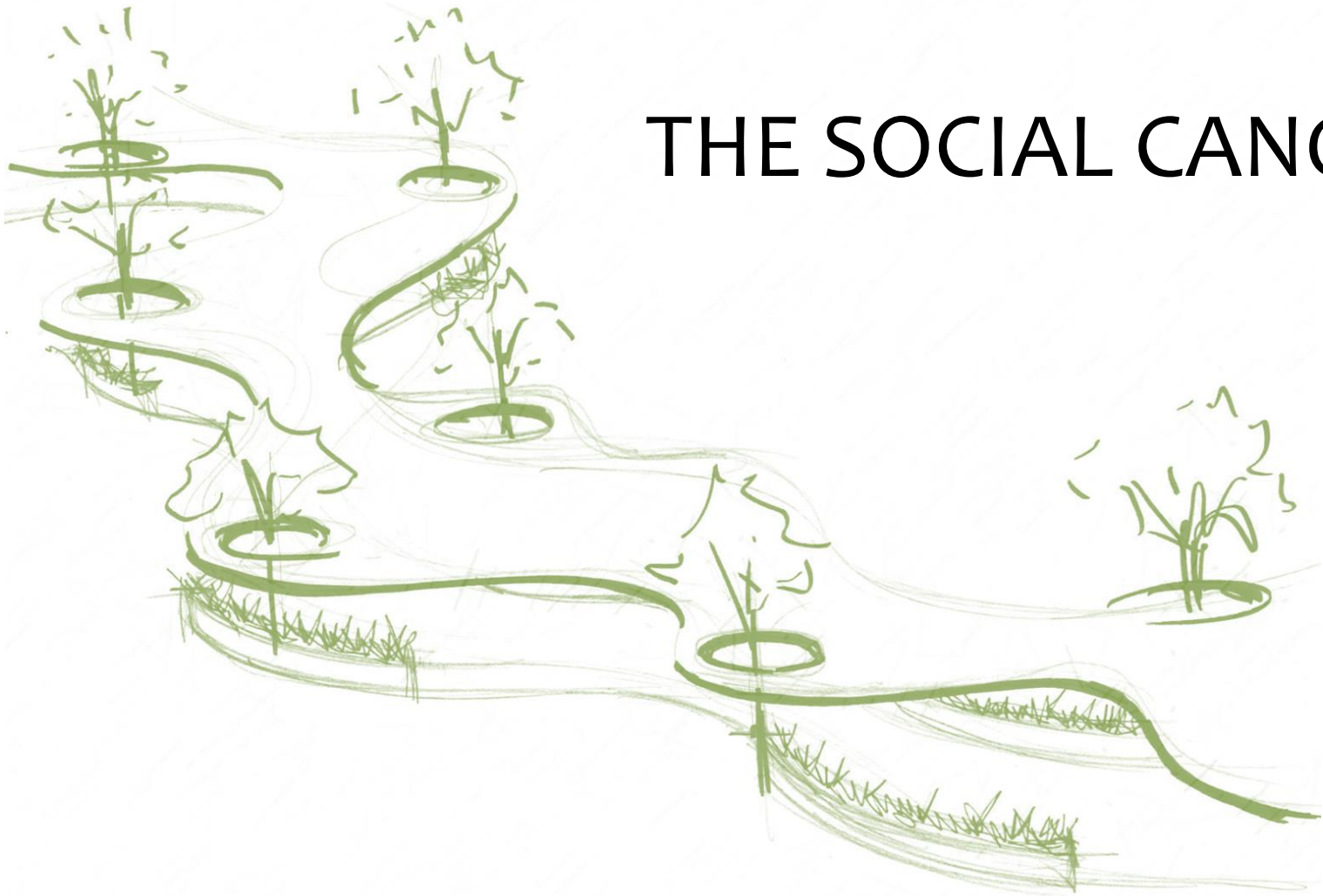


THE SOCIAL CANOPY





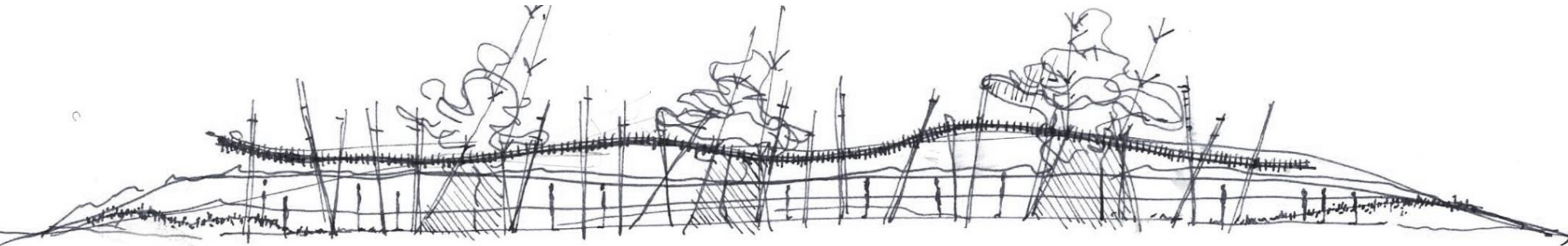
ITALY

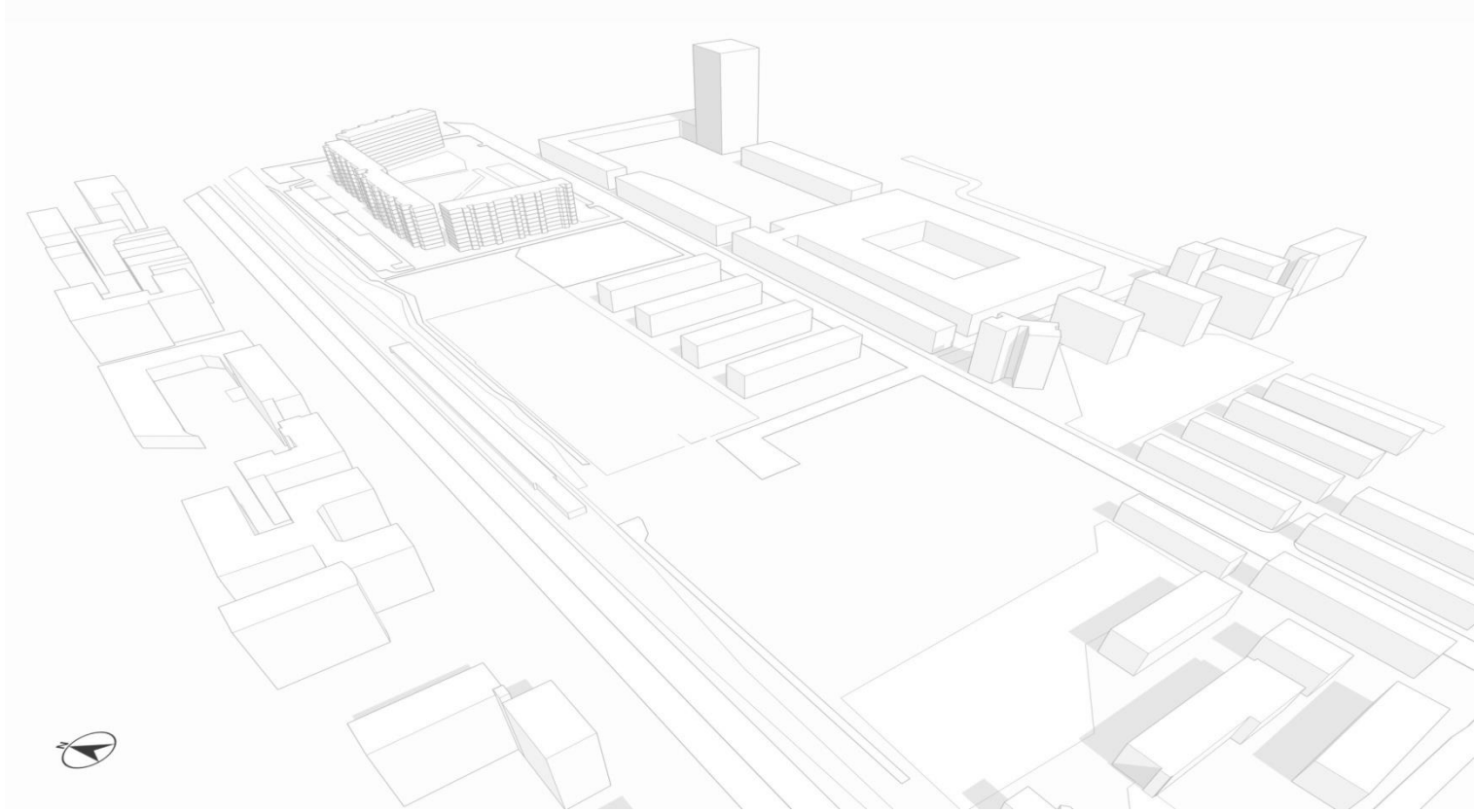


MILAN

CRESCENZAGO

- District of Milan
- Notable green areas
- Social housing development
- Metro connect with Milan center

