

**Federal Highway Administration
Operations**

Current Program Activities

August 2008

Federal Highway Administration Operations Current Program Activities Report

This report has been updated and summarizes recent activity of selected programs within the Office of Operations. The revisions reflect program titles that are consistent throughout the Office of Operations. For additional information about these or other activities, contact the program manager noted in each section. Additionally, more information may be available on the Office of Operations' web site: <http://www.ops.fhwa.dot.gov>. This report will be updated quarterly.

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I. NON_RECURRING CONGESTION

A.1 Traffic Incident Management (TIM): Program Manager, David Helman (David.Helman@dot.gov) and Congestion Initiative TIM Program, Paul Sullivan (Paul.Sullivan@dot.gov) (*note: Congestion Initiative TIM Program includes work on TIM Performance Metrics, Full-Function Service Patrols, Safe, Quick Clearance Laws & Policies, and CAD-TMC Integration*)

1. National Traffic Incident Management Coalition (NTIMC): The NTIMC has engaged in a Strategic Planning effort that will result in short term (1-2 years) and long-term (5-6 years) Action Plans to implement the 18 strategies of the National Unified Goal (NUG). The Strategic Plan is scheduled for completion and approval by the NTIMC in October, 2008. The NTIMC has also established a non-profit NTIMC Foundation that will accept funds from private sources to support the NTIMC. The NTIMC Foundation, a 501 (c) (3) entity, will have a separate governing body from NTIMC. The NTIMC and the National Committee on Uniform Traffic Control Devices (NCUTCD) have established a mechanism for coordination on traffic control issues that resulted in mutual agreement on revisions to the new MUTCD. The NCUTCD will have a liaison member to the NTIMC and the NTIMC will have similar representation in the NCUTCD.

2. TIM Performance Measures: Eleven FHWA Division Offices are participating in a Focus States Initiative (FSI) addressing TIM Performance Measurement. The FSI States have developed two measures of incident clearance and incident duration and a measure for secondary crashes. An outreach package and marketing strategy for TIM performance measurement is in development. Work has also begun on development of a TIM Performance Measurement Knowledge Management System to facilitate information sharing and communications among practitioners nationwide who are working on program performance measurement for TIM.

3. TIM Self-Assessment (SA): Fifty-two metropolitan regions make up the top 40 urban areas. Metrics will be annually updated using information contained with the Traffic Incident Management (TIM) State Self Assessments. The 2008 TIM SA results reveal that there are thirty-five Full Function Service Patrols (FFSP) programs in the top forty urban areas. Forty-two metropolitan regions report interoperable communications capabilities. As of July 9, 2008 67 assessments have been received with an average score of 60.29%. This is an increase over the 2007 National average score of 58.3%. The SA is being revised in both format (web-based) and content to link TIM to other existing incident management activities being conducted at the State level.

4. Full-Function Service Patrol Handbook: FHWA began work to develop a handbook in support of the Congestion Initiative element for implementing “full-function” service patrols in the top 40 urban areas of the U.S. This Handbook will describe the range of functions that a service patrol can and should perform as a full emergency response partner with public safety agencies at incident scenes. The Handbook will also cover equipment and training issues and costs and benefits of service patrols. Since traffic control is the primary function of a service patrol, the Handbook will address how traffic control should be provided under different incident scenarios. Work has been completed and an Executive Summary will be available in September 2008. **Full-Function Service Patrol Field Operations Guide and Checklists:** As a companion to the FFSP Handbook, FHWA will produce a Field Operations Guide (FOG) and Checklists to aid FFSPs in conducting their operations: from motorist assist to Incident Management. The FOG will provide easy to use, step-by-step instructions on performing all FFSP responsibilities – with a strong focus

on safety and best-practices. Appropriate space will be provided for individual programs to insert unique protocols, procedures, regulations, etc. The statement of work and recommendation for selection of a contractor has been sent to FHWA contracts.

5. Traffic Incident Management Handbook – Revision: The revision of the TIM Handbook (2000) is underway. The new TIM Handbook will describe TIM practices within the context of the National Incident Management System (NIMS) and will include information about the many significant changes in TIM over the last seven years. The review of handbook sections is being coordinated with the National Traffic Incident Management Coalition and the new TIM Handbook will carry the logos of both FHWA and the NTIMC. It will be complete in October, 2008.

6. Traffic Incident Management Safe, Quick Clearance Information Series: Five informational documents on various aspects of traffic incident management are being prepared in support of the Congestion Initiative. The subjects covered are: (1) Effect of Traffic Incidents on Agency Operations, (2) Traffic Control Concepts for Incident Clearance, (3) Hazardous Materials Cargoes and Spills in Incident Clearance, (4) Information Sharing for TIM, and (5) TIM in Construction and Maintenance Work Zones. Work was begun in October 2007 and will be completed in the September 2008.

7. Best Practices in Traffic Incident Management (TIM Safe, Quick Clearance Handbook): In FY08, FHWA will take the Information Series a step further to provide guidance to States on how to organize and conduct safe, quick clearance, using laws and policies and the myriad of State and local resources—law enforcement, fire, rescue, EMS, Full Function Service Patrols, TMCs and other Transportation resources—to get traffic moving while safeguarding travelers and responders following an incident. This document will provide actual efforts from both advanced and developing programs. This should be available in February 2009.

8. Education Outreach for Safe, Quick Clearance Laws and Policies (Safe, Quick Clearance Driver Education Training Module): FHWA is developing outreach materials that can be used by State and local jurisdictions to explain how interconnected laws, policies and resources come together to establish an effective TIM program. This document will be available in June 2009.

9. LAWTOV - TRAA National Drivers Certification Outreach: We are supporting the Towing and Recovery Association of America (TRAA), in an effort to increase awareness of its certification program for towers. An outreach package on the TRAA National Driver Certification Program will be sent to over 17,000 law enforcement agencies with a cover letter jointly signed by TRAA and the International Association of Chiefs of Police (IACP). Four regional workshops for leaders of the towing and recovery industry and law enforcement are scheduled summer and fall of 2008 to promote the use of the NDCP by law enforcement as a contract requirement for towing and recovery at traffic incidents.

10. NHI Course 133101 - Using the Incident Command System (ICS) at Highway Incidents: This new course has been developed by NHI and is targeted primarily at transportation responders. It covers ICS at highway incidents, describing what ICS is, its structure, and how it is used at highway incidents. TIM-PSE-ICS Certificate Program: NHI has developed a suite of complementary incident management courses: Managing Traffic Incident and Roadway Emergencies, Managing Travel for Planned Special Events, and Using the Incident Command System at Highway Incidents. Participants who complete all three courses receive certificates of accomplishments to recognize that they have learned, built, and refined their skills in specific topic area of incident management. The courses will be available for scheduling through NHI September, 2008.

11. 3rd Traffic Incident Management Conference: The “Transportation Operations for Planned and Unplanned Events” will be held March 25-27, 2009 following the ITE Spring 2009 meeting in Phoenix, Arizona. The Conference will be held in conjunction with the Traffic Planned Special Events community and NTIMC.

12. Department Of Homeland Security’s *Lessons Learned Information Sharing* Web site (Traffic Incident Management (TIM) Community of Practice (CoP) Web site): Operation of the TIM CoP web site has been handed over to the National Traffic Incident Management Coalition. The Office of Operations has partnered with the Department of Homeland Security and their Lessons Learned Information Sharing Web site and is posting Traffic Incident Management, Managing Traffic for Planned Special Events and Emergency Transportation documents to this Web site.

A.2 Planned Special Events Traffic Management: Program Manager, Laurie Radow
(Laurel.Radow@dot.gov)

1. NHI Training Course No. [133099: Managing Travel for Planned Special Events is now available.](#)

2. Planned Special Events: Checklists for Practitioners has been posted to <http://ops.fhwa.dot.gov/publications/psechecklists/index.htm>. The checklists cover these key phases of planned special events – Initial Planning Activities, Feasibility Study; Traffic Management Plan; Implementation Activities; Day-of-Event; and Post-Event Activities. What is especially useful about the checklists is that they are provided in an MS Word format to allow users to save copies of each file under a new name, thereby keeping the original checklists in an unaltered state while using the renamed copies as working documents that can then be adapted to reflect each user’s particular needs. CDs that include the checklists are currently being prepared.

3. *Managing Travel for Planned Special Events Handbook: Executive Summary:* The executive summary of the “Managing Travel for Planned Special Events Handbook” is available electronically at http://ops.fhwa.dot.gov/program_areas/special_events_mgmt/mng_trvl_exsum/index.htm in both HTML and PDF files. The publication is also available in hard copy. For copies, please contact the program manager.

4. 3rd National Conference on Managing Travel for Planned Special Events: The *Planned/Unplanned Events Conference* will be held in conjunction with the ITE 2009 Technical Conference, “Transportation Operations in Action” from March 22 to 25, 2009 in Phoenix, Arizona.

5. Tabletop Exercise Instructions for Planned Events and Unplanned Incident/Emergencies: The purpose of these instructions is to provide those involved in planned or unplanned events with the basics on how to conduct scenario-based exercises conducted in an informal stress-free environment. The instructions are available electronically at <http://ops.fhwa.dot.gov/publications/tabletopexercpe/index.htm>.

6. “ITS Best Practices Cross-cutting Study to Monitor and Manage Traffic Associated with Large-scale Special Events”: This task was initiated through the ITS Joint Program Office. The six cases studies examined the use of ITS during planned special events for a localities that range from large to rural. The six localities are Anaheim, Boston, Daytona Beach, Dutchess County, NY, Montgomery County, MD and Pasadena, CA. The overall objective of the cross cutting study is to identify and evaluate the best practices employed at various Planned Special Event (PSE) venues; to seek situational commonalities; and to identify and evaluate best practices, ITS applications and

repeatable solutions. The document will be available in November at the 2008 ITS America Annual Meeting and will be posted to the web site.

7. Planned Special Events – Role in the Economy and the Extent of PSE-Caused

Congestion: The purpose of this task is to delineate where planned special events fits within the national economy and to establish the magnitude of this sector. Once the economic value of the total number of planned special events held annually to the larger national economy is understood, the important role that transportation must play in managing the transportation aspects of these events can be better understood. The task is in its final stages of review and final delivery date is September, 2008.

8. Planned Special Events - Cost Management and Recovery Primer: This primer will aid jurisdictions recover some of the costs associated with traffic planning and operations for PSEs. The anticipated release date is October 2009.

B. Work Zone Management: Program Manager, Chung Eng (Chung.Eng@dot.gov), <http://www.ops.fhwa.dot.gov/wz/>

1. Work Zone Self-Assessment: Lead, Tracy Scriba (Tracy.Scriba@dot.gov) - Each FHWA Division worked with its respective State to complete the WZSA every year since 2003. For the 2007 WZSA, the National average score was 9.0 (on a 15 point scale), which is a 7% increase from 2006. The 2008 WZSA is underway and results will be available in November, 2008. Reports on the National results for each year are available at http://www.ops.fhwa.dot.gov/wz/decision_support/self-assess.htm. Individual state results are not available.

