VERMONT
AGENCY OF TRANSPORTATION

FACT SHEET

Field Metalizing of a Steel Beam Bridge

PROJECT TITLE
Field Metalizing of a Steel Beam Bridge

STUDY TIMELINE
January 2020 – July 2023

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Field Metaling of structural steel

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FHWA Accelerated Innovation Deployment Grant

Introduction or Problem Statement

The goal of this project is to determine the current cost of field metalizing an existing steel beam bridge. Painting has been the standard method of providing a protective coating to steel bridges in Vermont. However, paint systems require re-painting every 25-30 years. Metalizing has a life span of nearly 60 years reducing the necessity of future projects and subsequent disruption to traffic. The goal of the project is to determine if the cost of field metalizing is worth the expected life span.

Application of Field Metalizing

Methodology or Action Taken

A project was completed in 2021 to field metalize 6 rolled beams comprising an 82 ft long simple span bridge on VT 16 in Hardwick VT. The cost of the field metalizing on this project came in low due to the contractor's desire to gain field metalizing experience.

Conclusions or Next Steps

The construction portion of the project went well with little to no problems occurring. The metalizing coating specification included a two-year warranty on performance. The coating was inspected in 2023 and appears to be performing as expected.

Potential Impacts and VTrans Benefits

Subsequent bidding and construction costs of future field metalizing projects will determine the cost effectiveness of this system. If acceptable, this coating will be added to the Agency's toolbox for protective coatings of steel bridges.

More information about the VTrans Research Program, including additional Fact Sheets, can be found at:
http://vtrans.vermont.gov/planning/research