

STRYI



PILOT PROJECT FOR INTERNALLY DISPLACED PERSONS

STRYI / OBLAST LVIV / UKRAINE



DUNYA DEVELOPMENT

Integrated Housing and Economic Development Project for Displaced Persons and Local Residents in Stryi, Lviv Oblast, Ukraine



Permanent and temporary settlement of
displaced persons, sustainable economic and
infrastructure development and social services

PROJECT OVERVIEW

SMART & SUSTAINABLE LIGHTHOUSE PROJECT FOR UKRAINE

Homes for more than 14.000 displaced persons

More than 4.000 homes, 160.000 m²

Social infrastructure (hospital, kindergartens, schools)

Technical and communal infrastructure

Green & sustainable energy, industrial park

divided into 7 project phases



ISD - 4 PILLARS SMART CITY STRATEGIES

STRYI SOCIAL GREEN & SUSTAINABLE PILOT PROJECT

KNOWHOW TRANSFER COOPERATION WITH CITY OF VIENNA

SOCIAL LIVING

Affordable housing, accessibility, social diversity, cultural diversity, smart apartments

GREEN DEVELOPMENTS

Energy efficient design, green roofs & facades, indoor and outdoor thermal comfort, zero energy buildings, sponge city concept

URBAN INTERACTIONS

Future-oriented mix of housing and commercial space, offices and industry, interconnection with other urban structures, productive city

BUILDING FLEXIBILITY

Adaptive spaces for various uses, transformation of the building into other functions (as required), expandable construction (upwards or sideways) depending on space and needs, modular construction methods

COMBINATION OF HARD & SOFTWARE COMPONENTS

Project Hardware Components

Examples of project hardware
components:

construction and reconstruction of
buildings, delivery and montage of
- technical equipment,
- health sector equipment,
- infrastructure equipment, etc.



Project Software Components

Institutional capacity building

Know how transfer

Examples of project software components:

technical education programs,
experts exchange programs, etc.



PROJECT OVERVIEW

The Municipality of Stryi, near the city of Lviv has an overall population of 120.000 and is well situated close to the borders of Poland and Slovakia. The municipality is in the position and prepared for medium to long term reception and resettlement of Internally Displaced Persons (hereinafter IDPs) from the war troubled areas of the eastern areas of Ukraine, returning refugees from European countries and war affected families. The reception and integration of these populations for a short or longer stay through the proposed project will lead to economic growth, while fulfilling the principles of solidarity and national resilience.

Therefore, the Municipality is committed to the **construction and refurbishment of initially 4096 apartments for 14.336 inhabitants in 4 dedicated locations where the necessary permissions are already in place.** The housing project is combined with the development of infrastructure for the new settlements but will also be benefiting the local population. The introduction of sustainable energy generation with renewable energies as well as advanced water adduction and treatment systems as well as ecological waste management will benefit the environment and will be satisfying European standards and best practice models. The development of an industrial park as special economic zone, coupled with business development support and finance especially to small and medium enterprises, will confirm Stryi's strategic importance close to the European markets and partners and build the economic basis for the regional development in the medium and long term.

Special attention will be given to education, skill development, business acceleration and psycho-social services, including mental health.

PROJECT OVERVIEW

In total **4 separate housing projects in the municipality of Stryi** will provide medium to long term rental accommodation for up **to 14.336 beneficiaries through a total of 4.096 new apartments** developed through refurbishment or new construction.

Project	Number of apartments	Estimated Number of beneficiaries	Number of squaremeters	Provided Landslot size in ha
Dashava	115	402	4334	0,7
Rozhirche	171	599	3870	1,5
Nezhuhiv	2322	8722	16170	13,1
Bratkivtsi	1488	5208	39372	7,2
Total	4096	14336	160324	22.5

The current cost estimation for the construction of the above-mentioned shelter reconstruction and construction units is about EUR 300.000.000,- .

Income will be generated through rentals and common services at market price. Vulnerable families are expected to be subsidized through state or other external sources. The sale of a number of units can be envisaged through payment facilities.

