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REDUCTION OF BOX CULVERT STRESSES

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Abstract

A culvert is a crosswise and fully enclosed drainage structure that runs under a road. The amount of water flowing is the main role in determining the dimension of the opening and then which type of culvert, the area that is discharged into it and how deep the culvert is being installed. Whereas the thickness of the culvert section is designed based on the loads applied to the culvert. Therefore, this research focuses on the impact of using haunches on the economy of the culvert design. The results show the effect of haunch on the stresses of the box culvert while prediction equations for most of the cases are provided. The study considered the cost comparison made for different width of the haunch.

Keywords: haunch, rectangular box culverts, thickness of culvert, width of culvert

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