

**Federal Highway Administration
Operations**

Current Program Activities

As of

December 2005

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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Operations Program Activities

I. NON-RECURRING CONGESTION

A. **Traffic Incident Management:** Program Manager, David Helman (David.Helman@fhwa.dot.gov)

1. **TIM Self-Assessment** - The purpose of the Traffic Incident Management Self Assessment (TIM SA) is to provide a formal process for State and local transportation, public safety and private sector partners to collaboratively assess their traffic incident management programs and identify opportunities for improvement. At a national level the TIM SA helps the FHWA and its transportation and public safety partners identify national program initiatives to improve the practice of traffic incident management. The National Summary report for the FY 2004 TIM SA was distributed in November 2005.
2. **National Traffic Incident Management Coalition (NTIMC)** - The following activities, sponsored by the NTIMC, are now underway: (a) work to develop a standard for high-visibility vests for public safety responders (b) review of the MUTCD's treatment of traffic control issues for incidents; (c) providing guidance in the implementation Traffic Incident Response Scan Tour (see no. 3 below) recommendations, (d) planning the 2006 National TIM and Planned Special Events Conference, and (e) sponsoring an outreach and communications workshop.
3. **Traffic Incident Response Scan Tour** - Findings and recommendations from the scan will be available January 2006.
4. **LAWTOW - 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. This effort will involve the creation and distribution of an outreach package to the towing and recovery and law enforcement communities and the development of a TIM Awareness and Operations Train-the-Trainer effort for the towing and recovery industry.
5. **TIM Performance Measures** - Eleven FHWA Division Offices are participating in a Focus States initiative addressing TIM Performance Measurement. The purpose of the Focus States initiative is to identify appropriate measures of performance for TIM programs, identify who is now collecting and archiving the required data, and explore issues involved in fusing data from disparate public safety and transportation databases. Each State has developed an Action Plan that will be implemented, with support from the Office of Operations, in FY2006. This is a multi-year activity.
6. **CAD FOT (Computer Aided Dispatch Field Operational Test)** - This FOT in Utah and Washington provides for the integration of data among transportation management and public safety CAD system databases, making rapid exchange of unambiguous incident-related information possible. The FOT work was completed in December 2005. The final FOT evaluation report will be available in February 2006 and the final project reports from each State will be completed in April 2006.
7. **NHI Course 133101 - Using the Incident Command System (ICS) at Highway Incidents** - This new course is being developed by NHI and is targeted primarily at transportation responders. It will deal with ICS at highway incidents and describe what

ICS is, its structure, and how it is used at highway incidents. The course will be available later in FY2006.

8. Simplified Guide to Incident Command Systems (ICS) for Transportation Professionals - The purpose of this Guide is to explain ICS in a transportation context and its use at highway incidents under both Single Command and Unified Command structures. The publication will be available by spring 2006.

9. Non-Blinding Emergency Vehicle Warning Light Systems - This study investigates the effect of various emergency warning light systems on driver comprehension and behavior and on the safety of on-scene emergency responders. The study results will be available in FY 2007.

10. Traffic Control Training for Emergency Responders - The FHWA is partnering with the United States Fire Administration (DHS/FEMA) through the International Fire Service Training Association (IFSTA) to develop effective technical guidance and training in traffic control at highway incidents in accordance with the Manual on Uniform Traffic Control Devices. The guidance will be available by September 2006.

11. Traffic Incident Management (TIM) Community of Practice (CoP) Website - As a component of the National TIM Coalition (NTIMC), this Community of Practice website will connect and serve practitioners in the key communities involved in traffic incident management. The TIM Community of Practice website will link to current and planned websites in order to provide Community of Practice members with access to resources and references. The website will be available in September 2006.

