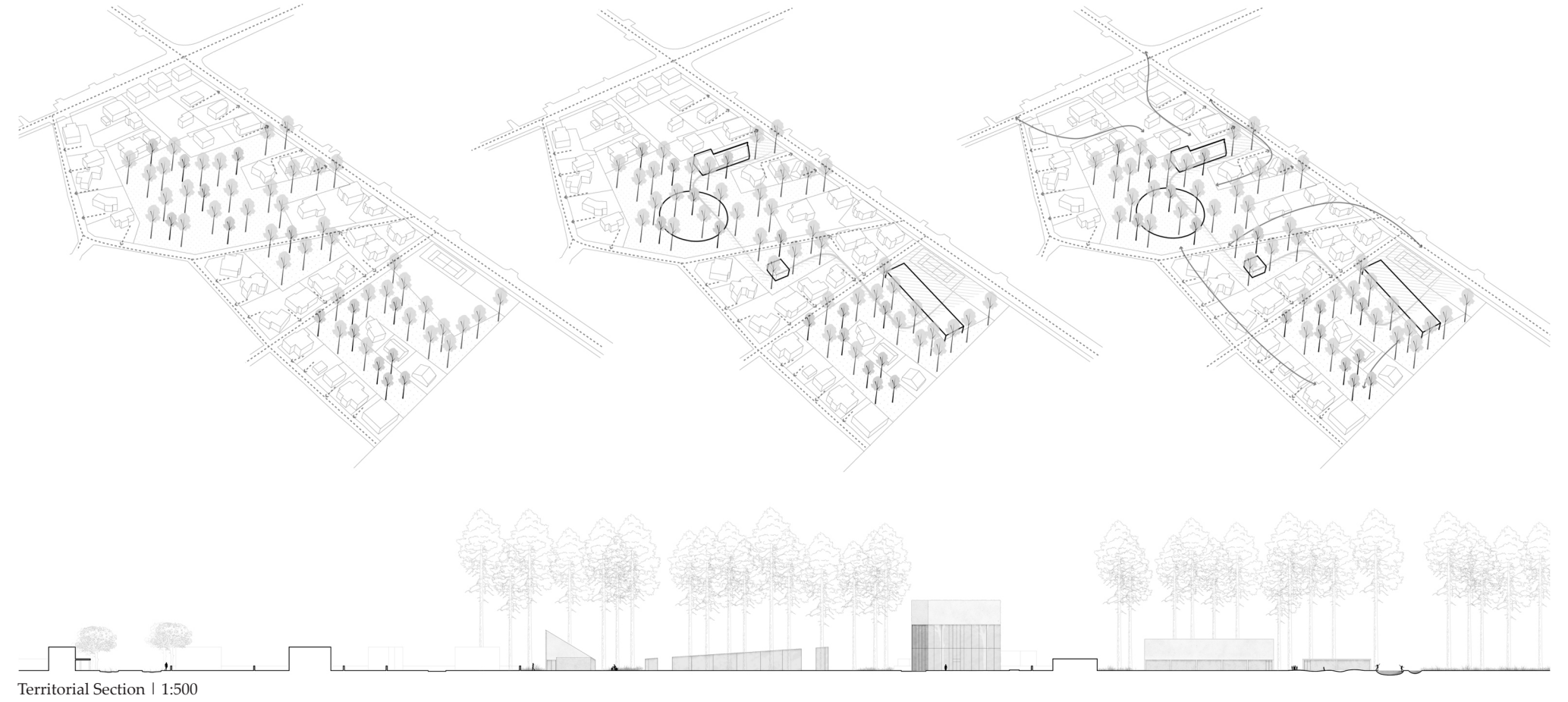
Castel Volturno is a territory of anomalies and contrasts. Starting from the morphological reading of the place it is possible to guess the number of elements that follow each other without ever really dialoguing. First, between the two lines that define the boundaries, the sea and the Via Domiziana, is a first horizontal gradient of elements that drastically flows from the dunes of the sea coast to the pouring of cement on which thousands of houses have been built (both abusive and not) that are repeated religiously along parallel axes. In this scheme, a large scale, there is a separation between the Green Bay and the Pinewood. The latter, an outstanding naturalistic element, was literally cut off from the life of Castel Volturno. The territory then suddenly becomes a piano, it begins to glimpse the sea, but still too far away. Reading by enclosures appears almost obvious in a reality like the one in which the life of Castel Volturno is immersed, yet it cannot escape the accuracy that every owner of each house has used in assigning a 'character' to their own separation from the collective and public world. In the area of Baia Verde there is a seemingly endless succession of arches of all kinds, the warm colors are flanked by the white plastered walls where the inscription 'private avenue', or 'avoid noise', is posted almost at a distance. The inhabitants of Castel Volturno prefer to stay at home, maybe go out in the garden in the evening, after the day's work in the city. And yet, there is a roundabout between Viale Lenin, the parallel of the Via Domiziana, and Viale Giorgio Vasari which is overlooked by a series of commercial facilities that invite public life. Small bars, refreshment points where people finally meet, finally talk. And evening is really movement, there are many young people. In the absence of other places where they could meet, the Castellani are forced to find themselves on the sidewalks of a roundabout, and they must be careful of the machines. But then, would a Castel Volturno inhabitant really prefer to live at home? Or is it the lack of public spaces that force people to live according to certain habits? This project



therefore tries to carry out a study on public equipment that could invite the inhabitants of single-family houses to come out of their pens, to find out what it is like to walk in the pine forest. Among the numerous anomalies, in fact, it is possible to find a quadrilateral of roads that do not respect the normal vertical, rectilinear and parallel course of the multitude of roads that mark the territory of Baia Verde. This climbing of shapes develops just inside the block to the right of the roundabout along which people try to live together. Moreover, penetrating inside the avenues it is accompanied throughout the journey by the not-less-invasive presence of the very tall pines that shade the different houses. There are even points where the trees are still the only masters, small green lungs around which the various enclosures containing the artificial gardens of the villas open up. In some of these, some pine trees emerge. The dialogue between the pine forest and the cement in this area is still ongoing. So why interrupting it? It seems almost logical to think of the introduction of a green path close to which develop a series of public facilities to support homes in the neighborhood and beyond. It starts from Viale Lenin with the entrance to the auditorium patio, conceived as a recovery of a church that is currently outdoors, evidently used only in summer, during the year of leaves deposit falling from the trees. It then continues towards a choral pavilion that welcomes and is welcomed by the pine forest, a subtle and circular architecture that rests on the ground without destroying it. Then we arrive at the structure hosting workshops and co-working spaces and finally we return to Viale Lenin from a place equipped for sports, whose function, also in this case, was defined starting from the presence of a tennis court at the side of which there is currently a parking lot. All the architectures, in their language that involves the use of materials in contrast with each other, such as glass, mirror-glass and raw reinforced concrete, hope for that dialogue that Castel Volturno is timidly carrying forward, getting rid of a past that is too far now.



CREATIVE PROCESS



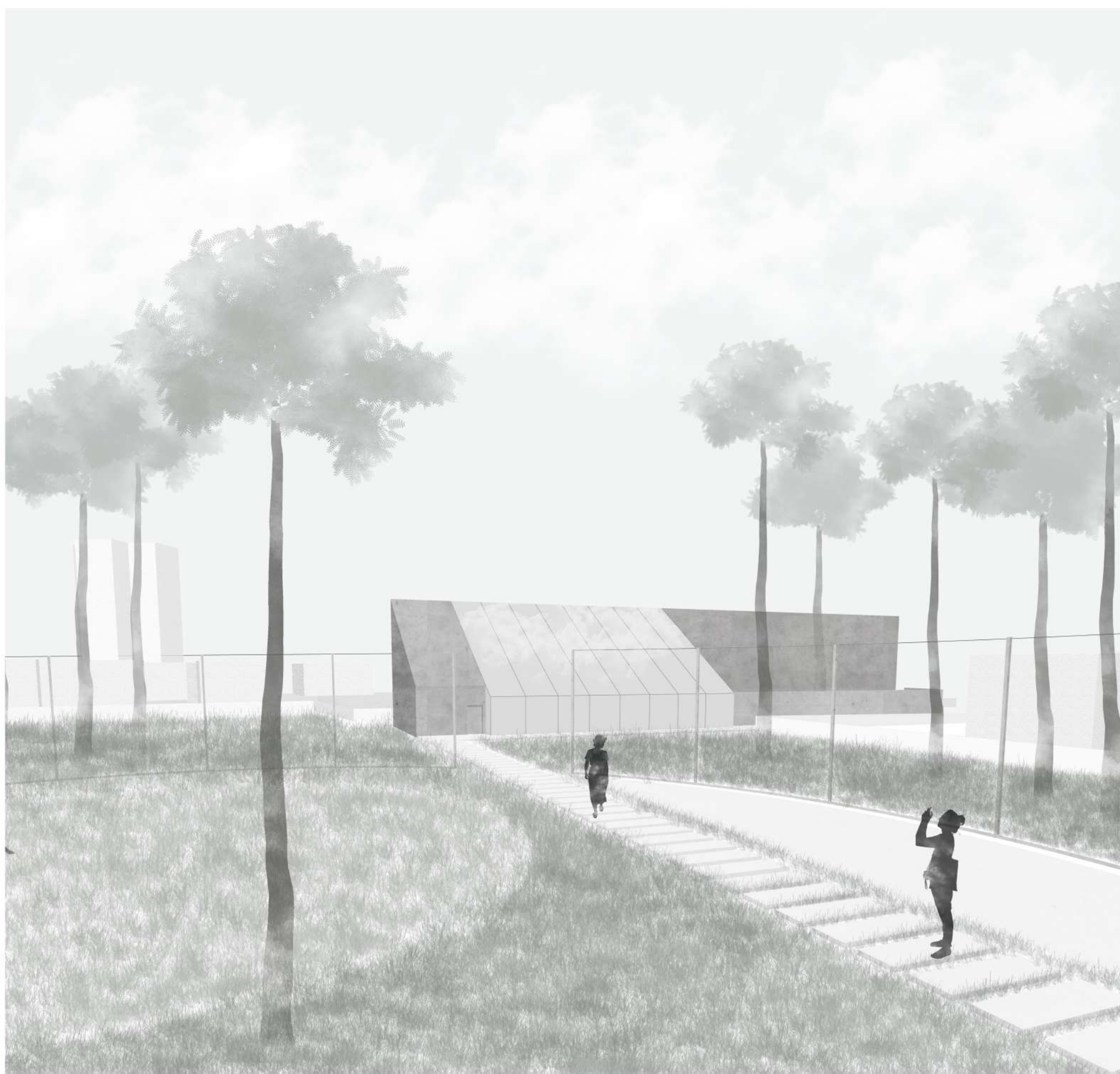
Territorial Section | 1:500



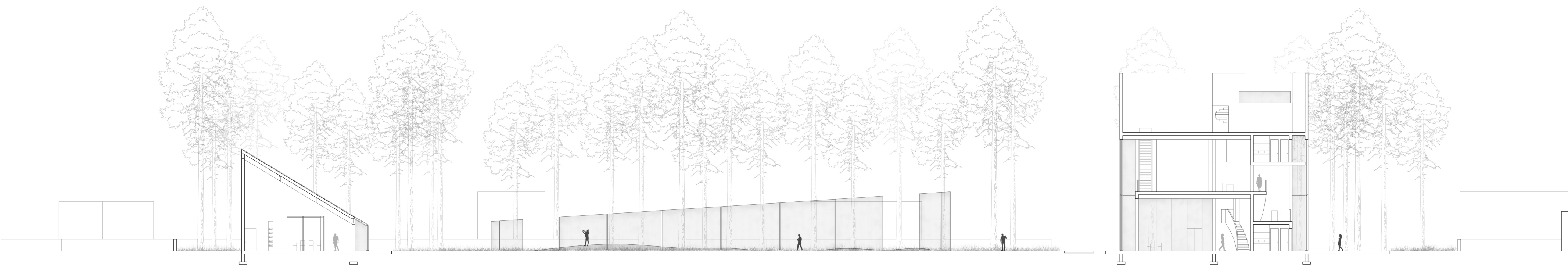
Masterplan | 1:500

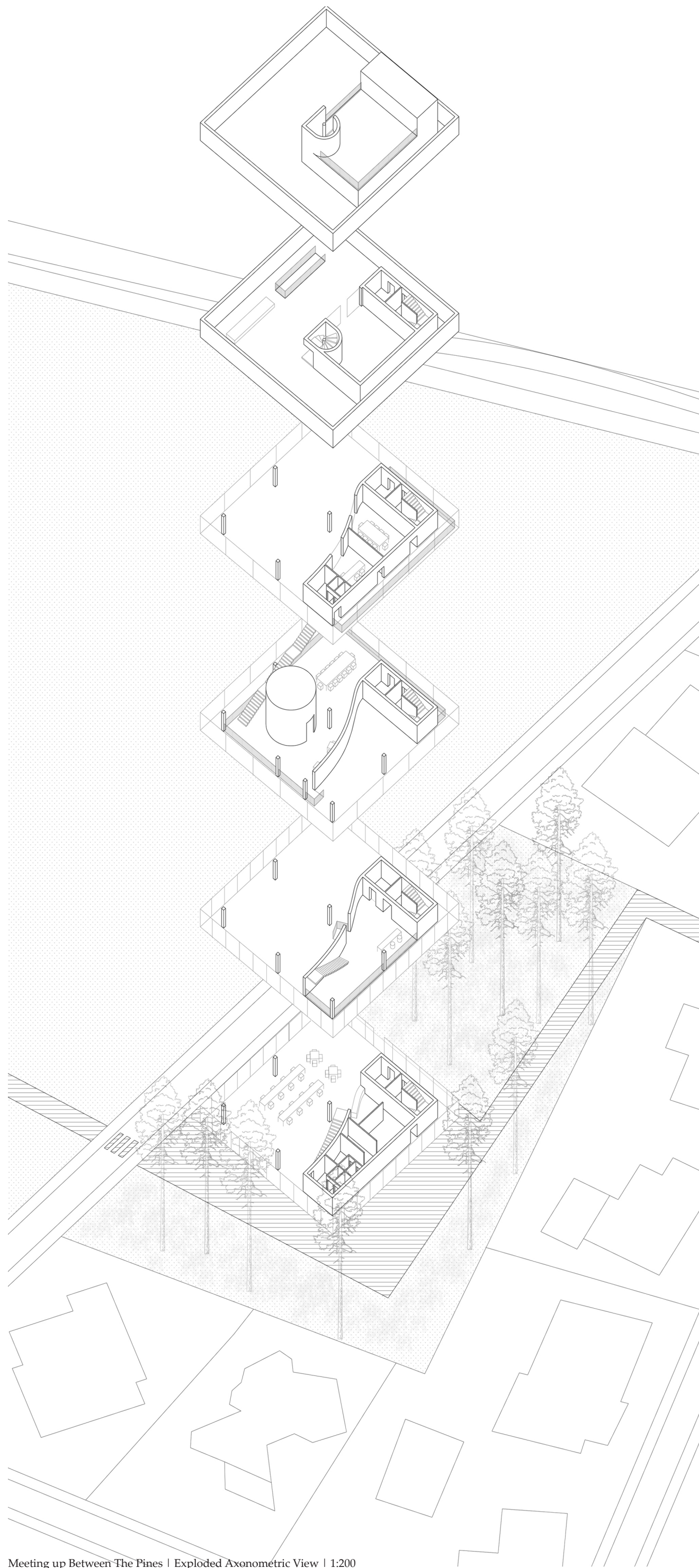


Auditorium | Floor Plan | 1:100

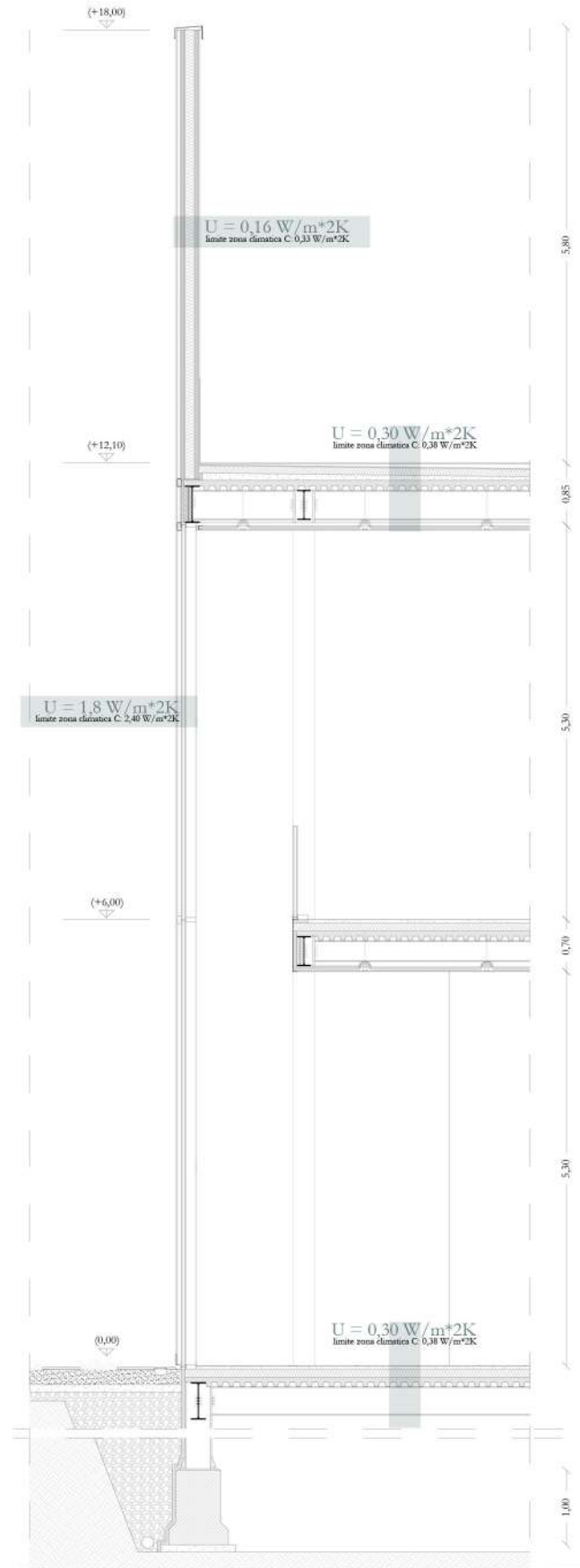


A Common Place Between the Pines | View from the inside

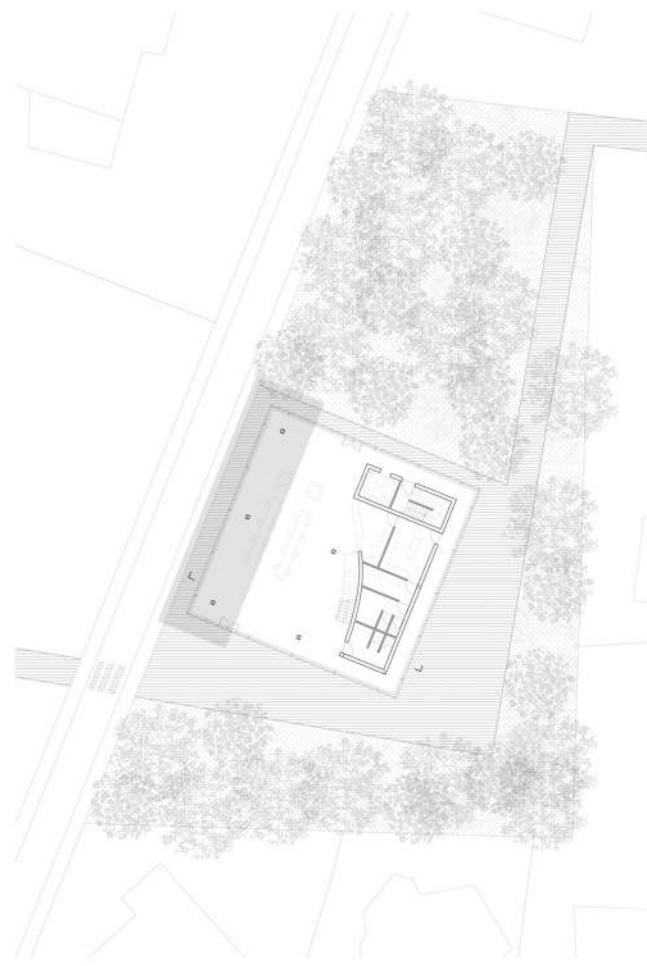




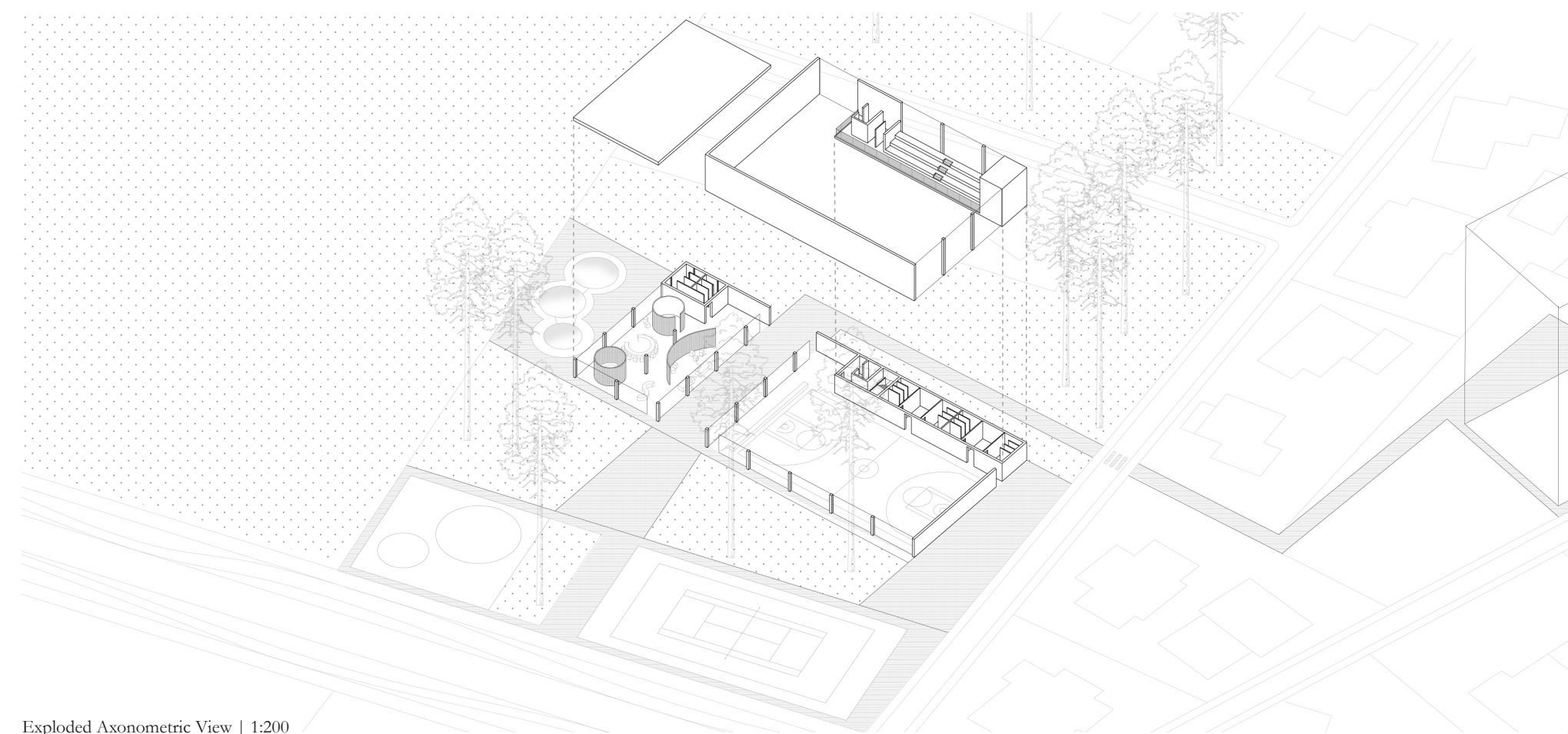
Meeting up Between The Pines | Exploded Axonometric View | 1:200



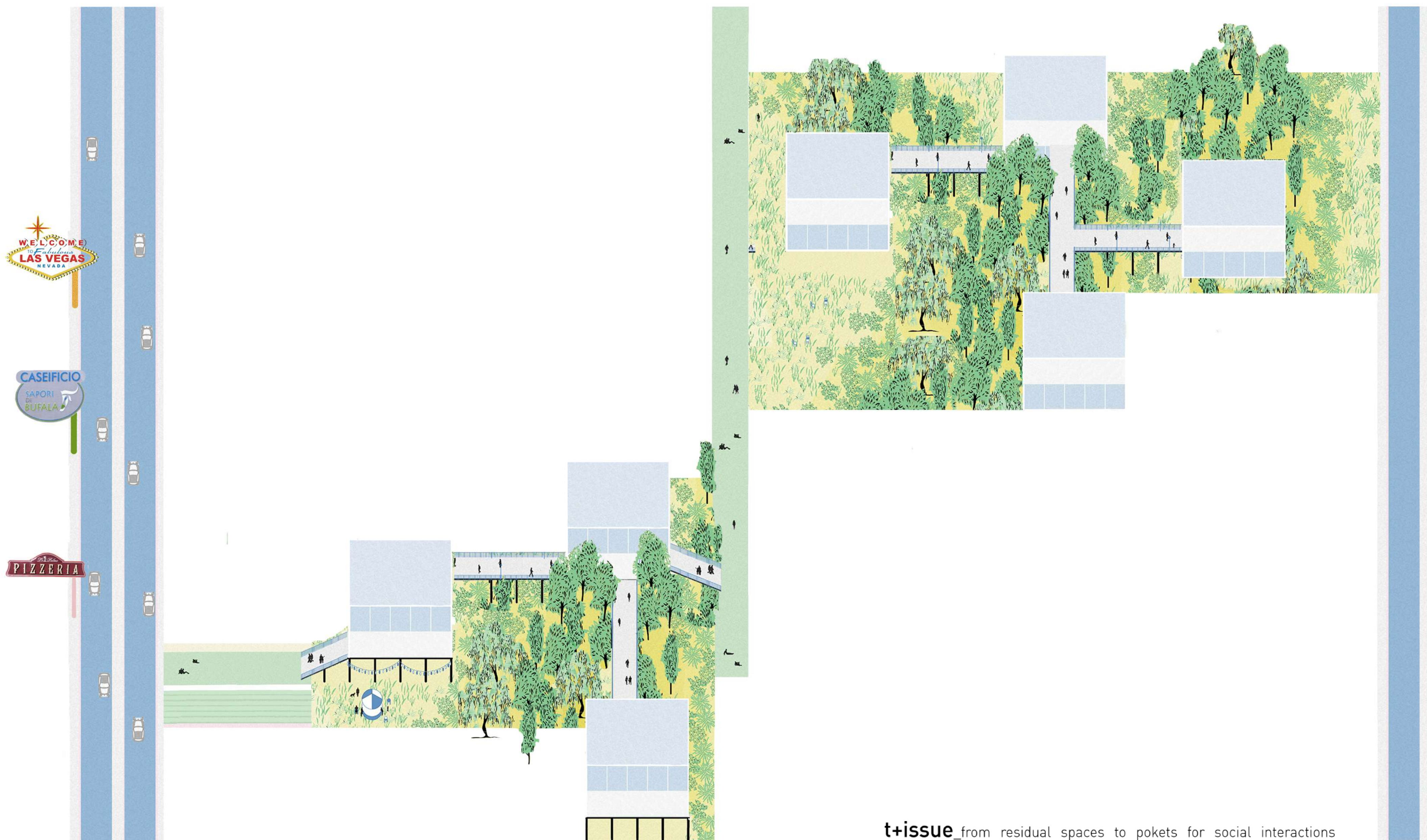
Construction Detail | 1:50 Section with U Values



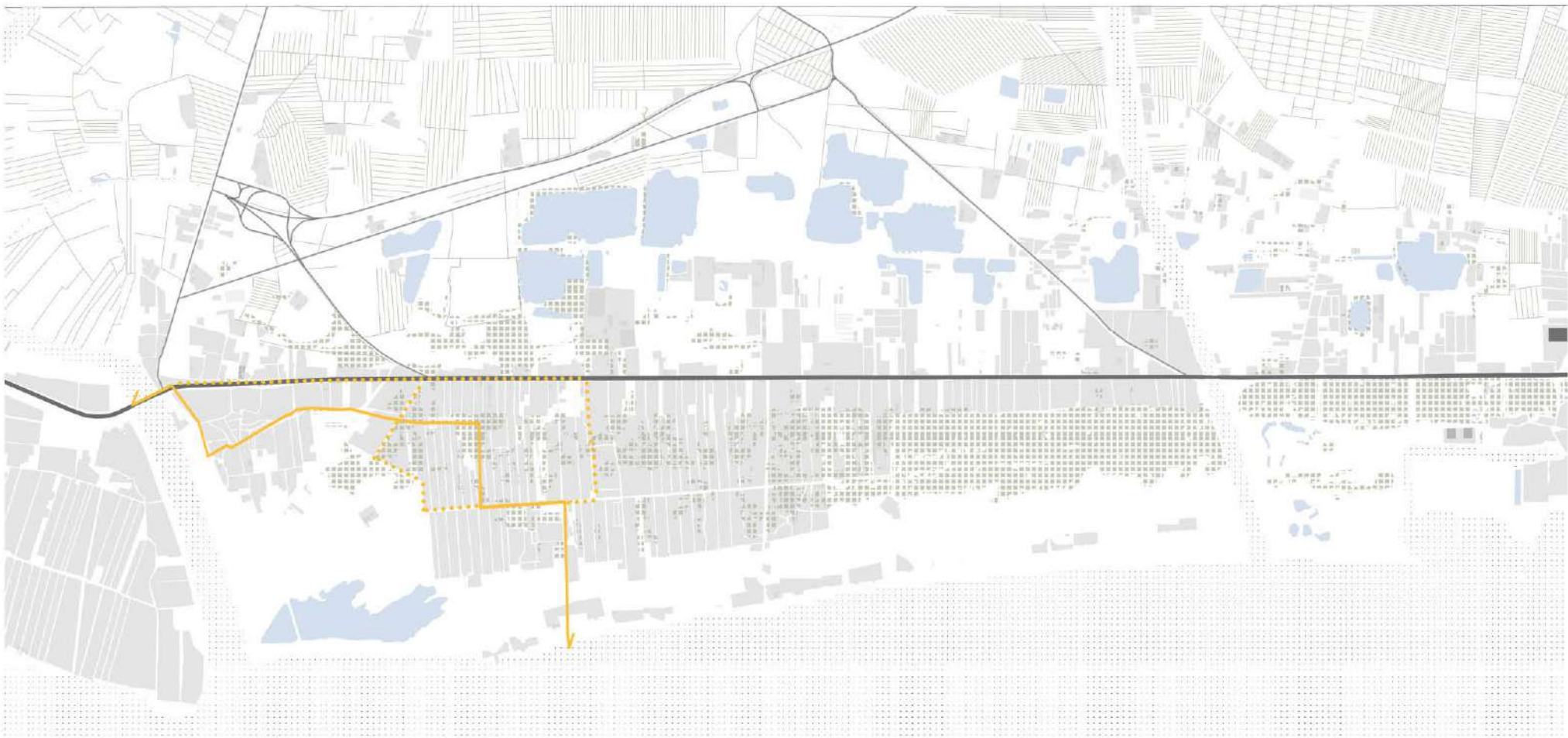
Working out Between The Pines | Floor Plan | 1:100



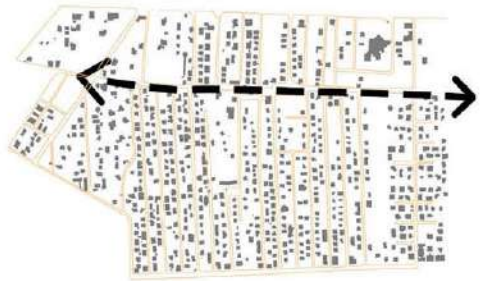
Exploded Axonometric View | 1:200



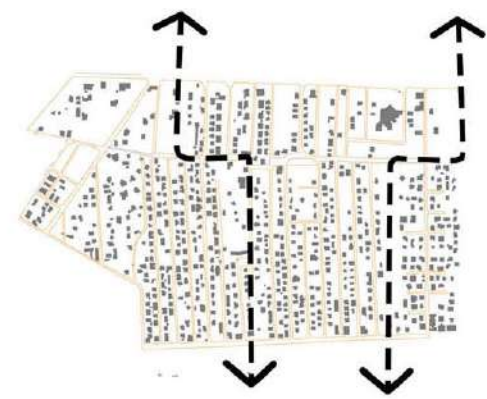
t+issue from residual spaces to pokets for social interactions



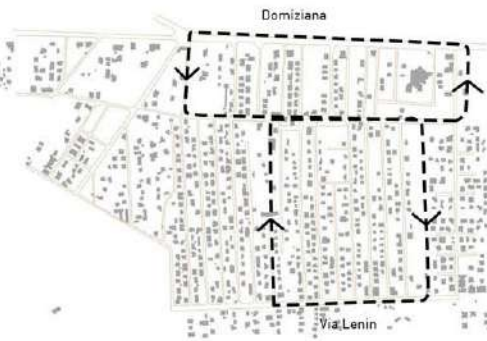
Current state



Strategy: new trasversal road



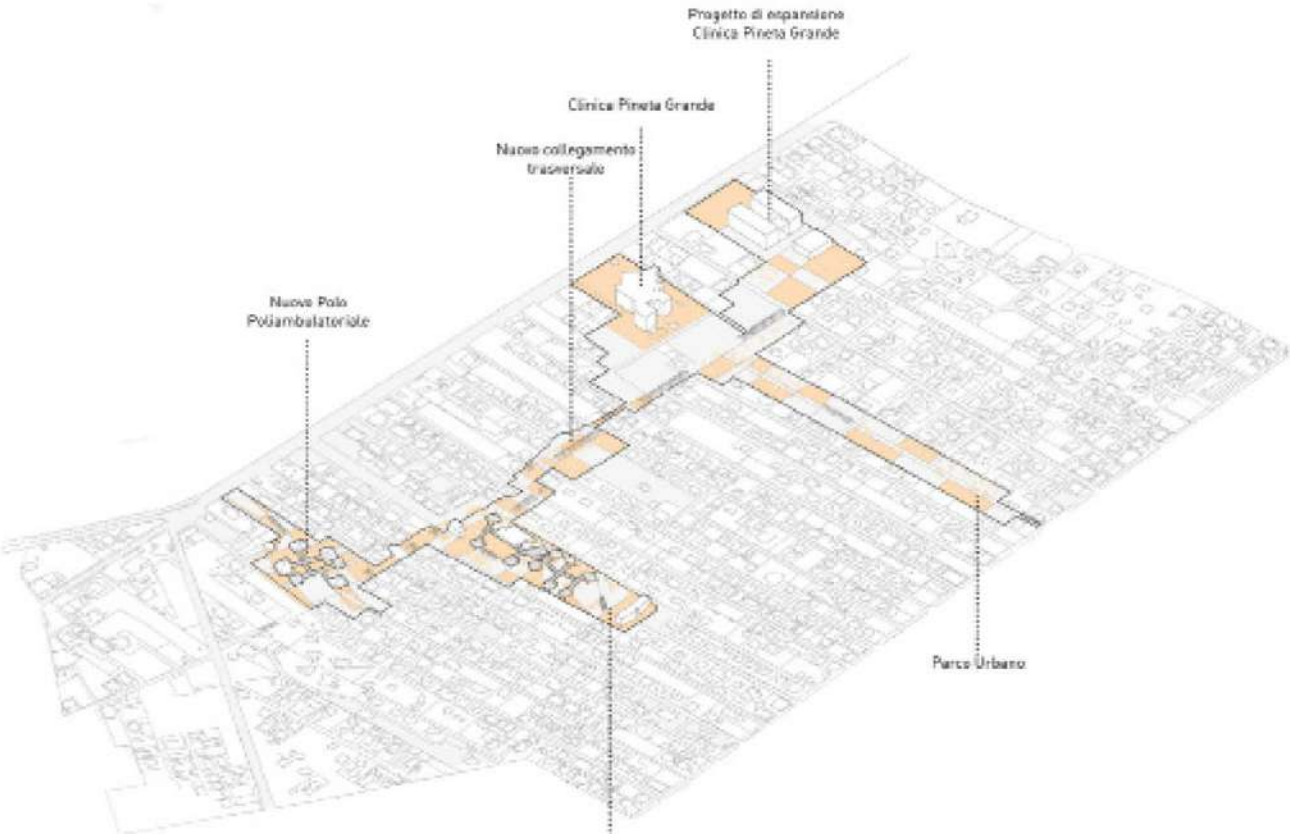
Strategy: new longitudinal roads



Strategy: new rings

T+issue was born with the intention of meeting specific needs of a fragile area such as Castelvolturno, devastated by illegal construction and building speculation. This project has the ambition to target all people living in the area : the “*castellani*” (the locals), the immigrants and temporary users. A starting phase in the design process was aimed at analyzing the shortcomings of the place and intercepting some of the unsatisfied needs of the population through a direct contact with the territory and the people. Among the most obvious problems, in addition to the dramatic living conditions the immigrants are undergoing, a low level of health services emerged as one of the main points . In fact, despite the presence of some facilities that provide services of this type, the demand for daily and constant healthcare is by no means satisfied. The existence of the Emergency headquarters in a place like Castelvolturno is certainly noteworthy but, with its limited space, it is not able to meet all health-care demands, besides the cardiological unit of the Pineta Grande Clinic, where everyone has free access to the emergency room, but not to the specialists. Still, the contact with people has revealed a perception of Castelvolturno as a city made of

fragments, made of “cities in the city” , whose parts are the historical center, Baia Verde, Destra Volturmo and the Domitiana, perceived as a barrier, limit and “Place” at the same time. In continuing the investigation it was noticed how the few institutions providing these services are located along the Domitiana itself and in particular all along the west side of this important infrastructure , an observation that contributed decisively to a scale shift, a viewfinder. which has focused the investigation on the portion of territory between the Domiziana and Viale Lenin, a dense gray fabric, made of fences and walled homes. It is between the meshes of this fabric that 4 potential areas have been identified. The first, the project’s engine, is the area in which the Pineta Grande Clinic is currently expanding, through the construction of a new facility expected to double its size. Hence the idea of hooking up with this expansive process by filling the gaps reached during the investigation: a new Clinic center that could offer medical visits, both for a daily routine control and more specialized exams, for all sections of the population and which does not include overnight stay, through a collaboration between the public and the private



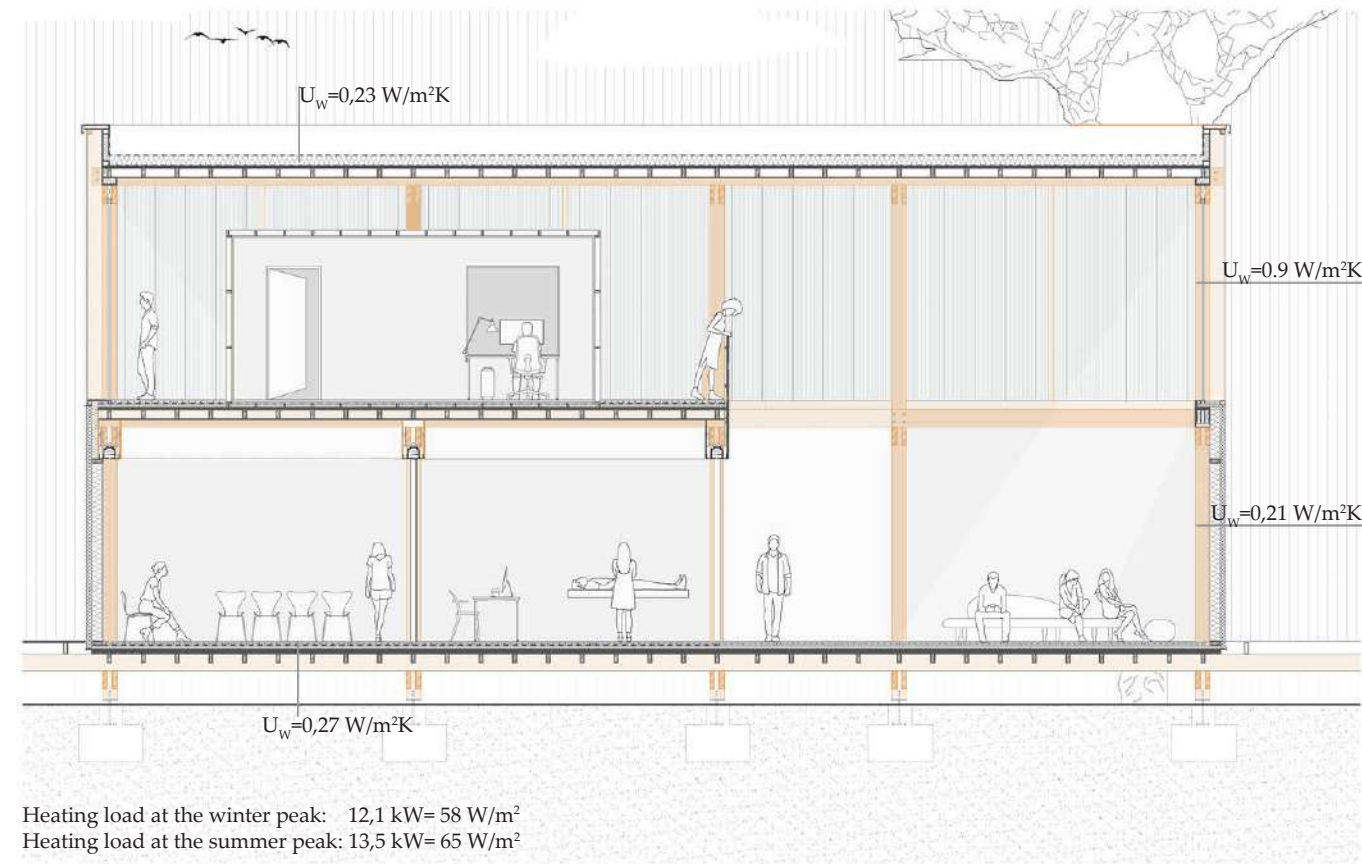
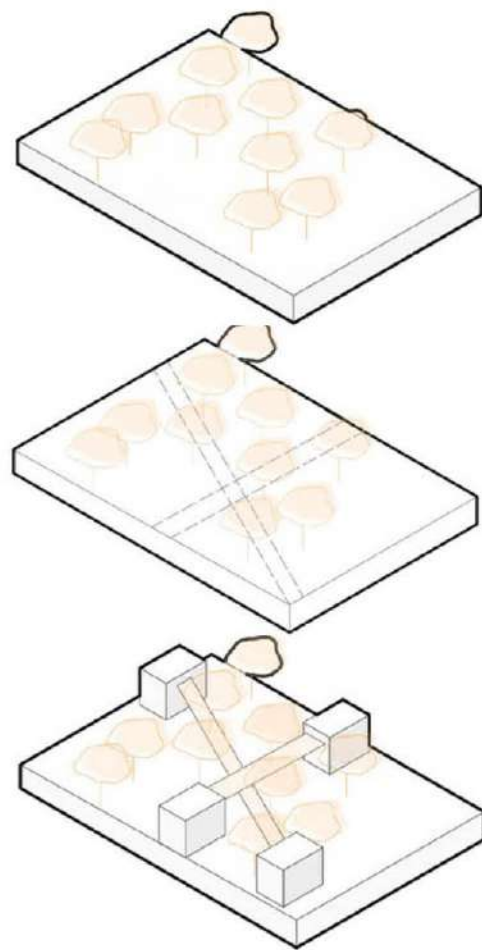
Strategy: axonometric Masterplan



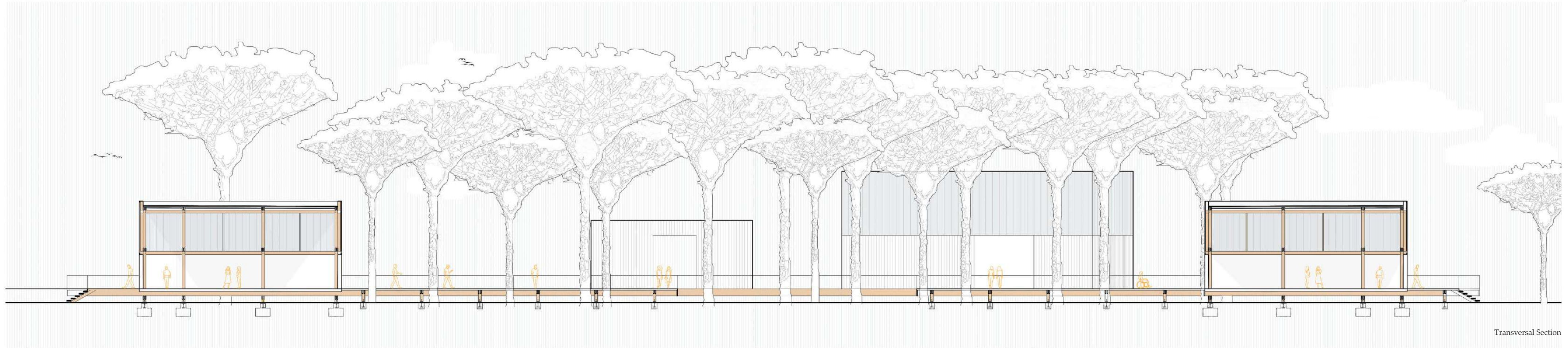
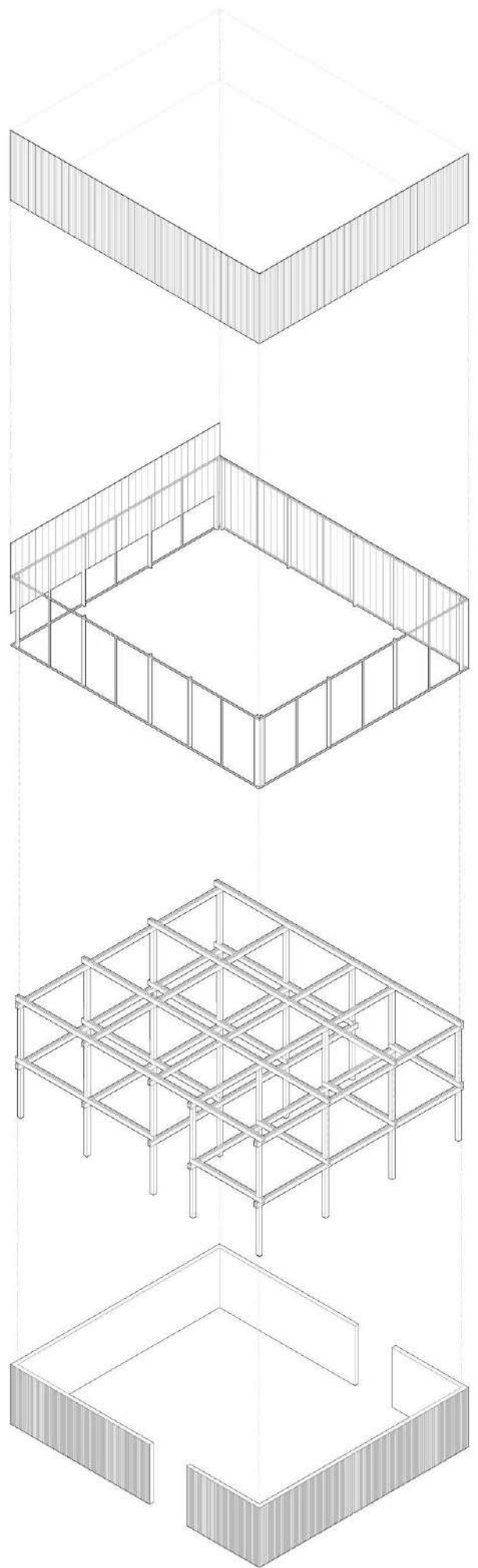
sector. Starting from this intervention already in progress, an incremental process could develop in different stages through the construction of pieces independent from one another, but that will be progressively integrated into a network of new relationships revitalizing such a dense and gray urban fabric. With the identification of the different areas, different project hypotheses were born, all with a common thread: care and respect for place, nature and people. The purpose of the architectural interventions is, indeed, to add new services and new functions, without removing any element from the existing habitats by paying particular attention to the existent vegetation and the permeability of the soil, thus studying interventions that do not further compromise the few vacant spaces of Castelvolturno. The second potential area is the longitudinal parcel, in very bad conditions, behind the clinic that crosses the urban fabric up to Viale Lenin: a potential linear park providing a therapy garden , a nursery for medical herbs and areas dedicated to rehabilitation and outdoor activities. The third area is a parcel on which an extended green surface is today occupied by small bungalows and some larger buildings: these are low quality, neglected artifacts. Strategically, the project deals with the artifacts by “augmenting the existing buildings” in three ways, respectful of the places and the existing pines in this area. Existing buildings are adapted and redesigned as temporary residences. The perimeter wall that surrounds the area is demolished and the green space becomes a public park. Existing buildings are connected by walkways designed as suspended balconies over the park,. This function, on one hand, aims to meet the housing needs of immigrants awaiting permanent accommodation and on the other to be supportive for those that assist patients of the Pineta Grande Clinic. In the larger buildings, other activities are planned and designed for the community and new offices for the really important associations active all across the Litorale Domitio. This supposed “mixité” wants to favor integration and mutual respect between the different categories of Castelvolturno. The fourth area, is also an abandoned parcel with a notable presence of trees, and straddling over the Domiziana, the historic center, and the mouth of the Volturmo. It is here that the project of the new Clinic center finds its place, conceived as a system of independent pavilions, consistent with the idea of being able to build each one in different and sequential stages, according to economic possibilities and social needs. The volumes of the pavilions, which are configured as light boxes, are elevated above the level of the countryside and connected to each other by gangways which are also suspended. The choice of this type on stilts is to be found in the desire not to cement the area, leaving the permeability of the soil intact and preserving the roots of the trees through foundations made up of small punctual and shallow plinths. Moreover, also from the compositional point of view, the intervention was designed starting from the connection paths appropriately placed through the trees, in respect of the existing one. The project ultimately identifies small areas between the meshes of the dense system of the building and connects them into a network: here is the fifth potential area. These are small, specific interventions that expand the meshes of the built and introverted system and constitute a new road for slow mobility, generating new forms of penetration of the territory mobility, both transversally with respect to Domitiana and Viale Lenin, both in a circular sense, like two rings binding themselves. The reasoning, on an urban and architectural scale, ranging from public space to the domestic sphere, is contaminated and completed in a continuous process of return, in which public and private spaces create a more complex system made of relations and sharing.



