

Bridge Substructure Rehabilitation External Structural Strengthening

STRUCTURE: Bridge Columns
LOCATION: Minneapolis, Minnesota
PROJECT DATE: August 1998
JOB DURATION: 21 Days
CONTRACT AMOUNT: \$ 186,000
CLIENT: Minnesota DOT
CONTRACTOR: Vector Construction Group



PROJECT DESCRIPTION:

In the summer of 1998 Minnesota Department of Transportation hired Vector Construction to undertake the substructure rehabilitation of Bridge # 27831, at Highway I-394 over Dunwoody Avenue, Minneapolis.

The project also served as a experimental project where the Minnesota DOT had the opportunity to try out various repair and protection materials and new technologies that can be monitored for long term performance.

The two main parts of the work however were the Electrochemical Chloride Removal (ECE) and the External Structural Strengthening of the substructure.

The ECE system helped remove the deicing salt from the concrete halting any ongoing corrosion of the reinforcing steel. The External Strengthening halted any further possible structural damage that would be generated by the pre-existing corrosion level, also the Carbon fiber wrap will prevent any further migration of the chlorides (salts) toward the reinforcing steel in the concrete.



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