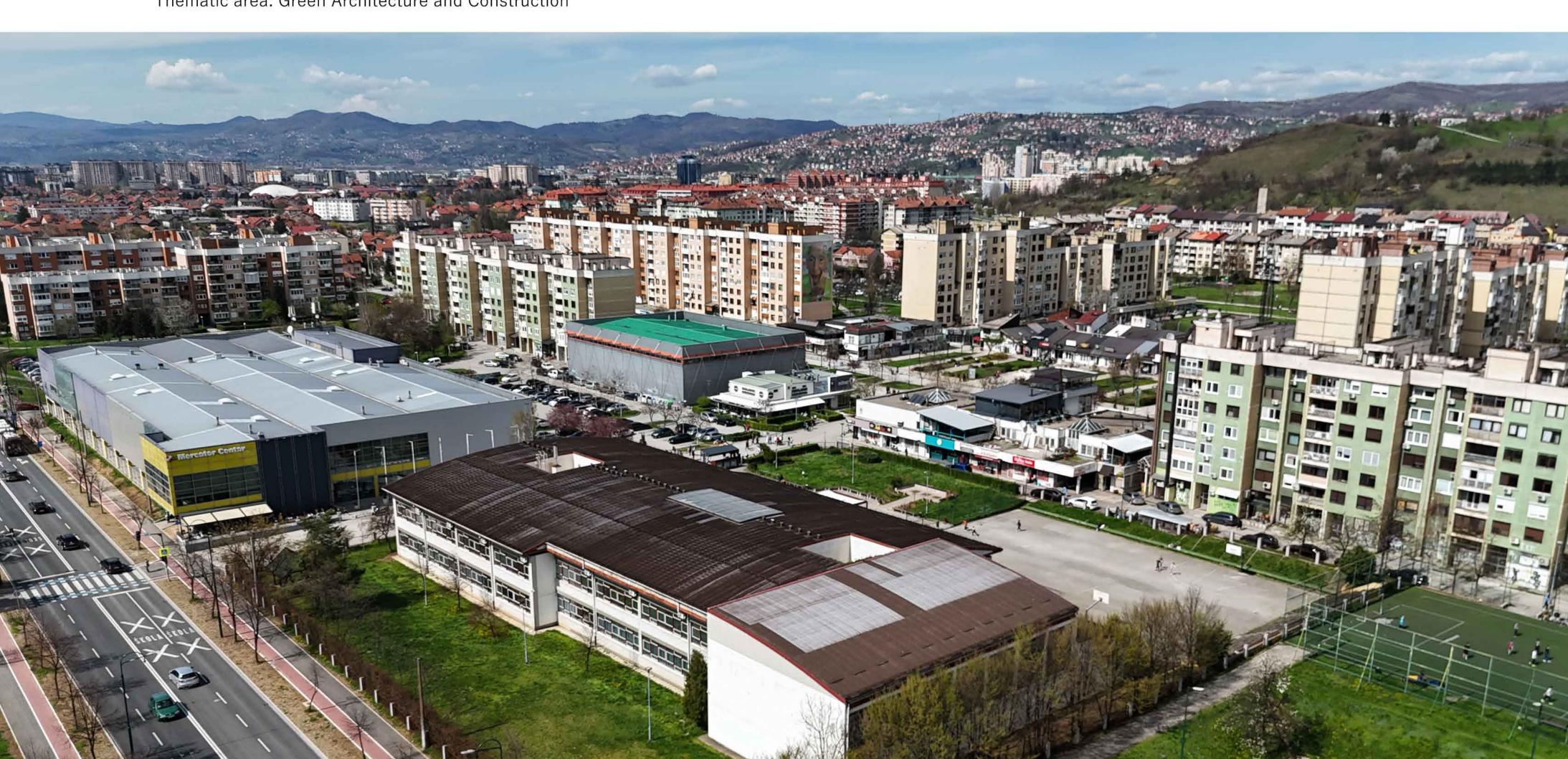


3rd European GREEN Conference – EGC 2025, Vodice, Croatia

#### ID: EGC\_443 Transformation of the existing Skender Kulenović elementary school building in Sarajevo Author: Doc.dr.sci. Haris Bradić, architect Thematic area: Green Architecture and Construction