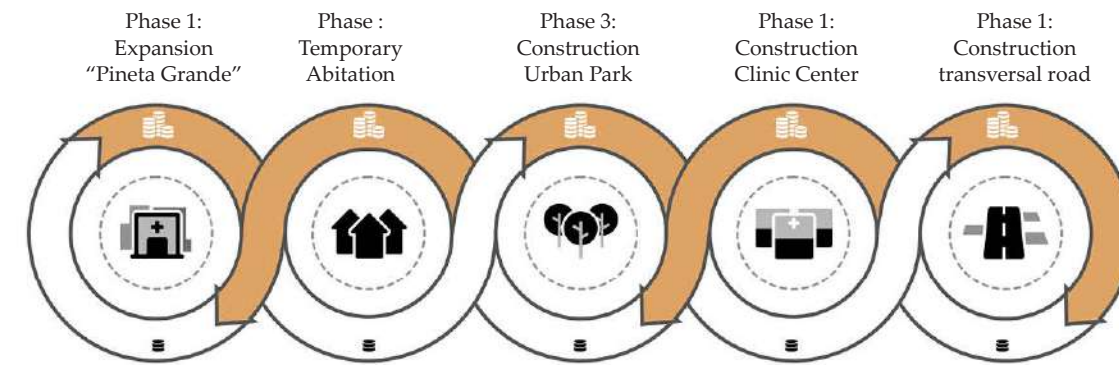
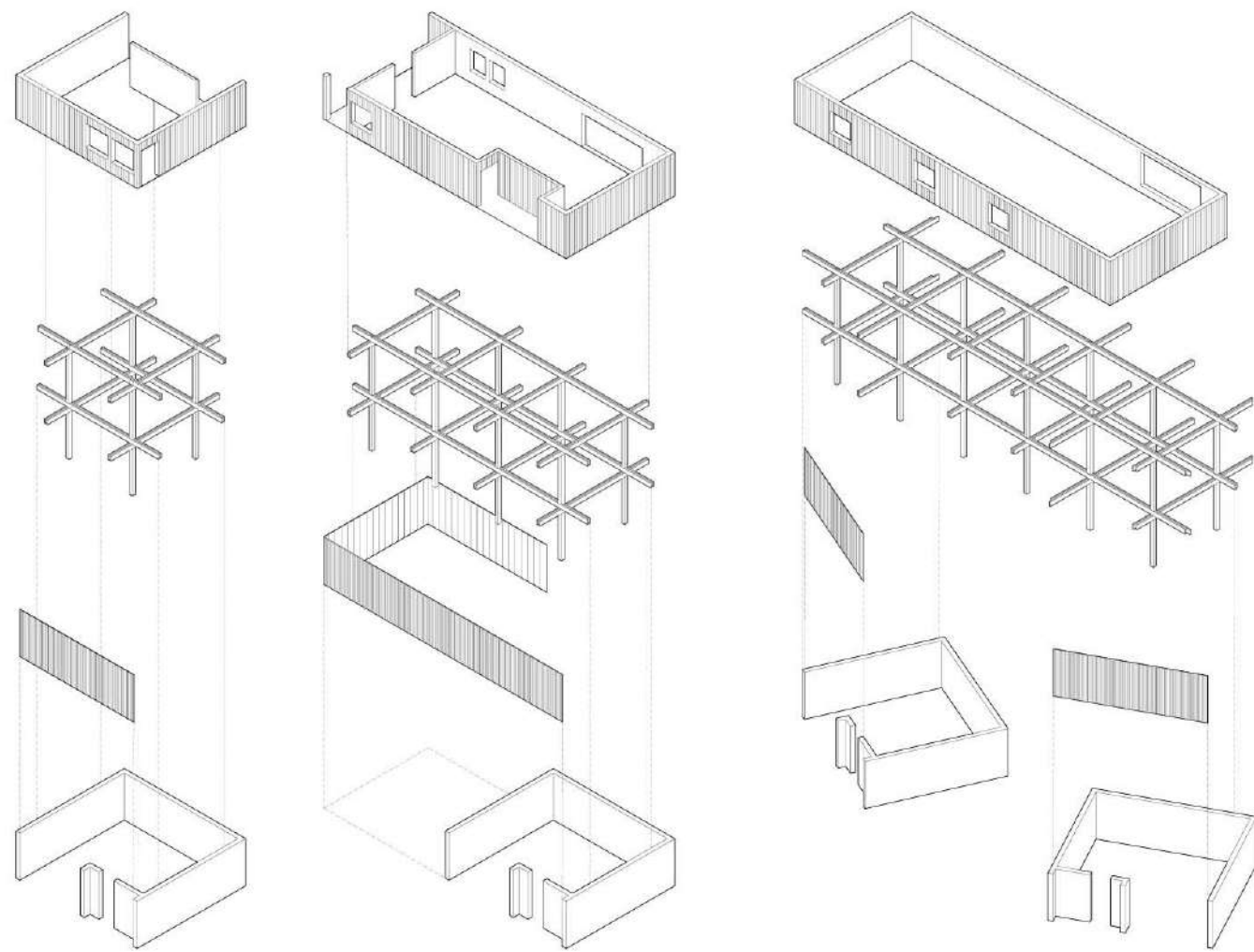
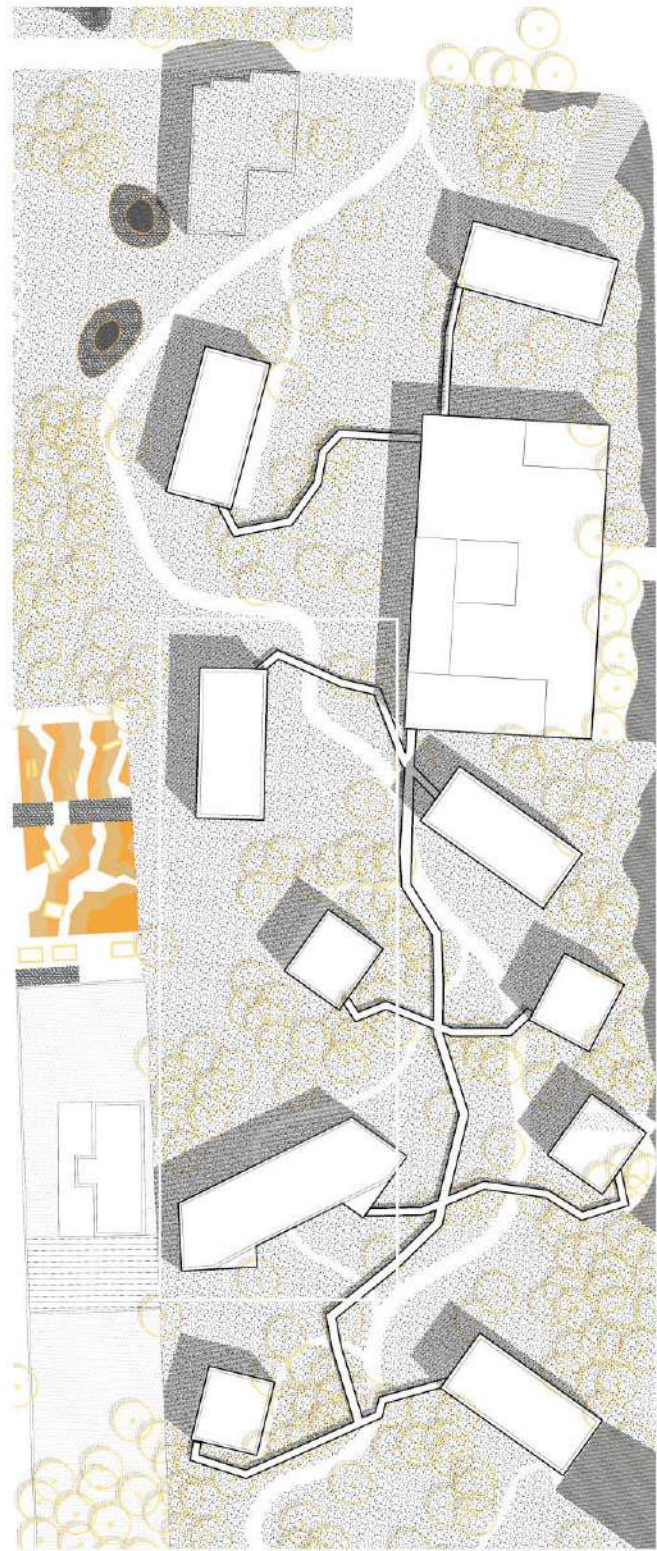
Ground Floor



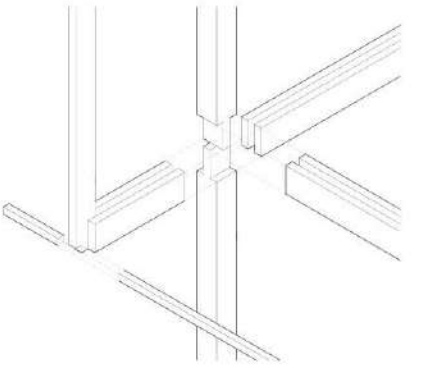
The health care center is conceived as a series of independent pavilions united by a path elevated one meter above ground level. The composition scheme on the left shows how the positions of these paths have been chosen starting from the position of the pre-existing trees and in their total respect. The design of the connection paths has the purpose of not cementing and waterproofing the soil. On the left, an axonometric exploded view showing how the coating clings to the wooden framed structure: the base in metal sheet, the upper part in polycarbonate. This stratigraphy is visible from the detail on the left. This stratigraphy is inverted in the pole of reuse, where on the street level there is the public sphere and on the upper level the private one.



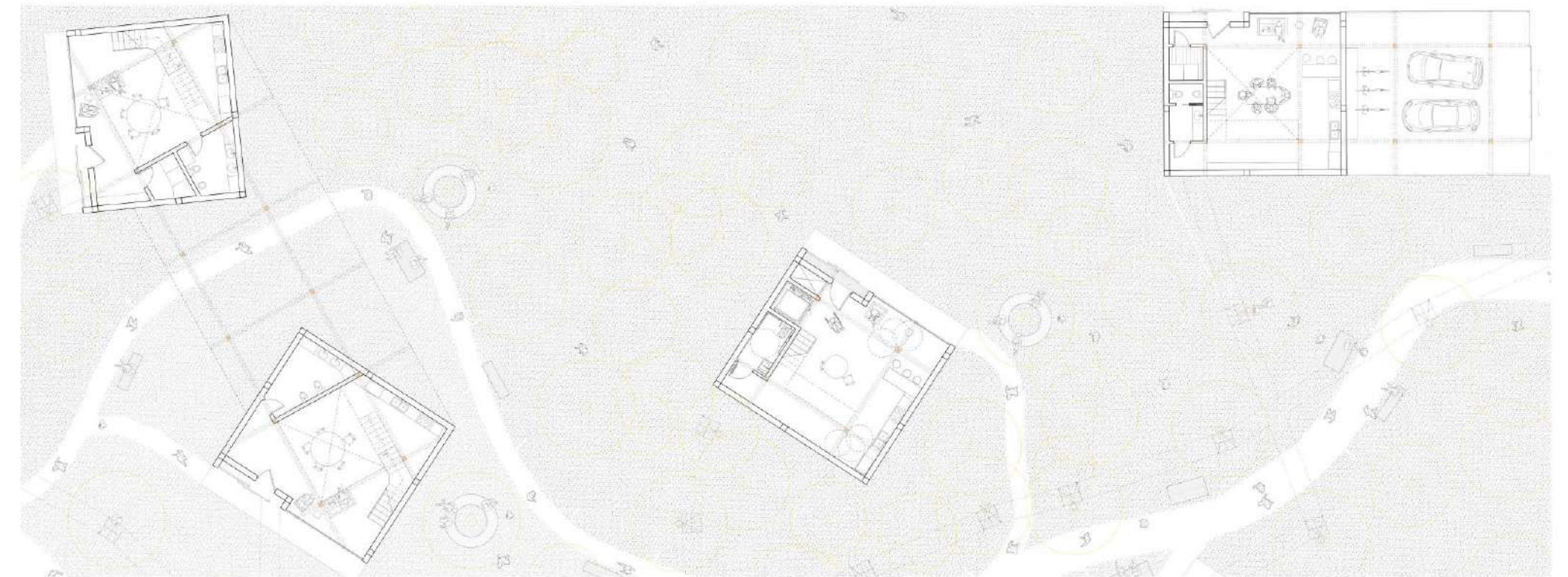
Transversal Section



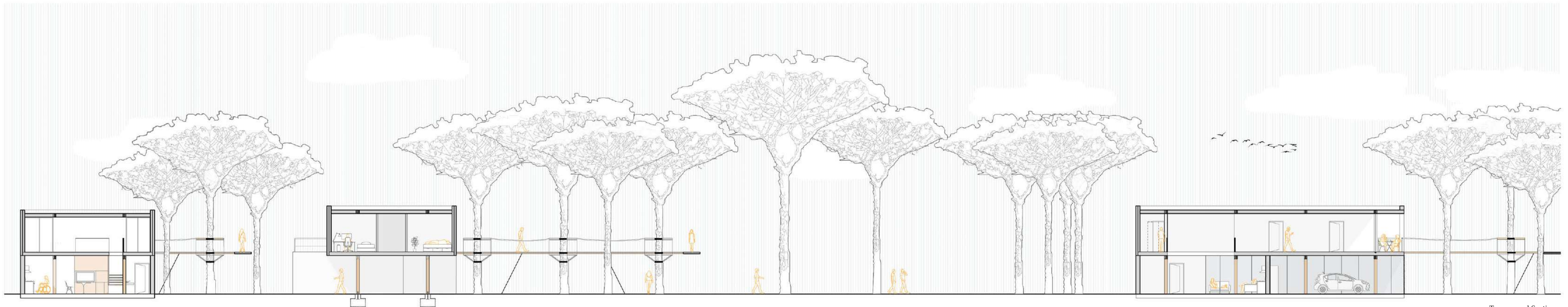
Typology 3: bridge, overlapping with two adjacent bungalows.
On the left the structural system:
The added structural system is the same as the new construction intervention.
The added pillars are independent of the pre-existing structure.
On the right the economic strategy:
a self-feeding process. The construction of each sector of urban strategy, once it has been put into operation, provides financial support for the construction of the next piece.



Ground Floor



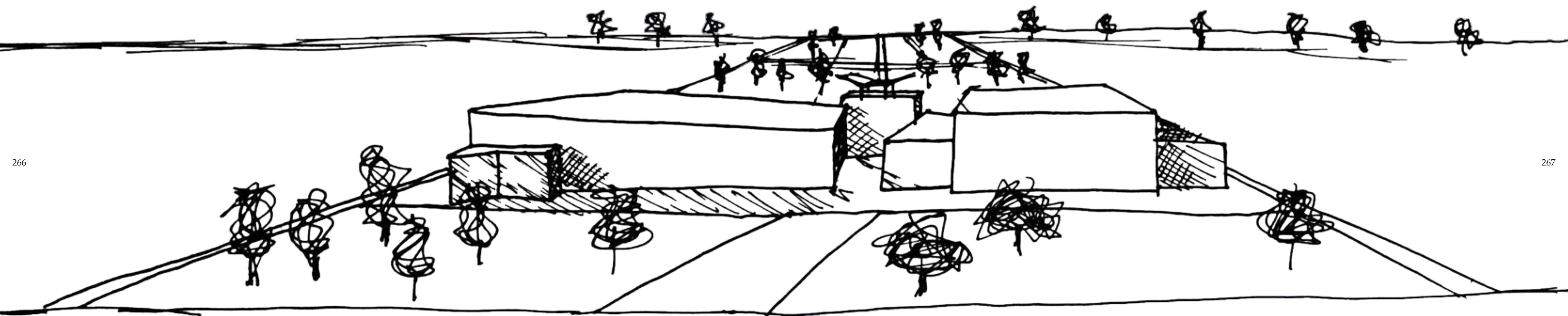
First Floor

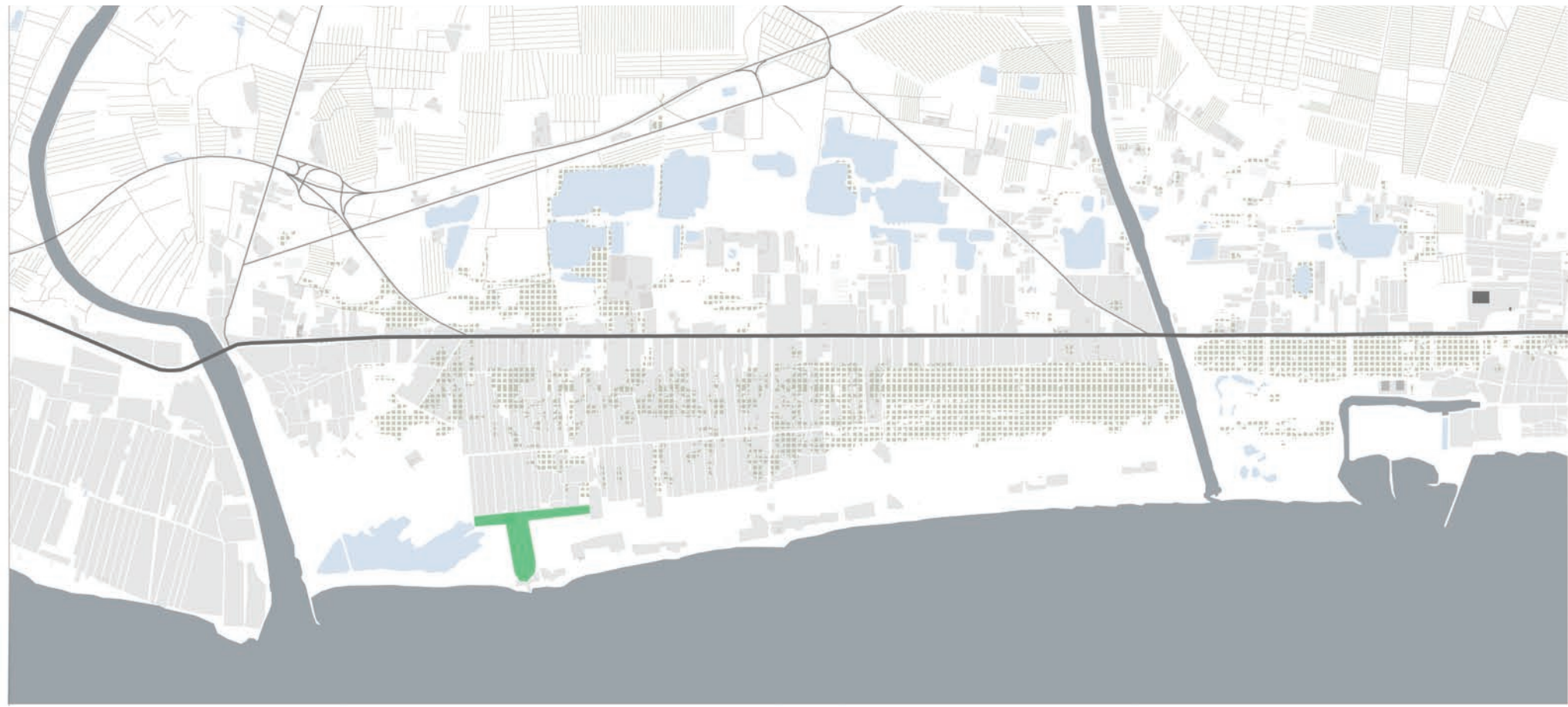


Transversal Section



SPORT AND NATURE
A NEW SPORTS HALL FOR CASTEL VOLTURNO





The project proposal starts from the consideration that Castel Volturno is no longer the tourist destination that used to be. Decades ago, many families purchased their own “villa” (which was also abusive) because this territory used to offer a lot of opportunities, considering the presence of significant landscape elements such as the sea and the Variconi Oasis.

People here found a familiar environment in which they could have fun. Over the years, people started to abandon their houses for various problems that characterize Castel Volturno still today (crime, illegal immigration, urban decay, just to name a few). The project proposal aims to give a new life to the city’s seaside tourism, choosing a particular area of intervention and specific functions presented in it.

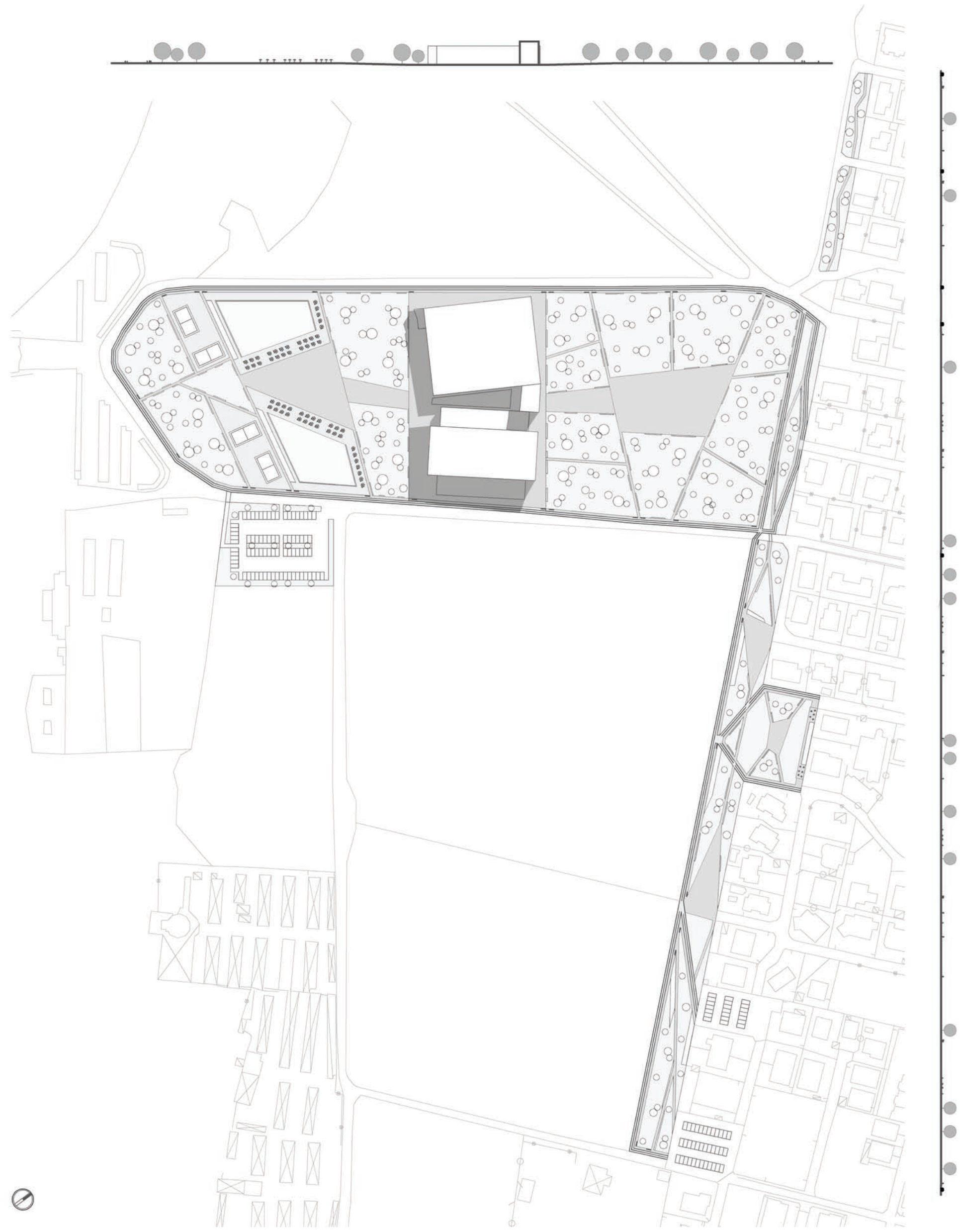
Located in the area of “Baia Verde”, near the beach, the project starts from an urban redevelopment of the abandoned green areas in a huge park, entirely pedestrian and with cycle paths, from which one arrives at an indoor pool complex and all open, which aims to be an

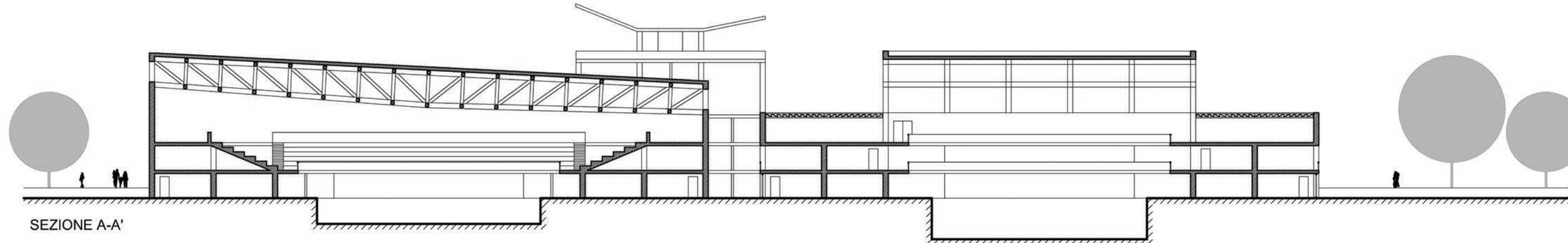
alternative to the beach and the often dirty sea. Going specifically, we have two indoor pool designated for the competitive competition and for water sports training.

In the first one, there is a water polo pool with related stands, precisely designed as a sports structure at competitive level; in the second, we have a diving tank whose structure, different from the first pool, is not aimed at competition but at training, with the presence of classrooms that allow learning and the training of athletes in these two sports and not only.

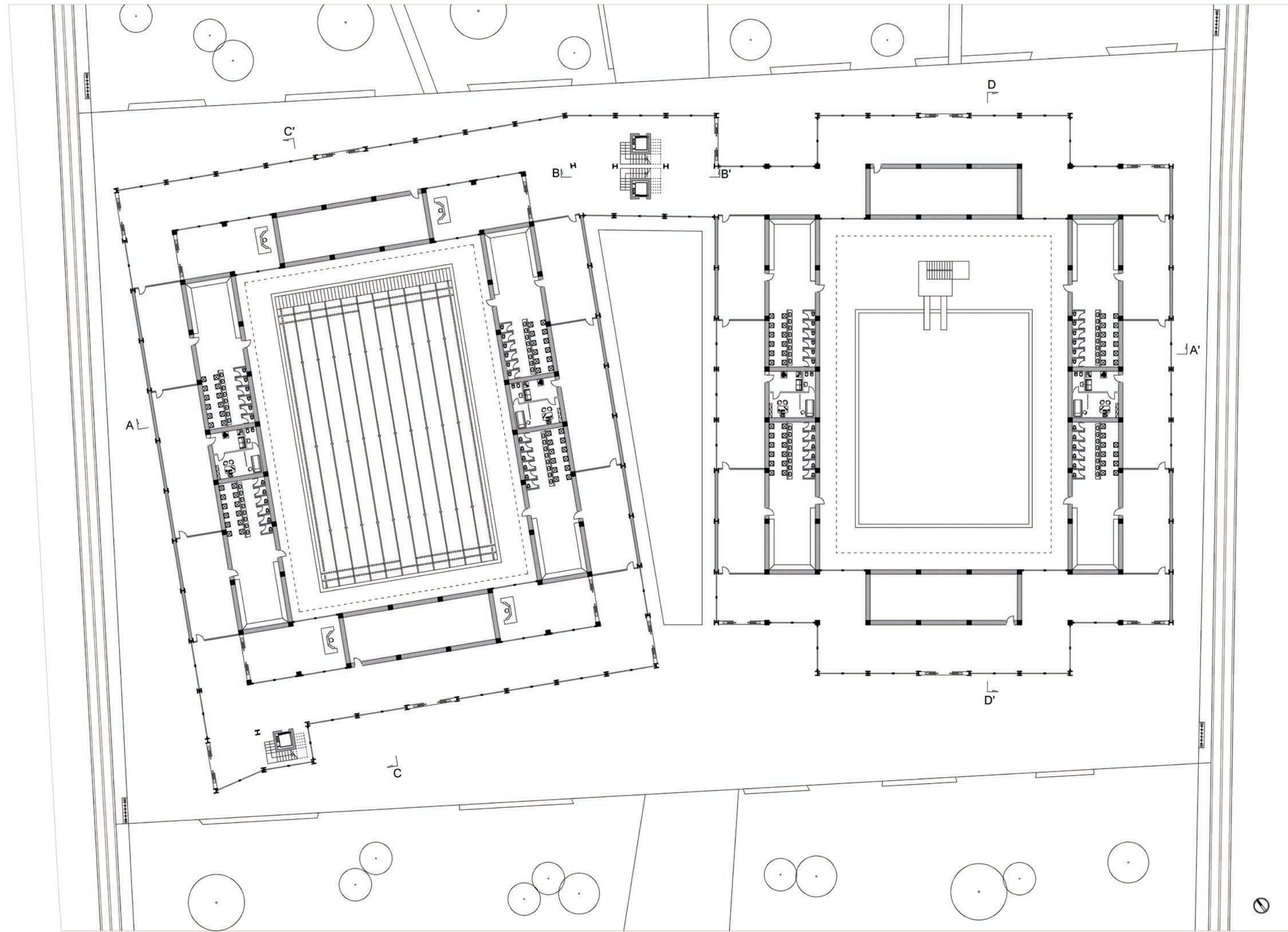
The second part of the complex includes outdoor pools which, as mentioned above, are a valid alternative to the beach. In this area it is possible to find all the elements characterizing a beach, such as umbrellas, cabins, refreshment points, beach volley courts.

These facilities are all placed inside a great park, which allows users to be able to go for a walk, surrounded by nature, to walk along pedestrian paths, to ride a bicycle with a presence of a large bike path that runs throughout the park, to be able to do a picnic inside the large meadows generated by this urban regeneration.

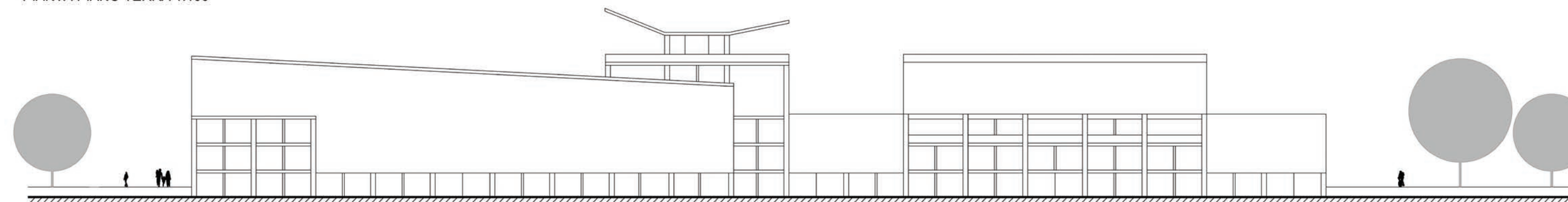




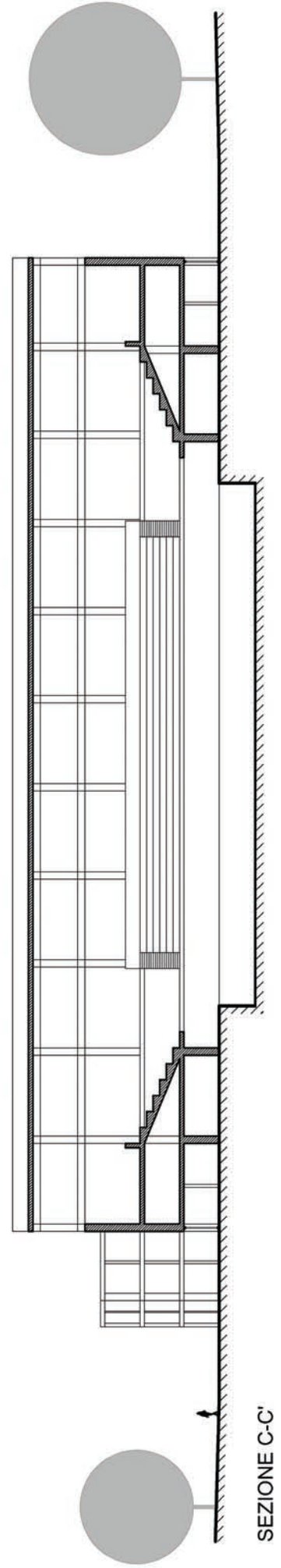
SEZIONE A-A'



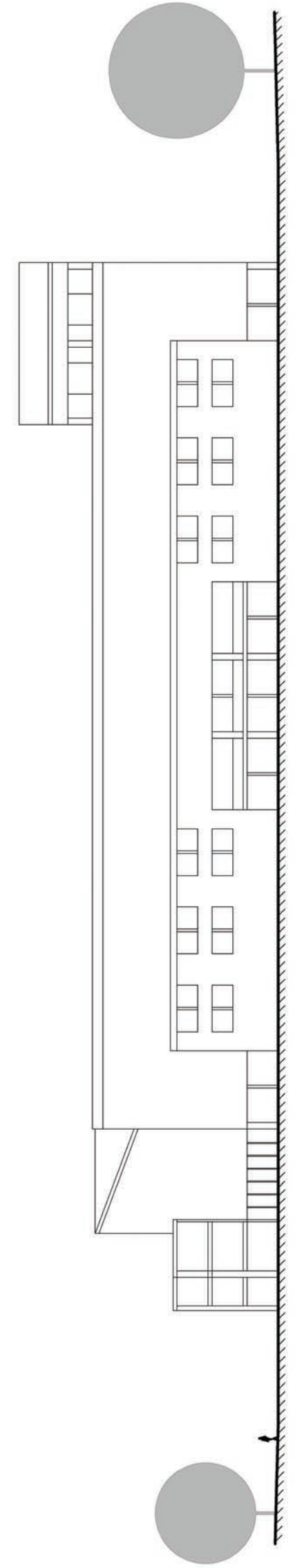
PIANTA PIANO TERRA 1:100



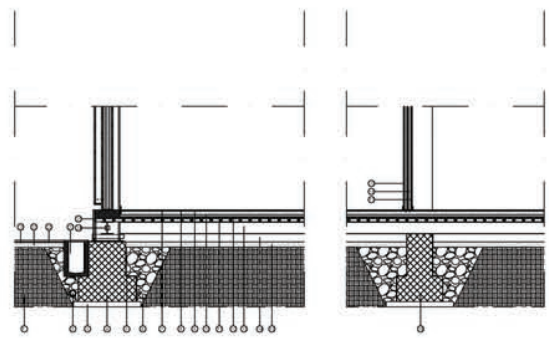
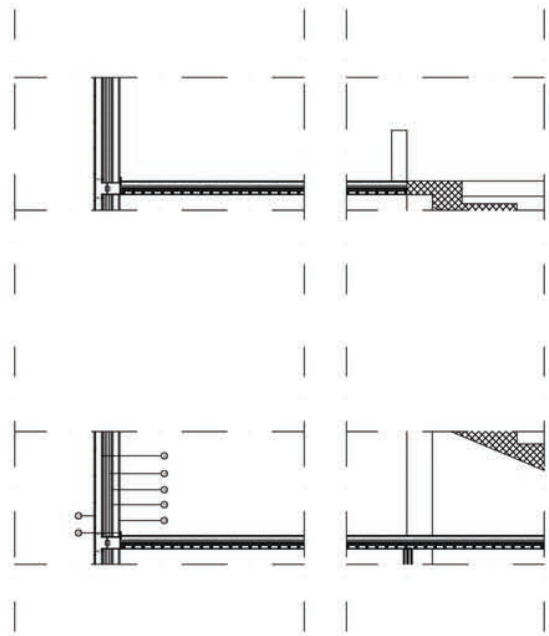
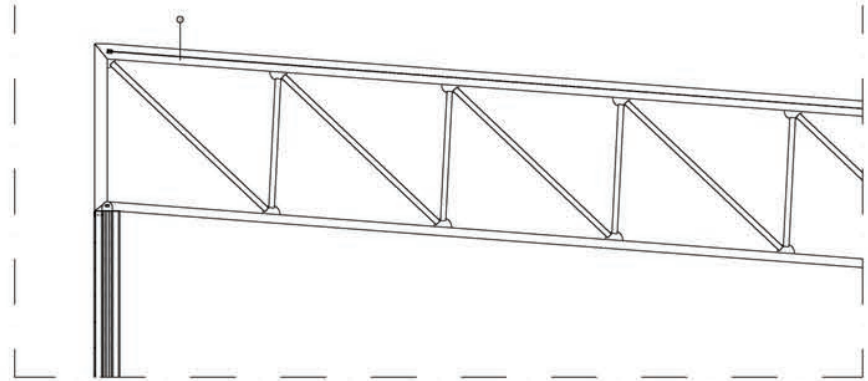
PROSPETTO SUD



SEZIONE C-C'



PROSPETTO SUD-EST



LEGEND

- 1 LAND WELL COSTIPATED
- 2 DRAINAGE TUBE
- 3 GREASE
- 4 PLINTH OF FOUNDATION IN CLS
- 5 WATERPROOFING SHEATH
- 6 PIETRISCO
- 7 INTERNAL FLOORING
- 8 BED OF MALTA
- 9 SCORIED
- 10 INSULATION
- 11 JET OF COMPLETION IN CLS
- 12 GREASE SHEET
- 13 BEAM HE 240
- 14 AIR ROOM
- 15 SCORIED
- 16 FOUNDATION PLINTH FOR PILLAR IN CLS
- 17 PORTLAND CONCRETE SLAB OF CEMENT
- 18 INSULATION IN ROCK WOOL
- 19 PORTLAND CONCRETE SLAB OF CEMENT
- 20 BED OF MALTA
- 21 SCORIED
- 22 EXTERNAL FLOORING
- 23 INTERCARRONE
- 24 BEAM HE 240
- 25 INSULATION PLATE
- 26 INTERNAL PLATE
- 27 MICROPHONATE WALL
- 28 PILLAR HE 500
- 29 PORTLAND EXTERNAL CEMENT SLAB
- 30 WATERPROOFING SHEATH
- 31 ISLAND OF ROCK WOOL
- 32 PORTLAND EXTERNAL CEMENT SLAB
- 33 RETICULAR STEEL BEAM

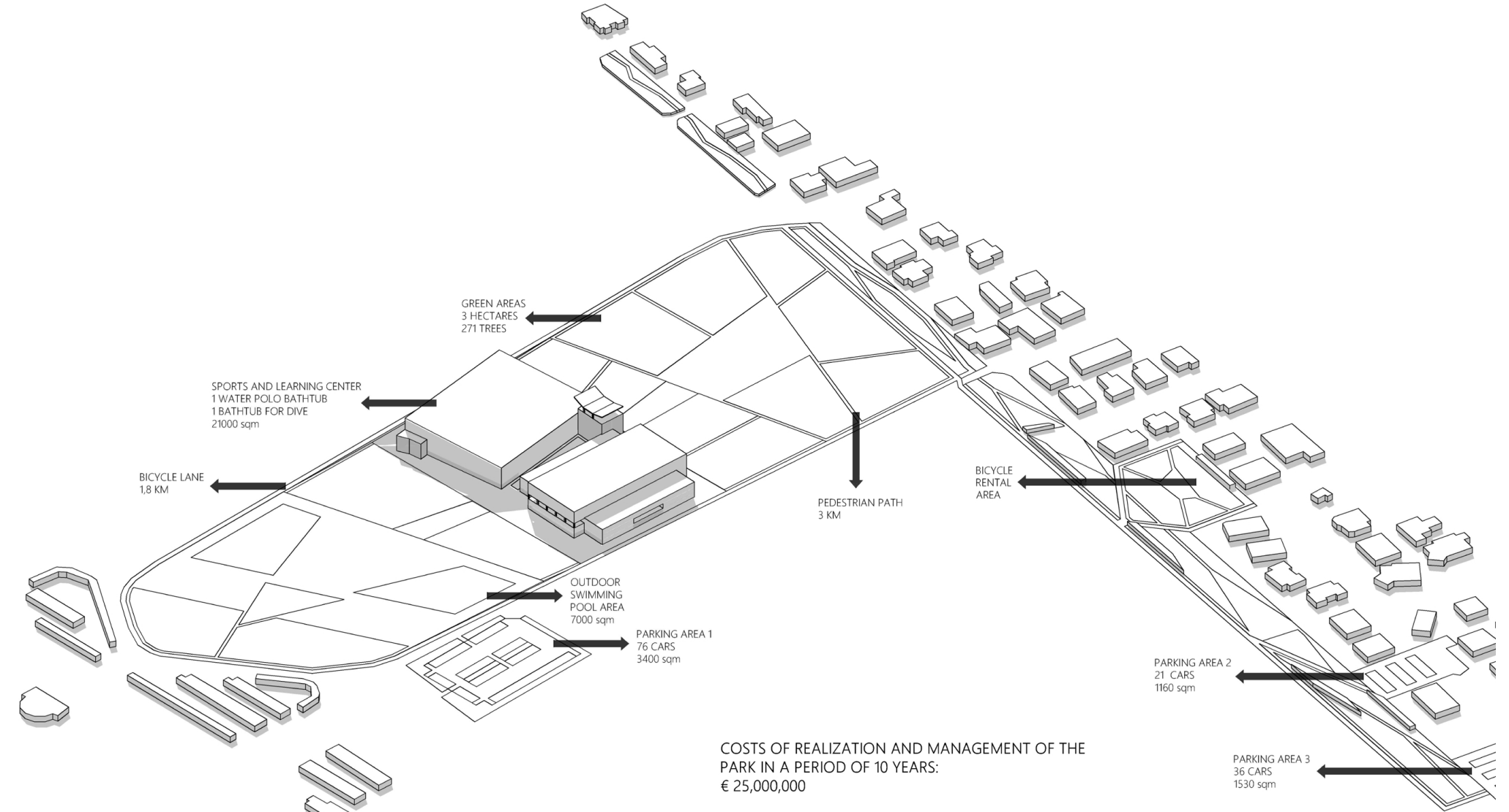
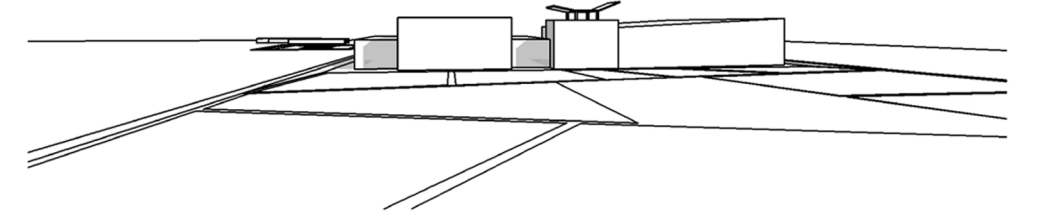
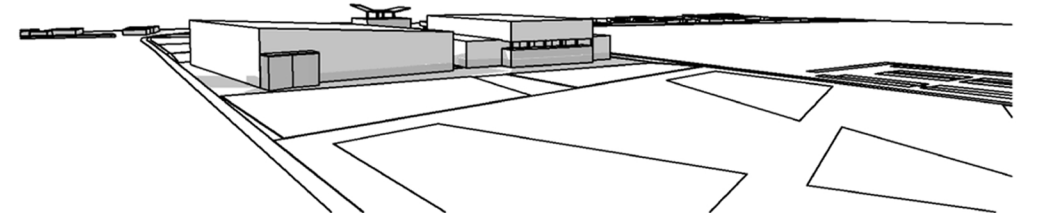
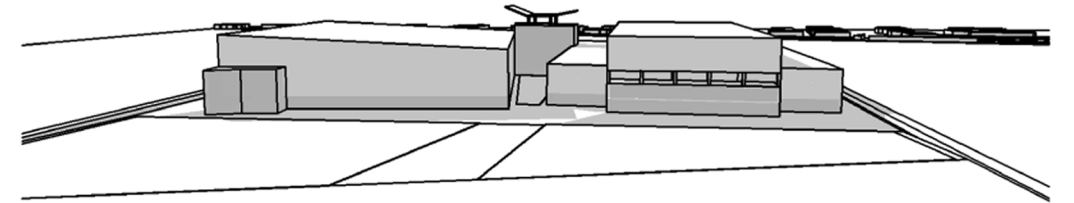
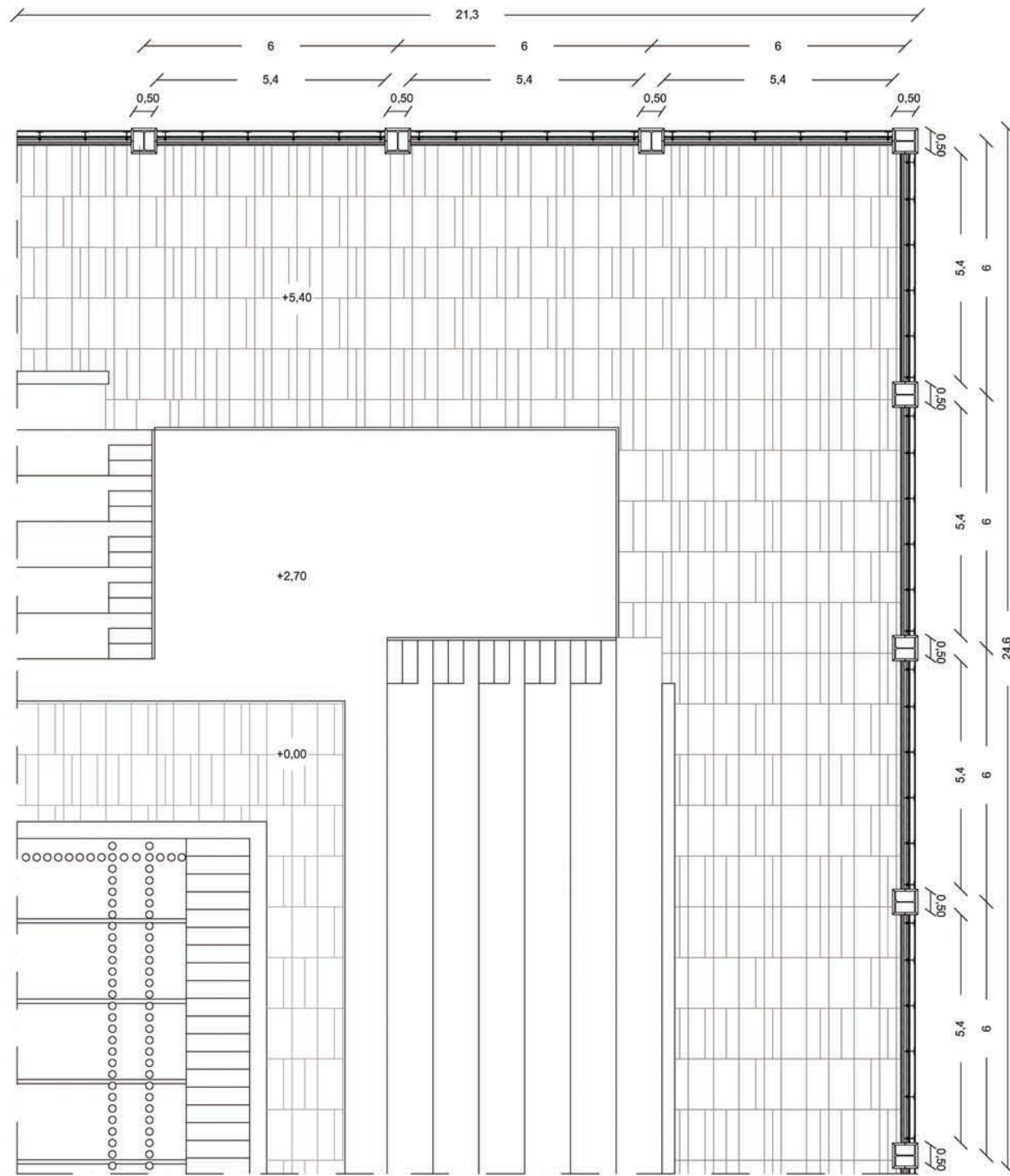
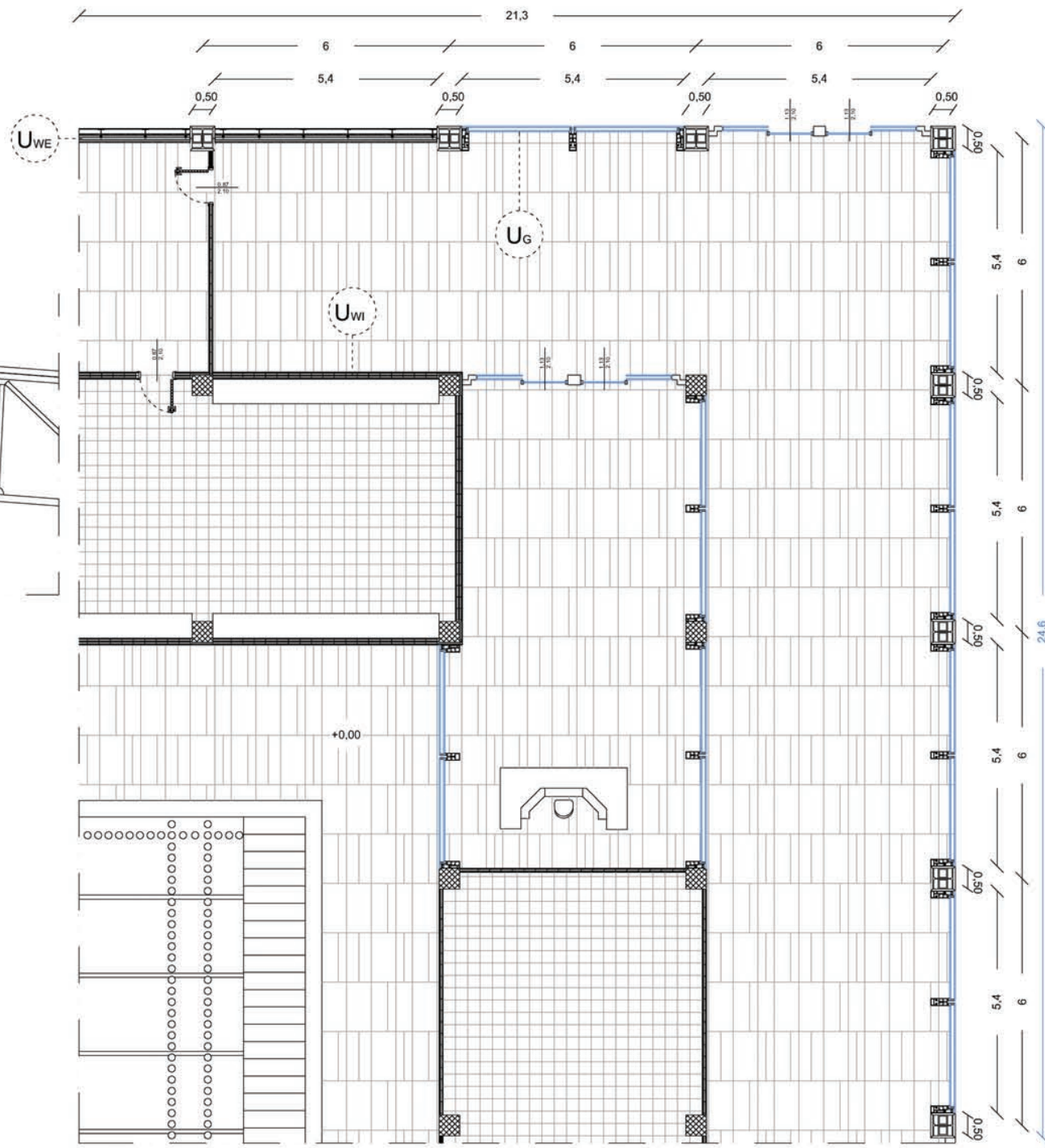
U SLAB ON THE GROUND : **0,31 W/m²K**