2. Work Zone Safety and Mobility Final Rule for 23 CFR 630, Subpart J: Lead, Tracy Scriba (Tracy.Scriba@dot.gov) - FHWA published updates to this work zone regulation in the Federal Register on September 9, 2004. The Rule had a compliance date of October 12, 2007. Forty-eight States have achieved full compliance with the initial compliance requirements, with the remaining four States in partial compliance as they finalize draft work zone policies. To assist transportation agencies with implementing the Rule, FHWA published four guides – an overall guide, and three technical guides. The guides, a brochure, facts sheets, implementation examples, and FAQs are available at http://www.ops.fhwa.dot.gov/wz/resources/final_rule.htm. A Resource CD containing these materials is available and may be ordered by sending an email with your request and shipping address to workzonepubs@dot.gov.

3. ITS and Work Zones Crosscutting Study: Lead, Tracy Scriba (Tracy.Scriba@dot.gov) - This study looks to educate maintenance and construction engineers and public sector managers about work zone ITS technologies and how they can be used to address work zone mobility and safety challenges. A study report, brochure, and four case studies were previously published and can be obtained at <http://www.ops.fhwa.dot.gov/wz/its/index.htm>. FHWA is currently finalizing an implementation guide that will provide information to practitioners on the considerations for selecting and implementing a work zone ITS application. Expected publication date is November, 2008.

4. Assessment of Work Zone ITS Effectiveness: Lead, Tracy Scriba (Tracy.Scriba@dot.gov) - FHWA is completing a study to quantify some of the benefits and assess the effectiveness of ITS applications in work zones. The study included five sites deploying WZ ITS and measures included elements of congestion (diversion, vehicle throughput), safety, the delivery of information on work zones to travelers, and accuracy of information. A report summarizing the

results is currently being printed, with availability anticipated for September, 2008. The report will also be available on our work zone web site at <http://www.ops.fhwa.dot.gov/wz/its/index.htm>.

5. Work Zone Performance Measures Pilot Test: Lead, Tracy Scriba (Tracy.Scriba@dot.gov) - FHWA has a pilot test underway working with three State DOTs (Washington, North Carolina, and Pennsylvania) to test a set of work zone performance measures on a sampling of road construction projects. The test sites include those that have data sources available from existing instrumentation through transportation management centers, as well as some that do not and will rely on data collection from field personnel and emerging data sources (e.g., third parties). Data collection is underway and results are anticipated by summer 2009.

6. QuickZone Traffic Impact Analysis Tool: Lead, Daniel Grate (Daniel.Grate@dot.gov) - Quick Zone version 2.0 is available through McTrans (<http://mctrans.ce.ufl.edu>). Version 2.0 includes a graphical user interface for network development, an enhanced cost analysis tool, and two-way, one-lane operations modeling. Eight case studies are available that describe how QuickZone was used on a variety of rural and urban projects and documents the resulting benefits. QuickZone workshops have either been held or have been scheduled in several States in 2008.

7. Work Zone Peer-to-Peer Program (WZ P2P): Lead, Chung Eng (Chung.Eng@dot.gov) - The WZ P2P was developed to help facilitate the sharing of knowledge on good work zone management practices among State and local practitioners. Additional information on the program, including a brochure and instructions on how to use the program can be found at: <http://www.ops.fhwa.dot.gov/wz/p2p/index.htm>. An additional feature of the program is the peer exchange workshop, that can be developed around strategically chosen focus areas and targeted at States with a specific interest and that are ready to take action in advancing that focus area. Peer exchange workshops are currently being developed for 1.) Managing WZ Impacts with ITS, and 2.) Automated Speed Enforcement in WZs.

8. Work Zone Traffic Analysis Strategies: Lead, Chung Eng / Daniel Grate (Chung.Eng@dot.gov / Daniel.Grate@dot.gov) - The guidance will include the use of comparative case studies to illustrate differences in data collection requirements, analysis methodologies, as well as expected analytical precision and accuracy. This material will be designed to complement currently available information, including the recently published Work Zone Impacts Assessment Guide. Print materials will include the following 2 guides, which will be added to the Traffic Analysis Toolbox as Volumes VIII and IX:

- (1) **Volume VIII - Work Zone Analysis - A Guide for Decision-Makers** - is geared towards both the decision-makers as well as the practitioners to provide a high level perspective of the strategies, benefits and pitfalls of Work Zone (WZ) Analysis Tools. This guide will be available August 2008.
- (2) **Volume IX - Work Zone Modeling and Simulation - A Guide for Analysts** - will target practitioners and will have more detailed real world and application information. This document as with Vol. VIII will be consistent with the processes within the Rule's WZ Impact Assessment Guide and the TAT's work zone modeling spectrum terminology and classification of tools. This guide will be available December 2008.
- (3) A webinar has been developed and piloted, and a seminar is currently being developed.

C. Road Weather Management: Program Manager, Paul Pisano (Paul.Pisano@dot.gov), <http://www.ops.fhwa.dot.gov/weather/>

- 1. Principles and Tools for Road Weather Management, NHI Course No. 137030A:** Lead, Roemer Alfelor (Roemer.Alfelor@dot.gov) - The course introduces transportation decision makers to the basics behind road weather management and the ways that various road weather management strategies can be applied to resolve a host of weather-related problems. A web-based version of the course was recently developed and a blended-version (online with instructor) will be refined and offered again before the end of the year. An RWIS Implementation Course was also recently developed by ITS Rocky Mountain in partnership with FHWA and was recently piloted in Denver. Options are being explored for delivering this course to the general transportation community.
- 2. Maintenance Decision Support System (MDSS):** Lead, Paul Pisano (Paul.Pisano@dot.gov) – MDSS Version 5.0 of the Federal prototype MDSS software, which was released in November 2007, can be downloaded from the National Center for Atmospheric Research (NCAR) Web site www.rap.ucar.edu/projects/rdwx_mdss/. Fourteen States have pooled funds to develop an operational version based on the Federal prototype. Others have procured the software or have contracted with private vendors for MDSS-capable services. MDSS, which has been declared a FHWA “market-ready technology”, was promoted through a series of Road Shows. More than 20 were given at various transportation agencies throughout the country. An MDSS Deployment Guide is now available. Three MDSS Product Demonstration Showcases will be conducted in May, August, and September 2008. An evaluation of a MDSS deployment in Maine has been completed. A second study is currently underway on the pooled fund version of MDSS. In addition, a cost/benefit analysis of MDSS deployment in the City/County of Denver is currently being undertaken. MDSS is also being deployed on a global front, with systems being developed and deployed in several European countries.
- 3. The Clarus Initiative:** Lead, Paul Pisano (Paul.Pisano@dot.gov) - *Clarus* is an ITS R&D initiative to improve the quality (e.g., accuracy and timeliness) of road weather information. The system was designed and developed in 2005. Phase 1 of a 3 Phase Regional demonstration project was completed in January 2008, resulting in three “*Clarus* Multi-State Regional Demonstration Concept of Operations.” Phase 2 was initiated in July of 2007 with the announcement/posting of the Connection Incentives Program (CIP) to encourage and assist eligible transportation agencies to collect their Environmental Sensor Station metadata and connect their Road Weather Information Systems to the *Clarus* system. Phase 3 was launched in June 2008 to enable the private sector to build out and test the best concepts captured in the Phase 1 Concepts of Operations. Phase 3 also calls for an independent evaluation of the *Clarus* System. Testing and evaluation of potential weather related technologies derived from the Vehicle Infrastructure Integration (VII) initiative is underway. Additional information about the initiative can be found at: www.clarusinitiative.org.
- 4. Road Weather Resource Identification (RWRI) Tool:** Lead, Roemer Alfelor (Roemer.Alfelor@dot.gov) - Version 2.0 of the tool was posted on the Road Weather Management Program (RWMP) Web site last year. An additional 300 resources will be added to the database this fiscal year, and the access/links to all RWRI resources will be improved as well.
- 5. Weather and Traffic Analysis:** Lead, Roemer Alfelor (Roemer.Alfelor@dot.gov) The Road Weather Management Program completed a research project to analyze existing traffic and weather data to develop empirical models of traffic flow in inclement weather. The final report entitled: [Empirical Studies on Traffic Flow in Inclement Weather](#) can be found on the Road Weather Management Program Web site. A complementary study that analyzes traffic flow at the microscopic level during adverse weather is currently being undertaken. Another research project

to incorporate weather impacts in traffic estimation and prediction systems is underway. A third, related study currently underway is looking at human factors in road weather advisory and control information.

6. Maintenance and Operations Decision Support System (MODSS): Lead, Paul Pisano (Paul.Pisano@dot.gov) – The Road Weather Management Program is working toward expanding decision support systems beyond winter maintenance to include traffic management and maintenance beyond snow and ice control, leveraging and expanding upon the capabilities of MDSS. A concept of operations for MODSS was completed early in 2008. The team is exploring next steps beyond the concept of operations. Development of MODSS capabilities is also being pursued under the *Clarus* Regional Demonstration.

7. Integrating Weather in TMC Operations: Lead, Roemer Alfelor (Roemer.Alfelor@dot.gov) - The Road Weather Management Team recently developed a self-evaluation and planning guide for integrating weather information in Transportation Management Center (TMC) operations. Two TMC's – Sacramento and Milwaukee – conducted the self-evaluation and assisted FHWA in refining the guidelines and tool. The guidelines will be posted on the RWMP Web site by September 2008. A follow-on task to promote the guide and deploy it in at least 4 TMC's will be initiated in August 2008. In addition, FHWA will assist Sacramento TMC in implementing some of the strategies identified in the weather integration plan resulting from their self-evaluation.

8. Implementation and Evaluation of Environmental Sensor Station (ESS) Siting Guidelines: Lead, Roemer Alfelor (Roemer.Alfelor@dot.gov) - FHWA will soon wrap up a study that determined how well the guidelines are meeting the needs of the transportation agencies, and identified the changes needed to make the guidelines more useful and applicable in the field. Three States – Michigan, New Hampshire and Idaho – worked with FHWA in implementing and evaluating the siting procedures outlined in the guide. The results of the study are being used to refine the existing guidelines, which will be available in December 2008.

9. Performance Metrics for Road Weather Management: Lead, Roemer Alfelor (Roemer.Alfelor@dot.gov) - A literature review of relevant performance measures used in the transportation and weather communities was completed, and a preliminary set of output and outcome measures were developed and discussed in a workshop involving a select group of stakeholders. A task is currently underway to quantify/operationalize performance measures gathered from general transportation and weather communities and relate them to the RWMP products and activities.

10. Baseline Road Weather Information: Lead, Roemer Alfelor (Roemer.Alfelor@dot.gov) - Last year, the RWMP initiated a project to characterize and track both the availability and quality of road weather information. This will serve as a baseline for future comparisons of enhanced road weather information enabled by the Clarus system and other advanced road weather management technologies. The results of a survey of transportation agencies regarding their assessment of quality and availability of road weather information will serve as the baseline for comparing road weather information.