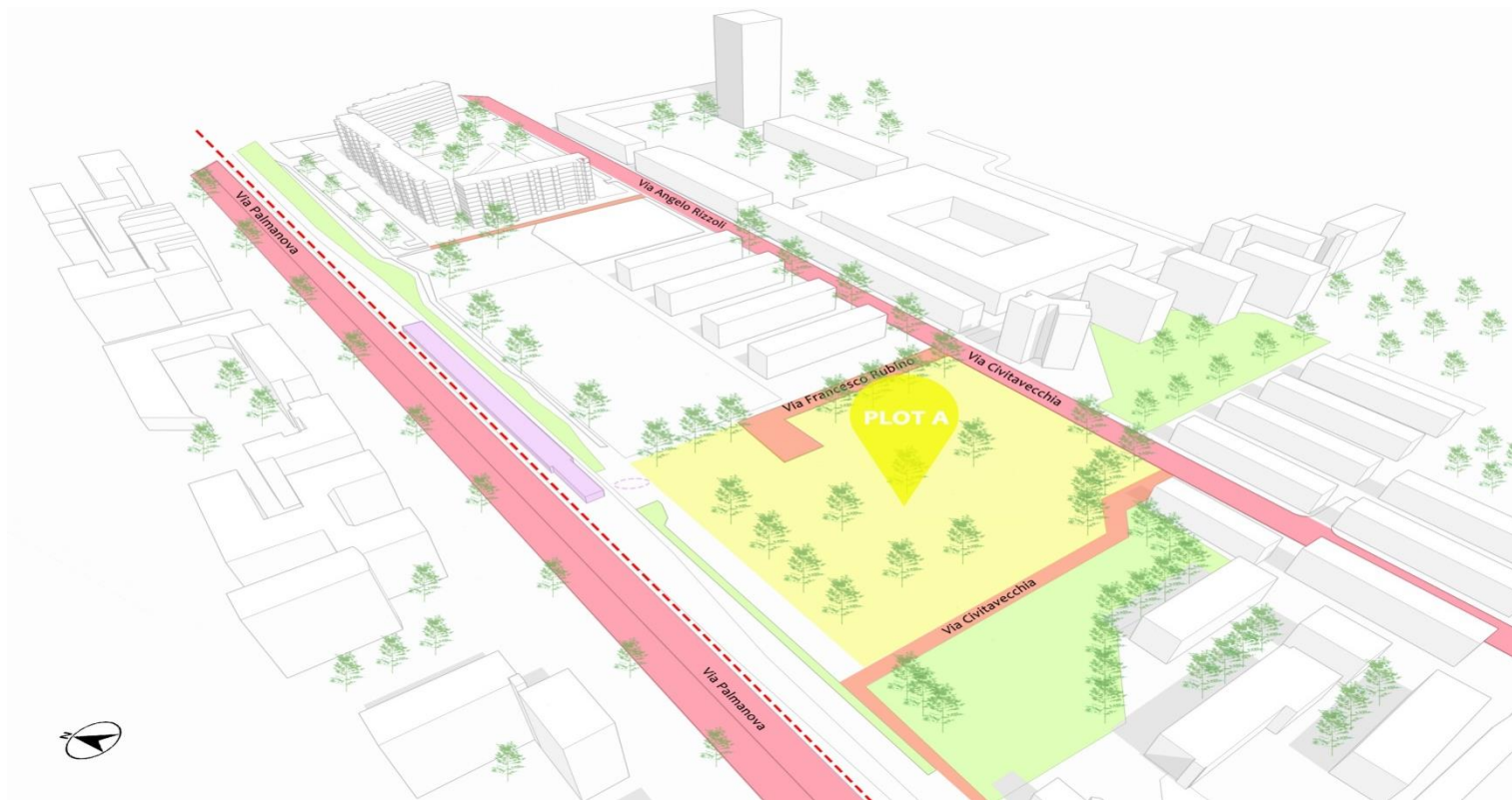




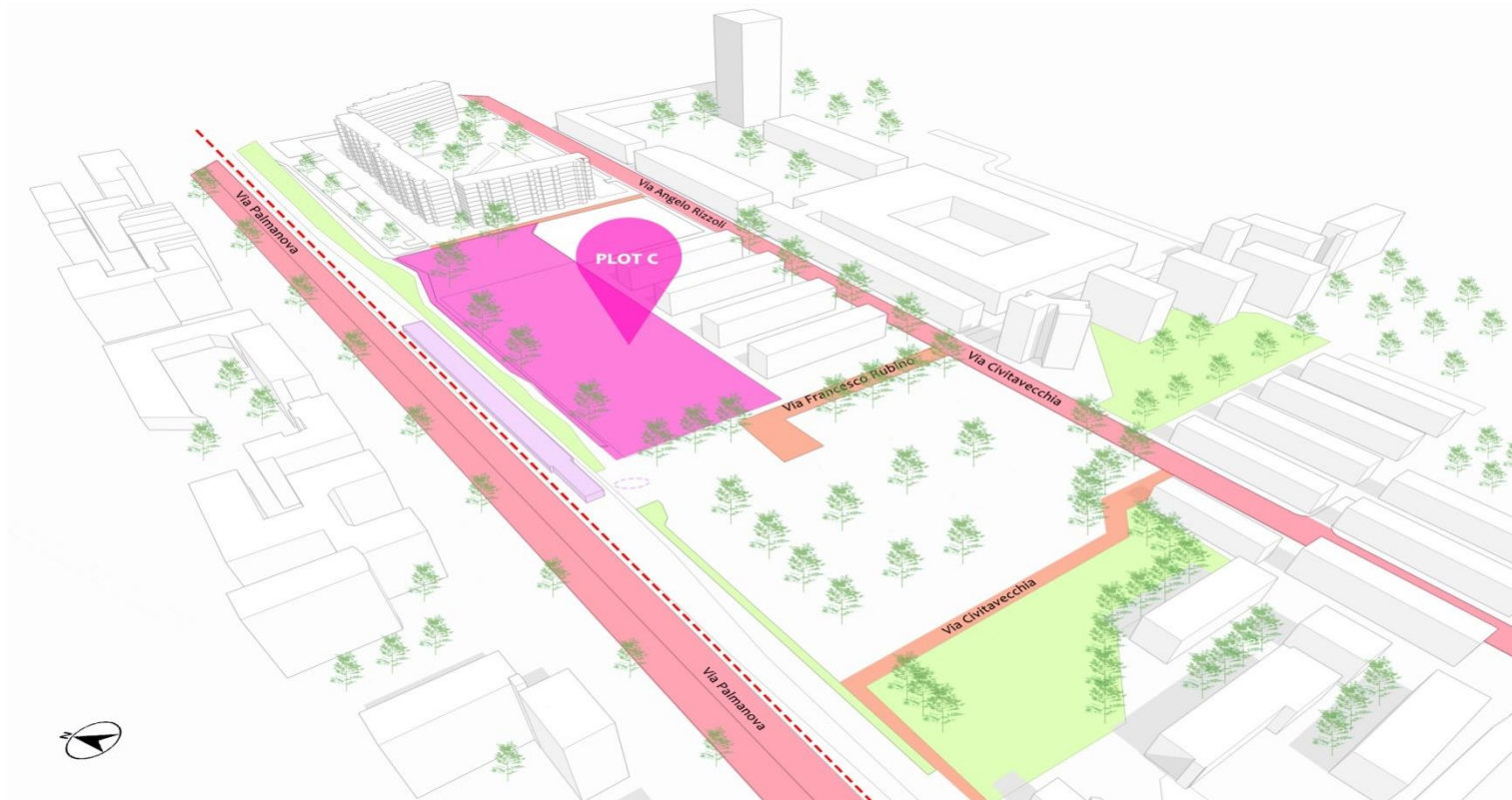
- Crescenzago metro station area



