

Title: Performance Monitoring of Jointless Bridges – Phase III

SPR No: RSCH011-985

Project Description: One of the primary benefits of jointless bridges is that the initial construction costs are significantly less than the costs for spread footings or standard pile foundations. In addition, if these bridges perform favorably, then future savings related to a reduction in maintenance costs can be realized. Jointless bridges have no potential “leaks” and help to preserve the public’s investment in our infrastructure. Results and recommendations generated from this research project will be used to develop safe and efficient design methods.



The objectives of this research project are to increase the knowledge base of VTrans’ engineers and answer as many design and construction related questions as possible, while 1) providing appropriate documentation of the research, 2) outlining current performance issues, and 3) providing recommendations for the design and construction of jointless bridges. Phase III consists of the purchasing, installation, and monitoring of instrumentation. Prior to the opening of the bridge, load testing of the bridge shall be conducted using the appropriate design vehicle, vehicle placement or locations and live load combinations which were used during the design process. Finite element analyses shall be conducted to compare the results from the live load tests for each bridge. A report of these efforts shall be one of the research project’s deliverables included with each structure’s Initial Performance Report.

Recent activities include the Stockbridge project, instrumentation was installed at both abutments and live load testing is scheduled for the coming months. In Middlesex, the project was awarded to A. St. Onge who will begin installing instrumentation at the abutments. The East Montpelier project was awarded to Winterset who will begin installing instruments

Start date: 10/01/2006

End date: 09/30/2013

Status: Active Inactive Completed

Total Dollars: \$410,284

Index Terms: Administration Bridges Construction Environmental
 Geotechnical Maintenance Materials Pavements Safety Traffic Transit

Sponsor Organization

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Subjects: Integral Abutments, Jointless Bridges, Monitoring

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