II. RECURRING CONGESTION

A.1 Arterial Management: Program Manager, Eddie Curtis (Eddie.Curtis@fhwa.dot.gov), http://www.ops.fhwa.dot.gov/arterial_mgmt/

- 1. Traffic Signal Timing Manual:** The final manual is complete and is available at www.signaltiming.com.
- 2. ACS-Lite** - was field tested at four locations corresponding to the four vendors currently providing the software: Quixote/Peek, McCain, Econolite, and Eagle/Siemens. Information about ACS-Lite can be obtained by visiting http://www.ops.fhwa.dot.gov/acs_lite/index.htm.
- 3. Signal Timing Under Saturated Conditions:** The first phase of the project focuses on identifying current practices to mitigate saturated conditions at signalized intersections to identify best practices. The second phase develops interim measures that agencies can apply immediately to address signal timing under saturated conditions. The third phase looks for long term technology solutions to alleviate the condition. The project has been extended and is scheduled for completion in October 2008. NCHRP 3-90 is a complementary effort that looks at over saturation from a network perspective.
- 4. Signal Timing Workshop:** The FHWA Resource Center Operations Technical Service Team has developed a workshop addressing the fundamentals of traffic signal timing and the development of signal timing plans. A pilot of the workshop was offered in Knoxville, TN in June 2008. The workshop will be modular to allow an ongoing and persistent regional training program to be developed to increase the knowledge and expertise of engineers and technicians involved in the day-to-day operation and maintenance of traffic signals.
- 5. Traffic Signal Program Audits (Process Review):** The Traffic Signal Audit Guide (TSAG) available at www.ite.org/reportcard was developed as a companion to the 2007 Traffic Signal Report Card. The TSAG process will be highlighted in an article published jointly by Paul Olson and Eddie Curtis in the August 2008 edition of the ITE Journal. Contact Eddie Curtis eddie.curtis@fhwa.dot.gov if you are interested in scheduling an audit.
- 6. Arterial Performance Measures Research:** Updating Traffic Signal Timing every 3 to 5 years is considered a best practice. The project currently underway and will be tested in both simulated and field environments.
- 7. Traffic Signal Operations and Maintenance Resource Requirements Guidance:** This guidance will provide a comprehensive analysis and criteria matrix to better estimate operations and maintenance staffing and resource requirements. The project is scheduled for completion in February 2009.
- 8. Regional Traffic Signal Operations Best Practices Guidance:** This effort is motivated by the positive outcome of several regional traffic signal programs such as Operation Green Light in the Kansas City Region and more recently the Regional Traffic Operations Committee formed in the Puget Sound Region. This guidance will identify critical activities, people and programs that contribute the successful formation of regional systems that result in the overall improvement of traffic signal operations. The project is a 12 month effort scheduled for completion in February 2009.

A.2 Access Management: Program Manager, Neil Spiller (Neil.Spiller@dot.gov), http://www.ops.fhwa.dot.gov/access_mgmt/index.htm - Access Management (AM) is no longer a program per se. No program monies are targeted at tasks and products. Instead, we will continue to endorse AM principles, participate in national discourse, and remain a presence in this area. Our charge will also be to ensure that AM principles are considered in other pertinent FHWA initiatives.

- 1. In July 2008 the 8th National Conference on Access Management will be held in Baltimore, Maryland.** Contact Mr. Spiller for information or visit the Web site <http://accessmanagement.gov>.

B. Corridor Traffic Management: Program Managers, John Halkias (John.Halkias@dot.gov) / Dale Thompson (Dale.Thompson@fhwa.dot.gov)

Integrated Corridor Management (ICM involves the coordination of transportation management techniques among networks in a corridor that together can collectively address congestion and improve overall corridor performance. Transportation corridors are usually characterized by a system of heavily traveled adjacent transportation networks that link major activity centers. Each of the networks provides an alternative means of mobility into, within, out of, or throughout the corridor. A coordinated effort among networks along a corridor can effectively manage the total capacity of a corridor and increase corridor trip performance by addressing corridor congestion.

1. Foundational research activities for the ICM initiative are complete resulting in the development of an ICM Concept of Operations for a Generic Corridor; Corridor Types, Approaches, and Strategies; and an ICM Implementation Guide. A revised ICM Initiative Program Plan is available at www.its.dot.gov/icms/icms_workplan.htm.

2. The ICM program has begun Phase 2, ICM Research and Tools Development, and Phase 3. All eight Pioneer Sites - Seattle, Oakland, San Diego, Minneapolis, Dallas, San Antonio, Houston, and Montgomery County, MD - received our assistance in developing a Concept of Operations, or vision, of how their corridors would operate under various traffic scenarios. In addition, the Pioneer Sites developed concept of operations and system requirements for their corridor that defined the tools, techniques and technologies required to implement the vision. This work is now complete. We have selected three sites that will receive U.S. DOT assistance in analyzing and modeling their proposed ICM systems. Finally, beginning in FY09, two to four sites will be selected to receive our assistance in actually implementing their vision.

C. Freeway Management: Program Manager, Jessie Yung (Jessie.Yung@dot.gov), <http://ops.fhwa.dot.gov/freewaymgmt/index.htm>

The Freeway Management Program has been updated to reflect the continuing shift in emphasis from focusing on individual types of facilities/strategies to managing and operating the overall transportation system within a corridor or region. Consequently, the previous program's "HOV Facilities" has been integrated into Managed Lanes and the "Transportation Management Systems and Centers" focus area has been integrated into "Freeway Operations and Traffic Management." The updated program's focus areas are therefore (1) **Freeway Operations and Traffic Management** and (2) **Managed Lanes and HOV Facilities Freeway Management & Traffic Operations**: Overall freeway operations, traffic operations and traffic management involves managing travel and controlling traffic through the application of the appropriate policies, strategies, and actions to mitigate any potential impacts resulting from the intensity, timing, and location of travel and to enhance mobility on highway and freeway facilities.

1. **TMC Pooled Fund Study (PFS):** Program Manager, Raj Ghaman (Raj.Ghaman@fhwa.dot.gov) - The TMC PFS is a forum of regional, State and local transportation agencies, and FHWA to identify issues that are common among public agencies, suggest, select, and initiate projects and initiatives to address these issues. Agencies are encouraged to join now, to participate with the 29 current members in the activities of the TMC PFS for 2008. The latest information on the following current projects initiated or completed over the past five years, can be accessed at: <http://tmcdfs.ops.fhwa.dot.gov>.

- (1) The TMC PFS Quarterly Newsletter, *TMC Update*, provides featured articles, project status information, and latest news about TMC PFS members and activities.
- (2) The *Transportation Management System Performance Monitoring, Evaluation and Reporting Handbook* project has reached final stages. The project develops a handbook that provides guidance on how to develop, implement, improve, and sustain a continuous performance monitoring, data management, evaluation and reporting program or initiative for TMCs and transportation management systems. The handbook is completed and will be available on the Web site at <http://tmcdfs.ops.fhwa.dot.gov> in November 2008.
- (3) The *TMC Business Planning and Plans* project has reached final stage and should be available December 2008.
- (4) The *TMC Clearinghouse Development* project establishes a central clearinghouse located on an internet web site that houses a comprehensive database of TMC related resources and provides resources at one central location. The Web site is now available at <http://tmc-clearinghousedev.tamu.edu/>. A second phase of this project will identify and implement enhancements to the clearinghouse and provide support and update to the Web site. The second phase is anticipated to start in November 2008.
- (5) The *Regional, Statewide, and Multi-State TMC Concept of Operations and Requirements* project develops a document providing guidance and recommended practices on what are regional/statewide/multi-state TMCs, pros and cons of the concept; how to develop and use a concept of operations and requirements for regional, statewide, and multi-state TMCs; policy, institutional and technical issues to consider; resources required, stakeholders to involve; process to develop and implement a statewide/multi-state TMC; and operations and maintenance considerations. This project has reached final stages and will be available in November 2008.
- (6) The *Redundancy and Mitigation for TMCs* project will develop a technical document that synthesizes current practice and state of practice as related to TMC redundancy and recovery; and highlight technical issues to considered, lessons learned, and recommended practices on the concepts, methods, and procedures for planning, designing, developing and implementing recovery plans and redundancy of TMCs. This project has reached final stages and will be available in November 2008.
- (7) The *Procuring, Managing, and Evaluating the Performance of Contracted TMC Services* project will develop guidance and recommended practice to managers, planners, and operators of TMCs in making decisions related to outsourcing portions, or in entirety, of their operation to a private contractor(s). The final guidance document will be available in December 2008.
- (8) The *Driver Use of Real-Time En-Route Travel Time Information* project will assess impacts of en-route real-time travel time information on drivers and define the most effective way to provide such information. This project will develop preliminary guidance to practitioners for delivering en-route travel time information. The final research report and preliminary guidance will be available in early 2009.

2. Managed Lanes and HOV Facilities – “Managed Lanes” are defined as highway facilities or a set of lanes where operational strategies are proactively implemented and managed in response to changing conditions.

- (1) The update of the *Federal-Aid Highway Program Guidance on High Occupancy Vehicle (HOV) Lanes* will supersede previous guidance dated March 28, 2001. The

program guidance was revised based upon feedback received and issues identified during the past five years and the requirements stated in the Section 1121 of SAFETEA-LU. It will be published in September 2008.

3. HOV PFS - The HOV PFS will focus on the critical program, policy, technical, and other issues that arise throughout the life cycle of an HOV facility. Agencies are encouraged to join the ten current member-agencies, to comment on projects selected and to propose new projects. Information about the current HOV PFS activities below can be accessed at <http://hovpfs.ops.fhwa.dot.gov>.

- (1) The *HOV Lane Enforcement Handbook* has reached final stages and will be available in November 2008. Associated products include a primer and brochure. Together, these products will provide guidance, recommended practices, and lessons learned on how to successfully enforce HOV lanes, integrate these needs in the design of HOV facilities and HOV program.
- (2) The *Safety Considerations of HOV Facilities Handbook* reached final stages and is will be available in November 2008. This project will develop a technical reference, primer, and brochure to provide guidance and best practices on the key issues, considerations, and potential impacts on safety related to various HOV facility issues, including roadway design features (e.g., facility type, shoulder widths, and types of ingress/egress), transit facilities, enforcement area and traffic incident management provisions, and signing or pavement marking.
- (3) The *HOV Performance Monitoring, Evaluation, & Reporting Handbook* has been recently completed and will be available in November 2008.
- (4) The *HOV Hours of Operation and Eligibility Requirements* task order was revised to develop additional outreach materials (primer, brochure, and presentation) that were not originally included due to the limitation of available funding. The products will be available in November 2008.
- (5) The *Web Site Clearinghouse and Facility Database* - The Web site and inventory database will be available in the December 2008.
- (6) The *Implications on Lane Pricing* project will develop a handbook that identifies technical, institutional, and organizational implications and provides guidance and recommended practices on planning and implementing pricing techniques on converting existing HOV lanes into HOT lanes. The handbook will be available in the December 2008.
- (7) The *Automated Vehicle Occupancy Technologies "State of the Practice"* project develops a white paper that identifies, compiles, and systematically evaluates concepts, methods, and technologies for automated vehicle occupancy detection, verification and enforcement. The products from this project will be available in December 2008.

4. Active Traffic Management (ATM) - The concept of ATM is to dynamically manage and control traffic based on prevailing traffic conditions using a collection of automated operational strategies that focus on trip reliability, optimizing effectiveness and efficiency of the system/facility, and increase throughput and safety through use of integrated systems with new technologies. Examples of ATM applications include: speed harmonization, temporary hard shoulder use, dynamic signing/rerouting, and adaptive ramp metering/junction control.

Two of the Urban Partner Cities, Minneapolis, Minnesota and Seattle, Washington, will implement ATM strategies as a key component of their congestion pricing projects. The Office of Operations

is responding to these developments by creating a new ATM Program with the aim of increasing the use of ATM strategies in the U.S.