U SLAB ON THE ROOF : **0,34 W/m²K**

U WALL EXTERN : **0,26 W/m²K**

U WALL INTERN : **0,31 W/m²K**

U GLASS : **1,5 W/m²K**

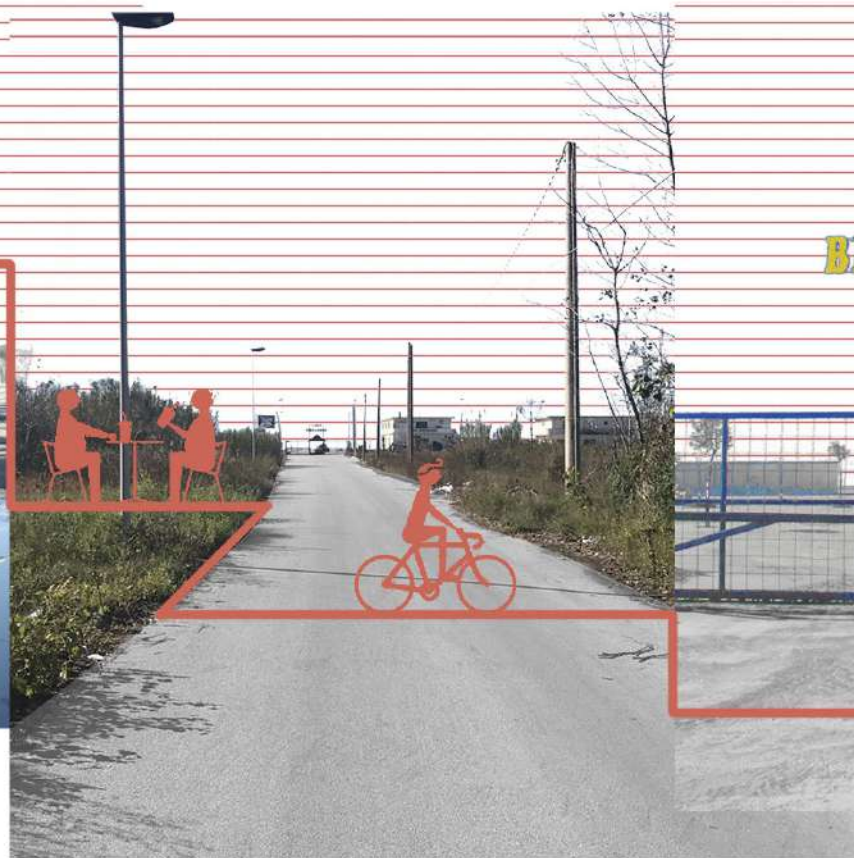
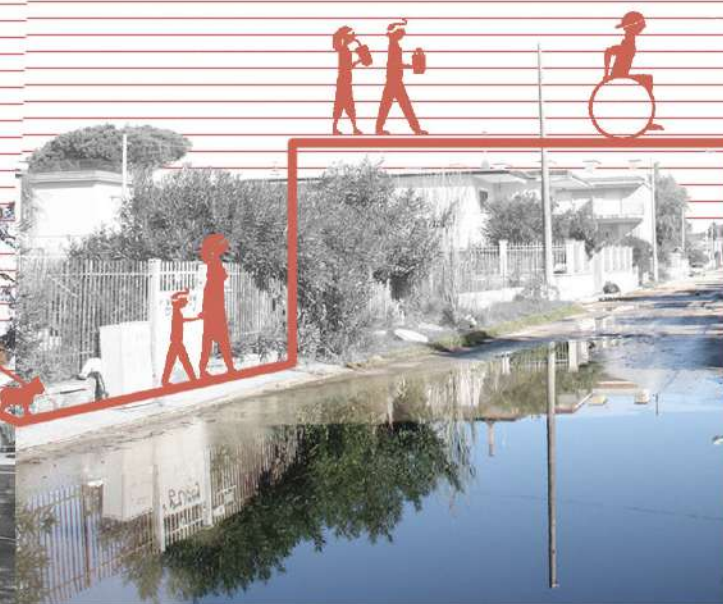
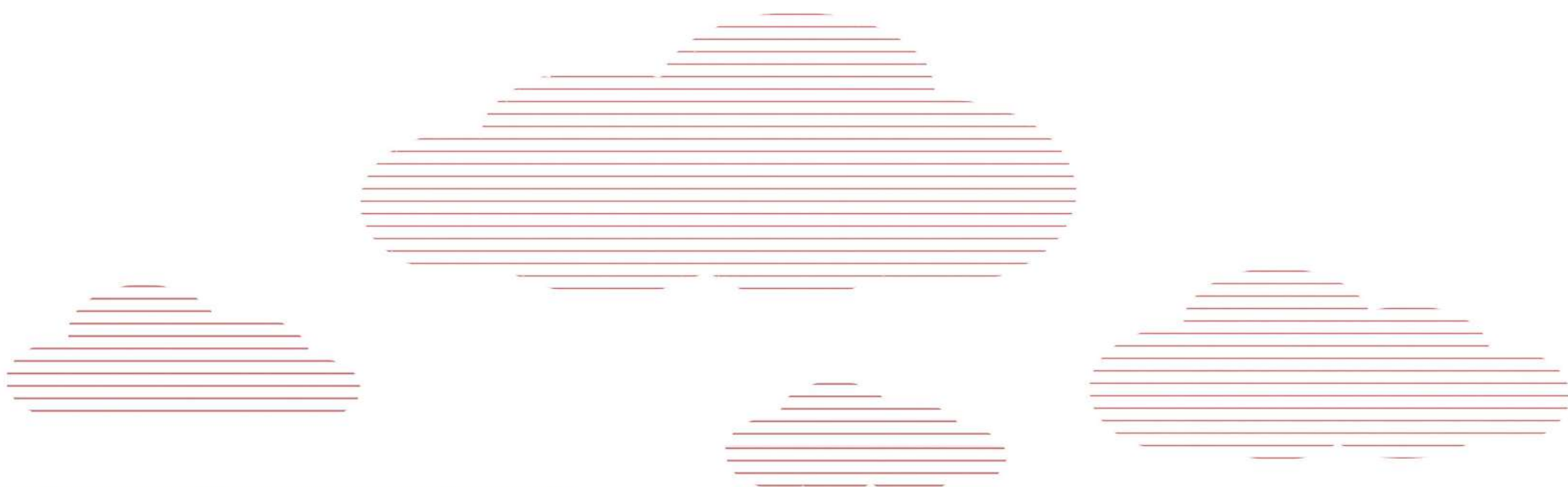
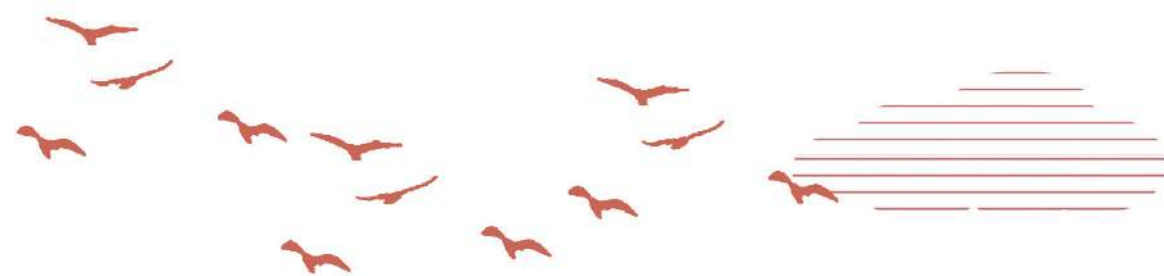
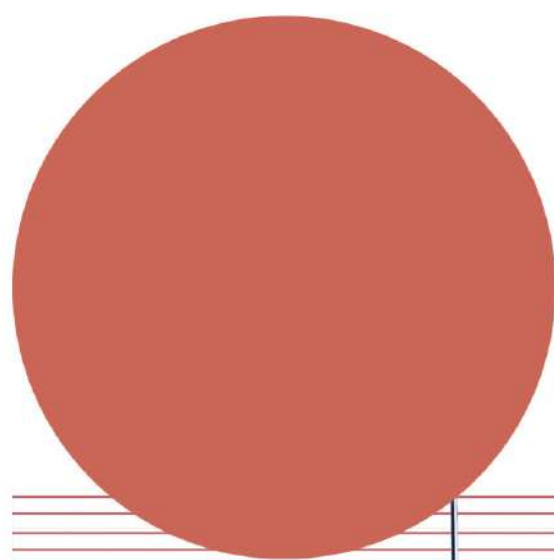
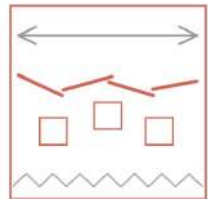


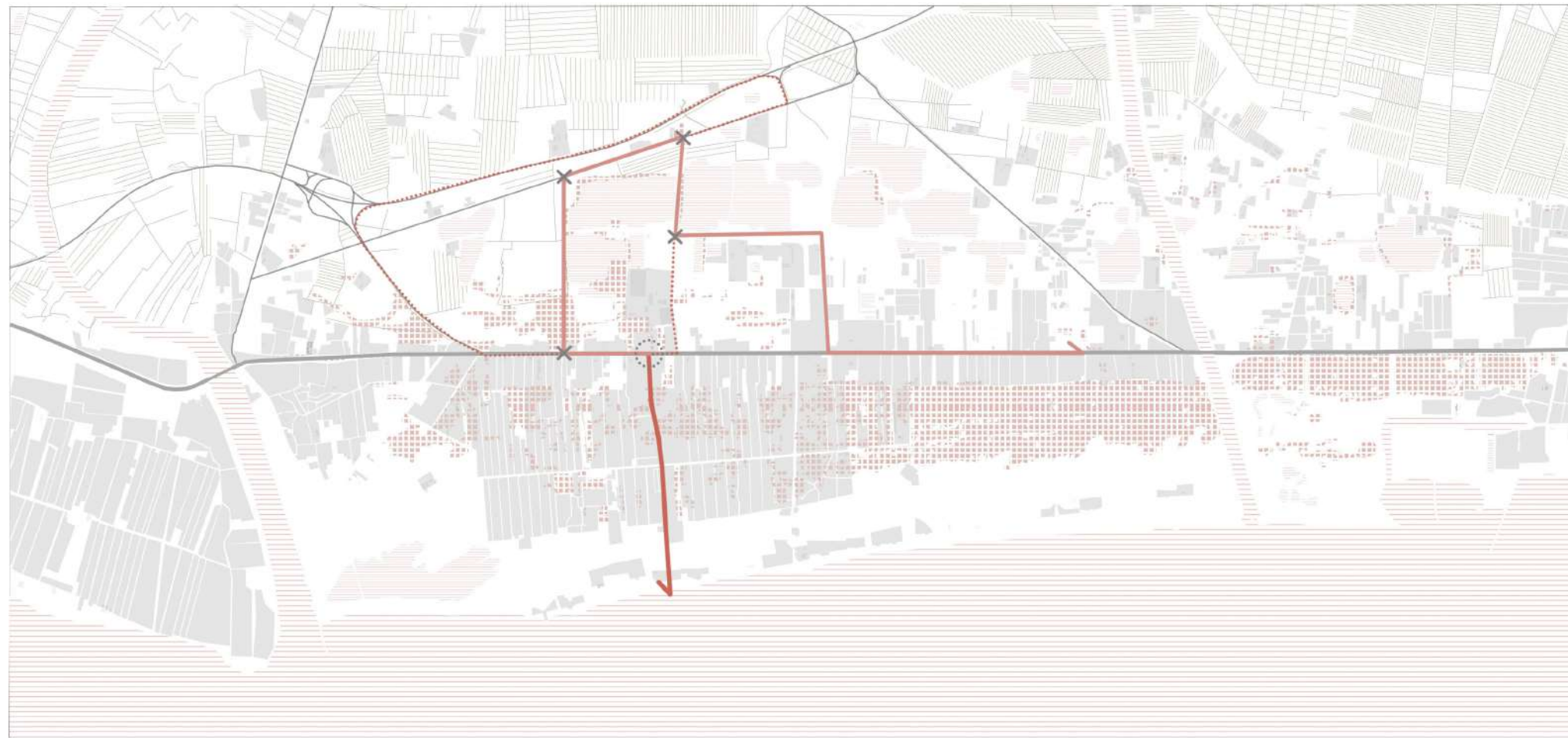
COSTS OF REALIZATION AND MANAGEMENT OF THE PARK IN A PERIOD OF 10 YEARS:
€ 25,000,000

PUBLIC BENEFIT OF THE PARK GIVEN BY SOCIAL VALUE:
€ 65,000,000

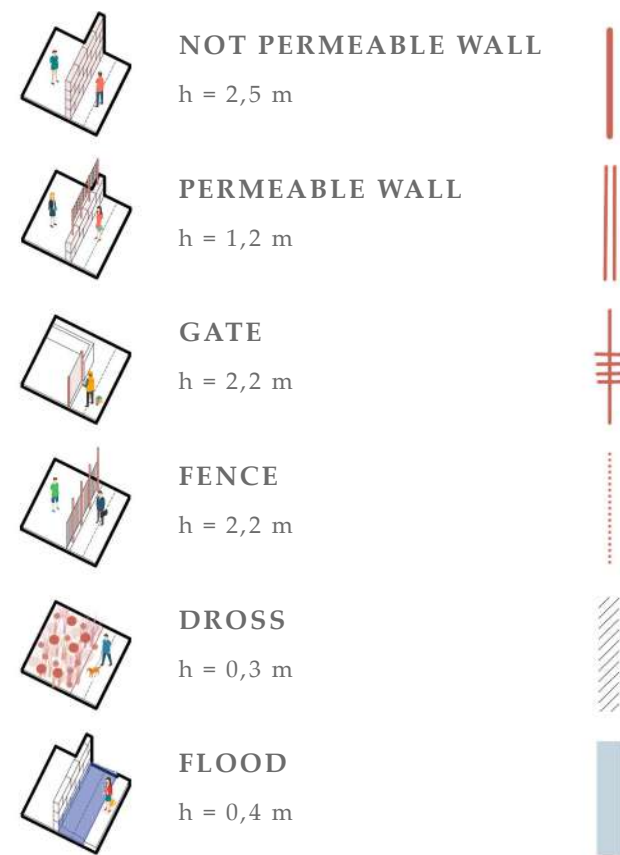
COST OF CONSTRUCTION OF THE SPORTS CENTER:
€ 10,000,000

SOCIAL CONNE(A)CTION
NEW FORMS OF TRADE IN CASTEL VOLTURNO

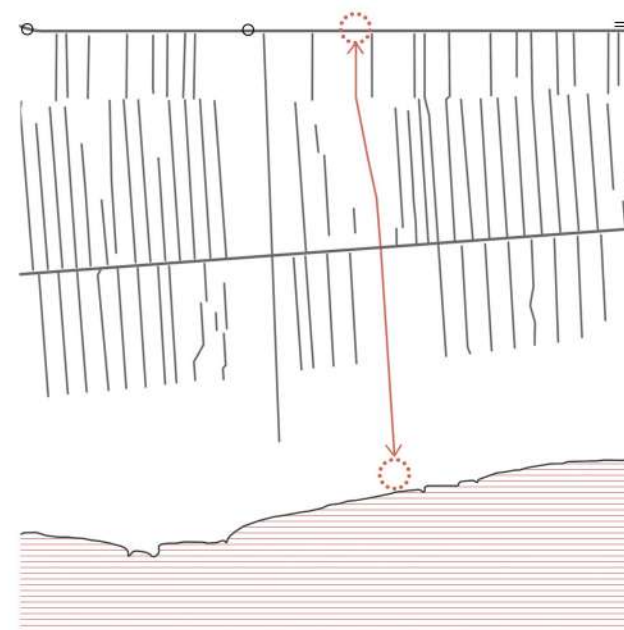




BARRIERS: LIST OF TYPOLOGIES

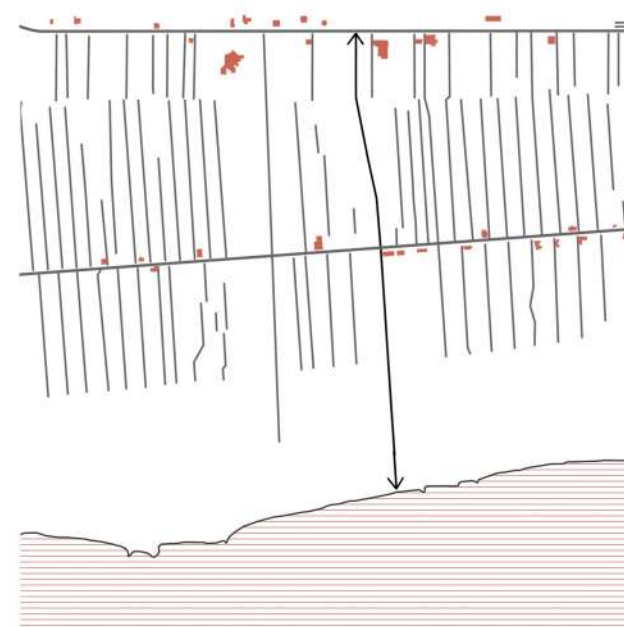


VIA CIMABUE: the only vertical link



Studying the roundabouts on the Domitiana, the only possible vertical connection from this to the sea is via Cimabue in Baia Verde, because here there is a direct entry, through roundabout.

Baia Verde: EXISTING SERVICES

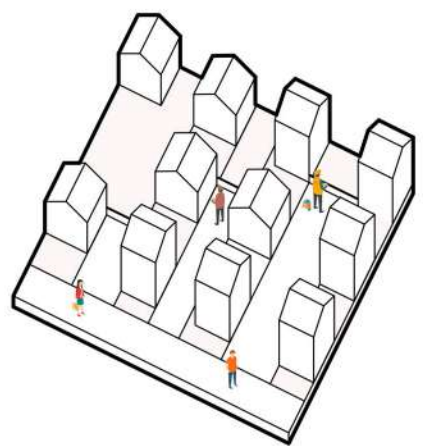
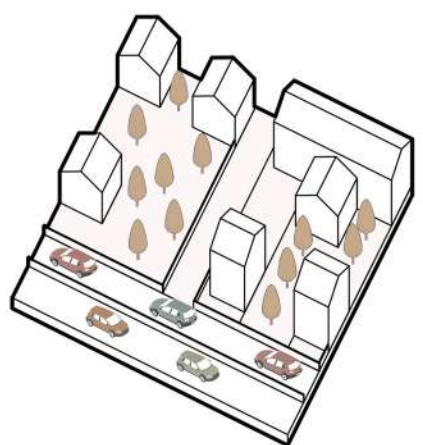
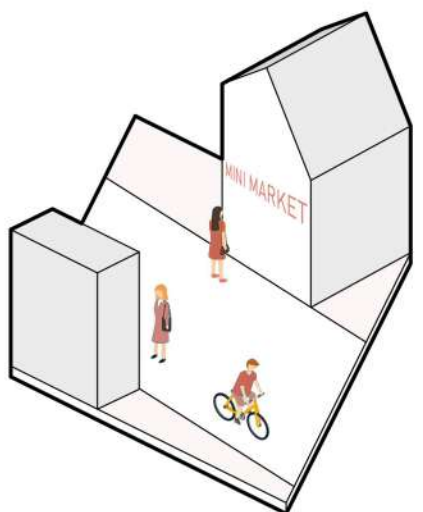
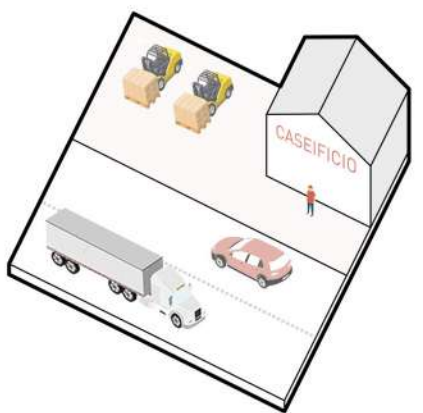
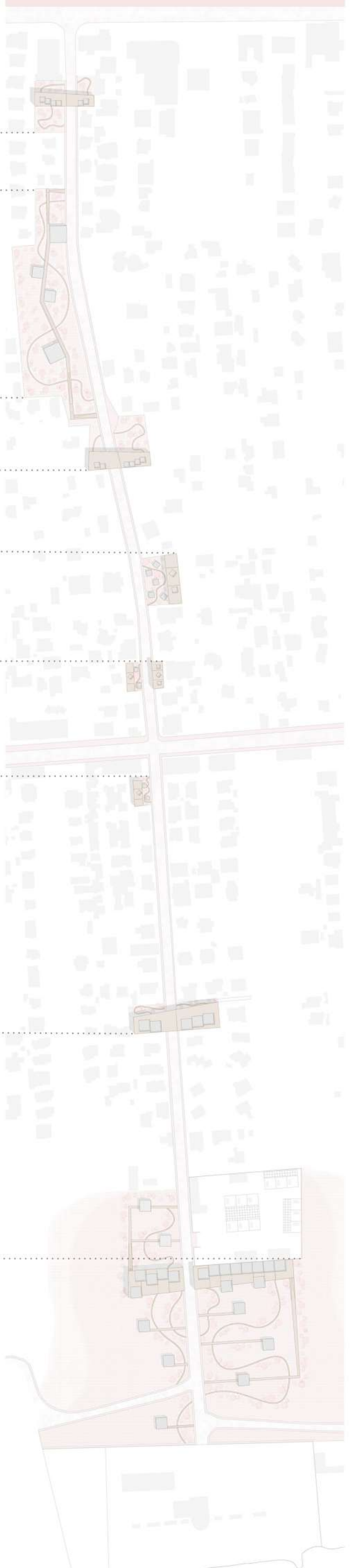


The only services in the whole "Baia Verde" are on the Domitiana and on Viale Lenin. Some of these are closed or open only in the summer season (for three months).

ANALYSIS OF BARRIER ||| CLOSING GAPS



MASTERPLAN ||| SOLIDS OF THE CITY



Castel Volturno is a quite puzzling town developed in horizontal bands, hardly connected to one another.

The main driver of these horizontal bands is the Domitiana a high speed road cutting different parts out of the urban context.

Many businesses unroll along the way according to a "logic of competitive combination", highlighted by the constant presence of the advertising signs. Such a logic doesn't create, in any way, aggregation. It is mainly about large retail plots, and features a typical "stop & go" mobility system. Parallel to the Domitiana there's Viale Lenin, another main axis serving a neighborhood called Baia Verde.

Via Lenin represents the best opportunity to locate basic services and retails for the whole residential area. Studying a possible vertical connection from Domitiana to the sea and crossing Viale Lenin, the best project occasion to design a new retail structure is found in via Cimabue. With a direct entry, through roundabout, the street is characterized by different spaces useful for creating places to stay. Retail can be a strengthening factor in turning the residents into a community.

With this project retailing functions aim to stimulate social life and the overall quality of the place, providing occasions to meet and exchange.

In this perspective, commerce is not a matter of isolated buildings and plots (as currently in Castel Volturno), but the entanglement of business and community services.

The project therefore involves the widespread creation of small commercial units characterized as autonomous pavilions, linked together through a more complex system of shelters and walkways.

The use of wood and glass differentiates them from the context and makes them recognizable, but their small size fits the overall landscape and integrates with it.

The narrow road that leads from the Domitiana to the sea is redesigned to include pedestrian mobility.

Accordingly, a net of sidewalks is created with a new water regulating system: the "Bachles" (open

streams flowing) revisited in a modern key.

This new system addresses key issues of flood management and water quality, while seeking to create the greatest possible synergy with the urban environment.

It starts from the identification of the key actors involved and the rules for a constructive co-operation at different level: in a first time with investment of the Public and, only in a second time, with investment of the Private.

Starting from potential areas, it define a strategy for the objective of social development.

The subject of the space to be mutually related.

The project proposes a network of single interventions that like all together to redefine the territory to a whole. Not unique is the vocation of this landscape, not univocal should be the intervention.

Three poles different from each other but with the same color scheme and materials are intertwined with elevated galleries that allow the passage from one side on the road to the other.

The first pole is connected with the pine forest nearby. This is the area where road pavement is broken by the roots of the trees: for this reason architecture rises through a system of walkways. The idea is to convey a feeling of great lightness where the volumes seem to float in nature while walking along the path through the trees.

The second pole, across Viale Lenin, is designed as a market. Like real market squares, the small pavilions fit in to the gaps in the area.

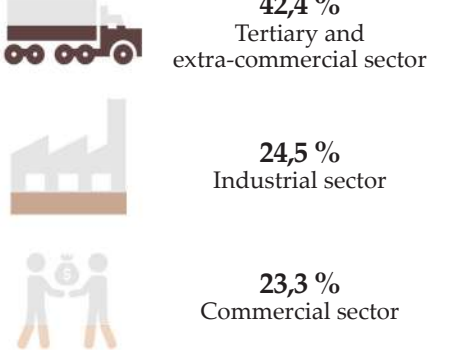
The third and not least important pole is the most properly commercial one in which different cultures merge. With the attempt to make the "dross" livable, a series of paths cling to the main road connecting to each other and leading to the various pavilions present.

All held together through platforms, walkways, roofs: all the elements found along the way go to this pole to merge.

This presence of small and medium-sized commercial activities animates space, representing a form of re-launching urban commerce that wants to demonstrate how this, although small-scale, is essential.

For the first time in Castel Volturno we are talking of trade in the city and for the city.

EMPLOYMENT



The main aim of the project is to help Commercial sector grow and increasing employment levels and social integration.

OBJECTIVE

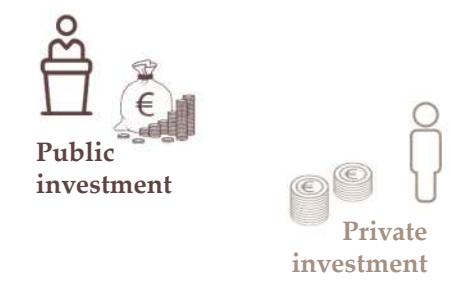
WHO ?



WHAT ?

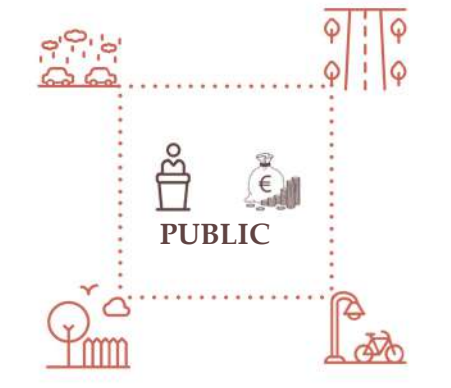


HOW ?

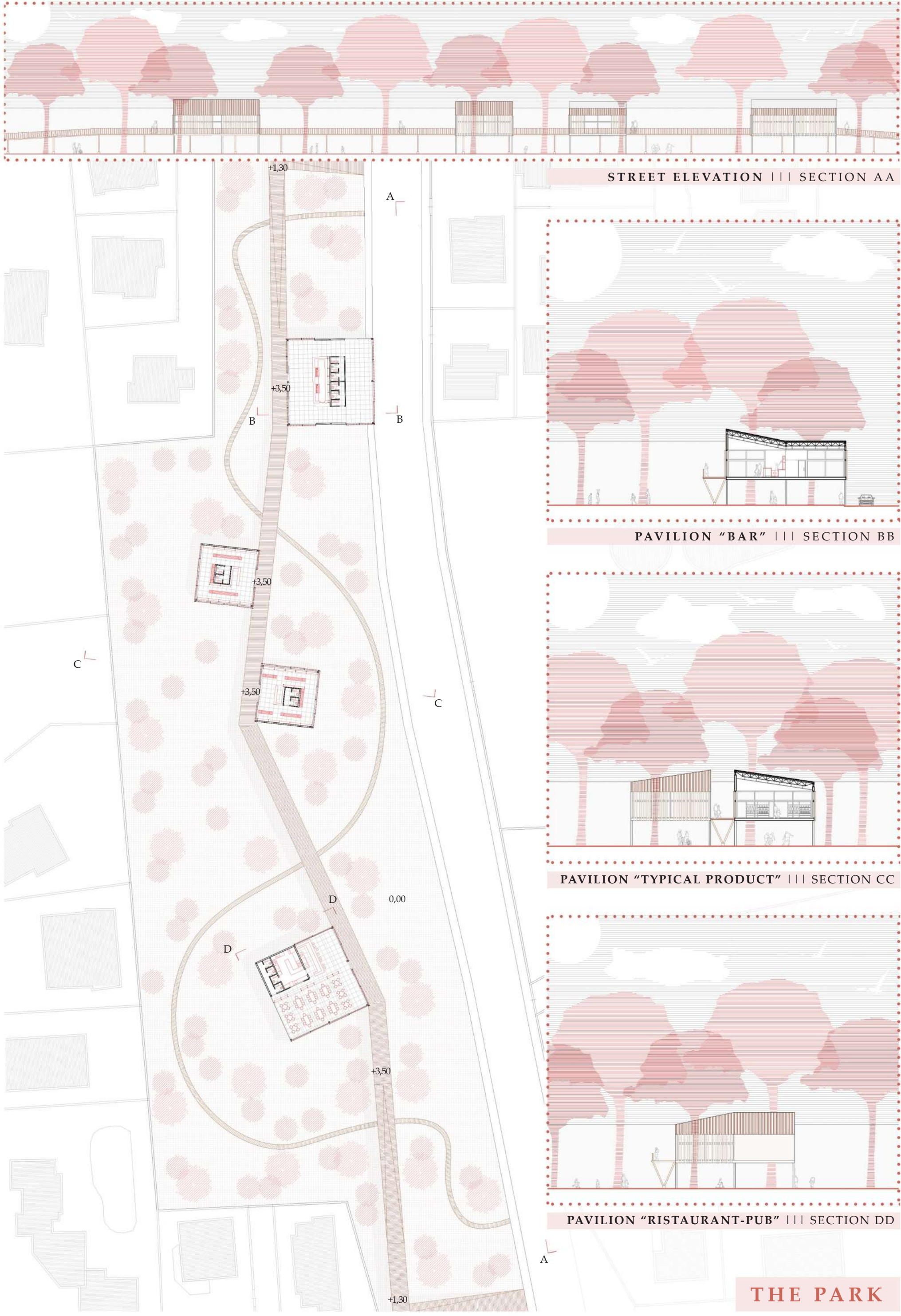
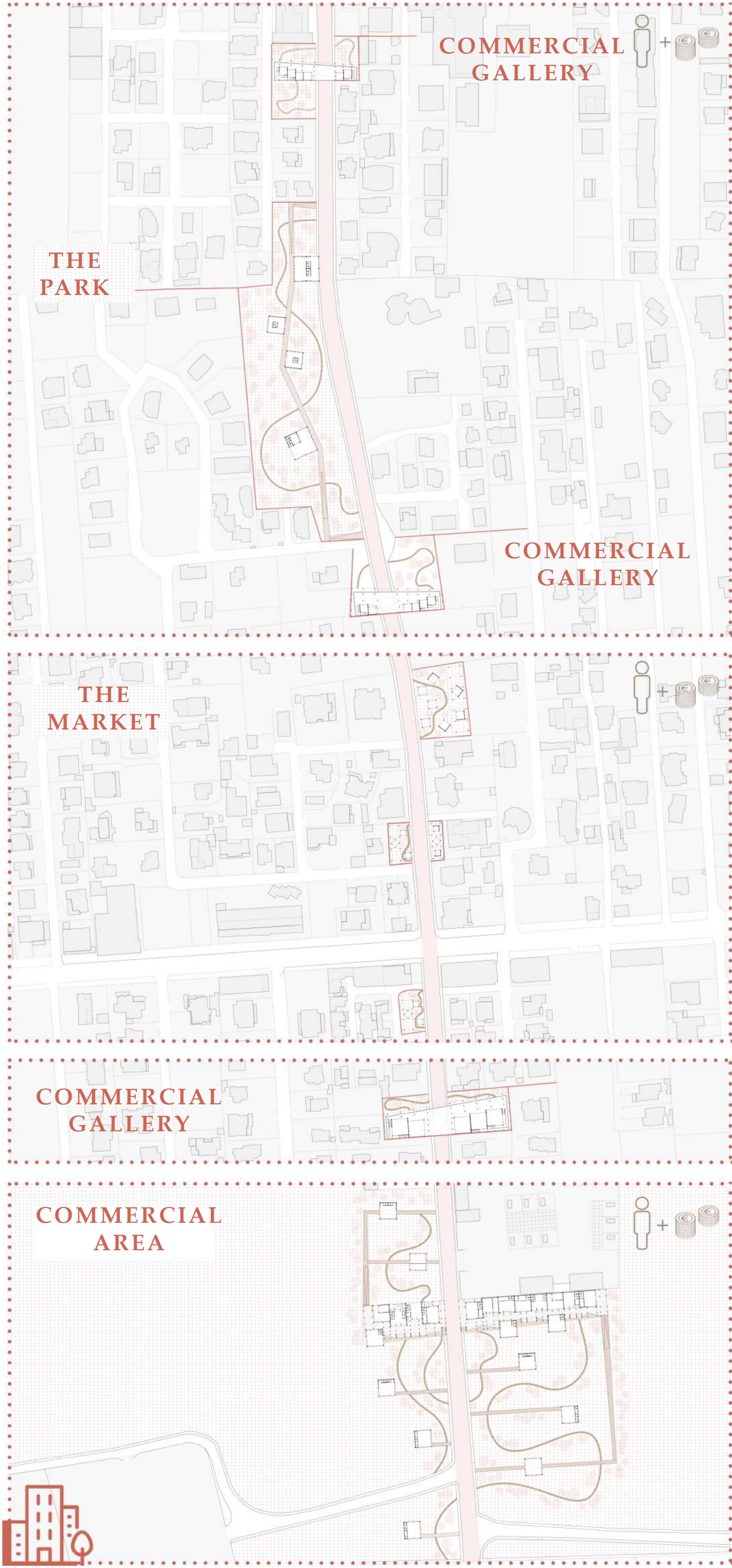


WHEN ?

Start of work for urban regeneration thanks to **public investment**.



The **PRIVATE** comes into play in individual projects.





SECTION EE

DETAIL D

WOOD ROOFS

DETAIL C

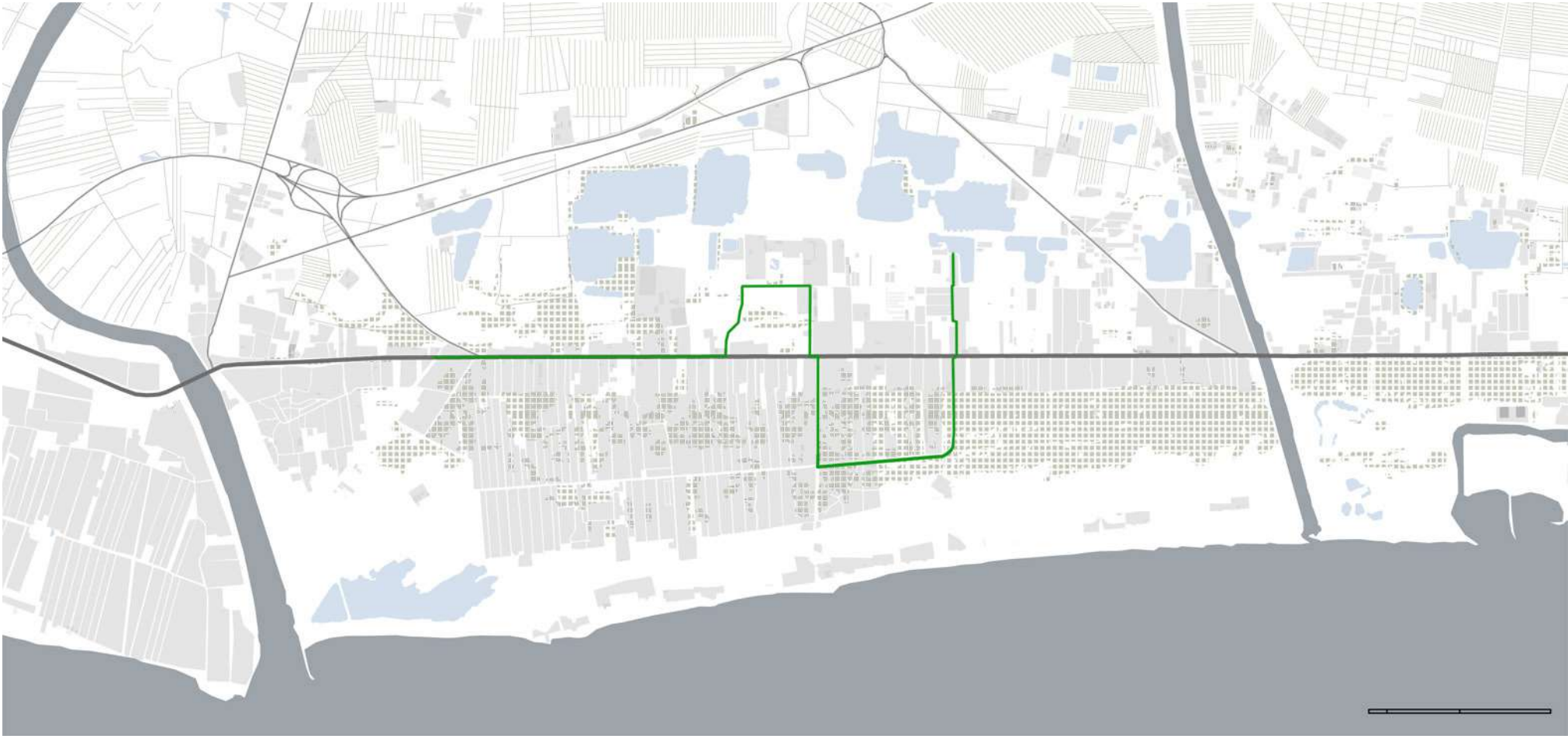
$U_{\text{glass}} = 0,9 \text{ W/m}^2\text{K}$
 $U_{\text{wall}} = 0,18 \text{ W/m}^2\text{K}$

THERMAL TRANSMITTANCE

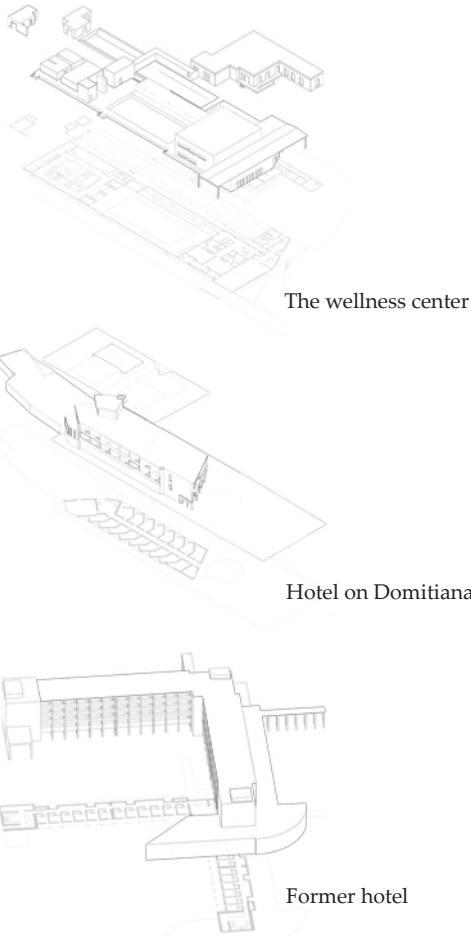
THE COMMERCIAL AREA



Castel Volturno
UNDER



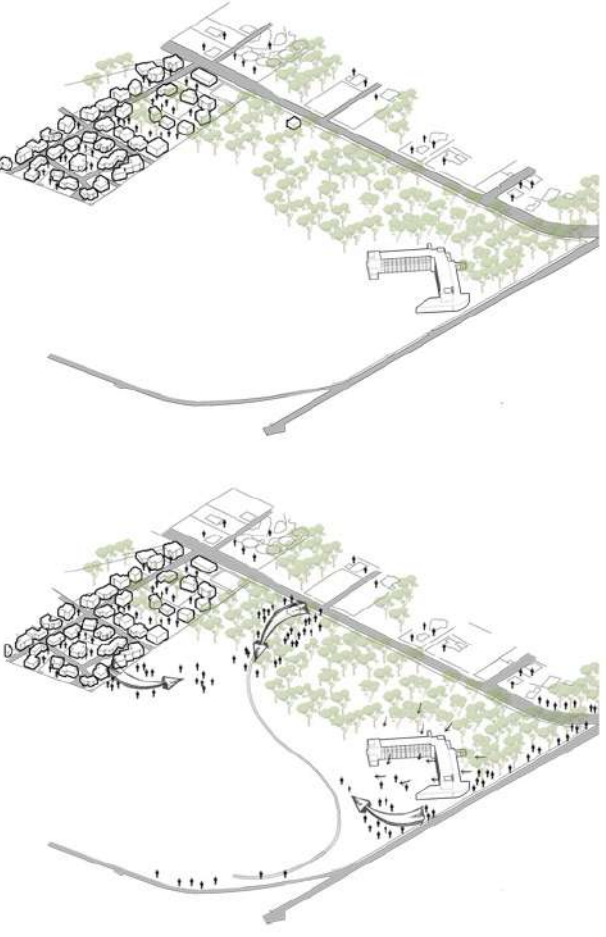
- buffalo breeding
- wellness center
- residences
- boutiques
- green spaces
- sea
- beach/dunes
- pinewood



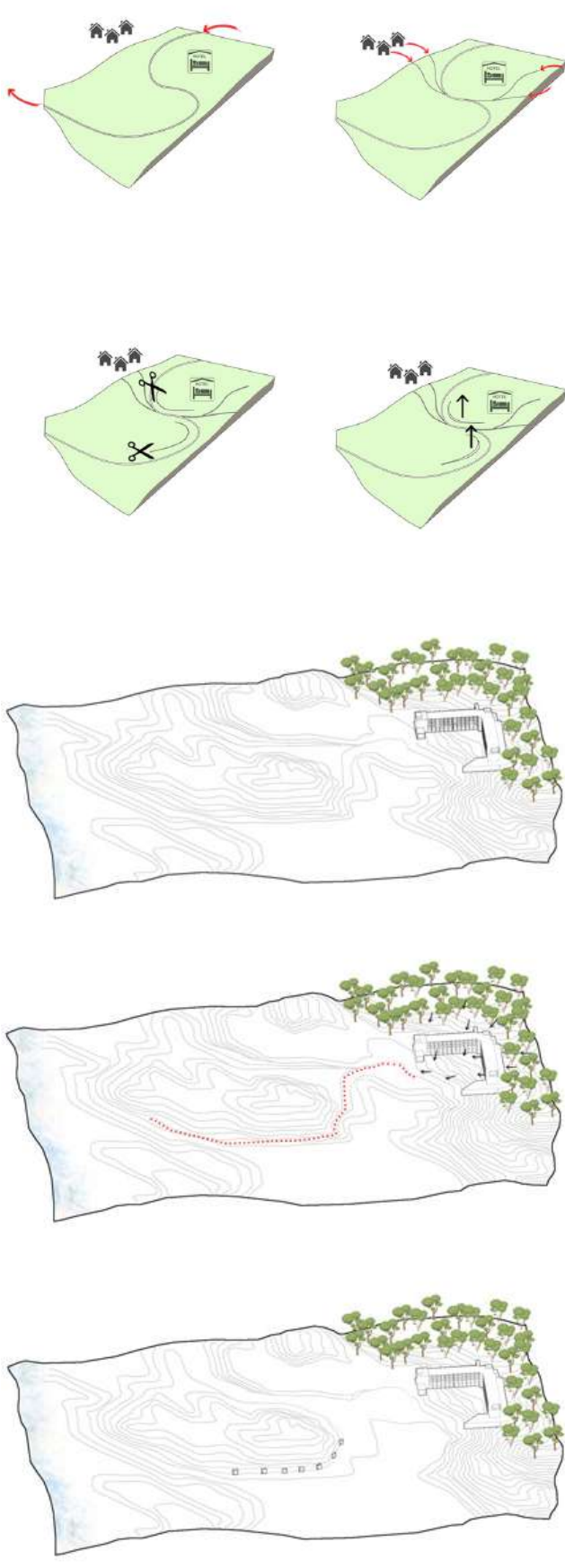
In order to make Castel Volturno more competitive in the market economy, it is necessary to put in place coordinated territorial projects that are good for private investments as well as for the local environment. These projects are conceived as acupuncture in selected areas which have potential to trigger urban and landscape regeneration by improving the economy and the lives of citizens in a short time.