B. Work Zone Management: Program Manager, Chung Eng (Chung.Eng@fhwa.dot.gov)

1. Work Zone Self-Assessment (Lead, Tracy Scriba, tracy.scriba@fhwa.dot.gov) - To support the congestion mitigation vital few areas of FHWA, a comprehensive work zone self-assessment tool was developed and is distributed annually to all 52 FHWA Division Offices. The tool is intended to assist State DOTs in evaluating their existing work zone management practices and identifying areas for potential improvement. The self-assessment process has resulted in increased awareness of, and communication on, work zone issues and has provided valuable insight on what DOTs are doing to reduce delay and crashes associated with work zones. The information is also being used to develop outreach, research, and deployment strategies within the FHWA work zone program. Each State completed the self-assessment in 2003, 2004 and updated their scores in 2005. Reports on the National results for each year, including information on overall average scores and potential areas for improvement, are now 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@fhwa.dot.gov) - FHWA published updates to this work zone regulation in the Federal Register on September 9, 2004. The Rule has a compliance date of October 12, 2007. To assist transportation agencies with implementing the Rule, FHWA is developing guidance materials. FHWA published an overall guide, *Implementing the Rule on Work Zone Safety and Mobility*, in September 2005. A technical guide on *Work Zone Public Information and Outreach Strategies* was published

in December 2005. Two additional guides, one on developing transportation management plans and one on assessing the safety and mobility impacts of work zones, will be published in early 2006. The guides (as they each are published), as well as a brochure, facts sheets, and examples, are available at http://www.ops.fhwa.dot.gov/wz/resources/final_rule.htm.

3. ITS and Work Zones Crosscutting Study (Lead, Tracy Scriba, tracy.scriba@fhwa.dot.gov) - Using ITS in work zones can help ease traveler frustration, manage congestion, and prevent crashes. 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. This implementation guide is expected to be ready for distribution by June 2006.

4. Making Work Zones Work Better Workshop Series (Lead, Daniel Grate, daniel.grate@fhwa.dot.gov) - This series of workshops was conducted to foster peer exchange and introduce the community of practitioners to new strategies and technologies for mitigating work zone impacts. In total, 20 workshops were held in 19 states and brought nearly 2500 transportation practitioners together to discuss strategic and tactical approaches to improving work zone mobility and safety. The series, a partnership activity among FHWA headquarters and field offices and State DOTs, highlighted the use of strategies such as ITS, full road closure, innovative contracting, and other promising work zone technologies and practices. Commentary from the workshops was captured to identify opportunities where FHWA could support broadly applicable improvements to work zone operations. Future workshops in interested States are being coordinated and supported through the Resource Center's Operations Technical Services Team. A guide to help states with hosting workshops is available for use by the field offices.

5. Assessment of Work Zone ITS Effectiveness (Lead, Tracy Scriba, tracy.scriba@fhwa.dot.gov) - FHWA is conducting a study to collect and evaluate data from five to six WZ ITS deployments to gather some quantifiable results of the effectiveness of ITS applications in work zones. Measures include elements of delay, queue length, and safety. Vehicle throughput and the delivery of information on work zones to travelers are also being considered. Data have been collected and analyzed for three sites. Data collection will be completed during the 2006 construction season. Upon completion of data analysis for all sites, a results report will be prepared.

6. QuickZone Traffic Impact Analysis Tool (Lead, Deborah Curtis, deborah.curtis@fhwa.dot.gov) - Quick Zone is an Excel-based user-friendly software tool for estimating queues and delay in work zones. Through alternative analysis, the best staging/phasing plan and mitigation strategies can be identified to minimize user delay and queuing in work zones. Version 2.0 is now available through McTrans. This updated version includes a graphical user interface for network development, an enhanced cost analysis tool, and two-way, one-lane operations modeling. Eight case studies on the use of Quick Zone were published in Fall 2005. These case studies

describe how QuickZone was used on a variety of rural and urban projects and the resulting benefits.

7. Advanced Work Zone Management and Design Course (Lead, Chung Eng, chung_eng@fhwa.dot.gov) - A new work zone course (#380072A) is being developed to add to the existing courses offered through the National Highway Institute (NHI). It will provide learners with broad skills and knowledge of technical and non-technical aspects of work zone safety and mobility management practices. The course will include principles of planning, design, project management, traffic management, and contract techniques. It is designed for those that have an understanding of principles of engineering judgment and studies, have management or design experience in work zone traffic control, and have an understanding of the Manual of Uniform Traffic Control Devices (MUTCD). A walkthrough of the course was held in late November 2005. The course is being revised based on feedback from the walkthrough. Once revisions are complete, a pilot of the course will be held, likely in late Spring 2006.

