



Accelerated Bridge Construction Decision Making and Economic Modeling Tool, TPF-5(221)

Description

Meta Fields

Project Completion Year : 2011

Project Starting Year : 2009

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Primary Sponsor Contact Info : Sponsor #1: Oregon Department of Transportation (lead in pooled fund study) 355 Capitol Street NE Salem, OR 97301 USA Sponsor #1 Contact: Benjamin Tang

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Project Length : 18

Budget : 120000.00

Key Words : Accelerated Bridge Construction, Decision Making, AHP, Criteria Hierarchy

Abstract : In this FHWA-sponsored pool funded study, a set of decision making tools, based on the Analytic Hierarchy Process (AHP) was developed. This tool set is prepared for transportation specialists and decision-makers to determine if ABC is more effective than traditional construction for a given bridge replacement or rehabilitation project. The tool set is user-friendly, flexible to accommodate a range of construction situations, transparent as to the method of calculation, and customizable to maintain future relevance. To accommodate this task, a comprehensive literature review on a number of relevant domains such as ABC construction techniques and decision making approaches, were completed. The findings were summarized into a decision model hierarchy that was also incorporated into the decision making software. The software was tested through evaluating a set of real-world construction projects.

Subject : AHP

Group : Design-Making Tools

Category : Completed Projects