

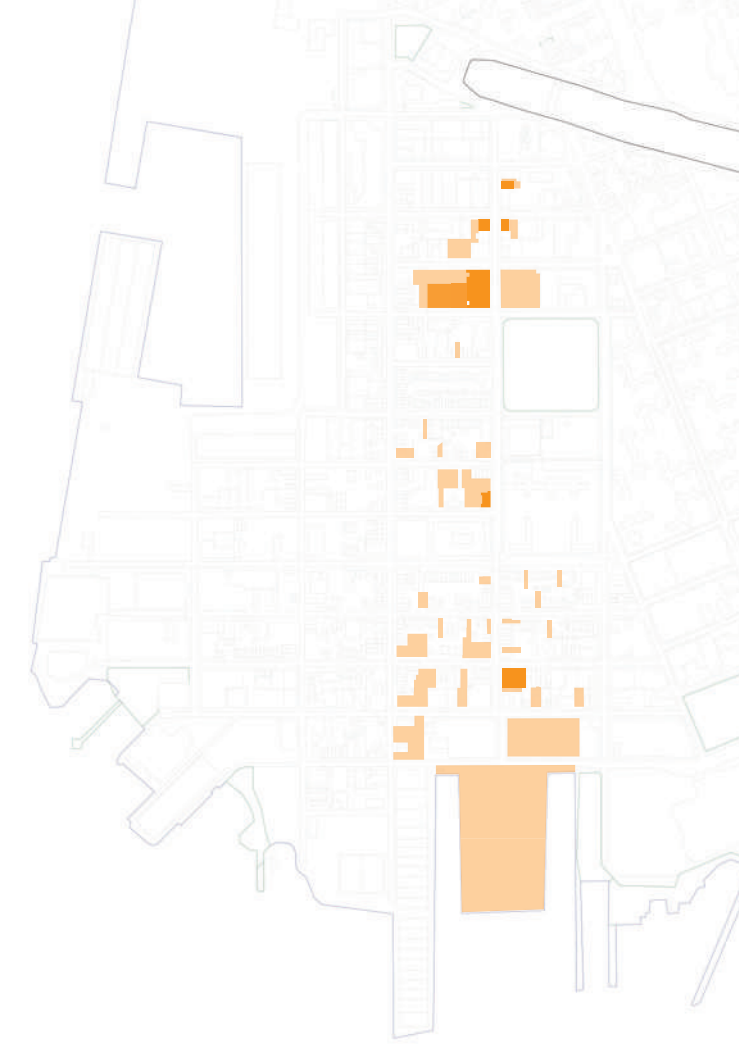
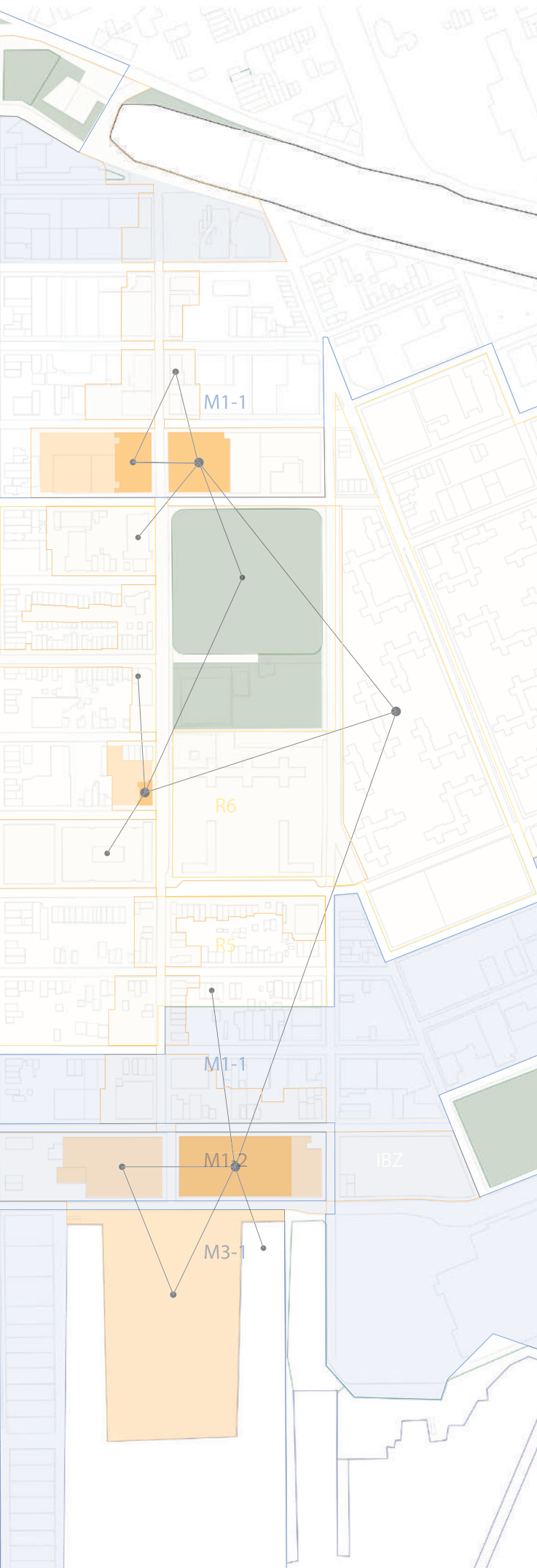
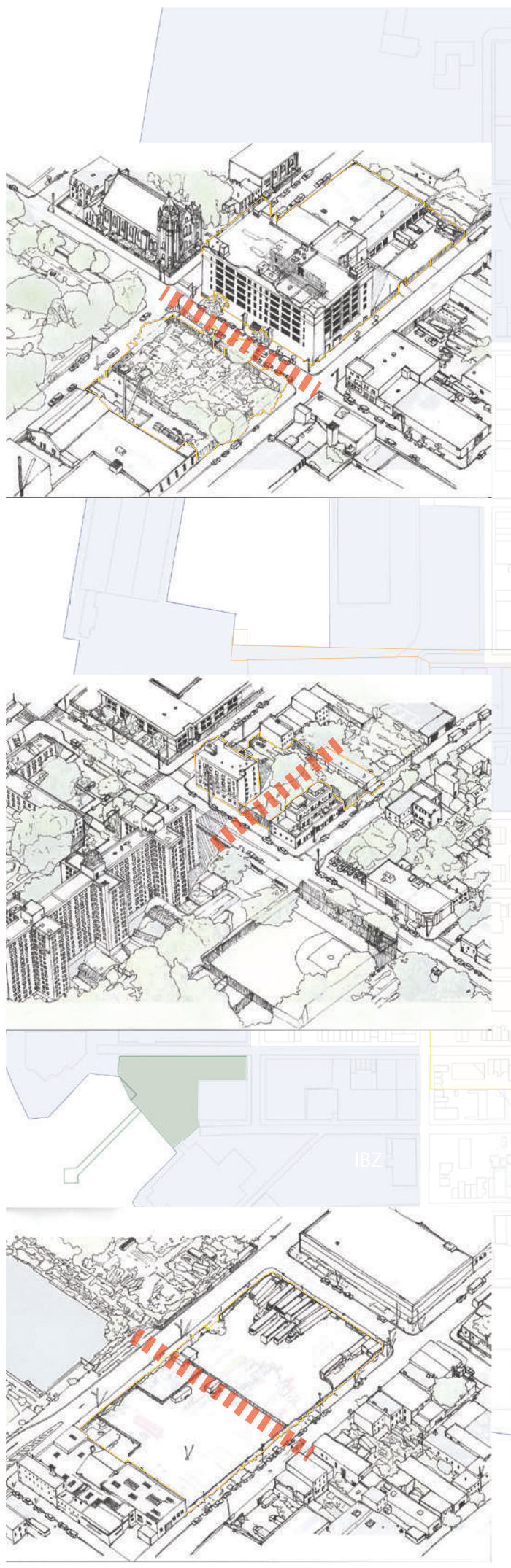
## FRINGE

BETWEEN TANGENT COMMUNITIES  
& IN A PIVOTAL SCALE CONDITION

FRINGE:  
- (adj.) peripheral, unconventional  
- (noun) the outer boundary of an area, group

In its historical heydays, Red Hook and the other neighbourhoods of Brooklyn were already nicknamed "the walled city", (SIMON, 2010) referring to the mammoth warehouses solely defining the streetscape as a consequence of private investors being allowed to take possession of every foot of available waterfront. Critics have been warning for the lack of public waterfront space, although the fenced areas were remarkably more secured and safe. Spatial delimitation on such scales took also form of touchdown infrastructures in favour of the private car when Robert Moses planned the Gowanus expressway and the Hugh L. Carey Tunnel, cutting through residential Red Hook areas and tearing it off from Carroll Gardens and the other parts of Brooklyn. These hard borders caused Red Hook isolated (and desolated) condition, but also saved the area in a way from mass construction and gentrification.