INVESTMENT COSTS

AUSFÜHRLICHER..? WOHER KOMMEN DIESE 300 MILLIONEN?

The housing and social project for a total of € 300 Million includes also the new construction of a preschool educational institution and an elementary school, refurbishment of educational institutions and to develop existing cultural and sports institutions, as well as to build new facilities.

The project implementation, in partnership with the municipality will be ensured by the Ukrainian Charitable Foundation "Dobre Cerce", founded, and supported by the Slovakian company "DUNYA INVESTMENT s.r.o" which has secured seed a financing commitment of € 120 million for the project from the Swiss Foundation "NOIVA". As a non-profit organization Charitable Foundation "Dobre Cerce" will ensure the humanitarian and social character of project and re-invest any possible profits into social and humanitarian projects.

Through a separate commercial project financed through equity and debt, but in synergy with the humanitarian project, the introduction of sustainable energy generation with renewable energies such as biogas and solar power; as well as advanced water treatment systems and ecological waste management will benefit the environment and be satisfying European standards and best practice. The development of an industrial park as special economic zone, coupled with business development support and finance through a venture studio especially tailored to small and medium enterprises, will confirm Stryi's strategic importance close to the European markets and partners and build the economic basis for the regional development in the medium and long term.

4 PROJECT LOCATIONS



NEZHURIV

DASHAV

A BRATKIVTSI

ROZHIRCHE

Mostyska
Мостиська

Sudowa
Wyschnja
Судова
Висньця

Horodok
Городок

Lwiw
Львів

Solonka
Солонка

Rudky
Рудки

Tyra

Sambir
Самбір

Mykolajiw
Миколаїв

Bibrka
Бібрка

Peremyschljanu
Перемишляни

Nowyj Rosdil
Новий Розділ

Chodoriw
Ходорів

Rohatyn
Рогатин

Drohobytsch
Дрогобич

Truskawecz
Трускавець

Hnisdytschiw
Гнізди́чів

Stryj
Стрий

Schurawno
Журавно

Burschtyn
Бурштин

Schidnyzja
Східниця

Morschyn
Моршин

Halytsch
Галич

LOCATION 1/DASHAVA

The total area of
the land - 0,8 ha
(886 m² area of
the existing
buildings)



SHELTER PROJECT 1 | DASHAVA

The main construction of this housing project represents an **old and currently unused primary care hospital complex which will be adapted for small scale flats**. Three more floors will be added to the existing structure and the building will be duplicated with a four-storey construction semi attached.

This reconstruction and construction project will be placed in the village of Dashava which is located about 18km away from the city of Stryi.

Together with the duplicated construction the housing unit is designed to contain **15 medium term flats** with **average size of about 39sqm** for an estimated number of **402 beneficiaries**.

These medium-term smaller flats can be turned into bigger permanent shelter units at a later stage with limited costs involved if the need arises in the future.

Thereby the immediate need for fast medium-term shelter will be fulfilled and the capacities can be adapted for future long-term use in the form of bigger apartment units.

The project will also contain recreational areas open to the public and social meeting places.



