URBAN PLAN OF DETAIL REGULATION

FOR THE LINEAR PARK - BELGRADE,
CITY MUNICIPALITIES STARI GRAD AND PALILULA

Contents

A)	GENERAL PART	3
1	1. Starting basics	3
2	2. Scope of the plan	4
	2.1. Plan limit	4
	2.2. List of cadastral parcels within the plan boundary	4
3	3. Legal and planning basis	4
4	4. Existing purpose of the area	4
B) F	RULES OF ARRANGEMENT AND CONSTRUCTION	5
1	1. Planned purpose of the area and division into zones	5
	1.1. Planned purpose area	5
2	2. General rules of arrangement and construction	6
	2.1.1. Protection of cultural heritage	6
	2.1.2. Protection of nature and natural resources	6
	2.1.3. Environmental protection and improvement	9
	2.1.4. Protection against natural and other major disasters and spatial-planning condition interest for the country's defense	
	2.1.5. Engineering-geological conditions	9
	2.1.6. Energy efficiency measures of construction	9
	2.1.7. Conditions for accessibility of space	9
	2.1.8. Conditions for waste evacuation	9
3	3. Rules of arrangement and construction for public areas	10
	3.1. Traffic areas	10
	3.1.1. Road network	10
	3.1.2. Public transport	10
	3.1.3. Green areas within the regulation of public traffic areas	10
	3.2. Areas for infrastructure facilities and complexes	10
	3.2.1. Water supply network and facilities	10
	3.2.2. Sewage network and facilities	10
	3.2.3. Electricity network and facilities	10
	3.2.4. Telecommunication network and facilities	10

	3.2.5. Hot water network and facilities	10
	3.2.6. Gas pipeline network and facilities	10
	3.3. Green areas	
	3.3.1. Park	10
	3.3.2. Protective green belt	21
	3.4. Water land	21
	3.4.1. The waters of the Danube	21
	3.4.2. Coastal land	21
	3.5 Water surfaces	21
	3.6. Areas for public service facilities and complexes	21
	3.6.1. Preschools (J1)	21
	3.6.2. Primary schools (J2)	21
	3.6.3. Higher education institutions (J4)	21
	3.6.4. Primary health care facilities (J6)	21
	3.6.5. Social protection institutions (J8)	21
	3.6.6. Cultural institutions (J9)	21
	3.7. Areas for sports facilities and complexes	21
	3.7.1. Sports and recreational complexes	21
	3.7.2. Competitive-sports complex	21
4.	Rules of arrangement and construction for areas of other purposes	21
	4.1. Mixed city centers	21
	4.2. Commercial facilities	21
	4.2.1. Zone K1.1	21
	4.2.2. Zone K1.2	21
	4.3 Areas for sports facilities and complexes	21
5.	Balances of urban parameters	21

A) GENERAL PART

1. Starting basics

Development of a detailed regulation plan for the linear park - Belgrade, the city municipalities of Stari grad and Palilula (in the following text: the plan) was approached on the basis of the Decision on the development of a detailed regulation plan for the linear park - Belgrade, the city municipalities of Stari grad and Palilula ("Official Gazette City of Belgrade", No. 88/18) which is adopted by The Assembly of the City of Belgrade at the session held on 25. September 2018, at the initiative of the Directorate for Construction Land and Construction of Belgrade PE.

The development of the plan was preceded by an invitation competition for young teams of professional architects. According to the competition program, the area of the Linear Park is divided into 10 spatial units. The goal is clearly defined - provide creativity in creating innovative and sustainable solutions to improve the quality of life and environmental conditions for a pleasant stay outdoors for all fellow citizens and users of this part of Belgrade.

The call for the development of a conceptual solution for a part of the linear park area was announced by the Cabinet of the City Urbanist in cooperation with the Association of Belgrade Architects (DAB) in December 2019. The public competition provided the application of 28 teams, which are a total of 127 participants.

The competition was conducted in the period from December 18, 2019 to January 28, 2020, and decision was made on February 26, 2020 by selecting 10 best urban-architectural teams.

The final submission of the conceptual solutions of the teams was at the beginning of September 2020.

Elaborated competition solutions were the basis for drafting the plan and they are implemented it in the plan as much as possible.

The plan was presented at an early public inspection in the period from 13 May, 2020 to May 27, 2020 and the Planning Commission from The Assembly of the City of Belgrade adopted the Early public insight Report which is implemented in this plan as integral part, at the 112th session, held on June 30, 2020.

General goals of the plan

The general goal of the plan is the urban transformation of the railway corridor.

The basic principle for the use and arrangement of the former railway is:

- formation of public urban space that connects other public spaces with its linear form, which is its peculiarity in relation to other urban matrix,
- · emphasizing public use of space,
- offer of various public contents within the planned green areas,
- suggesting, developing and networking public green urban spaces, as one of the most important factors in the constitution of the urban identity of Belgrade and the realization of direct contact between people and the environment
- realization of ecological, social and economic function of the linear park, as an ecosystem in urban space, by improving microclimatic characteristics, biodiversity, functional characteristics of space, public health and well-being of citizens, etc., by forming an ecological corridor by continuous planting of various forms of vegetation (tree lines, groups of trees and shrubs, massifs of trees, flower beds, various nature based solutions, etc.),

creating a single public space that contributes to the common good by including all the
principles of gender responsible planning and design, social inclusion and accessibility for all
with special care for vulnerable groups.

Protection and potentials of space and basic limitations construction

- The area of the linear park Belgrade, in terms of space, is a link between the Beton hala and the Pancevo Bridge, as well as the Danube slopes and the banks of the Danube River.
 - As such, this area has exceptional potential, impact and significance for the development of the city.

Good traffic connections and accessibility to all types of traffic, defined area is near the Belgrade coast, rivers and various zones of attractions in the contact area (Kalemegdan Fortress, Beton hala, Passenger Port, SRPC "Milan Gale Muskatirovic", tennis courts "Novak", Danube Quay, restaurants and etc.) and urban transformation of the former railway route, gives the opportunity to introduce different programs content and urban ambiences with the aim of permeating and connecting the historical and new identity of the Danube area slopes.

