Data Requirements in Transportation Reauthorization Legislation Conference

Keck Center of The National Academies
Washington, DC
December 8-9, 2005

Pre-Conference Materials For The Safety Data Team
Updated: 11/6/2005

Introduction:

This meeting will identify and refine the data issues associated with the program proposals in the legislation reauthorizing funds for surface transportation. The conference is designed for federal, state, and local officials and practitioners who manage data systems or who must assure the availability of high-quality data for their programs. Presentations will focus on the new and expanded requirements, including the new responsibilities that the data communities in state and metropolitan planning organizations are likely to face. The meeting also will offer an opportunity to examine the requirements across programs and to suggest efficient data strategies for transportation organizations.

Six teams will be analyzing the Reauthorization Legislation to identify provisions specifying data requirements directly or those programs the will need regular data sources to operate. The teams are:

- Finance & Revenue
- Freight
- Operations & Security
- Planning, Policy & Environment
- Public Transportation
- Safety

Our task, as the Traffic Safety Group during this conference will be to develop a more complete picture of key elements of the bill, as it applies to the likely impact upon federal and state data systems. Our charge is to try to document the following for each key part of the legislation.

- Legislative Provisions
- Data Implications
- Existing Data Needs & Status
- New data Needs
- Data Program Options
- Changing Roles of Public & Private Partners
- Performance Expectations

At this time the conference organizers have created four breakouts for us, with the proposed organization of our discussions along the following lines.

- Challenges of New Data Requirements and for Existing Data Programs
- Impacts on Data Provider and Analysis Communities
- Emerging Strategy Directions for the Data Programs – Opportunities for Collaboration
- Emerging Strategy Directions

Based upon the discussion, Dave Bozak will be compiling a white paper which will be used by the conference sponsors to educate the framers of the bill, and the states on areas of potential difficulty, potential ways of meeting the safety data requirements, etc.

At this time we have identified the following areas within the Bill that are likely topics for discussion during our breakouts. Should you be aware of other safety data implications within the bill, or of you would like to offer

advance comments on any of these areas, please forward them to Dick Paddock at rpaddock@tsass.com. We will add any contributions to the reference documents and will try to include them in the discussion agenda.

Obviously, we have a very large list of safety-related legislative issues to cover and the time in DC is limited. I am hoping that over the weeks going into the Conference we can communicate via email to narrow our focus on those aspects of the bill that will be the greatest issues to the federal and state traffic safety community. My goal for the resulting report is that we will be able to highlight the major challenges and opportunities presented by the bill and will be able to provide US-DOT and Congress with a viable briefing on the safety data implications of the Bill. Plans are currently under way to report out on our discussions at the Transportation Research Board Annual Meeting in late January, 2006.

Currently, our working group is composed of the following panel members who will be leading the discussions and / or assisting with the White Paper documenting our efforts:

Richard – Paddock – CEO, TSASS, Inc. - rpaddock@tsass.com (Team Leader)
David Bozak – InfoGroup - bozak@comcast.net (Scribe)
Tony Aiken – FHWA - tony.aiken@fhwa.dot.gov (may not be able to attend)
Anthony Kane - Director of Engineering and Technical Services, AASHTO - akane@aashto.org
Dennis Utter - Director, Office of Traffic Records and Analysis, NHTSA - dennis.utter@nhtsa.dot.gov
Barbara Harsha - Executive Director, GHSA - bharsha@ghsa.org
Robert Scopatz – Past Chairman, ATSIP - bscopatz@data-nexus.com
Mike Pawlovich - Iowa DOT Office of Traffic and Safety - Michael.Pawlovich@dot.iowa.gov
Jim Champaign - Louisiana Highway Safety Commission - JChampagne@dps.state.la.us (may not be able to attend)

Registrations for our working group as of 11/1/2005 include:

