Technology in Rural Transportation

A recent study documented more than eighty proven, cost-effective, "low-tech" solutions to rural transportation needs, most developed or implemented by local transportation professionals. One of these solutions is outlined below:

Learn all about the simple solutions on the Internet at http://inform.enterprise.prog.org

The simple solutions report is available from Hau To at (503) 892-2533, or email: to@crc-corp.com

Automated Anti-Icing System

Overall goal:	To improve road safety in areas that are prone to icy conditions.
Technical approach:	The City of Ft. Collins installed and deployed two anti-icing systems that are capable of operating automatically using a sensor, via remote control, by way of a wireless paging system or manual activation. The system is programmed with the number of activations necessary to fully de-ice the specified area and the amount of time the pump needs to run. A trailer containing the chemical tanks and the decision-making processor is located near the road and the only requirement is a 120-volt single-phase power source. The Fort Collins system covers 200 feet of a two-lane highway but may be adjusted to cover a larger surface area.
Current status:	The city of Ft. Collins plans to install and deploy an additional anti-icing system that will surround the perimeter of a roundabout.
Location / geographic scope:	The anti-icing system in City of Ft. Collins Colorado is located on a bridge at the bottom of steep hill, a short distance before a railroad grade crossing.
Agencies involved:	The city of Ft. Collins and Odin Inc. a private sector manufacturer of de-icing equipment.
Cost information:	Total costs include; utilities, communications costs (i.e., transmit road and weather information), de-icing solution, nozzles, sensors, spray pumps, and tanks. Total cost was estimated at $15,000.
Key contacts:	Scott Bowman, Traffic Engineer City of Ft. Collins (970) 221-6762, Tom Ask, Odin Systems Inc. (912) 638-2400.

U.S. Department of Transportation
Federal Highway Administration

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Have goals been achieved?

Yes, there has been an increase in roadway safety in areas that are prone to icy and potentially hazardous conditions, and a reduction in maintenance costs.

Solution timeline:

Installation and testing of the anti-icing system in Ft. Collins took roughly 16 to 24 hours, while estimated time for installation for a bridge deck system is roughly 40 to 50 man-hours. Scheduled maintenance must be done four times a year, at the start of the winter, twice during winter, and once at the beginning of spring.

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