Fringe, besides being the outer boundary, appears also on smaller scales within and between the neighbourhood's blocks. Overlap scenarios between neighbours and tangent communities are mostly avoided in a fear for conflict and for the sake of security. Territorial transitions are predefined with punctual gaps and margins. Territorial limits appear in ever more explicit and harsh forms, such as steel gates and (roll) fences, marking the boundary and entrance of someone's property, blocking of former entries (of nowadays vacant sites), keeping grass areas untouched etc. Although these easy-to-read territories sell better while ensuring qualities to the private sphere, the presence of collective or shared space has decreased at different levels. By analogy, the level of complexity (depth) in Red Hook's streetscapes has decreased to more linear and simple configuration structures.



## VACANCY

ABUNDANT & AMBIVALENT BUILD & INTERVALS  
IN THE EXISTING URBAN FABRIC

VACANCY:  
- (noun) an unoccupied, available empty space  
= emptiness, vacuum, void

Urbanization and industrialization are two sides of the same coin. Red Hook's industrial flux of nineteenth century growth, its stagnation point and decay in twentieth century changed many times the architecture that filled in the lots and blocks. The mix of thriving single-oriented industry and residents generated a homogeneous appearance with a dense collection of low brick stores dominating over brownstone houses. A stagnating industry felt the need for change and tried to replace its urban fabric by larger-scale infrastructures, which failed and led to decay and demolition.

What ultimately remains is a fragmental landscape in which the pivotal scale, uncertainties and constant negotiations on territorial organisation are dominant. The many vacant lots, which were once taken by the City and resold at auction, are still left undeveloped. Most of them are highly sealed, others are taken as open storage for light industries or used for dumping. Former industrial lots are begging to be leased as office space or for residential use.

*"Buildings define empty volumes of space in between, which can be seen as ordering space. Buildings seem to be physical artefacts, but that is illusory: transformations of space through objects means ordering relations between people. In other words, this constitutes a system of social relations."*  
(HILLIER & HANSON, 1984; SCHEERLINCK, 2013)