John Schaefer - Missouri Department of Transportation - John.Schaefer@modot.mo.gov
Doug Couto - Information Officer, State of Michigan - coutod@michigan.gov
Michael Griffith - Technical Director, FHWA - mike.griffith@fhwa.dot.gov
Peter Kissinger - President & CEO, AAA Foundation for Traffic Safety - pkissinger@aaafoundation.org
Mark Panos - Deputy Director, Utah Highway Safety Office - mpanos@utah.gov
Barbara Rhea - Chief, State Data Reporting Systems Division, NHTSA - Barbara.rhea@nhtsa.dot.gov
Rak Hoon Sung – Researcher, Korea Road Traffic Safety Authority - rtsatsi@unitel.co.kr
Brian Tefft - Research Assistant, AAA Foundation for Traffic Safety - btefft@aaafoundation.org
Ida Van Schalkwyk - Arizona State University - idavan@asu.edu
Joan Vecchi - Operations Director, Colorado Division of Motor Vehicles - jvecchi@spike.dor.state.co.us

We hope to have a few more late registrations. All registrants will be receiving periodic updates as we approach the conference. The latest information for our working group will be posted roughly every weekend at **www.tsass.com/trb_safety**

Should you wish to send materials to us in advance, please use one of the following addresses:

Email: **rpaddock@tsass.com** (no limit on attachment size)

US Mail/FedEx: TRB Data Conference
c/o Richard Paddock
Traffic Safety Analysis Systems & Services, Inc.
1213 Stringtown Road
Grove City, OH 43123

Thank you in advance for your participation and contributions.

Dick Paddock, Safety Data Team Leader

Title I – Federal-Aid Highways

Section 1401 – Highway Safety Improvement Program

State identification and analysis of highway safety problems and opportunities. State highway safety improvement program. As part of the State strategic highway safety plan, a State shall:

- Have in place a crash data system with the ability to perform safety problem identification and countermeasure analysis;
- Identify hazardous locations, sections, and elements (including roadside obstacles, railway-highway crossing needs, and unmarked or poorly marked roads) that constitute a danger to motorists (including motorcyclists), bicyclists, pedestrians, and other highway users;
- Advance the capabilities of the State for traffic records data collection, analysis, and integration with other sources of safety data (such as road inventories);
- Determine priorities for the correction of hazardous road locations, sections, and elements (including railway-highway crossing improvements), as identified through crash data analysis; and
- Establish an evaluation process to analyze and assess results achieved by highway safety improvement projects carried out in accordance with procedures and criteria established by this section

Section 1403 – Toll Facilities Workplace Safety Study

Secretary shall conduct a study on the safety of highway toll collection facilities, including tollbooths, to determine the safety of the facilities for the toll collectors who work in and around the facilities. As part of the study, the Secretary shall collect data regarding the incidence of accidents and injuries in the vicinity of highway toll collection facilities.

Section 1411 – Roadway Safety

Secretary shall enter into an agreement to assist in the activities of a national nonprofit organization that is dedicated solely to improving public road safety, by improving the quality of data pertaining to public road hazards and design features that affect or increase the severity of motor vehicle crashes.

Section 1807 – Nonmotorized Transportation Pilot Program

Secretary shall develop statistical information on changes in motor vehicle, nonmotorized transportation, and public transportation usage in communities participating in the program and assess how such changes decrease congestion and energy usage, increase the frequency of bicycling and walking, and promote better health and a cleaner environment.

Section 1907 – Pavement Marking Systems Demonstration Projects

Secretary shall conduct a demonstration project in the State of Alaska, and a demonstration project in the State of Tennessee, to study the safety impacts, environmental impacts, and cost effectiveness of different pavement marking systems and the effect of State bidding and procurement processes on the quality of pavement marking material employed in highway projects.

The demonstration projects shall each include an evaluation of the impacts and effectiveness of increasing the width of pavement marking edge lines from 4 inches to 6 inches and an evaluation of advanced acrylic water-borne pavement markings.

Section 1909 – Future of Surface Transportation System

Investigation and study of future surface transportation needs, including, but not limited to:

- The current condition and performance of the Interstate System (including the physical condition of bridges and pavements and operational characteristics and performance), relying primarily on existing data sources;
- Expected demographics and business uses that impact the surface transportation system;
- Expected use of the surface transportation system, including the effects of changing vehicle types, modes of transportation, fleet size and weights, and traffic volumes; and
- The assessment of the current and future capabilities for conducting system-wide real-time performance data collection and analysis, traffic monitoring, and transportation systems operations and management.

