

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

“Total Stations” for Accident Investigation

Overall goal:

To reduce the amount of time it takes to do on-site accident investigation, thereby clearing accidents quicker for congestion and air quality mitigation.

Technical approach:

Tripod mounted survey equipment is utilized to shoot coordinates at accident sites, allowing the accident to be cleared sooner than with traditional investigative techniques. Officers are able to record all pertinent accident data, such as distances, and turning angles, and recreate the accident scenario at a later date. Upon returning to the office, the “total station” data reduces the amount of paperwork and time required to file incident reports.

Current status:

Police officers are being trained on the surveying equipment, and it has been successful in helping in accident investigation. Reports from investigators indicate a positive attitude toward the technology for better investigation. However, the Texas Transportation Institute no longer recommends this method for on-site accident investigation. If it is being used then it is only for fatality incidents.

Location / geographic scope:

Total stationing is being conducted in the Dallas metropolitan area and other metropolitan areas of Texas, as well as in other states.

Agencies involved:

Department of Public Safety, Texas Department of Transportation, Texas Transportation Institute (TTI).

Cost information:

The costs are not available, however the total stationing equipment was purchased with Intermodal Surface Transportation Efficiency Act,



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Key contacts:

Congestion Mitigation/Air Quality funds by the local Council of Governments (COG), and disbursed through Texas Department of Transportation to various city Department of Public Safety agencies for testing.

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Have goals been achieved?

Although “total stations” are a proven and accurate method of accident investigation, it actually takes longer to clear an incident than conventional field investigation methods. It is too expensive to equip all squad cars with the equipment. Therefore, the equipment resides in one central location (usually the engineering department at City Hall) and it is inconvenient and time-consuming to get the equipment to the accident scene. The Texas Transportation Institute now recommends Photogrammetry as a faster method of clearing incidents.

Solution timeline:

Currently, officer training is taking place for this simple solution. The method is still in use for critical accident investigation with fatalities, if time is not an inhibiting factor. However, TTI is recommending Photogrammetry if the speed of clearing an incident is an issue.