Expected planning effects in terms of improving the use of space

- increasing the attractiveness of the area,
- new character and quality of the urban area in the context of the image of the city
- equipping the subject area with communal facilities, transport and social infrastructure
- improving the state of the environment
- positive impact on the microclimate and natural and functional characteristics of the space
- positive impact on the activation of business opportunities and resources of the area

2. Scope of the plan

2.1. Plan limit

2.2. List of cadastral parcels within the plan boundary

3. Legal and planning basis

4. Existing purpose of the area

The following purposes are included in the scope of the plan:

Areas of public use are:

- water surfaces,
- areas for facilities and complexes of public services,
- green areas,
- traffic areas (parking lots and public utility terminus),
- road network (underpass, overpass, pedestrian towards the footbridge, existing bicycle path),
- railway,
- areas for infrastructure facilities and complexes,
- areas for sports facilities and complexes.

Areas of other purposes are:

- living space,
- areas for commercial facilities,
- undeveloped land.

B) RULES OF ARRANGEMENT AND CONSTRUCTION

1. Planned purpose of the area and division into zones

1.1. Planned purpose area

TRAFFIC AREAS:

- road network (Streets: Nova 1, Bulevar Vojvode

Bojović, Dunavska, Tadeuša Košćuška, Dubrovačka, Mike

Alasa, Dunavski kej, Dunavski kej 1, Knežpoljska, Viline vode 1, 2 i 3, Poenkareova, Žorža Klemensoa, Mitropolita Petra i Ulica rampa 1)

- public garage (SP1)
- pedestrian path / pedestrian penetration

AREAS FOR INFRASTRUCTURE FACILITIES I COMPLEXES:

- pumping stations (CS)
- heating plant complex (TO)
- measuring and regulating station (MRS)

GREEN AREAS:

- park (ZP1)
- protective green belt (ZP5)

WATER LAND:

- water area of the Danube river and coastal land (green areas along the Danube) (V3)

WATER SURFACES:

- water surfaces (Marina pool) (VP)

AREAS FOR PUBLIC FACILITIES AND COMPLEXES SERVICES:

- preschool institutions (annexes J1-D)
- higher education institutions (J4)
- primary health care institutions (J6)
- social protection institutions (working unit J8-RJ)
- cultural institutions (J9)

AREAS FOR SPORTS FACILITIES AND COMPLEXES:

- sports and recreational complexes (ST1)
- competition and sports complexes (ST2)

Planned areas for other purposes are:

MIXED CITY CENTERS

- zone of mixed city centers in the zone of the center of Belgrade city (M1)

SURFACES FOR COMMERCIAL FACILITIES

- zone of commercial contents in the zone of higher floors (K1.1 to K1.2)

AREAS FOR SPORTS FACILITIES AND COMPLEXES:

- sports and recreational complexes (ST)

Within the boundaries of the plan, according to the predominant purpose and the planned way of land use, it is possible to identify seven spatial units.

Characteristic spatial units:

<u>Unit 1</u>, which extends along the entire area of the plan, is divided into ten sub-units, which were elaborated in the previous phase through conceptual designs of the call for proposals. The area encompassing Unit 1 extends along Vojvode Bojovića Boulevard and Dunavska Street, encompassing the former railway corridor around Kalemegdan to Pancevo bridge. The predominant purpose of this

unit is public green area (linear park) whose diversity connects public spaces in the contact area, forming a network of public urban spaces. Within these units are also planned areas for buildings and complexes of public services and cultural facility (museum Nebojsa Tower) and facility of higher education institutions. Sub-units have their own specific and characteristics that are described in the rules of construction and arrangement for public green areas - linear park.

<u>Unit 2</u> is predominantly sports purposes, encompassing the existing SRPC "Milan Gale Muškatirović", the existing one courts of FC "Polet and Dorcol" and Tennis Center "Novak".

<u>Unit 3</u> includes the area of the former Marina "Dorcol" which is being transformed into mixed city centers, the area of the former Thermal Power Plant "Power and Light" which is planned for revitalization with a new purpose - culture and the area between the former thermal power plant and the Danube River planned for public green space - park.

<u>Unit 4</u> includes the complex of the existing Heating Plant "Danube" and the existing retained pumping station facility. This area basic purpose has been retained - areas for infrastructure facilities and complexes.

<u>Unit 5</u> is planned for facilities and complexes of public services - higher education institutions, Faculty of Music with a Department of Dance.

<u>Unit 6</u> represents the space within which it is located hotel "Admiral" and which gives the opportunity to develop the existing purpose - commercial facilities.

<u>Unit 7</u> is a unit of dominant purpose – mixed city center, and within this unit there is an institution primary health care and area for infrastructure facilities and complexes.

2. General rules of arrangement and construction

2.1.1. Protection of cultural heritage

2.1.2. Protection of nature and natural resources

Nature protection, based on the preservation and sustainable use of natural resources and natural values, is carried out in accordance with the Law on Nature Protection, The law of environmental protection, Law on Ratification of the Convention on Biological Diversity, Regulation on the ecological network and etc.

The area of the plan in question is not within the protected area. The plan is bordered in the extreme southwestern part with the Monument of Nature "Kalemegdan Cape", I (first) category of protection - international, national, or exceptional importance, with established protection regimes II (second) and III (third) degree. The boundaries of natural monuments include a unique natural rarity of geological character on the territory of Serbia - the profile of the sea shore from the oldest stage in the history of the former Pannonian Sea. The only protected area is located on cadastral parcel 67/2, KO Stari Grad, area of 14 ha 07 and 18 m2, which is fully owned by the state. Prohibition measures and restrictions are defined by The study of the protection of SP "Kalemegdanski rt" and given in the Decision of protection. Also, the plan with the northern border includes a part of the ecologically important area "The confluence of the Sava and the Danube" and the river Sava and Danube ecological corridors of international importance, which are part of the ecological network of the Republic of Serbia, according to the Decree on the ecological network.