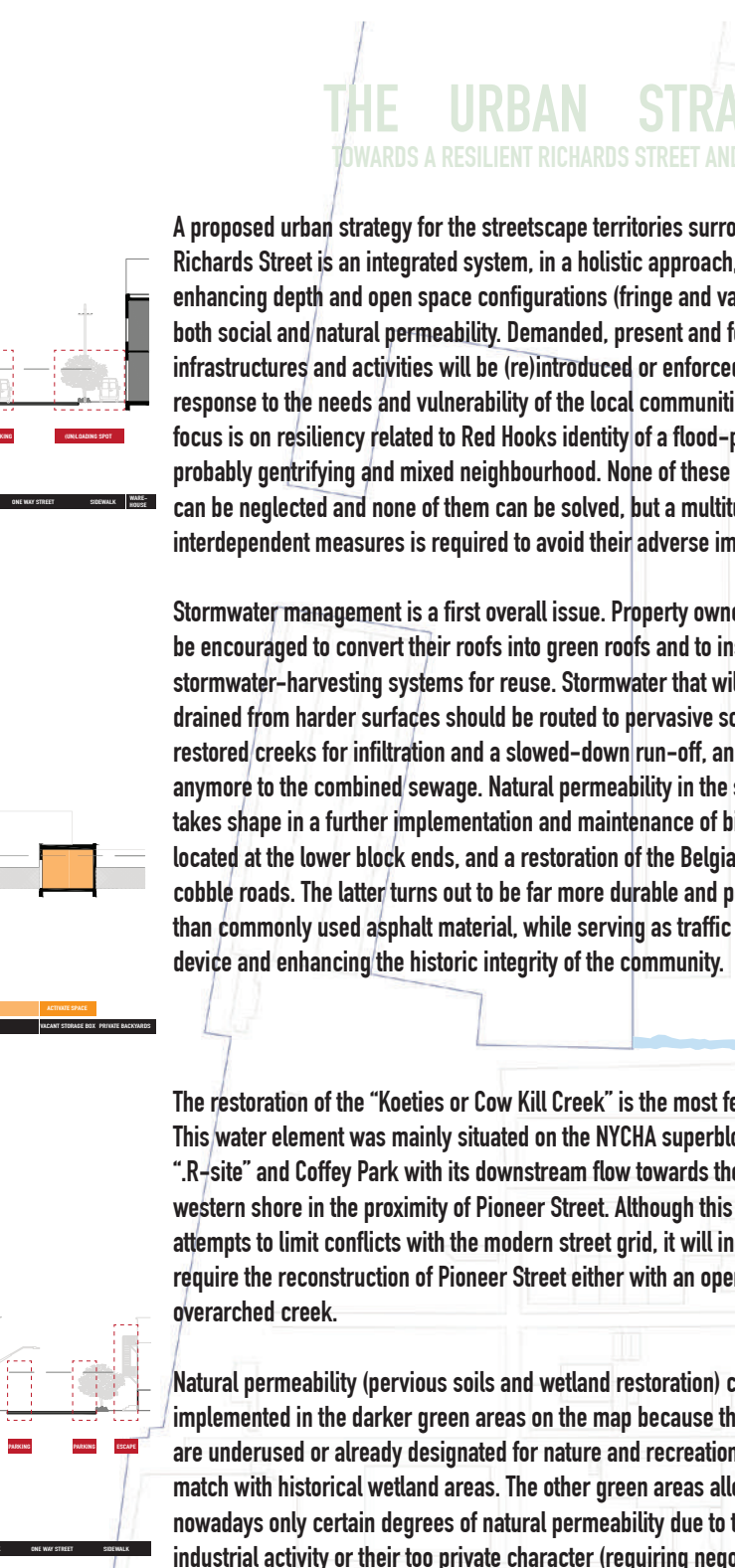
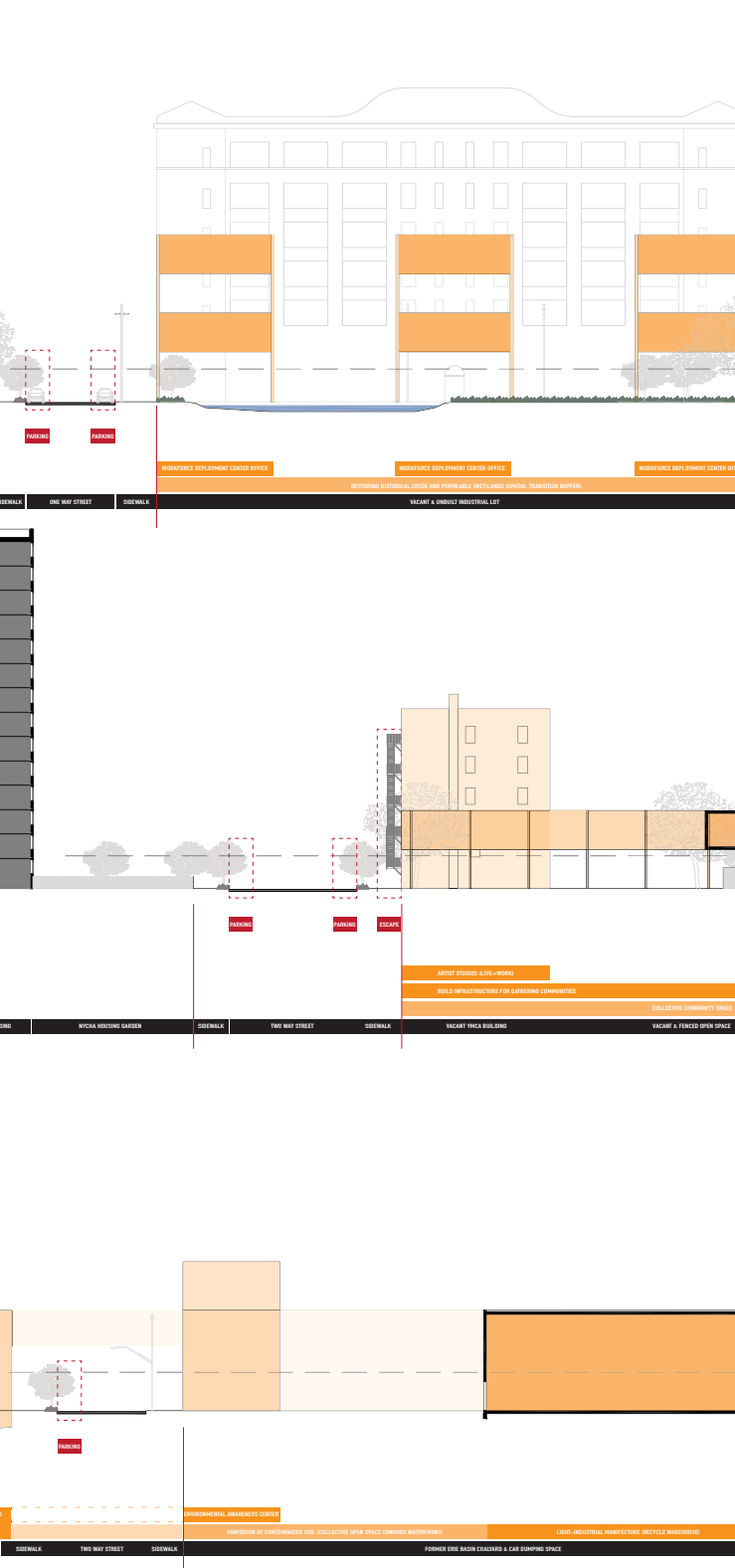
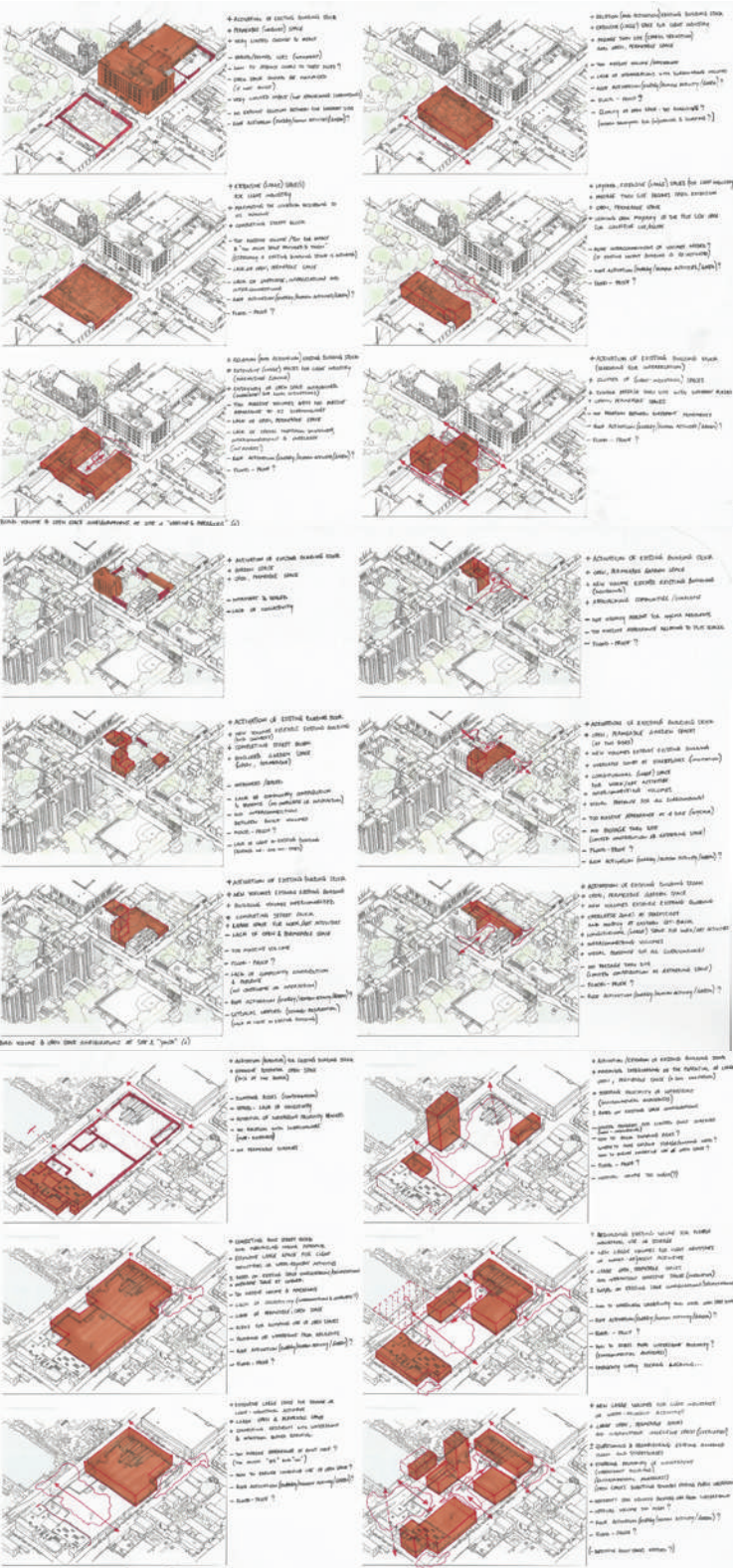
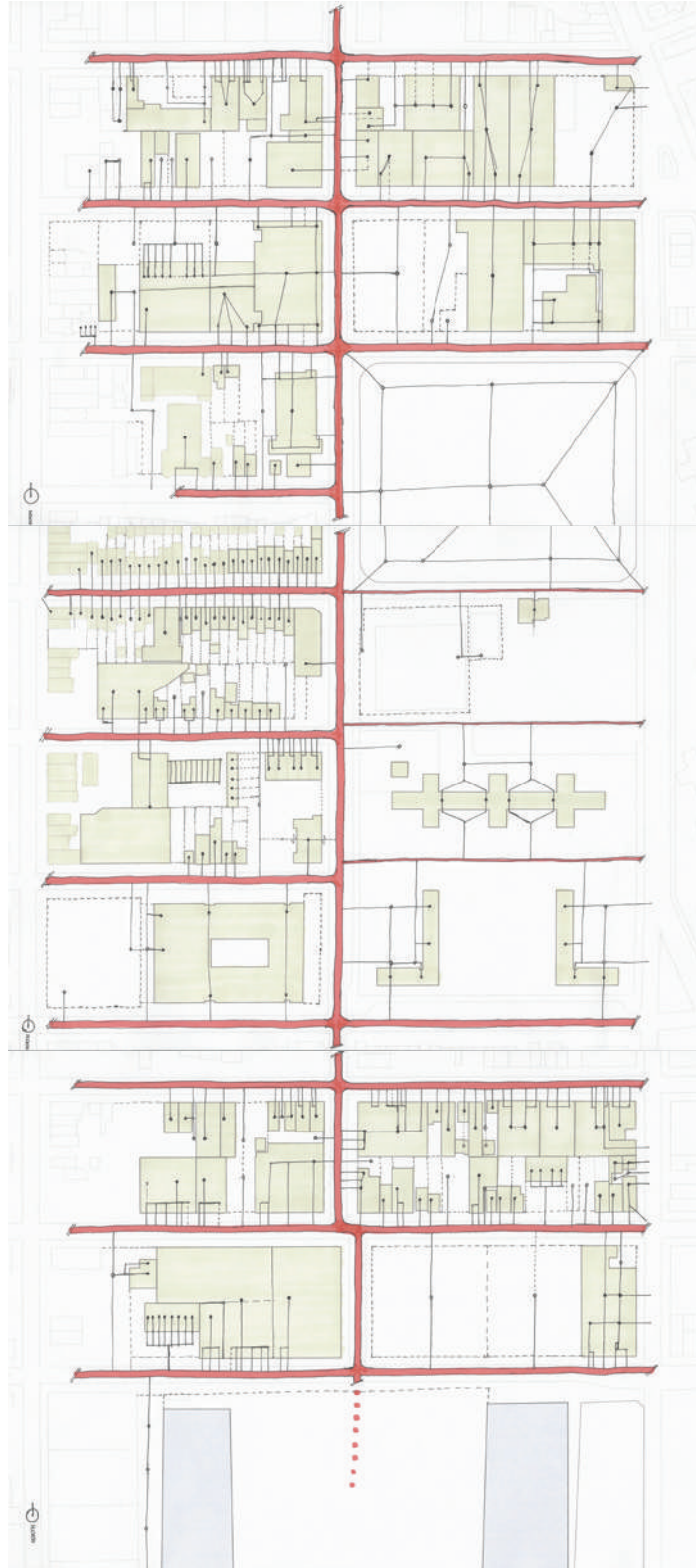
## PERMEABILITY

