

Manitoba Highways 9 & 101 Overpass Post-tensioning Strengthening

STRUCTURE: Highways 9 & 101 Overpass
 LOCATION: Winnipeg, MB
 PROJECT DATE: October 2003
 CONTRACT: \$ 43,000
 PRODUCTS USED: Wabo MBrace CF160
 JOB DURATION: 2 Weeks
 CLIENT: Manitoba Transportation and Government Services
 CONTRACTOR: Vector Construction Ltd.



PROJECT DESCRIPTION:

Vector Construction was contracted to repair and strengthen one pre-stressed girder on the Highways 9 & 101 Overpass in Winnipeg, Manitoba. The damage was caused by a highway vehicle exceeding overhead clearance, as a result two of the original pre-stressing strands were severed.

Vector Construction in collaboration with ISIS Canada has developed a solution that restored the damaged girder to its original structural capacity.

The concrete damage was repaired with an overhead patching material. Wabo MBrace carbon fibre wrap was installed in a post-tensioned mode, to the underside of the girder, to create an active structural strengthening.

Strengthening with externally bonded and post-tensioned carbon fibre wrap has never been attempted before in Canada, this project is the first project of this type that was completed on an actual structure. The traffic was restricted to one lane during installation, avoiding inconvenient traffic shutdowns and detours.



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