In order to preserve nature and natural processes, the Linear Park is planned as part of the green infrastructure of the city, the arrangement of which will provide ecological functions as an ecosystem in urban space. According to its shape and position in space, as well as the functions it should perform, the park will be arranged as a green (ecological) corridor. Realization of planned continuous forms of vegetation (tree lines, groups of trees and shrubs, massifs of trees, flower beds, various nature-based

solutions, etc.) will enable natural processes that will positively affect the quality of air, water, soil, biodiversity, etc. hence the quality of life in the city. The solution plans an even distribution of storeys of plant species, so that the floor of shrub species as "urban" corridors for wild species is provided as much as possible. Also, a certain percentage of green areas in direct contact with the soil on plots planned for public and other purposes is planned. Preservation and protection of dendroflora (individual trees, as well as groups of trees) is planned. Landscaping is planned according to high environmental standards. The planning solution preserves the integrity of the protected area of the SP "Kalemegdan Cape".

When implementing the planning solution, it is necessary observe the following protection measures:

- on areas where the protection regime of the III degree has been established, it is prohibited
 - construction of tourist accommodation and catering facilities, except for temporary facilities for the presentation of natural values or facilities in the traditional style that are in line with the needs of cultural heritage and the conditions of the competent organization for the protection of cultural heritage;
 - construction of energy facilities other than distribution electric power networks for the needs of electric power supply for temporary facilities;
 - planting material that could reduce the visible surface of the profile due to its height and size;
 - terrain modeling, except in order to achieve terrain stability if other solutions are inapplicable, for the purposes of archaeological research and presentation of cultural values;
 - construction and / or extension of facilities that are not in the function of natural and cultural property and for which it has not been obtained consent of competent institutions and organizations, except for water management activities;
 - unauthorized and uncontrolled fire lighting;
 - temporary and permanent disposal of waste materials;
 - introduction of invasive allochthonous species;
 - undertaking all other activities that may impair the visual integrity of cultural and natural assets.
- in areas where the protection regime of the II degree has been established, in addition to the prohibitions from Article 5 of the Decree, it is also prohibited:
 - destruction of existing natural shoots and those which would eventually be opened by archeological excavations;
 - destruction of fossil material on natural and artificially open sediment outcrops;
 - destruction of vegetation, especially that which could result in instability or erosion;
 - incision of the slope and for archaeological research, if the stability of the slope has not been previously analyzed by the research project and measures have been envisaged to ensure the stability of the excavation and the slope as a whole;
 - holding events that could endanger the shoots, or for which smooth running facilities would have to be set up, and which could affect the natural well in any way.
- restrictions for construction from the aspect of environmental protection networks (ecologically significant areas and ecological corridors) are defined by measures:
 - prohibition of habitat destruction and disturbance, as well as destruction and harassment of wild species; ban on destruction of areas under natural and semi-natural vegetation (coastal vegetation, etc.);

- prohibition of changes in morphological and hydrological characteristics of the area on which the functionality of the corridor depends; prevention, reduction, control and remediation all forms of pollution;
- improvement of ecological corridors within construction areas by establishing continuity of green areas whose structure and purpose support the functions of the corridor; apply appropriate technical solutions when illuminating the area in accordance with the function of the location and the needs of public areas;
- direct light sources of public lighting towards the ground; the use of strong light sources is not allowed (advertising rotating reflectors, lasers, etc.) directed towards the sky, in order to protect the ornithofauna;
- it is necessary to perform an expert analysis of the existing vegetation (bioecological basis), in order to determine the physiological and health status and functionality of existing specimens of dendroflora; in accordance with the obtained results of expert analysis, preserve functionally valuable specimens of existing dendroflora;
- it is necessary to preserve the surrounding vegetation as much as possible, especially dendroflora, ie old and quality trees and specimens of protected, rare and otherwise significant species of trees and shrubs;
- when choosing a species for new planting preference should be given to indigenous species of trees and shrubs adaptable to natural and created conditions of the subject area; as decorative the exotics species can be used olny those which can be adapted to local conditions, without being invasive and allergens; invasive (aggressive, allochthonous) species in Serbia are: Acer negundo, Amorpha fruticosa, Robinia pseudoacacia, Ailanthus altissima, Fraxinus americana, Fraxinus pennsylvanica, Celtis occidentalis, Ulmus pumila, Prunus padus, Prunus serotina and others. the overall landscaping of the space must be connected to the greenery of the surrounding area and connected to the greenery system of the city;
- when choosing a species, take into account the dimensions of the dendroflora habitus and the dimensions of the root system, ie. anticipate all measures to avoid track leveling (eg by placing rings due to root orientation system in the desired direction);
- by greening provide good ventilation of the area, to improve the microclimate, provide more comfortable environmental conditions for living and working;
- apply species that are resistant to urban conditions, and in form and color meet aesthetic values (decorative);
- it is desirable to use fast-growing species, which have greater phytoncidal and bactericidal action and pronounced aesthetic values;
- performing works that require the cutting of adult, valuable specimens of dendroflora, requires the consent of the competent institutions, in order to reduce the destruction of vegetation to a minimum; if the existing public greenery is destroyed due to construction, it must be compensated under special conditions and in a manner determined by the local self-government unit, ie the city of Belgrade;
- to build facilities for certain purposes in accordance with the principles of energy efficiency;
- prohibit the placement of temporary facilities such as are kiosks, metal garages, etc. in public areas (sidewalks, parking lots, green areas);
- organize the construction site on a minimum area necessary for its functioning, and the manipulative surfaces should be spatially limited so as not to disturb the natural state of the terrain more than is necessary;

