



PROJECT TITLE: **KRALJEVICA KINDERGARTEN**  
CATEGORY: **FUTURE PROJECTS – CULTURE / EDUCATION**  
LOCATION: **ZAJEČAR, SERBIA**

## SITE ANALYSIS

The design brief defines the construction of a new preschool facility – a kindergarten – which includes both the institutional building and an open area on the associated land – the yard. The project is being developed for the needs of the City of Zaječar, on cadastral parcel no. 6280/1 KO Zaječar, located on the northern side of the Kraljevica Memorial Forest Park in Zaječar.

Over the last decade, the population of Zaječar has shown a moderate decline. The area from Kraljevica to the Crni Timok River is predominantly residential. It features urban housing typologies, including both single-family and multi-family housing. In the zone adjacent to the base of Kraljevica Hill, a so-called “silent reconstruction” is planned at the block level, where single-family houses are to be replaced with medium-density multi-family housing. While demographic forecasts predict continued decline in key indicators, spatial planning solutions aim to reverse this trend by improving living standards and gradually changing demographic patterns. In the city center area, there are currently five childcare institutions: Ljiljan, Svitac, Zdravac, Đurđevak, and Neven, which meet current needs. However, based on the analysis and planning measures, the construction of a new preschool facility is justified in order to offer the local population a modern and high-quality public service that encourages families to remain and fosters the formation of new households.

The primary designation of Kraljevica is that of a memorial park with sports and recreational functions. It is one of the most significant spatial units of Zaječar, and the city's strategic goal is to maintain and improve the Kraljevica Memorial Park, while complementing it with additional activities and amenities aligned with the purpose of the area. Due to its exceptional value, the City of Zaječar has issued a decision to designate the Kraljevica Memorial Forest Park as a protected natural area and to regulate its protection regime accordingly.

Cadastral parcel no. 6280/1 KO Zaječar, with a surface area of 147,928.00 m<sup>2</sup>, currently houses sports fields and a swimming pool with auxiliary facilities. The northern section of the parcel is designated for the new development. Vehicular access to the site is only possible via parcel no. 8448, while pedestrian access is also possible from parcel no. 6280/2 KO Zaječar, and then via newly planned internal streets. The Zaječar–Niš railway runs north of the site, with a 40-meter-wide buffer zone serving as a separation strip.

The existing sports infrastructure in the northern part of Kraljevica (equestrian grounds, fields, stadium, swimming pool, fairgrounds, ski slope) is maintained and functional. In contrast, the recreational-forest area of Kraljevica is not maintained: paths are in poor condition, and structures are unused and neglected. Within the project site, the “Youth Center” building remains in place but has been unused for years and is in poor structural condition; its removal is necessary. The planned development also includes currently ruined volleyball courts, which are proposed for relocation. The undeveloped part of the site includes a significant number of mature trees (around 180) and mid-level vegetation, forming a green belt of the Kraljevica Forest Park. This natural setting requires careful consideration, and through controlled and selective evaluation of its environmental value, a large portion should be preserved by integrating the new facility into the natural surroundings. In these green areas, the construction of individual public buildings of national and municipal significance is exceptionally permitted, provided that their construction does not disturb the fundamental character or ecological balance of the site.

## CONCEPTUAL DESIGN

The newly designed facility has a ground floor and one upper floor (G+1), with a total gross area of 3,067.00 m<sup>2</sup> and a net usable area of 2,760.00 m<sup>2</sup>. The building is positioned as a free-standing volume, following the longer side of the plot in the NE–SW direction. As a public facility, its architecture and form serve as a spatial landmark, giving the surrounding neighborhood a distinct visual identity. In order to preserve the natural ambiance, the building footprint has been designed with maximum horizontal spread and minimal vertical massing, in harmony with the surrounding building heights and by meandering around existing clusters of tall vegetation. This approach has resulted in a courtyard-forest space with a summer pavilion on the western side of the building and a children's playground oriented toward the southeast, providing favorable sun exposure for outdoor activities.

The new preschool facility in Zaječar is conceived as a modular assembly consisting of 15 educational groups (6 nursery and 9 kindergarten), with a maximum approved capacity of 270 children. The layout follows the required south and southeast orientation, fully in accordance with the Regulation on Conditions for Establishing, Operating, and Performing Activities of Preschool Institutions (Official Gazette of RS, nos. 1/2019, 16/2022, and 6/2023). In addition to the primary indoor functional zones, the design also includes outdoor spaces such as a yard and organized play areas, encouraging physical activity and children's play.

As part of site development, 50% of the existing tall greenery must be removed (including dry, diseased, or spatially conflicting trees), with mandatory compensation through planting of new tall trees within the parcel and the adjacent park zone. The building represents a contemporary architectural solution appropriate to its function and surroundings, while complying with all relevant planning and technical regulations. The design process adheres to the Rulebook on Planning and Designing Facilities for Unimpeded Movement of Children, the Elderly, and Persons with Disabilities.

The reference level (+0.00) is located at the entrance plaza in front of the main entrance. The building height from this reference level is +9.10 m (roof ridge) and +4.90 m (ground floor eave). Vehicular access is from the north, via a newly planned street leading to the service/technical platform, which connects to the service entrance of the building, the heating substation, and the waste disposal zone. This platform also accommodates food deliveries from a central production kitchen, as well as waste collection containers.

The main entrance to the building is located on the north side, accessible via a covered entrance plaza and ramp. The level at the main entrance is +0.10, which also defines the ground floor elevation. The upper floor is located at +4.30 m above ground level. On the northeast side, there are designated service entrances for food delivery, staff entry (kitchen and laundry), and the waste collection area.

