

RAILWAY BRIDGES UNDER VYŠEHRAD

Verbal evaluation of Concepts

CONCEPT NO. 1

TRANSPORT SOLUTION

The design of platforms, platform edges and track layout of the Výtoň stop is without comments and the public transport transfer links are short and direct. However, the routing of pedestrians and cyclists in the middle of the bridge with a connection only to the street network, which does not allow a direct connection to the A3 cycle path in Smíchov, should be considered less suitable. At the same time, the lack of a direct connection between the platform and the footbridge over the Vltava River was identified, as well as the deterioration of direct access from Rašín's Embankment. It is not clear whether the proposed design preserves the direct connection between the embankment and Rašín's Embankment.

ARCHITECTURAL AND URBAN DESIGN

It honours the basic principles of Prague bridges and respects the views in the area under consideration – it is an evolution of the current form of the historical structure, which accentuates the established morphology with a very elegant architectural design. From urban planning perspective, completion of the wider area, which preserves the character of a rail link, is to be considered. The jury's comment on the further urban elaboration of the submitted Concept does not diminish the quality of the highly rated architectural design. The preservation of the current design is not addressed in detail and the design should be elaborated in this respect or the proposed solution should be justified in more detail.

FUTURE OPERATION

The contactless track solution is not documented – the fixing system using bridge girders is more maintenance intensive and a change to, for example, track beds would mean greater height and load, which may affect the subtlety of the designed structural elements. These are relatively subtle structures and the less robustness of the elements may affect the safety of operation in an emergency situation. It can be assumed that the elements formed by the tie rods may be the reason for the higher financial and technical maintenance requirements. Open bridge deck with bridge girder – the structure is firmly connected under all tracks, in case of necessity to exclude the structure from operation (e.g. when tensioning or measuring tie rods, or replacing bearings) the traffic will have to be excluded from all three tracks, at the same time less suitable in terms of maintenance and noise propagation.

TECHNICAL PARAMETERS

It is a trio of identical bridge structures, the advantage of which is the repeatability of the elements. The construction details are designed with great emphasis on aesthetics and design – however, from a design perspective, it is not a standard solution and will be more demanding in terms of inspection and maintenance (bolted connections have a higher risk of corrosion than welded ones).

RESTRICTIONS DURING CONSTRUCTION

A single structure with three tracks is a less suitable option, where the zero-track traffic condition lasts for a relatively longer period of time, but comparable to other concepts in the 3+0 layout. However, the construction technology is elaborated in the Concept in detail, which proves the feasibility of the proposed solution.