- to access the location the planned route, make maximum use of the existing road network, in order to prevent fragmentation of green areas;
- trees near the works protect from damage of manipulation by vehicles and construction machines; during earthworks the root system must remain undamaged;
- during the execution of works in the subject area, define the location for temporary disposal of materials necessary for the performance of works; disposal of materials on that location is limited exclusively to the duration of the works;
- during the execution of the subject works, it is necessary to maintain the maximum level of communal hygiene; to carry out systematic collection of solid waste that occurs in the process of construction and residence of workers in the construction site zone;
- to collect construction and municipal waste generated during the works in the courts intended for that purpose and to evacuate it regularly in cooperation with the competent communal service;
- after the completion of works all excess materials, equipment and remove waste from the site immediately;
- if during the works geological-paleontological or mineralogical-petrological objects are found, which are presumed to have the property of a natural asset, the contractor is obliged to inform the Ministry of Environmental Protection, as well as to take all measures to protect against destruction, damage or theft. arrival of an authorized person;
- it is necessary to inform the competent inspection service before starting the works in order for the authorized person to be able to supervise the implementation of conditions and measures for nature protection.
- 2.1.3. Environmental protection and improvement
- 2.1.4. Protection against natural and other major disasters and spatial-planning conditions of interest for the country's defense
- 2.1.5. Engineering-geological conditions
- 2.1.6. Energy efficiency measures of construction
- 2.1.7. Conditions for accessibility of space
- 2.1.8. Conditions for waste evacuation

- 3. Rules of arrangement and construction for public areas
- 3.1. Traffic areas
 - 3.1.1. Road network
 - 3.1.2. Public transport
 - 3.1.3. Green areas within the regulation of public traffic areas
- 3.2. Areas for infrastructure facilities and complexes
 - 3.2.1. Water supply network and facilities
 - 3.2.2. Sewage network and facilities
 - 3.2.3. Electricity network and facilities
 - 3.2.4. Telecommunication network and facilities
 - 3.2.5. Hot water network and facilities
 - 3.2.6. Gas pipeline network and facilities

3.3. Green areas

3.3.1. Park

3.3.1. Park					
RULES FOR BUILDING (CONSTRUCTION) AND ARRANGEMENT OF LINE PARK					
purpose and	Public green area - park				
typology					
construction plot	 the park is planned as a single unit (ZP1) with a total area of about 23.8 ha, on eighteen planned plots (ZP1-1 - ZP1-10.3); parts of the park under which (underground) pass roads (SA-3, SA-6, SA-14, SA-16 and SA-18) and part of the SA-1 road network in the above-ground part represent part of the unique public green area of Linear Park, to which the rules defined in this table apply; Overlay, above the structure that covers the road and enables continuity of the line park, harmonizes with the contents planned at the level of the linear park. The construction itself should be determined in further elaboration through technical documentation; 				
	 an integral part of the Linear Park is a public green area in the coastal area (water land) for which the rules of construction and arrangement are defined in Chapter 3.4.2. COASTAL LAND; 				
subunits	within the park, ten sub-units have been defined, which enables phase				
	realization;				
	 subunit 1.1, with an area of about 1.64 ha, includes plot ZP1-1; subunit 1.2, with an area of about 3.57 ha, includes plots ZP1-2 and ZP1-2.1, 				
	 subunit 1.3, with an area of about 1.17 ha, includes plot ZP1-3 and above-ground part of plot SA-3; 				
	 subunit 1.4, with an area of about 2.78 ha, includes plots ZP1-4 and ZP1-4.1; 				
	 subunit 1.5, with an area of about 1.31 ha, includes plot ZP1-5 and above-ground part of plot SA-6; 				
	- subunit 1.6, with an area of about 1.33 ha, includes plot ZP1-6;				
	- subunit 1.7, with an area of about 1.86 ha, includes plots ZP1-7,				
	 ZP1-7.1 and ZP1-7.2, as well as the above-ground parts of parcels SA-14 and SA-16; 				
	- subunit 1.8, with an area of about 1.54 ha, includes plot ZP1-8;				
	- subunit 1.9, with an area of about 3.9 ha, includes plots ZP1-9,				
	ZP1-9.1 and the above-ground part of parcels SA-17 and SA-18;				
	- subunit 1.10, with an area of about 3.6 ha, includes plots ZP1-10,				
	ZP1-10.1, ZP1-10.2, ZP1-10.3 and SA-19;				

	Note: the exact area of the construction plan parcels will be determined in the
	Republic Geodetic Authority, on the occasion forming the same.
basic principles and rules of landscaping	The line park is planned as a part of the unique system of green areas of Belgrade, ie the green infrastructure of the city, and it is obligatory to be arranged so as to realize ecological, social and economic services (functions) as an ecosystem in urban space; according to its shape and position in space, as well as the functions that - should be realized, the park needs to be arranged as a green corridor, which means to ensure continuity and connection of content and functions within this public green area, but also the entire space with the immediate environment and the main landmarks of the city; - in order to achieve ecological services, it is necessary to achieve continuity and integrity of the park with uninterrupted different forms of vegetation (tree lines, groups of trees and shrubs, massifs of trees, flower beds, various nature-inspired solutions, etc.). to enable the development of natural processes, which will positively affect the quality of air, water, soil, biodiversity, etc., and thus the quality of life in the city; in order to achieve social services, which include social and cultural needs of residents, it is necessary to achieve the integrity of the park with continuous paths for pedestrians, cyclists and recreationists, which connect functional units arranged and equipped to enable rest, passive recreation, education, socialization and spiritual development of visitors in the microclimatic and ambient pleasant space of the park, but also target places in the environment; functional units should be arranged so as to provide pleasant and safe stay of visitors for rest, meditation, recreation, socialization, education (nature-based solutions, natural and cultural values in the environment, etc.) and / or others, in accordance with the permitted facilities in the park; Achieving ecological and social services of the park, raising creativity, innovation and attractiveness of the espace (according to its carrying capacity), as well as presenting and highlighting the existing natural and cu
	 landscaping of the park should be based on previous geomorphological, pedological, climatic and biological research of the subject area;
allowed content	For the needs of arranging the park, the use of the following content is
(elements of	allowed:
landscaping)	 plant material (twigs, shrubs, flower species, grasslands,
	ground cover, creepers, aquatic plants, meadow species,),
	various forms of landscaping and nature-based solutions;
	- communication areas (pedestrian paths, plateaus, steps,
	ramps, bicycle paths, trim paths);
	- garden-architectural elements (walls, sub-walls, ramparts,
	fences, gates, water surfaces and elements with water,
	pergolas, canopies, pavilions, gazebos, amphitheater, stage,
	monuments, sculptures, gutters, canals,);
1	