Section 1961 – I-95/Contee Road Interchange Study

Secretary shall conduct a study on the I-95/Contee Road relocated interchange project located in Prince George's County, Maryland.

Data Requirements for States in SAFETEA-LU

Title II – Highway Safety – State Requirements

Section 2002 – Highway Safety Programs

This section requires states to provide assurances in their Highway Safety Plan that included activities reflect "data driven crash factors", as identified by the State highway safety planning process including:

A. Measuring safety belt use within the state following criteria established by DOT.

- So states are going to have to conduct a NHTSA approved safety belt use survey.
- This may require modifications to the TEA-21 Section 157 Survey Criteria.
- NHTSA will need to develop and issue any new guidelines for this survey.

B. Development of statewide data systems to provide timely and effective data analysis to support allocation of highway safety resources.

- So states are going to have to certify that they are investing in the improvement of their data collection and management systems.

Section 2004 – Grants For Primary Safety Belt Use Laws

This section introduces a new grant program, "§406. Safety belt performance grants", to provide incentive for states to pass primary safety belt use laws.

A. States can qualify for this incentive not only by passing the law, but also for reporting statewide safety belt use of 85 percent or more in two consecutive calendar years, based on a survey conducted "under criteria determined by [DOT]".

- So if a state elects to try to qualify for the incentive grant w/o a primary law, it would need to conduct a NHTSA approved statewide safety belt use survey.

- NHTSA will need to develop and issue any new guidelines for this survey, but they may be the same as the survey criteria to be issued under Section 2002.

B. States which have a primary use law in effect at time of enactment or who's use rate is 85 percent or higher in the 2 consecutive calendar years prior to enactment, qualify for a "CATCH-UP GRANT".

C. Language in this section also states that funds received under the incentive grant can be used for "safety conscious planning" and "improving crash data collection and analysis", among other uses.

Section 2006 – State Traffic Safety Information System Improvements

This section introduces the data improvement grant program, "§408. State traffic safety information system improvements". States can apply for grants to improve their traffic records systems, under the criteria listed in the section.

Section 2007 – Alcohol-Impaired Driving Countermeasures

This section updates the current §410 program. States can qualify for grants by either:

- Having an alcohol-related fatality rate of 0.5 fatalities per 100 M VMT, as determined by most recent FARS; or
- Carrying out an increasing number of listed programs.

Several of these programs will require the states to keep records:

- Enforcement activities at high incident locations
- Monitoring adjudication of impaired driving offenders
- Increasing the rate of BAC testing of drivers involved in fatal crashes

Section 2010 – Motorcyclist Safety

This section introduces a new grant program through which states are eligible for a grant if they have one (first year) or two (second and succeeding) years of several programs in effect. Two of those programs require data collection:

- "Reduction of fatalities and crashes involving motorcycles"; and,
- "Reduction of fatalities and accidents involving impaired motorcyclists.

Data Requirements for NHTSA in SAFETEA-LU

Title II – Highway Safety – NHTSA Requirements

Section 2002 – Highway Safety Programs

NHTSA will need to develop the criteria for states to conduct statewide safety belt use surveys and to determine the criteria by which to determine that a state has a "statewide data system to provide timely and effective data analysis to support allocation of highway safety resources".

Section 2003 – Highway Safety Research And Outreach Programs

- Subsection (a) Establishes authority for NTHSA to conduct research (which would include data collection) in a long list of Highway Safety areas.

- Subsection (c) Directs NHTSA to "collect on-scene motor vehicle collision data and to determine crash causation". It also requires a Report to the Congress on results of the survey.
- Subsection (d) Directs NHTSA to conduct demonstration projects to "evaluate new and innovative means of combating … problems caused by distracted, inattentive, or fatigued drivers".
- Subsection (e) Directs NHTSA to conduct a study on Pedestrian Safety Countermeasures and report back to the Congress.
- Subsection (f) Directs NHTSA to conduct a study of Frequency of Refusals to take tests to determine BAC by Persons arrested for operating under the influence or while intoxicated. A report is to be made to the Congress.
- Subsection (g) Directs NHTSA to conduct a study on the "educational, public information and other activities" aimed at reduced deaths and injuries in crashes involving impaired motorcycle operators. A report is due to the Congress. Language specifically calls for the report to include "data collected and statistics compiled."
- Subsection (h) Directs NHTSA to conduct a study on "reducing the incidence of alcohol-related" crashes through "advanced vehicle-based alcohol detection systems". A report to Congress is required.

