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01. INTRODUCTION

"Architecture is petrified music."

Jože Plečnik

"An interior is a natural projection of the soul."

Coco Chanel

The Author begins the textual explanation of the conceptual design with quotes which inspired him to create an installation, followed by a project for the Museum of the Memorial Complex on Mt. Cer, adding that the Exterior is also a *natural projection of the soul*. Special attention and emphasis is put on the material - the domestic "plavi tok" marble, which is elaborated upon more in the following passages of the text. The project also presents and emanates the strong symbolic significance of the Battle of Cer, through both its functional and ecological importance. The architectural installation of the museum speaks of the Serbian identity, of human suffering and of the important historical event which took place in August 1914.

ABOUT THE "PLAVI TOK" MARBLE – made by Serbia

PLAVI TOK marble is a metamorphic stone found in Serbia, in the region of Požega, Kosjerić and the surrounding mountains. It is characterized by its massive, brecciated structure and by its distinctive bluish-gray color from which it gets its name.

According to its technical characteristics, it falls into the category of medium pressure strength materials, with the pressure strength of about 100 MPa, and the flexural strength of 10-15 MPa. However, due to its extremely low porosity, below 1%, and its water absorption of 0.1%, it is a material with exceptional frost and salt tolerance. Its wear resistance falls into the middle grade category, so a brushed face finish of a slip grade of 9 is recommended for the purposes of covering horizontal interior surfaces.

For the purposes of coating external horizontal surfaces, the application of a sandblasted finish with a slip rating of 11 or of a bush hammered finish with a slip rating of 13 is recommended.

As for the coverage of vertical facade surfaces and others, the marble is characterized by the persistence of its color, regardless of the UV radiation and atmospheric influences.

This marble was extremely popular in the architecture of the 1960s, and was used for both facade and interior vertical surfaces as well as for floors, most often in combination with brighter materials.

Modern marble processing technology has enabled the production of an entire host of new surface finishes, as well as of finishing treatment techniques using cutting edge chemical agents and nano-technology hydrophobing, allowing for the intensification of the color and texture of the stone, as well as the permanent protection of the stone's surfaces.

Owing to these facts, PLAVI TOK, comes in a large array of visual varieties, which can be used to achieve an impressive diversity while still utilizing only one type of stone.

The aforementioned characteristics and facts intrigued the Author, prompting him to attempt the implementation of this type of marble within the Design through an entire series of different finishes, heightening the textural, structural and visual impressions through the use of just one neutral color tone - GREY.

The discreet accentuation of the natural shape of the stone in the vertical surfaces of the facade and the interior using the "ROCK FACE" finish is an attempt to "initiate the mimicry" of the new building within the existing environment.

The same principle was applied to the area of the greening of the roof of the MUSEUM, whereby the Author insists on the idea of maximally adapting the building to the environment, with only minimal corrections done to the natural features of the terrain.

02. ANALYSIS OF THE LOCATION

The Museum of the Memorial Complex on Mt. Cer /at the altitude of 655m above sea level / located mostly in the cadastral municipality Dvorište, cadastral parcel 928 /right side of the wider area of the location/ in the part of the terrain where the above sea level altitude ranges between 644m and 648m.

THE CRITERIA FOR THE POSITIONING OF THE MUSEUM OF THE MEMORIAL COMPLEX:

1. The angle of the slope of the terrain, due to the designing of the Museum building according to the principles of sustainable and green architecture
2. The building of the Museum should be in the valley, the basin of the terrain because of the wind currents and the formation of the water of the /lake/.

03. THE ARCHITECTURAL CONCEPT OF MUSEUM

The architectural Design is in accordance with the basic concept stemming from the symbolic and functional requirements of the Museum, while paying full respect to the natural environment of the location. The proposed Design functionally and visually improves the subject location and fits into the context of the distinctive part of the Cer mountain. Furthermore, with its monumental appearance and content, the complex provides a potential for bringing activity to the subject area.

The architectural concept of the Museum has completely adapted to the requirements of construction in nature, where the architecture does not dominate over nature, but is an integral part of it. In designing the Museum, care was given to the visual communication of the building with nature and to the ability of opening towards the outside with the introduction of an open, green atrium, overpass, balconies and the usage of the arranged outdoor spaces for outdoor exhibitions. All of the Museum entrances are controlled.

The entrance to the Museum, which is an integral part of the Memorial Center complex, leads over a spacious stone plateau at the level of + 644.50m above sea level. Special attention on the plateau is given to a large regenerating lake at the level of + 644.00m above sea level with the depth of about 30cm. More on the lake later in the text.

The Museum building is southwest-northeast oriented /its longer horizontal axis is North-South oriented, and its shorter horizontal axis is oriented East-West./

The author put a special accent on the following spaces in the museum's spatial design:

1. The impressive entrance reception hall with an informational booth
2. The exhibition space for permanent installations with the art piece depicting the scene of *THE BATTLE OF CER* in a three-dimensional form, in a glass cube, visible both in the Interior and from the Exterior.
3. The open, green atrium with an amphitheater for lectures, discussion and multimedia presentations.
4. The ramp-path leading from the building of the Museum to the monument with a lookout and the apartment hotel
5. The flat, green roof with light tunnels that illuminate the rooms of the building

The building visually "comes out of, emerges" from a hill, which leads over the ramp-path to the monument and to the highest point of the terrain, at the altitude of 648.00m above sea level.

Due to the configuration of the terrain and the Author's architectural concept, it was necessary to fill the existing terrain with soil at the rear side of the building.