The three selected areas include the wellness center in EcoPark, former Hotel on Domitiana road, and a former hotel for elderly people on the coast; these are three poles from which an urban regeneration process may start.

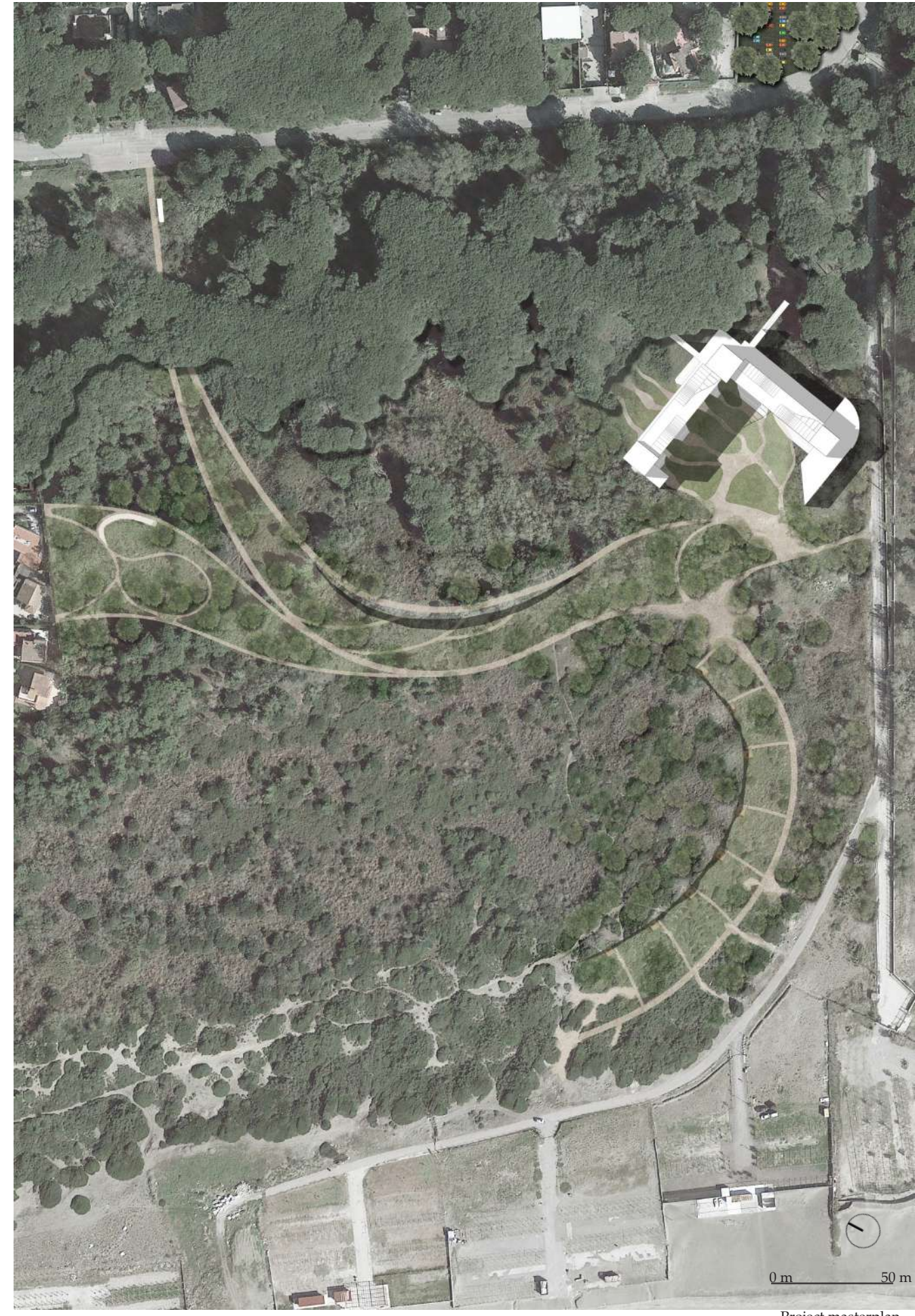
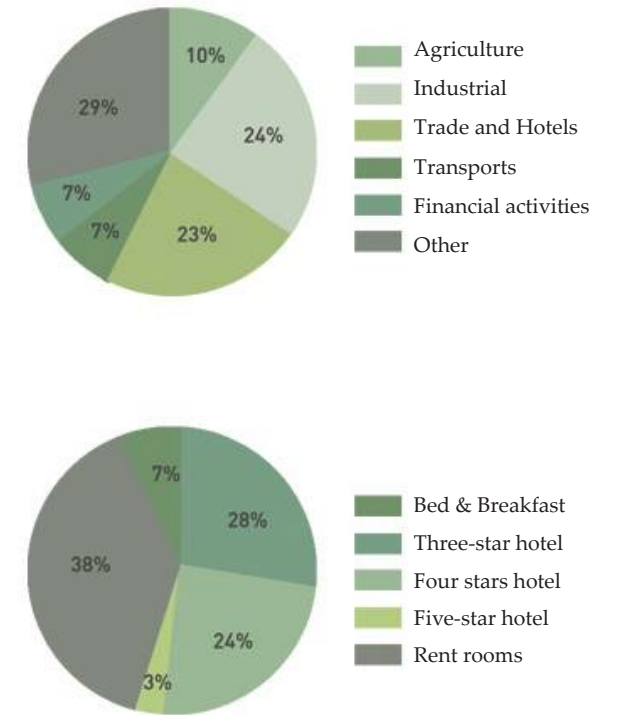
For the former hotel for elderly people, located in a protected wildlife area and standing with its out-of-scale presence as a total alien, the proposed project pays total respect to the natural landscape with which it establishes a balanced dialogue. The site and the building are in a state of disrepair, posing a danger to the public safety; the complex is also without fences and therefore anyone can enter. The hotel has a spectacular location, just a short walk from the beach, between the Mediterranean scrub and the pine forest, overlooking the coast and the island of Ischia. What is taken away from the structure is distributed on the ground, which is molded with artificial dunes, a strong natural feature of the place. From simple temporary hospitality, therefore, the functions will have to be expanded to embrace the commercial and cultural activities for a local and international audience.



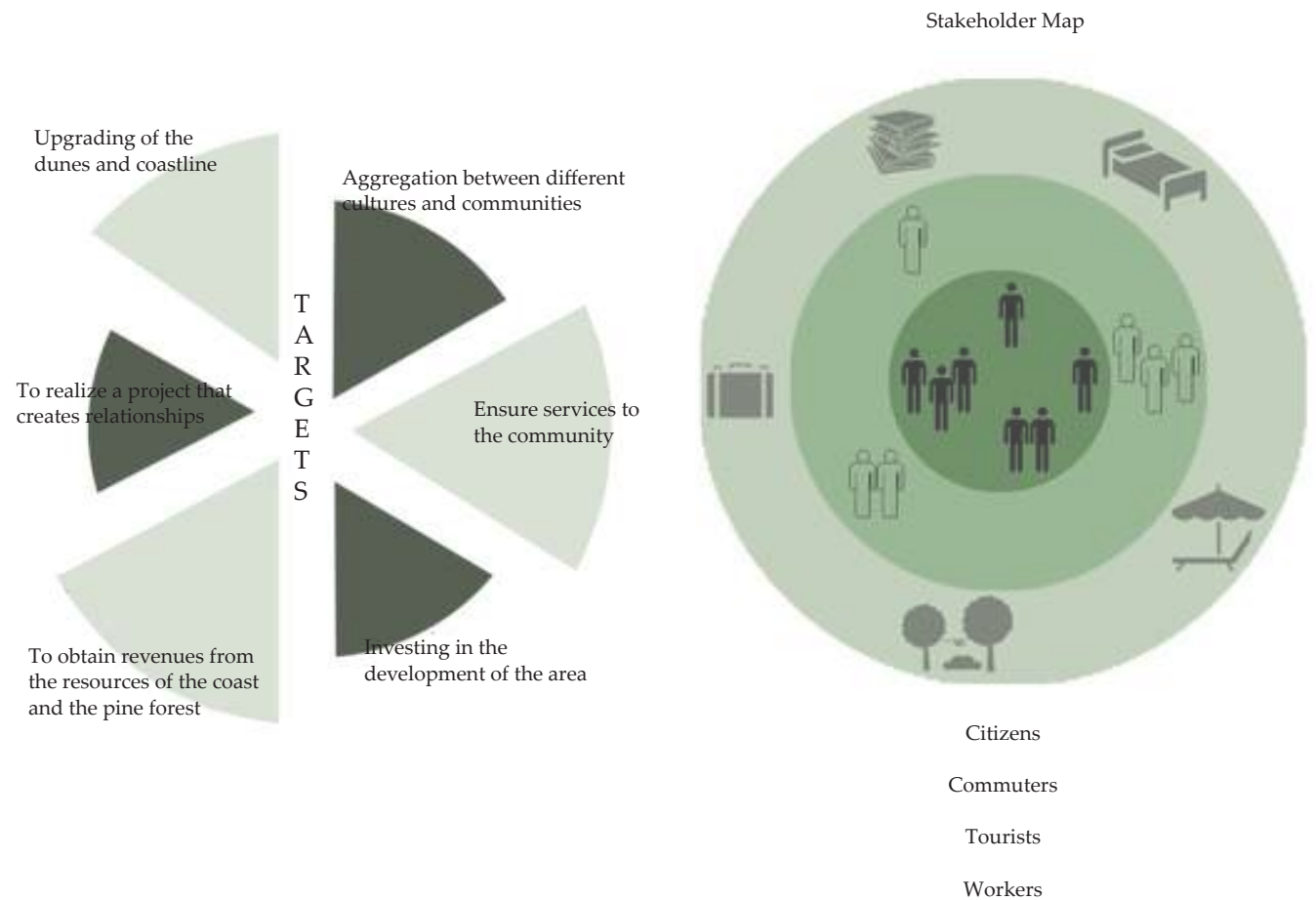
Former hotel

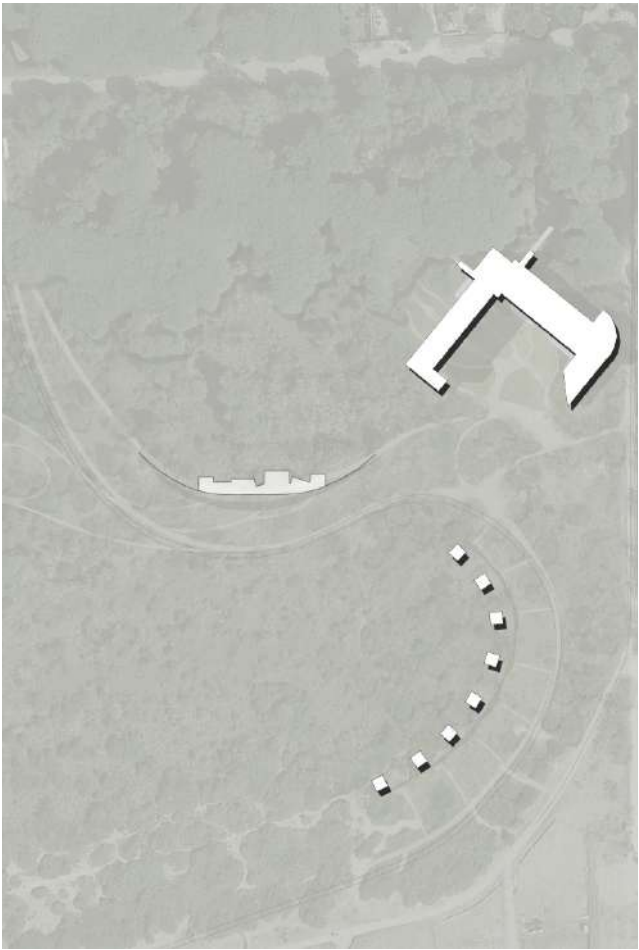


Phases of the intervention



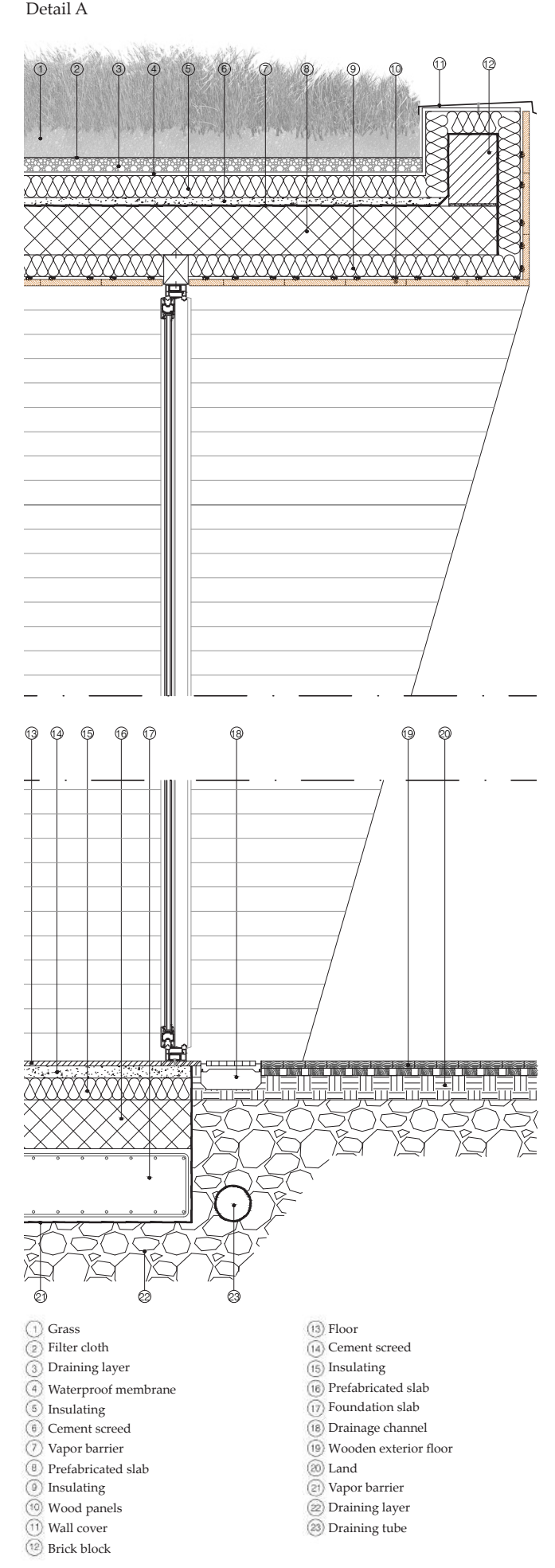
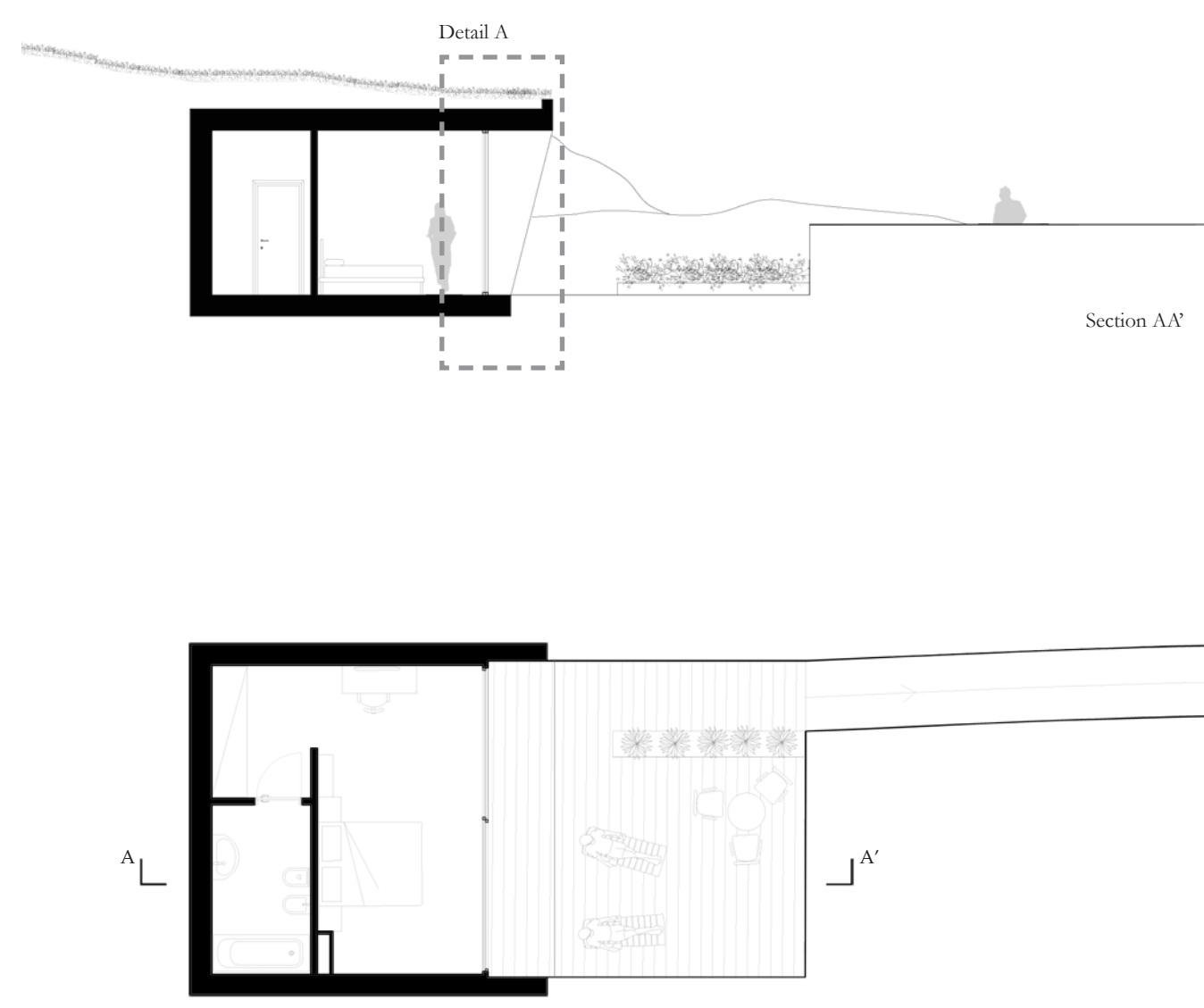
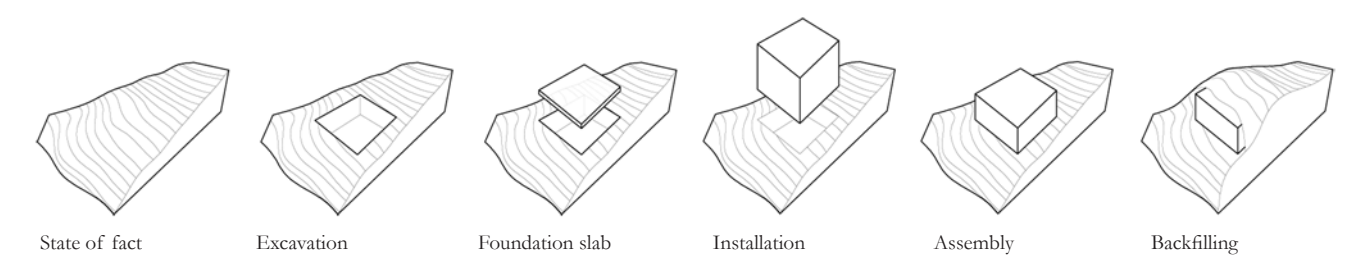
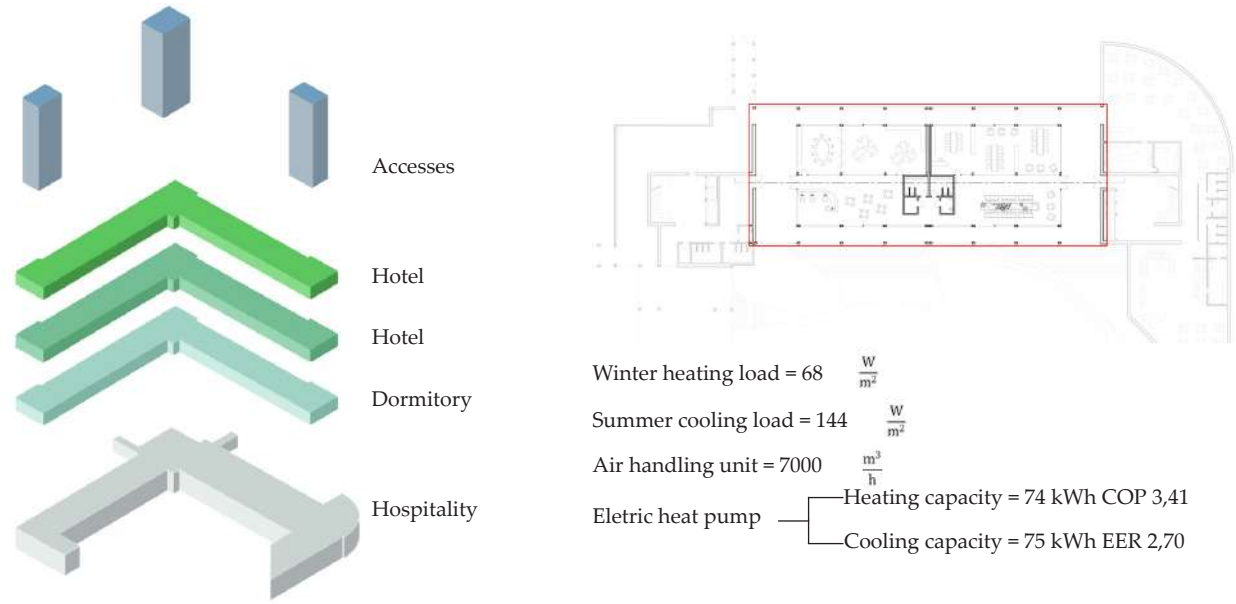
Project masterplan

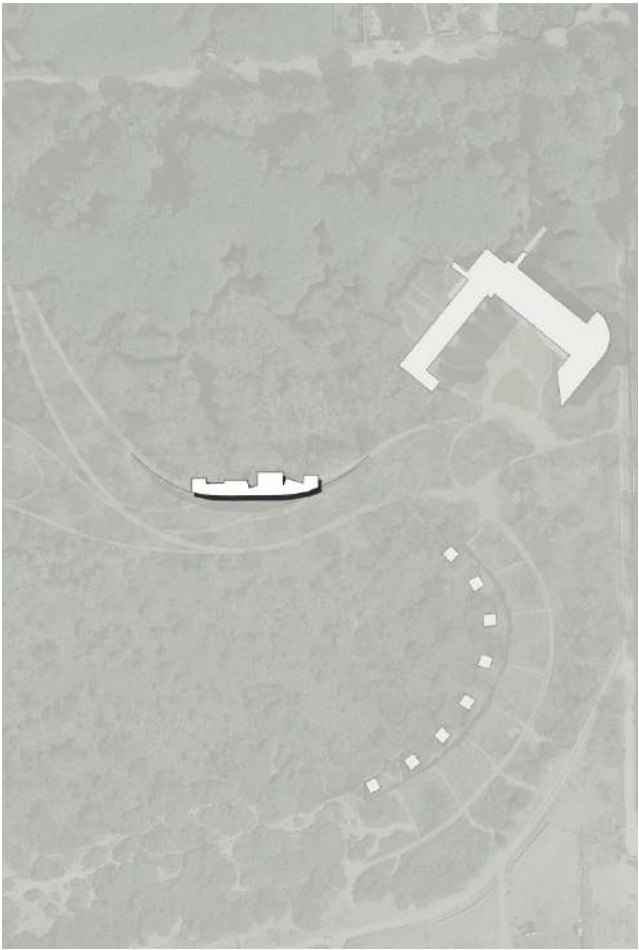




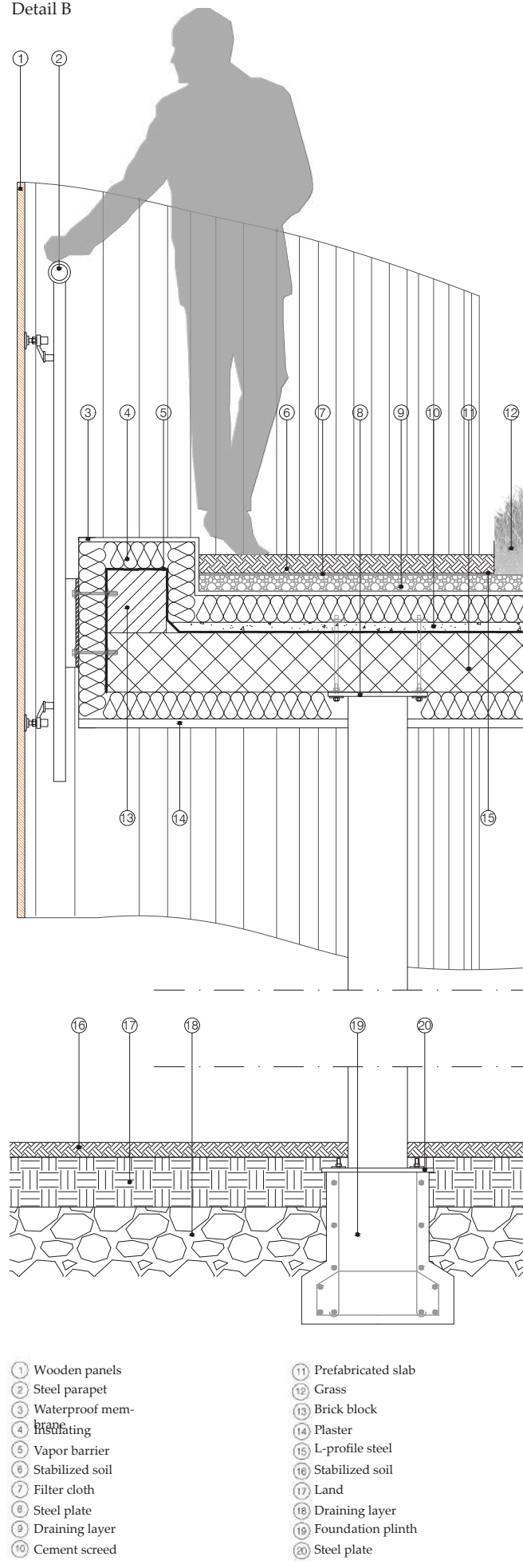
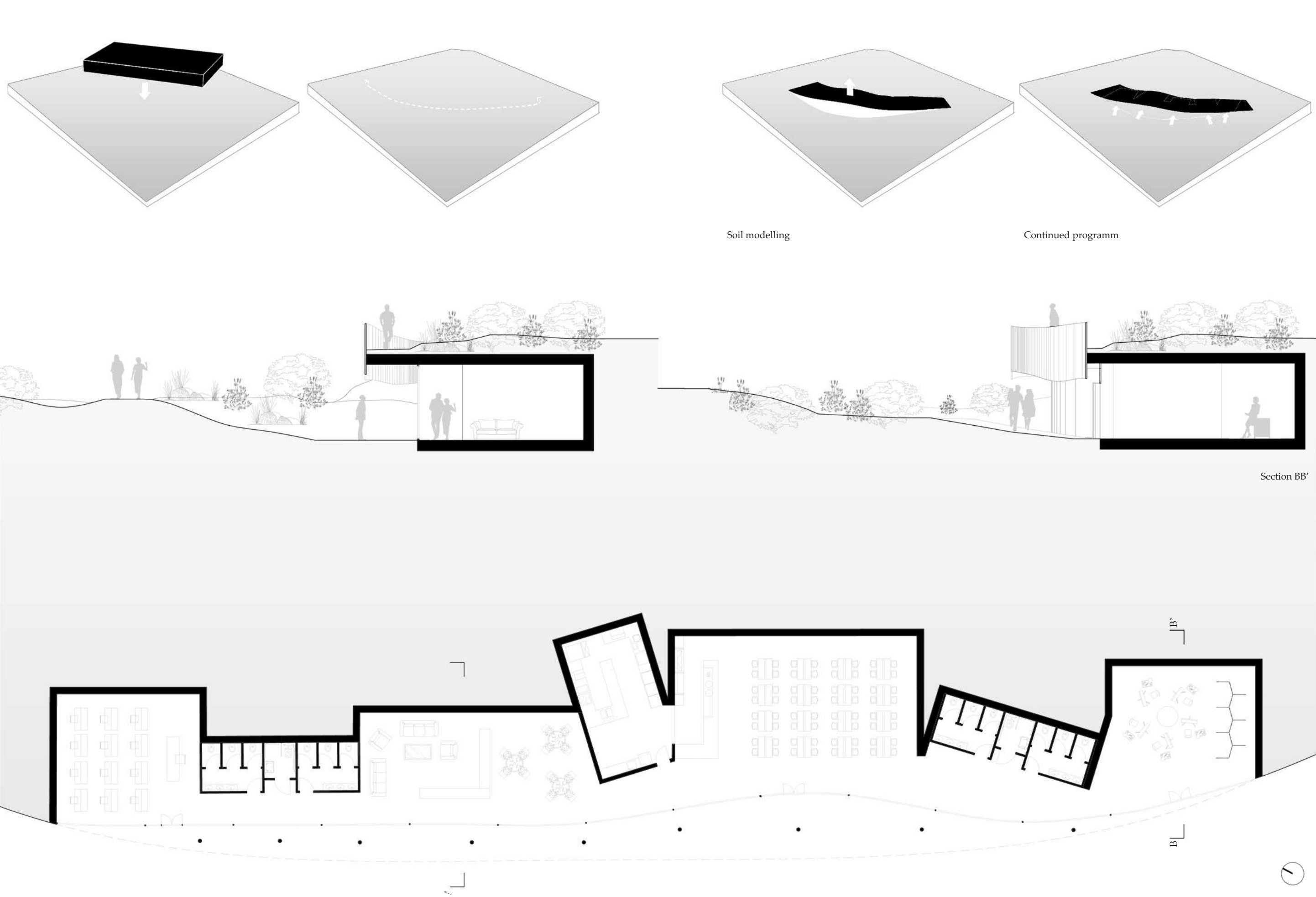
The intervention focuses on the structural reinforcement of the building through the construction of new cores and double walls in reinforced concrete, and new expansion joint. At the expense of the number of rooms, which is still considerable, I planned to demolish some planks and pieces of floor, to achieve double heights, which mark the common spaces inside, and the connection between the upper / lower floor, despite the different types of reception. Thus, the former hotel for the elderly is redesigned as a “mixed use” building. Since a simple elevation of the existing building would have distorted its compositional characteristics, I decided to rethink the entire complex and provide the building with a new identity. While maintaining the exposed brick as the external wall face, the layout of the roof has been completely overturned, with the addition of a new load-bearing wooden structure that takes up the forms of the natural landscape, as a clear break of the horizontal development of the building.

Inspired by the identity of the place, prefabricated tourist accommodation units will be placed under the dunes, hidden between the sea and the sand, as shelters.

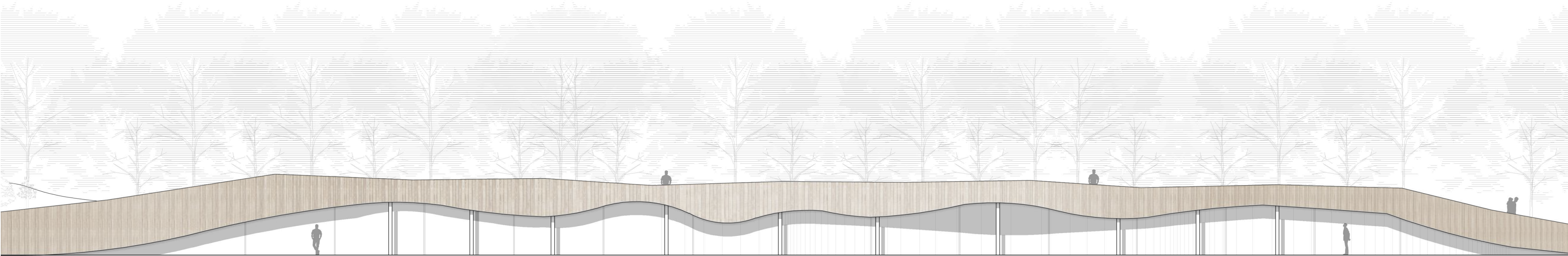




In addition, the project involves the construction of a multipurpose building, whose structure, open on one side to stimulate the effect of continuity between inside and outside, has a curved glass facade, protected by wooden sunshades. With sinuous curves, the sunshade, lowers and rises also acting as a parapet for the path above the building. The walk-on roof protrudes just enough to ensure a good shading area. An almost invisible intervention, since the whole is homogeneous and does not have an impact on the landscape. The green roof, besides being useful and aesthetically pleasing, acts as a natural thermal insulator and contributes to making the interior spaces cool in summer and warm in winter. The building houses a canteen open to all, study and laboratory rooms for morning and afternoon courses, divided into time slots, open to all ages, bathrooms, reading rooms, and a room for the exhibition of laboratory products, and for events. Thanks to the intervention, the dunes will be redeveloped and preserved, rather than leveled. The project takes strength from the natural landscape, and aims to be one of the most innovative attractors of the coast.



- ① Wooden panels
- ② Steel parapet
- ③ Waterproof mem-
- ④ Bitumflating
- ⑤ Vapor barrier
- ⑥ Stabilized soil
- ⑦ Filter cloth
- ⑧ Steel plate
- ⑨ Draining layer
- ⑩ Cement screed
- ⑪ Prefabricated slab
- ⑫ Grass
- ⑬ Brick block
- ⑭ Plaster
- ⑮ L-profile steel
- ⑯ Stabilized soil
- ⑰ Land
- ⑱ Draining layer
- ⑲ Foundation plinth
- ⑳ Steel plate

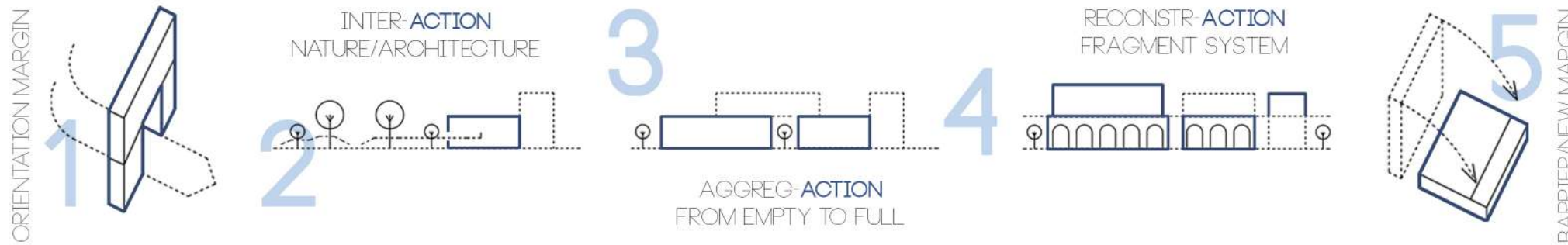




DOMESTICITY

A STRATEGY AGAINST SPRAWL

Maria Masi

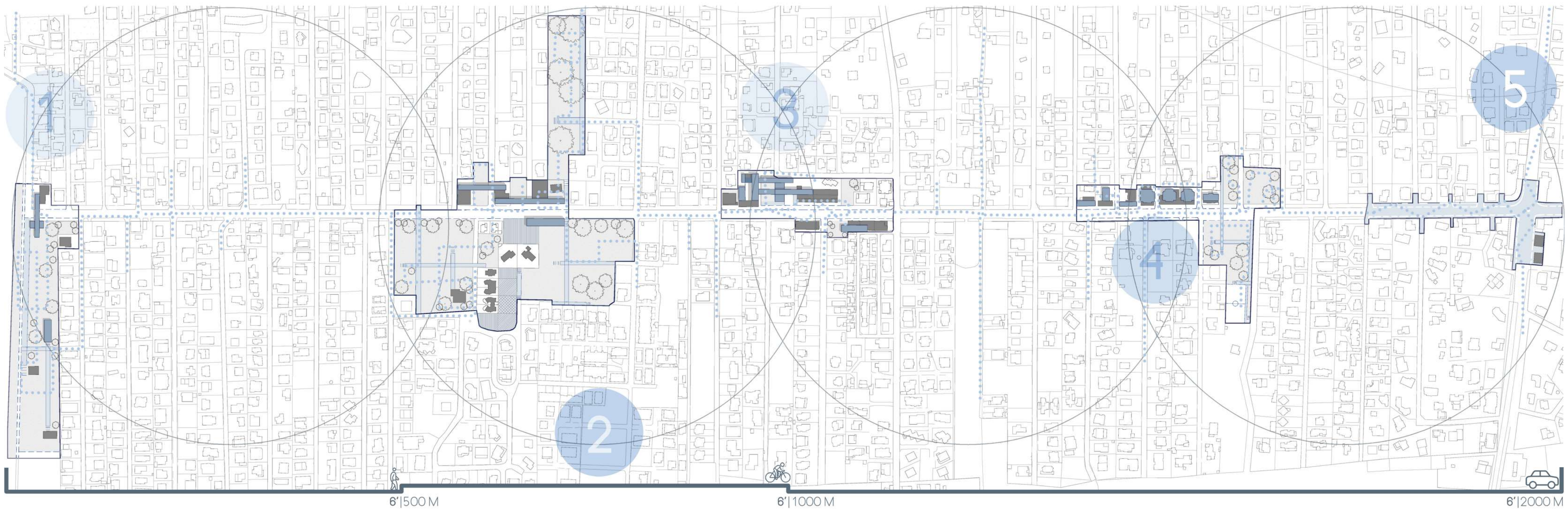


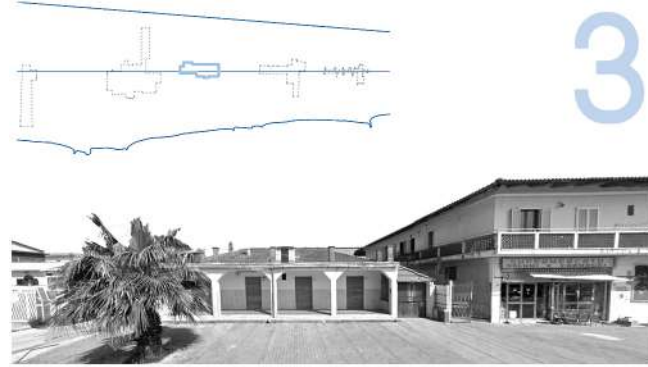
FROM STREET TO SQUARE
LENIN



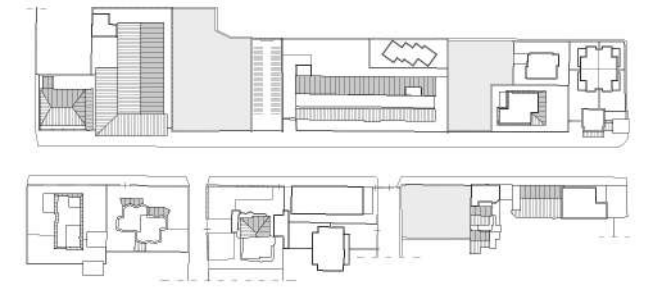
A city is domestic when physical, social and economic relations contribute to the creation of a place where the man recognizes himself as protected. In Domesticity the boundaries fade and the home extends beyond the simple domestic walls. The complexity of Castelvoturno hardly allows it to be read as a domestic city. However, some conformations of urban space contain a germ of domesticity and suggest behaviors, encourage and direct life in that sense. If the Domitiana is the axis of rapid flow, infrastructure on a territorial scale, tangential to the questions of the city, Via Lenin, its parallel, already stands in this sense as an “internal”, intimate space. In fact, the motorist traveling the domitio axis, to access the Baia Verde road, is forced to penetrate the urban fabric by slowing down through the few perpendicular paths that inevitably filter the flow. What this movement returns is a stretch of road on a “human” scale, potentially a neighborhood. The project is part of this reasoning, trying to transform what is already present into potential. It works to slow down the flow in an attempt to form a new square in what has until now been a space of passage. Not the linear meters but the minutes are the unit of measurement for the project. It is organized by macro areas called “condensers” arranged every “5 minutes walk” from each other. These services at the scale of the neighborhood, as beating hearts attract and release new relationships to the city. As for urban space, even the built environment has been analyzed, studied and evaluated for its potential. In fact, observing the typologies present along Via Lenin, the prevalence of the residential function emerges alongside small commercial establishments. Almost as if to cling to the residences, they develop into porticoed structures placed at the base. The composition of the project takes up this idea of physical aggregation and develops it to

guarantee vertical and functional densification. The work is based on the study of the existing building through the redesign of it and of the structural systems evidently declared in the front view. The drawing is therefore the first instrument of knowledge of the intrinsic vocation of the elements and, from this, it is possible to re-draw the city. The compositional logic of volumetric aggregation becomes the leitmotif of the intervention and returns to the city hybrid and new spaces reinterpreting the concept of public, private, in and out. The work involves the demolition of disused buildings, preserving their structural system. The reinforced concrete frames become a mesh that accommodates new functions on new levels. Vertical densification takes place through the grafting of a “domestic infrastructure”, a level that more than overcoming the built, guarantees new points of view towards the sea and the lakes area. The returned space, in its complexity, goes beyond any functional definition. Assigning a definition of it would entail a limitation of use while the project aims rather at an opening towards new possibilities of use, suggests but does not oblige. The composition is regulated by the existing structures and by the new upper order of the pylons and “bridge beams”. Proceed by successive aggregations: as autonomous structures, the service boxes are inserted in the mesh. The intervention aims to not simulate and differs from the built also for the use of materials. The new structures are made of steel, the presistences are wrapped and held together by a plastic skin: a mechanical logic attributes a new face to the city. The aggregation of successive elements proceeds up to the scale of man: in private spaces also equipment for life is thought of as boxes that suggest possible uses. The work aims to demonstrate the need of an overview at different scales in solving urban problems by taking the suggestions and possibilities that the built itself offers.

