TASK VII

IH 35 ACTION PLAN

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ACTION PLAN

User service objectives for incident management were identified in Task I of this study. Additional information concerning roadway incident management has been discussed in Task II. Task III identified techniques and technologies associated with incident management. Accident information, a type of incident, was presented in Task IV for the IH 35 corridor. Task V identified incident management as part of a strategic plan for the Austin area. Task VI identified assessment and evaluation criteria for incident management. This task more specifically addresses incident management for the IH 35 corridor.

Challenges and Opportunities

Improving incident management on the IH 35 corridor has been the subject of several past Austin Traffic Management Team (TMT) meetings. It is desirable to develop a incident management plan to reduce delay to the travelers along the corridor. Information and response must be coordinated and integrated between the agencies responding to an incident in order to achieve this result. Technical, as well as, institutional issues must be mitigated between agencies involved.

Freeway Traffic Management

The TxDOT Austin District has aggressively pursued the implementation of a freeway traffic management (FTM) system, including integration of a courtesy patrol, to provide incident

management support for the IH 35 corridor. Implementation of these supporting techniques and technologies has proven to be a challenge.

FTM systems have been deployed in a few areas of Texas, however, standard, uniform deployment has not taken place. These systems have been costly in construction and especially in operations and maintenance. These issues are an important factor in the equation for implementing incident management support along the IH 35 corridor in downtown Austin.

Major investment studies are currently under way to completely rehabilitate IH 35 in the downtown Austin area. Schematics reveal a drastic change in the section of the roadway from right of way to right of way line. Installing a traditional FTM system in this area will most likely not be cost effective at this time. TxDOT has been reluctant to install the traditional proven FTM systems in this area for fear it could all be destroyed during rehabilitation.

Courtesy patrol implementation has equally suffered from operational, financial, and institutional issues. Although courtesy patrol was finally implemented in 1997, the operational staff of 5 is spread thinly over 75 centerline miles of roadway, 27 of which include IH 35. Efforts to increase patrol staff have been unsuccessful to date, even though public response to implementation has been supportive. Finding and increasing funding for this incident management support continues to represent a significant hurdle to overcome.

Traffic Signal Management

Incident signal timing plans along the downtown IH 35 corridor were developed under the Traffic Light Synchronization (TLS) Program in 1992. These timing plans were intended to be implemented during a freeway incident with significant diversion to the frontage road arterial. These signal plans have never been implemented due to a variety of technical and institutional issues.

The usefulness of these plans, once implemented, was uncertain. The plans were developed assuming all traffic volume diverted from the freeway to the arterial. This volume was distributed among several ramps somewhat arbitrarily. The plans were developed using the PASSER family of programs, however, a more comprehensive corridor model may be more appropriate. Data for a more robust corridor model was not available. Implementing and then revising the plans to several controllers from an antiquated central control system in a timely fashion was also of concern.

PASSER revealed that progression along the frontage road arterial was limited due to specific lane assignments at intersections. Many of the intersections along this corridor have only one thru lane for traffic traveling parallel to the freeway.

In addition, informing the driver that signal timings had been changed to encourage diversion was not addressed. Drivers would have no assurance or indication that the signal timings had, in fact, been changed. Many drivers often prefer to “wait out” an incident rather than divert, having limited information.

Emergency Services

A roadway incident can include three principle emergency service responses. These services are police, fire, and medical. The responsible agencies for these services have a policy for who is responsible at the incident scene. For instance, if the incident is a car fire with no injuries, the fire department would have control of the incident scene. This policy is logical, however, the impacts to transportation are not always favorable.

Police officers in the Austin area generally receive some traffic control training. Fire and medical personnel typically do not. Obviously, fire and medical incidents often impose a more serious impact to transportation simply by virtue of the training of the individual in charge at the incident scene. However, even when the police are in charge of an incident scene there are sometimes a decreased level of concern for transportation issues.

Actions

Specific actions must be taken by each agency involved in responding to an incident before a plan can be developed that will significantly and noticeably reduce delay to travelers. These actions will provide the foundation for a desirable incident management plan.

Texas Department of Transportation

Previous tasks have identified the importance of surveillance in the success of ITS services.

