

Evaluation of the Buena Vista IBRD Bridge: A Furthering of Accelerated Bridge Construction in Iowa

Description

Meta Fields

Project Completion Year : 2011

Project Starting Year : 2008

Other Documents 0 Other Documents File : 2463

Primary Sponsor Contact Info : Iowa Department of Transportation 800 Lincoln Way Ames, IA 50010 USA

Project Length : 37

Budget : 0.00

Key Words :

Accelerated Bridge construction, box girder bridges, bridge design, bridge structures, innovative bridge construction precast bridge components rapid bridge construction single span precast structural performance

Abstract :

The need to construct bridges that last longer, are less expensive, and take less time to build has increased. The importance of accelerated bridge construction (ABC) technologies has been realized by the Federal Highway Administration (FHWA) and the Iowa Department of Transportation (DOT) Office of Bridges and Structures. This project is another in a series of ABC bridge projects undertaken by the Iowa DOT.

Buena Vista County, Iowa, with the assistance of the Iowa Department of Transportation (DOT) and the Bridge Engineering Center (BEC) at Iowa State University, constructed a two-lane single-span precast box girder bridge, using rapid construction techniques. The design involved the use of precast, pretensioned components for the bridge superstructure, substructure, and backwalls.

This application and demonstration represents an important step in the development and advancement of these techniques in Iowa as well as nationwide. Prior funding for the design and construction of this bridge (including materials) was obtained through the FHWA Innovative Bridge Research and Deployment (IBRD) Program. The Iowa Highway Research Board (IHRB) provided additional funding to test and evaluate the bridge.

This project directly addresses the IBRD goal of demonstrating (and documenting) the effectiveness of innovative materials and construction techniques for the construction of new bridge structures. Evaluation of performance was formulated through comparisons with design assumptions and recognized codes and standards including American Association of State Highway and Transportation Officials (AASHTO) specifications.

Subject : Precast Cap Beams, Backwalls, Box Beams

Group : Standards

Category : Completed Projects