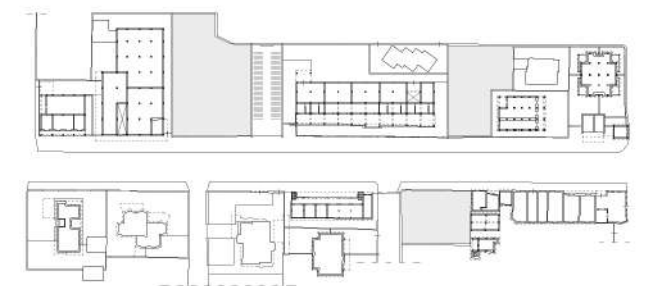




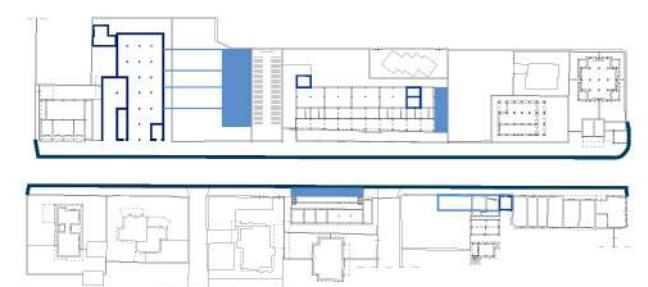
CURRENT STATE:



Roof plan



Ground floor plan

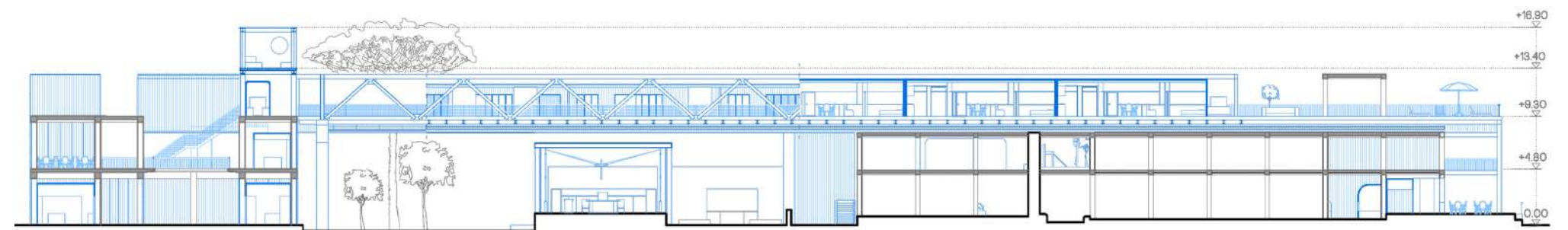
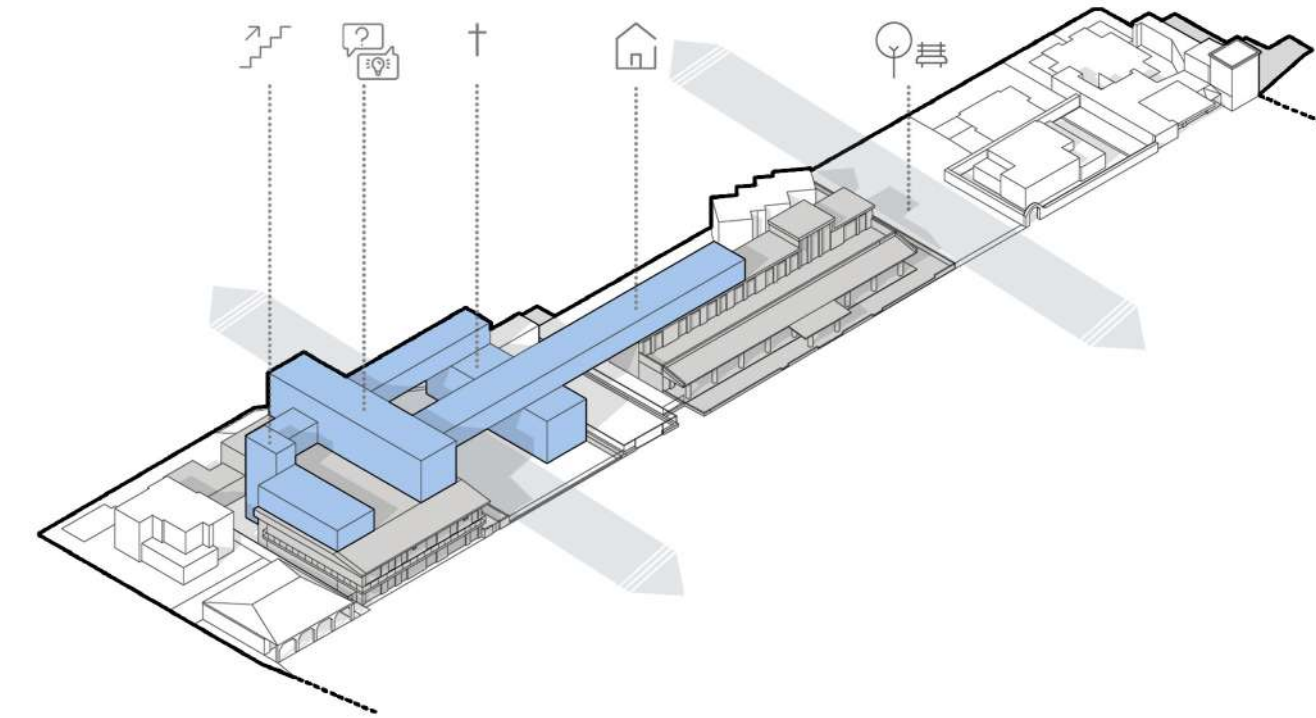
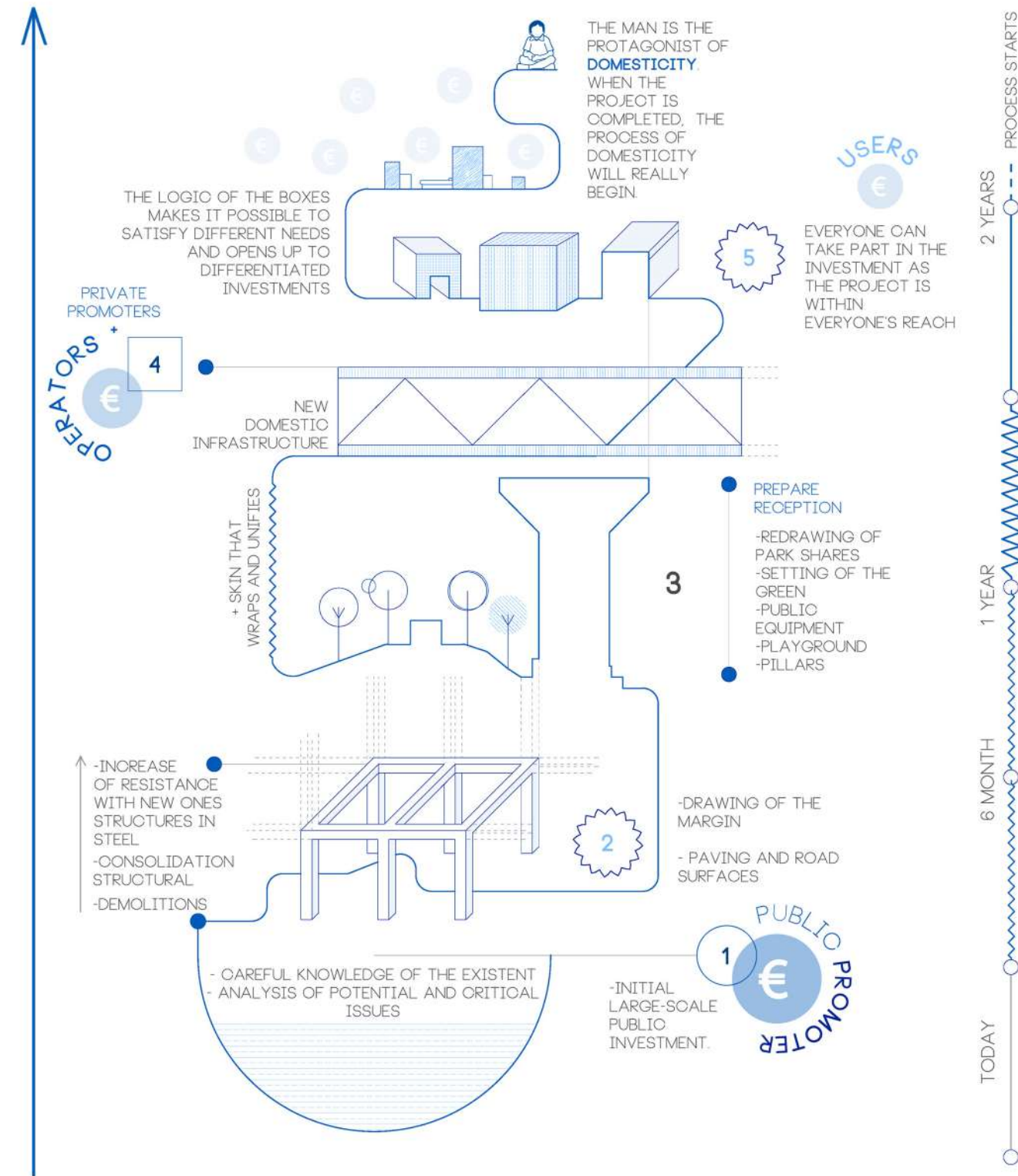


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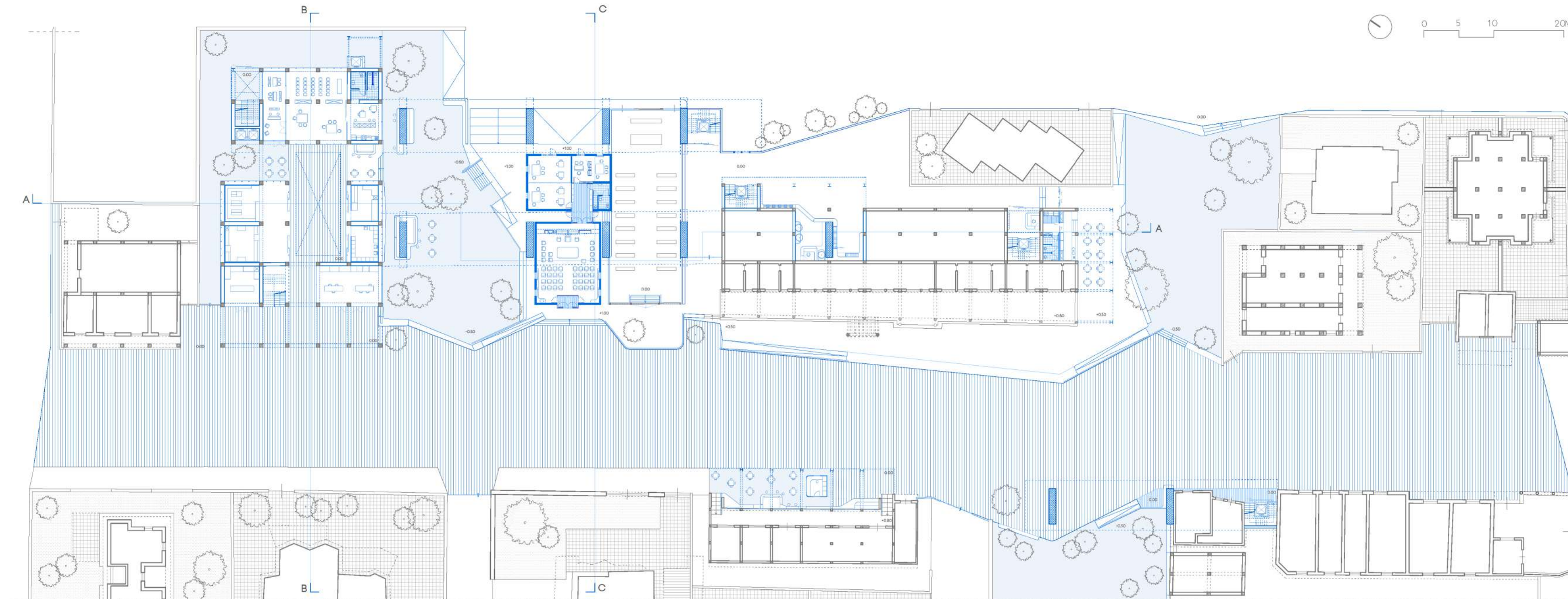
Demolition
Restyling

New aggregations
Border new design

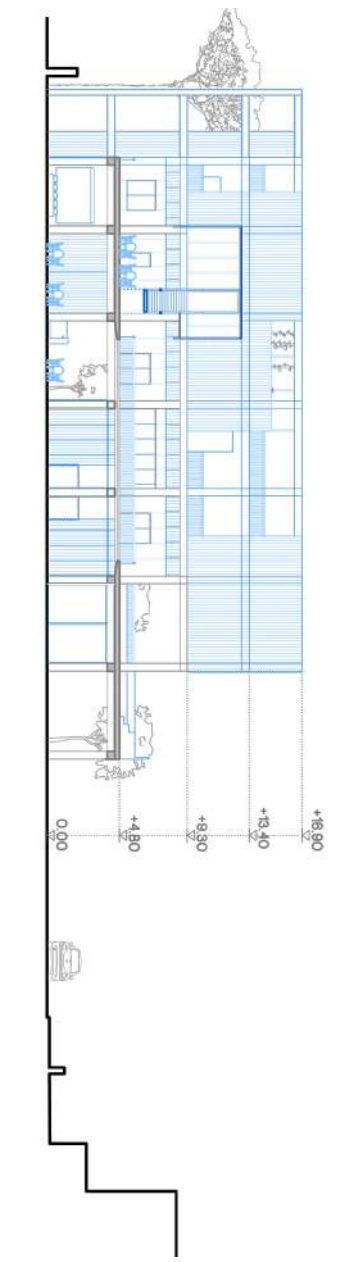
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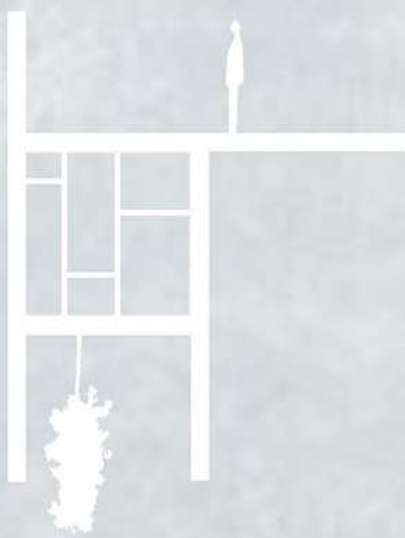
section AA

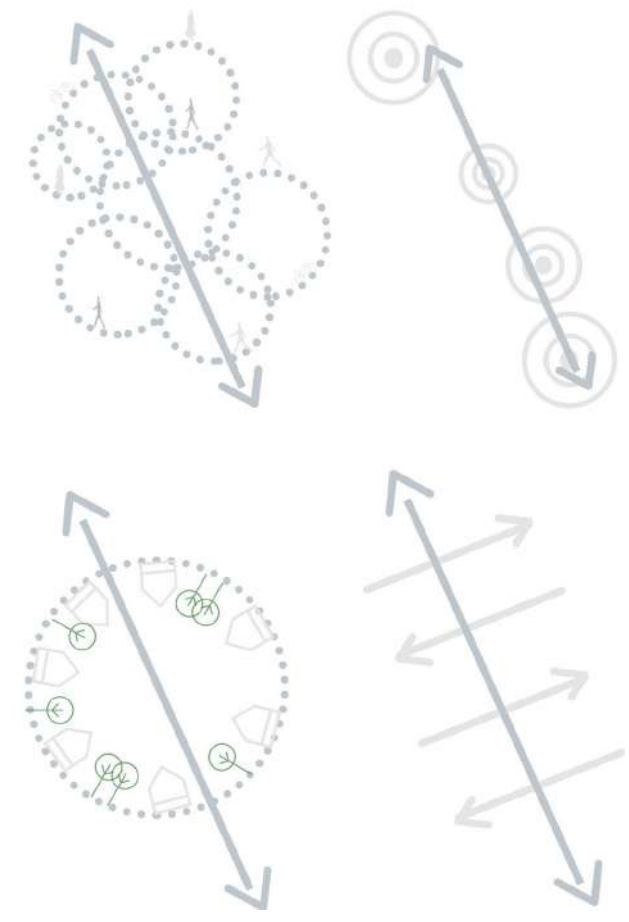
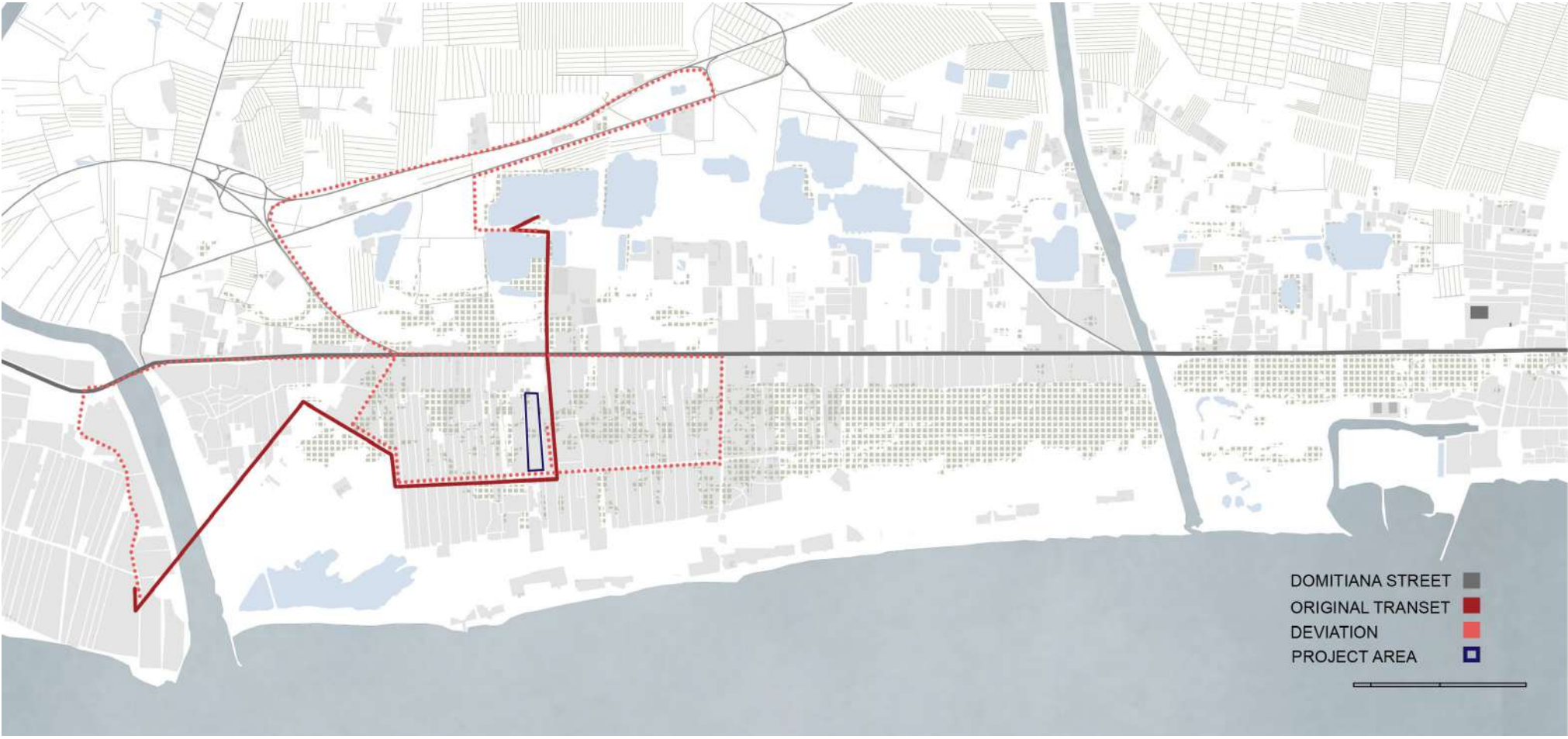


Ground floor plan

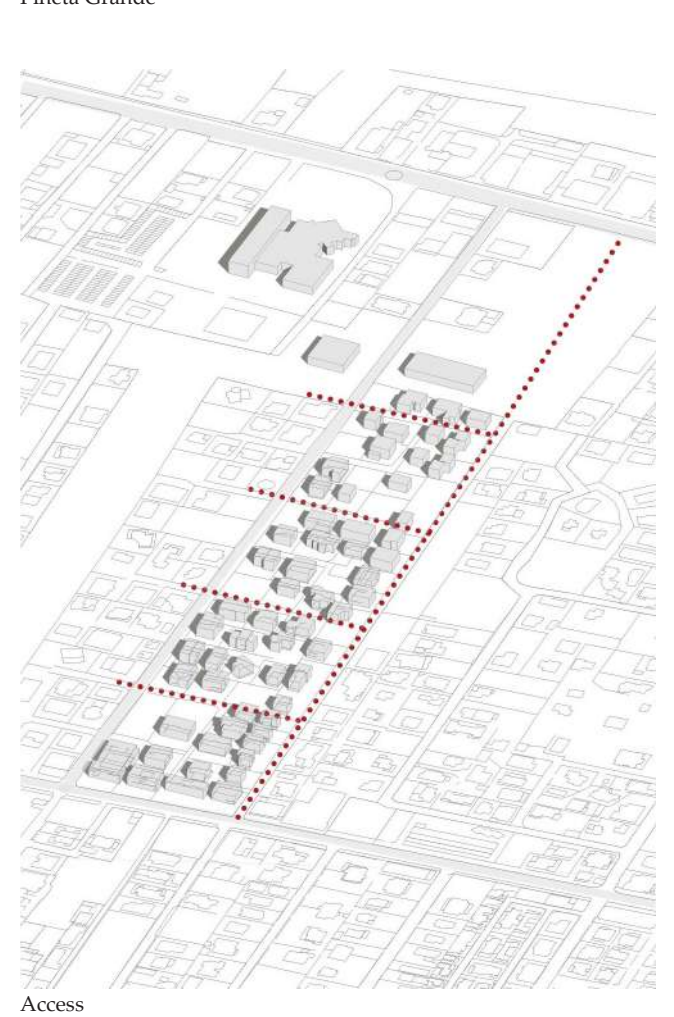
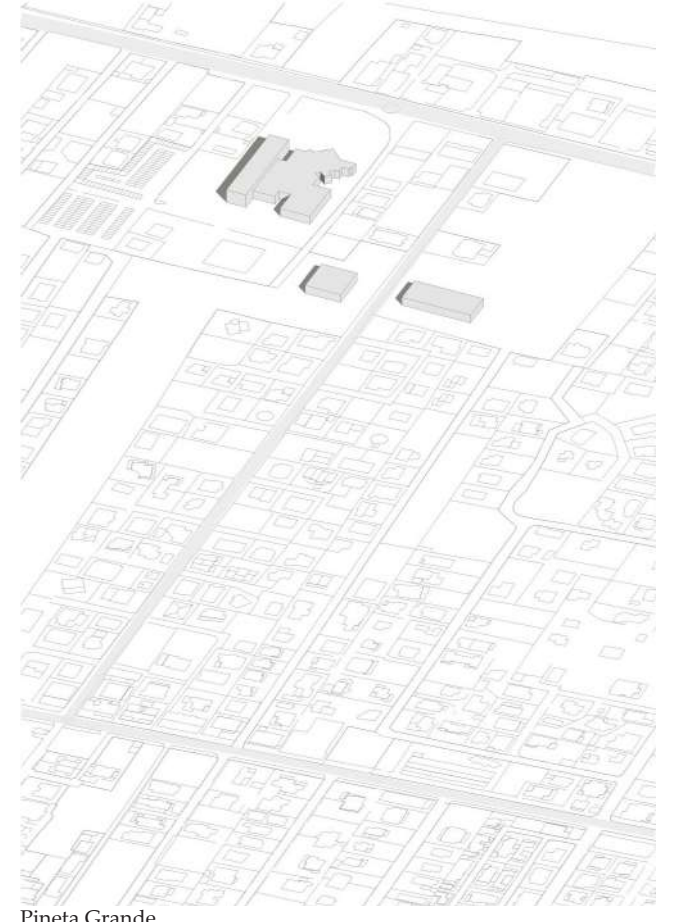
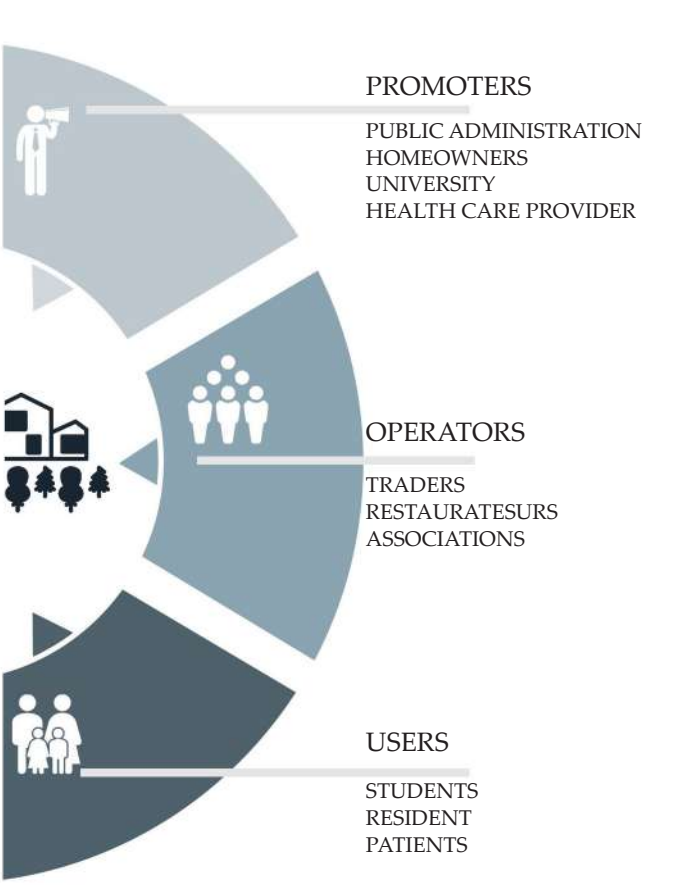


Section BB





Design strategies



The site chosen as a project area is located near the Pineta Grande clinic, a private health care facility serving the whole coastal area, and which has recently promoted an expansion plan in the areas nearby. The clinic will expand from the current 150 beds to about 400 beds and from 600 to 1100 employees. The project foresees the construction of some new buildings for 45,000 square meters in total. This program has been the inspiration for my project, aiming to join the new clinic expansion, offering a variety of services for the hospital structure also hosting the department of pharmacy of Federico II University. The site is currently fragmented and the buildings are abandoned. The project strategy was to place a grid and a series of paths forming courts delimited by the same covered paths. As in a traditional court, there's a hierarchy of spaces, addressing the views from above and beneath, encapsulating the landscape in architecture and creating an overlap between interior and exterior. The passage between the walls in the paths that cross the site from one end to the other, provides an elongated view, while the light plays with the openings along the way, inviting guests to venture further and further into the project. Inside the wall, many of the courtyards serve student dorms, guest houses and other shared facilities such as reception, library, restaurant and fitness area. Many of the roof lines of the buildings are confined within the height of the septa surrounding them, so that they are not visible from afar. Guests cross the site using the routes between the septa to discover the architecture. In this complex architecture the visitor is going to see what is not perceptible with a single glance, or to realize the relationships between the various parts inside and outside. Once inside, there is a clear separation between the building and the septa, a layering of privacy and this offers a number of different landscapes for the guest. Other courtyards are gardens, allowing visitors to pass through a succession of open and closed spaces, that mark the architectural rhythm. It is the task of empty space, the sky, the air, to shape architectural objects considered as "full objects" structuring the urban reality and the landscape. Guests can also climb through the openings above to get privileged scenic spots overlooking the landscape. With this project, the intention is to use two strong architectural elements such as the wall and the courtyard, to unify a complex site while layered spaces seek to redefine the court's tradition with a modern architectural language.

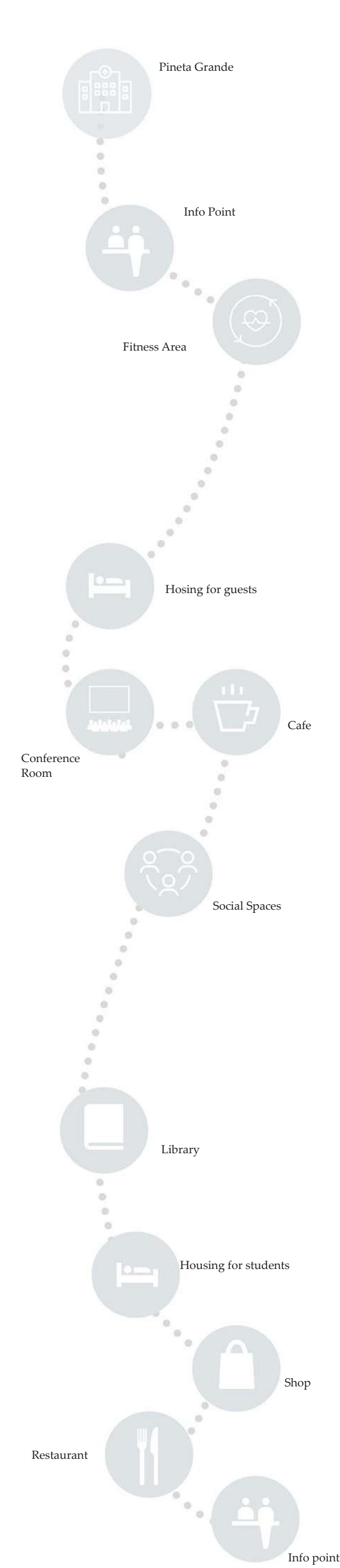


Masterplan

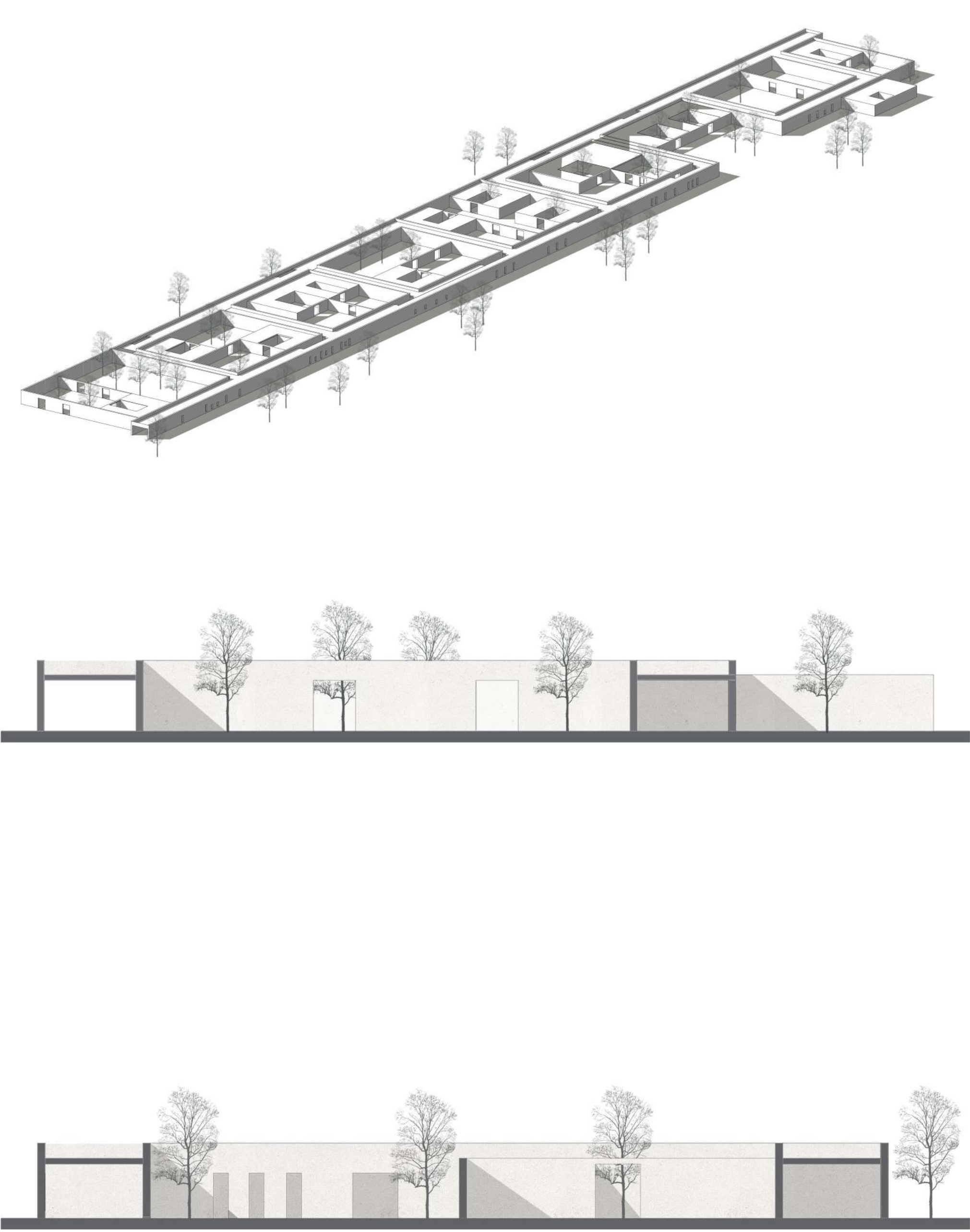


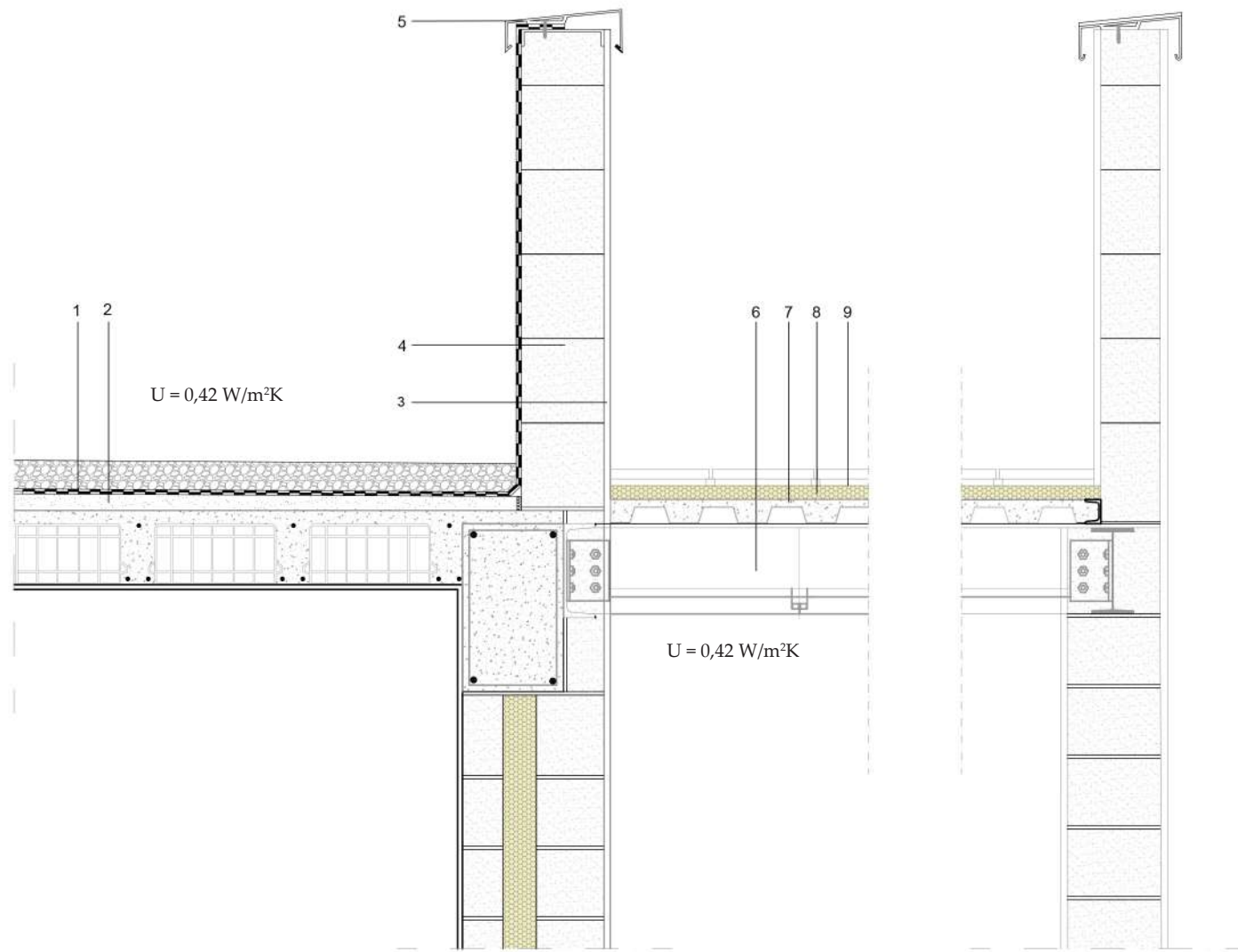
Floor Plan

Functions



Elevations

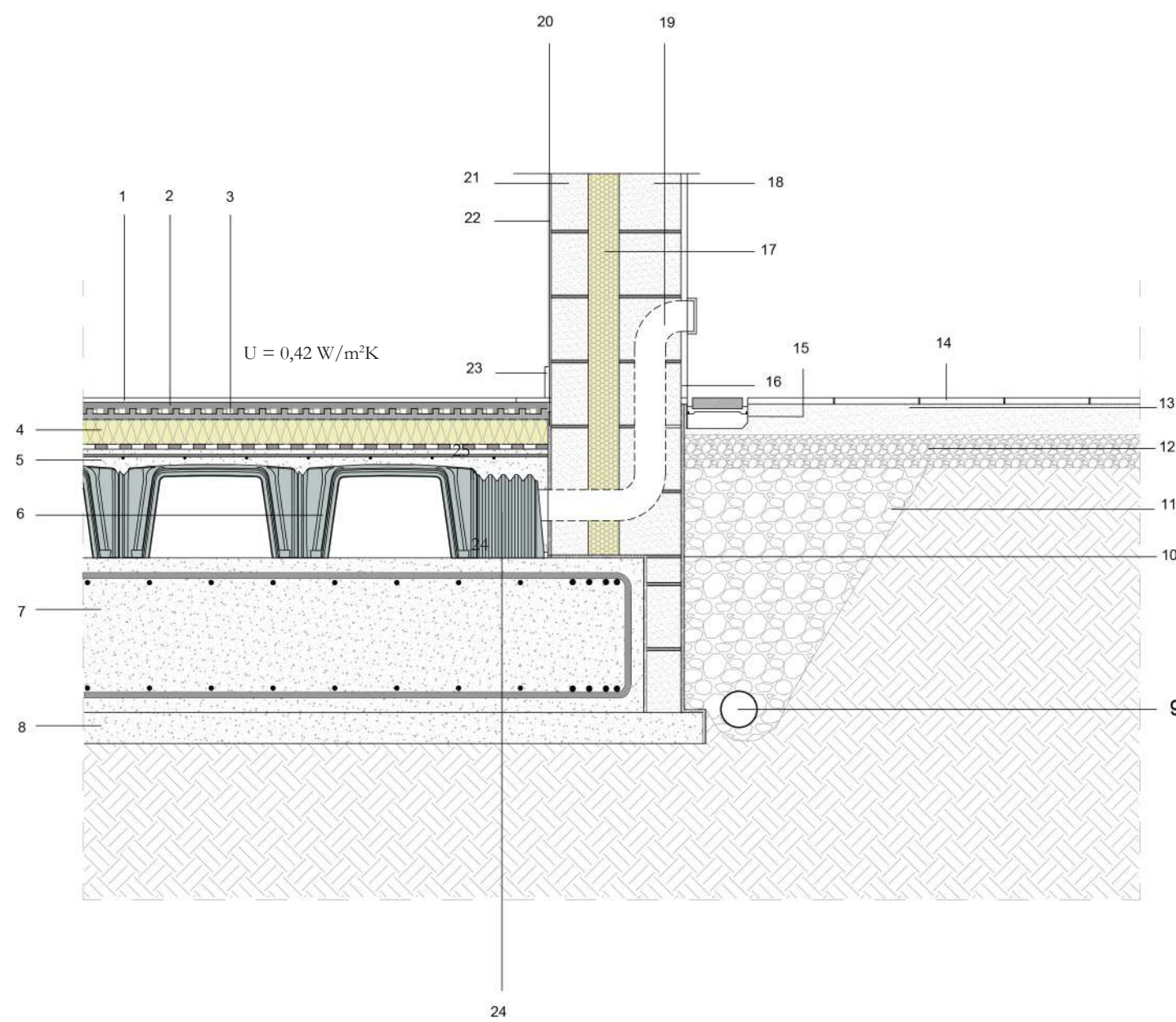




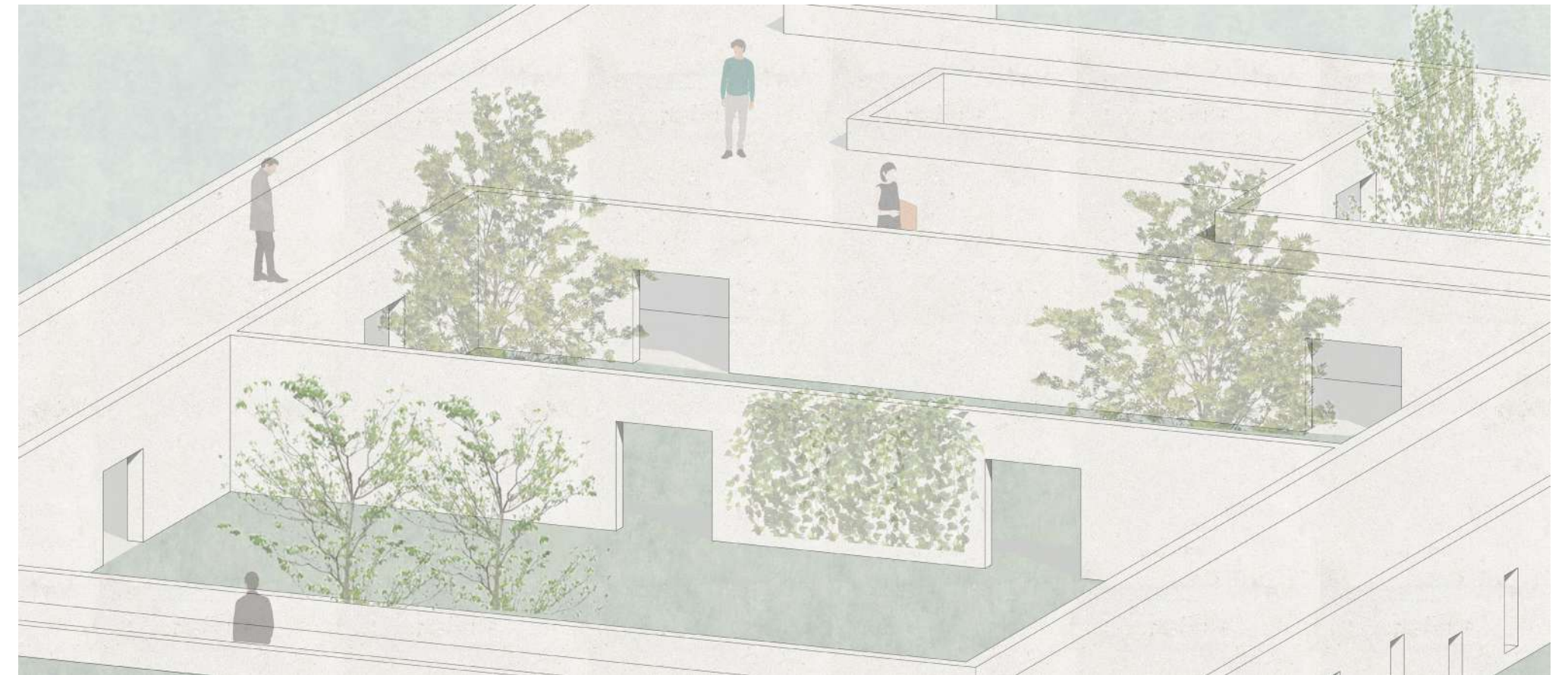
1. Insulation
2. Lean concrete
3. Plaster
4. Gasbeton
5. Metal flashings
6. IPE beam
7. Insulation
8. Insulation
9. Concrete floor

Cooling Load of the building: 30228,366 W
158,92 W/m²

Heating Load of the building: 11257,31 W
59,186 W/ m²



1. Pavement
2. Self-levelling screed
3. Radiant panels
4. Insulation
5. Jet of concrete
6. Igloo 50x50x30
7. Concrete
8. Lean concrete
9. Drainage tube
10. Sheat
11. Drainage pebble
12. Drainage pebble
13. Gravel
14. Pavement
15. Raceway
16. Plaster
17. Insulation
18. Gasbeton
19. Ventilation tube
20. Sheath
21. Gasbeton
22. Plaster
23. Skirting
24. Beton stop

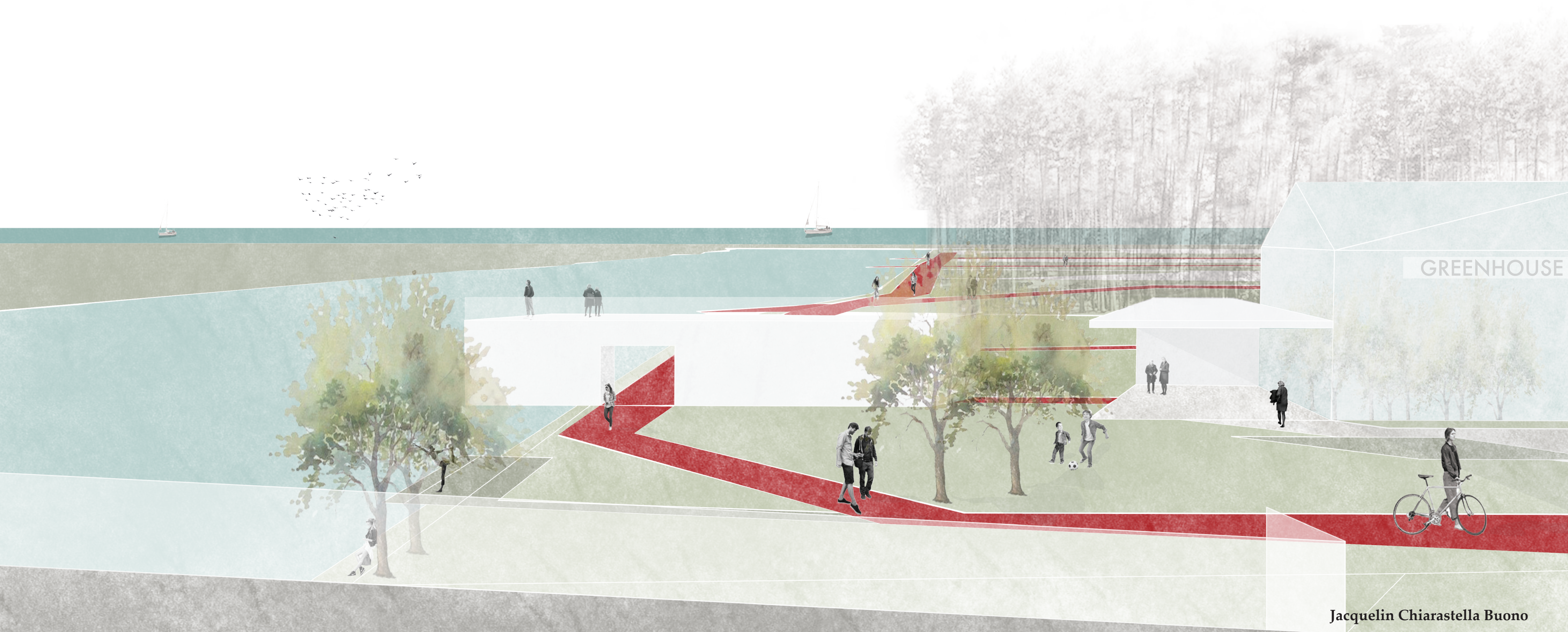


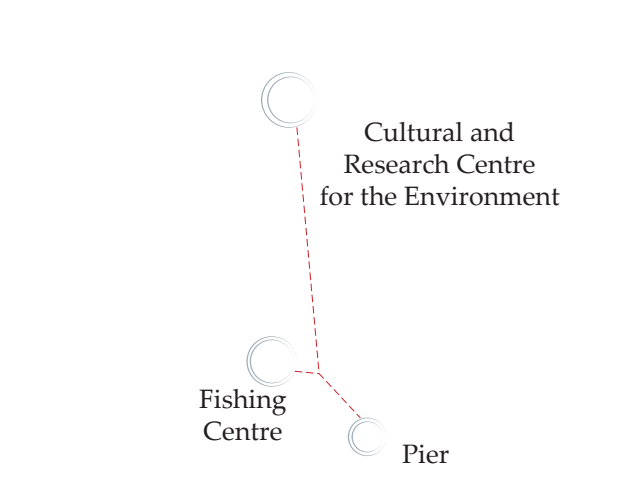
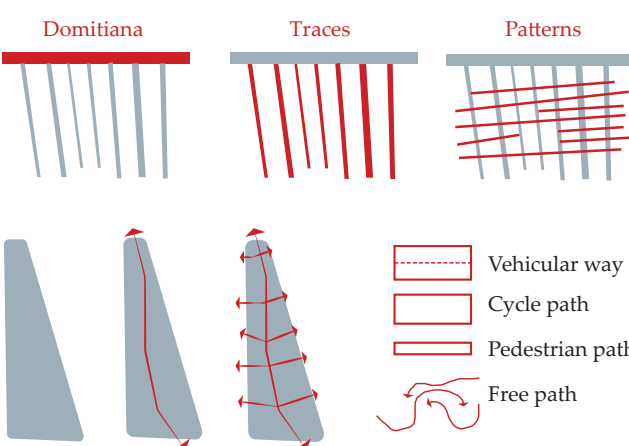
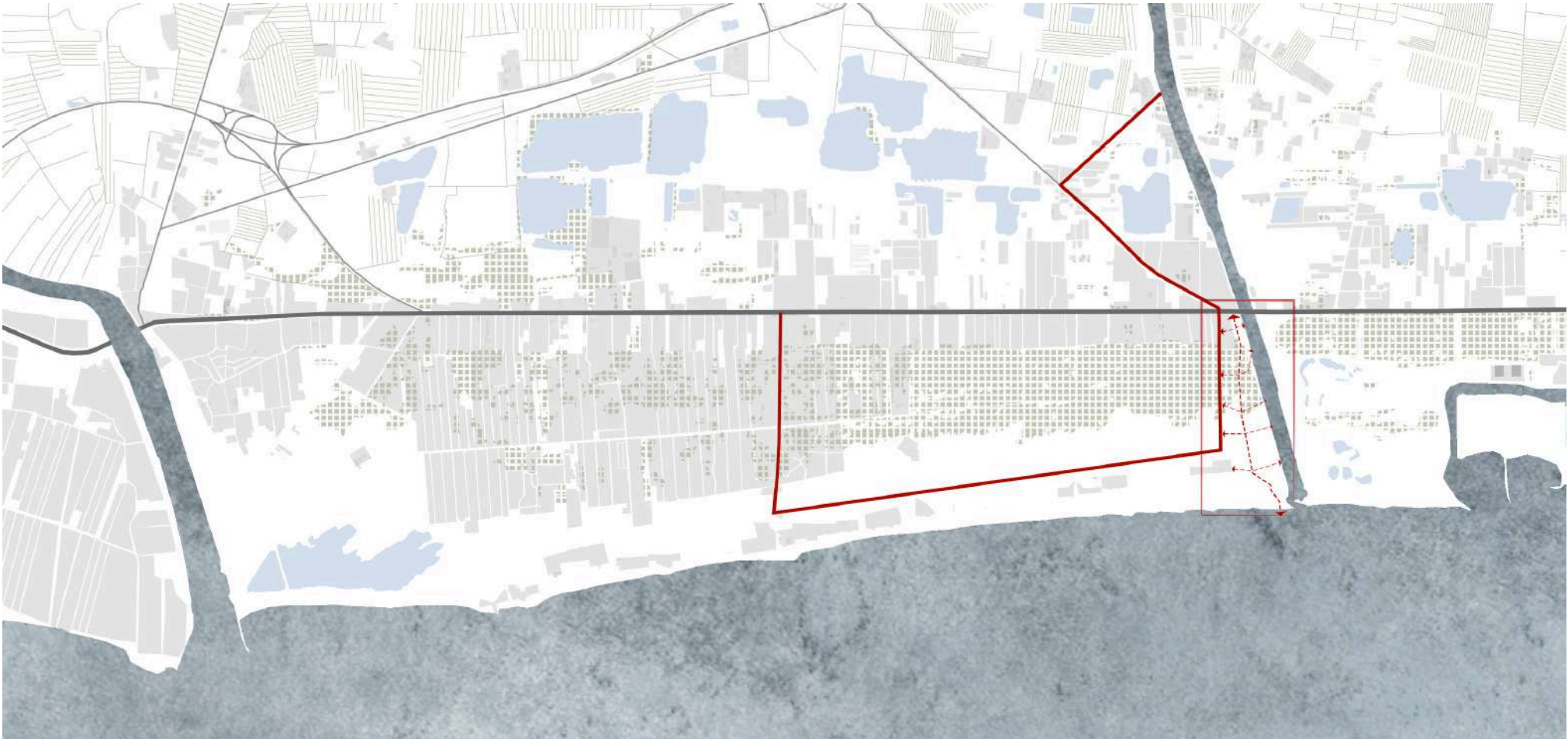


THE REGI LAGNI AREA *L'AREA DEI REGI LAGNI*

- 29. **Starting from nature** Jacquelin Chiarastella Buono
- 30. **Outside the Fence** Rosa De Rosa
- 31. **A new touristic port** Giovanni Di Costanzo
- 32. **Designing horizons** Maria Grazia Guastafarro

STARTING FROM NATURE





The project is located between two major infrastructures: the Domitiana and the canal system known as Regi Lagni, crossing different landscapes: the urban fabric, the Pine forest, the dune area and the beach. It's from this particular vantage point that the idea of the project was born. The project sets nature as a starting point. Nature is the means for community regeneration and is enhanced and preserved through architectures.

