Smichov City - Sever

Blocks B01, B04, B07

Behnisch Architekten

Urban Context

The site of the new masterplan at Smichovske nadrazi is located in a key urban intersection in Prague. The site is less than 3km from the historical centre to the North and only 500m from the Vltava River to the East. The site offers the unique opportunity to reconnect the urban fabric of an area which previously housed a railway station and mixed-use industrial and residential quarter.

Key to this task of reconnecting the urban fabric of such a historical city is a sensitive understanding of the existing fabric, particularly the 19th Century perimeter block structure of the Smichov quarter. This historical urban block structure has been well translated in the area masterplan with the existing block structure East of Nadrazni street continuing to form a clear hierarchy of active street fronts and protected courtyards behind. In turn the streets have been given a clear hierarchy, with the central North-South Boulevard connecting the new bus station to the South with the existing Metro station and shopping precinct to the North.

Blocks B01, B04 and B07 were chosen as the development area as this site offers the opportunity to transition from outward facing office typology, complementing the existing context and the important Radlicka road, to a smaller scale residential typology defining the scale and character of the interior of the masterplan.

Concept

The scheme responds to this clear hierarchy with a **protective outer façade** to the street edge which deals with the acoustic issues of traffic noise and respects the historical fabric, with its large scale openings punched into the carved stone form. By contrast, the **inner courtyard façade** is made of a series of open, garden terraces; a protected garden at the ground floor to continues upwards to the roof levels with green roof gardens overlooking the city skyline and providing a unique image and address in Smichov.

The block scale and structure is formed by continuing the existing East-West streets, ensuring that the hierarchy of the existing masterplan is preserved. The block facing Radlicka is split into 3 clear blocks at ground floor, whilst at the upper levels, the blocks connect to from a single mass. This combines the advantages of acoustic protection and a highly efficient office layout, whilst providing a **'gateway'** at ground floor, celebrating the entrances to the 2 East-West streets.

These 2 'gateways' as well as the gateway at the corner of Radlicka and Za Zenskymi Domovy clearly mark the office entrances as well as framing and celebrating the gardens courtyards beyond, providing a lively, welcoming and protected ground floor. Due to the cafes and terraces in these ground floor courtyards, the green co-efficient required in the regulation plan has not been reached. This has been off-set however by the green terraces and green roof, which ensures that, viewed from the hills above, the building presents a green image to the city.

The building massing optimizes natural light in the south facing courtyards, so that these become generous, sunny spaces inviting people through to the cafes and shops behind. The massing of the office building slopes gradually from the 7 storey high point at the corner of Radlicka and Za Zenskymi Domovy down to 6 storeys at the South end of Radlicka in response to the regulation plan. The office massing also steps back in section in response to the historical roof form and eaves height opposite, breaking up the scale of the façade to Radlicka. The massing of the apartments also steps back in section at the 6th floor, in-line with the requirements of the regulation plan.

Office Organization

The offices are organized into 3 blocks each with clear entrances at the 'gateways'. Above the gateways, atriums contain informal meeting points, vertical circulation and terrace access. From these shared spaces, access to the offices is controlled by a welcome desk and waiting area to ensure secure access. Lift access from the underground garage arrives directly at the atriums. This office concept ensures maximum flexibility of use; offices can be let either as 3 blocks, as 1 block or even per floor. To the street side the offices are 5.5m, open plan offices and to the courtyard side offices are 6.5m deep to allow for closed offices as desired, for management, meeting rooms etc. For the street side windows, a double façade is used so to ensure that the inner façade window can be opened for natural ventilation whilst maintaining acoustic protection from the traffic on Radlicka. For the courtyard façade, a full height double-glazed facade maximizes natural light and views to the garden bellow as well as giving offices direct access to the garden terraces.

Apartments Organization

The apartments are located along the quieter residential street, and can be accessed from both the street side and the courtyard side. The 5 separate apartment houses also have direct access from the underground garage; the underground parking is divided into office and residential areas with a clear division at the bottom of the entrance ramp. Corridors in the apartment houses have natural light and street views, to ensure clear navigation. The apartment types are organized on a simple structural module so that studios and 1 bedroom flats (Type A+B) can be merged to form 2 and 3 bedroom flats (Type C+D). Larger flats (Types C+D) are primarily located on corner situations, maximizing views to the city and Type D flats are dual aspect. Street facing flats have loggia balconies that have the same language as the full height window openings, maximizing natural light. Courtyard facing balconies follow the language of the garden terraces with enclosed balconies separated by garden planters, offering privacy.