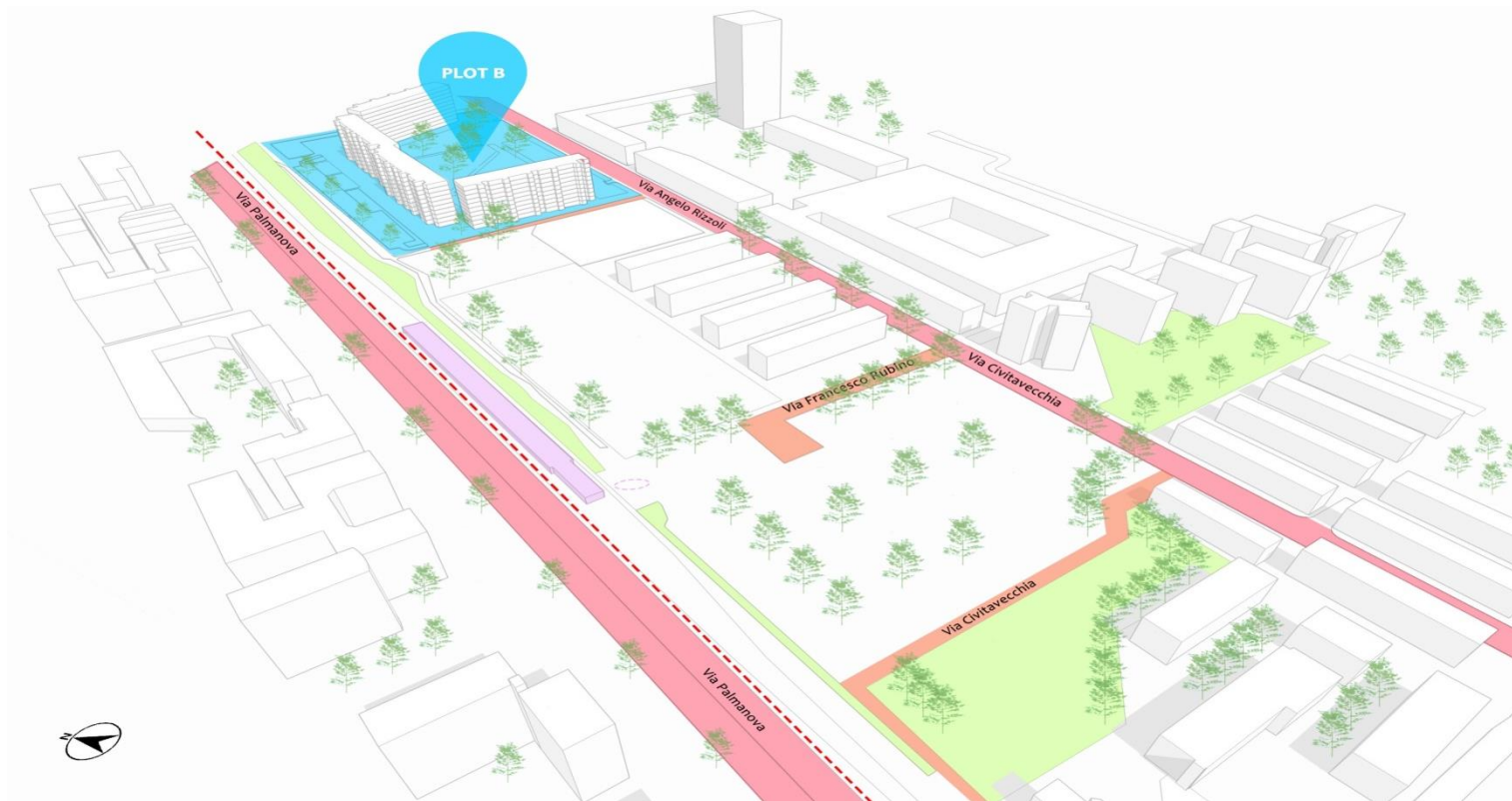
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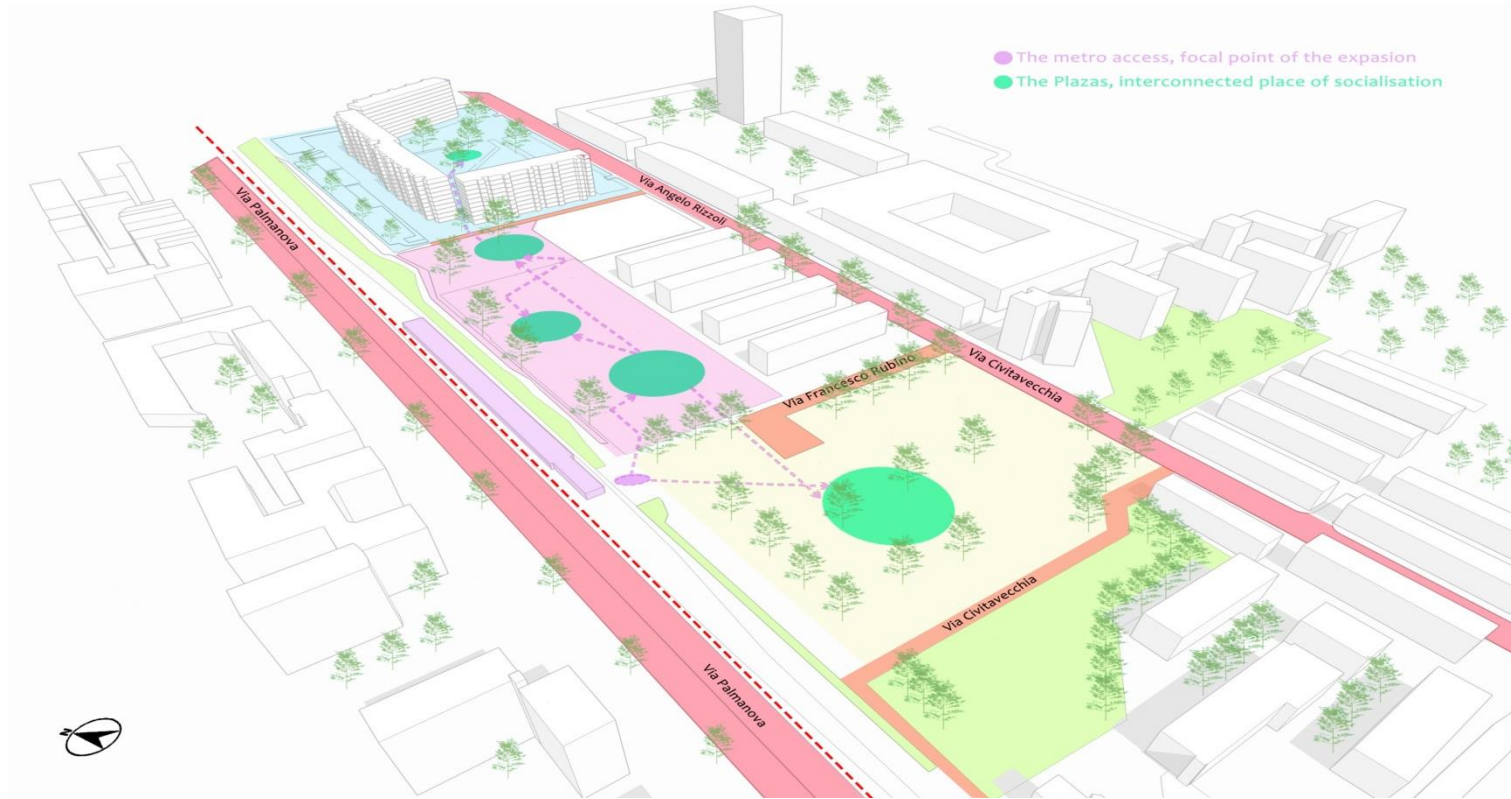
- Location of Plot A