During the fieldwork and on-site survey, one of the first critical issues was the total inaccessibility to the area from the Domitiana, as well as from the pine forest which is almost totally fenced. Arriving in the dune area one experiences a feeling of total bewilderment, almost like being in a desert. These different landscapes, although contiguous, appear completely separated from each other.

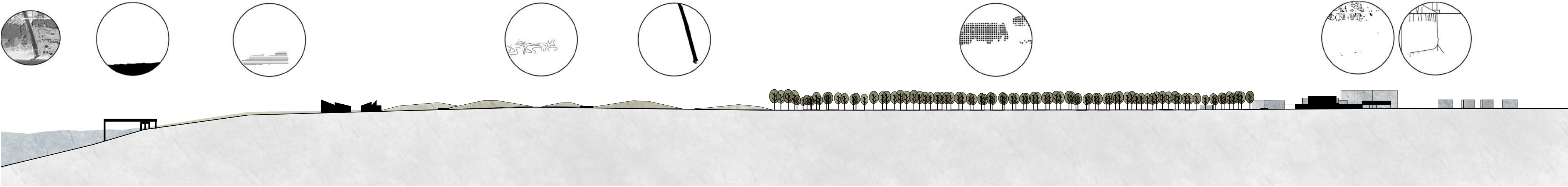
The first project idea is to imagine a path that connects these places and makes them accessible in several strategic points. It's a wooden path, fully respectful of the landscape. The route follows a different hierarchy and therefore takes on different thicknesses. The big one accommodates both pedestrians and cyclists, the small one is only for pedestrians.

The path configures itself in a different way depending on the intercepting landscape: on the Regi Lagni it juts out both to enjoy the view and to get closer to the water, and to practice birdwatching; in the pine forest it can become roofs or seats, in the dunes it goes underground while on the beach it acts as a catwalk.

The design of the park engages the relationship between the Domitiana and secondary streets, and deals with how the houses are configured on these streets. This system generates a grid that is taken as a reference and reinterpreted for the system of greenery and paths.

To meet the flooding problems in this area, two rain water collection systems have been planned. The first is placed at the beginning of the park in a side position with the greenhouse into which waters from the built-up area are channeled, with the aim of reusing them for the plants in the greenhouse. The second is placed on the dunes and is parallel to the road following the same system of the back channel of the Regi Lagni.

The functional choice for this place, besides focusing on nature, also meets the demands of citizens that emerged during the interviews: enjoying the natural landscape, having spaces for leisure and cultural activities.



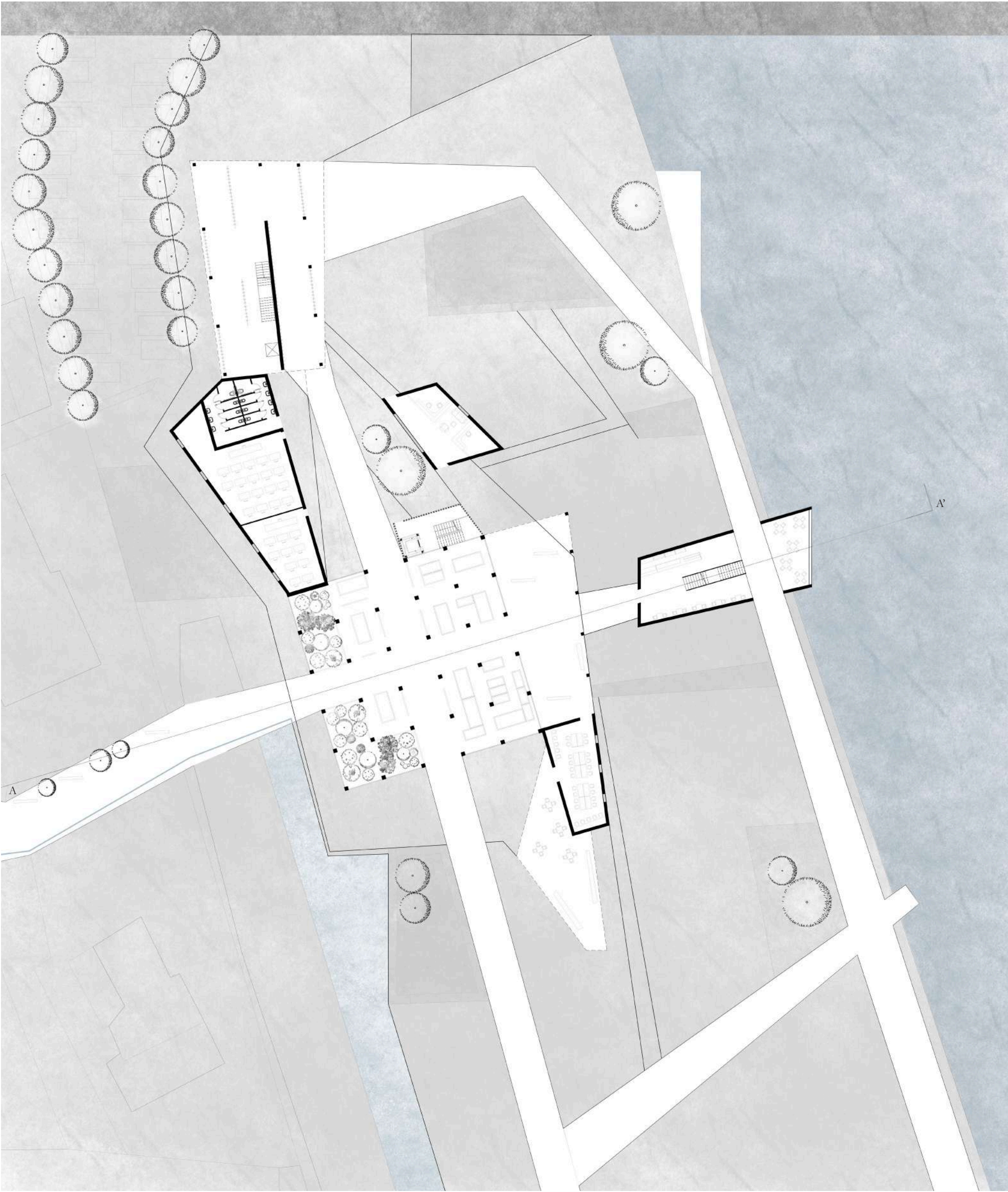
There are two landmarks in the project area; the first, which is also the park's gate, is a persistent concrete building. This building is reworked and used as a large greenhouse, with the aim of expanding what the park already offers in terms of laboratories and workshops, observation and exhibition of different plants and crops. To build the greenhouse, it was decided to keep only the concrete structure and to fill the façades with a hortiplus glass frame system. To the central body of the greenhouse other steel volumes are hooked, covered with wood and glass reinforced concrete panels. These volumes offer support functions to the greenhouse; there is the first volume which on the ground floor is a bicycle station open but covered by the upper floor of the building that is a conference space. In a middle position there are two other volumes, a small information point and two classrooms which, if necessary, can become a single space through the opening of the mobile wall that separates them. On the Regi Lagni side there is a volume that is a refreshment point with a panoramic terrace overlooking the canal. This volume is in continuity with the second possible route that goes from the driveway, which surrounds the project area laterally, passes between the residential fabric, opening the park also towards the urban fabric, and arrives at the greenhouse, crosses it, increasing the relationship with the Regi Lagni.

The last volume is near the greenhouse and favors the entrance from Domiziana to the park. It is used as a coworking space both indoors and outdoors thanks to the presence of a roof.

The second architectural headboard consists of a building that replaces an old abandoned bathhouse. The building consists of two parts, a first one that relates more to the road and in which there is a fish market, and a second part which is a restaurant on the sea with a bar and bathing facilities. The architecture is related with the landscape with which it interacts, it takes up the jagged shapes of the sea waves and a sailboat, through the articulated roof that also reflects the inside composition. The internal warping of the pillars can in fact be read on the roof by raising the partitions which, related to each other, give life to the forms mentioned above.

This architecture reaches the sea by the path until reaching the pier. The pier is made up of two arms, one taller used mostly by tourists and visitors, the other lower for fishermen who already regularly use this beach space, but who can thus have a more equipped space to practice this activity.

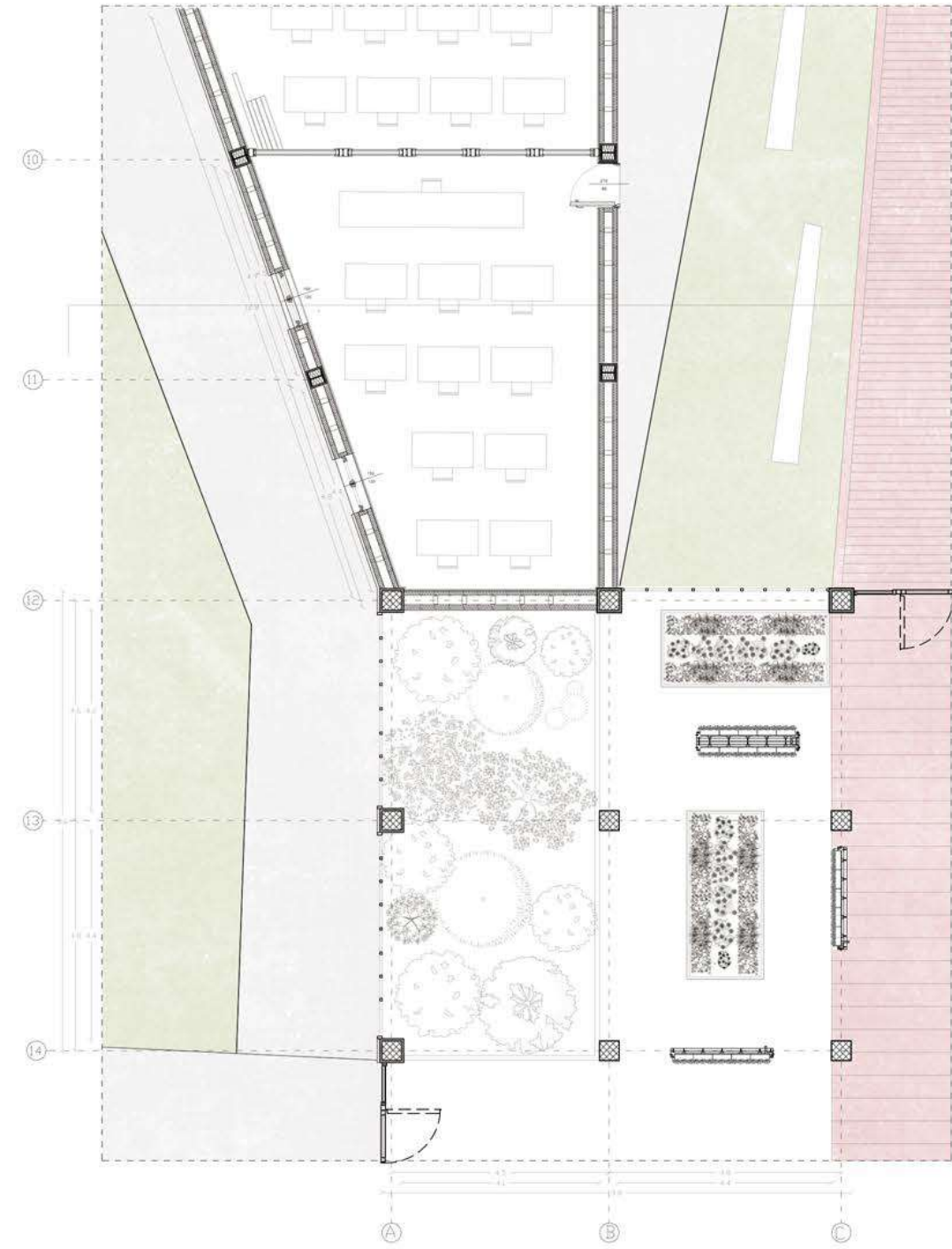




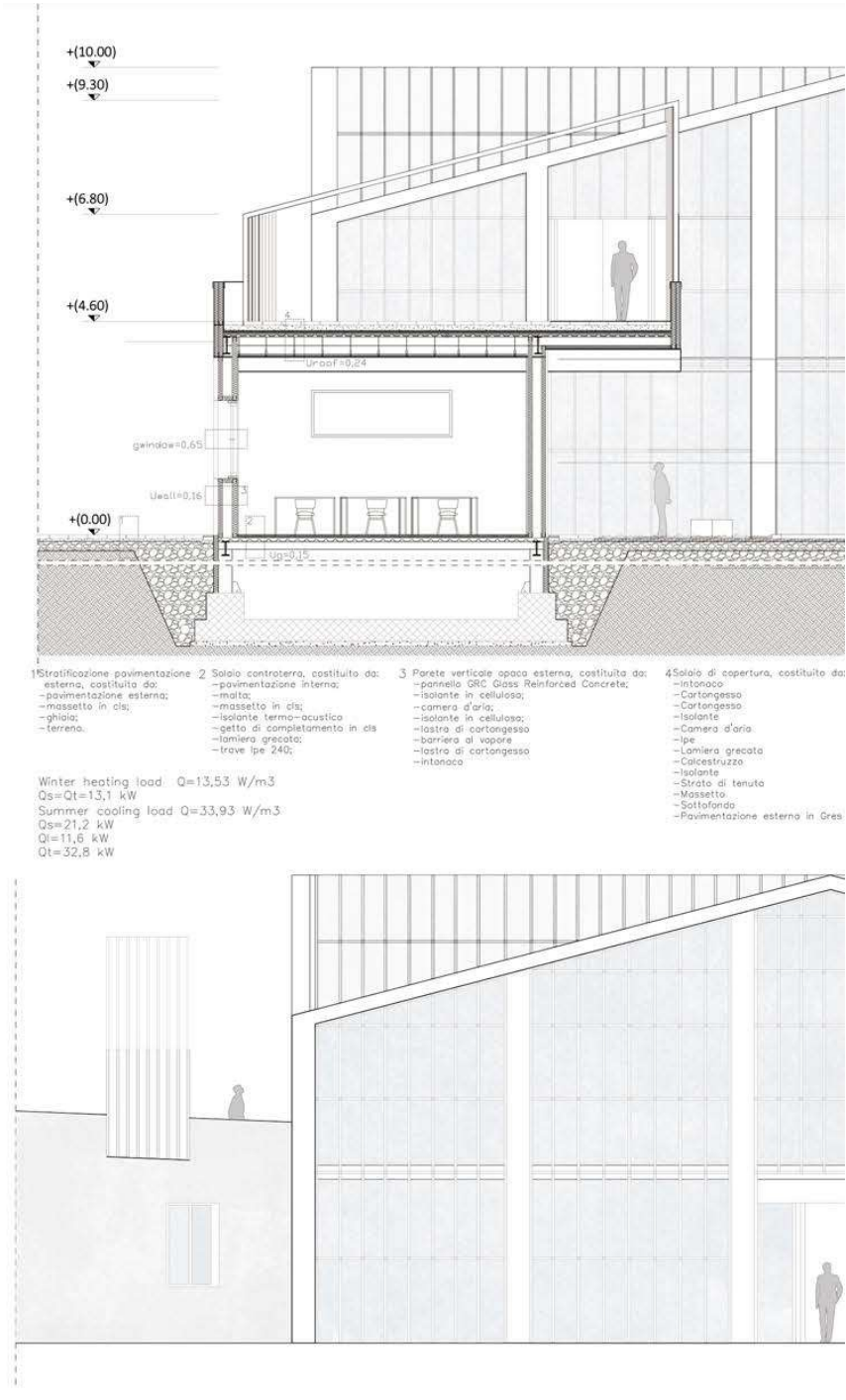
Floor plan Cultural and Research Centre for the Environment



Section AA'



Detail on the greenhouse



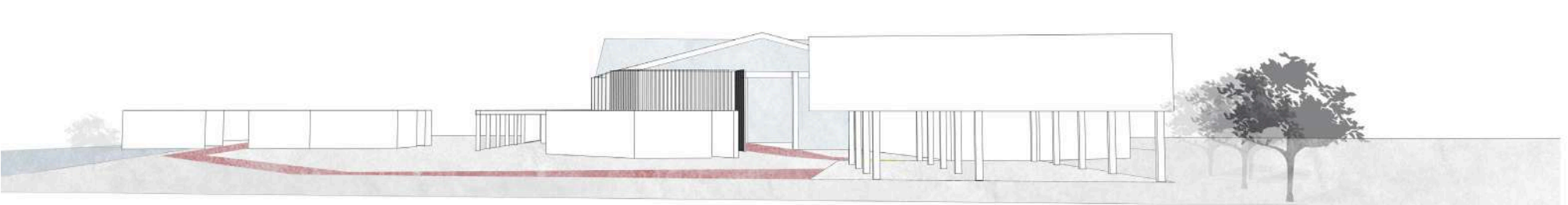
North-western Elevation



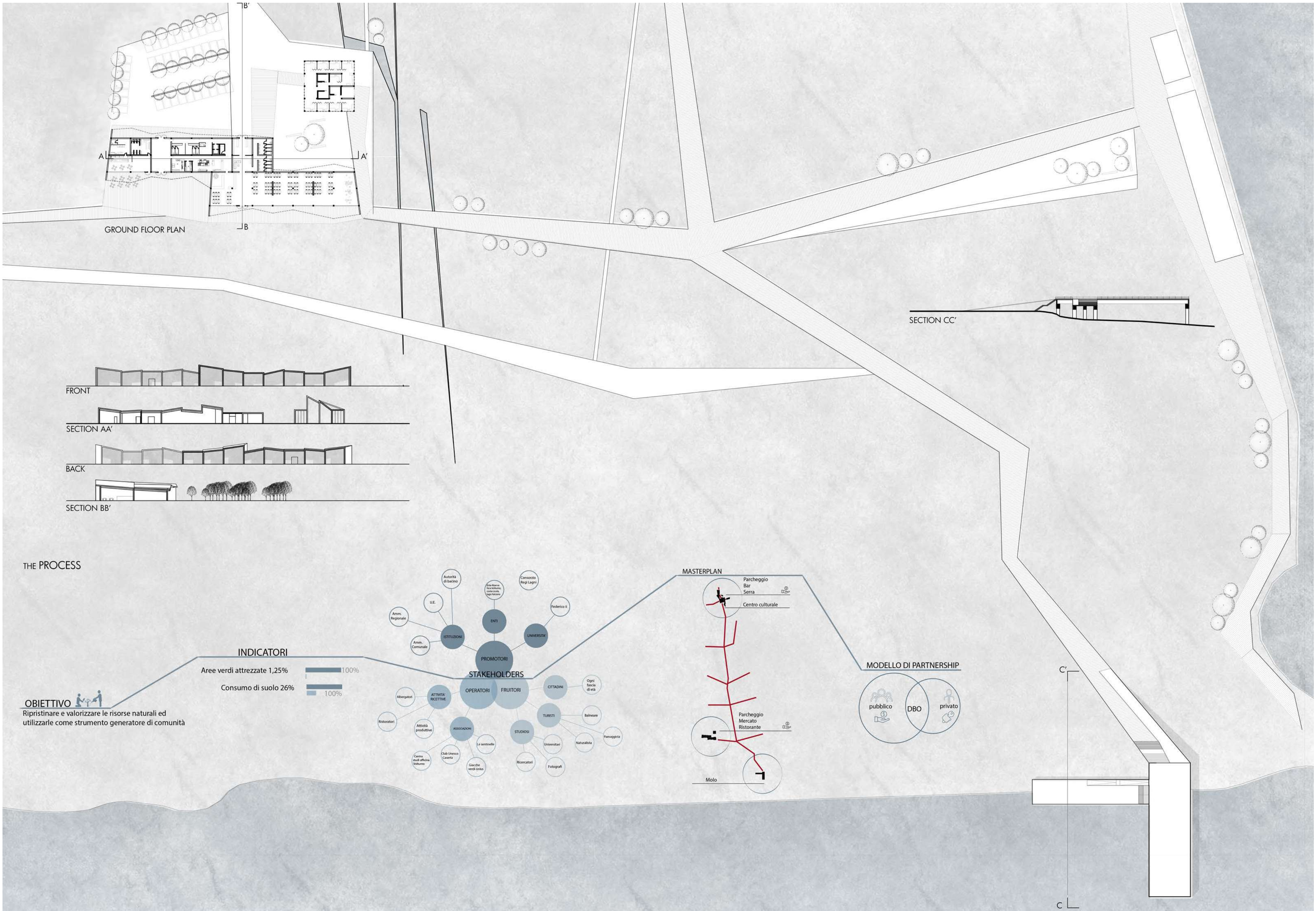
Floor plan program

Level 1 plan

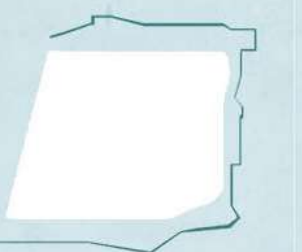
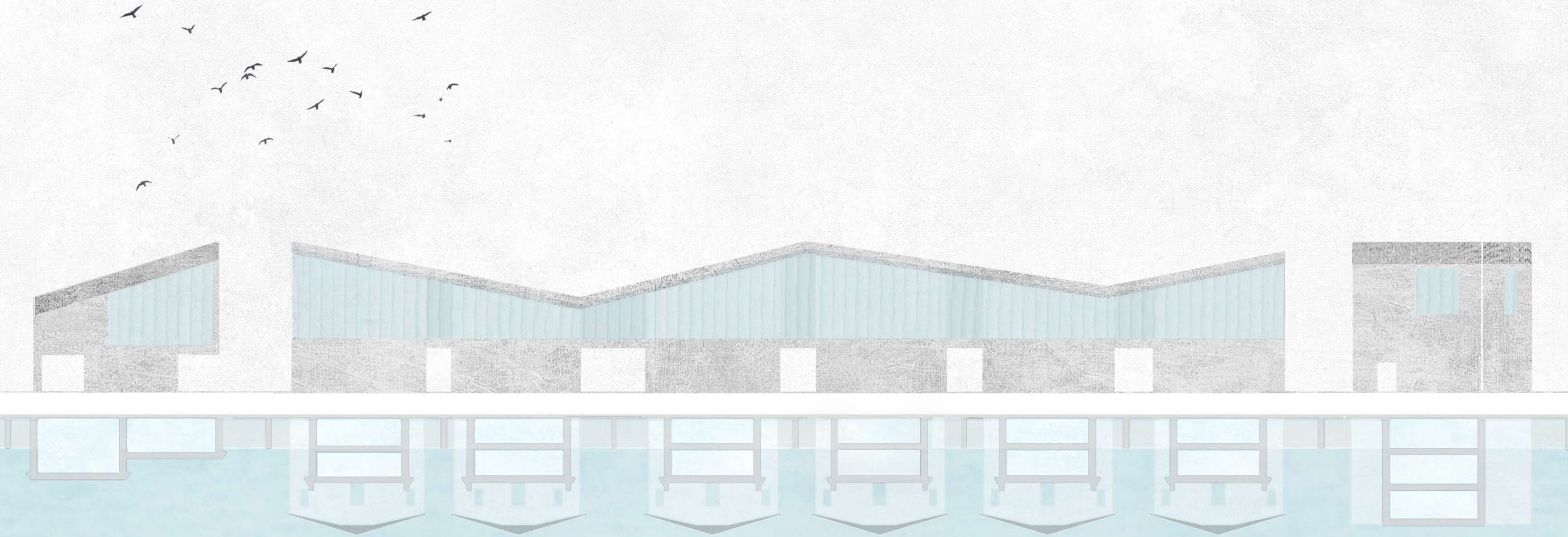
Level 1 program

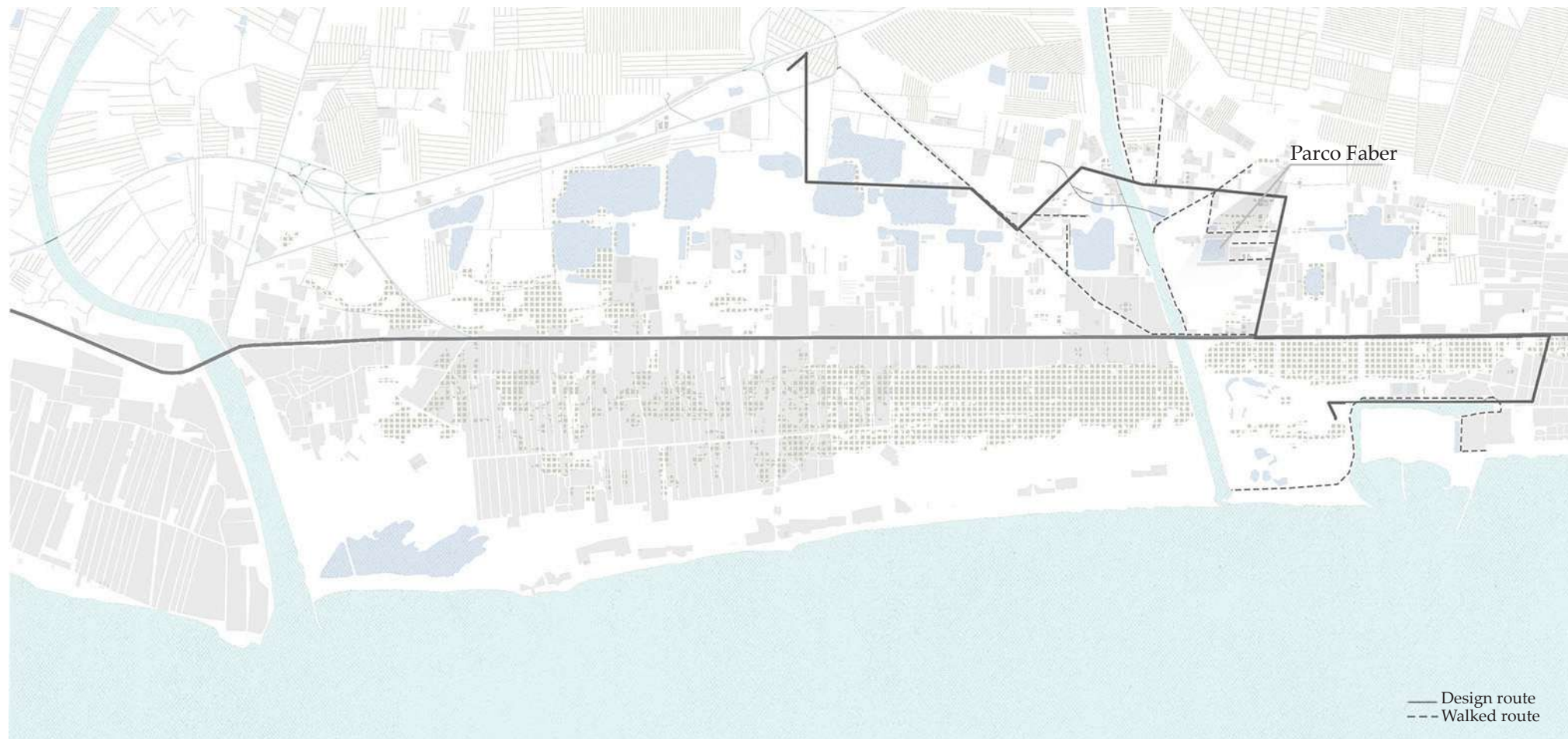


View from the entrance



Outside the Fence





The loss of identity that characterizes the non-places of the open space between the seashore, the via Domitiana and the desolated areas in the municipality of Castel Volturno has represented a matter of absolute relevance to analyze, understand and therefore challenge the project for a new civic center. This issue has been tackled in the design process by keeping together the urban scale patterns with the leftover interstitial spaces between the built context and the surrounding natural environment, reactivating the long-lost potential of the place. The questions taken into account concerned the different physical, economic and social conditions, and the consequent aspirations and needs of the involved communities. Recognizing the immaterial values and the richness of the natural and built environment was the first step to fully assess which interventions are needed for the regeneration of the territory, trying to focus on those processes that over time led to a fragmentation of uses and to a lack of reference points. The project area is located between the via Domitiana and the Regi Lagni, where a small artificial lake has slowly become the radial center around which a series of low-quality terraced houses have been built: the Parco Faber,

composed by thirty-four small houses confiscated from organized crime. Degraded and degrading for its inhabitants, this architectural in vitro experiment presents signs of a failed, sometimes obstinate and short-sighted planning malpractice. Illusory of promised yet unrealizable futures. Out of the one hundred eighty confiscated properties in Castel Volturno, this is perhaps considered the most important, both for its size and for the peculiarly favorable conditions surrounding it. How could these confiscated goods become today a means of social progress, cultural growth, and inclusion of young people? The project answers giving new significance to the place through architecture, keeping the traces of the recent past alive while organizing a new physical space. Carefully following the existing imprint of the terraced houses, the new building redefines the misshapen border with the existing urban structure, connecting in a single volume the different fragments of the place. The project translates the relation between past and future in a space of possibility. The open green space and the artificial lake coexist into a new vibrant core establishing connections and patterns of continuity, allowing the residents to enjoy places that have been abandoned for a very long time.

Linking together traces of different stories, interlaced pasts take shape into the volumetric extrusion of the previous small houses typological imprint. The new building folds following the surrounding views and places of interest. So does the roof: a long concrete slab that through its modulation draws a new landscape, concluding the unexpressed potential of the plan. Planned as a civic center of hybrid but complementary uses, the project includes a new school, new spaces to promote local excellences, a new exhibition gallery and a restaurant. The architectural potential and the strong urban value expressed by the project could trigger manifold transformation processes within a forgotten landscape. Form, material, color: these are the features connecting architecture and context, between human environment and nature. Through the various architectural devices that have been deployed, the surrounding context mirrors in the new building, looking at itself through the filter of architecture. The memory of the past is highlighted in the ground floor, where the original proportions and dimensions of the small houses have been kept untouched and used as a reference point for the design process, ensuring a clear understanding of the untold stories that were there before.



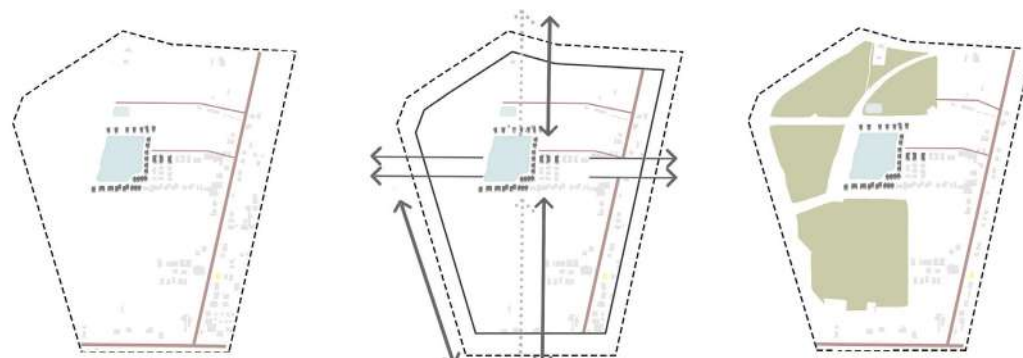
Inside Parco Faber



View from the Domitiana



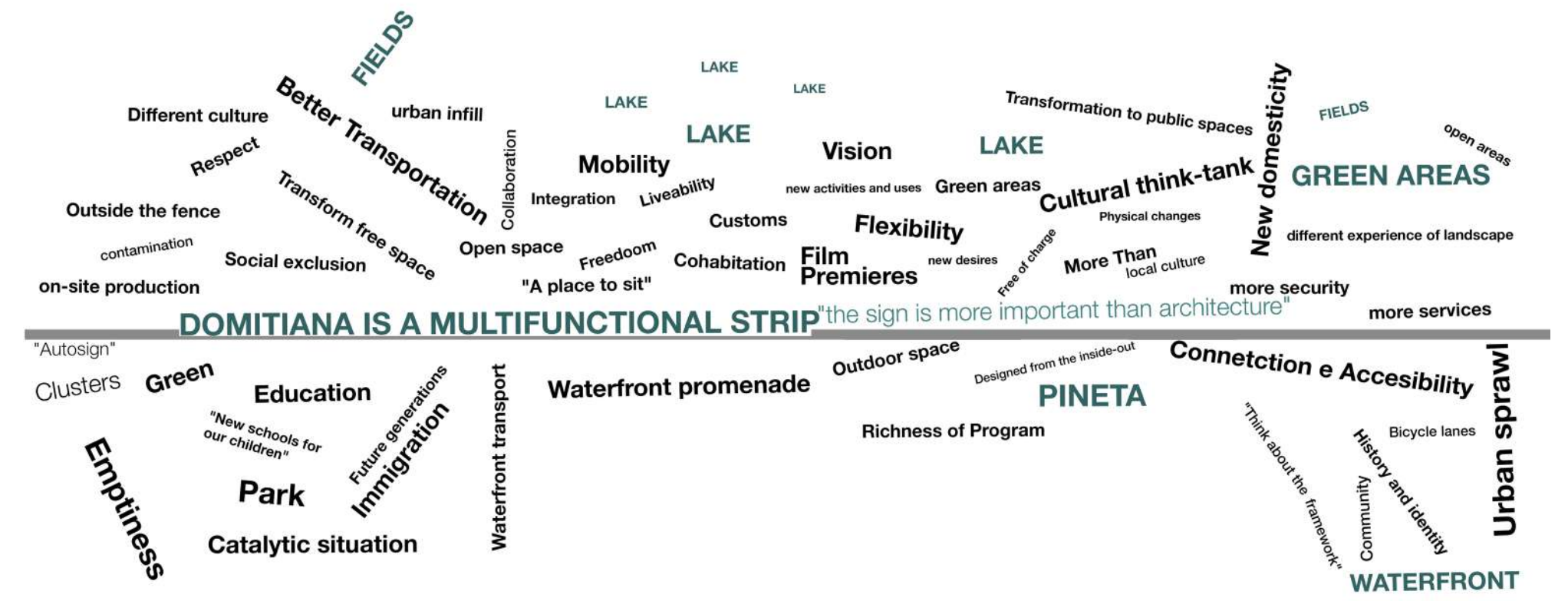
Outside Parco Faber | fence | water | rural and agricultural space



A non-organized space

New access routes

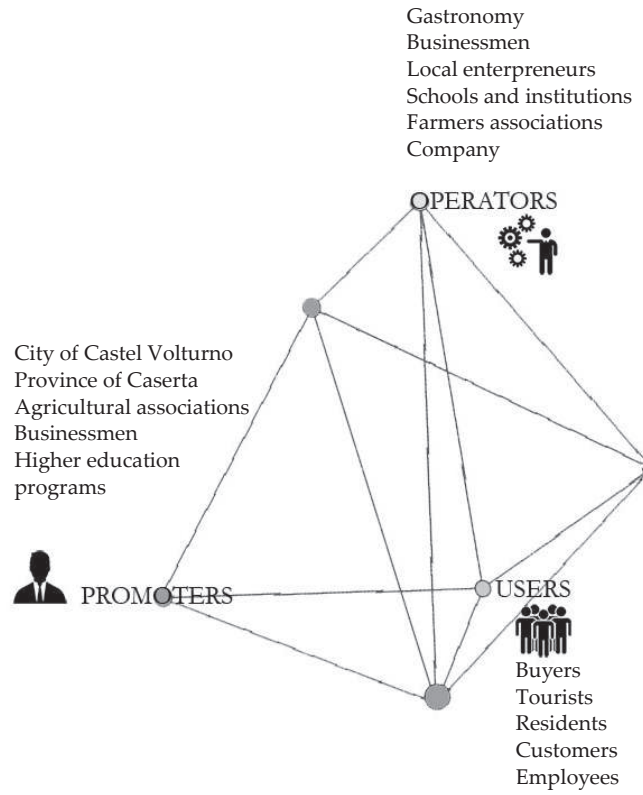
A new urban park













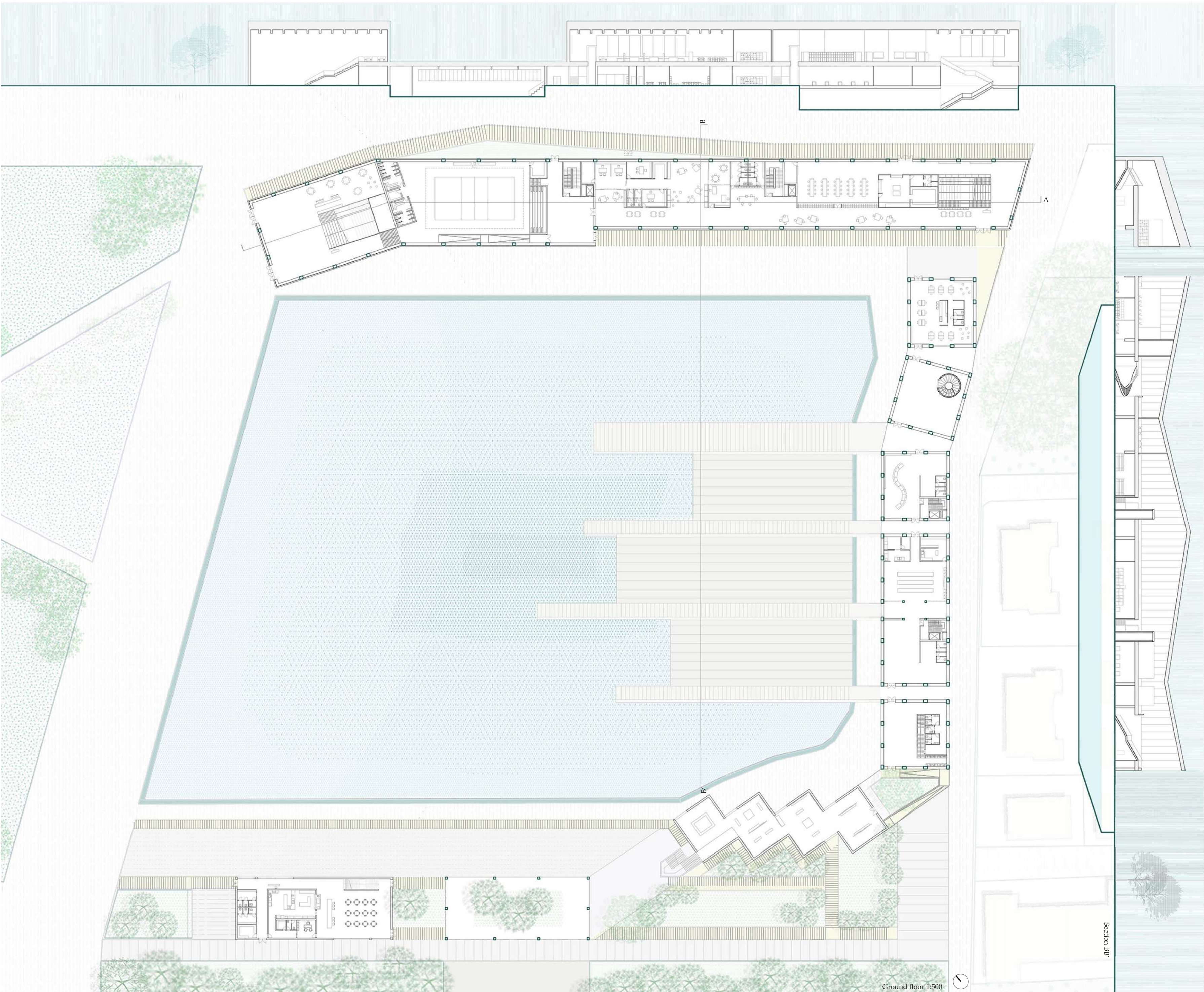
Map of desires of the public of Castel Volturno

Masterplan 1:1000

ENVIROMENTAL GOAL 	Renewale of the park Regeneration of the area near the artificial lake
CULTURAL GOAL 	Creating a new relation between the artificial lake and Regi Lagni to establish activities Mixed-use new spaces for different targets; old and young poeple,families,immigrants
ECONOMIC GOAL 	Increasing touristic activities and development, improving knowledge and avoiding the exploitation of the territory by promoting local good practices
SOCIAL GOAL 	Improving and refining the social integration between different cultures. Avoiding young unemployment and consequent social inequalities by creating new activities in a local circuit



USES	
	Urban garden
	Urban green areas for leisure
	School
	
	
	
	
	
	
	
	Local excellence hub
	Tasting / exhibition
	Restaurant
	Urban park

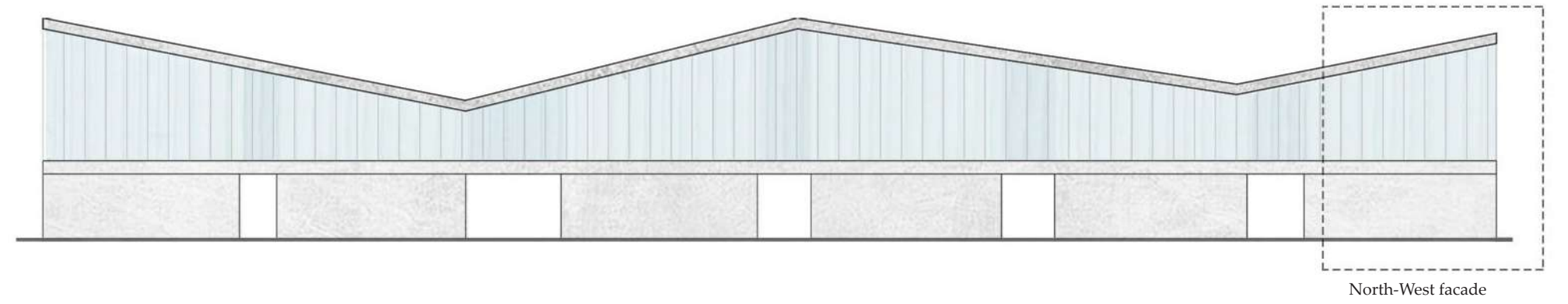
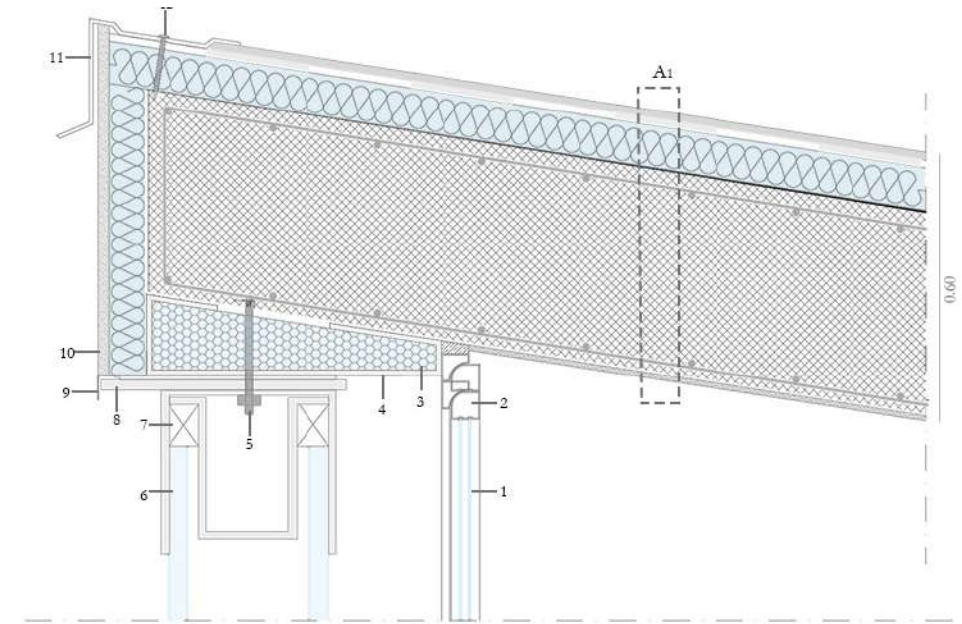