Picture 1: Current situation of the construction in Dashava

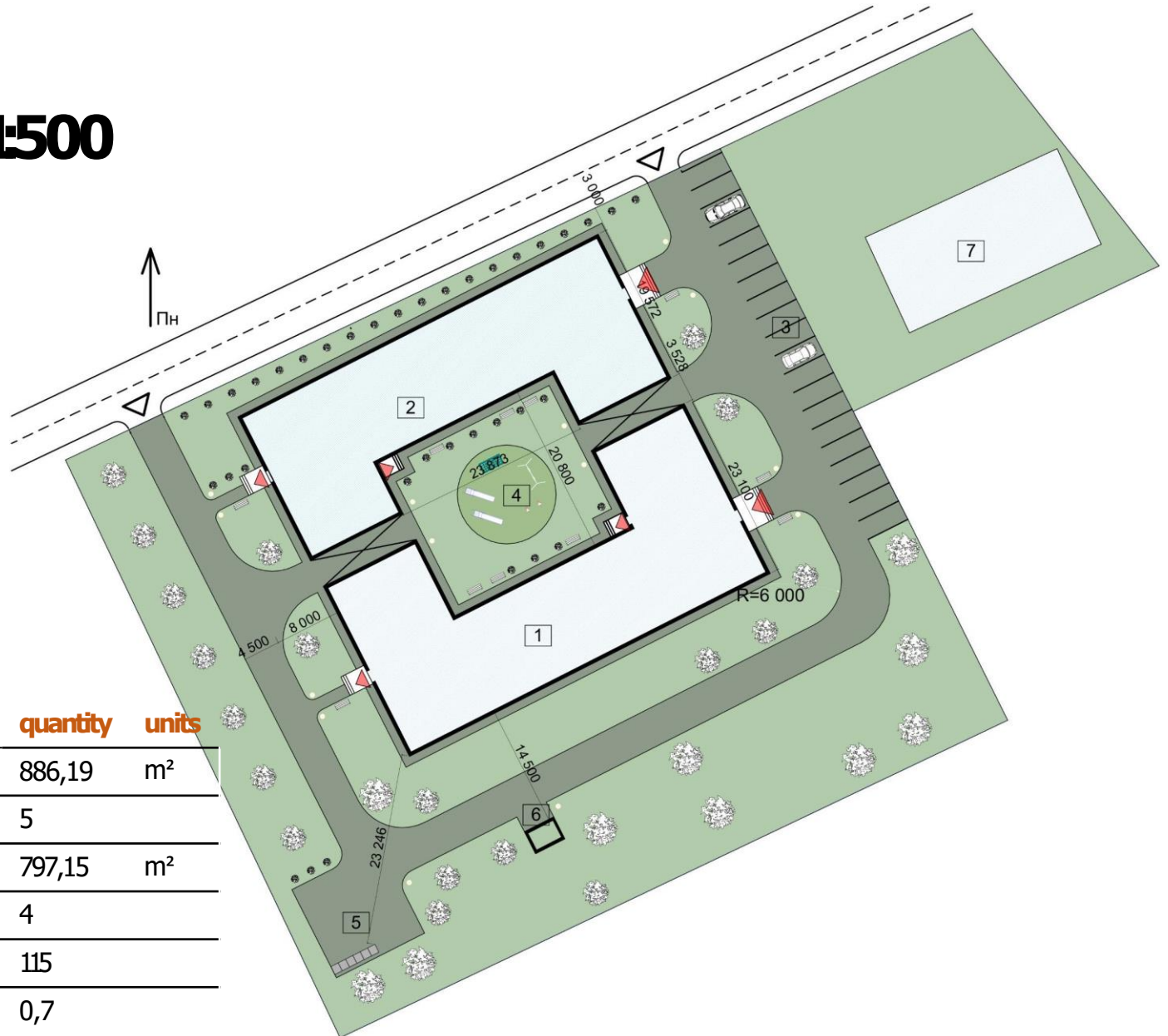
GENERAL PLAN 1:500

Explication

1. Existing section
2. Designed section
3. Parking
4. Playground
5. Garbage containers
6. Freestanding boiler room
7. The object of reconstruction for a sport and recreation facility

Name

Name	quantity	units
1. Area of existing buildings	886,19	m ²
2. Superficiality existing buildings	5	
3. Area of designed building	797,15	m ²
4. Superficiality designed building	4	
5. Flats	115	
6. Field area	0,7	



TYPICAL FLOOR PLAN



FACADES



INFRASTRUCTURE CONSTRUCTION ADAPTATION REQUIREMENTS DASHAVA SHELTER PROJECT

Electricity: Construction of Transformer Substation - 1unit, connection to 10kV networks - 200 m connection

Water: Modernization of pumping station and water tower equipment. Replacing the water supply network - 1.5 km

Sewage: Replacement of the sewage network to KNS-1 - 1.8km. Reconstruction of sewage and cleaning systems of sewage treatment facilities.. Replacement of the emergency section of the water supply: str. L. Ukrainki-300m, Polubotka - 300m, Replacement of the emergency section of the drainage network: str. Bandery – 500m, Kulisha – 80m