TOWARDS A RESILIENT RED HOOK  
IN SOCIAL AND NATURAL MEANS

> PERMEATE(D):  
- (verb) to pass into or through every part  
or to penetrate through the pores, interstices

Permeability, in social means, is highly related to fringe and territorial depth since it focuses on the possibility of crossing multiple boundaries and – not only accessing but also – passing through properties and interstices. This allows overlaps scenarios and increases depth in the streetscapes. As M. De Sola-Morales suggests, private enclosed spaces could be interconnected to turn them into parts of the collective realm. (SCHEERLINCK, 2012)  
Red Hook's configuration structure could be made less simple and linear by allowing more gaps and margins in and between its spatial delimitations. In the first place, the many vacant interstices could provide these needed margins to understand certain adjacencies and explore enriched spatial transitions.

Permeability, per physical and natural definition, measures the ability of a porous (soil) material to allow fluids to pass through its pore spaces or fractures. Public parks, private gardens, bio swales and cracks in the streets and sidewalks represent permeable surfaces in Red Hook. Urbanization and industrialization sealed and asphalted lots of Red Hook's footprint. From these hard surfaces storm water is still drained nowadays to a combined sewer system causing at least twice a year inundation issues at the overflows (CSO's). Sealed surfaces should be broken open for natural stormwater infiltration into the soil and to make the neighbourhood less vulnerable for heavy rainfalls, fast flooding and ponding water. However, we also have to take into account the very nature of Red Hook's underground clay structure. The groundwater table throughout Red Hook is only five to ten feet below the surface and can be pushed up by storm surges.



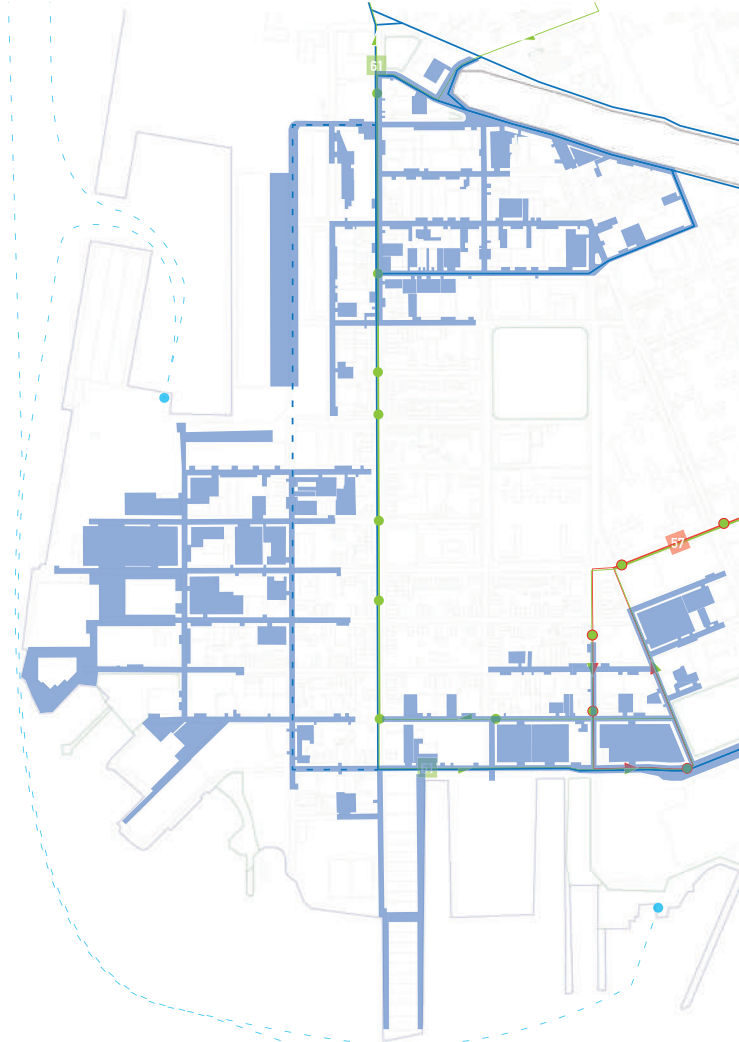
## PERMEABLE INTERVAL SPACES

ARCHITECTURAL INTERVENTIONS FOR A RESILIENT RED HOOK: MIXED COMMUNITY AND ADJACENT ENTITIES

DISSERTATION PROJECT BY DRIES DELAGAYE

RESEARCH QUESTION:

*"Can more permeable interval spaces and new architectural interventions there socio-economically incubate a resilient Red Hook, given its mixed community and adjacent entities?"*



A proposed urban strategy for the streetscape territories surrounding Richards Street is an integrated system, in a holistic approach, enhancing depth and open space configurations (fringe and vacancy) and both social and natural permeability. Demanded, present and forgotten infrastructures and activities will be (re)introduced or enforced as a response to the needs and vulnerability of the local communities. The focus is on resiliency related to Red Hook's identity of a flood-prone, probably gentrifying and mixed neighbourhood. None of these conditions can be neglected and none of them can be solved, but a multitude of interdependent measures is required to avoid their adverse impacts.

Stormwater management is a first overall issue. Property owners should be encouraged to convert their roofs into green roofs and to install stormwater-harvesting systems for reuse. Stormwater that will be still drained from harder surfaces should be routed to pervasive soils and restored creeks for infiltration and a slowed-down run-off, and not anymore to the combined sewage. Natural permeability in the streets takes shape in a further implementation and maintenance of bioswales, located at the lower block ends, and a restoration of the Belgian Black cobble roads. The latter turns out to be far more durable and pervasive than commonly used asphalt material, while serving as traffic calming device and enhancing the historic integrity of the community.

The restoration of the "Koetjes or Cow Kill Creek" is the most feasible. This water element was mainly situated on the NYCHA superblocks, the "R-site" and Coffey Park with its downstream flow towards the western shore in the proximity of Pioneer Street. Although this restoration attempts to limit conflicts with the modern street grid, it will inevitably require the reconstruction of Pioneer Street either with an open or an overarched creek.