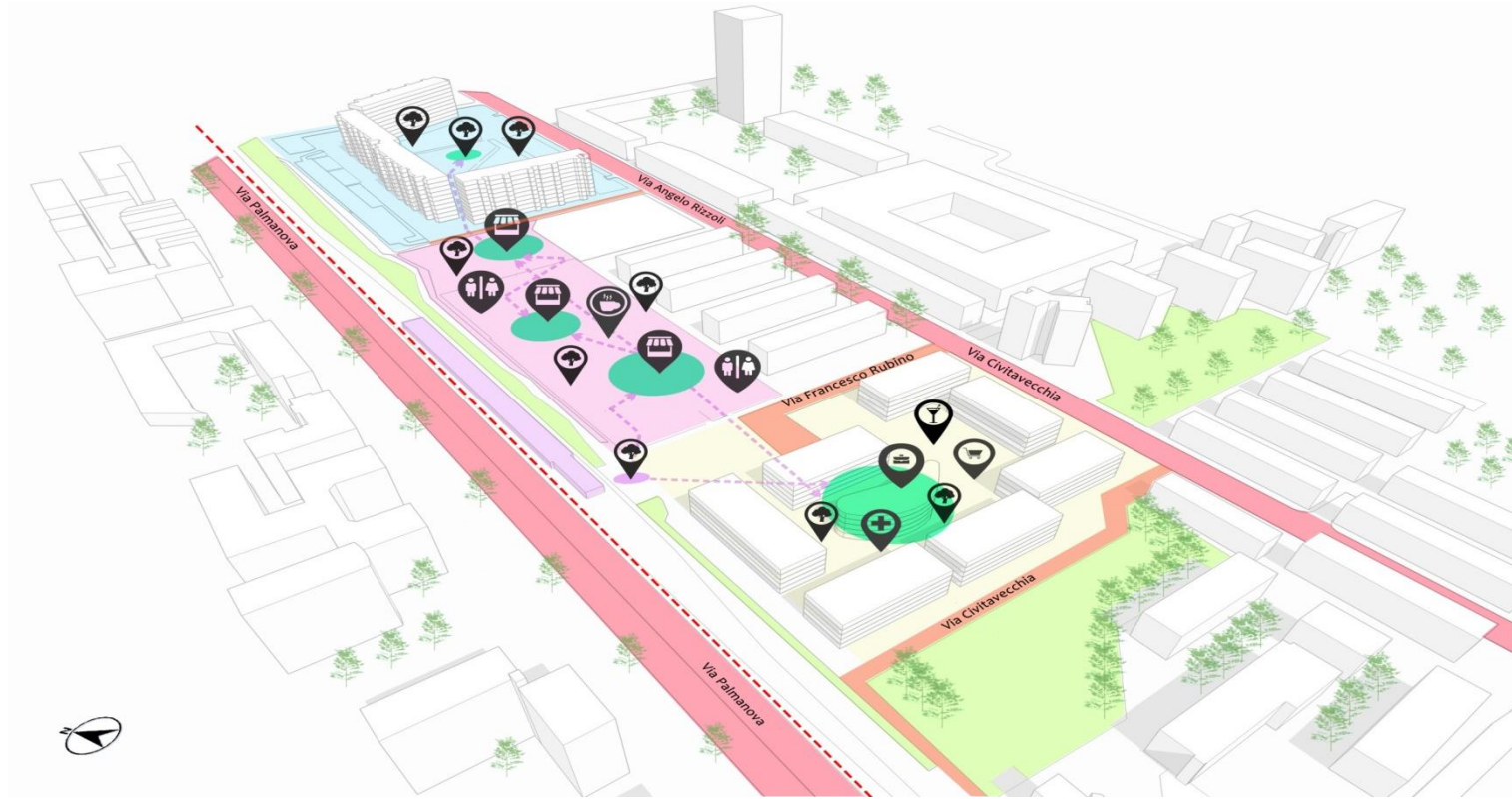
- Location of Plot C



- Location of Plot B



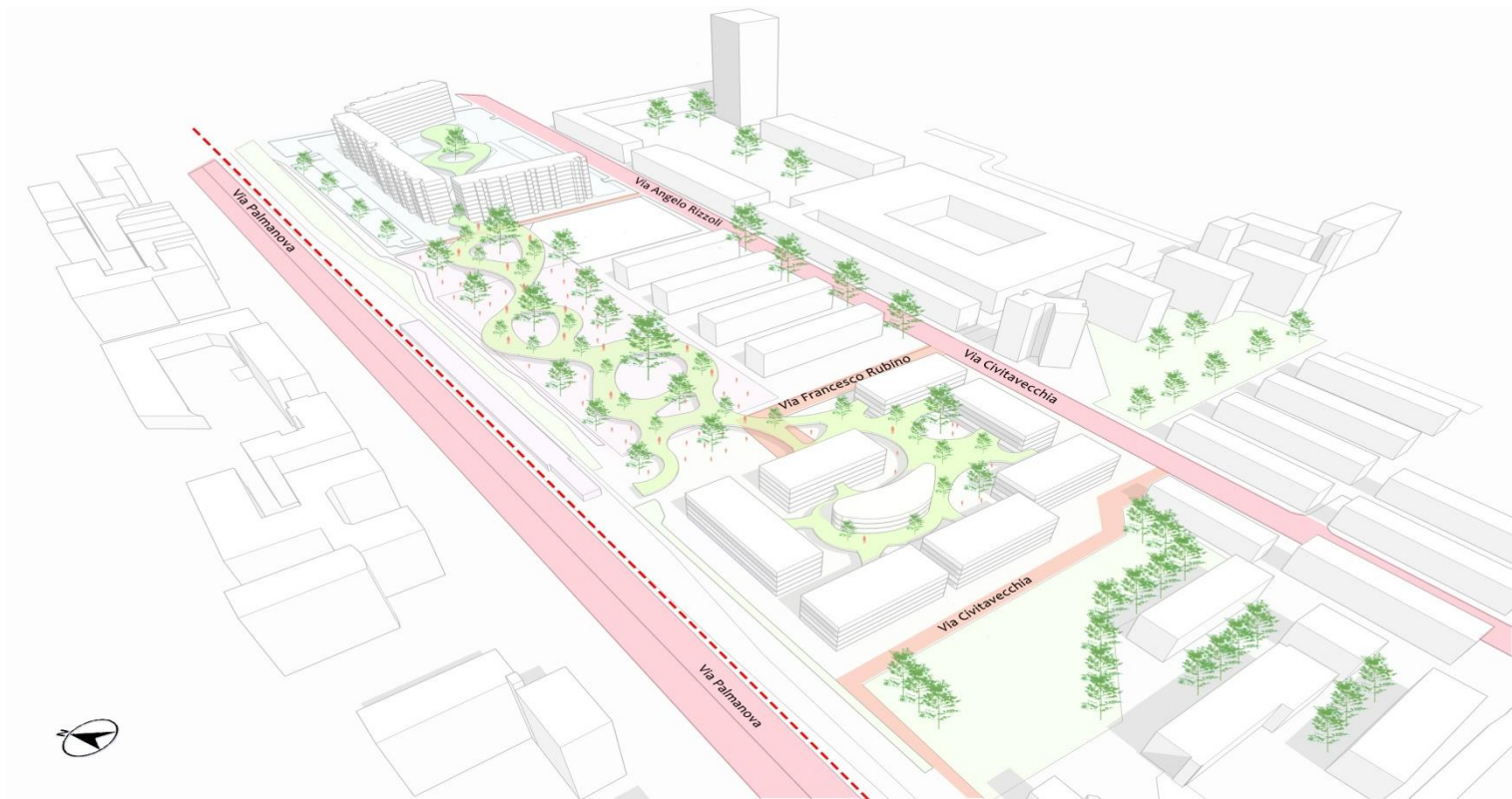
- Allocation of interconnected socialization plaza
- The metro access being the departure point of this interconnection



- Distribution of equipment, services and activity in and around the plazas



- Modeling of a covering platform expanding over all the area
- Starting point being the metro access