Heating: Connection to the existing gas network (on the site up to 50m). Construction of modular gas boiler house 600kWτ

Road access: Overhaul of the connecting road and construction of pavements - 1.5 km V category

LOCATION 2 / ROZHITRICE

The total area of
the land - 1,6 ha
(1160 m² area of
the existing
buildings)



300 m



SHELTER PROJECT 2 | ROZHIRCHE

This proposed housing project is located in the village of Rozhirche about 25 km away from Stryi city center

The main capacity of the construction represents an **old school building** that has not been in use, which **will be adapted to contain 63 medium term flats** that can be turned into bigger permanent shelter units at a later stage with limited costs involved .

In addition to the old school complex six new 3-floor housing structures will be built at the compound providing for further 108 apartments.

Recreational and sports facilities like an amphitheatre and a sportsground **are planned** and will be established which will also serve to the inhabitants of the village of Rozhirche.

Thereby the immediate need for fast and medium-term shelter will be fulfilled and the capacities can be adapted for future long-term use in the form of bigger units.

In total 171 housing units will be established through this project component.

Accompanying industrial development projects such as the **establishment of a water bottling plant** in the vicinity of the village of Rozhirche and renewable energy projects will establish necessary labour creation capacities. Beneficiaries of the shelter project will be in the position to get **employment through the accompanying projects.**



Picture 2: Current situation of the construction in Rozhirche

GENERAL PLAN 1:500

Explication

1. Reconstructed building
2. Parking
3. Technical zone
4. Playground
5. Designed houses



Plot area

1,5 ha

Designed houses (4 floors)

6

Number of flats

96

1ST FLOOR PLAN 1:200

Total 1 st floor square	1242 m ²
Total 1 st floor apart. square	951 m ²
Total square of the building	4969 m ²
Total square of apartments	3804 m ²
Building area	1459 m ²



2 VERSIONS OF PLANNING



INFRASTRUCTURE CONSTRUCTION ADAPTATION REQUIREMENTS ROZHIRCHE SHELTER PROJECT

Electricity: Construction of Transformer Substation - 1 unit, construction of an overhead line -2.7 km and connection to 10 kV network.

Water: Reconstruction of additional wells at the water intake - 2 pcs. Replacement of the water line from the access point to the boundary of the land plot with an approximate length of 3.2 km

Sewage: Replacement of the sewage network on the street Promyslova to sewage treatment facilities.- 1.8 km. Reconstruction of the KNS and modernization of pumping equipment.

Replacement of pressure collector 2*F400 from sewage treatment facilities. to st. Nyzhankivskyi, the estimated length is 1.5 km.

Heating: Construction of a medium-pressure gas network - 800 m, Installation of a gas boiler room for f 2 units - 4000 kW and 6000 kW

Road access: Overhaul of the connecting road and construction of pavements –4,3 km V category

LOCATION 3 / NEZHUHIV 1

The total area of the land - 7,4 ha.



900 m

SHELTER PROJECT 3 | NEZHUVI

This new construction project will be placed in the vicinity of the already **existing industrial area** right next to the operational factory of the German Leoni enterprise which is producing car wiring structures in Stryi and represents **one of the biggest employers in the region now.**

Also next to this project component the **newly planned industrial park** in the northern part of Stryi city will be located and will provide for employment opportunities and new jobs on all different qualification levels.



Picture 3: Current situation of the identified land slot in Nezhuviv

The **new construction complex will be established to contain 2322 medium term apartments for an estimated 8127 beneficiaries.** These medium-term smaller flats can be turned into bigger permanent shelter units at a later stage with limited costs involved.

The project will involve 74 apartment buildings with four to nine floors each and will provide for housing units that again can be adapted for permanent shelter at a later stage.