The scheme is arranged into phases, as described in the diagram opposite. Blocks B01, B04 and B07 are each designed to be built as separate phases with a mix of office and residential functions for phases B04 and B07.

Sustainability

The development requires highly efficient buildings, service strategies using innovative technologies and a supply concept dependent on renewable sources. These principles can be denoted as the three steps to an environmental sustainable development:

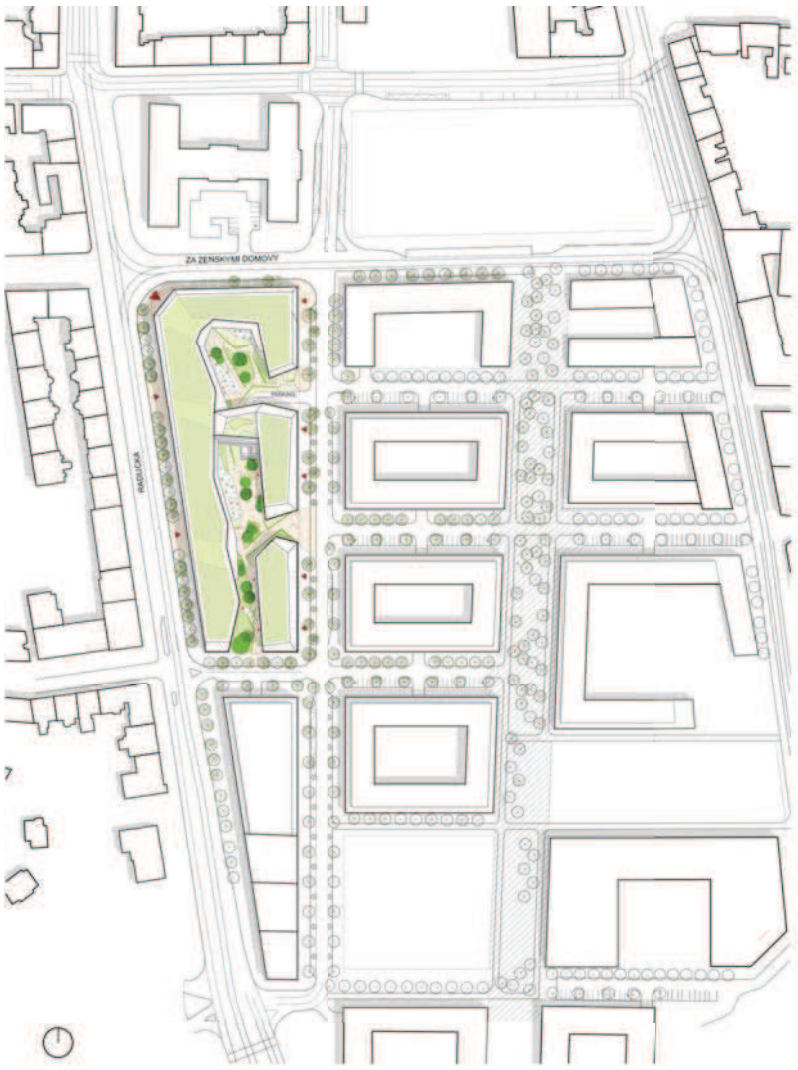
1. Minimize peak loads and annual demand
2. System optimization
3. Renewable substitution

New master plan developments provide the potential to apply sustainability on a bigger scale, affording the opportunity of different technologies and better economics. Every new master plan should be developed on the premise of a carbon neutral "road map". This doesn't mean carbon neutrality is achieved with the 1st building that is constructed but it describes a process which enables carbon neutrality as an ultimate build-out, with transformation options over time providing the flexibility to implement future technologies. At the same time a sustainable development has additional requirements which are beyond environmental issues, such as social and economic sustainability.

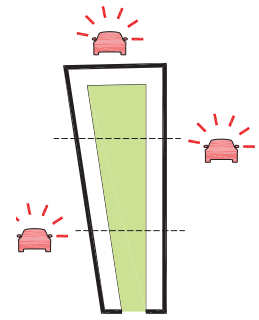
A precinct will be successful only if people feel comfortable and like the area. Issues such as architectural quality, mix of people living there, quality of retail, restaurants, security aspects etc. as well as environmental quality in the public realm (sun, light, wind) are essential. Optimizing these factors is probably the most important basis for an economically, and also socially, successful development. All of these aspects are important to everybody who is going to live, work or develop a building in this precinct.