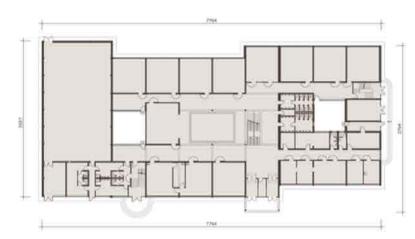
Position in the city of Sarajevo

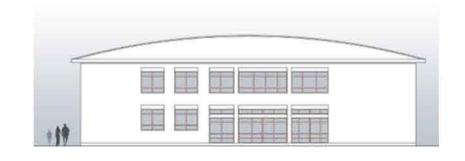
# Basic information about the object

Sjeverna zemljopisna čirina	43749'40.11"
Istočna zemljopisna dužina	18720'47.39"
Nadmorska visina	516 m
Arhitekt - rekonstrukcije	Vuković Nada
Godina izgradnje	1970/1997. godina
Katnost	Pr + 1
Prosječan broj učenika i osoblja (10god.)	920

The building was constructed in 1970 and belongs to the historical period of construction after World War II, specifically from 1970 to the present. During the last war (1992 - 1995), it was completely destroyed, so in 1997 it was redesigned and rebuilt on the original site.

## Draft of the current situation



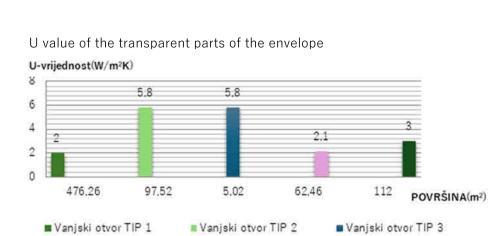








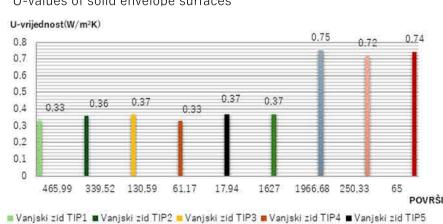
## Analyze the envelope and energy consumption



■ Polikarbonatni krov

■ Vanjski otvor TIP 4

U-values of solid envelope surfaces



■ Pod na tlu TIP1 ■ Pod na tlu TIP2 ■ Pod na tlu TIP3

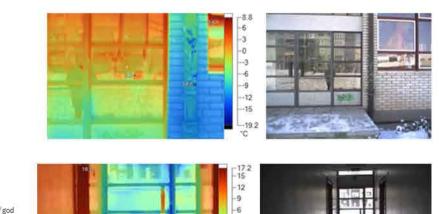
U-vrijednost (W/m²K)

Grijanje

Hladenje

Relationships between solid and transparent surfaces in the envelope



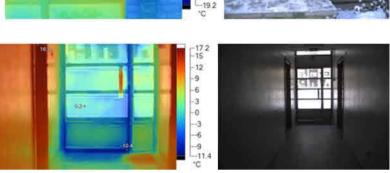


Thermal imaging analysis of the envelope

Hlađenje 18,43 kWh/m²/god Priprema tople vode 12.9 kWh/m²/god Prisilno osvjetljenje 6,01 kWh/m²/god Ostali potrošači 11,9 kWh/m²/god

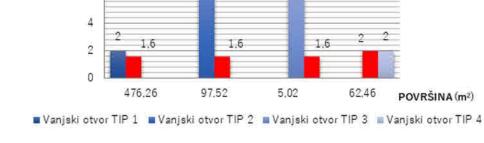
Energy consumption

Grijanje 87,3 kWh/m²/god



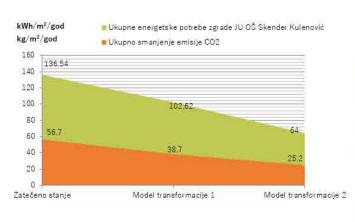
#### Transformation of space usage, energy refurbishment of the envelope and the concept of using renewable energy sources





kWh/m<sup>2</sup>/god ■Zatečeno stanje ■Nakon intervencije

osvjetljenje potročači



## Building redesign - new architectural identity