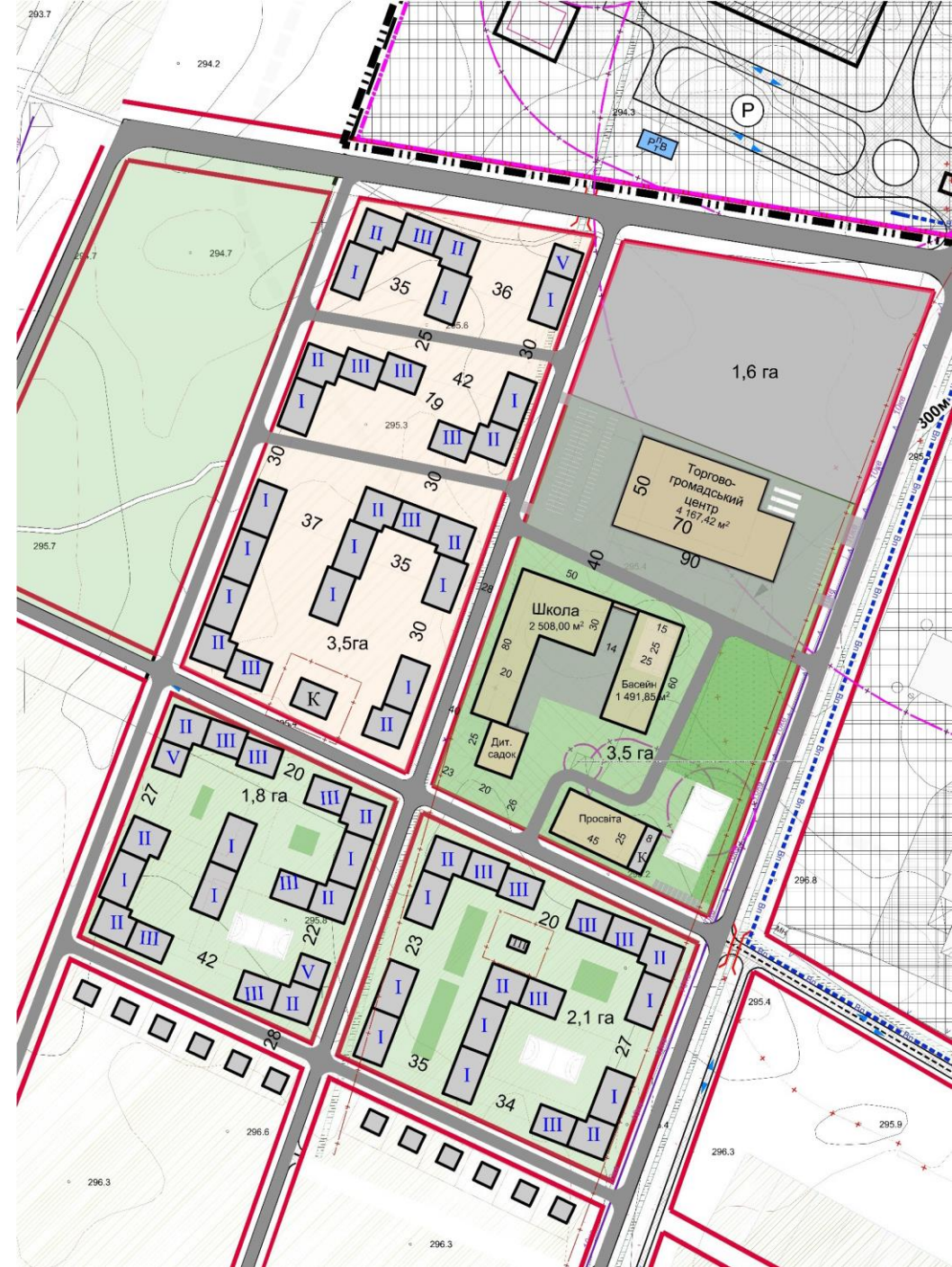
This project component will also establish additional sports facilities like a soccer ground and outdoor training facilities, a swimming pool, a kindergarten for about 100 children, a primary school for 280 pupils and a public and social centre with police station and primary aid clinic within the new settlement.