Section 2006 – State Traffic Safety Information System Improvements

This section introduces the data improvement grant program, "§408. State traffic safety information system improvements". States can apply for grants to improve their traffic records systems, under the criteria listed in the section. NHTSA will need to develop the guidelines by which states can apply for grants under this section.

Section 2007 – Alcohol-Impaired Driving Countermeasures

This section updates the current §410 program. Besides issuing guidelines for applying for the grants, NHTSA will need to calculate alcohol fatality rates for states each year to determine eligibility:

- States having an alcohol-related fatality rate of 0.5 fatalities per 100 M VMT, as determined by most recent FARS; or
- The 10 states with the highest impaired driving related fatalities as determined from most recent FARS.
- Subsection (c) requires NHTSA to issue guidelines specify the type formats of data states should collect relating to drivers who are arrested or convicted impaired driving.

Section 2008 – NHTSA Accountability

This section requires NHTSA to conduct a review of each state's highway safety program once every 3 years.

- Data program improvements would be included.
- It also requires a "program improvement review" of any state that does not "make substantial progress over a 3 year period in meeting its program goals".
- So data are involved in both setting the goals, monitoring the goals and determining that progress has not been made.

Section 2012 – Safety Data

This section requires NHTSA to "collect and compile statistics" on incidents resulting in a fatality or injury involving a vehicle backing up.

- Thus a new data system will need to be developed, or in case of this section, it may just be a special study, since a report to Congress is required in 3 years. The report is to include "data collected and statistics compiled".

Section 2013 – Drug Impaired Driving

Requires conducting research on and producing a report to Congress on ways to combat driving under the influence of an illegal drug.

Section 2015 – Driver Performance Study

Directs NHTSA to conduct a study and report to Congress on ways to reduce risks associated with glare to oncoming drivers on 2-lane roads.

Section 2016 – Rural State Emergency Medical Services Optimation Pilot Program

Directs NHTSA to enter into an agreement with the State of Alaska to conduct a pilot program of collecting geo-coded data for highway accidents to study the best methods to place and manage emergency medical services resources and personnel. A report to Congress is required.

Section 2017 – Older Driver Safety; Law Enforcement Program

Requires NHTSA to conduct research and demonstration program to improve safety of older drivers. NTHSA will develop an older driver safety plan and submit it to Congress.

Title IV – Motor Carrier Safety

Section 4128 – Safety Data Improvement Program

The Secretary shall make grants to states for projects and activities to improve the accuracy, timeliness, and completeness of commercial motor vehicle safety data reported to the Secretary.

A state shall be eligible for a grant under this section in a fiscal year if the Secretary determines that the State has:

- Conducted a comprehensive audit of its commercial motor vehicle safety data system within the preceding 2 years;
- Developed a plan that identifies and prioritizes its commercial motor vehicle safety data needs and goals; and
- Identified performance-based measures to determine progress toward those goals.

Title V –

Section 5202 – Long-Term Bridge Performance Program; Innovative Bridge Research and Deployment Program

Secretary shall establish a 20-year long-term bridge performance program. Secretary shall make grants and enter into cooperative agreements and contracts to:

- Monitor, material-test, and evaluate test bridges;
- Analyze the data obtained under the first bullet; and
- Prepare products to fulfill program objectives and meet future bridge technology needs.

Section 5206 – International Highway Transportation Outreach Program

The development, monitoring, assessment, and dissemination in the United States of information about highway transportation innovations in foreign countries that could significantly improve highway transportation in the United States.

Section 5207 – Surface Transportation Environment and Planning Cooperative Research Program

Secretary shall establish and carry out a surface transportation-environmental cooperative research program. The program carried out under this section may include research:

- To develop more accurate models for evaluating transportation control measures and transportation system designs that are appropriate for use by state and local governments (including metropolitan planning organizations) in designing implementation plans to meet Federal, State, and local environmental requirements;
- To improve understanding of the factors that contribute to the demand for transportation;
- To develop indicators of economic, social, and environmental performance of transportation systems to facilitate analysis of potential alternatives;
- To meet additional priorities as determined by the Secretary in the strategic planning process under section 508; and
- To refine, through the conduct of workshops, symposia, and panels, and in consultation with stakeholders (including the Department of Energy, the Environmental Protection Agency, and other appropriate Federal and State agencies and associations) the scope and research emphases of the program.