- (1) **Synthesis of ATM Practices** - A consultant is under contract to conduct initial synthesis and inventory of information on current and future ATM deployments. The synthesis information is intended to supplement the 2006 international scanning tour data, and assess U.S. deployment initiatives. An initial outline for an ATM Guidebook will be developed. This guidebook will serve as the primary resource for practitioners considering ATM deployment. The synthesis document will be available by December 2008.
- (2) A draft ATM program roadmap has been developed.

5. Bottlenecks Initiative: Program Manager, Neil Spiller (Neil.Spiller@dot.gov), <http://www.ops.fhwa.dot.gov/bn/index.htm> - The Localized Bottleneck Reduction Program (LBR) was established in FY07. The purpose of the program is to bring attention to mitigating local, operationally influenced bottleneck locations; e.g., lane drops, merge areas, poorly functioning signals, ramp metering, and peak hour shoulder use. This program seeks to address these problem areas in the short term, and hopefully using less structurally-intensive means, as opposed to waiting for a more expensive mega project or corridor sized improvement. In short, this program is to local, spot improvements, as tolling and HOV lanes are to corridors, and as urban partnerships are to regional solutions. In FY07 we initiated to visit a few states each year, intending to learn of their bottleneck activities, but also to raise awareness therein and develop champions in this area. We visited WA, FL, MD, CA, and MN. The first edition of the bottleneck primer was produced. Web site content was also established.

- (1) In FY08 the program continued its “state’s visits” to ascertain level of activity in this area. We visited OH, NC and TN. Three regional workshops are planned: Orlando, FL; Seattle, WA; and Vienna, VA. A task order is underway to develop a best-practices guidance for which micro simulation products best analyze localized bottleneck problems. Much of what we find will contribute to the planned second edition of the bottleneck primer due in February 2009.

D. Tolling and Pricing Opportunities: Program Manager, Wayne Berman (Wayne.Berman@dot.gov), http://www.ops.fhwa.dot.gov/tolling_pricing/index.htm The Tolling and Pricing Team was formed consisting of representatives from all of the responsible program offices – Operations, Policy, and Infrastructure – plus representatives from other stakeholder offices in the United States Department of Transportation. The Team will serve to coordinate all tolling and pricing requests.

1. A **Tolling and Pricing** Web site was developed to serve as an information clearinghouse of all of the eligible programs, as well as to solicit and collect Expressions of Interest that State and other candidate authorities will submit.
2. Urban Partnership projects awarded by the Department of Transportation are advancing in the cities of Miami, Minneapolis-St. Paul, San Francisco, and Seattle). The project award for New York City was withdrawn when the State legislature did not approve the proposed pricing concept for Manhattan. In April, 2008, the US Department of Transportation awarded two new projects under the Congestion Reduction Demonstration Program (CRD) to the City of Chicago and the County of Los Angeles. The City of Chicago project is an Express Bus / Bus Rapid Transit system and an on-street parking pricing program using a private concessionaire. The project in the City of Los Angeles will convert existing HOV Lanes to dynamically-priced HOT Lanes on I-10

and I-110. To learn more about the UPA and CRD Initiatives please go to the following USDOT Web site: <http://www.fightgridlocknow.gov>.

3. **Value Pricing Pilot Program (VPP)**: Program Manager, Angela Jacobs (Angela.Jacobs@dot.gov)

- (1) The **VPP Program Quarterly Report** provides the latest information on current projects, feasibility studies or completed projects.
- (2) The VPP program has developed a VPP program Lessons Learned report that is currently under final review by an independent review committee and is slated for web posting and publication in the fall 2008. Contact: Larry Swartzlander (Larry.Swartzlander@dot.gov) or Angela Jacobs.

E. **Travel Demand Management (TDM)**: Program Manager, Wayne Berman (Wayne.Berman@dot.gov)

1. **TDM Reference Guide – Update**: This project updated the 1993 Reference Guide based upon a new “operations-oriented” model for TDM in a contemporary environment. The updated Reference Guide entitled “Mitigating Traffic Congestion – The Role of Demand-Side Strategies” contains two principal sections – one to address TDM for commute trips and one to address TDM for non-commute trips. Each section is developed based on five to ten case examples that illustrate contemporary enablers of TDM, such as information, technology, and financial incentives. The Reference Guide is available electronically on the Office of Operations Web site: www.ops.fhwa.dot.gov. Hard copies are available by contacting Wayne Berman at Wayne.Berman@dot.gov.

2. **Managing Demand Through Traveler Information Services**: The objectives of this project are: 1.) To compile existing information on how, where, and under what circumstances traveler information services are affecting or managing demand and 2.) To package the information compiled into a colorful, easy-to-read, 25-page brochure. The brochure highlights the opportunities and benefits for using traveler information services to manage demand during periods of recurring and non-recurring congestion, including special events and emergencies. The [brochure](#) is available electronically on the Office of Operations Web site. For a paper copy, contact Wayne Berman at Wayne.Berman@dot.gov.

3. **Managing Travel Demand: Applying European Perspectives to U.S. Practice**: This report is now available electronically on the Office of International Programs Web site www.international.fhwa.dot.gov. For a paper copy, contact Wayne Berman at Wayne.Berman@dot.gov. The scan team visited the following cities throughout Europe that are pursuing policies and programs to reduce automobile demand: Rome, Italy; Stockholm and Lund, Sweden; Cologne, Germany; the Netherlands; and London, England. The visit focused on both local and national research, policies, and programs to integrate demand management into planning, management, and operations of the transport system.

III. DAY-TO-DAY OPERATIONS

A. **Manual on Uniform Traffic Control Devices**: Program Manager, Hari Kalla (Hari.Kalla@dot.gov), <http://mutcd.fhwa.dot.gov>

1. **Rulemaking for the Next Edition of the MUTCD**: Scott Wainwright (Scott.Wainwright@dot.gov) - The Office of Operations published a Notice of Proposed Amendments (NPA) to the MUTCD in the Federal Register on January 2, 2008. The NPA

proposed a variety of new and updated uniform traffic control device designs and practices, reflecting advances in technology and successful research. The MUTCD Team has conducted a large number of webcasts and on-site presentations to inform all interested parties of the proposed changes. The period for public review and comments to the docket will close on July 31, 2008. After analysis of docket comments, a final rule to adopt a new edition of the MUTCD is anticipated September 2009.

2. Sign and Pavement Markings Retroreflectivity Rulemaking: Scott Wainwright (Scott.Wainwright@dot.gov) - The final rule on sign retroreflectivity requirements published in the Federal Register on December 21, 2007 adopting revision number 2 of the current 2003 edition of the MUTCD, was posted to the MUTCD Web site. The MUTCD Team continues to participate in the development of proposed rulemaking for pavement markings retroreflectivity requirements, an activity being led by the Office of Safety. A Notice of Proposed Amendments for pavement marking retroreflectivity is anticipated in December 2009, following adoption of a new 2009 edition of the MUTCD. The amendments would be proposed as Revision number 1 of the 2009 MUTCD.

3. Worker High Visibility Clothing: Ken Wood (Ken.Wood@fhwa.dot.gov) - SAFETEA-LU section 1402 established a requirement for workers on or near Federal-aid highways to wear high-visibility clothing. A final rule was published on November 24, 2006. The NPA for the next edition of the MUTCD proposes to expand this requirement to apply to all roads open to public travel.

4. Traffic Control Devices Pooled Fund Study: Scott Wainwright (Scott.Wainwright@dot.gov) - The experimentation process has been used by jurisdictions for on-road testing and evaluation of innovative traffic control devices. FHWA has established a pooled fund study for traffic control devices that is intended to provide a quicker way to assess low-risk new traffic control devices and applications. Eighteen States have become members of the pooled fund, which has completed seven projects (results from which were incorporated into the NPA for the next edition of the MUTCD) and has two additional projects underway. The following four new projects have been selected to be started in 2008:

- (1) Legends for Emergency Management Signs Carried by First Responders
- (2) Evaluation of International Symbol Sign Designs for Potential U.S. Adoption
- (3) Evaluation of Combined Lane Use and Destination Sign Alternatives
- (4) Best Practices in Proportionally-Based Design and Layout of Guide Signs

5. Developing Traffic Control Strategies at Toll Booth Plazas: Hari Kalla (Hari.Kalla@dot.gov) - Key findings from the best practices report distributed in September incorporated into the NPA for the next edition of the MUTCD.

6. General MUTCD Training Course: Ken Wood (Ken.Wood@fhwa.dot.gov) - This 8-hour workshop includes modules on human factors, positive guidance, and the history of the MUTCD. The workshop also highlights basic information from each part of the MUTCD that is helpful for novice users of the MUTCD to know. We plan to put this training on CD and make it available as a classroom training tool or as a self-instructional tool to interested persons upon request. Availability is anticipated by March 2009.

7. MUTCD Strategic Planning Initiative: Scott Wainwright (Scott.Wainwright@dot.gov) - The Office of Operations has identified the need for a strategic long term plan for the MUTCD that would define a strategic direction for the MUTCD's future scope, content, and format. Consensus answers to longstanding questions, such as what things are or are not traffic control devices and thus are regulated or not regulated by the MUTCD, need to be developed to guide

future decision making. It is necessary to develop an MUTCD strategic plan with a 20-year vision. A meeting was held with a group of respected leaders from the NCUTCD to discuss the issues. It is anticipated that the NCUTCD will take a leadership role in this effort, which will take several years to complete.

8. Traffic Control Devices for Managed Lanes: Kevin Sylvester (Kevin.Sylvester@dot.gov) FHWA has identified the need to establish uniform practices for traffic control devices for managed and preferential lane facilities. A task force of National experts is in the process of scanning such facilities in the United States that are in various stages of planning or operation. A policy memorandum was issued on August 3, 2007 that clarified and expanded the criteria for signing and marking of preferential lane facilities. In addition, a synthesis of signing practices for managed lane facilities has been completed and Turner-Fairbank Highway Research Center has been engaged to conduct a human factors evaluation of various messages and sequences of freeway guide signs to direct traffic into and along managed lanes. The ultimate goal of this effort is to establish new provisions for the MUTCD in the areas of preferential and managed lane facilities. This is anticipated in September 2009.

B. Real Time Traveler Information: Program Manager, Bob Rupert (Robert.Rupert@dot.gov), <http://www.ops.fhwa.dot.gov/travelinfo/>

1. The ATIS / 511 Guidance, Lessons Learned and Technical Assistance activity provides a means to share information with others that may be planning to develop traveler information systems. An assessment of the current state of [Traveler Information Business Models](#) is available, and a document on [Communicating With the Public Using ATIS During Disasters](#) is also available. The main repository of information from the 511 Deployment Coalition is [Resource 511](#). It includes version 3.0 of Guidelines, “Quick Tips” report on interoperability, usage statistics, marketing information, and contacts for all the 511 systems.

2. The AMBER Alert Guidance, Support and Implementation Program includes the AMBER Plan Implementation Assistance Program that provides up to \$400,000 to States for implementing motorist information systems to notify motorists when child abduction alerts are issued, and a total of \$15,548,000 in grants had been provided to 40 States and the District of Columbia, with another State approved to receive funds.