GENERAL PLAN 1:500

Plot area **7,4 ha**

Designed houses (4 and 9 floors) 74

Number of flats 2322



SECTION PLANNING | Type 1

Technical and economic numbers

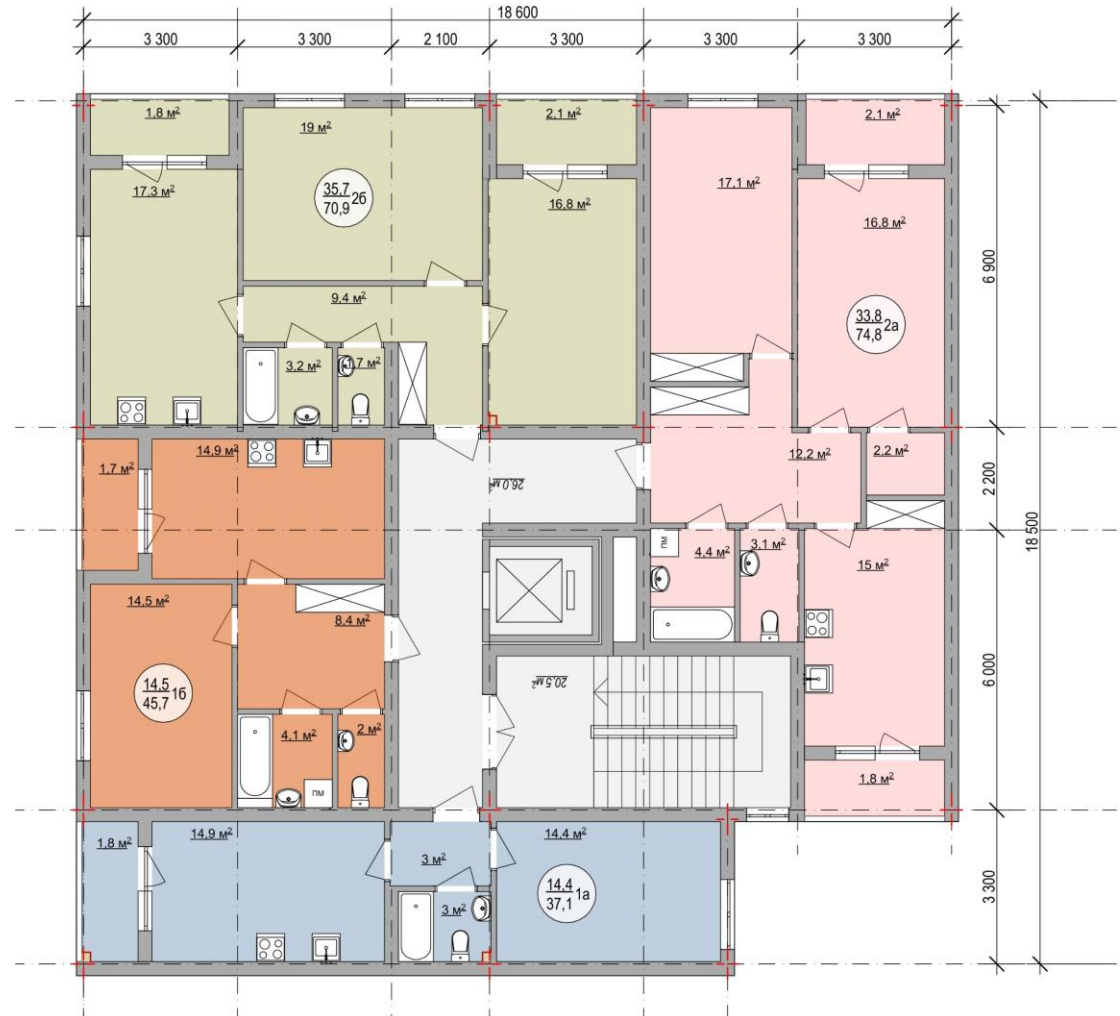
Building area	382,8 m ²
Floor area	334,7 m ²
Apartments area	273,4 m ²
Number of apartments per floor	7
Out of them: 1-room apartment	6
2-rooms apartment	1



