

Appendix E

Summary of Regional Congestion Management Process



T h i s p a g e i s i n t e n t i o n a l l y b l a n k

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Summary of Dallas-Fort Worth Regional Congestion Management Process

Congestion management is an integral element of the region's transportation planning and programming process. It serves as a guide for implementing both near-term and long-term regional transportation improvements. The Congestion Management System in the Dallas-Fort Worth Metropolitan Area was originally adopted by the Regional Transportation Council in October 1993 as an element of the Mobility 2010 Plan Update: The Regional Transportation Plan. The Congestion Management Process (CMP), formerly known as the Congestion Management System, was updated and approved by the Regional Transportation Council (RTC) on April 12, 2007.

Through the implementation of the CMP, transportation decision-makers in the region continue to receive information on system performance, the evaluation of regional and corridor-specific projects and programs, and the effectiveness of implemented strategies. To assist in the evaluation of projects, the Regional Transportation Council and its technical committee, the Surface Transportation Technical Committee, have representatives from Dallas Area Rapid Transit, the Denton County Transportation Authority, the Fort Worth Transportation Authority, TxDOT Dallas District, TxDOT Fort Worth District, North Texas Tollway Authority, Dallas/Fort Worth International Airport, and local governments on these committees.

In the Dallas-Fort Worth region, congestion management strategies, including Intelligent Transportation System (ITS), Transportation System Management (TSM), and Travel Demand Management (TDM) will comprise \$4.8 billion

(approximately five percent) of the total capital cost of the future transportation system. Mobility 2035 includes regional ITS, TDM, and TSM programs, including an employer trip reduction program, vanpools, transportation management associations, and special events management. The Plan includes an Advanced Traveler Information System, an Advanced Traffic Management System, and an Advanced Public Transportation System covering freeways and toll roads, HOV lanes, rail and bus transit, and strategic arterials. The Plan mandates that consistent, coordinated freeway operational plans, which include quick incident clearance practices, are to be in place prior to major freeway improvement expenditures.

The region's Major Investment Study (MIS) guidelines outline a TSM/TDM focus for corridor studies, and states that "additional capacity would only be provided where the demand would not be satisfied by other less capital intensive projects." These guidelines dictate that "the results of an MIS should include strategies which provide for maximum operational efficiency of the locally preferred alternative. The strategies should range from general policy guidelines for transportation management to specific projects such as parallel arterial intersection improvements or rail/arterial grade separations."

The location and extent of congestion is measured through the following criteria:

- Percent lane-miles congested
- Weekday vehicle miles of travel
- Annual cost of congestion
- Daily vehicle traffic volume
- Passengers per vehicle
- Freeway level of service
- Passengers per vehicle-mile
- Percent time spent in delay
- NAFTA mobility travel time index
- Airport mobility travel time index

Performance measures supporting the **evaluation of the effectiveness** of congestion reduction and mobility enhancement strategies are documented in the Metropolitan Transportation Plan and include:

- Reduction of daily vehicle trips
- Reduction in person hours of travel
- Reduction of peak period vehicle trips
- Increase in average speed
- Reduction of vehicle miles of travel
- Enhanced accessibility
- Reduction of vehicle hours of travel
- Reduction in traffic collisions
- Reduction in congestion delay

Ongoing data collection activities in the region include the categories listed below. These data sources support transportation system performance monitoring and identification of traffic congestion, strategy development and evaluation, and evaluation of implemented projects. NCTCOG's emphasis is to continue implementation and to continue to strengthen data collection and strategy development through the long-range planning and MIS processes. Data collection efforts include:

- Demographic information data
- Traffic measurement data
- Transportation infrastructure data
- System performance data
- Trip generation and distribution data
- Special studies/other data
- Model data

During system planning, implementation responsibilities and potential funding are identified

in the metropolitan transportation plan.

Implementation schedules and responsibilities, and funding sources are identified in environmental documents and the Transportation Improvement Program.

Measurement of effectiveness studies are performed on selected projects after implementation. These before-and-after studies seek to quantify the benefits of various congestion mitigation and air quality projects, and provide decision-makers with valuable information for future project selection and development. To date, effectiveness studies have been undertaken to assess the bicycle, HOV, traffic signals, truck lanes, freeway bottleneck, and light rail projects. In addition, a 1996 Transportation Control Measures Effectiveness Study analyzed air quality benefits of various State Implementation Plan commitments in the region. Future studies are planned as implementation of projects continues.