C. Road Weather Management: Program Manager, Paul Pisano (Paul.Pisano@fhwa.dot.gov)

1. Principles and Tools for Road Weather Management, NHI course No. 137030A (Lead, Roemer Alfelor, roemer.alfelor@fhwa.dot.gov) - A one-day course has been developed to introduce transportation decisions makers to the basics behind road weather management and the ways that they can be applied to address a host of weather-related problems. Topics include a review of road weather problems, meteorology for non-meteorologists, technology resources and implementations, and case studies. The course was piloted in August 2005 and will be available for delivery in January 2006.

2. Maintenance Decision Support System (MDSS) (Lead, Paul Pisano, paul.pisano@fhwa.dot.gov) - One of the market-ready technologies identified by FHWA for implementation and deployment, the MDSS is a decision support tool for winter maintenance that fuses relevant road weather forecasts, maintenance practices, and maintenance resource data into a "one-stop shop," providing recommended winter maintenance actions. Version 4.0 of the MDSS software is now available from the National Center for Atmospheric Research website www.rap.ucar.edu/projects/rdwx_mdss/. Eight states have now joined the pooled fund effort to develop an enhanced version based on the MDSS prototype, while others are in the process of procuring the software or have contracted with private vendors for MDSS-like capabilities. An MDSS Stakeholder meeting took place last October 2005 in Colorado.

3. Clarus (Lead, Paul Pisano, paul.pisano@fhwa.dot.gov) - *Clarus* is an ITS initiative to develop and demonstrate an integrated surface transportation weather observing, forecasting and data management system, and to establish a partnership to deploy such a system nationwide. Clarus is intended to provide more timely, accurate and relevant road weather information that will be made available to all transportation managers and users so they can deal more effectively with adverse weather. The Clarus system design is near completion after a task force meeting and an Initiative Coordinating Committee meeting were held in November, to be followed by a Critical System Design Review in mid

December. A proof-of-concept demonstration is scheduled for Spring 2006. Additional information about the initiative can be found at: www.clarusinitiative.org.

4. Road Weather Resource Identification (RWRI) Tool (Lead, Roemer Alfelor, roemer.alfelor@fhwa.dot.gov) - The FHWA Road Weather Management Program has gathered hundreds of road weather resources including research reports, articles and other publications. The prototype RWRI tool, which contains a database of those resources, has been developed to help transportation professionals find the appropriate road weather documents to suit their specific needs. The tool enables the users to navigate the database resources using a guided search, a menu of topics search or a keyword search. The prototype tool was posted on the FHWA website in October for testing and evaluation, and has been downloaded by close to 100 users. Comments from the users will be compiled and used to update the tool.

5. Empirical Studies on Weather and Traffic (Lead, Roemer Alfelor, roemer.alfelor@fhwa.dot.gov) - The Road Weather Management Program is currently undertaking a research project to utilize existing data and knowledge, and/or develop new models, to quantify the impacts of weather on traffic flow parameters including speed, volume and delay. The goal is to better understand the effects of adverse weather on traffic conditions to help identify appropriate traffic management strategies. A synthesis report and a detailed research and analyses plan including data sources were already completed. Work is underway to collect and analyze traffic and weather data from four sites – Minneapolis, Baltimore, Seattle, and Phoenix, for which empirical models and relationships between traffic flow and weather will be developed. The research is scheduled for completion in June 2006.

6. Missouri DOT Weather Response System for Transportation Management: (Lead, Roemer Alfelor, roemer.alfelor@fhwa.dot.gov) - The Federal Highway Administration (FHWA) is currently involved in a cooperative agreement project with the Missouri Department of Transportation (MoDOT) to develop and deploy a weather responsive system (WRS) for transportation management. The system will utilize weather data and products from various sources to support the application of traffic management, operations and highway maintenance strategies throughout the agency. The WRS prototype has been refined and a walkthrough was held in December 2005. The system will be tested and evaluated in the Kansas City district of MoDOT beginning January 2006.

7. Integrating Weather Into TMC Operations (Lead, Roemer Alfelor, roemer.alfelor@fhwa.dot.gov) - The Road Weather Management Team, in partnership with the Emergency Transportation Operations Team, sponsored a research project to conduct a survey and analysis of how weather and emergency information are currently being integrated into the operations of the Traffic Management Centers throughout the country. The goal is to identify best practices and use the information from the study to develop guidance and recommendations. The research team completed the base case analyses of several TMC's around the country including detailed interviews of 9 TMC sites. The draft final report was submitted to FHWA in November 2005 and will be finalized in early 2006.