The Museum descends to a level + 644.00m above sea level with stairs and the ramp. The level of the ground floor is at + 644.05m above sea level.

The height of the museum from the level of the floor to the ceiling is 5.00m. The total height of the museum is 6.10m. The outline dimensions of the building are 48.93mx103.31m.

The construction of the museum is a skeleton concrete made of AB concrete 100x50cm "V" columns and 50x50cm concrete beams, ranging from 6.00-12.00m in span.

The facade walls of the museum are made of concrete with a thickness 20 cm, 10 cm thick insulation and ROCK FACE stone, with a thickness of 5-8 cm. Reinforcement mesh and scrim are installed over the thermal insulation and are plastered with a hydrophobic mortar to which stone is adhered to with white glue.

The flat roof panel is made out of concrete, 40 cm thick, and serves as a "planter" for the green roof. The thermal insulation of the roof is 20cm thick. The layers for the greenery are ~ 50-55cm thick.

The wall cladding of the museum is made largely from natural irregularly shaped stones, with roughly cut edges, the so-called ROCK FACE - plavi tok marble/ lateral facade of the museum./

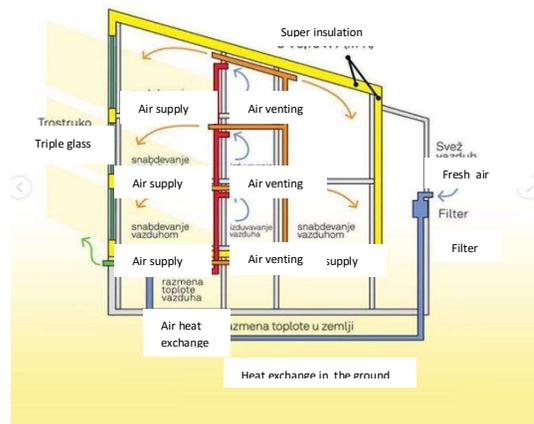
The main southwest entrance facade of the Museum is made out of glass /tempered safety glass/ with appropriate divisions and glass clamps.

The rear northeast facade of the museum is mostly buried in the ground, that part of the Museum is where the mechanical rooms and depots are located.

The windows are made out of / Siberian larch / carpentry, the doors are made of steel profiles, the atrium and main front facade are made of tempered safety glass. The rear facade and the sides of the ramp are plastered with white acrylic paint.

The toilet window latticework is made of dark gray steel box profiles, modern in its design, covered with vines.

The concept of energy-sustainable and economical architecture is applied in the conceptual design of the museum with the exploitation of the heat and energy of the earth



In the process of designing mutually independent buildings for the complex, buildings which are mutually separate physical structures, measures concerning the ecological aspect have been undertaken, with respect to the existing and planned greenery, establishing the continuity of green areas.

The complex was designed in a functional sense in order to provide efficient evacuation in case of fire.

It is important to note that attention has also been given to people with disabilities / ramps, platforms / when designing the building through the complex and around it

RIGID LIGHT TUNNEL FOR THE FLAT ROOF

The length of the light tunnel in the flat green roof of the Museum is 1m between the roof top and the ceiling.

Tunnel characteristics:

- The recommended tunnel length between the roof and the ceiling is 0.8 to 6 m.
- The 1.7-meter long rigid tunnel should be used at larger lengths in combination with the ZTR extensions in order to ensure that the adequate amount of daylight is provided. Supplied with 2 45 degree elbows.
- They can extend up to 6 meters.
- The rigid tunnel has a diameter of 35 cm or 25 cm.
- Super reflective coating along the inside of the tunnel provides an internal reflection rate of 98%.
- Easy folding diffuser comes complete with matte polycarbonate insulation.
- Roof module made of PVC and an acrylic dome.



REGENERATING LAKE

The regenerating lake is located on the spacious entrance plateau in front of the museum at the level of 644.00m above sea level. Plateau descends lightly to the lake, from the level of 644.50 to 644.00m above sea level. There are algae and other bacteria in the lake which serve to self-purify the water and contribute to the sustainability of the lake throughout the year. The lake is surrounded by short, natural stones, which are also within the lake itself, much like the oak forest, which surrounds the whole complex. The lake can be naturally or artificially made, depending on the hydrographic potential offered by the location. Hydrographically speaking, Cer represents the divide between the Sava's tributary rivers of Posavina and the flows of Jadar and Lesnica. There are small river flows present on the map of the area which provides, there is the potential for the natural formation of lakes, but this subject requires a more detailed analysis in the future. The lake is illuminated at night and contributes to the overall ambience of the complex.

General information on regenerating pools/lakes

The preservation of the environment, a healthy lifestyle and the return to nature in general, have been the subject of various forums, debates and discussions over the past decades and have finally become the trend today, a practice partaken by an increasing number of people in their everyday lives. The concept of biological or natural pools/lakes goes hand in hand with this. Biological pools/lakes are based on 100% natural water purification processes, which means that this type of pool/lake does not differ much from the kinds found in nature. However, the emergence of biological pools/lakes is not a recent one. The first pools of this type first appeared in Austria as far back as a century ago and were constructed under the order of the most influential people of the time. They have been in development for decades and have become significantly more accessible to a larger number of people in the last thirty years. The pool and the regenerator can also be physically connected as one lake with internal separation or as two lakes separated by a wall through which water flows from one pool to the other. Part of the regeneration zone is covered with grass, stone, etc. and can be used for a stay. The pool/lake and the regeneration can also be physically connected as one lake with internal separation or as two lakes separated by a wall, through which water flows from one pool/lake to the other.

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