

## MATERIALS & RESEARCH

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## RESEARCH UPDATE

U 2005-3

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### INTERIM REPORT ON SILICOFLEX STRIP SEAL JOINT SYSTEM BERLIN, VERMONT

**REFERENCES:** RESEARCH UPDATE No. U95-10  
RESEARCH UPDATE No. U97-3

**OVERVIEW:**

Bridge No 1 on northbound Rte 62 was built in 1974 with a neoprene joint at the upper abutment. By 1984 leakage of deicing salt solutions had caused severe delamination of the steel girder ends due to the joint which failed to return to its original dimension as the joint opened in the winter.

On August 1<sup>st</sup>, 1995 the Vermont AOT District 6 maintenance forces replaced the neoprene joint with a Silicoflex Strip Seal Joint System. Installation proceeded as by the manufacturer's specifications which included blast cleaning and wiping the contact area with Silicoflex cleaner/primer.

**PRODUCT DESCRIPTION:**

Silicoflex is a preformed silicone joint seal that is bonded directly to concrete, elastomeric concrete, polymer concrete or steel joint interfaces, with a specially developed, fast curing, silicone locking adhesive. The product is a 3-1/2" preformed elastic strip seal extruded in a modified flat "V" configuration. It is installed by squeezing the strip seal together, inserting it to the desired depth in the open joint and then locking it in place by extruding a silicone sealant along both sides of the seal element.



Credits: Silicoflex.com

**SITE VISIT:**

On March 16, 2005, personnel of the Materials and Research Section performed a visual inspection and took photographs for the records. The seal joint itself appears to be in good condition, however, only a section of about seven feet (7ft) is still attached to the inside walls of the open joint.



Photo -1  
Looking west

Notice there is no strip seal left



Photo -2  
Looking west

Notice the strip seal had dropped down passed original level as seen in Photo -3



Photo -3  
Looking east

Only about 7 feet remains in place  
At its original level

**FOLLOW-UP:**

Due to the bonding failure, there is no need to continue monitoring the performance of this product in this particular application. Additionally, The New York Thruway Authority also reported a similar failure in that the joint material appeared to be durable but in most of them the bonding failed. However, further evaluation of this product may be warranted and if requested will be considered.

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**DISCLAIMER**

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