The following sustainable strategies will be employed:

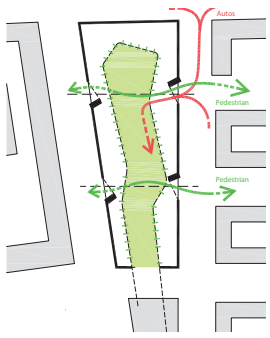
- Building massing is arranged in order to optimize view and solar access; in addition the massing is optimized in order to block wind before it enters the public realm
- Building depth provides an optimized utilization of daylight and natural ventilation
- Heating as well as cooling (where necessary) is provided with radiant systems (low temperature heating and high temperature cooling)
- Central hot water supply is used for peak load conditions - a connected seasonal heating storage can be used as a balance for the central cogeneration facility in order to allow a generation of electricity in times without sufficient heating demand - the heat from the storage will be used in the district with top priority, which increases the overall system efficiency.
- Natural ventilation, the best possible use of daylight, solar gain and optimal summer sun protection are all passive measures that will be employed as value-added features of the scheme.
- Green roofs store rainfall, rain water is used for irrigation of green area. Gray water is recycled and the installations will be geared towards low water consumption.



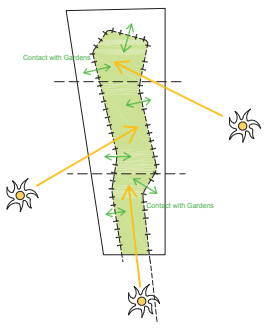
SITE PLAN 1:2000



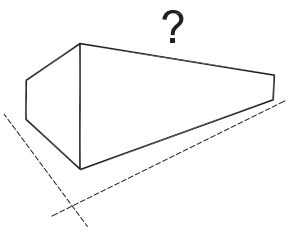
Exterior : Noise Protection



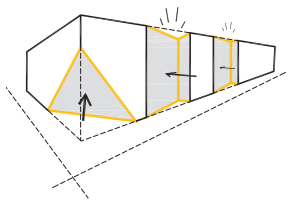
Courtyards: Gardens and Sun



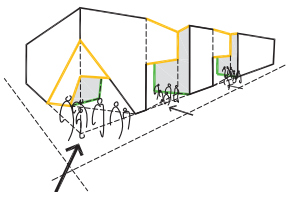
Connections



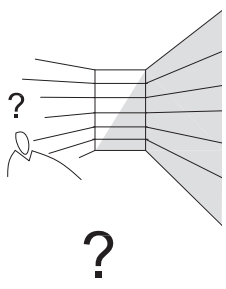
Volume

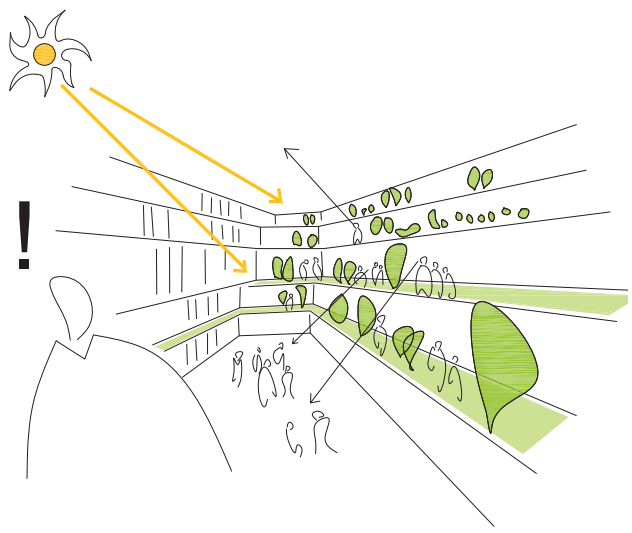


Diversity



Entrance





Courtyard : flats with balconies and terraces

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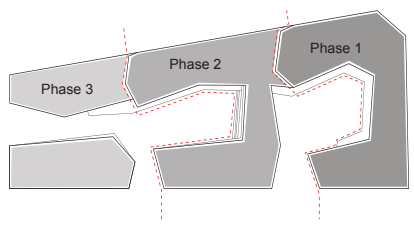
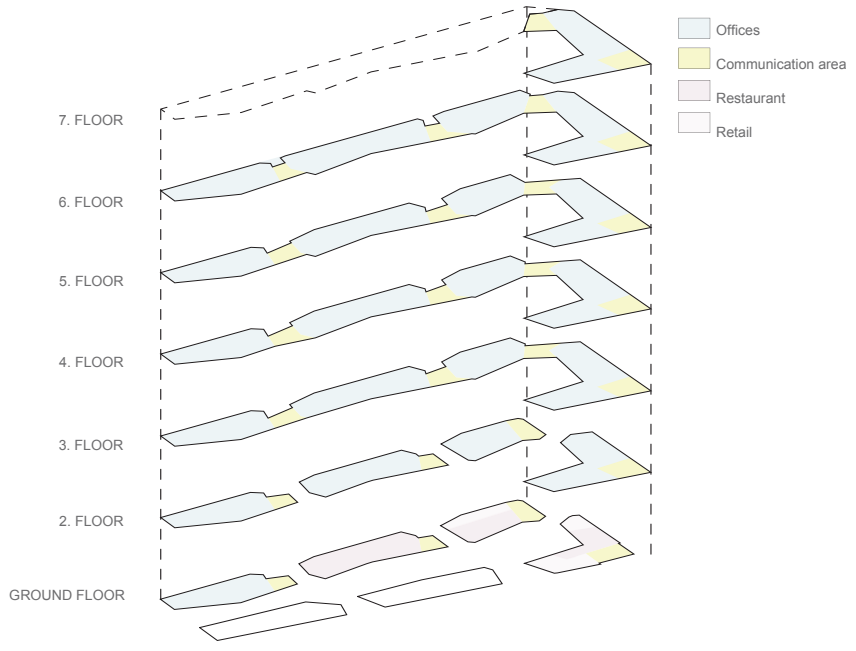
GFA Phase I	16,891 m2
GFA Phase II	17,266 m2
GFA Phase III	14,052 m2
NIA Offices	17,645 m2
NIA Commercial	4,345 m2
NIA Residential	13,228 m2
Number of Flats	221 Total
Number of Parking Spaces	164 Residentail
	608 Offices
	16 On-Street