- Vegetalization of the Canopy

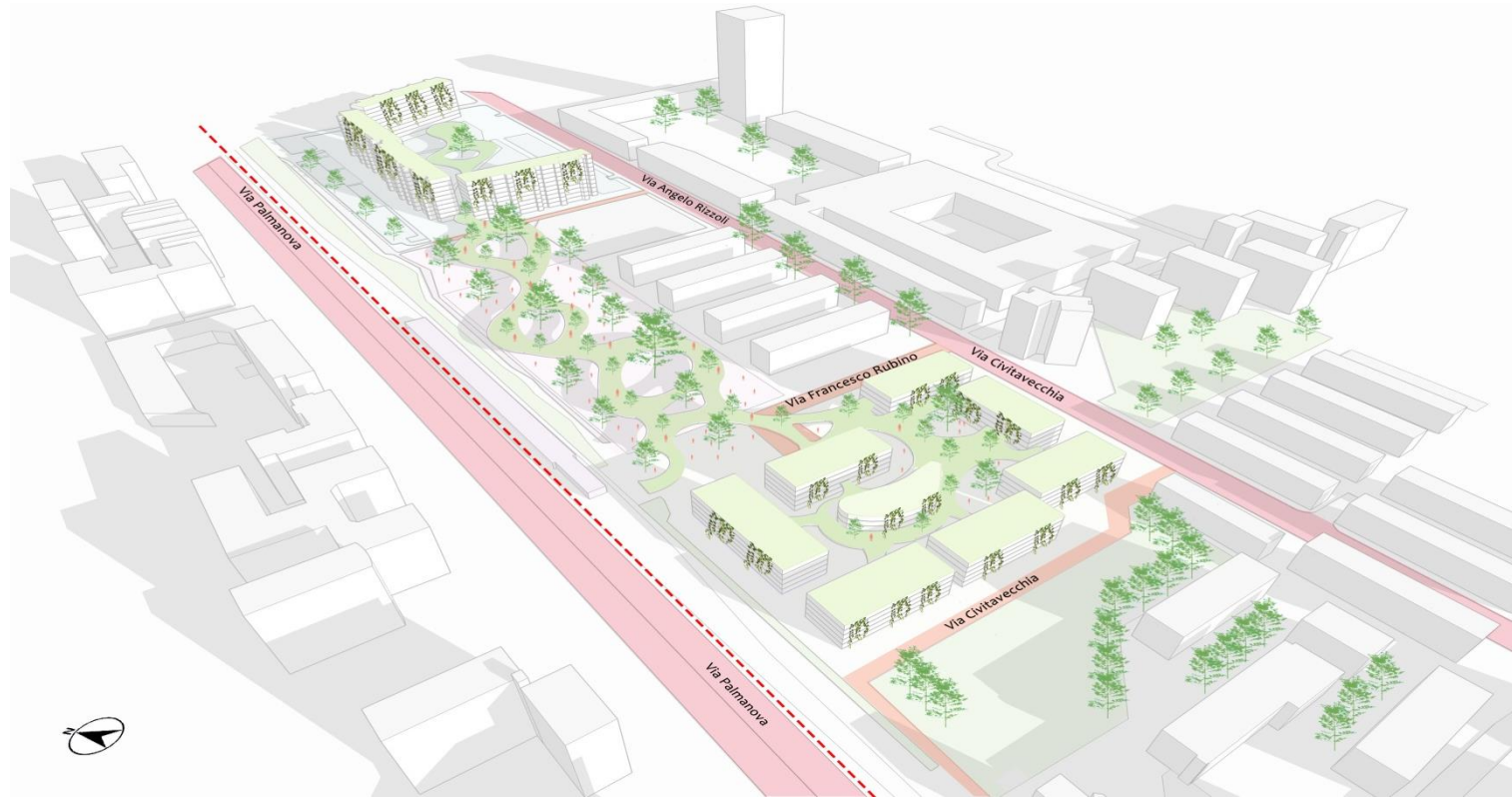


- Vegetalization of the facades



- Vegetalization of the roofs

WINTER



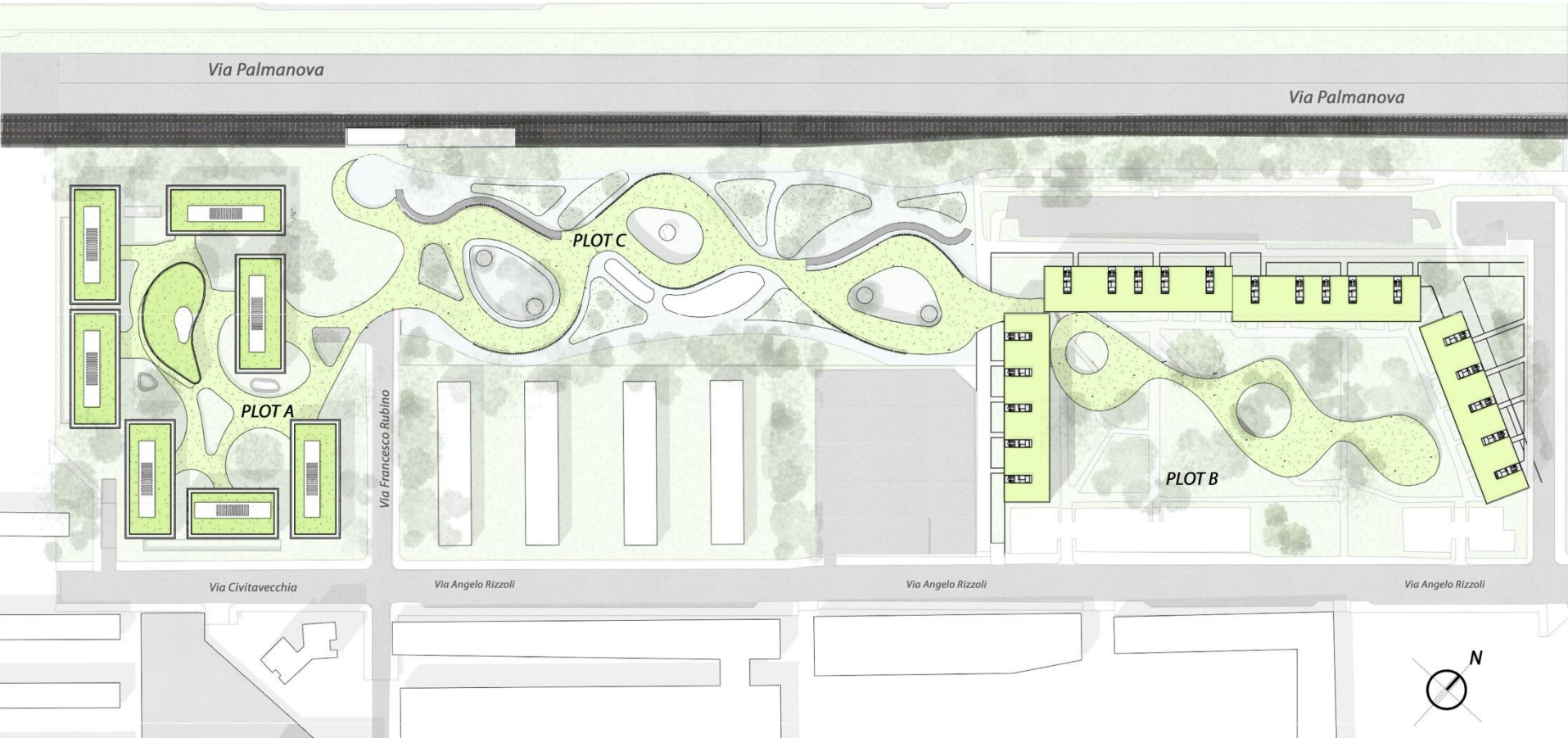
- Shadow study in winter
- Thermal comfort