3. Travel Times on Dynamic Message Signs activities encourage and assist states and metropolitan areas in posting travel time messages on dynamic message signs (DMS). Many DMS across the country are often blank or show messages that have little use to drivers, but cities that currently post travel time messages enjoy wide public support for their efforts. [Case studies on four cities](#) (Chicago, Houston, Nashville and Portland) that post travel time messages are available on the Operations Web site. Forty-one (41) locations currently provide travel time messages on DMS. The Resource Center or headquarters are available to conduct workshops, share successful practices and facilitate peer-to-peer assistance to assist with travel time messaging. For more information, please contact Jimmy Chu at Jimmy.Chu@dot.gov.

4. [Transportation Technology Innovation and Demonstration Program / Intelligent Transportation Infrastructure Program](#): Program Manager, Bob Rupert (Robert.Rupert@dot.gov) - This is a 2-part intelligent transportation infrastructure program (ITIP) to advance the deployment of an operational intelligent transportation infrastructure system, aid in transportation planning and analysis; and provide a basic level of traveler information. The program addresses national, local, and commercial data needs through enhancement of surveillance and data management. On the national level the program measures the operating

performance of the roadway system. Locally, such roadway system performance data can be used to assist in local system planning, evaluation, and management activities. Section 5508 of SAFETEA-LU expanded the original ITIP program to 35 cities that are eligible to potentially participate in either Part 1 or Part 2 of the program. Part 1 of the program uses the existing private partner under the current ITIP contract and funding remains for 10 additional cities. To date, the TTID program has deployed this public/private partnership in 25 metropolitan areas under Part 1. Systems in Boston, Chicago, Detroit, Indianapolis, Los Angeles, Oklahoma City, Providence, St. Louis, San Diego, San Francisco, and Tampa have completed and systems in Atlanta, Baltimore, Cincinnati, Columbus, Las Vegas, New Orleans, Norfolk, Phoenix, Raleigh/Durham, Sacramento, Salt Lake City, San Jose, Seattle, and Washington, D.C. are under development. For Part 2, a competitive process was used to choose a private sector partner with Requests for Proposals from the private sector. Funding was available for two cities under Part 2, and locations would be selected based on their congestion rankings. An initial RFP for the first Part 2 city was issued June 25, 2007. The RFP was subsequently canceled. The Fiscal Year 2008 Omnibus Appropriations Bill, signed into law December 26, 2007, rescinded the remaining unobligated TTID program funding. As a result, further deployment under Part 2 cannot be pursued.

5. iFlorida Model Deployment: A complete software overhaul was initiated in 2006 to enable certain functionality that was incorrectly implemented. The software is in the final stages of implementation and testing. The final evaluation report for the iFlorida Model Deployment is undergoing final review and will be released in November 2008. For more information on the iFlorida model deployment, contact James Pol at James.Pol@dot.gov.

6. Vehicle Infrastructure Integration: The Vehicle Infrastructure Integration (VII) initiative was launched to share information about the initiative. Public sector applications for the initial deployment of VII are currently under development, as is Proof-of-Concept (POC) testing for safety-related applications in the Detroit area and in the San Francisco Bay area. Completion is anticipated by September 2008. The Volpe National Transportation Center is leading an effort to establish an operational demonstration of certain VII functions, known as *SafeTrip-21*, by December 2008. Caltrans was selected as a *SafeTrip-21* partner, and will be pursuing probe data and other mobility tests.

C. Traffic Analysis Tools: Program Manager, John Halkias (John.Halkias@dot.gov), <http://www.ops.fhwa.dot.gov/trafficanalysisitools/>

- 1. Next Generation Simulation (NGSIM) Core Algorithms and Data Sets:** This effort is to develop a core of open behavioral algorithms in support of traffic simulation with supporting documentation and validation data sets that describe the interactions of multi-modal travelers, vehicles and highway systems. These products will be openly distributed and made freely available to the broad transportation community.
- 2. Traffic Analysis Tool Primer** - is an overview of traffic analysis tools.
- 3. Decision Support Methodology for Selecting Traffic Analysis Tools:** This is an on-going project to assist traffic engineers and traffic operations professionals in the selection of the correct type of traffic analysis tool for operational improvements. In addition, this document will assist in creating analytical consistency and uniformity across State Departments of Transportation and Federal/regional/local transportation agencies.

4. The [Guidelines for Applying Traffic Micro-simulation Modeling Software](#) are designed to provide practitioners with guidance on the appropriate application of micro-simulation models to the estimation of traffic performance for freeways, highways, rural roads, and city streets.
5. The [CORSIM Application Guidelines](#) describe the proper use of the CORSIM tool in analyzing real-world transportation problems, building upon the generic FHWA simulation guidelines as a framework and adding CORSIM-specific guidance.
6. **Definition, Interpretation, and Calculation of Traffic Analysis Tools Measures of Effectiveness (MOEs)** will serve as information and guidance on which MOEs should be produced, how they should be interpreted, and how they should be defined and calculated in traffic analysis tools. It will also develop innovative approaches to interpret these MOEs when conducting traffic analysis studies. The report will be available November, 2008.
7. **DYNASMART-P** represents a new generation of tools to support transportation network planning and operations decisions in the ITS and non-ITS environments. It combines dynamic network assignment models with traffic simulation models. DYNASMART-P has been packaged with DSPED (the Network Editor) and is being released to the public through McTrans Center. DYNASMART-P has been identified as a market ready technology and deployment goals of 10 State DOTs and MPOs have been established. An extensive program of marketing activities to help achieve these goals is being finalized.
8. **ITS Deployment Analysis System (IDAS)** is designed to assist in integrating ITS/Operational improvements in the transportation planning process. It offers the capability for a systematic assessment of ITS/Operations with one analysis tool and is used for determining the benefits and costs of various deployments. IDAS is being released to the public through McTrans Center. IDAS has been identified as a market ready technology and deployment goals of 25 State DOTs and MPOs have been established. An extensive program of marketing activities to help achieve these goals is being finalized.
9. FHWA R&D initiated a **Dynamic Traffic Assignment (DTA)** research project to develop advanced network-wide traffic models to address complex traffic control and management issues in the information-based, dynamic ITS environment. Under this project, two prototypes of Traffic Estimation and Prediction System (TrEPS) for real time traffic management and two prototypes for offline Operations Planning (TrEPS-P) were developed. All prototypes can be used for corridor traffic management analyses, both online and offline analyses. The two TrEPS prototypes are being field-tested.

IV. CREATING A FOUNDATION FOR 21ST CENTURY OPERATIONS

- A. **Planning for Operations:** Program Manager, Rick Backlund (Rick.Backlund@dot.gov)
 1. **Development of Reference Guidebooks on Operations in the Metropolitan Transportation Plan and the Congestion Management Process (CMP):** The FHWA Office of Operations is working with the FHWA Office of Planning and the FTA Office of Planning to develop and support guidance on SAFTEA-LU transportation planning provisions that integrate operations into the Metropolitan Transportation Plan and the CMP. The thrust of this effort is to advance objectives-based, performance-driven planning for operations. Interim guidebooks have been prepared, are being printed, and are being posted on the joint [FHWA-FTA](#) Web site. External Webinars that were advertised through groups such as AASHTO, AMPO, APTA, and NARC were held for operators and planners on June 24th & 26th to discuss the initiative. Seven workshops have been scheduled to provide outreach on the guidebooks and promote an objective

based, performance driven approach to planning for operations. For further information, contact Rick Backlund (Rick.Backlund@dot.gov).

2. Model Transportation Plan: The guide, which would be a Model Transportation Plan, is being developed with a focus towards Metropolitan Planning Organizations, who can use such objectives for implementation in a regional transportation plans focusing on operations, or share such objectives to stakeholders for their implementation in their respective management and operation plans. For further information, contact Rick Backlund (rick.backlund@dot.gov).

3. “Collaborative Advantage: Realizing the Tangible Benefits of Regional Transportation Operations Collaboration” - The reference manual discusses nine collaborative efforts across the U.S. to illustrate the tangible benefits gained through key collaborative strategies. From these illustrations and best practices that the manual provides, decision makers can identify opportunities, outline the associated benefits, and create the case for collaboration with other agencies. For more information, please contact Wayne Berman (Wayne.Berman@dot.gov).

B. Performance Measurement: Program Manager, Rich Taylor (Rich.Taylor@dot.gov), http://www.ops.fhwa.dot.gov/perf_measurement/

1. Mobility Monitoring Program (MMP): FHWA is working closely with the Texas Transportation Institute and Cambridge Systematics to develop and calculate area wide, travel-time based performance measures using archived data from freeway management systems. This program has grown to include 31 cities in 2008, including 23 that produce monthly data reports. The program tracks congestion measures (travel time index, congested hours) and a reliability measure (planning time index).

2. Monthly Urban Congestion Reporting: This on-going program acquires travel time data from the MMP from 23 metropolitan areas and uses it to calculate key travel time reliability performance measures on a monthly basis. The information is used to develop performance measures for internal FHWA use and as a proof-of-concept with state DOT data providers.

3. Developing reliability measure outreach materials: This on-going program develops materials for an outreach campaign to advance the state of the practice in travel time reliability performance measurement and to broaden acceptance of its use by public agencies. A guidance document is available at http://www.ops.fhwa.dot.gov/perf_measurement/reliability.htm. Eight workshops have been held since March 2007 with more to follow later in 2008. Another good source of information on the reliability and other operations performance measures is the [National Transportation Operations Coalition \(NTOC\) Performance Measures report](#). A follow-on National Cooperative Highway Research Program study has piloted some of the NTOC measures – the resulting draft guidance report.

4. Freight Performance Measures: Program Manager, Crystal Jones (Crystal.Jones@dot.gov) - HOFM is developing performance measures for freight-significant corridors and border crossings. Data collected from commercial vehicles equipped with tracking and communications technologies are used to derive measures of speed and reliability along freight-significant corridors and delay measures at border crossings. Data are available (May 06 - present) for 25 interstate corridors and for 5 U.S.-Canada border crossings: Blaine (Pacific Highway for 5 U.S. - Canada border crossings: Blaine (Pacific Highway), Washington; Pembina, North Dakota; Ambassador Bridge (all Detroit crossings), Michigan; Peace Bridge (all Buffalo-Niagara crossings), New York; and Champlain, New York. Please contact Crystal Jones at 202-366-2976 or at crystal.jones@dot.gov.

C. Facilitating Integrated ITS Deployment: Program Manager, Steve Clinger
(Stephen.Clinger@dot.gov)

1. Final Rule on Architecture and Standards Conformity, 23 CFR 940, Subpart K: Lead, Emiliano Lopez (Emiliano.Lopez@dot.gov) - On April 8, 2005 the FHWA “Final Rule on Architecture and Standards Conformity” went into effect. The Final Rule/Policy requires States and metropolitan areas to have a regional ITS architectures in place and follow a systems engineering process for ITS project development if there is intent to spend Federal-aid dollars on ITS deployment. To assist transportation agencies with implementing regional ITS architectures, training, technical guidance and best practices are currently available on the architecture conformity web site (http://www.ops.fhwa.dot.gov/its_arch_imp/index.htm). Training, technical guidance and best practices for the requirement within the Final Rule that all ITS projects must be developed based on a systems engineering analysis can be found on the systems engineering web site (http://www.ops.fhwa.dot.gov/int_its_deployment/sys_eng.htm).

