



Mitchell Interchange Tunnels

Wisconsin, USA



Completion Date
SPRING 2012

Owner
WISCONSIN DOT

Designer
JOINT VENTURE OF CH2M HILL AND HNTB – MARK MADAY, PE

Prime Contractor
WISONCSIN CONSTRUCTORS – JOINT VENTURE OF LUNDA CONSTRUCTION CO., MITCHELL CORPS. AND EDGERTON CONTRACTORS

Shotcrete Subcontractor
JOHNSON WESTERN GUNITE – GARRICK JOHNSON-SITE SUPERINTENDENT / MARIO OCHOA – SITE FOREMAN



The I-94 North—South Freeway is one of Wisconsin's most important transportation corridors. This section of the freeway was in need of a major re-structuring to significantly reduce congestion and improve travel safety. A critical component of this project is the Mitchell Interchange comprising, amongst other things, three separate tunnels, measuring 585 ft, 744 ft and 645 ft respectively in length, each with a minimum of 12 ft in width by 16 ft 9 in. in height.

of the tunnel structure. To waterproof the walls of the tunnel a combination of Xypex Concentrate and Xypex C-500 admixture was used. 24,000 lbs. of Xypex Concentrate was sprayed as a mortar into the secant pile joints and 3,500 cubic yards of shotcrete was treated with 2% Xypex C-500 admixture. The walls were then covered with tile.



The design team decided to use a combination of secant piles with a shotcrete facing to create walls for the tunnel. The dirt was then excavated from between the secant pile walls to create a trench. A roof extending between the secant piles that would then be covered with backfill completes the basics

The walls of the Mitchell Interchange Tunnel were effectively waterproofed using Xypex Crystalline Technology to the point of having no visible leaks.