- open fields for recreation (children's playgrounds, open fields for active and passive recreation, ...);
- facilities (public prefabricated toilets, tourist checkpoint, found masonry building, metro station, underground garage, one new building
- demonstration center with nature-based solutions, prefabricated educational point and maintenance service facility);
- furniture and equipment (benches, tables, jardinieres, waste baskets, candelabra, playground equipment, equipment for recreational grounds, bicycle parking space, elements of visual communication - information boards, fixed and mobile measuring devices);
- communal infrastructure (lighting, water supply, sewerage,...);
- the scope and type of allowed content must be adjusted the size and shape of the available space, the primary function, natural and cultural value of the space, landscaping rules, as well as landscape-architectural solution;
- all contents of the park should be publicly available to visitors:
- contents in the park should be thematically concentrated, as well as to satisfy all age groups;
- parts of the park should be arranged as functional units (FC) which provide the stay of visitors for rest, meditation, recreation, socialization, education (nature-based solutions, natural and cultural values in the environment, etc.), etc.; functional units with the same theme should be arranged at a distance of 500 to 1,000 m;
- it is allowed to form a space for dogs to play under conditions defined below;
- areas under curtain (communication surfaces, open recreational grounds, etc. contents that prevent the natural flow of water into the soil, e.g. garden-architectural elements) and above-ground and underground facilities, are allowed to occupy a maximum of 25% of the park area, ie the area of each of the plots of the Linear Park; exceptions to this rule are plots ZP1-7 and ZP1-7.1 for which a maximum of 50% is allowed, plots ZP1-4 and ZP1-7.2 below which is an underground garage (100%), as well as plots SA-3, SA-6, SA-14, SA-16, SA-17 and SA-18 which are leveled roads (100%), which must be taken into account during the total calculation for the park, ie. it is not allowed to exceed the prescribed norm of a maximum of 25%;

herbal material

- it is necessary to preserve functionally valuable specimens of the existing dendroflora, based on an expert analysis of existing vegetation, with an emphasis on determining the physiological health status and functionality of existing specimens of dendroflora (bioecological basis), and fit it into a new landscape solution;
- for landscaping, use deciduous, evergreen and coniferous woody and shrubby species, flower species (perennials, roses, ...), lawns, ground cover, creepers, etc., the following rules should be observed:

- use autochthonous types of vegetation that belong to natural potential vegetation, adaptable to local environmental conditions;
- it is allowed to use specimens of exotics that have been confirmed to adapt well to environmental conditions;
- the participation of deciduous species should be dominant in relation to other vegetation;
- use nursery-produced seedlings of trees with a breast diameter larger than 10 cm;
- use leafy decorative and floral forms of shrubby species and seasonal flowers;
- avoid invasive and allergenic species;
- tree-lined trees should be trained hardwood seedlings, minimum height 3.5 m, tree clean from branches up to 2.5 m high and chest diameter at least 15 cm;
- it is desirable to use fast-growing species, which have a higher phytoncide and bactericidal effect and pronounced aesthetic values;
- the choice of species should ensure the functionality of the green space throughout the year;
- the choice of plant material should simultaneously contribute to the aesthetic values of the space and microclimatic characteristics (shade, freshness, higher humidity, good ventilation of the space, etc.), in order to create an environment conducive to living;
- the presence of trees should, in the vegetation period, be keep a minimum of 70% of the area under the canopy (orthogonal canopy projection);
- form at least one-row along the communication path, one-sided tree line;
- the inner edge of the park, next to the existing and planned high frequency roads, in accordance with the spatial possibilities, it is necessary to form compositions of trees and shrubs that have a dense and well-developed canopy, in the form of a protective vegetation belt, in order to protect against noise and negative products traffic;
- when choosing species, take into account the dimensions of the dendroflora habitus and the dimensions of the root system, ie.
 provide all measures to avoid leveling of paths and areas under the curtain (eg placing rings to direct the root system in the desired direction);
- ensure the resistance of plant species, so that the floor of shrub species as "urban" corridors for wild species is formed as much as possible;
- on the facilities of two underground garages, planned as a whole 4 and 7, area of about 1.6 ha, the roof garden should be erected, in the land substrate 1.2 m deep (layer in which the plants are planted), which will be at the level of the rest of the park with the upper elevation of the substrate (raised to 0.5 m if necessary), and which should be arranged so that it is functionally and visually inseparable the whole park;

areas for communication

- areas for communication consist of pedestrian paths, plateaus, steps, ramps, bicycle paths, trim paths;
- all elements of the ground floor arrangement must be of exceptional artistic and aesthetic qualities, shaped and dimensioned in such a way as not to endanger the views of the Fortress, materialized so as not to compete with the continuous surfaces of the walls of coastal fortifications;