SUMMER



- Shadow study in summer

MASTER PLAN



- Master plan

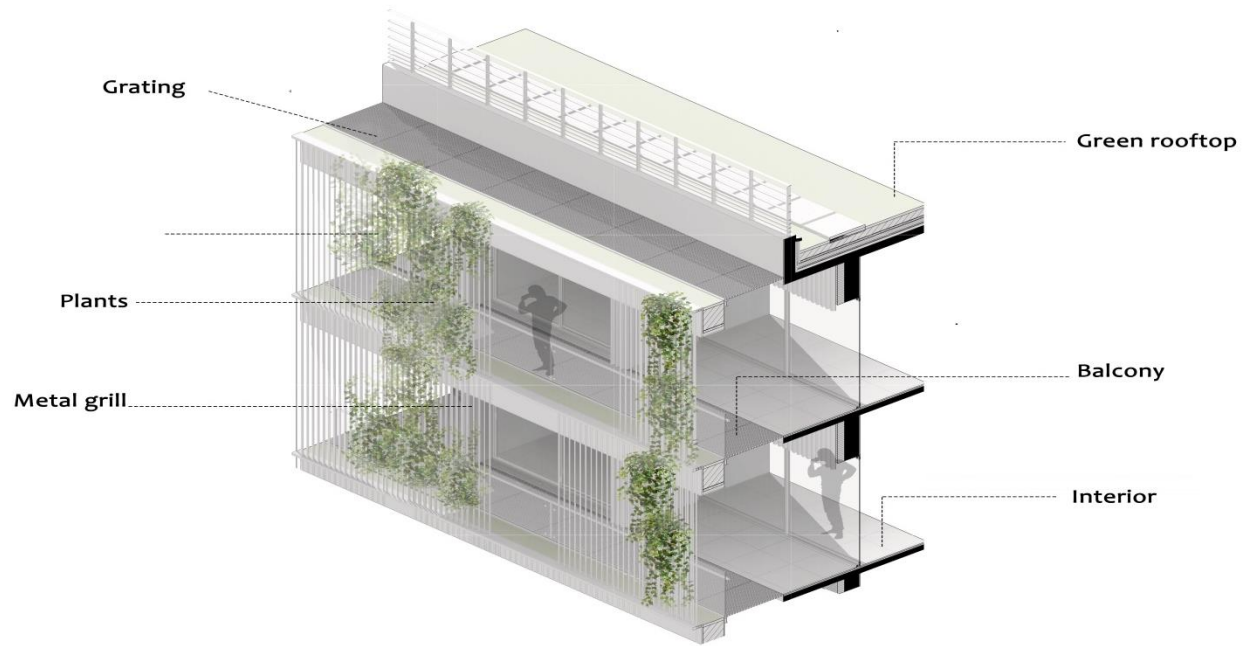
MASTER PLAN



THE CANOPY



RENOVATION CONCEPT



- Extension of the balconies
- Vegetalization of the envelope

SECTION



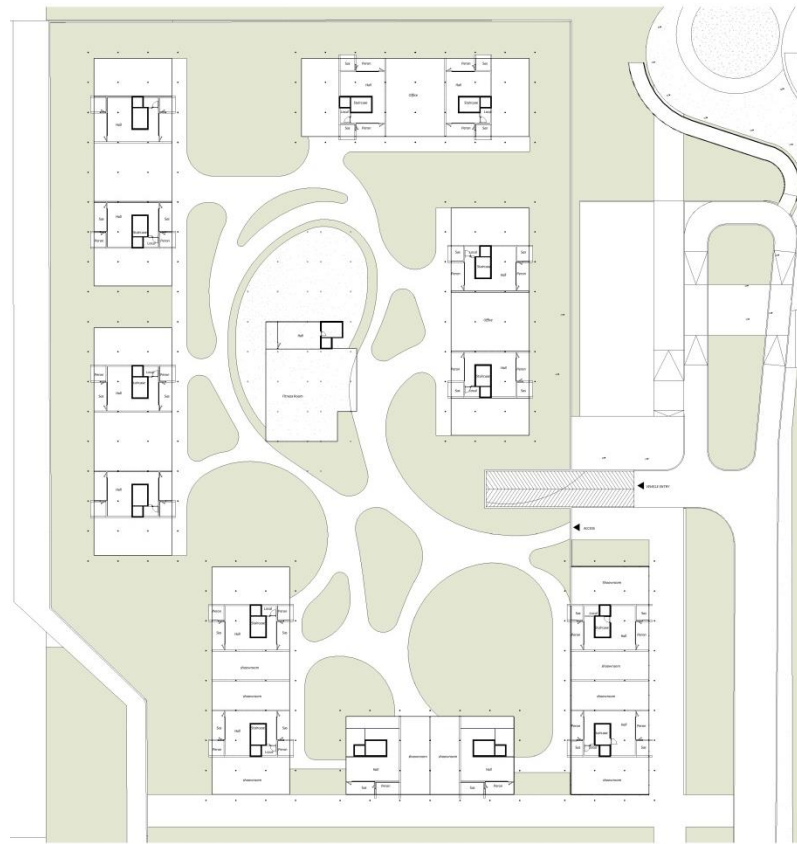
- Building performances optimized by the help of a green envelope

NEW DEVELOPMENT CONCEPT



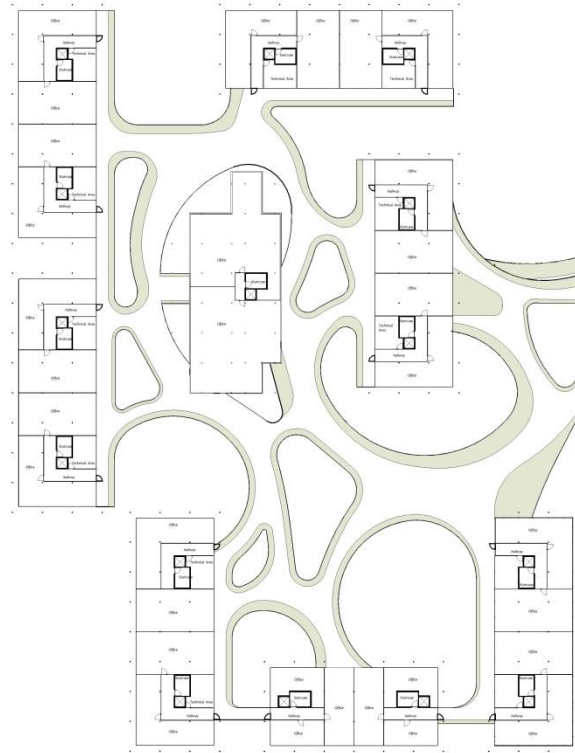
- Double skin facade with expanded metal sliding grids
- Grating floors
- Green rooftop

GROUND FLOOR



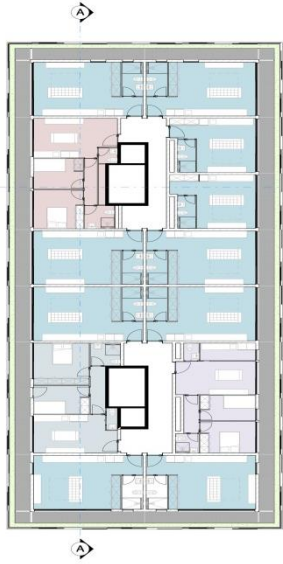
- Floor entirely dedicated to the public and only containing public equipment
- Shops, showrooms

FIRST FLOOR



- A semi-public garden, with controlled access and equipment in relation to the housing
- Also open space buildings

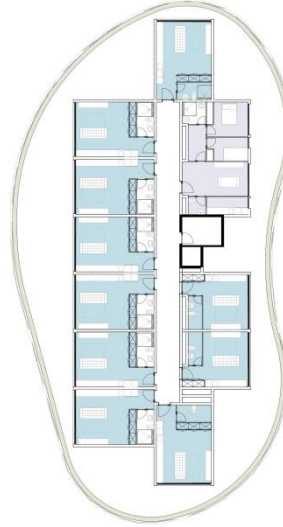
TYPICAL FLOOR LAYOUT



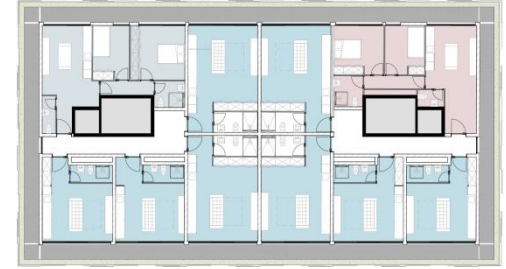
B1- 2nd & 4th



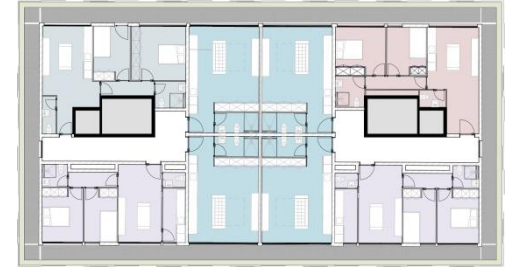
B1- 3rd



B2



B3 – 2nd & 4th



B3 – 3rd

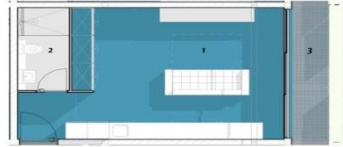
- 3 Types of buildings distributed on the plot
- Eight buildings in all

APPARTMENTS UNITS



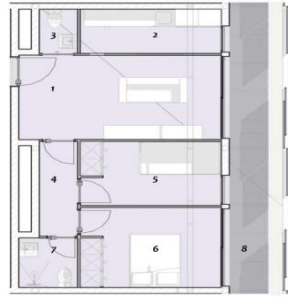
Three Bedrooms

92.40 sqm



Studio L

32 sqm



Two Bedrooms L

54.60 sqm



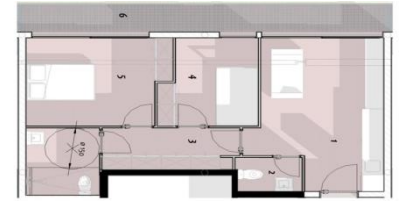
Studio S

24.50 sqm



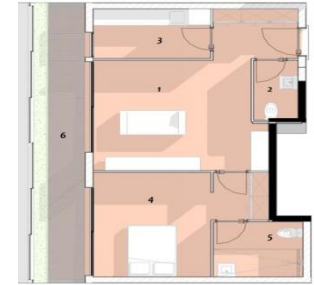
Two Bedrooms S

54.60 sqm



Two bedrooms (PWD)

54.80 sqm

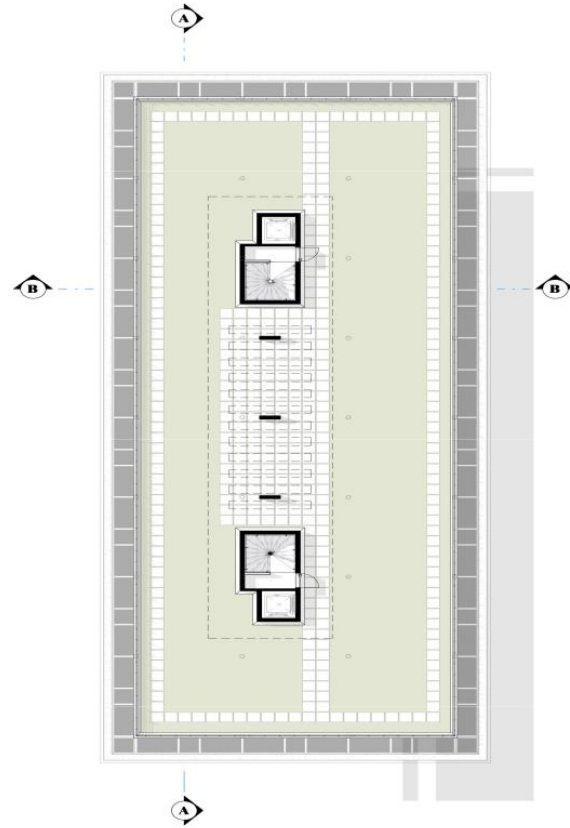


One Bedroom

51.60 sqm

- Seven kinds of apartments suitable for a variety of dwellers
- Families, workers, students, retired people and people with disabilities