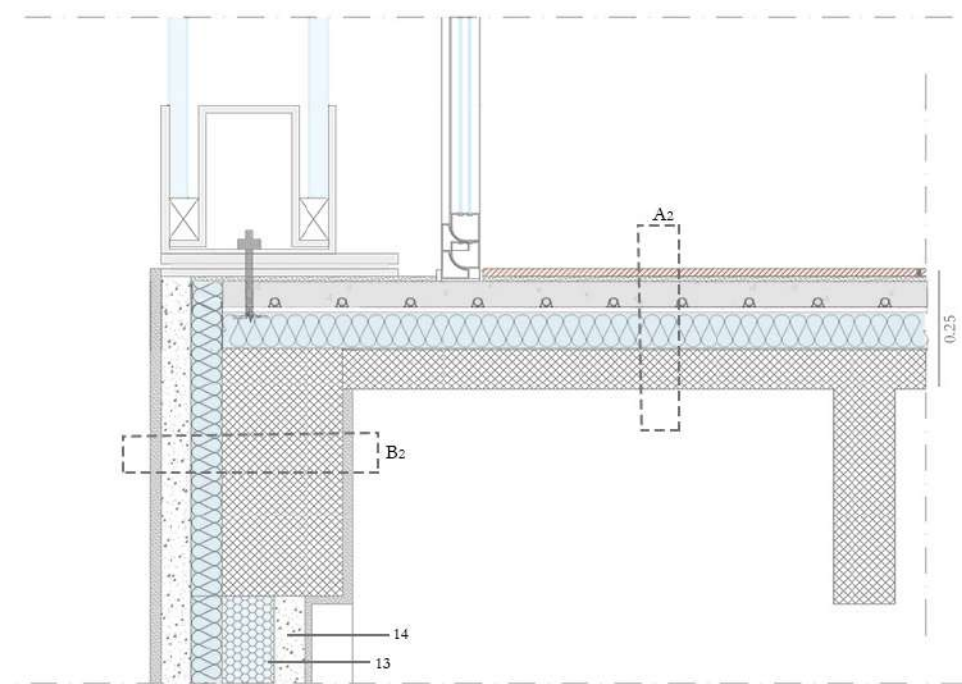
The library



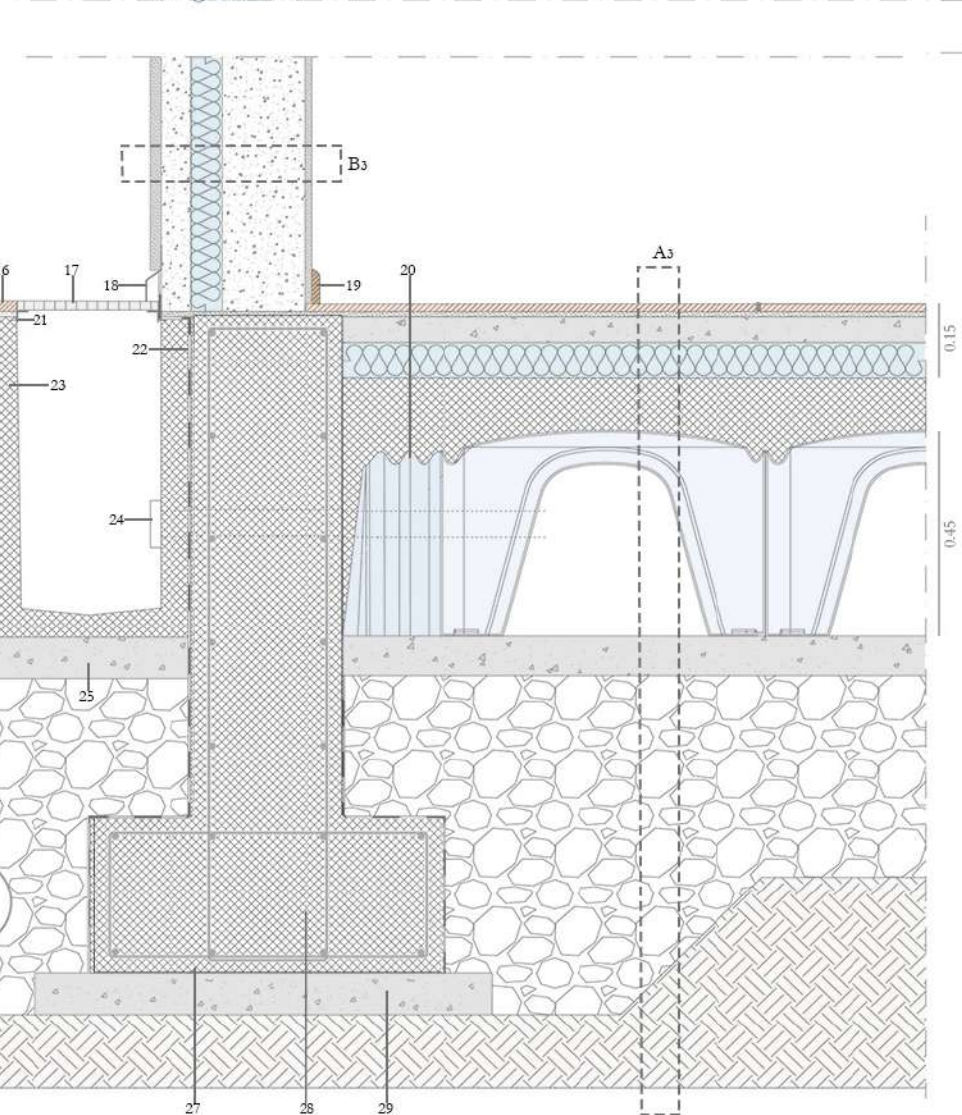
The restaurant

Facade detail with U-Glass solution
and precast isolating concrete infill wall**Roof detail: $U = 0,36 \text{ W/m}^2\text{K}$**

- A1
Waterproofing, expanded polypropylene insulation, vapor barrier, embedded reinforcement, concrete slab, plaster
1. internal window
 2. aluminium frame
 3. foam in expanded polysio
 4. "C" steel guide
 5. fixing bolt
 6. U-Glass
 7. U-Glass bearing support
 8. joining steel plate
 9. flashing
 10. external plaster
 11. roof flashing
 12. fixing bolt

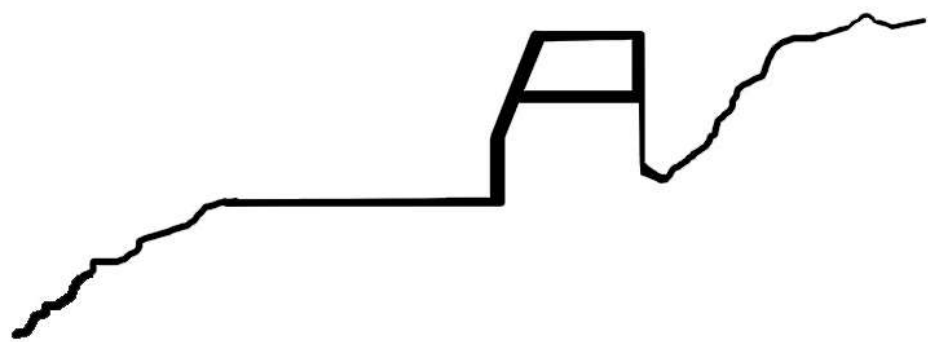
**Floor detail: $U = 0,22 \text{ W/m}^2\text{K}$**

- A2
Concrete terrazzo floor, mortar, screed, welded mesh, lattice, insulation in expanded polypropylene, jet of concrete, secondary beam
- B2
External plaster, precast concrete infill wall, insulation in expanded polypropylene, beam, external plaster
13. foam in expanded polysio
 14. precast concrete infill wall

**Ground floor detail: $U = 0,34 \text{ W/m}^2\text{K}$**

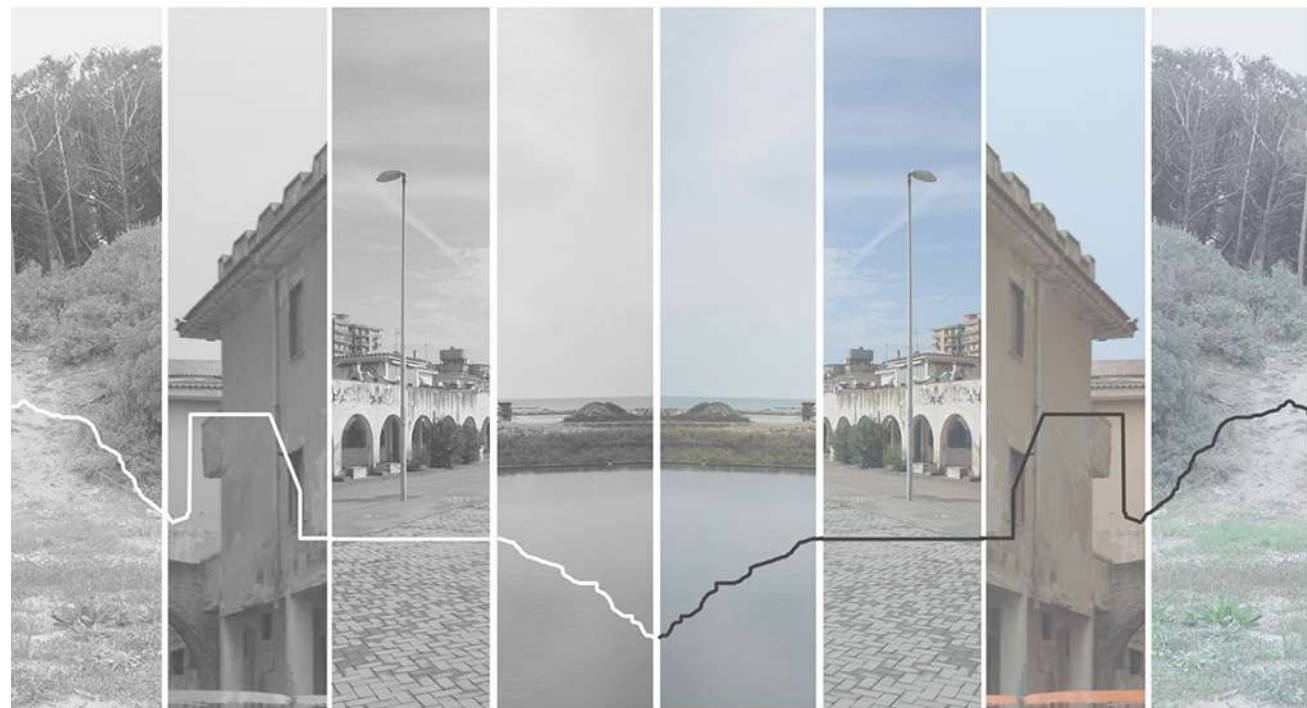
- A3
Floor in porcelain stoneware, mortar, screed, insulation in expanded polypropylene, jet of concrete, modular formwork in polypropylene "Cupolex", lean concrete, gravel, ground
- B3
External plaster, precast concrete infill wall, insulation in expanded polypropylene, precast concrete infill wall, internal plaster
14. lean concrete
 15. mortar
 16. pavement
 17. water collection
 18. flashing
 19. base board
 20. beton stop
 21. "L" steel guide
 22. waterproofing
 23. drainage
 24. ventilation tube
 25. lean concrete
 26. drainage tube
 27. embedded reinforcement
 28. foundation beam
 29. lean concrete

Heating and cooling loads:
summer peak: $Q_{\text{tot}} = 74,30 \text{ W/m}^2$
winter peak: $Q_{\text{tot}} = 19,14 \text{ W/m}^2$

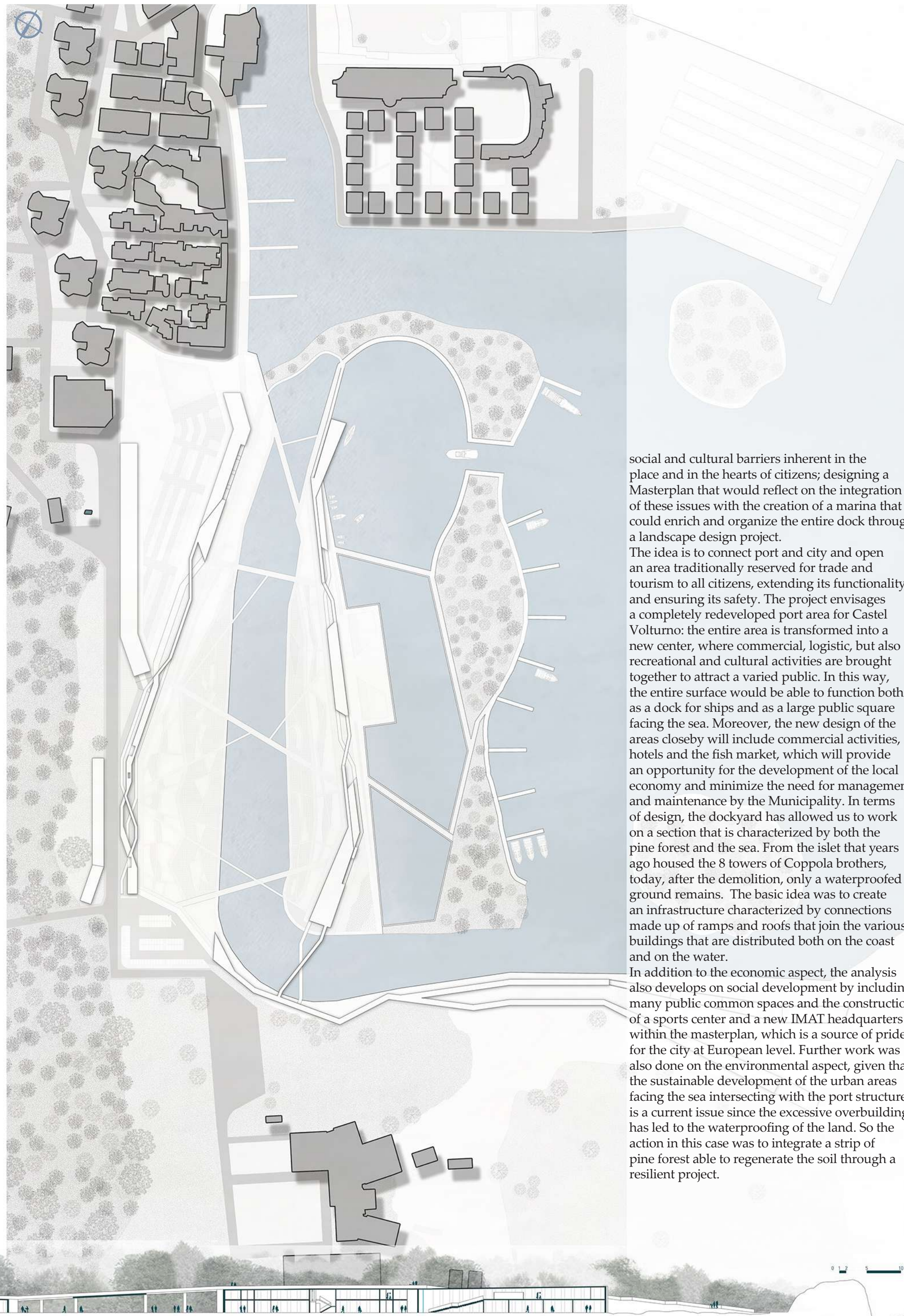




VIEW OF THE PORT

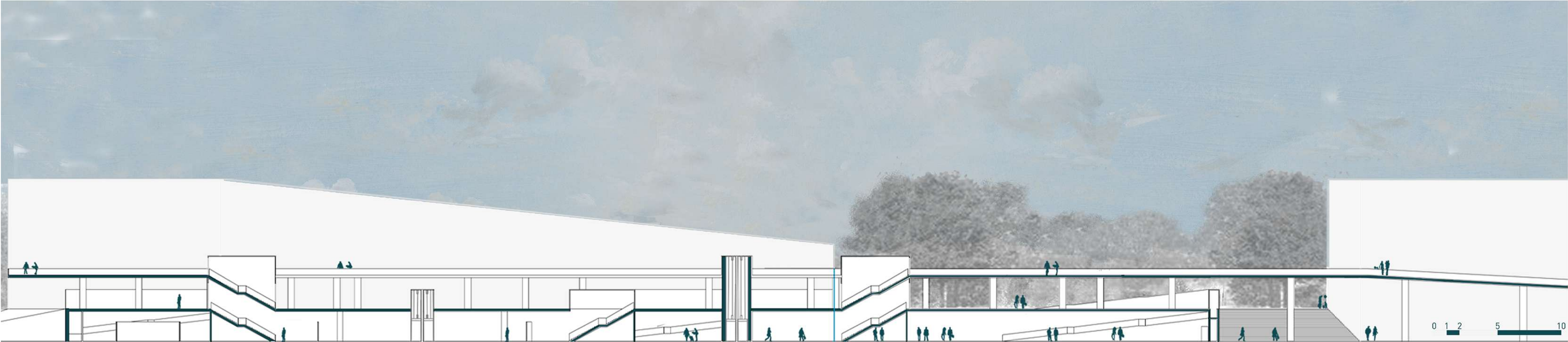
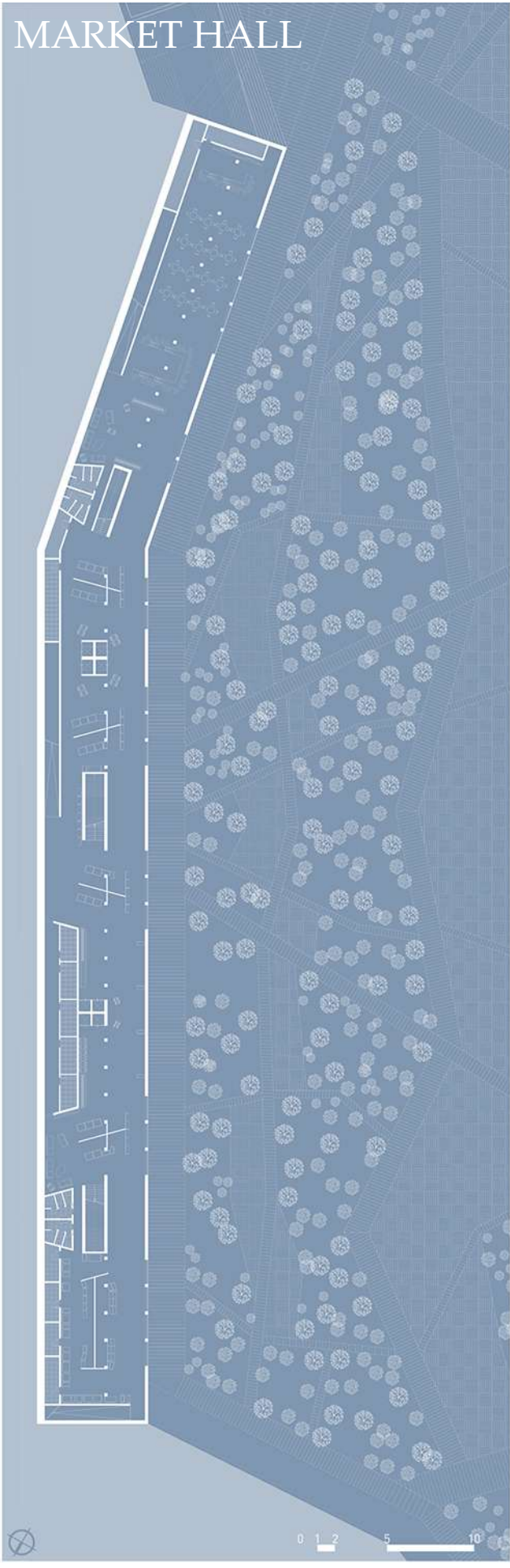
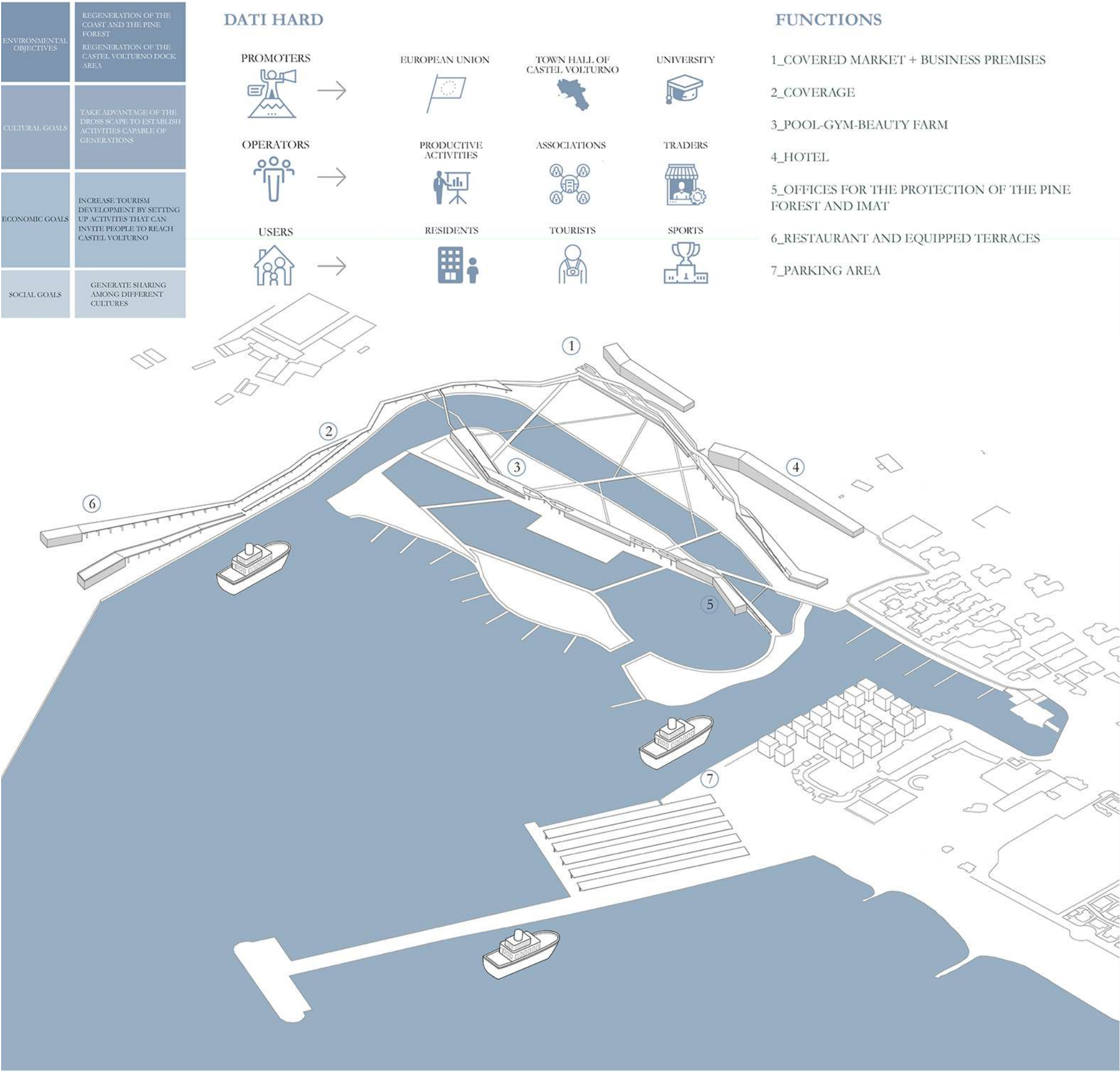


Pinetamare used to be a small Mediterranean Miami, an oasis for the petty bourgeoisie in search of a safe shelter from the evils of Naples, a sort of inverted ghetto where to live with their fellows, protected from the dangers of the outside world. Thirty years later, his failure is impressive: the yacht harbor and luxury boats have remained a chimera, the dock is without water and the premises surrounding it are closed. The eight towers a few meters from the sea, which have become one of the symbols of building destruction in Italy, have been demolished after years of environmental battles. The debate on the project of the port is a current debate because within the urban plans it exists and has already been commissioned, but today it is only witnessed by a sign on the dock that represents a vision of a project with a futuristic image, which finds space only in a desolate place forgotten by the world. Unfortunately, history has structured a number of incomplete territories, whose definition has involved tensions due to different ethnic groups, over the years there have been multiple events in some particularly emblematic cases. From here started the challenge to realize a project inside the Castel Volturno dock, a place where local people believe it can be a turning point for their city, also because it can be considered as the 'historical center' 'of the citizens of the "south" of Castel Volturno. Through the interviews carried out on site, most of the people interviewed, to the question: which project could change the fortunes of Castel Volturno? Many of them answered THE PORT! To meet this need it was decided to intervene on that portion of the territory that offers architectural potential but above all also economic, logistic and landscape potential. The design action started with a careful analysis of the territory where various issues emerged that needed to be addressed, also because on the dock there are some elements that carry much more complex issues such as: the Saracen park, the IMAT (a training school for air force personnel), Golf club, The pine wood, the beach but also the old waterfront. The first work was to find a way to make these different realities communicate with each other, breaking down the architectural,

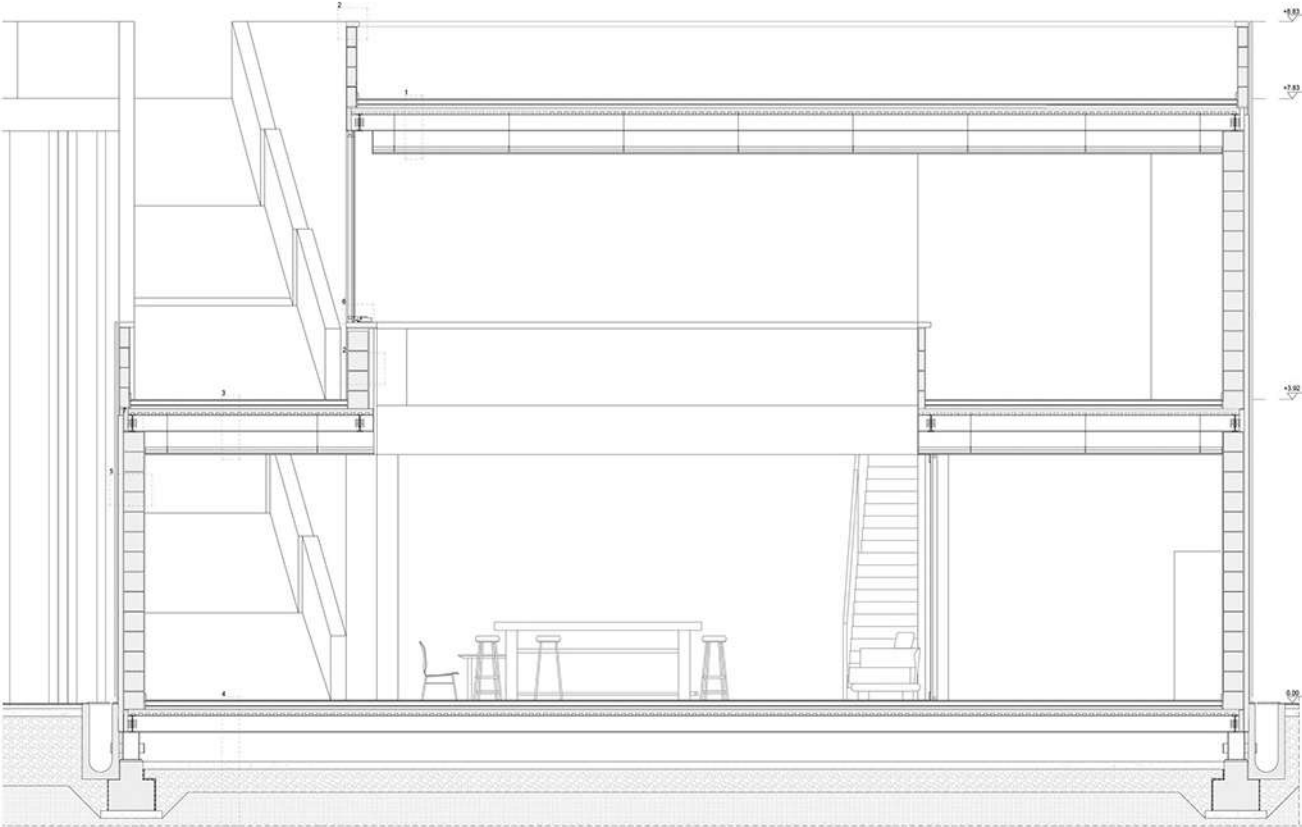
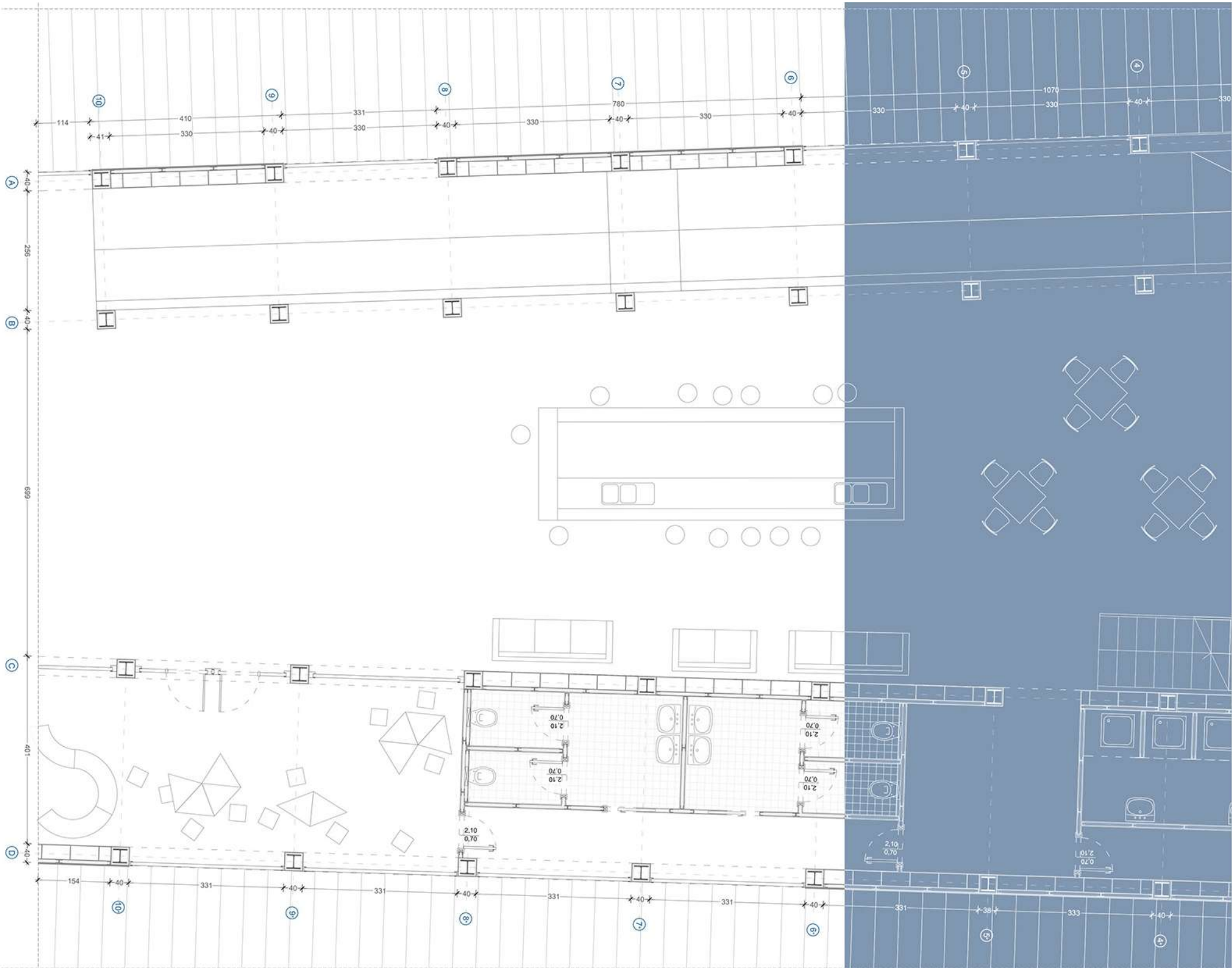
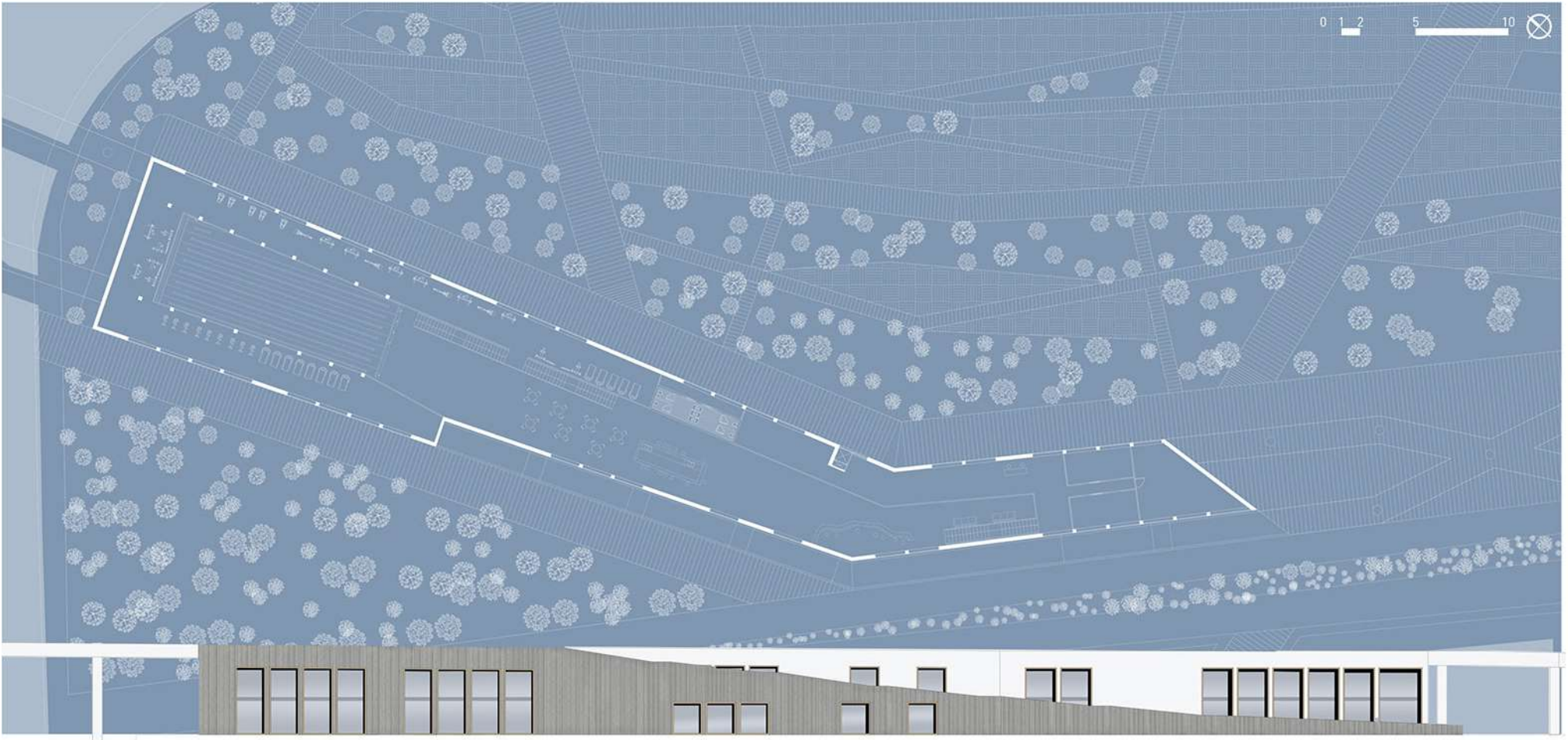
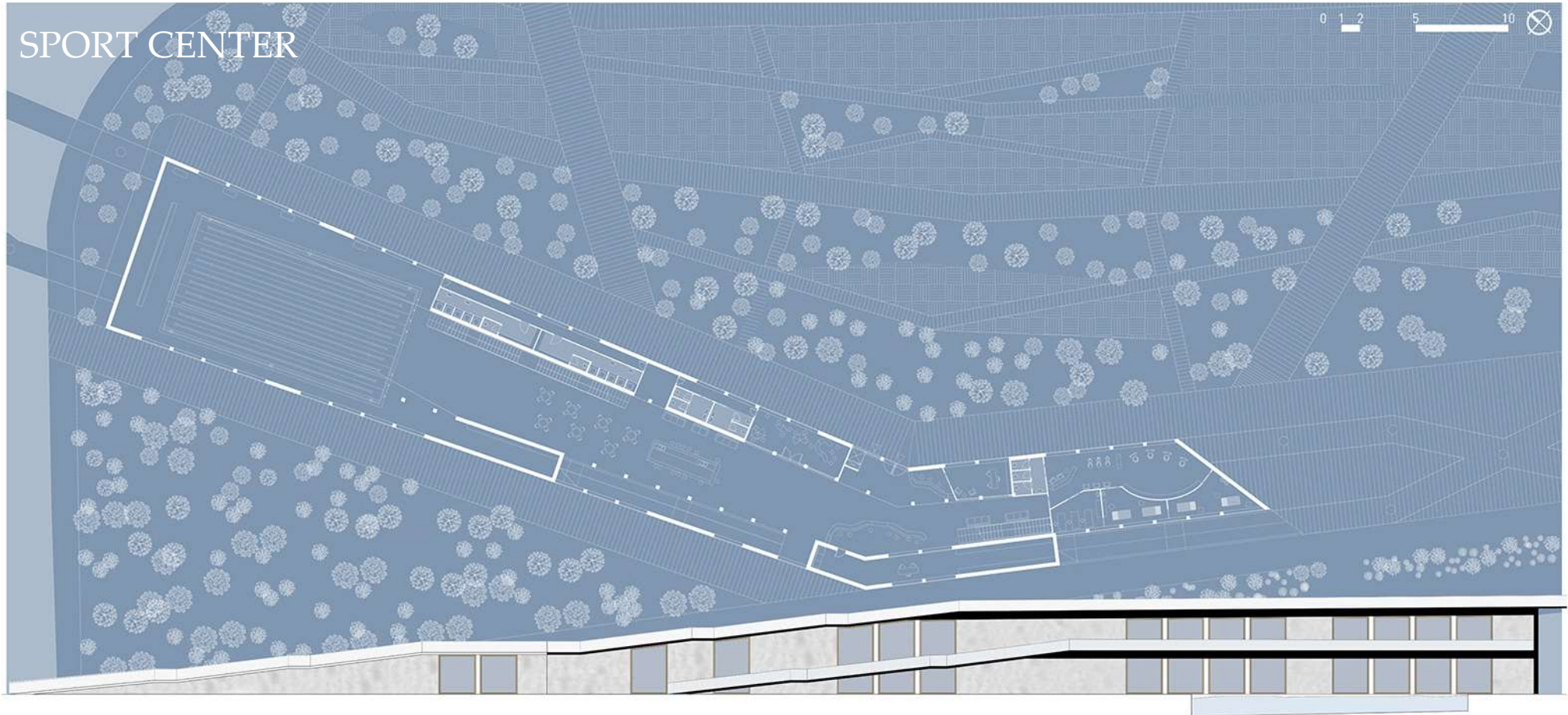


social and cultural barriers inherent in the place and in the hearts of citizens; designing a Masterplan that would reflect on the integration of these issues with the creation of a marina that could enrich and organize the entire dock through a landscape design project. The idea is to connect port and city and open an area traditionally reserved for trade and tourism to all citizens, extending its functionality and ensuring its safety. The project envisages a completely redeveloped port area for Castel Volturno: the entire area is transformed into a new center, where commercial, logistic, but also recreational and cultural activities are brought together to attract a varied public. In this way, the entire surface would be able to function both as a dock for ships and as a large public square facing the sea. Moreover, the new design of the areas closely by will include commercial activities, hotels and the fish market, which will provide an opportunity for the development of the local economy and minimize the need for management and maintenance by the Municipality. In terms of design, the dockyard has allowed us to work on a section that is characterized by both the pine forest and the sea. From the islet that years ago housed the 8 towers of Coppola brothers, today, after the demolition, only a waterproofed ground remains. The basic idea was to create an infrastructure characterized by connections made up of ramps and roofs that join the various buildings that are distributed both on the coast and on the water. In addition to the economic aspect, the analysis also develops on social development by including many public common spaces and the construction of a sports center and a new IMAT headquarters within the masterplan, which is a source of pride for the city at European level. Further work was also done on the environmental aspect, given that the sustainable development of the urban areas facing the sea intersecting with the port structures is a current issue since the excessive overbuilding has led to the waterproofing of the land. So the action in this case was to integrate a strip of pine forest able to regenerate the soil through a resilient project.





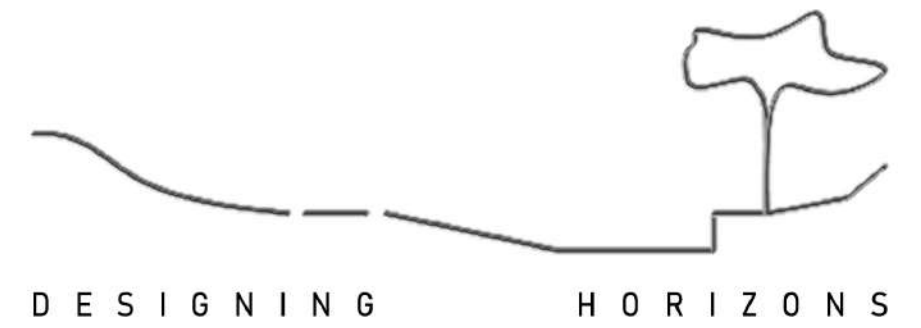
SPORT CENTER



LEGEND

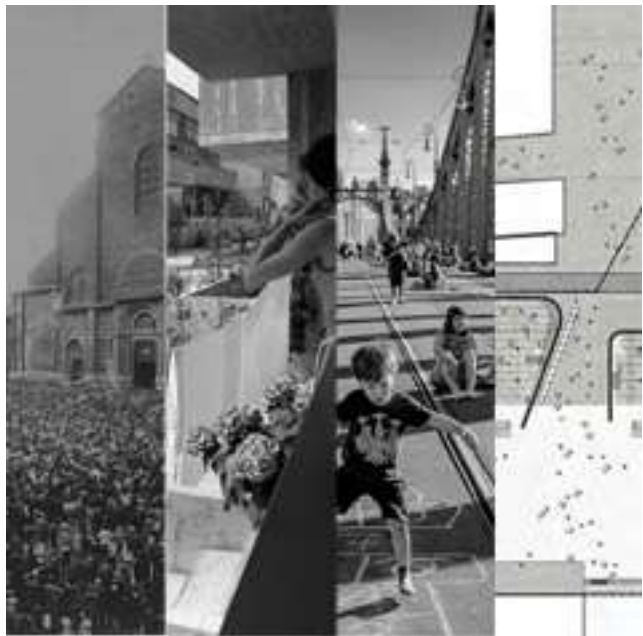
- 1- covering floor made up of: throw of resin, mortar bed ,concrete screed, tnt , thermal and acoustic insulation knauf , concrete screed whit corrugated sheet,expansion joint ,steel detail - beam pillar ipe 120, strap hangers for fixing whit centre distance ,plasterboard sheet ,internal plaster
- 2- railing made up of :cover, concrete blocks gasbeton ,glue ,external plaster , thin sheet metal shaped to cold , expansion joint ,plinth.
- 3- intermediate floor made up of: throw of resin, mortar bed ,concrete screed, tnt , thefmal and acoustic insulation knauf, concrete screed whit corrugated sheet,expansion joint ,steel detail - beam pillar ipe 120, strap hangers for fixing whit centre distance ,plasterboard sheet,internal plaster.
- 4-fondation floor made up of: throw of resin, mortar bed,concrete screed, tnt, thermal and acoustic insulation knauf, concrete screed whit corrugated sheet,expansion joint ,steel detail - beam pillar ipe 120, protective grillers in steel inox, echaust vent in pvc,sealing film,gravel ,protection for the sheath ,jargons in c.l.s,ground ,jargons c.l.s,external flooring ,pre- fabricated niche shafts in c.l.s, manhole cover in steel inox.
- 5- wall made up :plinth,internal plaster,concrete blocks gasbeton+glue, thermal and acoustic insulation knauf , mortar bed, aluminium guide,wood paneling
- 6- stained glass window made up of :aluminium frame with thermal cut , silicon joint ,fixed frame in pvc,insulating glass whit glass float ,selective glass saint gobain.
- 7- steel detail made up of : pillar-main girden - secondari girden, plate , counterplate , plinth in c.a, jargons , ground.







The clues from the context after the inspection:
the wildlife, the pine forest, the canals, the inhabitants.

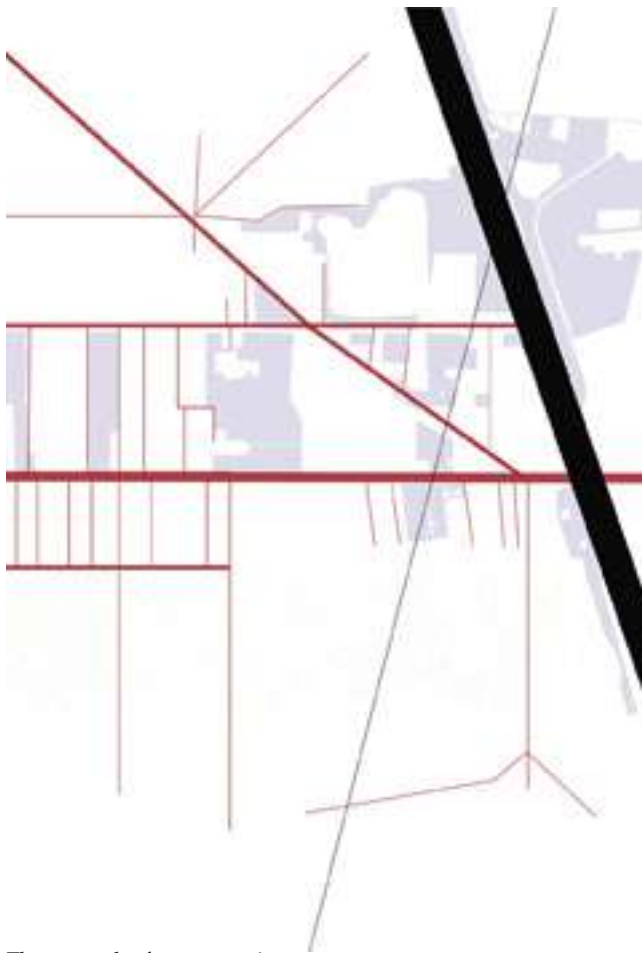


The context, references.
Appropriation of spaces through the act of democracy, experiences
of participation, spontaneous claim, new grafts of landscape.

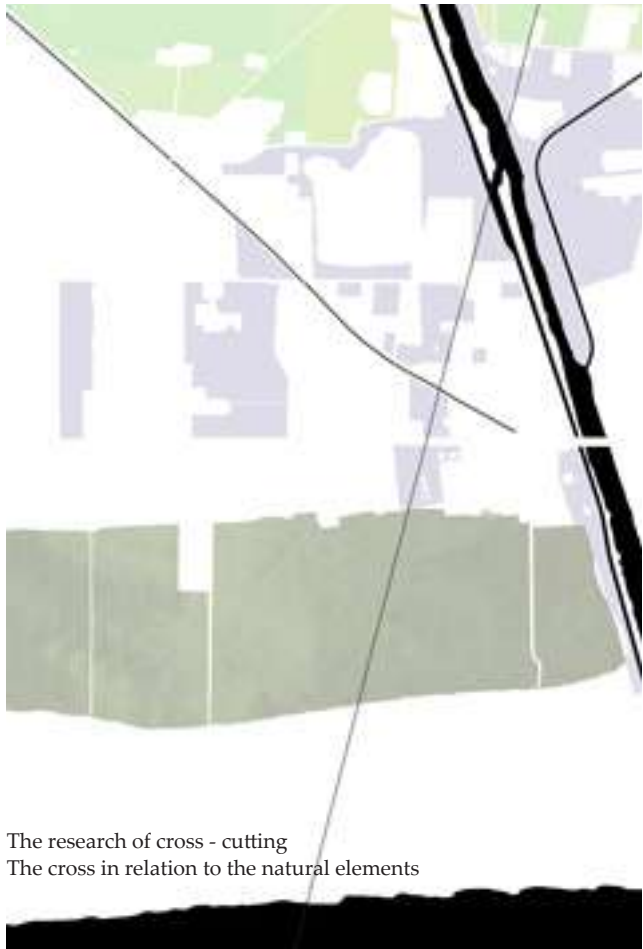
(A Bolognese square, Matteotti village - G. De Carlo - 1969/1974,
bridge of freedom - Budapest - 2016, Almere lakefront - M.
Desvigne - 2000/2005)

The term horizon has a story in it. The Greek verb “ορίζω” has various meanings. The first one is to restrict, marking the boundaries that represent the condition of the territory at the time of the inspection. The second is to separate, to detach, which represents the first cognitive action on the place linked to the recognition of the parts. The last meaning is to pass through, which is the design action that characterizes the entire project. It has come to the definition of the place where to insert the project, looking for places where the axiality of via Domitiana could be broken, assuming new spatial meanings. The voids chosen as the sites for the project are placed one in front of the other, connected and divided at the same time by via Domiziana. First of all, the place of my project is chosen through a careful study of catalytic situations (potential fact that could be happen) and, in the same time, through sensations that the place gives me visiting this area. In fact, the two lots are the only ones from which it is still possible to see the natural landscape from via Domiziana. In fact, from via Domiziana we can see the pine forest on one side and the residues of the agricultural landscape on the other. The ultimate goal of the project is the design of two public spaces in connection. If the square is the place of democracy, the architecture that more than any other is the place of freedom is, still today and with no doubt, the library. The first driving force of the project is the firm will of providing Castel Volturno, in a strategic point, of a library, whose sense of space has always remained unchanged but whose processes of articulation and becoming are objects of continuous research and experimentation. The whole operation, moreover, must be intended as an activity of research in which the project starts from a non-standard way of knowing the place, in order to arrive at a new knowledge of the place through the project. While intending all the existing urban restrictions as an occasion and not as a limit, there is one obstacle left: the fact that both areas are private properties. If the city denies democratic spaces, then the landscape and woodland restrictions become a precious opportunity to experiment new design horizons. The library space shatters, the furniture becomes a refuge that you meet while walking through the pine forest. That space becomes an excuse for a journey. To functionalize the pine forest means putting a regular presence there. Of this action, however, must be highlighted all the limits of architecture, that without a program of re-appropriation of spaces, can even aggravate the state of decay in which lays the area.