Certainly, a lack of regular and reliable traffic information along the IH 35 corridor has inhibited the implementation of incident management support. Changeable message signs and lane control signals will not be effective if roadway conditions are not known. Innovative and cost effective surveillance solutions must be sought out, implemented, and information shared with other incident response agencies.

Innovative and significant funding sources for incident management support must be found. "Piecemeal" deployment with short staffs will not achieve desired ITS user services.

To summarize, it is recommended that the TxDOT Austin District take the following near term actions:

- deploy surveillance technologies along the IH 35 downtown corridor.
- expand the courtesy patrol service to permit dedicated service in the IH 35 downtown corridor.

City of Austin Traffic Signals

TxDOT has executed a maintenance agreement with the City of Austin to maintain traffic signal timings along the IH 35 downtown corridor. Although a corridor modeling program may produce more useful signal timing plans for an incident, they most likely will need to be altered during the incident in a timely fashion. In addition, lane assignments may need to be altered or dynamic lane assignment technology may need to be implemented to achieve maximum results from a incident signal timing plan. Some activities need to be coordinated with TxDOT. The City of

Austin and TxDOT both maintain a license to transmit traveler information on 0.530 MHz a.m. These agencies can coordinate transmission on this frequency to provide real time traveler information especially during an incident.

To summarize, it is recommended that the City of Austin Traffic Signals take the following near term actions:

- upgrade the current signal control system to provide timely modifications of signal timing plans during an incident.
- coordinate use of the existing a.m. transmitter, located near the IH 35 downtown corridor, to provide real time incident information.

City of Austin Emergency Services

Coordination of the emergency service response has been a recognized concern in the Austin area. Late in 1997 emergency services in the Austin area began implementation of an Incident Command System (ICS). ICS is a uniform method of procedures for commanding the incident scene. All responding agencies are included in the training for ICS, however, emergency services have the priority to complete training. ICS includes traffic control, however, transportation agencies desire a functional role in the development traffic control training.

To summarize, it is recommended that the City of Austin Emergency Services take the following near term actions:

- functionally involve transportation agencies in the development of training.

PLANS, SPECIFICATIONS, AND ESTIMATE (PS&E)

The sponsoring agencies were determined at the to quickly deploy some ITS technology identified in this study that would be useful to the Austin area. A major emphasis in this study was the need for surveillance technology. This technology is necessary to either efficiently operate an ITS service or is needed to evaluate its performance. To accomplish this task TxDOT prepared PS&E for three projects involving surveillance technologies along the IH 35 corridor. All of these projects have been approved for construction with the assistance of the Federal Highway Administration. An overall location map is illustrated in Appendix VIIA.

The first project to include PS&E for surveillance technologies along IH 35 is a Surface Transportation Program Metropolitan Mobility/Rehabilitation project. This project was selected for funding by the local metropolitan planning organization. The project involved installing closed circuit television cameras at two intersections along IH 35. One camera was located at 6th Street in downtown Austin and the other was located at the intersection of the east leg of US 290 at IH 35 in north Austin. These cameras are located near existing freeway changeable message signs (CMS) and lane control signal (LCS) arrays. These cameras will be used to verify incidents in the area along the freeway corridor, as well as, intersecting arterials. These cameras can also be used to verify the operation of existing traffic control devices. These locations are detailed in Appendix VIIA. A contract for this construction was awarded with the second project in

November 1996. Completion is estimated in August 1998.

A second project was modified to include PS&E for surveillance technologies along IH 35. This project is a National Highway System Traffic Management System project to install Austin's first comprehensive freeway traffic management system along US 183. This project crosses the IH 35 corridor. The PS&E for this project was modified to include incidental duct bank and two cameras along IH 35 at the US 183 interchange. These locations are detailed in Appendix VIIA. This contract was awarded in November 1996 and completion is expected in August 1998.

The third project includes PS&E to install a system of detectors near two camera locations on IH 35. One location is the 1500 block of IH 35 in downtown Austin. The second location is the 4700 block of IH 35. These detector locations are detailed in Appendix VIIA. These detectors will supply information to freeway traffic management software located at the TxDOT Austin District to automatically alarm when established thresholds are exceeded. This contract was awarded in November 1997 and completion is expected in April 1998.