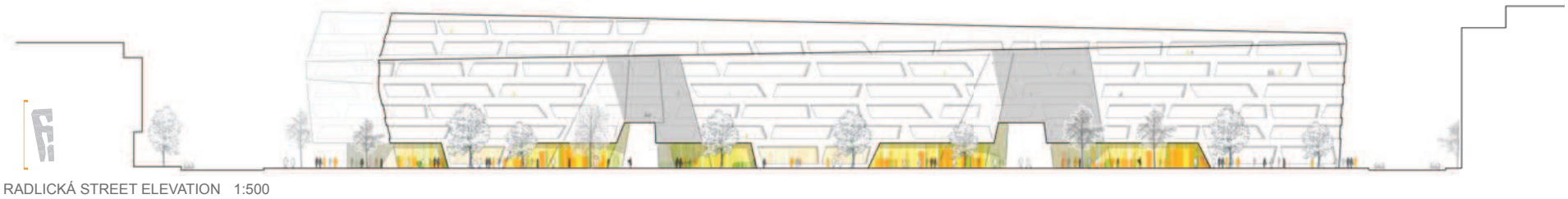
Data Table



Phasing Diagram



OFFICE ORGANIZATION



RADLICKÁ STREET ELEVATION 1:500

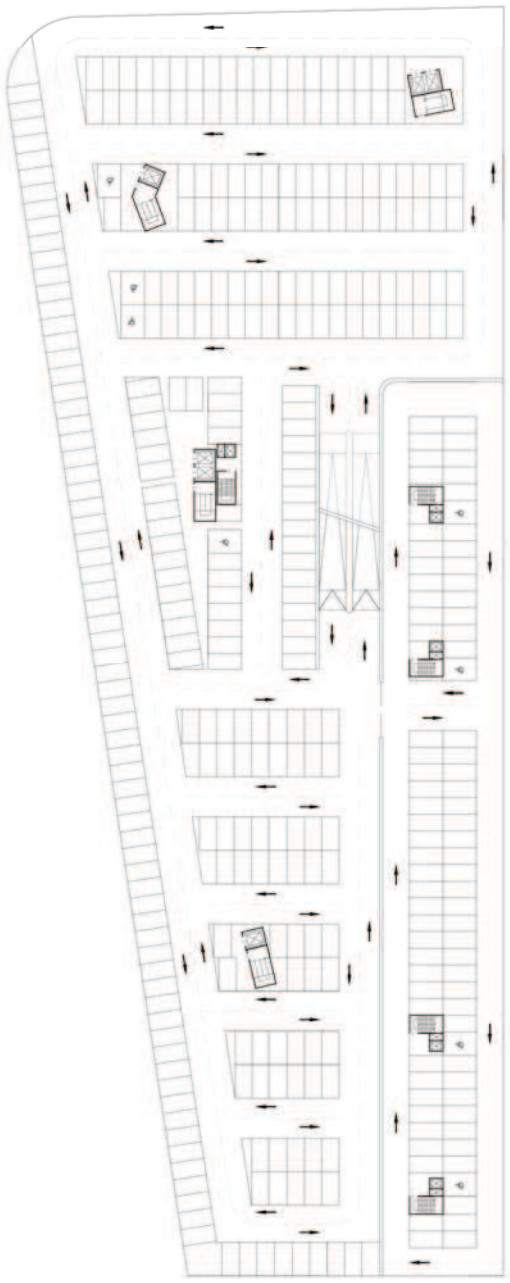
BIRDS EYE NW

BIRDS EYE SE

VIEW RADLICKÁ STREET

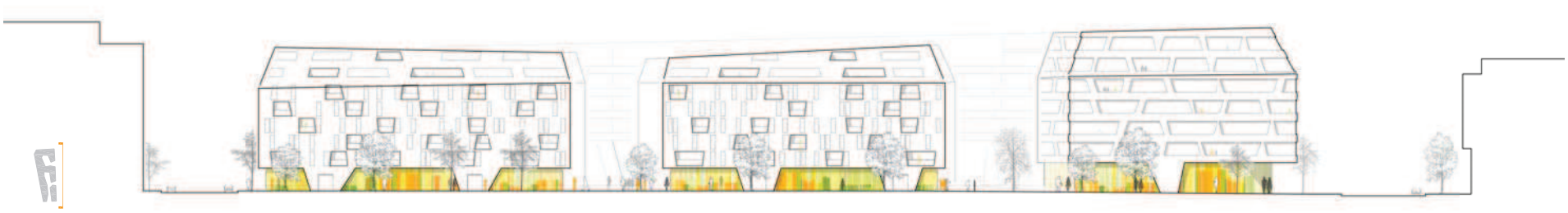
SMICHOV CITY - SEVER

RADLICKA STREET

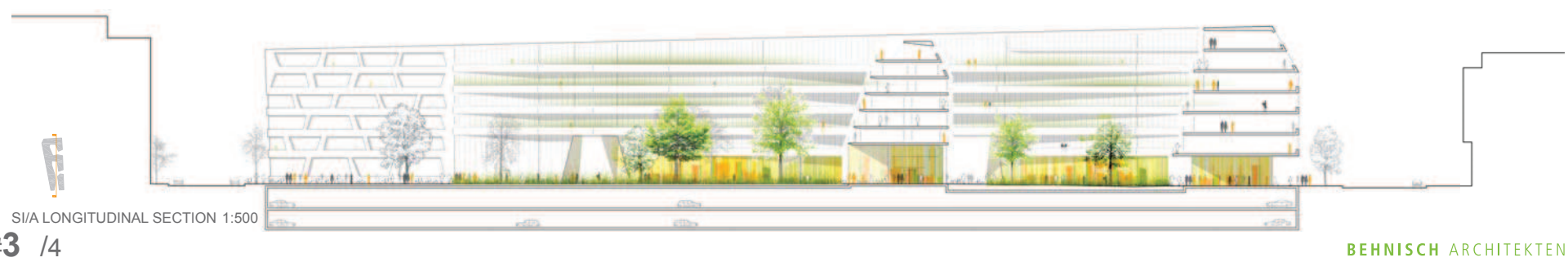


TYPICAL PARKING FLOOR 1:500

GROUND FLOOR 1:500



SI/B STROUPEŽNICKÉHO STREET 1:500