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

- 1. Executive Summary of the “Managing Travel for Planned Special Events” Handbook** - The executive summary of the “Managing Travel for Planned Special Events Handbook” is designed to reach the decision makers and senior officials who need to be familiar with planned special events and who need to understand the importance of providing safe travel to and from these events; the value of regional coordination and collaboration to ensure the success of these events; and the merits of local, county and/or state agencies representing transportation, transit, public safety as well as private sector partners working together in the planning and implementation of these planned events.
- 2. NHI Training Course No. 133099 - Managing Travel for Planned Special Events** Delivery of the courses will begin in early 2006.
- 3. Practical Checklists for Travel Management for Small, Medium, and Large Planned Special Events** - A series of checklists based on research of proven agency methods will include flowcharts that agencies can customize for their use in the permitting and planning for special events, as well as to identify when coordination with other agencies is necessary. The checklists will simplify tasks for small events, but provide increasingly responsible coordination, liabilities, and considerations for larger events. The project will involve the development of an evaluation plan to “categorize and size” the event, which will, in turn, identify necessary agencies, resources, lead-time, facilitation, and administrative approvals. The checklists will compile best practices of similar lists that have been created by individual agencies. Draft checklists will be available for the PSE/TIM TRB Workshop (see below) in November/December 2006.
- 4. Planned Special Events (PSE)/Traffic Incident Management (TIM) Workshop at the 2006 TRB Annual Meeting** - With the theme of Commonality of PSE and TIM Planning and Actions, the workshop will focus on three cross cutting issues - TIM/PSE Tactical Planning; Comparison of TIM/PSE Post Action Activities; and Interchangeable use of PSE and TIM Plans. This session will also include a multi-layered Planned Special Event/Traffic Incident Management tabletop exercise. The workshop will take place in January 2006 at the TRB Annual Meeting.
- 5. 2006 Joint Conference on Managing Travel for Planned Special Events and Traffic Incident Management** - Scheduled for late November/early December 2006, the 2006 National Conference will provide public agencies with information on how to best influence the practices related to planning for special events, and be better prepared to handle the aftermaths of a traffic incident. Conference Information will be available on the conference website http://www.ops.fhwa.dot.gov/program_areas/sp-evnts-mgmt.htm.

II. RECURRING CONGESTION

A. Arterial Management: Program Manager, John Halkias
(John.Halkias@fhwa.dot.gov), http://www.ops.fhwa.dot.gov/arterial_mgmt/

- 1. Traffic Signal Timing Manual** - An 18-month effort to develop a concise, practical, user friendly and modular guide to signal timing practitioners, focusing on the principals of traffic signal timing, identifying sound timing practices, and a practical and comprehensive tabletop resource. The target audience for this manual, expected to be

completed in the Summer of 2007, will be state, city and local individuals responsible for the day-to-day timing and coordination of traffic signals, including planning, design, operations and maintenance staff who design, operate and maintain traffic signals, whether it be an individual signal, large signal system or somewhere in between.

2. Signal System Life Cycle Costing - This investigation, scheduled for completion in July 2006, will focus on developing the techniques, and procedures needed to calculate total costs of signal cost items and develop a sound basis by which signal system options can be economically evaluated, consistent with practices learned from asset management. Providing guidance to support the accurate calculation of life cycle costs for signal systems is the first in a set of investigations geared at building an analytical foundation for operations asset management. After this investigation for signal systems, other investigations for other operations systems to develop life cycle costs will need to be undertaken.

3. Traffic Signal Training Assessment - This assessment, available on the Arterial Management Web site by March 2006, will identify the knowledge, skills and abilities needed by various types of traffic signal practitioners in order to support good traffic signal operation, and will scan applicable training that is currently offered to identify gaps in existing training.

4. Case Studies For Regional Traffic Signal Timing - The intent of this document is to show case studies of the successes and struggles of current or past programs to develop regional (i.e., across jurisdictional boundaries) traffic signal timing programs, that have been shown to reduce trip travel times by 8 to 25 percent. The case studies of regional traffic signal timing programs, available on the Web site in Spring 2006, that can also be provided to agencies and transportation partners as a models, guides, or frameworks for establishing successful programs.

