



Local Operational Research Assistance (OPERA) Program

Temporary Roadside Turf Irrigation System

Irrigating newly planted grass seed in roadside areas disturbed by construction is a common challenge for many local agencies. To address the problem, the City of Edina Engineering Department adapted a temporary roadside turf irrigation system developed by turfgrass researchers at the University of Minnesota.

The City of Edina received a \$5,900 grant through the Minnesota Local Road Research Board Local Operational Research Assistance (OPERA) Program for the project team to build and test the temporary roadside turf irrigation system. The team assembled the system with parts readily available at most hardware retailers for less than \$200.

City staff tested the system along a portion the roadside of a smaller city road and utilities reconstruction project. Turf establishment was monitored and compared to the traditional method of irrigating with a water truck on the remaining portions of the project. The contractor was directed to water the turf areas per the specifications but to not water the temporary irrigation area.

It was assumed that testing the system on a 50-foot strip that was 5-feet wide would yield the same results when applied to a much larger area. It also was assumed that both areas were undisturbed during turf establishment and that the water for both applications came from the same source and was not contaminated during application.

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OPERA Funding

\$5,900



Steps for creating a temporary roadside turf irrigation system

1. Identify a local water source
2. Fabricate an irrigation system with common parts
3. Set it, relax, and watch the grass grow

The temporary system and a control plot were installed along a portion of the project that was not watered by a permanent irrigation system. City staff monitored staff time, gallons of water, and length of time to achieve 90 percent coverage with 6-inch turf grasses.

The City of Edina intends to share the design, installation, and use of the temporary roadside turf irrigation system with other local agencies.

The Local Operational Research Assistance (OPERA) Program encourages maintenance employees from all cities and counties to get involved in operational, “hands-on” research. OPERA helps to develop innovations in the construction and maintenance operations of local government transportation organizations and share those ideas statewide.

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Local OPERA Program partners: Minnesota Local Road Research Board (LRRB), Minnesota Department of Transportation (MnDOT), and Minnesota Local Technical Assistance Program (LTAP) at the Center for Transportation Studies, University of Minnesota.

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