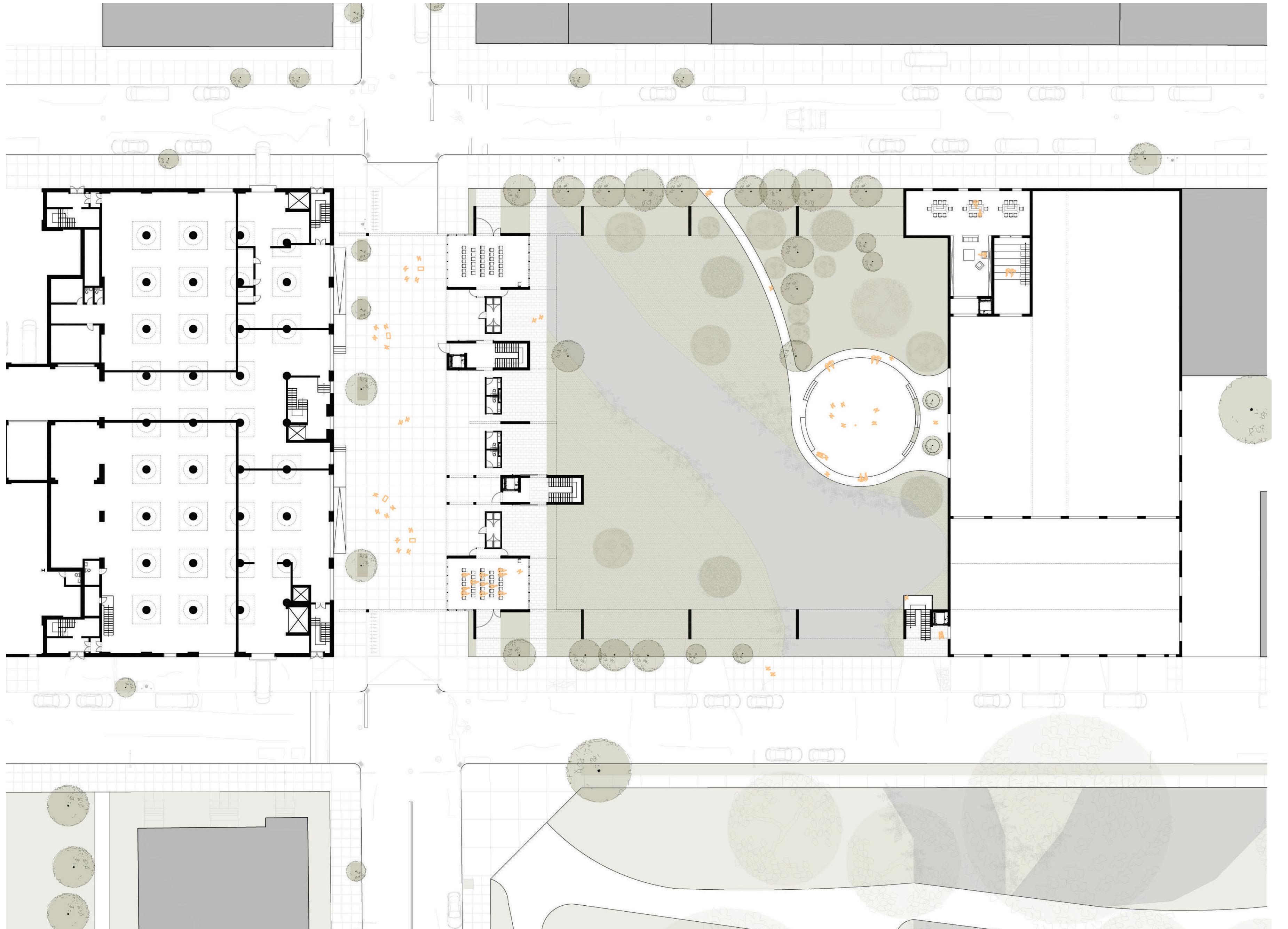
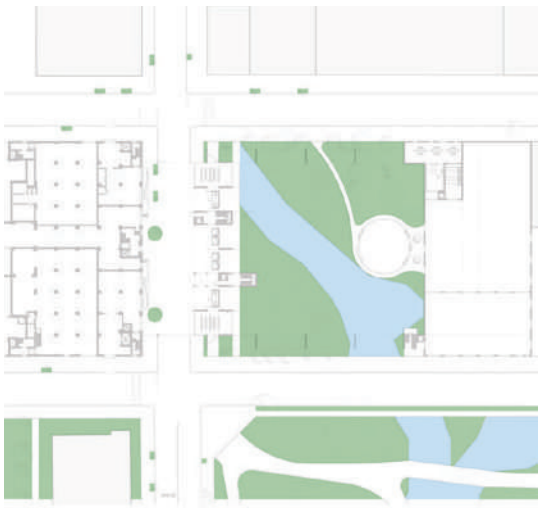
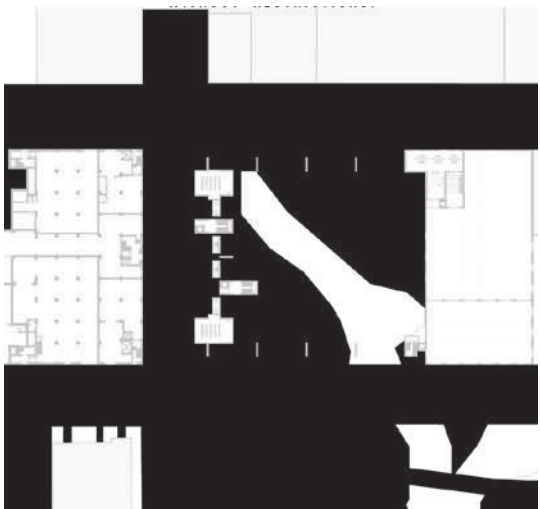
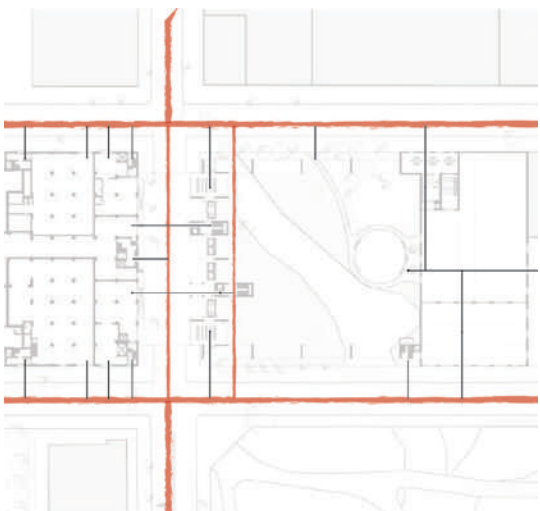
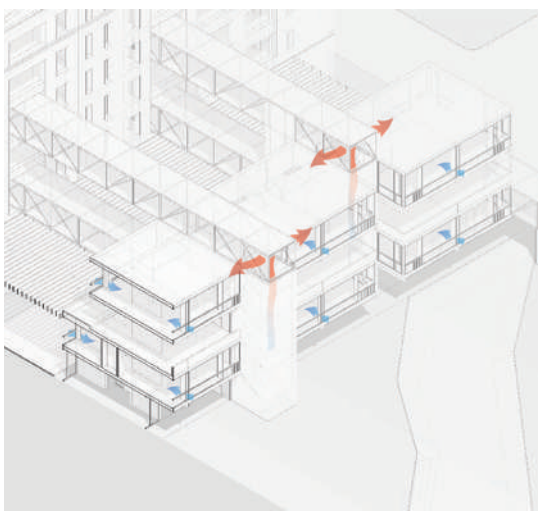
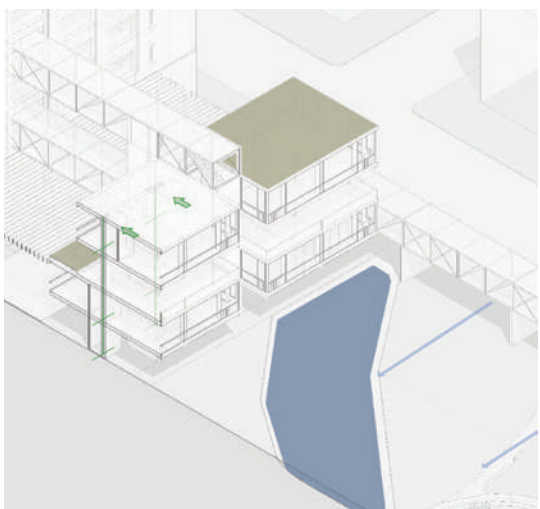
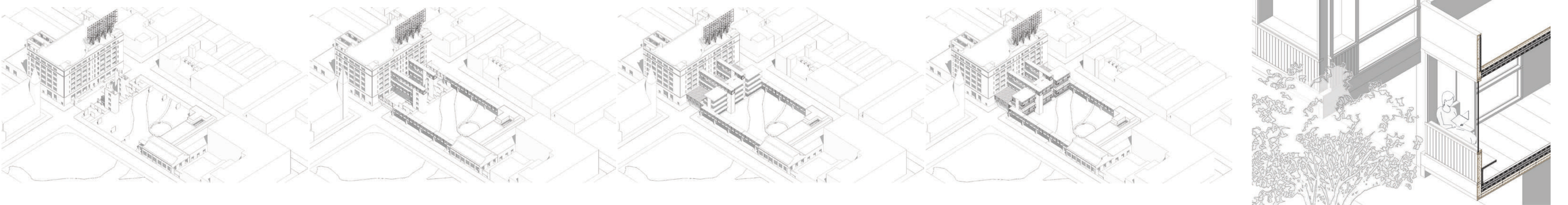
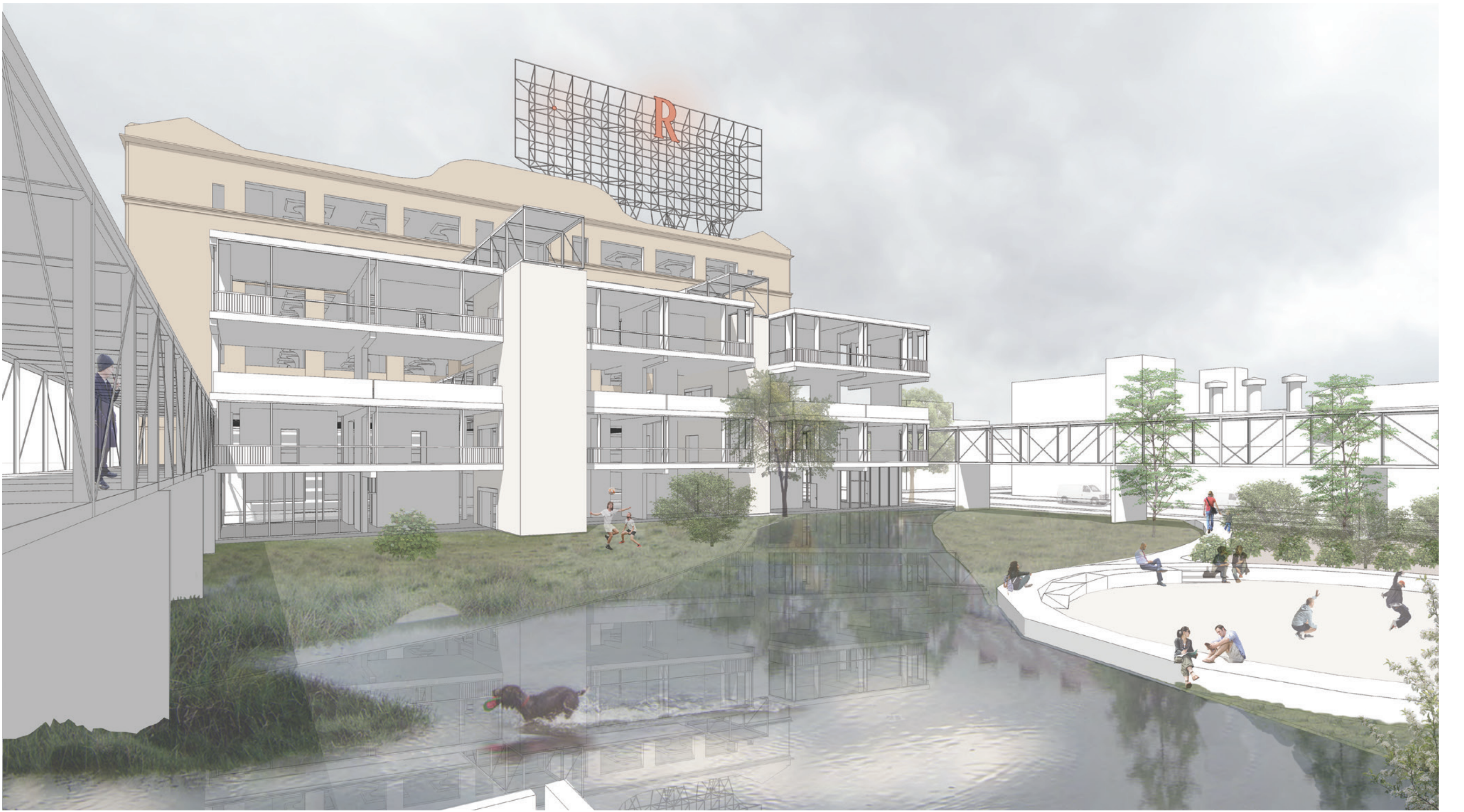
Natural permeability (pervious soils and wetland restoration) can be fully implemented in the darker green areas on the map because these areas are underused or already designated for nature and recreation. They also match with historical wetland areas. The other green areas allow nowadays only certain degrees of natural permeability due to their industrial activity or their too private character (requiring negotiation).