- trails should be formed so that they connect the functional units of the park, but also the target places and directions of movement in the immediate vicinity;
- along the entire length of the park, the main communications should be formed of all three paths (pedestrian, bicycle and trim paths), and additional communication and accessibility to the functional zones of the park should be provided by forming second-order pedestrian paths, which indirectly defines the degree of stay in the park and flow rate;
- provide even lighting of the line park tracks in order to enable safe movement at night, where the light should be directed towards the ground;
- it is necessary to provide situational and leveling adjustment pedestrian and bicycle paths with the existing / surrounding street network, so as to ensure continuity;
- the dominant width of the main pedestrian path should be 3 m, while in some parts, where it is necessary to emphasize certain contents, it can be up to 4 m wide, and in parts of the park that are small, the main path can be at least 2 m wide;
- the width of the second row pedestrian path should be 1.2 2 m;
- second order paths should provide access to individual functional units, as well as exit from the park;
- the width of the two-way bicycle path should be at least 2.5 m, while in the parts of the park that are narrow, the width of the path may be at least 2.2 m;
- connect the main bicycle path with the surrounding street network with two-way bicycle paths with a width of min. 2.2 m;
- the minimum radius of the horizontal curve for bicycle paths is planned with Rmin = 5m;
- ensure visibility of the bicycle path in the length of min. 30 m;
- the minimum transverse slope of the bicycle path in the direction is ip = 2.0%;
- the minimum transverse slope of the bicycle path in the curve is ip = 2.5%, directed towards the center of the curve;
- separate the bicycle path with an appropriate curb;
- separate the bicycle path from pedestrian paths and surfaces
- vegetation belt with a minimum width of 0.75 m;
- distance the bicycle path min. 0.5 m from the facilities;
- the bicycle path should be traced so that it connects to the existing bicycle path near Beton Hall, but also envisages its connection with the direction towards Ada Huja (future bicycle path);
- plan bicycle parking elements ("P" profile) in the zones of the main functional units;
- the width of the trim track should be at least 1.6 m;
- the trim track should be formed as loops, which ensures circular movement, and thus the choice of recreation time;
- use quality and resistant materials for curtains, safe for use in all weather conditions;
- Semi-porous and porous curtains should be used wherever not endanger traffic safety;
- the materialization of the path should be adapted to the use, while the color should be chosen in accordance with the design of the landscape architectural solution;
- provide natural and renewable materials for materialization;
- when choosing paving materials, favor the circular use of existing resources and materials at the location of the line park (railway

- sleepers, gravel, bricks from non-retained facilities, railway tracks, etc.), where the safety of visitors should be imperative;
- it is necessary to provide 1-2% drop in communication areas, thus enabling the drainage of surface water to the surrounding porous soil or rainwater drainage, for which it is necessary to provide drainage elements (earthen gutters, gutter-gutters,
- the trails should be accompanied (in full length or in parts) by the stormwater collection system;
- in parts of the line park where the space for the main pedestrian and bicycle path is limited, priority should be given to the width of the pedestrian path, since this is a park area where a larger number of users is expected who do not use the bicycle but pedestrian path;
- for establishing pedestrian connections with the area in the immediate vicinity the park environment should use the already established network of administrative intrusions, using the "softest" places for their tracing in a way that does not disrupt the functioning of existing facilities and that improves the quality of use of space and functional organization of the park;

garden-architectural

- garden-architectural elements that can be found in the park are: walls, sub-walls, ramparts, fences, gates, water surfaces and elements with water, pergolas, canopies, pavilions, gazebos, amphitheater, stage, monuments, sculptures, gutters, channels, ...;
- the application of garden-architectural elements should be harmonized with the style of landscape-architectural arrangement
- elements with water (fountains, springs, water surfaces and watercourses in the formed riverbed) should be placed in all functional units of the park, where water as an element should mimic the continuity of rivers in the immediate vicinity;
- pergolas, canopies, pavilions, gazebos, etc. should be set in all functional units, to the extent required by the specific organization and function of the individual unit;
- pergolas, canopies, pavilions, gazebos, etc. prefabricated elements must be made of light, natural material, maximum area 15 m2; it is possible to set more of these elements, but their total area must not exceed an area of 500 m2;
- amphitheater and stage should provide space for cultural events (poetry evenings, concerts, theater performances, ...) for a smaller capacity of visitors (up to 100 people);
- amphitheater, the stage should be formed so that it is a part terrain configurations, where seating would be provided on a wooden and / or concrete base, which is an element in a green environment, or the stage would be a raised wooden platform (stage), and gathering of visitors would be provided on a semiporous / porous base;
- installation of monuments and sculptures should be foreseen during the process of designing the park, in order to purposefully create an environment that will emphasize their importance, while at the same time being an inseparable part of the landscapearchitectural arrangement;
- channels, etc. should be placed so that excess atmospheric water is collected and directed to the rain sewer, the system for pr;
- bicycle parking elements ("P" profile) should be planned in the zones of the main functional units;

elements

fencing of the park is necessary in places of direct contact with traffic areas, transparent fence with a maximum height of 1.20 m; the park in the part towards the banks of the Sava and the Danube should not be fenced; when designing and selecting garden-architectural elements, valorize the envisaged elements in relation to different needs of users, taking into account gender, age, physical limitations and social role, in order to create inclusive spaces that do not endanger vulnerable groups and encourage positive interactions between users: when choosing architectural and garden materials and designs elements favor the circular use of existing resources and materials at the location of the line park (railway sleepers, wood from the location, bricks and other material from non-retained facilities, railway tracks, etc.), where the safety of visitors should be imperative; under open terrains for recreation, which are allowed to be open grounds for located in the park, are considered children's playgrounds, recreation grounds for active and passive recreation, as well as trim tracks (processed in the field of "communication surfaces"); it is necessary to provide as much of the terrain for recreation as possible natural shade formed by tree canopies; children's playgrounds should provide play for children of all ages group; children's playgrounds should be made of natural materials, and in accordance with the prescribed safety standards, designed to enable the inclusion of children with disabilities, but also joint activities and active, educational play of larger groups of children; children's playgrounds should not be formed in unit ten, due to the proximity of the Pancevo bridge and extremely frequent traffic, and thus the concentration of pollution; under the fields for active and passive recreation are considered courts for basketball, football, badminton, volleyball, yoga, gyms on outdoors, skate park, bowling alley, which should be predominantly grassy areas, then of semi-porous and porous materials, and if necessary, in accordance with the requirements of recreation, can be completely covered; it is necessary to use semi-porous and porous curtains wherever they do not endanger the safety of recreation; it is necessary to provide access to these facilities on foot by second-order trails; in functional units with predominantly recreational facilities, elements for bicycle parking should be provided; it is not allowed to cover or close the recreation area (balloons, prefabricated structures, ...); the size of the field should be adjusted to the available dimensions of the space and the allowed % of park obscurity, and it does not have to be adjusted to the sports propositions; children's playgrounds should be in accordance with the Rulebook on the safety of children's playgrounds ("Official Gazette of RS", No. 41/19); objects facilities that are planned to be located on the plot of the Linear Park are: four existing facilities that are being retained, the subway station facility, two underground garages, one new facility - a demonstration center of **nature-based solutions**, public