5. Traffic Signal Timing On A Shoestring - This effort, aimed at jurisdiction or municipalities that cannot afford to perform full-blown data collection and analysis studies, will explore and document the minimal amount of data collection and optimization that should be performed in a signal retiming project to acquire some appreciable benefits. Available on the Web site by March 2006.

6. Assessment of the State-of-the-Practice In Low Cost Traffic Engineering Improvements (Primer) - An assessment of low cost strategies and programs used by local agencies to manage their arterials, this primer includes traffic signalization considerations, signal hardware and software, signing, markings, and geometric design and construction. Outreach efforts in conjunction with this document will be the issuance of supporting guidance documents to help jurisdictions keep their signals re-timed on a cyclical basis, and the minimal amount of data collection and optimization that should be performed in a signal retiming project to acquire some appreciable benefits. This document is available on the Web site as a complement to **Traffic Signal Timing On A Shoestring** document.

7. Integrated Transportation Management for Small- and Medium-Sized Communities - This workshop will help small communities consider all of the various ITS Systems and how to apply them to address their particular needs, encouraging the deployment of ITS in rural areas that are critical to the nationwide network. This course was piloted in May and is expected to be ready for scheduling by March 2006.

8. Small Communities Handbook - Within this handbook, systems that apply various ITS components for ATMS and ATIS to appropriate categories of traffic and network characteristics are covered, as well as integrated and isolated traffic signals, small traffic signal systems, traffic management systems for seasonal and episodic events, and the communication systems that maybe applicable for incident, emergency and disaster management. A range of small communities of various sizes and populations are highlighted in order to capture the unique aspects of each. The Handbook is being distributed as part of the course materials for the **ITS in Small Communities Workshop**.

9. Traffic Control Systems Handbook - The Traffic Control Systems Handbook is being revised to reflect the changes in technology and associated standards, the state of the practice, and recent FHWA requirements. This updated version will continue to help users understand the basic elements of traffic control systems and serve as a basic reference for the practicing traffic engineer, and is expected to be available on the Web site by April 2006.

Access Management: Program Manager, Neil Spiller, (Neil.Spiller@fhwa.dot.gov), the website can be accessed at http://www.ops.fhwa.dot.gov/access_mgmt/index.htm.

10. Access Management Course Update #133078 - In summer, 2005, this course began a one-year effort to update the current offering to incorporate NHI's Learning Objectives, to incorporate Power Point, to include metrification, and to make it 508 compliant. The pilot course is tentatively scheduled for June 2006.

11. A CD and companion Primer addressing business owners' concerns when their driveway is changed as the result of adjacent roadway corridor improvement projects is due for completion in Spring, 2006. The two interrelated products will help to sway them that a driveway(s) relocation, or the loss of lefts-in/lefts-out (replaced by U-turns downstream) has much less effect on the success of their business when compared to other, more important business determinants.

12. An access management domestic scan is planned for late 2006. This relatively small-scope scan will target differing, regional AM strategies to coordinate multiple jurisdictions into one plan that works for all.

B. Corridor Traffic Management: Program Manager, John Harding
(John.Harding@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. Each of the networks is usually operated in isolation except for pseudo coordination at facility junctions. This lack of coordinated operations among networks prevents effective use of the combination of these networks to address day-to-day congestion and congestion caused by work zones, incidents, weather, and special events. 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. Developing, testing and evaluating the technology and strategies necessary to make this vision a reality is the subject of the ongoing major ITS initiative that forms the core of this program area.

