
State Management Systems

Overview of ISTEA Requirements and Current Implementation

DANE ISMART

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) requires the development and implementation by the states of six management systems. Congress included the management systems in ISTEA legislation for several reasons. U.S. highway and transit systems are aging and the nation is faced with tight financial constraints and increased environmental concerns. Planning must therefore focus on how to use the transportation systems more effectively and address the public's higher performance expectations.

Management systems are the key to addressing these concerns and effectively managing existing transportation systems and resources. In its response, Congress included the following management systems in ISTEA:

1. Pavement Management System (PMS),
2. Bridge Management System (BMS),
3. Safety Management System (SMS),
4. Congestion Management System (CMS),
5. Public Transportation and Equipment Management System (PTMS), and
6. Intermodal Management System (IMS).

In addition to the management systems, states are required to develop, establish, implement, and operate on a continuous basis a traffic-monitoring system (TMS). The purpose of TMS is to provide traffic data to support the management systems as well as studies and programs of the U.S. Department of Transportation.

On December 1, 1993, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) jointly issued an interim rule for the six management systems and the traffic-monitoring system. The regulation was issued as an interim instead of a final rule because of concerns about the data burden that states, metropolitan planning organizations (MPOs), and local agencies may have during the implementation and continual operation of these systems.

Although FHWA and FTA believe that much of the data needed to implement management systems currently exists and is available to states, an evaluation of the data burden is being conducted by FHWA and FTA. Comments on the data burden have been received by these agencies and estimates of the data effort required by the regulation will be submitted to the Office of Management and Budget.

After review and analysis of the data burden and comments, the Interim Final Rule will be completed. Although the management system regulations have not yet

received final acceptance from the Office of Management and Budget, all requirements of the Interim Final Rule were effective as of January 3, 1993, and remain so.

The Interim Final Rule provides a common framework for all six management systems. Each management system should be the result of a systematic process designed to assist decision makers in selecting cost-effective strategies and actions to improve the efficiency and safety of, and protect the investment in, the nation's transportation infrastructure. The results of the management systems should be entered into the statewide and metropolitan planning process and the development of State Transportation Improvement Programs (STIP) and Metropolitan Transportation Improvement Programs (TIP).

Although the interim rule provides flexibility, a basic structure is required for all management systems. Each management system should include the following elements:

1. Identification of performance measures,
2. Data collection and analysis,
3. Determination of needs,
4. Evaluation and selection of appropriate strategies and actions to address needs, and
5. Evaluation of the effectiveness of the implemented strategies and actions.

Dane Ismart is an Intermodal Engineer with the Federal Highway Administration.

5. Evaluation of the effectiveness of the implemented strategies and actions.

The states' progress on the implementation of the management systems varies based on their experience with management systems before the passage of ISTEA. Many states have had previous experience in the establishment of bridge and pavement management systems as well as safety management systems. However, very few states have had previous experience with congestion, intermodal, or public transportation and equipment management systems. Lack of experience and examples of ongoing management systems have created a need for technical guidance, especially for CMS, IMS, and PTMS. Efforts are currently under way by FHWA and FTA to provide technical guidance and prototype management systems to assist states and MPOs.

States with existing management systems were advised that they could submit documentation to FHWA by June 1, 1994, requesting acceptance in lieu of developing a new system. Required documentation included demonstrating that the existing system meets the interim rule requirements and reflects the views of all affected agencies. Several states and MPOs indicated that requests for accepting existing systems would be submitted.

For states that are establishing new or modified systems, serious challenges exist in developing coordination among the six management systems. Many states have formed separate committees or task forces for each management system. However, establishing coordination among the six management systems can be elusive when developed separately by independent committees.

One approach that state departments of transportation (DOTs) are taking to develop coordination among their management systems is through the application of geographic information systems (GIS). States such as California and Michigan are conducting extensive efforts for creating GIS-based systems that will provide data integration for all the management systems. Also, GIS-T, a national pool-funded study with the participation of more than 40 states, is currently under way. The purpose of the project is to develop a GIS that states

may use for coordinating the data base required for all six management systems.

Although establishing coordination within state DOTs may be difficult, coordination may also be hard to establish among the states and MPOs during the development and operation of management systems. The state has the responsibility for establishing the management systems, except for congestion management systems in transportation management areas (urbanized areas with populations of more than 200,000). States should coordinate the congestion management system activities to ensure compatibility of the systems and their results.

Technical coordination between the states and MPOs will also be necessary for establishing performance measures and data-collection responsibilities. When coordination has not been established, local agencies and MPOs have become unsure about what role they will have in the creation and operation of management systems.

The roles and responsibilities of the states, MPOs, and other agencies involved should be mutually determined. States may enter into agreements with other agencies but the state remains responsible for overseeing the coordination of the management system activities and taking corrective action, including implementing systems at the regional and local levels if necessary.

By October 1, 1995, the states must develop work plans that identify major activities and responsibilities for implementing the management systems. The work plans should include time schedules, identification of available resources, and a discussion of how the management systems will be coordinated. The work plans must be submitted as part of the January 1, 1995, certification statement. The states will be certifying that the management systems are being implemented in accordance with the compliance schedule specified in the interim rule.

States failing to certify that they are implementing the management systems may be subject to withholding of up to 10 percent of the funds apportioned to the state under Title 23, U.S.C., and to any recipient under the Federal Transit Act.

Before imposing any sanctions, FHWA will notify the state of the actions necessary to correct deficiencies in the implementation of the systems.

Management system development and implementation by the states and MPOs is an evolving process. As the learning curve on management systems progresses, it is inevitable that states and MPOs will find it necessary to make modifications to their systems as they gain operational experience.

For many states the most difficult part of implementing management systems is taking the first step. Uncertainty on how to develop management systems led to inertia in the implementation of the systems. States and MPOs, however, should recognize that the management systems that are in place 10 years from now may be significantly different from those that were initially implemented. The management system program is a continuous process that will improve over time.

Additional information on FHWA management system technical assistance and courses may be obtained from Dane Ismart,

Deen Retires; Skinner Named New TRB Director

Thomas B. Deen will retire after 14 years of distinguished service as Executive Director of the Transportation Research Board. Bruce M. Alberts, Chairman of the National Research Council, has announced the appointment of Robert E. Skinner, Jr., to succeed Deen. The transition will take effect later this year.

Deen presided over TRB's growth into new research areas and modes, initiating a program of policy studies on critical national transportation issues while enhancing the quality of traditional programs including technical committee activities, the Annual Meeting, publications, the Transportation Research Information Services, and the National Cooperative Highway Research Program. The size and scope of TRB's programs grew significantly during Deen's tenure.

Skinner joined TRB in 1983, becoming Director of the Studies and Information Services Division in 1986. Under his direction, the division has performed key studies, earning the Board a reputation for authoritative analysis of national transportation policy issues.