As a mixed neighbourhood with a long absence of mass construction and investment, Red Hook is very susceptible to impacts of both residential and industrial gentrification. In any case, the rezoning of industrial property (buildings or land) for the reconversion into upmarket residential lots should not be tolerated, never mind impossible. This phenomena caused in the past in other Brooklyn neighbourhoods like Williamsburg moving out industries and communities. In Red Hook, industry and affordable living always coexisted.

Keep on being resilient in the future means to (re)connect and to interact. The green areas on the urban strategy map also have a social identity. Darker green areas propose public parks and collective pocket parks. These spaces can be completely freed from spatial delimitation or can be controlled by neighbouring residents. Already two examples of the latter exist at the southern area of Richards Street. They appear more as shared gardens. At appropriate places, areas of overlaps, these pocket parks can be upgraded with structures and facilities supporting certain activities and the gathering of diverse communities and individuals.

Light green areas in the north and in the south represent private industrial intervals mostly used as docking zones, outdoor working space, parking or open storage nowadays. Some of these activities are time-dependent and therefore, the intervals can have a more shared or collective character at other times. Even within a timing overlaps, these spaces can become the crucial spots for interaction between industrials and residents, activated as workshops, production exhibitions, sales markets etc. Light green areas in the central (residential) districts mainly map private backyards that need negotiation before they can be upgraded to more collective spaces.