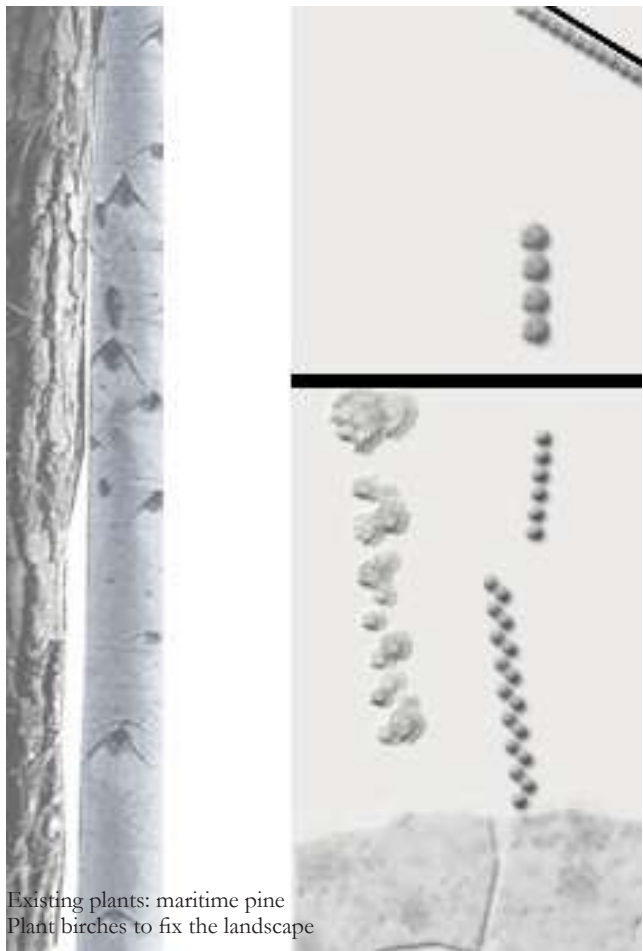
This is why we imagine a participatory process that accompanies the architecture, stimulating awareness about living urban space in a collective sense. Designing a new transversality becomes, operatively, a work of section. The architecture derives from the study of the recurring signs in the existing section. The first change takes place at ground level. It's the soil that in Castel Volturno remains indifferent to the spontaneous building: now lowers in altitude following the water, now it rises with the pinewood, leading your look up to the sky, guided by the flight of myriads of birds. These landscape suggestions are the basis for the choice of highlighting this character of the place with a hypogeum patio in the area in front of the pine forest, and, in the area bordering the canal, an artificial hill created with the resulting soil of the excavation, thus creating a “fracture of altitude” in the plain. This first act with the ground is the permanent sign. The fixed points that the project establishes are with the ground. The architecture has a character of variability. We want to assign democracy to these fixed points, therefore to big public spaces. The variable components are in becoming since they respond to contingencies. So, the project proposes, in architectural terms, one of the possible compositional horizons. The search for the function is the search for a compromise. On one side, to mark the access to the pine forest there is a school of music that can serve as an attractor for various types of user; on the other side of via Domiziana, a social incubator: in a territory torn by the logic of survival, a living organism that becomes the temple of new, young, courageous entrepreneurship. Public spaces are the gaps resulting from fragmentation of the Third landscape and for this reason they are conceived together with nature. Considering the variable of time for the re-planting, first choice is the maintaining existing trees. The work of grafting new trees is a job of re-sewing between the dense drawing of the pine forest and the sparse and shattered one of the agricultural landscape, to which widespread buildings have clung like a disease. Nature then becomes guarantor of space. This same approach is proposed on both sides of via Domiziana, thus creating spaces that are filters, connections, passages, and glimpses of landscape. The intervention as a whole is to be seen as a re-appropriation of space at multiple levels, in the belief that if democracy has to be exercised at Castel Volturno, this cannot happen far from via Domitian, but only through it. What is a possible “through” is what this operation chooses to define: what horizons, future prospects are possible.



The research of cross - cutting
The cross in relation to the streets and urban voids



The research of cross - cutting
The cross in relation to the natural elements

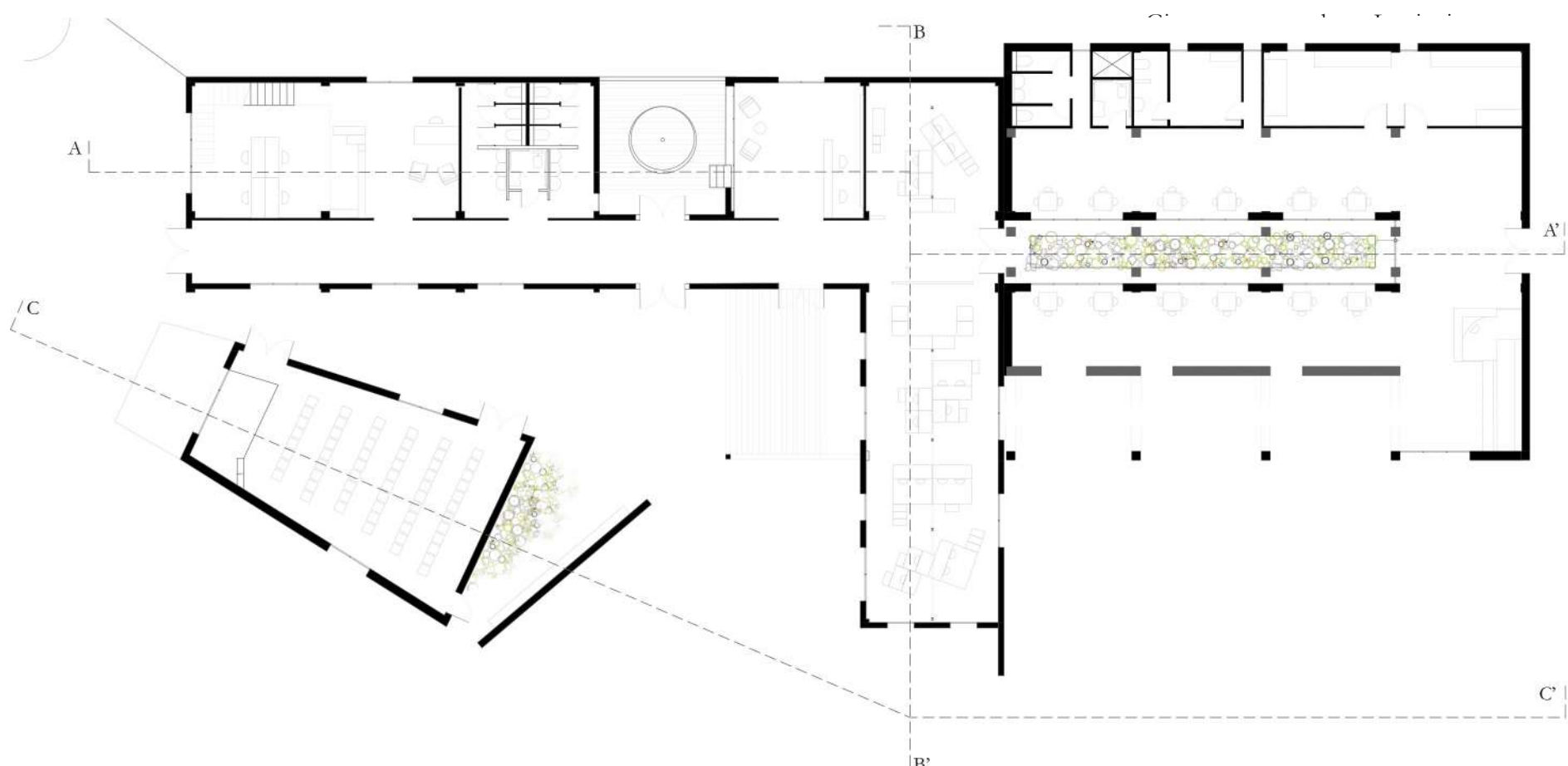


Existing plants: maritime pine
Plant birches to fix the landscape

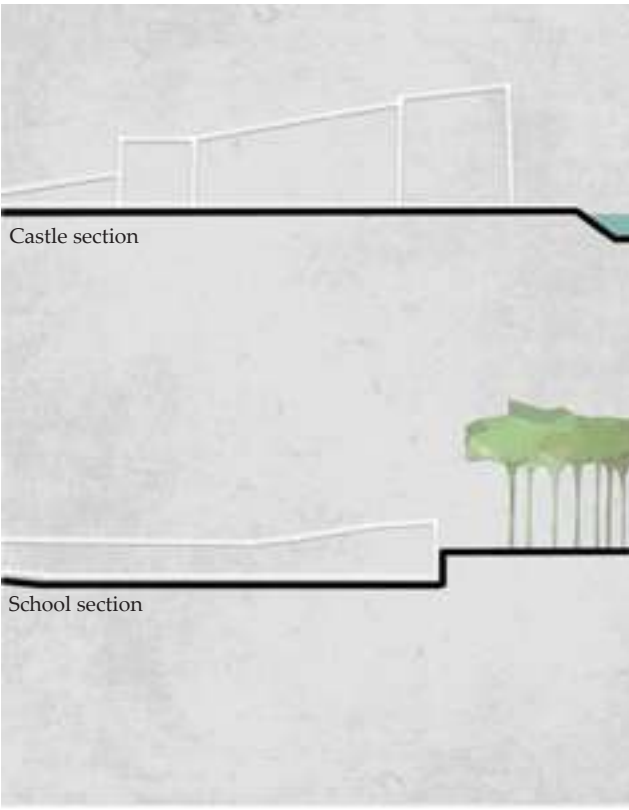




Section AA'



Social cradle, plan +1,20m



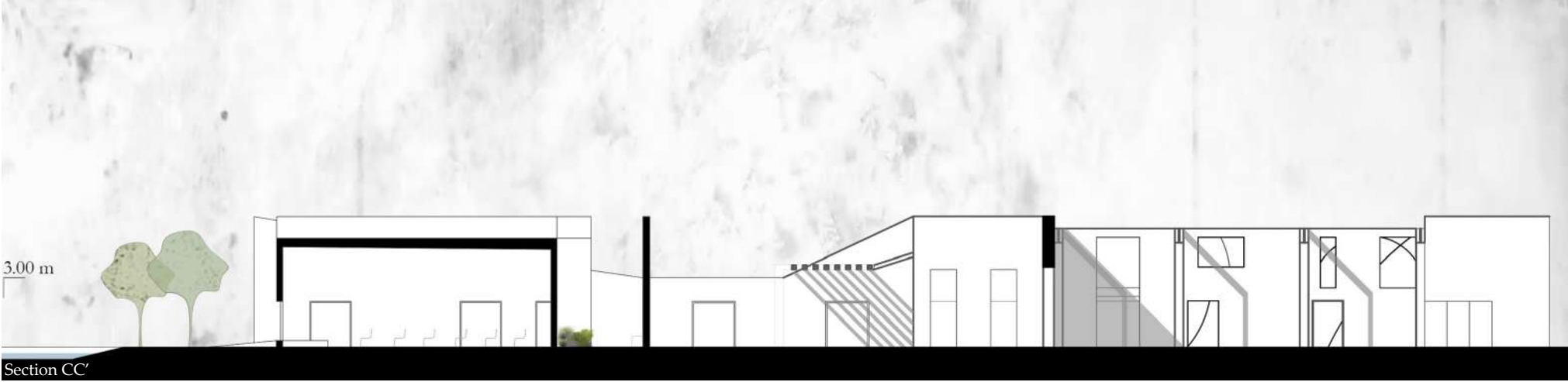
Creating relationships with the landscape.
Relations: the castle of the city and the river, the music school and the Pine forest



Section DD'
Architecture becomes superfluous, similar to nature



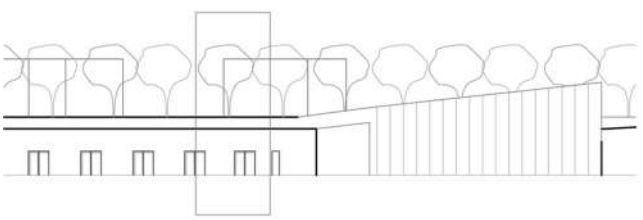
Section BB'



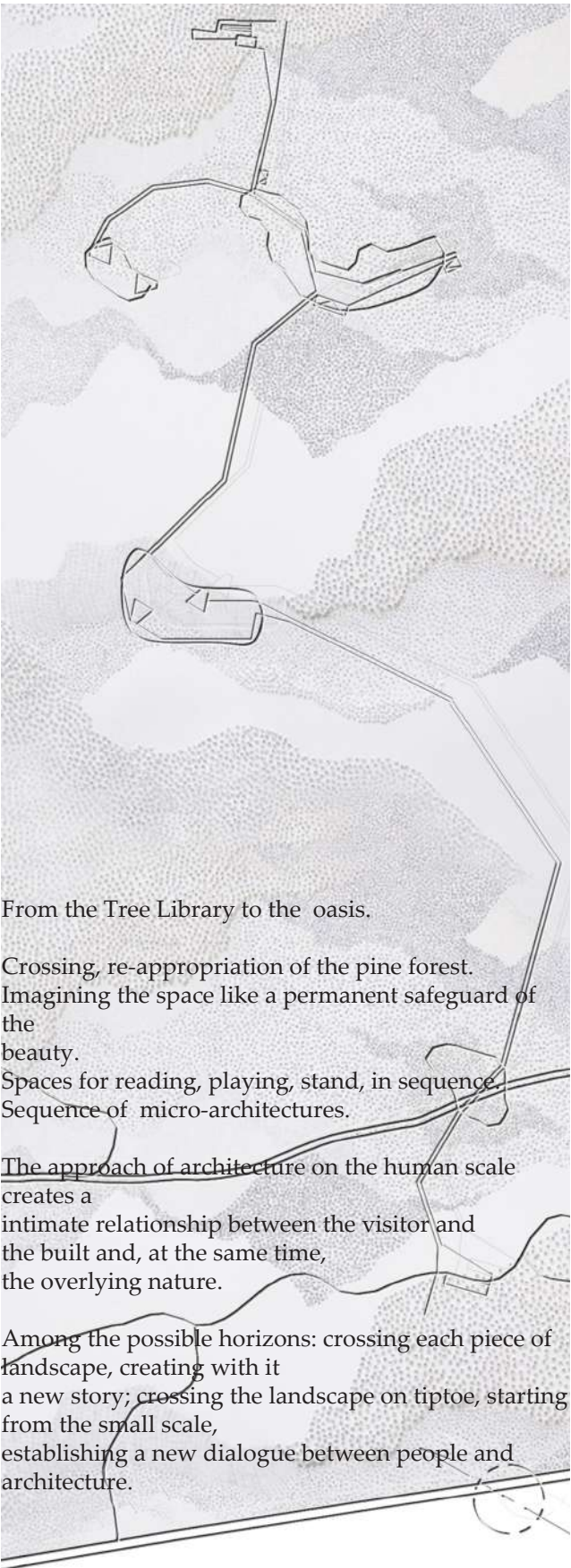
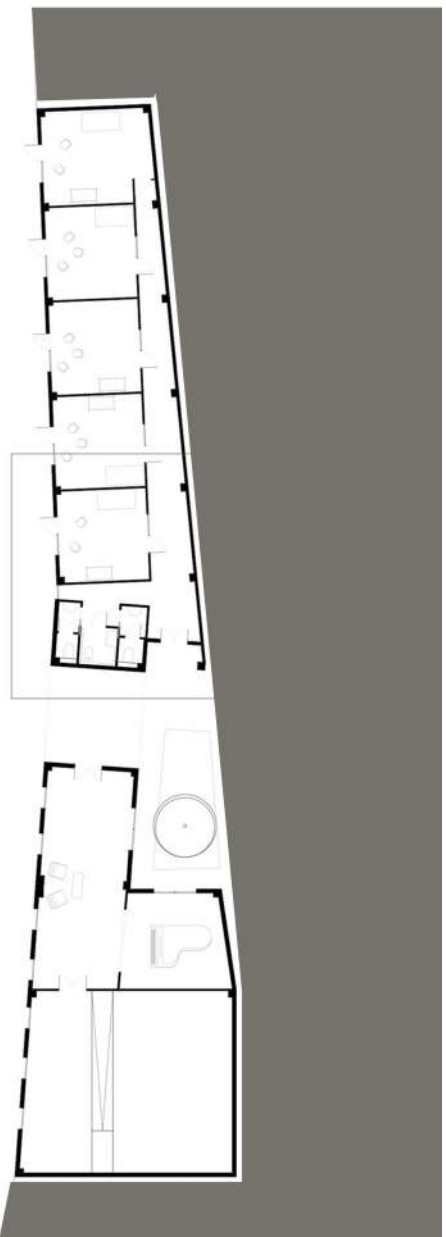
Section CC'



Music school, plan -3.80m



Music school,
detail 1:50



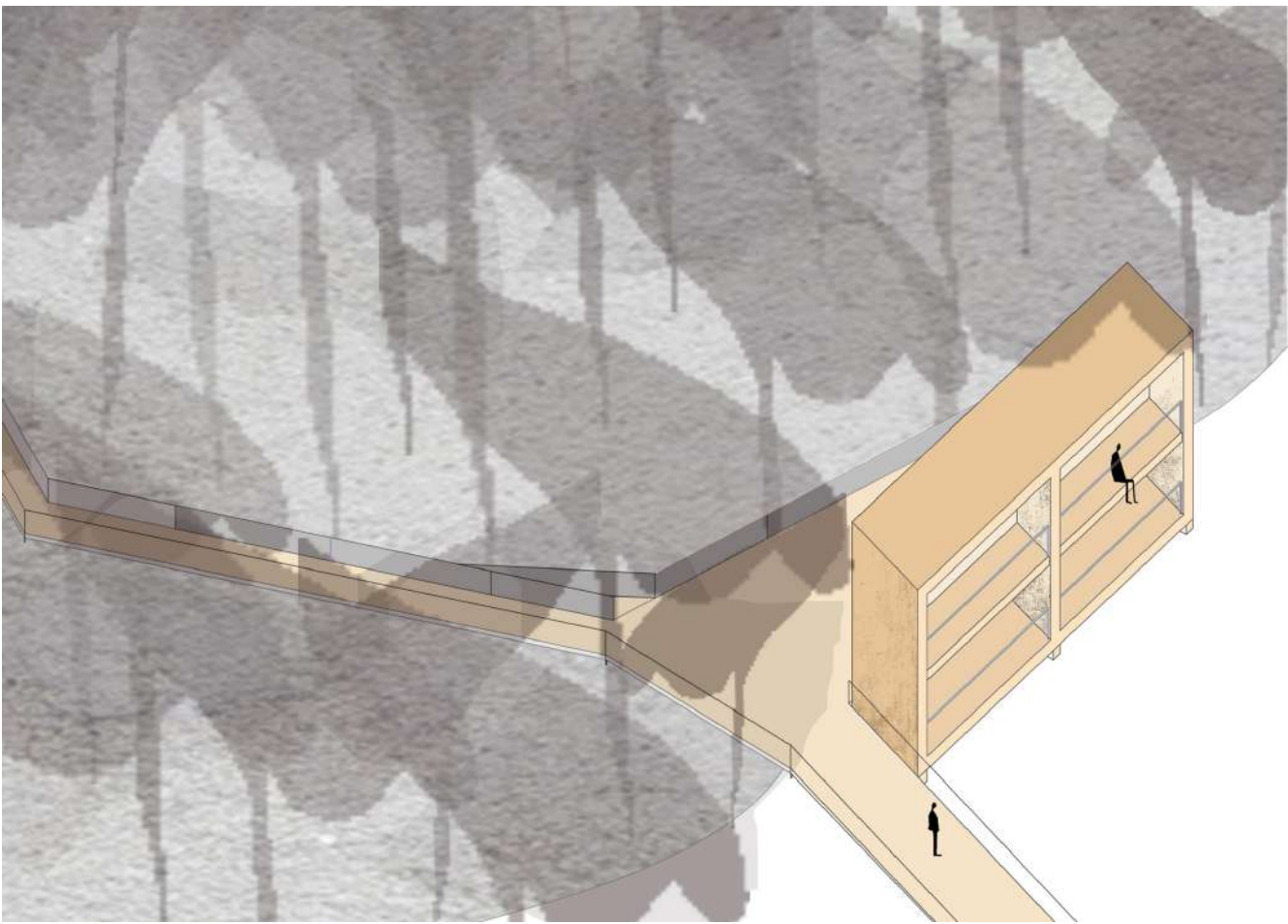
From the Tree Library to the oasis.

Crossing, re-appropriation of the pine forest.
Imagining the space like a permanent safeguard of the beauty.
Spaces for reading, playing, stand, in sequence.
Sequence of micro-architectures.

The approach of architecture on the human scale creates a intimate relationship between the visitor and the built and, at the same time, the overlying nature.

Among the possible horizons: crossing each piece of landscape, creating with it a new story; crossing the landscape on tiptoe, starting from the small scale, establishing a new dialogue between people and architecture.

Private actors	Living
Public actors	L
Knowledge institutes	A
Users	B





Valeria Di Maio

Marika Riello

Domenico Illiano



Patrizia Boldoni

Federica Esposito



Maria Masi

Federico Di Lorenzo



Luca De Simone

Simone Castaldi

Chiara Barone



Silvia Romano

Federica Amoddio

Vincenzo De Iulio



Rosachiara Dell'Erario

Daniela De Michele

Gessica Pepe



Annamaria Salzano

Mario Del Prete

Francesca Del Vecchio



Jacquelin Chiarastella Buono

Antonio Stabile

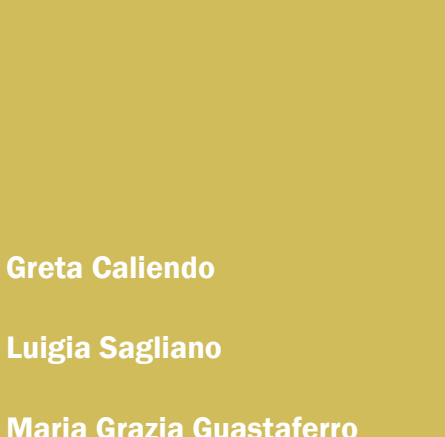
Mattia Franceschetti



Giovanni Di Costanzo

Chiara Colicchio

Marilena Bosone



Greta Caliendo

Luigia Sagliano

Maria Grazia Guastaferrò



Erminia Barone

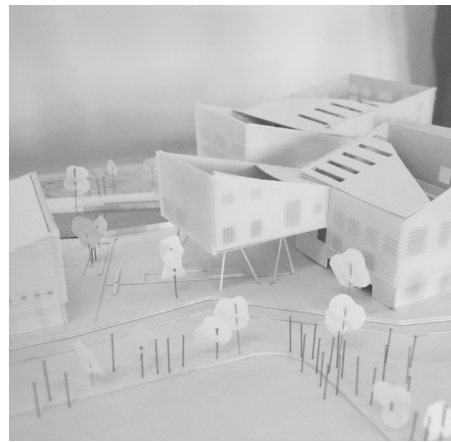
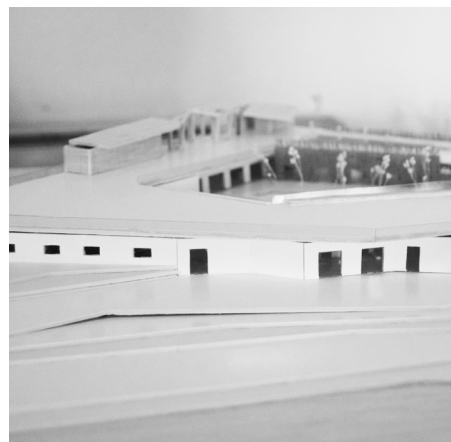
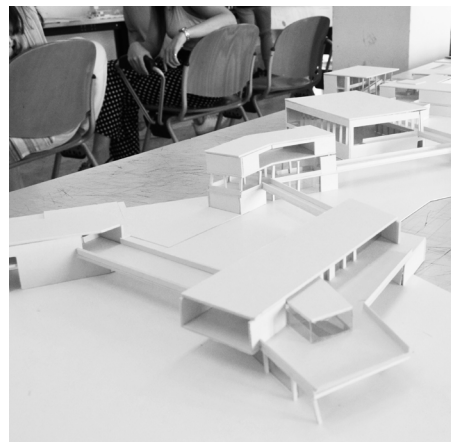
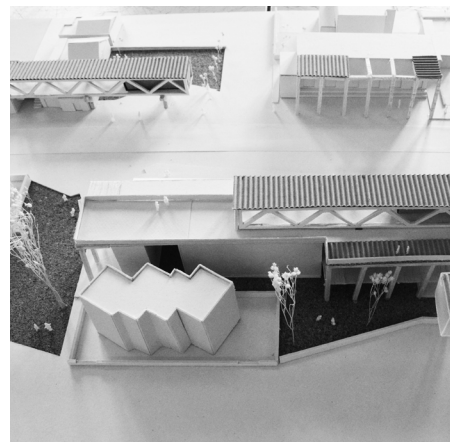
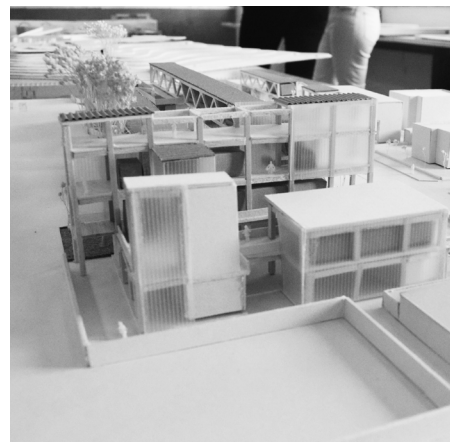
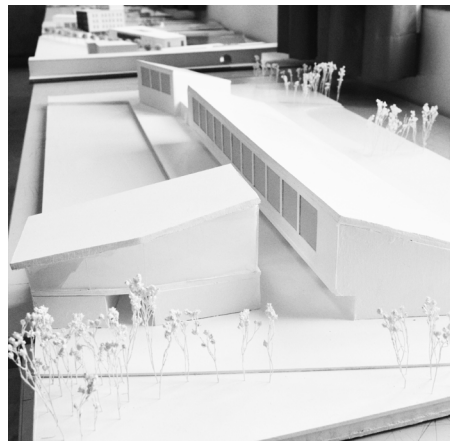
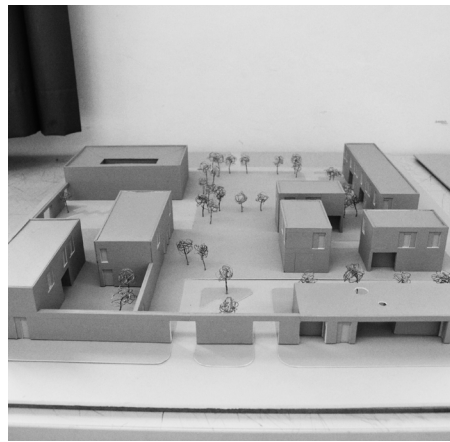
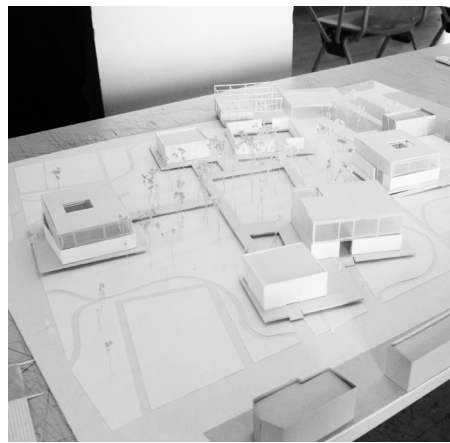
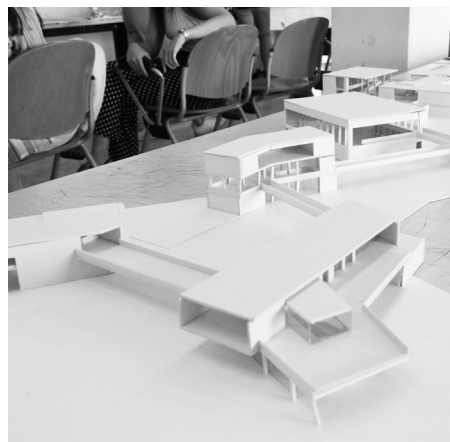
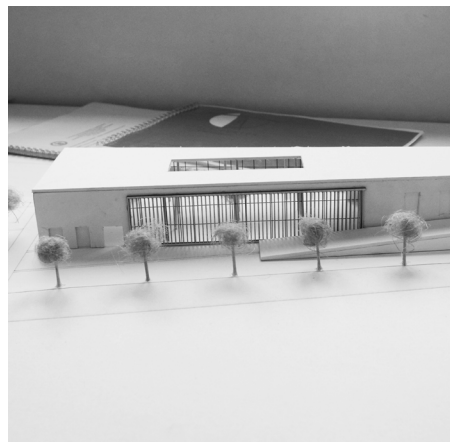
Francesca Spacagna



Rosa De Rosa

Giannantonio Di Tuoro





URBAN AND ARCHITECTURAL DESIGN

Pasquale Miano

with con

Adriana Bernieri

Francesca Coppolino

During the Advanced Design Studio 2018-2019 of the Master's Program, architectural and urban design have played the role of coordinating and summarizing the different points of view and disciplinary contributions, engaging on the theme of Castel Volturno, through the rethinking of its own characters and the interactions that distinguish its territory. The architectural project moves from the identification of an urban theme, recognized and studied in terms of its spatial relations. The current condition of the places, although often in a sate of abandonment and degradation, has been addressed with the tools of the architectural and urban project, identifying the existing city as the basis material of the project. On these elements, such as for example the beach, the pine forest, the

neglected vacation homes, the ponds, the dynamics of the students' individual projects have been settled, through which multiple correlations were established among new grafts, connection elements and the existing reimagined within a new scenario. It has been a wide-ranging work that, subsequently, was gradually focused on some nodes of the whole system, identifiable architectures, developed at scale and level of detail. In this sense, reasoning on forms and uses has been very much explored, aiming at offering prospective for reversing the existing equilibrium, without claiming to determine a new overall situation of a definitive type. The final restitution is a complex design framework in which operating not with macro-interventions but through the systematic and capillary action of the urban and architectural project.

URBAN PLANNING

Laura Lieto

The course of Urban Planning has been focused on urban regeneration strategies in extremely fragmented and segregated contexts and severely compromised natural environments. To contribute to the overall program of the Design Studio, this class takes empirical research as the back-bone of the planning activity, addressing students' work from an in-depth practical immersion in the study area to further, more theoretical investigation about how design and planning can make a difference in critical places such as Castel Volturno. The course is based on early-stage fieldwork

inspired by transect methodology, in which students are confronted with the complexity of the place and are compelled to progressively build local knowledge using techniques such as sketched interviews, surveys, photography and - most importantly - their own bodily experience in traveling through places. The main goals of the planning course is developing critical local knowledge to build planning strategies that are context-sensitive and possibly open to incorporate different processes and scales, ranging from local to trans-national processes of urban and social transformation.

PROGETTAZIONE ARCHITETTONICA E URBANA

Nel Laboratorio finale del quinto anno del Corso di Laurea Magistrale 5UE 2018-2019, la Progettazione architettonica e urbana ha svolto il ruolo di coordinamento e di sintesi dei differenti punti di vista e apporti disciplinari, impegnandosi sul tema di Castel Volturno, attraverso il ripensamento dei suoi stessi caratteri e delle interazioni che lo contraddistinguono. Il progetto di architettura muove dall'individuazione di un tema urbano, riconosciuto e studiato sotto il profilo dei rapporti territoriali e spaziali. La condizione attuale dei luoghi, pur spesso in condizione di abbandono e degrado, è stata affrontata con gli strumenti del progetto architettonico e urbano, individuando la città esistente come il materiale base del progetto. Su questo materiale, la spiaggia, la pineta, le case di vacanza in stato di abbandono, i laghetti, si è

innestata la dinamica dei singoli progetti degli studenti, attraverso la quale si sono stabilite correlazioni multiple tra nuovi elementi di innesto e di connessione e il preesistente rimesso in campo. Si è trattato di un lavoro ad ampio raggio che, successivamente, si è gradualmente concentrato su alcuni nodi del sistema, architetture identificabili, sviluppati alla scala e al livello di approfondimento di maggiore dettaglio del progetto architettonico. I ragionamenti sulla forma e sugli usi diventano in questo senso molto approfonditi, con l'obiettivo di offrire prospettive di ribaltamento degli equilibri esistenti, senza la pretesa di determinare una nuova situazione complessiva di tipo definitivo: la restituzione finale è un quadro progettuale complesso, in cui si opera non per macro-interventi ma attraverso un'azione sistematica e capillare del progetto urbano e architettonico.

PROGETTAZIONE URBANISTICA

Il corso di Progettazione Urbanistica si è focalizzato sulle strategie di rigenerazione urbana in contesti estremamente frammentati e segregati e in ambienti naturali gravemente compromessi. Per contribuire al programma generale del Laboratorio di Progettazione, questo corso ha inteso la ricerca empirica come la spina dorsale dell'attività di progettazione, indirizzando il lavoro degli studenti a partire da un'immersione reale e approfondita nell'area di studio a un'ulteriore indagine più teorica su come il progetto e la pianificazione possono fare la differenza in luoghi critici come Castel Volturno. Il corso si basa su un lavoro sul campo in fase

iniziale ispirato alla metodologia del transetto, in cui gli studenti si confrontano con la complessità del luogo e sono costretti a costruire progressivamente la conoscenza locale utilizzando tecniche come interviste disegnate, sondaggi, fotografie e, soprattutto, la propria esperienza corporea nel viaggiare attraverso i luoghi. Gli obiettivi principali del corso sono lo sviluppo di conoscenze locali critiche nell'ottica di costruire strategie di pianificazione che siano sensibili al contesto e possibilmente aperte a incorporare diversi processi e scale, da quelli locali a quelli transnazionali di trasformazione urbana e sociale.

APPRAISAL AND EVALUATION

Maria Cerreta

The course of Appraisal and Evaluation deals with the theme of the design of an urban transect in Castel Volturno, as a transformation of the urban framework that can lead to changes in social, economic and environmental dynamics. The design choices must, therefore, take into account the many variables involved (financial, economic, social and cultural), no less than the functional, formal, structural and plant ones. The economic and financial feasibility of a project lies in a balance between costs and revenues, which can be achieved by satisfying the market demand, compatibly with the urban framework in which it is inserted, and identifying the appropriate sources of financing, both public and private, and the most suitable partnership model. The course allowed the students to acquire the theoretical bases and the operational tools to evaluate the socio-economic and financial

convenience of urban transformations, with reference to some relevant aspects: - Scheduling of the works: parametric costs and time schedule; - Design of the works: a summary estimate of costs, standardized costs, economic framework; - Financial analysis: theoretical foundations, estimation procedures, application examples; - Valuation of assets without market: definition and assessment methods; - Decision aid methods: multi-criteria and multi-group analysis. The approach of thinking through multidimensional and complex values has provided students with the opportunity to identify a dynamic and inter-scale intervention strategy, attentive to the management of the conflicts and to the concrete implementation approach.

ECONOMIA ED ESTIMO AMBIENTALE

Il corso di Economia ed Estimo Ambientale affronta il tema della progettazione di un transetto urbano a Castel Volturno, come trasformazione del quadro urbano che può portare a cambiamenti nelle dinamiche sociali, economiche e ambientali. Le scelte progettuali devono, quindi, tenere conto delle molteplici variabili in gioco (di carattere finanziario, economico, sociale e culturale), non meno di quelle funzionali, formali, strutturali e impiantistiche. La fattibilità economica e finanziaria di un progetto risiede in un equilibrio tra costi e ricavi, che può essere raggiunto soddisfacendo la domanda di mercato, compatibilmente con il quadro urbano in cui è inserito, e individuando le opportune fonti di finanziamento, sia pubbliche che private, e il modello di partnership più adatto. Il corso ha consentito agli studenti di acquisire le basi teoriche e gli strumenti operativi per valutare la convenienza socio-economica e finanziaria delle

trasformazioni urbane, con riferimento ad alcuni aspetti rilevanti: - programmazione dei lavori: costi parametrici e tempistiche; - progettazione delle opere: stima sintetica dei costi di costruzione, costi standardizzati, quadro economico; - analisi finanziaria: fondamenti teorici, procedure di stima, esempi applicativi; - valutazione di beni senza mercato: definizione e modalità di valutazione; - metodi di supporto alle decisioni: analisi multicriterio e multigruppo. L'approccio del pensare per valori multidimensionali e complessi ha fornito agli studenti l'opportunità di identificare una strategia di intervento dinamica e interscalare, attenta alla gestione dei conflitti e ad un approccio concreto per l'attuazione.

TECHNIQUES OF CONSTRUCTION

Attilio De Martino

The integrated course of Construction Techniques has been articulated through three main phases: frontal lessons, collective exercises and reviews. During the first part of the course, the construction work as a whole has been introduced; some fundamental themes from the point of view of the structures and their behaviors have been explored, addressing the attention to the specific design case studies of the students. In particular, materials resistances, performance requirements, security aspects as well as regulations have been investigated according to the functions and uses chosen during the design phase process. A very important part of the course schedule has been dedicated to the wind and earthquake actions, to the buildings response possibilities and the correct structural design approach to these

phenomena. Particularly, foundations systems have been studied in depth, considering the fragile and delicate territory of Castel Volturno which presents a very high groundwater system. In the second part, the course has been characterized both by single reviews and choral discussions about the individual project cases, following their development or way of conception so that even those who did not have elements to submit would listen and participate in the solutions of the various cases proposed. This approach demonstrates that there is no unique structural solution for an architectural proposal, but more a wide range of possibilities among which one can be chosen through a coherent investigation between shape, details, materials and structures specific behaviors.

TECNICA DELLE COSTRUZIONI

Il corso integrato di Tecnica delle Costruzioni è stato articolato attraverso tre fasi principali: lezioni frontali, esercitazioni collettive e correzioni. Nella prima parte del corso è stata presentata l’opera costruttiva nel suo complesso; sono stati approfonditi alcuni temi fondamentali dal punto di vista delle strutture e dei loro comportamenti, rivolgendo l’attenzione ai casi studio progettuali specifici degli studenti. In particolare sono state indagate le resistenze dei materiali, i requisiti prestazionali, gli aspetti di sicurezza nonché le normative in funzione delle funzioni e degli usi scelti in fase di progettazione. Una parte molto importante del programma del corso è stata dedicata alle azioni del vento e del terremoto, alle possibilità di risposta degli edifici e al corretto approccio strutturale a questi fenomeni.

In particolare, sono stati approfonditi i sistemi di fondazione, considerando il fragile e delicato territorio di Castel Volturno che presenta un sistema idrico di falda molto elevato. Nella seconda parte, il corso è stato caratterizzato sia da singole revisioni che da discussioni collettive sui singoli casi progettuali, seguendone lo sviluppo o il concepimento in modo che anche chi non avesse elementi da sottoporre ascoltasse e partecipasse alle soluzioni del vari casi proposti. Questo approccio dimostra che non esiste un’unica soluzione strutturale per una proposta architettonica, ma piuttosto un’ampia gamma di possibilità tra cui scegliere attraverso un’indagine coerente tra forme, dettagli, materiali e comportamenti specifici delle strutture.

TECHNICS OF ENVIRONMENTAL CONTROL

Fabrizio Ascione

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Margherita Mastellone

The integrated course of Techniques of Environmental Control – after previous studies of thermodynamics, heat transfer and psychrometry, with particular reference to the course of Applied Thermodynamics, Heat Transfer for Buildings and Architectural Technology – investigated all issues concerning the macro-topic of the energy efficiency in the construction sector, in the framework of the legislative and regulatory acts, as presently in force or established for the next years. Starting from necessary thermal comfort requirements for both the indoor and urban environments, and in particular by fulfilling traditional and adaptive thermo-hygrometric requirements of comfort, the students, during theoretical lessons, in-depth meetings and individual reviews, tried to design buildings characterized by high quality standards, by taking into account energy efficiency and environmental preservation, with reference to all involved systems, from the single component of the thermal envelope to the architecture as a whole.

The students’ evaluations concerned critical issues and energy efficient solutions by pressing all levers connected to energy demand and conversion in buildings, with a view to the microclimatic control, by including the design of the building envelope, bioclimatic architecture solutions, heating systems, air conditioning equipment, conversion from renewable energy sources. The carried-out projects aim to solve current and potential technical criticalities, by looking for high-quality and sustainable buildings, with sensitivity towards the binding environmental issues. The laboratory has contributed, together with previous teachings and other integrated courses, to direct the architectural and urban design towards an irreplaceable objective of limitation of energy demand and climate-changing emissions, for an indispensable low-carbon future that involves necessarily, in light of the enormous environmental footprint of buildings, the energy sustainability in the architectural design.

TECNICA DEL CONTROLLO AMBIENTALE

Il corso integrato di Tecnica del Controllo ambientale – dopo precedenti studi di termodinamica, scambio termico e psicrometria, con particolare riferimento ai corsi di Termodinamica applicata, scambio termico per l’edilizia e Tecnologie dell’architettura – ha approfondito tutte le tematiche riguardanti la macrotematica dell’efficienza energetica nel settore delle costruzioni, nell’ambito degli atti legislativi e regolamentari, come attualmente in vigore o stabiliti per i prossimi anni. Partendo dai requisiti di comfort termico necessari sia per gli ambienti interni che urbani, ed in particolare soddisfacendo i requisiti termoigrometrici tradizionali e adattativi di comfort, gli studenti, attraverso lezioni teoriche, incontri di approfondimento e revisioni individuali, hanno cercato di progettare edifici caratterizzati da elevati standard qualitativi, tenendo conto dell’efficienza energetica e della salvaguardia dell’ambiente, con riferimento a tutti i sistemi coinvolti, dal singolo componente dell’involucro termico all’architettura nel suo insieme.

Le valutazioni degli studenti hanno riguardato criticità e soluzioni di efficienza energetica premendo tutte le leve legate alla domanda energetica e alla riconversione degli edifici, in un’ottica di controllo microclimatico, includendo la progettazione dell’involucro edilizio, soluzioni di architettura bioclimatica, impianti di riscaldamento, condizionamento attrezzature, conversione da fonti energetiche rinnovabili. I progetti realizzati mirano a risolvere criticità tecniche attuali e potenziali, ricercando edifici di alta qualità e sostenibili, con sensibilità verso le problematiche ambientali vincolanti. Il laboratorio ha contribuito, insieme ai precedenti insegnamenti e agli altri corsi integrati, ad orientare la progettazione architettonica e urbanistica verso un obiettivo insostituibile di contenimento del fabbisogno energetico e delle emissioni climalteranti, per un indispensabile futuro *low carbon* che comporti necessariamente, alla luce dell’enorme impronta ambientale degli edifici, la sostenibilità energetica nella progettazione architettonica.

DETAILED DESIGN OF ARCHITECTURE

Eduardo Bassolino

The Executive Planning of Architecture course was aimed at developing an in-depth study in the field of Technology of Architecture and Environmental Design, defining those aspects related to the construction of buildings and the processes that regulate it, by defining integrated solutions between buildings and open spaces, in order to obtain a holistic approach in terms of awareness in the technical-design choices and paying particular attention to issues related to the environmental impact, to the reduction of greenhouse gas emissions and to the life cycle. This approach to the project wants to confront itself above all on those issues and those concepts that are central of today’s global debate related to the construction sector and the design of the built environment, such as the phenomena deriving from climate change, and in particular on the water management in relation to both the pluvial

flooding phenomena and the specific conditions of the intervention area, but also those related to the phenomenon of the increase in urban temperatures. The students’ production focused first on the study and definition of local environmental conditions, useful for defining the design strategy, and then on the detailed representation of parts of the architectural project (excerpts) and open spaces developed, specifying the materials, the solutions, the construction techniques and products that constitute the designed buildings and capable of responding, in terms of technical and environmental characteristics, to the principles of energy containment, environmental sustainability, adaptation and mitigation to phenomena related to climate change and to the indoor and outdoor microclimatic control, also through the simulative experimental verification of environmental comfort conditions through the use of ICT tools.

PROGETTAZIONE ESECUTIVA DELL'ARCHITETTURA

Il corso di Progettazione Esecutiva dell’Architettura ha avuto l’obiettivo di sviluppare un approfondimento nell’ambito della Tecnologica dell’Architetture e della Progettazione Ambientale, definendo quegli aspetti legati alla costruzione del manufatto architettonico ed ai processi che la regolano, mediante la definizione di soluzioni integrate tra edifici e spazi aperti, allo scopo di definire un approccio di tipo olistico in termini di consapevolezza nelle scelte tecnico-progettuali e ponendo particolare attenzione alle tematiche relative all’impatto ambientale, alla riduzione delle emissioni di gas climalteranti e del ciclo di vita. Un approccio al progetto questo, che vuole confrontarsi soprattutto su quelle tematiche e quei concetti protagonisti dell’odierno dibattito globale legato al settore delle costruzioni e della progettazione dell’ambiente costruito, quali i fenomeni derivanti dal cambiamento climatico, ed in particolare sul *water management* in relazione sia ai fenomeni di

pluvial flooding, sia alle condizioni specifiche dell’area di intervento, ma anche quelle legate al fenomeno dell’aumento delle temperature urbane. La produzione degli allievi si è incentrata dapprima sullo studio e sulla definizione delle condizioni ambientali locali, utili per definire la strategia progettuale, ed in seguito sulla rappresentazione di dettaglio di parti (stralci) del progetto architettonico e degli spazi aperti sviluppate definendone i materiali, le soluzioni e le tecniche costruttive ed i prodotti che costituiscono il manufatto architettonico e capaci di rispondere, in termini di caratteristiche tecniche ed ambientali, ai principi del contenimento energetico, della sostenibilità ambientale, dell’adattamento e della mitigazione ai fenomeni legati ai cambiamenti climatici ed al controllo microclimatico indoor ed outdoor, anche attraverso la verifica sperimentale di tipo simulativo delle condizioni di comfort ambientale mediante l’utilizzo di strumenti ICT.



