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RESEARCH UPDATE

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PAVETECH (KOCH) BRIDGE JOINT SYSTEM I 89 BRIDGE 16 S PUTNEY

REFERENCE: Work Plan 90-R-2; Research Report 90-2

HISTORY:

Bridge 16 S, I89 over Sackett's Brook in Putney was rehabilitated during 1988-1989. The immediate failure of the installed joints led to the need for replacement. A PAVETECH Joint had been installed on a Bridge on Route US 2 in Waterbury in January of 1990 and appeared to have been successful. This system was selected as an experimental replacement on Bridge 16 S. The design, construction and early performance of the Joint in Waterbury was reported in research report 90-2 in January 1990, and is referenced for details of this system. Recently KOCH inc. has acquired the PAVETECH system and it has now been renamed "KOCH Bridge Joint System (BJS) TM.

INSTALLATION:

The system which consists of a modified mastic asphalt binder incorporating pre-weighed select granite aggregate and rubberized asphalt, was installed on March 14, 1990. Two 30 ft long joints were installed at the abutment joints. Air temperature was 66+ Deg. F. The width of the south joint was 25"+/- and the width of the north joint varied from 30" to 32". The only installation problem encountered was at the northerly joint in the shoulder area where the pavement depth was less than designed. This caused the system to taper from 3 to 2 lifts at the curb line. The system representative indicated that this would not affect the system's waterproofing ability.

COST:

The installation of this joint was performed at a per foot cost of $172.15 for 60 feet. The total cost of the contract was thus $10,329.00. Additionally,removal of the previous joint and traffic control by state forces was $1,519.88.

STATUS:

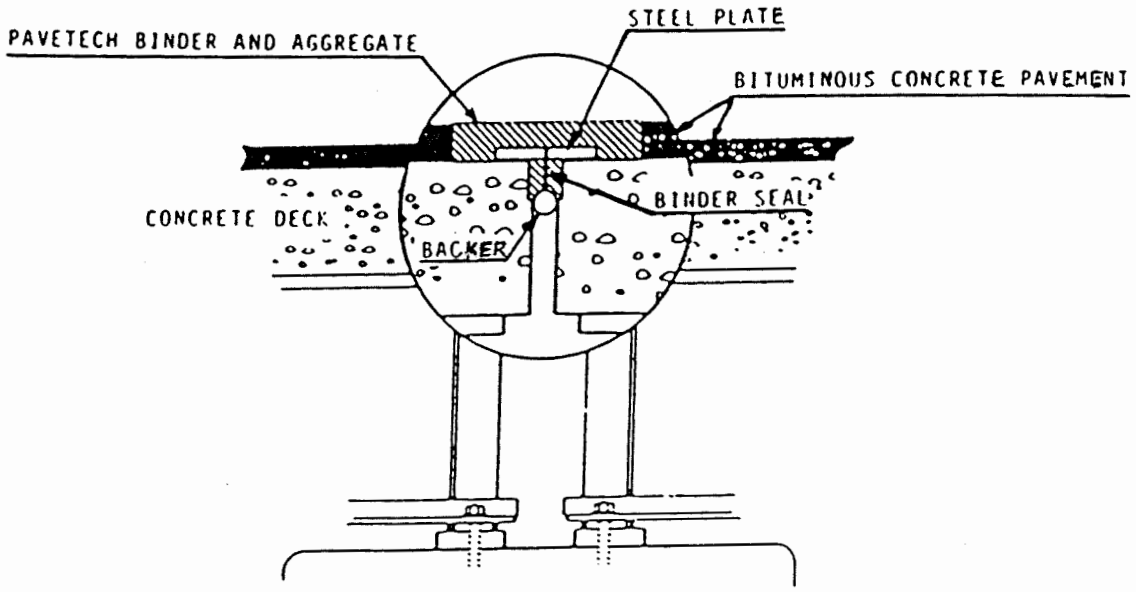
As of July 11, 1990 the joints are still flexible enough that an indentation can be made by a bootheel. Under traffic however, the indentation immediately disappears. The joints ride well. A slight, built in, "hump" does not appear to have increased with span expansion with hot weather.

STATUS Continued

Due to the location of the joints over the abutments, leakage will not be apparent unless there is visible surface damage such as delamination at the pavement/plug interface or significant cracking.

FOLLOW UP:

The joints will remain under observation and performance will be reported as significant results occur.



TYPICAL PAVETECH CROSS SECTION

Distribution A,B,C,D,E