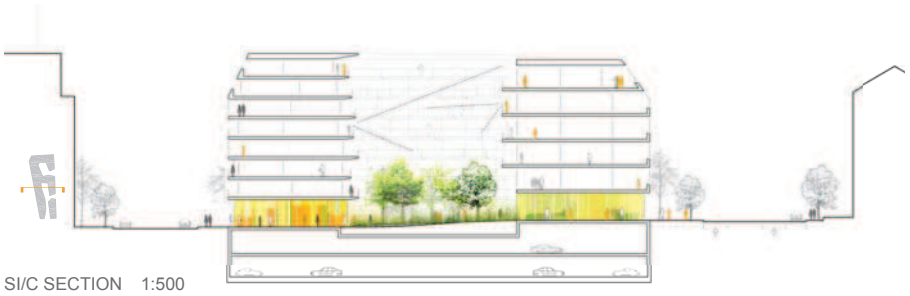
SI/A LONGITUDINAL SECTION 1:500

STROUPEŽNICKÉHO STREET

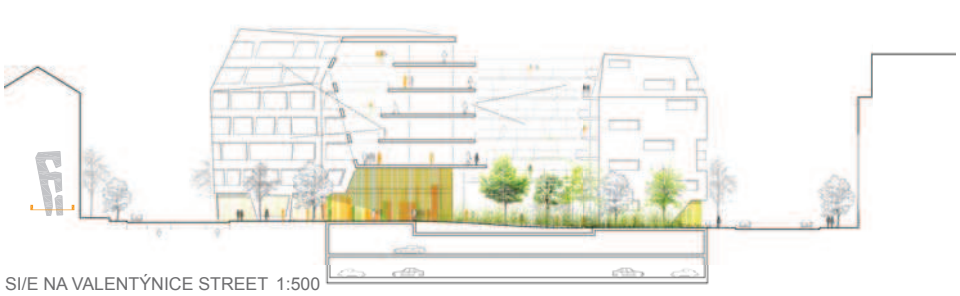
TYPICAL FLOOR 1:500

TYPICAL 2/PENTHOUSE FLOOR 1:500

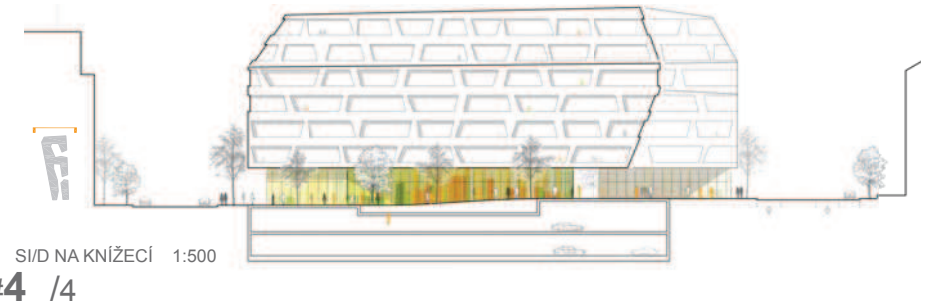
SIXTH FLOOR OFFICE / PENTHOUSE RESIDENCE 1:500



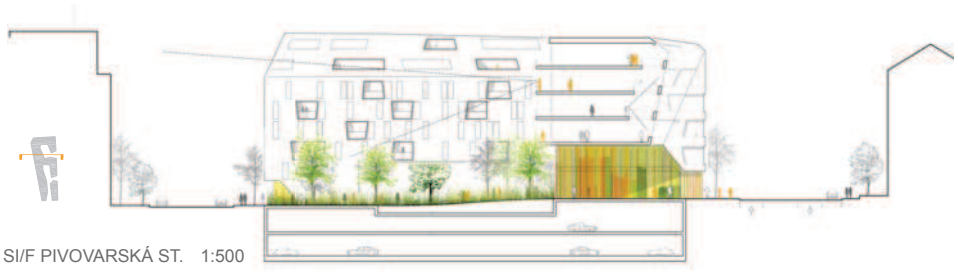
SI/C SECTION 1:500



SI/E NA VALENTÝNICE STREET 1:500



SI/D NA KNÍŽECÍ 1:500



SI/F PIVOVARSKÁ ST. 1:500