

## 35W Storm Tunnel – Investigation and Instrumentation Minneapolis, MN

The 35W storm tunnel, located in Minneapolis, Minnesota was inspected and instrumented to determine ways to increase the tunnel's hydraulic capacity. The 12-foot diameter tunnel, which was constructed in the 1960's, runs north from 39th Street to the Mississippi River. The tunnel was instrumented to gain more information regarding the hydraulic characteristics, including flow velocity, and tunnel internal pressures.

CNA inspected over 12,000 feet of the tunnel for cracking, voids behind the liner, and other deterioration. Inspection of the tunnel revealed that many of the construction joints and transverse shrinkage cracks were leaking large volumes of groundwater. Geostructural analysis was performed on the tunnel to find the liner's ability to withstand different loads from external and internal high water pressures.



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**Owner- Minnesota Department of Transportation, Dennis Larson, 651-634-2078**  
**Completion Date — 1998 original inspection and instrumentation**  
**2002 partial reinspection and instrumentation review**

**CNA**  
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