ROOF FLOOR



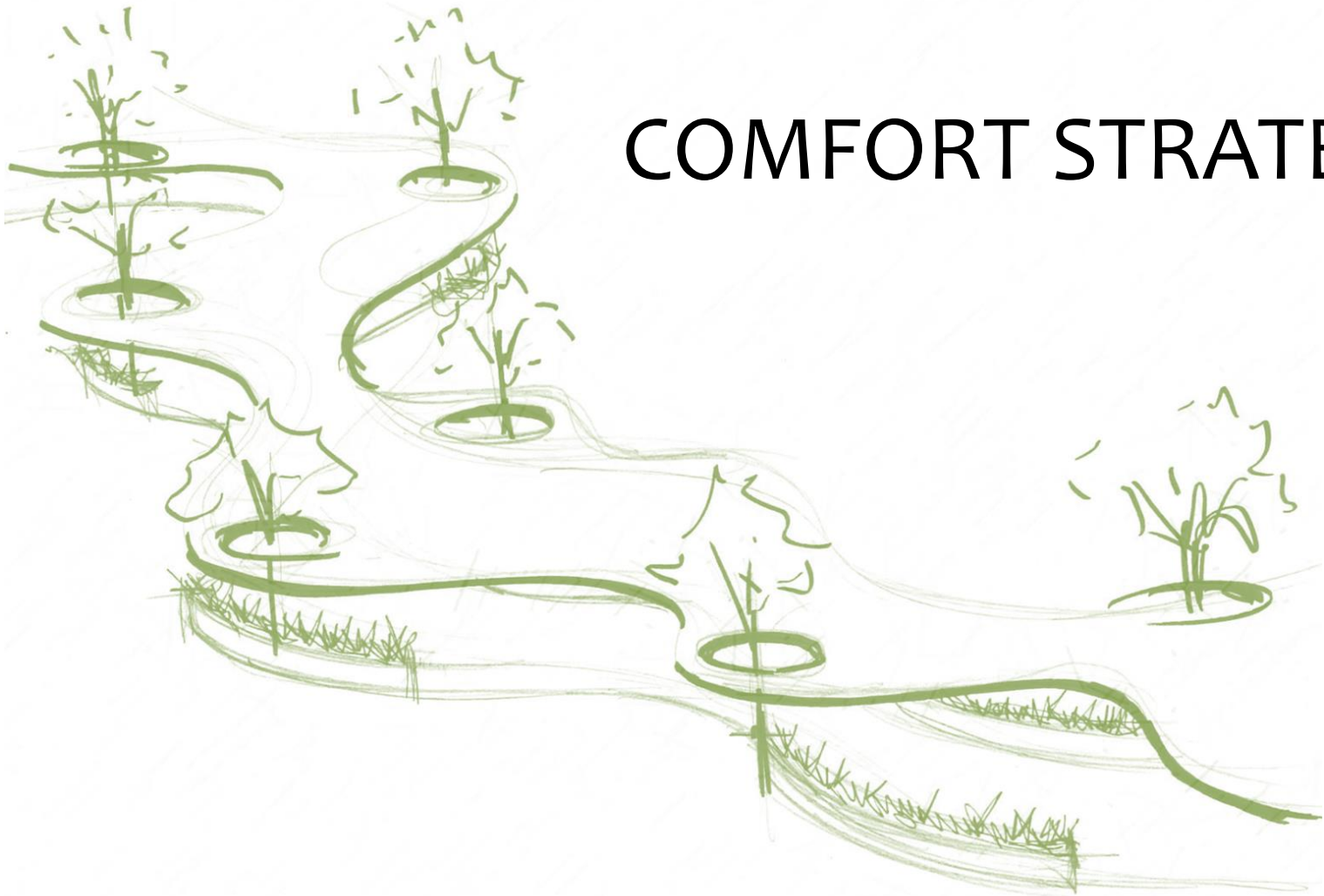
Building 1

- Accessible green rooftop that helps improving the energy performance of the habitat

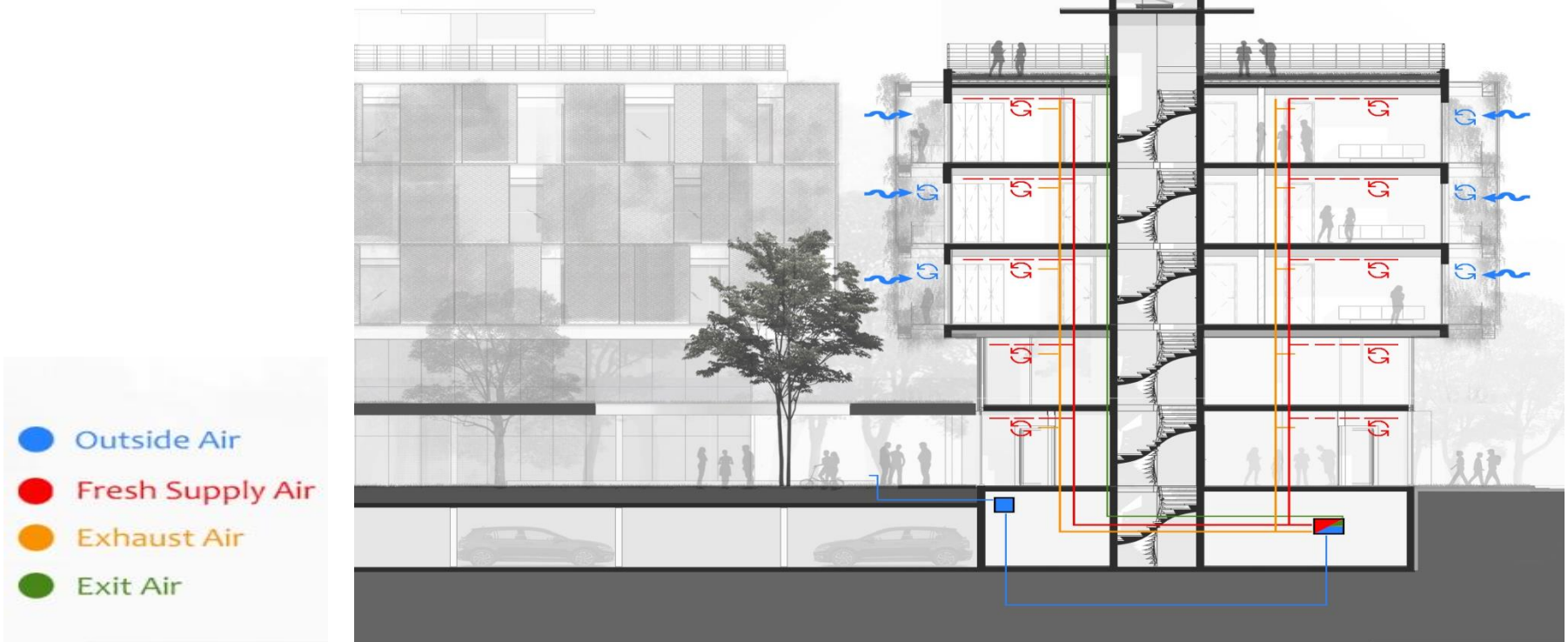
THE NEW BUILDING



COMFORT STRATEGY



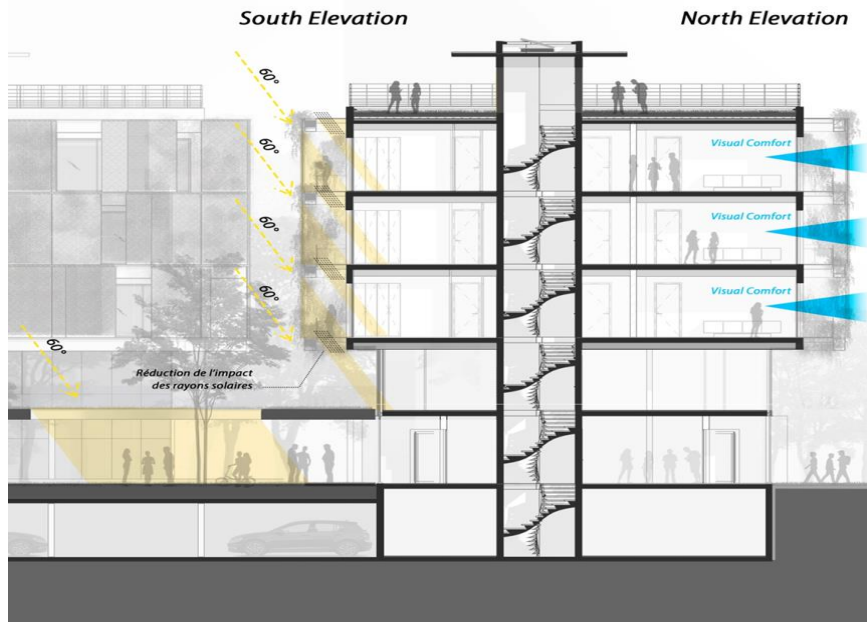
VENTILATION AND THERMAL COMFORT



- Dual flow thermodynamic ventilation in winter
- Natural ventilation in summer
- Antiv'air plate against COV's
- Trees improve air quality