Foundational research activities for the major initiative are being completed. Two stakeholder-developed definitions for “Corridor” and “Integrated Corridor Management” have been approved and posted. After the July 2005 stakeholder workshop, initiative work focused on developing the information necessary to demonstrate the preliminary feasibility of the Integrated Corridor Management concept to the DOT ITS Management Council. Preliminary benefits and the feasibility of addressing operational and technological gaps were identified and assessed. The various stakeholder meetings culminated in the identification of stakeholder needs and issue. Analysis of stakeholder needs and issues identified what areas of development the next phase of the initiative needed to concentrate. The next phase, will concentrate on developing corridor analysis tools, evaluating the effectiveness of different ICM approaches and strategies, determining the system standards and protocols necessary to integrate among the network systems in a corridor, and provide the techniques necessary for corridors to identify how responsibilities need to be distributed and what control must be shared. Stakeholder concerns about the model deployment phase, phase 3, were addressed by developing a new Pioneer site/ICM demonstration approach. The new pioneer site approach will include three stages:

Stage 1: Pioneer Site selection and Corridor Concept of Operations development

Stage 2: Corridor Concept Analysis and Evaluation

Stage 3: Demonstrations

Current work is focused on documenting the results of the foundational research and producing the ICM Concept of Operations for a Generic Corridor and an ICM Implementation guide. The Concept of Operations for the generic corridor communicates the ICM concept as applied to a fictitious corridor. The ICM Implementation Guide identifies and explains areas of investigation that need to be addressed to successfully develop and implement an integrated corridor management system. These documents and a Request for Applications from pioneer sites are scheduled for release in February 2006.

C. Freeway Management: Program Manager, Jessie Yung

(Jessie.Yung@fhwa.dot.gov), <http://ops.fhwa.dot.gov/freewaymgmt/index.htm>

The Freeway Management Program supports and promotes the use of integrated and coordinated freeway systems and proactive freeway management to improve the safety efficiency and reliability of travel on the nation's freeway facilities. 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 Demand Management**.

The TMC and HOV Pooled Fund Studies assist the FHWA in programming, funding, and monitoring the activities in their associated focus areas. The program also includes cross-cutting efforts that apply to all of the focus areas such as: coordinating with ITS Deployment Tracking; updating the FHWA Operations website and/or outreach material; following through on recommendations on changes to the MUTCD; and developing the Traffic Management Toolbox.

1. Freeway Management & Traffic Operations - Overall freeway operations and traffic operations and traffic management involves managing travel and controlling traffic involves 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.

- The ***Freeway Management & Operations Training Course*** (NHI Course #13375) course will be available in February 2006. The course will provide participants with a general appreciation and understanding of the key policies, challenges and barriers, institutional issues, technical and other issues to consider in the planning, design, implementation, management, operation, evaluation, and marketing of freeway facilities. Details and scheduling for this course are available at <http://www.nhi.fhwa.dot.gov/default.asp>.
- The ***Ramp Management and Control Handbook***, available in January 2006, will provide guidance and recommended practices on managing and controlling traffic on freeway ramps through the enhanced use of and effectiveness of various ramp management and control strategies and techniques. The handbook presents the impacts that all aspects of roadway improvement planning have on the performance and management of traffic at freeway ramps.
- The ***Configuration Management for Transportation Management Systems*** (NHI Course #137042) demonstrates the benefits and role of configuration management, and how it supports the development and operation of transportation management systems. Details and scheduling for this course are available at <http://www.nhi.fhwa.dot.gov/default.asp>.
- **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 30 current members in the activities of the TMC PFS for 2005. The latest information on the following current projects, initiated or completed over the past five years, can be accessed at: <http://tmc pfs.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 ***Developing and Using Concept of Operations in Transportation Management Systems*** provides technical guidance and recommended practices on the need for and how to develop and use a concept of operations throughout the life cycle of a transportation management system. It is available at is now available at http://tmc pfs.ops.fhwa.dot.gov/cfprojects/new_detail.cfm?id=38&new=0.

3. The *TMC Operator Requirements & Position Descriptions and Software – Phase 2* is now available at http://tmcdfs.ops.fhwa.dot.gov/cfprojects/new_detail.cfm?id=55&new=0. The interactive software tool allows public agencies to develop operator requirements, tasks, knowledge, skills and abilities (KSA's), and position descriptions based on the current or planned market packages or functions supported by their TMC.
4. The *TMC Business Planning and Plans* project, scheduled for completion in January 2006, will develop a technical document and primer providing guidance and recommended practices on the need for, how to develop, outlines various processes, identify types of business plans, supporting management systems, and use of business planning processes for TMCs. This project will also address various business planning models that have been successfully employed by transportation agencies to ensure the long-term sustainability of applications similar to TMCs.

