Synthesis on System Performance on ABC connections in Mod to High seismic regions; NCHRP 12-88, NCHRP Report 698 [Final]

Description

Meta Fields
Project Completion Year : 2011
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Base isolation; Bridge construction; Earthquake resistant design; Prefabricated bridges; Prefabricated structures; Seismicity; Structural connection; Traffic delays; Work zone safety; Work zone traffic control

Abstract :

The Federal Highway Administration (FHWA) and many state Departments of Transportation (DOT) are actively promoting accelerated bridge construction to minimize construction related impacts to the traveling public and to enhance work-zone safety. Many successful applications of ABC techniques have been recently realized, largely in regions of low seismic activity. A number of these ABC applications are documented in the FHWA Connection Details for Prefabricated Elements and Systems Manual published in 2009. However, utilization of ABC techniques has been more limited in seismic regions of the country. A key factor in successful implementation of this initiative lies in the connections between prefabricated elements. Providing reliable connections to ensure ductile performance is essential to developing designs capable of performing to the specifications required in seismic-prone areas. Several prefabricated connection details used for recent ABC projects in seismic regions hold significant promise for more widespread application, but they have not been fully tested for seismic loading. In addition, by testing these details and developing an improved understanding of their ultimate performance, these details could be used for potential ABC application throughout the country for other extreme event hazards. The objective of this research is to synthesize the available information related to connection details recently used or under development for potential use on ABC bridges with promise for more widespread application in seismic regions.

Subject : Synthesis
Group : Seismic
Category : Completed Projects

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