VISUAL AND THERMAL COMFORT

SUMMER



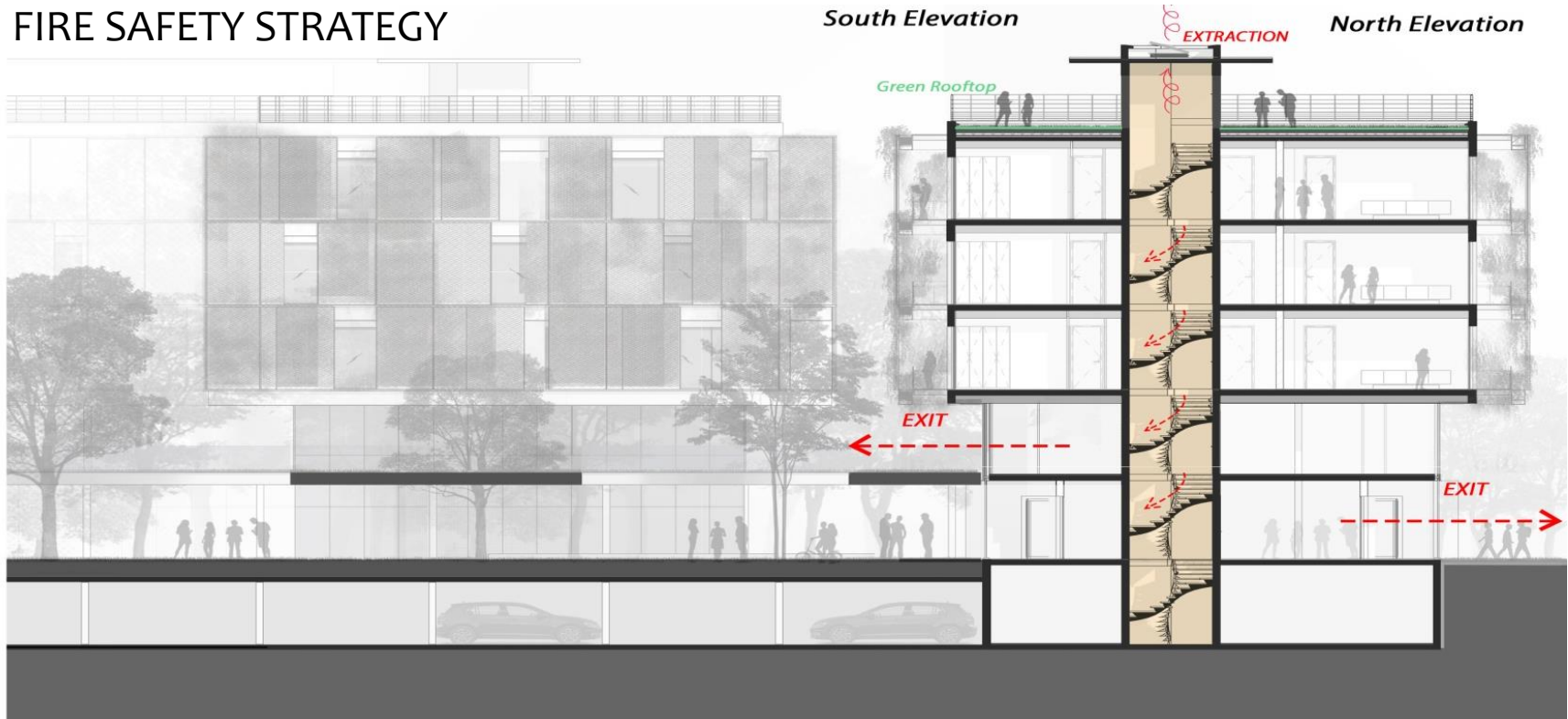
- Double skin facade with sliding metal grids
- Shade provided by the trees

WINTER



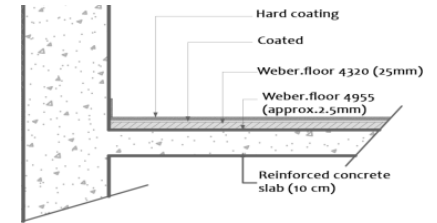
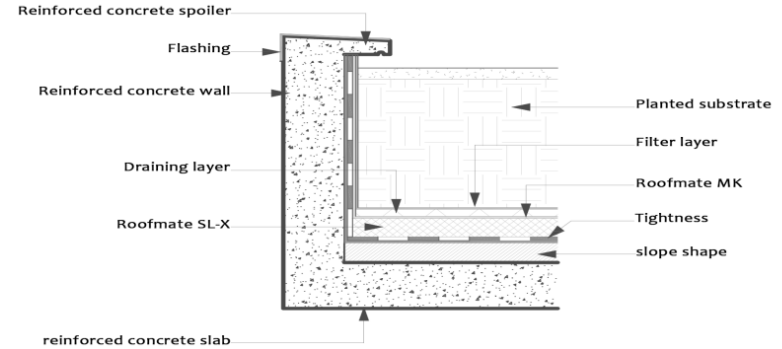
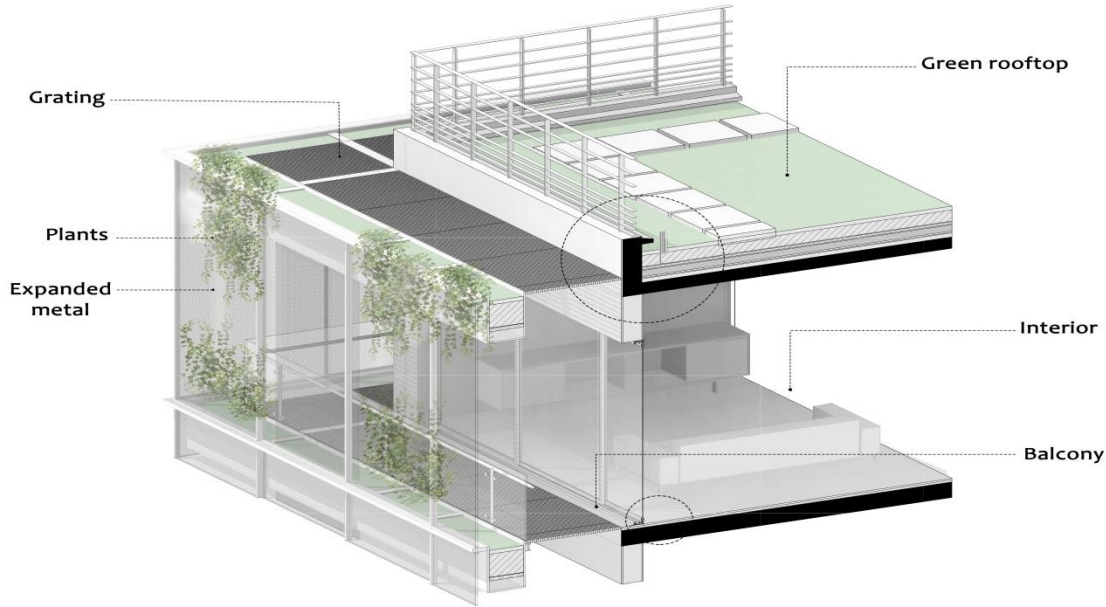
- Planitherm 4s glass
- Direct penetration by trees dormancy in winter

FIRE SAFETY STRATEGY



- Evacuation at the first floor for residents and ground floor for public areas
- Facade products are non-combustibles
- Pressurized enclosure and smoke extraction through the stair skydome

ACOUSTIC AND THERMAL COMFORT



- Roofmate LG – X insulation
- Weber floor 4320 / 4955

- Roofmate MK
- Roofmate SL - X

- Insulation under siding
- Isofacade

CALCULATIONS

I. Project data :

object : 2 bedrooms appartments
climate zone : Italy
construction : new building
building type : residential
usage : for living
design temperature : 20°

II. Area input

Sum of living area : 50 m²
Sum of heated space volume : 150 m³

III. Opaque elements (mean u-values)

roof flat : n/a
wall against air : 0.11 W/(m²K)
wall against neighbour : n/a
slab against ground : 0.10 W/(m²K)

IV. Windows/doors (mean u-values)

windows : 0.73 W/(m²K)
doors : 0.80 W/(m²K)

V. Quality

air tightness : 3.5
thermal bridge free : yes

VI. Shading (standard + summer shading)

225° : 0.70
135° : 0.70
45° : 0.70

VII. Winter ventilation strategy

with heat recovery system : 95 %

VIII. Calculations

internal heat gains : 856.80 kWh/a
annual heat demand : 287.79 kWh/a
specific heat demand : 5.76 K WH(m²a)