2. ITS Architecture Process Improvement Reviews: To enhance the Regional ITS Architecture Guidance Document and assist stakeholders in understanding how to use and maintain Regional Architectures, a number of process improvement reviews will be conducted looking at how well project deployer’s business process and practices facilitate use and maintenance of Architectures. These reviews will be conducted throughout FY08 and a final report on best practices will be available late FY08 at:
http://www.ops.fhwa.dot.gov/its_arch_imp/resources.htm.

3. Systems Engineering Process Improvement Review Workshops: To enhance the Systems Engineering Guidance Document and assist stakeholders better understand how to properly conduct systems engineering during project planning and implementation, five process improvement reviews will be conducted looking at how well project deployer’s business process and practices facilitate systems engineering analysis. These reviews will be conducted throughout FY08.

4. ITS Standards Deployment: Program Manager, Tom Stout (Tom.Stout@dot.gov) - The widespread use of Intelligent Transportation Systems (ITS) standards promotes interoperability and interchangeability of traffic management devices and systems. The ITS Standards Deployment Program works jointly with the JPO to encourage the use of ITS standards by providing deployment support. Deployment support includes building confidence in the standards. This is accomplished through testing and case studies, by providing resource information on ITS standards, by developing and delivering standards training courses, by providing training and technical assistance, by collecting and disseminating deployment experience-based guidance (lessons learned), and by assessing the readiness of standards for deployment. The following is representative of deployment support provided:

(1) **ITS Standards Training:** Currently training is provided in a classroom format to provide a basic understanding of ITS Standards and a more in-depth workshop to provide the information necessary to procure traffic management systems that utilize ITS Standards. The following provides an overview of the training offered.

- **Standards Overview and Introductory Courses:** Delivered in a classroom format, this training provides a basic understanding of the ITS communications standards. Topics include how the standards are defined by the Natural ITS Architecture, their purpose, and how they are combined to achieve an agency’s traffic management objectives. The following courses are available.

- A one-day **ITS Standards Overview** is intended for policy makers and transportation professionals that are, or may be involved in ITS deployment;
 - A one-day introduction to the family of **ITS Center-to-Center Communication (C2C)** standards. An overview is provided of the Traffic Management Data Dictionary (TMDD), the SAE Advanced Traveler Information System (ATIS) standards, and the IEEE 1512 series of Incident Management standards;
 - A one-day introduction to NTCIP 1203 **Dynamic Message Sign** ITS standards. This course and the previous one are intended for decision makers and designers of ITS traffic control and management systems.
 - **Advanced Training:** Classroom training to discuss in detail the particulars of what is necessary to develop successful procurement documents incorporating NTCIP standards. The course is designed for professionals responsible for specifying/procuring ITS systems.
 - A two-day **DMS Procurement Workshop** to develop the communications protocol portion of a procurement document to specify use of NTCIP 1203 Version 2 and the supporting ITS standards for dynamic message signs. The workshop may be customized to include additional topics, such as testing, that may be of interest to agencies attending the workshop.
- (2) **Distance-Learning:** FHWA is working with the JPO to focus on the objective of providing the right training at the right time. One of the results is expected to be the introduction of a Web based distance-learning program.
- (3) **Technical Assistance Program:** The technical assistance program can provide short-term, on-call assistance to solve ITS standards implementation issues.
- Through the JPO Learning Center **Peer-to-Peer Program**, specialists in all areas of ITS standards can provide assistance to public agencies to implement standards based systems. For the most part these specialists are from the public sector and are knowledgeable of the range of problems and benefits that may be encountered when deploying ITS standards.
 - The **Field Support Team** (FST) is comprised of FHWA Resource Center specialists who are prepared to provide short-term, on-call ITS standards assistance in supporting and facilitating deployment of ITS standards.
- (4) **Guidance:** The ITS program has developed numerous documents to help agencies understand and deploy ITS standards.

V. IMPROVING GLOBAL CONECTIVITY BY ENHANCING FREIGHT MANAGEMENT AND OPERATIONS

A. Freight Analysis

1. **Freight Analysis Framework (FAF):** Program Manager, Michael Sprung (Michael.Sprung@dot.gov) - FHWA's Office of Freight Management and Operations (HOFM) published the FAF2 2007 provisional estimate of the origin-destination (O-D) database in June 2008. Revisions to the 2002 O-D benchmark, 2010-2035 forecasts, and 1997 historical file will be released in FY 2009. The highway flow data for 2002 and 2035 were published in 2007. Maps, tables, and other FAF products based on these files will be prepared through the remainder of the calendar year.

2. Freight Model Improvement Program: Team Leader, Rolf Schmitt (Rolf.Schmitt@dot.gov)
The Freight Model Improvement Program (FMIP) assesses the state of the art and state of the practice in freight forecasting and analysis models, provides information on best practices and training opportunities, and supports research to develop a new generation of freight models and tools. HOFM, in partnership with its DOT partners and TRB, held a national conference on freight demand modeling in September 2006. The conference proceedings are now available through the FMIP Web site (www.freight.dot.gov/fmip/).

3. Benefit/Cost of Freight: Program Manager, Ed Strocko (Ed.Strocko@dot.gov) - Traditional benefit-cost analysis methods base the value of transportation investments on short-term cost savings to highway users without properly accounting for the effect of changes in shipper/carrier behavior and industry reorganization in response to improved transportation system performance. Research suggests the benefits may be understated by 15 percent using traditional cost-benefit analysis, which does not capture long-term productivity gains. FHWA created a planning tool that captures the full benefits associated with freight transportation (infrastructure and operational) improvements. The tool and more information is available at www.ops.fhwa.dot.gov/freight/freight_analysis/econ_methods.htm.

B. Freight Infrastructure: Program Manager, Ed Strocko (Ed.Strocko@dot.gov)

HOFM is responsible for promoting investment in cost-effective infrastructure for the efficient movement of freight. This responsibility includes technical advice to other FHWA offices and its partners and oversight of four programs authorized by the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

1. Projects of National and Regional Significance: Program Manager, Ed Strocko (Ed.Strocko@dot.gov) - Projects of National and Regional Significance are authorized under Section 1301 of SAFETEA-LU. Specific projects and guidance are published on the HOFM Web site at www.regulations.gov. A Notice of Proposed Rulemaking (NPRM) establishing eligibility and rating criteria for the program closed on February 9, 2007. The NPRM and comments can be reviewed at <http://www.regulations.gov>. Docket Number 23393. USDOT is currently completing the final rule.

2. National Corridor Infrastructure Improvement Program: Program Manager, Ed Strocko (Ed.Strocko@dot.gov) - The National Corridor Infrastructure Improvement Program is authorized under Section 1302 of SAFETEA-LU. Specific projects and guidance are published on the HOFM Web site at www.ops.fhwa.dot.gov/freight/infrastructure/index.htm.

3. Truck Parking Facilities Program: Program Manager, Tom Kearney (Tom.Kearney@fhwa.dot.gov) - The Truck Parking Facilities Program is authorized under Section 1305 of SAFETEA-LU (PL 109-59). Two awards have recently been made under this grant program to Caltrans on the I-5 Corridor and the I-95 Corridor Coalition with a team of 7 states. Funding memos have been sent to the states of CA and MD and the projects are expected to commence by the end of the September 2008.

4. Freight Intermodal Distribution Pilot Program: Program Manager, Ed Strocko (Ed.Strocko@dot.gov) - The Freight Intermodal Distribution Pilot Program is authorized under Section 1306 of SAFETEA-LU. Specific projects and guidance are published on the HOFM Web site.

C. **[Freight Professional Development \(FPD\)](#)**: Program Manager, Carol Keenan, (Carol.Keenan@dot.gov)

1. **New Course - FHWA-NHI-139003 Advanced Freight Planning:** This two-day course is aimed at transportation professionals involved in multi-modal planning and program management. It will provide participants with the skills needed to identify, prioritize, develop and implement freight supportive projects. It will identify tools and teach skills focusing on ‘selling’, ‘doing’, and ‘using’ a freight plan.
2. **New Course - FHWA-NHI-139005 Linking Freight to Planning and the Environment:** This two-day course is designed to assist public and private sector transportation planners and engineers, environmental planners, and freight planners better address and integrate freight and environmental considerations throughout the planning, programming, and project development process.
3. **New Web-Based Course - FHWA-NHI-139006 Integrating Freight in the Transportation Planning Process Web-based Training:** This Web-based training (WBT) course provides a greater understanding of freight trends, its stakeholders, and its issues, so that public-sector transportation planners are better able to incorporate freight into their respective transportation planning processes and programs. This WBT course is an update of and replaces the instructor-led course FHWA-NHI-139001.
4. **National Highway Institute (NHI) Offers new Certificate of Accomplishment in Freight Management and Operations:** The certificate program features suites of complementary NHI courses bundled together to enable participants to enhance their depth and breadth of knowledge and expertise in specific disciplines or topic areas. It will be awarded to individuals who have completed and achieved passing grades in Advanced Freight Planning, Uses of Multimodal Freight Forecasting in Transportation Planning, and Linking Freight to Planning and the Environment.
5. **"Talking Freight" Seminar Series**: Offered via Web conference, discusses topics relevant to the freight community on the third Wednesday of every month from 1:00 p.m. – 2:30 p.m. east coast time. Upcoming sessions will focus on: The Freight Technology Assessment Tool, Virtual Weigh Stations, Freight Transport and Safety, and Urban Congestion and Freight. Registration for upcoming sessions is on the Web site.

D. **Vehicle Size and Weight**

1. **Training and Technical Assistance:** Program Managers, John Nicholas (John.Nicholas@dot.gov) and Tom Kearney (Tom.Kearney@fhwa.dot.gov) – The Office of Operations will offer a new training course for States, FHWA Division staff, and enforcement personnel on the various requirements of the Size and Weight program. This program is a formal classroom course for FHWA Division and State transportation and enforcement personnel to provide guidance on how to run an effective size and weight enforcement program. The NHI # 139004 training course was piloted in early 2008 in Florida and will be offered to other states by fall, 2008.
2. **Electronic Reporting and Access:** Program Manager, John Nicholas (John.Nicholas@dot.gov) – The Office of Operations developed an automated system, called the Vehicle Size and Weight reporting tool. It resides on a web site accessible by the state and division personnel with S&W responsibility. The system enables FHWA Division Offices and State DOTs to develop and submit required Annual Enforcement Plans and Certifications

electronically via a secure web portal. The system is fully available to all states, and all submissions to FHWA will be required to be made on the system by January 1, 2009.

3. Virtual Weight Station, E-Permitting, and Damage Assessment Tool: Program Manager, Tom Kearney (Tom.Kearney@fhwa.dot.gov) – The Office of Operations is conducting several research projects to advance the state of the art in truck size and weight. The virtual weigh station project is meant to provide better enforcement tools to law enforcement to better preserve the infrastructure. E-Permitting is focused on harmonization of permit requirements by states and checking those electronically at roadside. The damage assessment tool is being prepared for states to accurately assess infrastructure service life based upon proposed increases to truck loads by state leadership. It is also expected to be a tool to more accurately set permit fees for overweight trucks to recoup reduced service life costs.