SECTION PLANNING | Type 2

Technical and economic numbers

Building area	315,1 m ²
Floor area	275,1 m ²
Apartments area	228,5 m ²
Number of apartments per floor	4
Out of them: 1-room apartment	2
2-rooms apartment	2



SECTION PLANNING | Type 3

Technical and economic numbers

Building area	289,2 m ²
Floor area	250,0 m ²
Apartments area	208,7 m ²
Number of apartments per floor	4
Out of them: 1-room apartment	2
2-rooms apartment	2



SECTION PLANNING | Type 4

Technical and economic numbers

Building area	335,0 m ²
Floor area	293,4 m ²
Apartments area	249,3 m ²
Number of apartments per floor	4
Out of them: 1-room apartment	2
2-rooms apartment	1
3-rooms apartment	1



SECTION PLANNING | Type 5

Technical and economic numbers

Building area	187,2 m ²
Floor area	158,5 m ²
Apartments area	118,1 m ²
Number of apartments per floor	3
Out of them: 1-room apartment	3



INFRASTRUCTURE CONSTRUCTION ADAPTATION REQUIREMENTS **NEZHUV** SHELTER PROJECT

Electricity: Construction of Transformer Substation - 1 unit, construction of an overhead line -2.7 km and connection to 10 kV networks.

Water: Reconstruction of additional wells at the water intake - 2 pcs. Replacement of the water line from the cut-in point to the boundary of the land plot with an approximate length of 3.2 km

Sewage: sewage network on the street. Promyslova to sewage treatment facilities.- 1.8 km.

Reconstruction of the KNS and modernization of pumping equipment

Replacement of pressure collector 2*F400 from sewage treatment facilities. to st. Nyzhankivskyi, the estimated length is 1.5 km.

Construction of sewage treatment facilities. and pressure collector $\phi 630$ mm for pumping sewage effluents of the Skartal to the self-alloying sewage network, st. Industrial

Replacement of pressure collector 2*F400 from sewage treatment facilities. to st. Nyzhankivskyi, the estimated length is 1.5 km.

Heating: Laying of a medium-pressure gas network - 800 m, Installation of hydraulic fracturing, Construction of a gas boiler room for a quarter of 2 units - 4000 kW and 6000 kW

Road access: Overhaul of the connecting road and construction of pavements –4,3 km V category

LOCATION 3 / BRATKIVTSI

The total area of
the land - 7,0 ha.

LOCATION?
WOGENAU?

600 m



SHELTER PROJECT 3 | BRATKIVTSI

This new construction project will be placed in the south of the city centre as a completely new settlement to the north-west of the village of Bratkivsti

Bratkivsti is located about 10 min drive away from Stryi and can be easily reached by buses.

31 new buildings with a total of 1488 housing units will be established with dedicated parking facilities and social infrastructure like a **reconstruction of the nearby soccer ground to be turned into a small sized soccer stadium**



Picture 4: Current situation of the identified land slot in Bratkivsti

About **5200 beneficiaries will receive housing** through this project component.

This project component **will also involve a kindergarten** and the **existing primary school** in the vicinity of the new constructions **will be reconstructed**.

INFRASTRUCTURE CONSTRUCTION ADAPTATION REQUIREMENTS BRATKIVTSI SHELTER PROJECT

Electricity: Construction of Transformer Substation - 1unit, construction of an overhead line and connection to 10 kV networks. Transfer of PL-10kV beyond the land plot.

Water: Reconstruction of additional wells at the water intake - 1pcs. Construction of the water channel from the cut-in point to the boundary of the land plot with an approximate length of 600 m and diameter of 600mm

Sewage: Construction of ne sewage network treatment facilities. Construction of a sewage pump station and 2 km pressure collector for the discharge of treated wastewater into the river Zizava.

Heating: Laying of a medium-pressure gas network - 200 m, Installation of hydraulic fracturing, Construction of a gas boiler room for a quarter of 1unit and 6000 kW

Road access: Overhaul of the connecting road and construction of pavements –2,1 km V category