- prefabricated toilets, tourist station, prefabricated educational station, maintenance service facility and bicycle rental area;
- three existing masonry buildings in subunit 1.9 are retained and functionally transform, and public cultural are allowed educational content:
- one existing facility in sub-unit 1.6 is retained and functionaltransforms, and the contents of the restaurant are allowed service type in the function of the park;
- keep the facilities in the existing size (basically about 354 m2, 300 m2, 442 m2 and 179 m2) and volume;
- upgrading and superstructure of existing buildings is not allowed;
- adaptation, rehabilitation, investment and current are allowed maintenance of facilities in the existing size and volume, in accordance with the planned contents;
- it is necessary to green the roofs and facades of existing buildings,
 in accordance with their constructive possibilities;
- keep access to facilities from the existing traffic area, but also provide access from the park, pedestrian path, while for facilities in subunit 1.6. pedestrian access through the park should be provided;
- demonstration center of nature-based solutions, it is planned within sub-unit 1.6 for which there are building rules given in the table ADDITIONAL RULES FOR BUILDING AND ARRANGEMENT SUBCONSE 1.6 OF THE LINE PARK
- within the park, prefabricated public toilets should be provided at a distance of at least 500 m, ie at an optimal distance from individual functional units;
- the public toilet should be a ground floor, free-standing building, to contains 3 cabins (female, male and cabin for persons with special needs) and anteroom, total maximum BRGP 25 m2;
- the public toilet facility should be connected to the city infrastructure network;
- it is allowed to set up a smaller prefabricated building as an information and tourist point (maximum area of 4 m2);
- it is allowed to set up a ground floor prefabricated building as an educational point (maximum area of 300 m2);
- in order to achieve historical continuity, it is necessary in some subunits of the park (or all) to use recycled train cars to organize the functions of culture, education, information and hospitality (small cafes and restaurants);
- recycled wagons should be placed in groups, as much as possible 2-3 in certain functional units, or individually, on a uniform distance of at least 500 m from each other, with a total area not exceeding 500 m2;
- installation of modular objects of the container type is allowed
- the proposed forms should be used for the maintenance service facility recycled train wagons and container type facility;
- planned facilities should be connected to the city infrastructure network:
- it is needs for all to have a green roof and vertical green walls, which is considered one of the envisaged types of nature-based solutions;
- construction of other overhead and / or underground is not allowed - buildings and floors;

furniture and equipment

 under park furniture and equipment are considered: benches, tables, jardinieres, waste baskets, candelabra, playground

- equipment, recreation equipment, bicycle parking elements, elements of visual communication information boards, fixed and mobile measuring devices, etc.;
- the choice of furniture and equipment should be harmonized with the style of landscape-architectural arrangement of the park, the effects and functionality that is to be achieved;
- benches, lighting and rubbish bins must be placed on equal distance along pedestrian, bicycle and trim trails;
- public light sources should be directed towards the ground;
- it is not allowed to use strong light sources (advertising rotating reflectors, lasers, etc.) directed towards the sky, in order to protect the ornithofauna;
- it is not allowed to place billboards on the park plot;
- it is necessary to introduce interactive information boards that provide information on natural and cultural values of space and environment (Belgrade Fortress, Nebojsa Tower, Kalemegdan Park, Thermal Power Plant "Strength and Light", PIO "Great War Island", rivers Sava and Danube, confluence of two rivers, forland on the left bank of the Danube, New Belgrade, the Museum of Contemporary Art, etc.), as well as on the city's various tourist offers (river sailing schedule, various city itineraries, ...);
- when designing and selecting furniture and equipment, valorize
 the planned elements in relation to different needs of users, taking
 into account gender, age, physical limitations and social role, and
 in order to create inclusive spaces that do not endanger vulnerable
 groups and encourage positive interactions between user;
- adapt the elements of visual communication in the park to visually impaired people; when materializing and designing furniture and equipment, favor the circular use of existing resources and materials at the location of the line park (railway sleepers, wood from the location, bricks and other material from non-retained facilities, railway tracks, etc.), where user safety is imperative;

communal infrastructure

- the necessary communal infrastructure of the park is lighting, water supply, rainwater and sewage;
- the park needs to be equipped with standard infrastructure and watering system;
- for the planned functioning of the park it is necessary to provide electrical network for lighting the entire park, connection of facilities to the water supply and sewerage network, as well as to the water supply fountain network;
- the use of renewable sources should be included primarily energy (primarily solar and thermal) for lighting paths, mobile phone chargers, charging small electric vehicles (scooters and bicycles), etc.;
- it is necessary to ensure the drainage of atmospheric water from covered areas into the rain sewer, it is necessary to force the systematic collection of atmospheric water through nature-based solutions and release into the ground (possible collection and use for irrigation);
- for elements with water (fountains, fountains, springs, water surfaces and watercourses in the formed riverbed) a connection to the water supply network should be provided, but these elements should be formed as a priority so that they are based on a closed water flow system (reuse);
- harmonize the installation of the infrastructure network with the landscape-architectural solution of the park, ie the projected