E. Freight Operations and Technology: Program Manager, Randy Butler (Randy.Butler@dot.gov)

1. Freight ITS Technologies Research Program to Streamline Information Exchange: The operational tests and streamlines information exchange between supply chain partners. The Electronic Freight Management (EFM) initiative involves private sector participants and agencies within the Department of Homeland Security. EFM design work began in Jan 2006 and build out was completed by the end of the year. Deployment began in June 2007 and was completed in December 2007. Adoption of the EFM is now continuing with Kansas City Smart Port and 2 partners. A Request for Information (RFI) has also been sent through Fedbizops to industry to assess general interest in EFM. Early indications show interest to be high and approximately 10 cases studies are expected to be conducted over the next 3 years (2008-2010) to determine the cost benefits of implementing EFM across a wide industry group. FHWA is also working with industry through the Intermodal Freight Technology Working Group to identify future projects for consideration. A paper on the EFM initiative has been completed and is available for distribution. It discusses the context for developing the EFM initiative, its approach, components, and products. Other design and architectural documents are available on EFM Web site at www.efm.us.com.

2. Border Information Flow Architecture (BIFA): The Office of Operations, HOFM, in coordination with the Office of Planning and Environment, HEPI, Transport Canada (ITS Office), state, provincial, and regional planning organizations, and other federal agencies, developed BIFA. Completed in 2005, BIFA efforts focus on facilitating the use of architecture for border ITS and technology projects and maintaining the architecture to reflect the changing border environment. BIFA architecture and supporting documentation are available at <http://www.iteris.com/itsarch/bifa/>. Activity in 2008 centers on finding opportunity to use the BIFA to benefit border communities on both sides of the border. Please contact Crystal Jones at 202-366-2976 or at crystal.jones@dot.gov.

VI. IMPROVING MOBILITY AND SECURITY THROUGH BETTER EMERGENCY MANAGEMENT

A. Emergency Transportation Operations: Program Manager, Kimberly Vásconez (Kimberly.Vasconez@dot.gov)

1. Integrated Emergency Transportation Operations Program: This project integrates several current FHWA initiatives in emergency transportation—including Traffic Incident Management, Planned Special Events Planning, Hazardous Materials preparedness, and Evacuation planning and operations guidance—into a strategic program that enables transportation

professionals, emergency management and public safety professionals to work together in resolving impact highway transportation challenges.

2. Emergency Transportation Operations Documents – current and proposed are listed in the flyer found at http://www.ops.fhwa.dot.gov/opssecurity/evac_plan_doc_flyer/index.htm.

3. The Best of Public Safety and Emergency Transportation Operations CD released: The CD is a compilation of more than 40 resource documents and is arranged by the following focus areas: Public Access to Emergency Services; Enhanced Information Sharing; Evacuation Management and Operations; Transportation Operations During Biohazard Situations; Preparedness and Response; and Planned Special Events. The CDs may be obtained through the following link: http://www.its.dot.gov/its_publicsafety/index.htm.

4. The Integration of Transportation Management Centers (TMC), Emergency Management Centers (EMC) and Fusion Centers (FC): This integration of TMC and emergency management information/system processes look at how information can be integrated to support decision-making in the emergency and security environments. The report will be finalized in October 2008. In addition, the Office of Operations will continue to support Incident Command training for highway transportation officials. The Office of Operations will produce guidance to aid State and local highway authorities operate within the national security special events environment. This guidance will be forthcoming from the Office of Operations in June 2009 and will complement the highly successful “Simplified Guide to the Incident Command System for Transportation Professionals”.

5. Evacuation Primer Series: This primer series is intended as guidance to state, local, and regional authorities on how to prepare an evacuation plan with regard to transportation, i.e., a kind of “101”. It is designed for two separate audiences: emergency managers who lead development of evacuation plans and transportation managers. The Emergency Transportation Operations Team has developed a Primer Series that comprehensively addresses all aspects of transportation evacuations. The emphasis of the first Primer is on Highway Evacuations triggered by events that give advance warning. The second primer in the series has as its focus Highway Evacuations resulting from no-notice events. The third is in development and focuses on evacuating populations with special transportation needs and its publication is anticipated by December 2008. The first two primers are available on line at: http://www.its.dot.gov/its_publicsafety/index.htm.

6. Transportation Evacuation Planning and Operations Workshops: In 2007-2008, the Office of Operations hosted three regional workshops designed to help State and local authorities use the primer series in developing their evacuation plans. These workshops integrated information from the three primers and included breakout sessions. The first three workshops were held in Tallahassee, FL, May, 2007; Long Beach, CA, January 2008 and Richmond, VA, June 2008. Future workshops will be held across the country, including one in Chicago, IL in September 2008.

7. Movement Coordination during Emergency Operations: The Emergency Transportation Operations team will begin working with the Office of Freight Management and other partners to discuss the need for guidance in developing movement coordination plans—which will include evacuating populations as a subcomponent.

8. Knowledge Management Portals: FHWA and the Department of Homeland Security (DHS) launched an Emergency Transportation Operations (ETO) channel—or special interest page—on the DHS Lessons Learned Information Sharing (LLIS) system. This channel is dedicated to topics related to emergency transportation. It can be reached at www.llis.gov. In addition, ETO will be consolidating the FHWA ETO, TIM and Planned Special Events web sites to make them more

user friendly for those who access information through the FHWA Web sites. The consolidated webpage will be called ETO-TIM-PSE and will be available in the September 2008.

9. Evacuation Modeling Task and Survey: Evacuation Modeling Task and Survey: The U. S. DOT Federal Highway Administration (FHWA) Office of Operations in coordination with the U. S. Department of Transportation (DOT) Intelligent Transportation Systems Joint Program Office (ITS JPO) which is part of the Research and Innovative Technology Administration (RITA) is collecting information on tools and methodologies that can support the planning and/or operations phases of the evacuation response cycle with a focus on transportation. The result will be a guide to provide information on transportation evacuation analysis tools/models. The audience for the guide will be State and local agencies involved in transportation planning and/or operations in support of an evacuation. The guide will be available in November 2008.

10. Emergency Evacuation Planning: On-Line Training: As the result of a successful focused brainstorming session, the statement of work for the training has been developed and the expected delivery date of the training is May 2009. The nine member states and TSA of the Security Pooled Funds Study provided funding for the task.

ADDENDUM

SAFETEA-LU

The Safe Accountable Flexible Efficient Transportation Equity Act: a Legacy for Users, authorizing funds for Federal-aid Highways, highway safety programs, transit and other purposes, requires a number of actions to be handled by the Office of Operations. These include the following:

- **Section 1110 - Temporary Traffic Control Devices** – Requires the issuance of regulations to establish conditions for appropriate use of, and expenditure of funds for, uniformed law enforcement officers, positive protective measures between workers and motorized traffic, installation and maintenance of temporary traffic control devices during construction, utility, and maintenance operations.

Current Status – SAFETEA-LU did not establish a statutory deadline, a self-imposed deadline of 2 years has been established. Office of Operations (HOTO) is working with the FHWA Offices of Infrastructure and Safety to implement Section 1110. An NPRM was published in the Federal Register on November 1, 2006. The comment period, originally set to expire on January 2, 2007, was extended to February 16, 2007 (per a December 19, 2006 notice in the Federal Register). Comments received were analyzed, and a Final Rule on Temporary Traffic Control Devices (Subpart K) was published on December 5, 2007 with an effective date of December 4, 2008. Information on Subpart K, including the Final Rule, the NPRM, and a set of Questions & Answers can be found at <http://ops.fhwa.dot.gov/wz/resources/policy.htm>.

- **Section 1121 - HOV Facilities (23 U.S.C. 166)** – Replaces Section 102(a) of 23 USC with a new Section 166, clarifying the operation of high occupancy vehicle (HOV) facilities and provides more exceptions to vehicle occupancy requirements. A State agency that has jurisdiction over the operation of a HOV facility must establish the occupancy requirements of vehicles operating the facility. Except as provided otherwise in this new section, no fewer than two occupants per vehicle may be required for use of a HOV facility. Motorcycles and bicycles must be allowed to use HOV facilities unless a State certifies that such use would create a safety hazard. Until September 30, 2009, States may permit vehicles certified and labeled as Inherently Low-Emission Vehicles (ILEV), in accordance with Sections 88.311-93 & 88.312-93 of CFR 40, to use HOV facilities. States may also establish exceptions for public transportation vehicles, certified low emission and energy efficient vehicles, and High Occupancy Toll (HOT) vehicles. Tolls under this section may be charged on both Interstate and non-Interstate facilities.

To void the need for potential corrective action, States are encouraged to work with their local FHWA Division Office before allowing HOT, alternative fuel, or low emission and energy-efficient vehicles (i.e., hybrid vehicles), that do not meet minimum occupancy requirements, to use HOV facilities. When HOT and low emission and energy-efficient vehicles are allowed to use HOV lanes, States are required to annually certify that operational performance monitoring programs and enforcement programs are in place to ensure HOV facilities are not degraded and are operated in accordance with the restrictions and requirements of 23 U.S.C. 166. States must limit or discontinue the use of the

facility by a sufficient number of HOT and/or low emission and energy-efficient vehicles, if the operation of the facility has degraded.

Current Status – On May 24, 2007, the U.S. Environmental Protection Agency issued a Notice of Proposed Rulemaking to implement elements of the SAFETEA-LU Section 1121 (23 U.S.C. 166) to provide exemptions for vehicles certified as low emission and energy-efficient for use in high occupancy vehicle lanes. Revised HOV Program Guidance will be available by September 2008.

- **Section 1201 - Real Time System Management Information Program** – Requires the establishment of a real-time system management information program to provide, in all States, the capability to monitor, the traffic and travel conditions of the nation’s major highways and to share that information with State and local governments and the traveling public. The purpose of the program is to improve the security of the surface transportation system, to address congestion problems, to support improved response to weather events and surface transportation incidents, and to facilitate national and regional highway traveler information. The program will also identify longer range real-time highway and transit monitoring needs and develop plans and strategies for meeting such needs.

Current Status – A draft Notice of Proposed Rulemaking was prepared to incorporate input from the request for information published in May 2006, and is under review by the Department prior to release to the Office of Management and Budget (OMB) at the White House. The NPRM should be released in fall 2008. Interim guidance on data exchange formats to facilitate sharing of program information was published October 24 in the Federal Register, with comments received by February 12, 2008. Workshops are being held in summer (July 8-9) and fall 2008 to further identify issues surrounding data exchange and data quality. The data exchange formats reference existing message sets among various ITS Standards to ease implementation and broaden acceptance of the standards.

- **Section 1301 - Projects of National and Regional Significance** – Establish a program to solicit for and provide grants to the States for projects of national and regional significance. Grants can be used for eligible project costs including development, construction, reconstruction, rehabilitation and acquisition of real property. The program provides funding beyond the state apportionment levels for high cost transportation infrastructure facilities for critical national economic and transportation needs that are not adequately funded within existing surface transportation program categories. The program improves economic productivity, facilitates international trade, relieves congestion, and enhances movement of passengers and freight.

Current Status – Project funds are fully earmarked through 2009, however grant recipients will need to submit project descriptions to the Office of Operations (HOFM) in accordance with the guidance issued on January 4, 2006 (see HOFM Web site at www.ops.fhwa.dot.gov/freight/infrastructure/index.htm). The NPRM establishing eligibility and rating criteria was published on July 24, 2006. The NPRM comment period was reopened until February 9, 2007 to ensure extensive input from a broad range of stakeholders. The NPRM and comments can be reviewed at <http://www.regulations.gov>. Docket Number 23393. USDOT is currently completing the final rule.