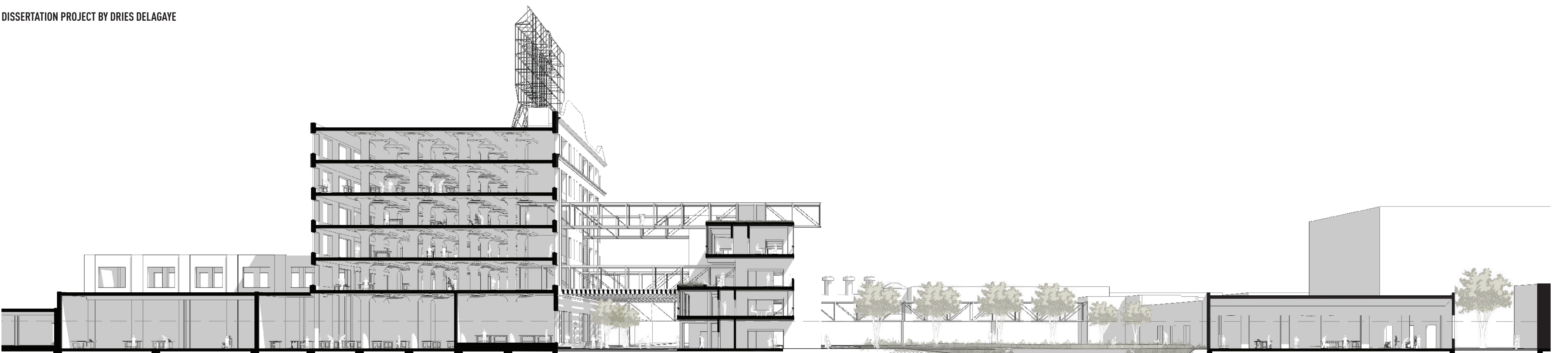




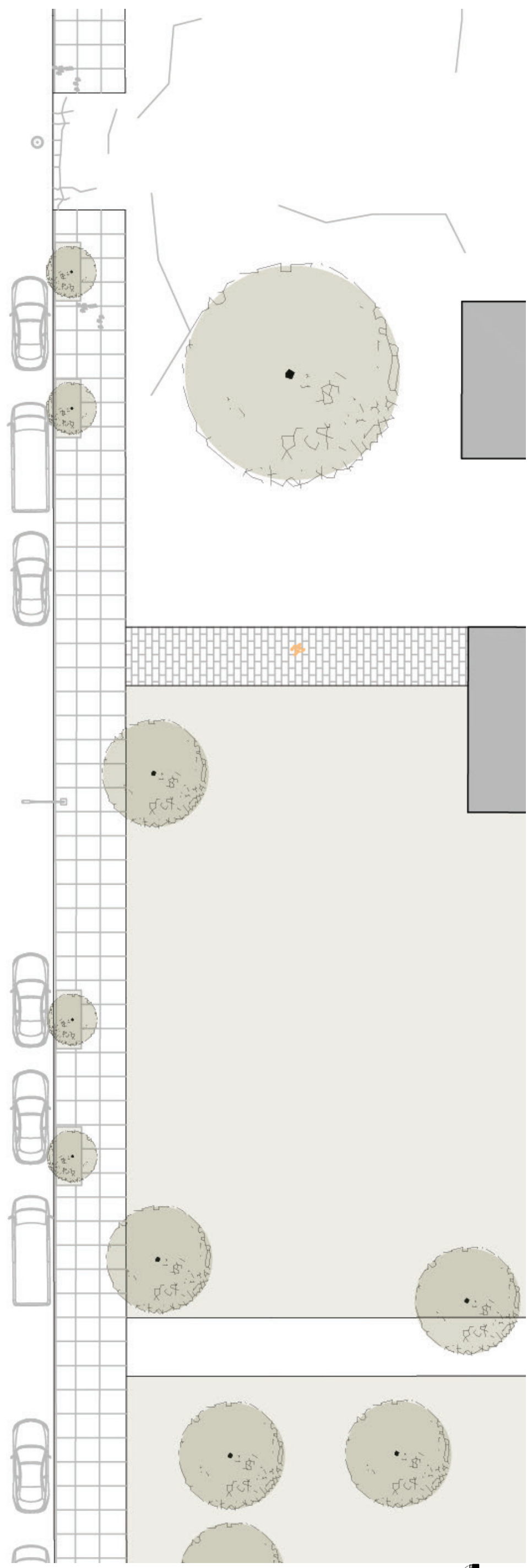
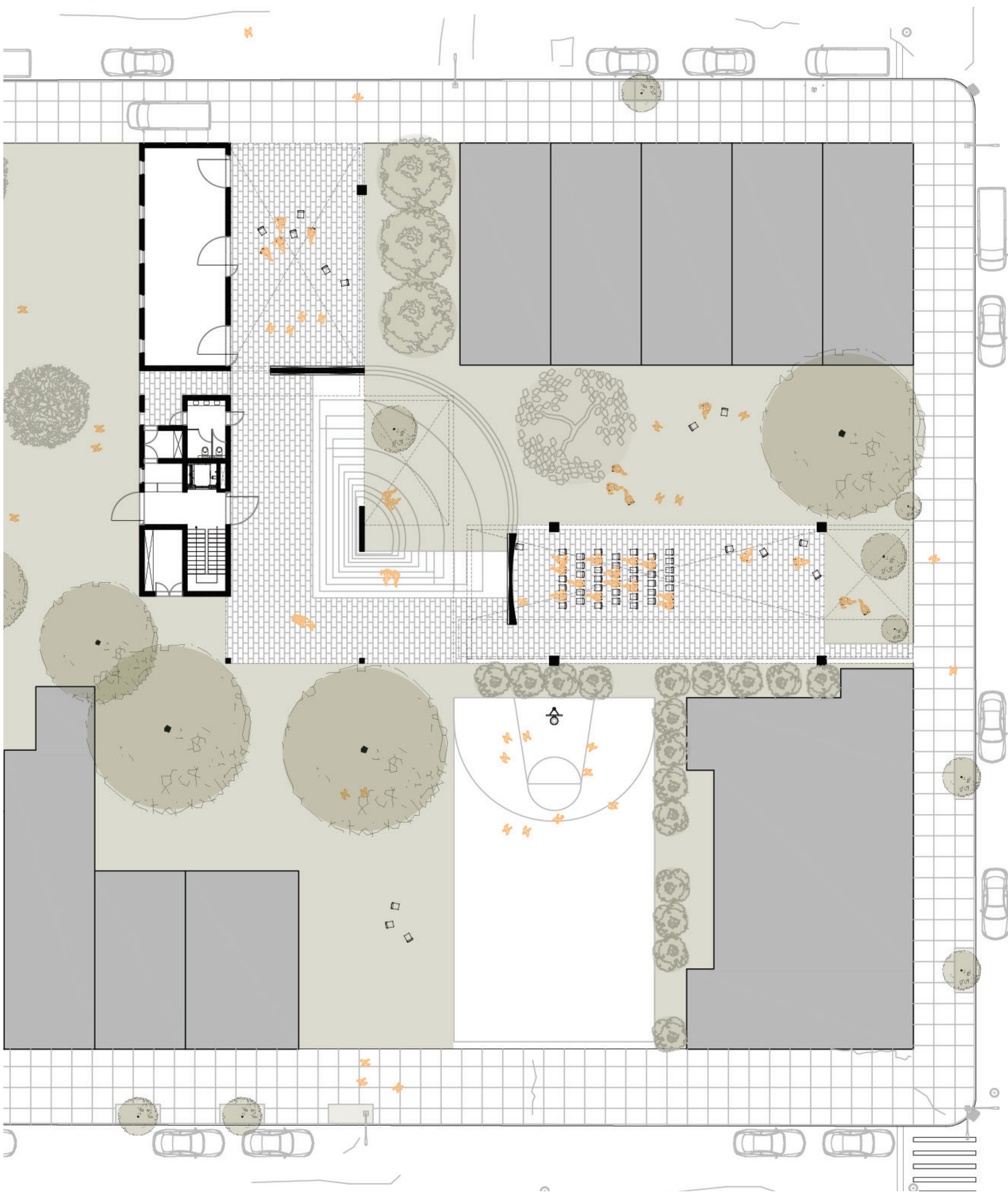
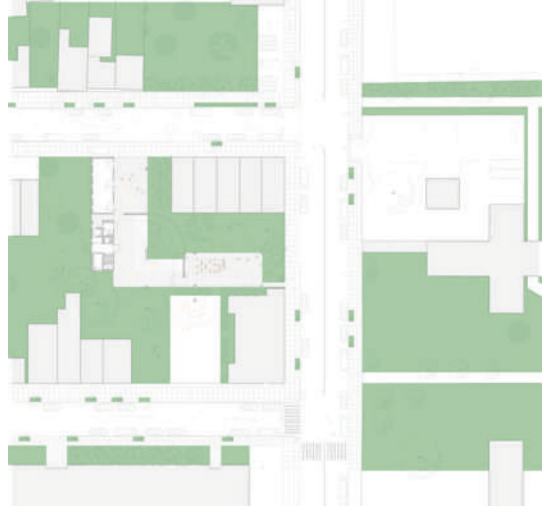
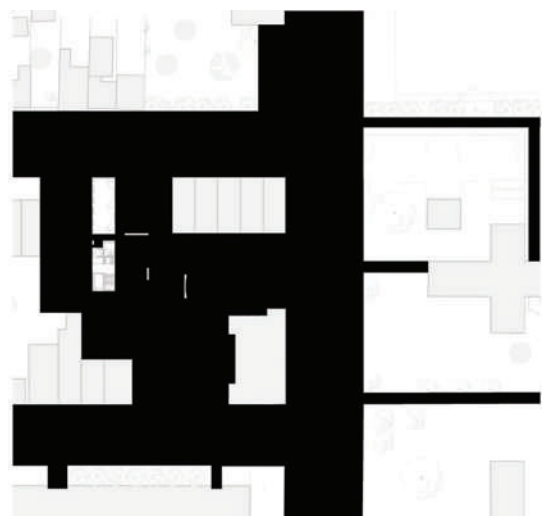
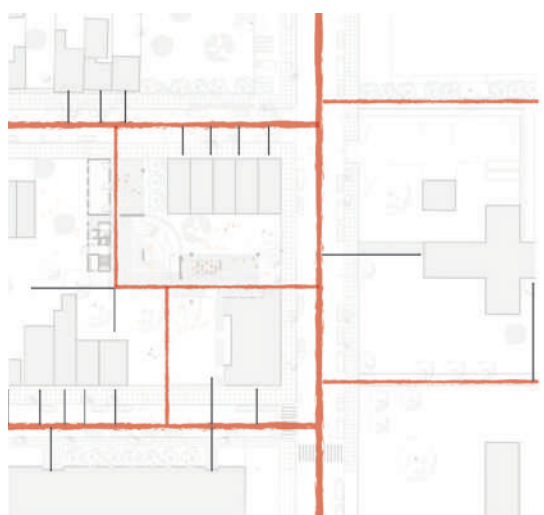
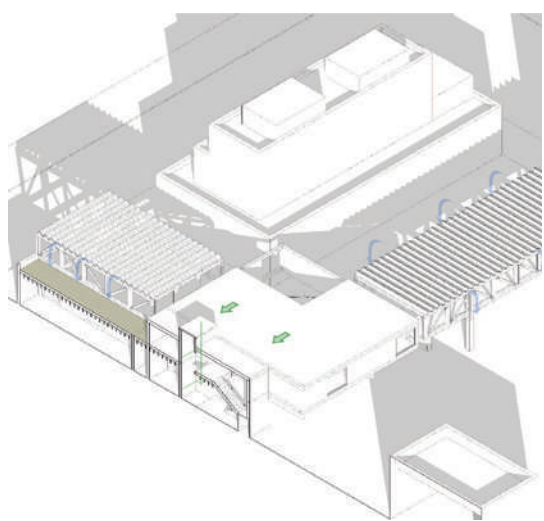
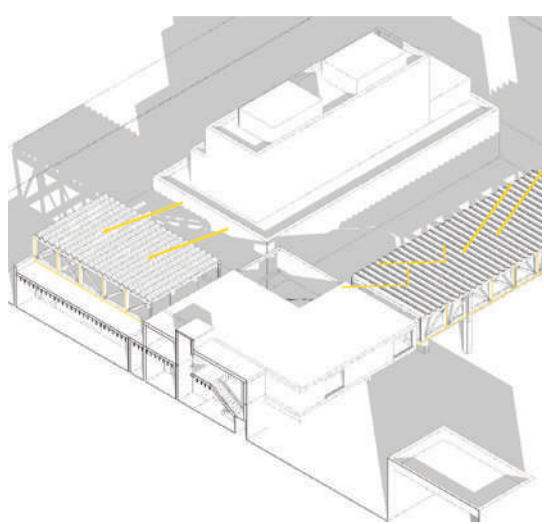
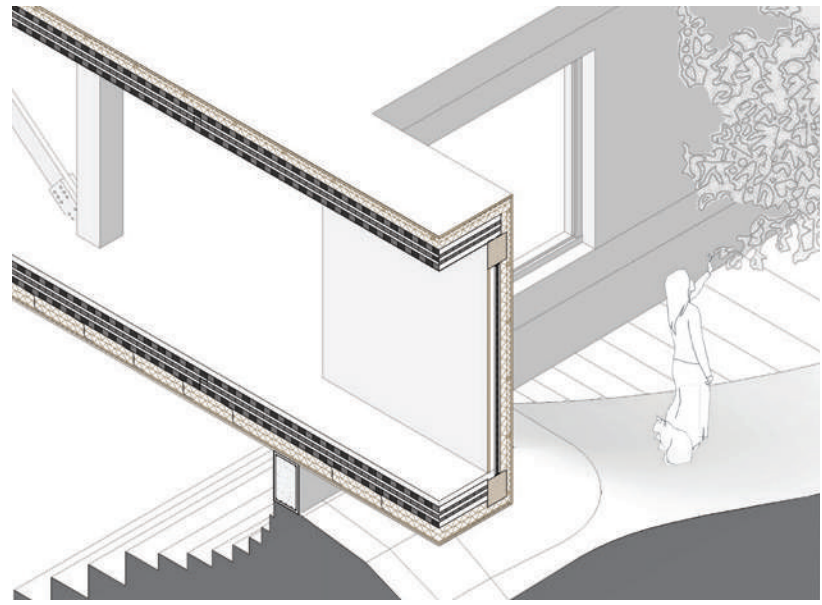
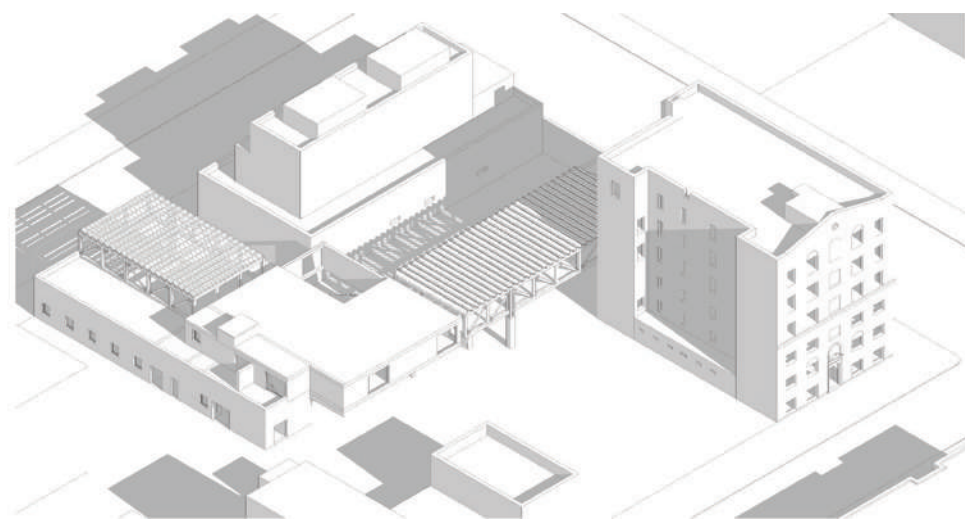