The central lobby, located between the main entrance and the courtyard access, is partially double-height and includes a staircase. This space serves multiple purposes: playroom, performance area, and meeting space. The lobby connects to an atrium that provides natural light and greenery, as well as to the western courtyard and the children's playgrounds to the east and south. Health-related rooms (preventive care and isolation) are located near the main and courtyard entrances. A stroller storage area is integrated under the central staircase, which follows a curved wall. An elevator next to the stairs ensures accessibility, facilitates laundry transport, and supports food distribution to the upper level.

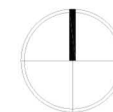
The first floor houses classrooms for the oldest age group and connects via a gallery to technical installations located on the roof of the ground floor. The roof is designed as a flat, non-accessible green roof, with accessible technical walkways only.

A perimeter walkway of minimum width 130 cm surrounds the building, enabling continuous movement and connecting all entrances and the service platform. The building is properly set back more than 10 meters from traffic routes and buffered by green zones. The yard design emphasizes green areas with low, medium, and tall vegetation, featuring play plazas, a running and tricycle track, artificial hills for climbing, and tunnels for exploration.

Parking is provided on-site, with 28 parking spaces in accordance with local planning regulations (1 space per 100 m<sup>2</sup> of net area). This includes 2 spaces for persons with disabilities and 4 for parents with children. The entire preschool complex is enclosed with a transparent fence or a combination of low masonry base and open fence, with a maximum height of 1.5 m. Entry gates, both pedestrian and vehicular, open inward toward the parcel.

The new facility will be equipped with full utility infrastructure: water supply, sewage, electricity, telecommunications, and heating.





# SITUATION

6280/1

6280/11

interna pristupna ulica

P+1

0 5 10 20 30 50



P01 – Wind Lobby – Main Entrance  
 P02 – Health Area – Preventive Care  
 P03 – Health Area – Isolation Room  
 P04 – Corridor  
 P05 – Teacher's Room  
 P06 – Staff Restroom  
 P07 – Staff Changing Room  
 P08 – Corridor – Children's Changing Area  
 P09 – Classroom for Children 3–5 y.o. / 20 children  
 P10 – Restroom Attached to Classroom  
 P11 – Classroom for Children 3–5 y.o. / 22 children  
 P12 – Restroom Attached to Classroom  
 P13 – Corridor – Children's Changing Area  
 P14 – Classroom for Children 3–5 y.o. / 22 children  
 P15 – Restroom Attached to Classroom  
 P16 – Classroom for Children 3–5 y.o. / 22 children  
 P17 – Restroom Attached to Classroom  
 P18 – Children's Changing Room  
 P19 – Classroom for Children 3–5 y.o. / 20 children  
 P20 – Restroom Attached to Classroom  
 P21 – Classroom for Children 3–5 y.o. / 18 children  
 P22 – Restroom Attached to Classroom  
 P23 – Central Lobby – Multipurpose Space  
 P24 – Corridor  
 P25 – Lobby – Wind Lobby  
 P26 – Health Area – Preventive Care  
 P27 – Health Area – Isolation Room  
 P28 – Restrooms Adjacent to Playground  
 P29 – Storage  
 P30 – Corridor  
 P31 – Teachers' Changing Room  
 P32 – Teachers' Restroom  
 P33 – Cleaning Room  
 P34 – Teachers' Room  
 P35 – Children's Changing Room  
 P36 – Classroom for Children 1–3 y.o. / 16 children  
 P37 – Restroom Attached to Classroom  
 P38 – Children's Changing Room  
 P39 – Classroom for Children 1–3 y.o. / 15 children  
 P40 – Restroom Attached to Classroom  
 P41 – Children's Changing Room  
 P42 – Classroom for Children 0–1 y.o. / 13 children  
 P43 – Restroom Attached to Classroom  
 P44 – Children's Changing Room  
 P45 – Classroom for Children 0–1 y.o. / 13 children  
 P46 – Restroom Attached to Classroom  
 P47 – Children's Changing Room  
 P48 – Classroom for Children 1–3 y.o. / 15 children  
 P49 – Restroom Attached to Classroom  
 P50 – Children's Changing Room  
 P51 – Classroom for Children 1–3 y.o. / 16 children  
 P52 – Restroom Attached to Classroom  
 P53 – Multipurpose Hall  
 P54 – Storage  
 P55 – Reception / Porter Room  
 P56 – Restroom for Persons with Disabilities  
 P57 – Parents' Restroom – Women  
 P58 – Parents' Restroom – Men  
 P59 – Corridor  
 P60 – Corridor  
 P61 – Office – Expert Associate  
 P62 – Office – Psychologist  
 P63 – Office – Pedagogue  
 P64 – Office – Accounting  
 P65 – Office – Secretary  
 P66 – Office – Director  
 P67 – Kitchenette  
 P68 – Archive  
 P69 – Staff Restroom – Men  
 P70 – Staff Restroom – Women  
 P71 – Anteroom – Auxiliary Staff  
 P72 – Room for Auxiliary Staff  
 P73 – Cleaning Room  
 P74 – Restroom – Auxiliary Staff  
 P75 – Storage  
 P76 – Wind Lobby – Service Entrance  
 P77 – Corridor  
 P78 – Kitchen Staff Changing Room – Men  
 P79 – Kitchen Staff Changing Room – Women  
 P80 – Food Delivery  
 P81 – Kitchen Storage  
 P82 – Distribution Kitchen  
 P83 – Cleaning Room  
 P84 – Low Voltage Room  
 P85 – High Voltage Room  
 P86 – Pantry / Supply Room  
 P87 – Heating Plant Room  
 P88 – Waste Storage Room  
 P89 – Laundry Staff Changing Room  
 P90 – Dirty Laundry Storage  
 P91 – Laundry and Ironing Room  
 P92 – Clean Laundry Storage

