- **Section 1302 - National Corridor Infrastructure Improvement Program** – Establish a program to make allocations to States for highway construction projects in corridors of national significance to

promote economic growth and international or interregional trade. Priority will be given to those corridors that are a part of or will become a part of the National Interstate Highway System and projects that will be completed within 5 years of the date of allocation of funds for the project.

Current Status – Project funds are fully earmarked through 2009, however, grant recipients will need to submit project descriptions to the Office of Operations (HOFM) in accordance with the guidance issued on January 4, 2006 (see HOFM Web site at www.ops.fhwa.dot.gov/freight/infrastructure/index.htm).

- **Section 1305 - Truck Parking Facilities** – Requires implementation of a pilot program to address the shortage of long-term parking for commercial motor vehicles on the National Highway System. Report to Congress by August 10, 2008.

Current Status - HOFM published a Federal Register Notice announcing the program and application procedures on November 16, 2007. State submissions due to FHWA Divisions by February 14, 2008; Twenty applications were received from States, metropolitan planning organizations and local governments from the solicitation that was included in the November 16, 2007, Federal Register notice. The U.S. Department of Transportation selected two of those proposed projects at a cost of \$10,977,000. They are: the California iPark project and the I-95 Corridor Coalition truck parking project (see HOFM Web site at www.ops.fhwa.dot.gov/freight/infrastructure/index.htm).

- **Section 1306 – Freight Intermodal Pilot Grant Program** – Requires implementation of a freight intermodal distribution pilot grant program. The pilot should facilitate and support intermodal freight transportation at the State and local levels to relieve congestion, improve safety and provide capital funding to address infrastructure and freight distribution need at inland ports and intermodal freight facilities. Report to Congress in three years.

Current Status – Project funds are fully earmarked through 2009, however grant recipients will need to submit project descriptions to the Office of Operations (HOFM) in accordance with the guidance issued (see HOFM Web site at www.ops.fhwa.dot.gov/freight/infrastructure/index.htm). The Office of Operations (HOFM) is actively working on a Report to Congress.

- **Section 1309 – Extension of the Public Transit Exemption from Axle Weight and Restrictions** – Section 1023(h)(1) of the Intermodal Surface Transportation Efficiency Act of 1991 (23 U.S.C. 127 note; 106 Stat. 1552) is amended by striking “2005” and inserting 2009.

Current Status – The Office of Operations (HOFM) prepared the required NPRM due May 2007 and a Final Rule was published February 20, 2007.

- **Section 1310 – Interstate Oasis Program** – Requires consultation with States and other interested parties to establish an interstate oasis program. This includes public comment, development of standards for identifying facilities that offer services to the public, 24-hour access to restrooms and parking for autos and heavy trucks, and establishment of facility standards and proximity to Interstate System, including a logo.

Current Status – HOTO held a stakeholders' workshop with AASHTO and organizations representing truck stop operators and independent truckers to help define issues for the program. Program guidance was posted in the Federal Register on October 18, 2006. The NPA for the next edition of the MUTCD incorporates provisions for signing of Interstate Oases, including a logo.

- **Section 1402 – Worker Injury Protection and the Free Flow of Vehicular Traffic** – Issuance of regulations to: Decrease the likelihood of worker injury; Maintain the free flow of vehicular traffic by requiring workers whose duties place them on or in close proximity to a Federal-aid Highway to wear high visibility garments.

Current Status – Office of Operations (HOTO) published a final rule in the Federal Register on November 24, 2006

- **Section 1604 – Tolling** – Extends and authorizes a total of \$59 million funding for the Value Pricing Pilot Program; creates a new Express Lanes Demonstration Program to permit tolling on up to 15 demonstration projects to manage congestion, reduce emissions, or finance new lanes to reduce congestion on the highway system; and creates a new Interstate System Construction Toll Pilot Program that authorizes tolling to finance construction of up to three new Interstate highway facilities.

Current Status – The Value Pricing Pilot Program funds under Section 1604 (a) are being used to support the Urban Partnership Agreements with the USDOT in the cities of Seattle, Minneapolis, and San Francisco. The Express Lanes Demo Program Federal Register Notice was issued on February 4th, 2008. Currently two projects have been accepted into the program – I-635, the LBJ Freeway in Dallas and the North Tarrant Express Lanes project in Ft. Worth. Work is underway on rulemaking required in section 1604(b) to establish interoperability requirements for electronic toll collection systems implemented in projects pursued under this section, and the comments for the NPRM are currently under review.

- **Section 1910 – Motorist Information Concerning Full Service Restaurants** – Rulemaking may be initiated to determine whether full service restaurants should be given priority on not more two panels of the camping or attractions logo-specific service signs in the Manual on Uniform Traffic Control Devices of the Department of Transportation.

Current Status – Office of Operations (HOTO) has decided that, at present, rulemaking is not necessary. An Interim Approval was issued in September 2006 allowing States to expand from 6 to 12 the number of logos for any given type of service at an interchange, including food, by utilizing unused logo positions on other service signs. These provisions were also included in the NPA for the next edition of the MUTCD. The MUTCD team will continue to work with the NCUTCD to explore ways to revise the Specific Service Program so as to permit States to provide more logo positions for all service categories. Congressional members were notified of FHWA intentions.

- **Section 1943 – Great Lakes ITS Implementation** – Grants to the State of Wisconsin to continue ITS activities in the corridor serving the greater Milwaukee, Wisconsin, Chicago, Illinois, and Gary, Indiana areas initiated under the Intermodal Surface Transportation Efficiency Act of 1991, and other areas of the State of Wisconsin.

Current Status – The Office of Operations (HOTM) will make funding available to the Gary-Chicago-Milwaukee corridor as required.

- **Section 4112 – Nebraska Custom Harvesters Exemption** – Nebraska may allow the operation of a truck tractor and 2 trailers or semi-trailers not in actual lawful operation on a regular or periodic basis on June 1, 1991, if the length of the units DOES NOT exceed 81 feet 6 inches and used to transport equipment to harvest wheat, soybeans and or silo during harvest months as defined by the State of Nebraska.

Current Status – The Office of Operations (HOFM) prepared the required NPRM due May 2007 and a Final Rule was published February 20, 2007.

- **Section 4141 – Driveaway Saddle-mount Vehicles** – Amended 49 U.S.C. Section 31111(b) (1) to allow lengths of 97’ on a driveaway saddle-mount with fullmount vehicle transporter combinations.

Current Status – The Office of Operations (HOFM) prepared the required NPRM due May 2007 and a Final Rule was published February 20, 2007.

- **Section 5204(g) – Training and Education (Freight Capacity Building Program)** – Requires establishment and implementation of a freight planning capacity building program to support enhancements in freight transportation planning to better target investments in freight transportation systems to maintain efficiency and productivity and strengthen the decision-making capacity of State transportation departments and local transportation agencies with respect to freight transportation planning and systems.

Current Status – The Office of Operations (HOFM) is incorporating these requirements into the Freight Professional Development Program.

- **Section 5211 – Multi-state Corridor Operations** – Encourage multi-state cooperative agreements, coalitions or other arrangements to promote regional cooperation, planning and shared project implementation for programs and projects. The program will improve transportation management and operations along Interstate 95 corridor and enhance transportation systems management and operations.

Current Status – \$7 million annual ITS research funds will be administered by the Office of Operations. Contact Greg Jones at GregM.Jones@fhwa.dot.gov for more information.

- **Section 5507 – Rural Interstate Corridor Communications Study** – This study will determine the feasibility for leveraging the rights-of-way of three Interstate corridors – I-90 (SD, MN, IA, WI); I-91 (MA, VT, NH); and I-20 (LA, MS, AL) – for securing resource sharing agreements with communications providers. The feasibility assessment will identify the potential benefits of enhanced wireline and wireless communications for the rural communities along the corridor. A report to Congress is due by September 30, 2007, and will be prepared that documents the impacts of enhanced communications to social and demographic groups, education and health systems, homeland security, local industry and transportation. A more detailed report that illustrates a concept-level plans package will be delivered to the stakeholder states in early 2008.

Current Status – The Report to Congress was completed and approved by the Office of Management and Budget and the Office of the Secretary. The Report to Congress should be delivered to Congress in August. Concept-level plans for each of the corridors were completed and will be reviewed by each of the state agency stakeholders involved with the study. A white paper was completed that incorporates discussions from the corridor workshops and presents information related to the development of the preliminary alignments and information developed by the study team to be utilized by the corridor states in the future. It addresses issues of constructability, scheduling and maintenance, environmental considerations, and utility accommodation policies. The white paper is available on the project Web site at <http://www.ruralcomm.org>. Contact James Pol at James.Pol@dot.gov for access to the site.

- **Section 5508 – Transportation Technology Innovation and Demonstration Program** – This is a 2-part intelligent transportation infrastructure program (ITIP) to advance the deployment of an operational intelligent transportation infrastructure system, aid in transportation planning and analysis; and provide a basic level of traveler information. The program addresses national, local, and commercial data needs through enhancement of surveillance and data management. On the national level the program measures the operating performance of the roadway system. Locally, such roadway system performance data can be used to assist in local system planning, evaluation, and management activities.

Current Status – Extension of the TEA-21 ITIP Program. Selection of cities and which part of the Program to participate in were made March 2006. Local Agreements have been reached with 25 cities under Part 1. The request for proposals for first Part 2 city was issued June 25, 2007, subsequently canceled. The Fiscal Year 2008 Omnibus Appropriations Bill, signed into law December 26, 2007, rescinded the remaining unobligated TTID program funding. As a result, further deployment under Part 2 cannot be pursued.

- **Section 6001 – Transportation Planning – Operations** – Metropolitan transportation plans shall include operational and management strategies to improve the performance of the existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods. *The requirement for the inclusion of operational and management strategies must be in place prior to MPO adoption of transportation plans addressing SAFETEA-LU provisions.* Congestion Management Processes in Transportation Management Areas (TMAs): there must be “a process that provides for effective management and operation” to address congestion management. Management and Operations Planning Factor: The metropolitan transportation plan shall provide for consideration of projects and strategies that will “(G) promote efficient system management and operations.”

Current Status – Interim guidebooks for the Congestion Management Process and Management and Operations in the MTP have been completed in February 2008. In concert with the release of these documents, FHWA and FTA have commenced an outreach program that has included Internal and External webinars (held in May and June 2008 respectively), and will include seven workshops around the United States starting in late July 2008. The outreach has and will continue to explain the content of the guidebooks while looking to obtain through this outreach effort additional public and

agency input and feedback. It is anticipated that the guidebook documents will be finalized in the Fall of 2008.

- **Section 10204 – Catastrophic Hurricane Evacuation Plans** – Requires DOT and DHS Secretaries to coordinate with the Gulf Coast States and contiguous States to jointly review and assess Federal and State evacuation plans for catastrophic events impacting the Gulf Coast Region. The report was produced in consultation with appropriate Federal, State, and local transportation and emergency management agencies. The Office of Policy will lead a multi-office team in producing the report. However, the Office of Transportation Operations will produce the foundational material defining “good practice” evacuation planning, management, and implementation tools.

Current Status - Report was finalized and sent to Congress by June 1, 2006. The report was distributed in CD form to Research Centers and Division offices in late July and posted on the FHWA Web site at <http://www.fhwa.dot.gov/reports/hurricanevacuation/>.