



## Nonintrusive Road and Weather Information System

**Project Number** 2011-05

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**Problem** During night and weekend weather events, staff at the City of Eden Prairie had a difficult time determining when a full deployment of personnel was needed for snow and ice removal. Limited information about weather and roadway conditions was available to key decision makers who live outside of the city, which made it difficult for them to determine what type of precipitation was falling (snow, ice, sleet, rain), if an immediate response was needed, and what would be the most appropriate treatment (plowing, sanding, salting).



**Solution** The City of Eden Prairie installed a Vaisala road and weather information station on Viking Drive near Interstate 494. The system provides real-time information on weather conditions and on the current grip level of the roadway. In addition, the station includes a camera that can be accessed from any device with Internet access. The data provided by the system allow supervisors and on-call personnel to make timely and informed decisions about snow and ice removal—including the dispatching of appropriate personnel, materials, and equipment—even from off-site locations outside of normal business hours.

**Procedure** The Vaisala system was installed on Viking Drive near I-494 in November 2012. During the 2012–2013 snow removal season, the data provided by the system were compared to data collected at the nearby Minnesota Department of Transportation (MnDOT) Road Weather Information System (RWIS) station at Minnetonka Boulevard and I-494. The data were also compared to weather information from the National Oceanic and Atmospheric Administration (NOAA) office in Chanhassen.

**Results** The initial evaluation demonstrated that the data collected by the Vaisala system were comparable to the MnDOT RWIS station and to weather data reported by NOAA. The Vaisala system was also a more affordable option for the city than a full RWIS. Overall, city personnel have successfully used the system to help monitor winter weather events and make timely callouts for snow removal, which has led to improved customer service for those traveling in Eden Prairie.

**Approximate Cost** \$30,000

**OPERA Funding** \$10,000

**Implementation** The system has provided accurate, reliable data for the City of Eden Prairie. The city plans to continue using the system as a decision-making tool during winter weather events.

**Status** Complete

**Prepared by:**

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