	notition of the trace respecting the prescribed minimum distances
	position of the trees, respecting the prescribed minimum distances for certain types of infrastructure in relation to the existing and
	new trees;
functional units	thematically and functionally related contents are grouped in within the park
	into four functional units (FC) shown on graphic attachment no. 10
	"Compositional plan of the line park ":
	- FC1 - thematically green space, consists of different themes
	vegetation compositions (flower garden, aromatic garden, healing
	garden, sensory garden, moist habitat, aromatic plant garden,
	urban beekeeping, atmospheric water collection systems, small,
	exemplary common garden for urban agriculture and other
	nature-based solutions);
	- FC2 - space for rest, represents a space for rest, sitting, lying down,
	meditation, etc. on a grassy ground in the shade of a tree canopy,
	with wooden furniture that follows the configuration of the
	terrain, from which the landscape in the surroundings can be seen;
	- FC3 - space for cultural and educational programs in the open, is a
	space within which there is a plateau, amphitheater, water
	surface, pergola, etc., which provides the presentation of various
	cultural and educational programs and gathering a smaller number
	of visitors;
	- FC4 - a space of concentrated content for recreation, it seems
	space within which open terrains have been set up, for active and
	passive recreation and / or children's playgrounds, according to the intensity of recreation, age groups and space required by each
	of them individually;
	functional units with the same theme are planned at a distance of 500 to 1,000
	m;
space for	- space for dogs to play is allowed to be formed in subunits 1.4, 1.5,
dogs	1.6, 1.7, 1.9 and 1.10 of the line park;
	- space for dogs to play must be located in an isolated part of park in
	relation to functional units, as well as at a sufficient distance from
	residential buildings in the contact area (min. 30 m);
	 the maximum area of an individual space for playing dogs can be
	300 m2;
	- the space must be fenced with a high wire fence overgrown with
	creepers or hedges (according to the arrangement of the park in
	the immediate vicinity);
	- the space must be equipped with standard equipment for playing,
	bags for collecting feces and trash cans;
	- provide adequate maintenance, adequate use and degree of
	pollution (cleaning, soil change and remediation of microbiological pollution of soil and eggs of intestinal parasites,);
	- determine the position during the preparation of the Project of
	landscape-architectural arrangement of the Linear Park;
conditions for protection	- with the stylistic, ambient and technical solution of the park, to
natural values	preserve the integrity of the protected area of the SP
	"Kalemegdanski rt" which is entirely located on k.p. no. 67/2, KO
	Stari grad, on an area of 14 ha 07 and 18 m2;
	- preserve the existing and form new naturally regulated vegetation
	in the coastal part of the Sava and Danube, which represent the
	ecological corridors of the RS, within the Ecological Network of the
	RS of International importance;
	- if there is a natural asset or some natural value in the area of the
	planned park, it is necessary to obtain the conditions of the
	competent institution;

- if geological-paleontological or mineralogical-petrologic are encountered during the works, which are presumed the property of a natural asset, the contractor is obliged the Ministry of Environmental Protection, as well as to measures to protect against destruction, damage or the arrival of an authorized person; conditions for protection cultural values - since the new park area is located within the area that status of protection, in accordance with the Law on Cul Heritage, for the construction of the park it is necessary cooperate with the competent institution for the prote	d to have d to inform take all
the property of a natural asset, the contractor is obliged the Ministry of Environmental Protection, as well as to measures to protect against destruction, damage or the arrival of an authorized person; conditions for protection cultural values the property of a natural asset, the contractor is obliged the Ministry of Environmental Protection, as well as to measures to protect against destruction, damage or the arrival of an authorized person; since the new park area is located within the area that of status of protection, in accordance with the Law on Cul Heritage, for the construction of the park it is necessary	d to inform take all
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cultural values status of protection, in accordance with the Law on Cul Heritage, for the construction of the park it is necessary	
Heritage, for the construction of the park it is necessary	
cooperate with the competent institution for the prote	
	ction of
cultural monuments;	
- around new public monuments, memorials and sculptu	
works in the park, it is necessary to form a micro ambie	
adequate landscaping in order to emphasize the impor	tance of
monuments, memorials or highlight the aesthetics of the	ne
sculptural work, the emphasis can be placed on decora	tive
lighting;	
 if archeological remains or larger finds are found during 	g the works,
it is necessary to inform the competent service for the	protection
of cultural monuments in order to take adequate meas	ures and
procedures to protect against damage to the findings in	
accordance with the Law on Cultural Heritage;	
- elements of the Belgrade Fortress should be left visible	to visitors
(ramparts, curtains) (part of the fortress fence that con	
two bastions), bastions,);	
- in the part of the ramparts of the Belgrade Fortress, it is	s obligatory
to preserve the existing trees; planting new trees is not	
- use species with shallow roots for landscaping;	,,
way of using - the formed park represents a public green area and car	n he use
only for the purpose for which it is intended;	. Se use
- the formed park is introduced into the maintenance sys	stem ie it is
handed over for management to the competent public	
company or other professional legal entity;	active
technical - in the preparation of the Landscape Architectural Plann	ning Project
terms it is obligatory to form Linear Park as a unique space;	illig i roject
- The project should contain a detailed elaboration of the	o plannod
contents and functional units of the park, which are pre	•
Graphic Annex 10. "Composition plan", and within the object to redistribute the sub-units. It is possible to redistribute the sub-units. It is possible to redistribute the sub-units.	
·	
planned functional units within the subunit, all in accor	uance with
the building rules given by this Plan	a.a.da.a
- apply defined standards for landscaping in the field of l	-
architecture ("Landscaping in the field of landscape arc	nitecture"
and "Roof gardens and terrace gardens");	-1
- design pedestrian paths in accordance with the Rulebo	
technical standards of planning, design and constructio	
facilities, which ensure unimpeded movement and acce	
persons with disabilities, children and the elderly ("Offi	cial Gazette
of RS", No. 22/2015);	
- after the realization (phase and total) it is necessary to	
the park in maintenance system, ie hand it over for mai	nagement
to the competent public utility company or other profe	ssional legal
entity.	

- 3.3.2. Protective green belt
- 3.4. Water land
 - 3.4.1. The waters of the Danube
 - 3.4.2. Coastal land
- 3.5 Water surfaces
- 3.6. Areas for public service facilities and complexes
 - 3.6.1. Preschools (J1)
 - 3.6.2. Primary schools (J2)
 - 3.6.3. Higher education institutions (J4)
 - 3.6.4. Primary health care facilities (J6)
 - 3.6.5. Social protection institutions (J8)
 - 3.6.6. Cultural institutions (J9)
- 3.7. Areas for sports facilities and complexes
 - 3.7.1. Sports and recreational complexes
 - 3.7.2. Competitive-sports complex
- 4. Rules of arrangement and construction for areas of other purposes
- 4.1. Mixed city centers
- 4.2. Commercial facilities
 - 4.2.1. Zone K1.1
 - 4.2.2. Zone K1.2
- 4.3 Areas for sports facilities and complexes
- 5. Balances of urban parameters