Section 5305 – Planning Programs

Secretary may award grants to states, authorities of the states, metropolitan planning organizations, and local governmental authorities, and make agreements with other departments, agencies, or instrumentalities of the Government to:

- Develop transportation plans and programs;
- Plan, engineer, design, and evaluate a public transportation project; and
- Conduct technical studies relating to public transportation

Section 5306 – Research and Development

Secretary shall carry out a comprehensive program of intelligent transportation system research, development, and operational tests of intelligent vehicles and intelligent infrastructure systems and other similar activities that are necessary to carry out this subtitle. Under the program, the Secretary shall give higher priority to funding projects that:

- Enhance mobility and productivity through improved traffic management, incident management, transit management, freight management, road weather management, toll collection, traveler information, or highway operations systems and remote sensing products;
- Utilize interdisciplinary approaches to develop traffic management strategies and tools to address multiple impacts of congestion concurrently;
- Address traffic management, incident management, transit management, toll collection traveler information, or highway operations systems;
- Incorporate research on the impact of environmental, weather, and natural conditions on intelligent transportation systems, including the effects of cold climates;

- Enhance intermodal use of intelligent transportation systems for diverse groups, including for emergency and health-related services;
- Enhance safety through improved crash avoidance and protection, crash and other notification, commercial motor vehicle operations, and infrastructure-based or cooperative safety systems; and
- Facilitate the integration of intelligent infrastructure, vehicle, and control technologies.

Section 5308 – Road Weather Research and Development Program

The Secretary shall establish a road weather research and development program to:

- Maximize use of available road weather information and technologies;
- Expand road weather research and development efforts to enhance roadway safety, capacity, and efficiency while minimizing environmental impacts; and
- Promote technology transfer of effective road weather scientific and technological advances

Section 5501 – Transportation Safety Information Management System Project

The purpose of the TSIMS project is to further the development of a software application to provide for the collection, integration, management, and dissemination of safety data from and for use among state and local safety and transportation agencies, including driver licensing, vehicle registration, emergency management system, injury surveillance, roadway inventory, and motor carrier databases.

Section 5502 – Surface Transportation Congestion Relief Solutions Research Initiative

Research leading to improved surface transportation congestion management system measures.

Section 5503 – Motor Carrier Efficiency Study

Secretary, in coordination with the motor carrier and wireless technology industry, shall conduct a study to:

- Identify inefficiencies in the transportation of freight;
- Evaluate the safety, productivity, and reduced cost improvements that may be achieved through the use of wireless technologies to address the inefficiencies identified in the first bullet; and
- Conduct, as appropriate, field tests demonstrating the technologies identified in the second bullet.

Section 5511 – Motorcycle Crash Causation Study Grants

The Secretary shall provide grants to the Oklahoma Transportation Center for the purpose of conducting a comprehensive, in-depth motorcycle crash causation study that employs the common international methodology for in-depth motorcycle accident investigation of the Organization for Economic Cooperation and Development.

Section 5601 – Bureau of Transportation Statistics

Title X – Miscellaneous Provisions

Subtitle C—Specific Vehicle Safety Related Rulings

Section 10303 – Tire Research

Directs NHTSA to conduct research and submit a report to Congress on tire aging and recommendations for a potential rulemaking.

Section 10304 – Vehicle Backover Avoidance Technology Study

Directs NHTSA to conduct a study of methods to reduce incidence of death and injury from movement of parked vehicles. A report to Congress is required.

Section 10305 – Nontraffic Incident Data Collection

This section directs NHTSA to develop and maintain data on number and types of injuries and deaths resulting from motor vehicle related non-traffic incidents. This data collection is more comprehensive than that required in Section 2012, although data here are limited to non-traffic incidents, whereas the backover data required in 2012 include all such incidents, whether on public or private roads or driveways.