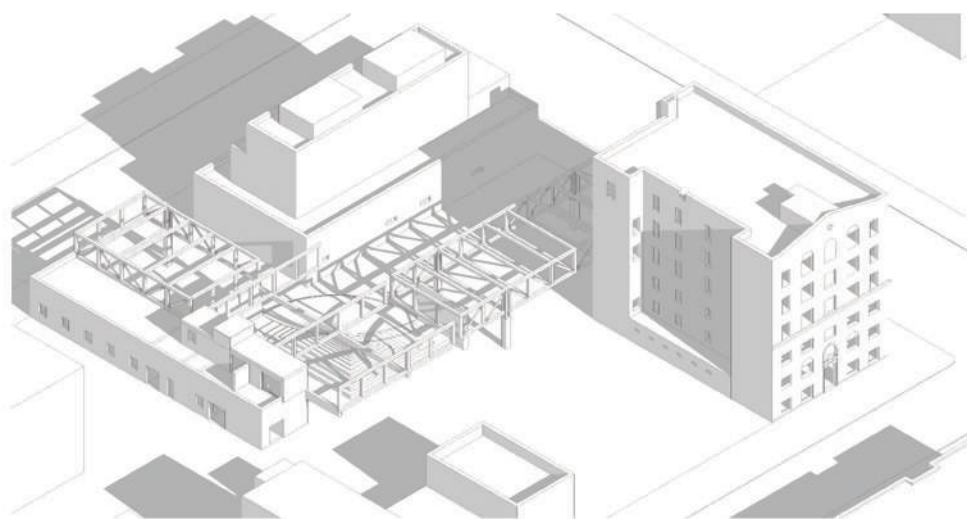
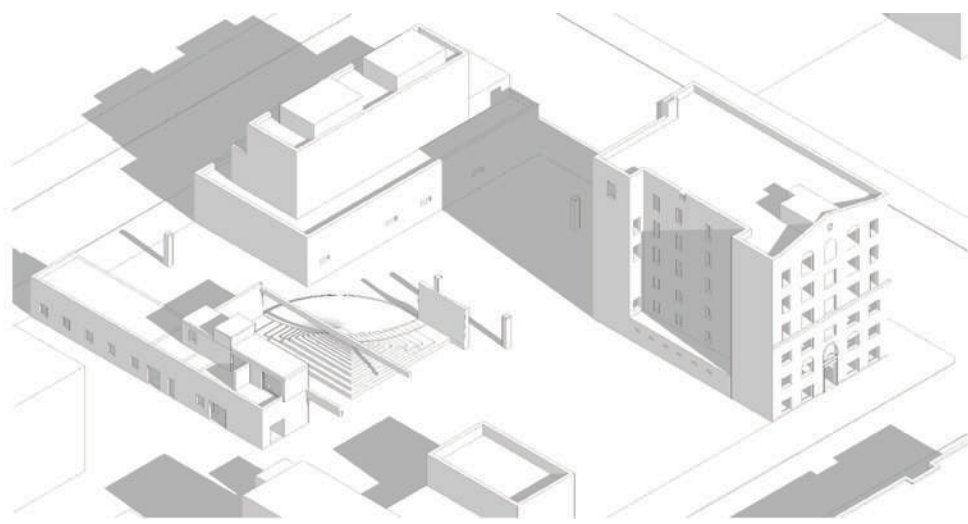
# THE PERMEABLE INTERVAL SPACE AS AN INCUBATOR FOR SOCIO-ECONOMIC PRODUCTIVITY

ARCHITECTURAL INTERVENTION FOR THE .R-SITE

DISSERTATION PROJECT BY DRIES DELAGAYE







# THE PERMEABLE INTERVAL SPACE AS AN INCUBATOR FOR THE COMMUNITY

ARCHITECTURAL INTERVENTION FOR THE YMCA-SITE

DISSERTATION PROJECT BY DRIES DELAGAYE

