



AESTHETIC REQUIREMENTS FOR BRIDGE PIERS

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Abstract

The bridge designers should try to find an ideal balance between structural integrity, economy, buildability, aesthetics and durability. Bridge's structures should harmonize with landscape. Today the bridge design features are mostly the topical issue of designers often not having instruments to estimate the real output related to visual qualities. Some methods have been developed to examine bridge interaction with landscape by 3D modeling and photomontage in landscape.

Transport infrastructure development usually must ensure decreasing of project costs, increasing the social and economic benefits and also reducing the negative impact on the landscape. During the last years the society has accepted documents giving procedures for evaluation of the structural appearance on surrounding landscape. The European Landscape Convention defines the landscape as a part of territory whose features draw from natural and anthropogenic factors and consequently, interrelationships. The Convention gives clear and objective methods to assess the landscape's visual quality.

This paper deals with aesthetic requirements for bridge piers, and according to the Convention analyzes two categories of piers: short piers and tall piers. The key to improve the appearance of a not tall pier is eliminating or minimizing the pier cap, limiting the taper of piers. Problems of short hammerhead piers can be minimized with appropriate proportions. Tall piers are easier to design because both structure and aesthetics point in the same direction: emphasizing vertical members. The paper presents the analysis of bridge piers built in Latvia in the last decade.!

Key words

Pier shape, short piers, pier caps, tall piers, aesthetic requirements.

To link to this article in conference proceedings:

http://www.fce.vutbr.cz/ekr/pbe/PBE2012_Proceedings.pdf

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