Information on projects to be initiated in 2005/2006, including *Integration of TMC and Law Enforcement, Recovery and Redundancy of TMCs*, and *Procuring, Managing and Evaluating the Performance of Contracted TMC Services* can be accessed at: http://tmcdfs.ops.fhwa.dot.gov/cfprojects/new_search.cfm?new=3.

2. Managed Lanes and Demand Management

“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. Conceptually, Managed Lanes are based upon flexible operating strategies and active management of the transportation system and provide the perspective needed for integrated operations leading to improved performance. However a number of issues critical to advancing managed lanes require greater understanding (e.g., legislative authority, demand forecasting, revenue use, design, management, traffic management and operation).

- The *Managed Lane Cross Cutting Study and the Managed Lanes Primer*, are available electronically at http://ops.fhwa.dot.gov/freewaymgmt/managed_lanes/index.htm. The Cross Cutting Study summarizes the current practices, trends, lessons learned, gaps in practice, and research needs based on experiences from leading agencies from around the country.
- The *Managed Lanes Traffic Control & Signing Study* summarizes the current practices, trends, lessons learned, gaps in practice, and research needs based on experiences from leading agencies from around the country will be completed in the March 2006.
- The *Developing Managed Lanes* report will provide guidance to agencies addressing managed lanes issues at the earliest stage possible in the development process to maximize their potential for success. It will be completed in the March 2006.
- The *HOV Training Course* (NHI Course #13375) will provide participants with a general appreciation and understanding of the key policies, institutional issues,

challenges and barriers, technical, and other issues to consider in the planning, design, implementation, management, operation, evaluation, and marketing of HOV facilities. This updated course, available for presentation in late 2006, is targeted at a wide range of individuals who may be responsible for or involved in activities that influence the HOV program, system, facility, or specific support services. Contact Greg Jones, GregM.Jones@fhwa.dot.gov, for more information.

- 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 available in January 2006.
- **HOV PFS: Program Manager, Neil Spiller (Neil.Spiller@fhwa.dot.gov)** - The HOV PFS provides a forum for regional, State and local agencies, transportation service providers, and FHWA to identify the key issues and challenges that are common among agencies, and propose, prioritize, and initiate projects and initiatives to address these challenges. 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*** project, scheduled for completion in December 2005, will develop a technical reference, primer, and brochure to 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*** project, scheduled for completion in December 2005, 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, or signing or pavement marking.
 3. The ***HOV Performance Monitoring, Evaluation, & Reporting*** project, scheduled for completion in December 2005, will develop a technical reference, primer, & brochure providing guidance and best practices with monitoring, evaluating, and reporting on HOV system performance to foster improvements in the planning, design, management and operation of HOV facilities and support services.
 4. The ***HOV Hours of Operation and Eligibility Requirements*** project scope was revised to develop a technical document to limited outreach material (fact sheet) due to the limitation of available funding. These products would assist the practitioners in communicating the key themes and concepts contained in the technical document to a broader audience.

These outreach products would also identify key issues for their agencies to consider, identify the benefits and/or value, recommend practices and lessons learned, profile successful practices. It is scheduled for completion in January 2006.

5. The **Website Clearinghouse and Facility Database** project will create an interactive database of Arterial and Freeway HOV facilities with up to date information on selective parameters including length, age of facility, # of lanes, measures of effectiveness, hours of operation, vehicle eligibility, and where available, history of the facility. The website and inventory database will be available in October 2006.

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

1. **TDM Reference Guide – Update** - The objective of this project is to update 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 website: www.ops.fhwa.dot.gov. Hard copies are available by contacting Wayne Berman at Wayne.Berman@fhwa.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 website: www.ops.fhwa.dot.gov. Hard copies are available by contacting Wayne Berman at Wayne.Berman@fhwa.dot.gov.

III. DAY TO DAY OPERATIONS

A. Manual on Uniform Traffic Control Devices: Program Manager, Hari Kalla (Hari.Kalla@fhwa.dot.gov)

1. **Traffic Control Devices Pooled Fund Study** (Scott Wainwright, Scott.Wainwright@fhwa.dot.gov) - The experimentation process for updating the MUTCD is time-consuming and involves evaluation reports. The experimental process has been used by jurisdictions as a mechanism 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. The panel has selected 2 projects this year, which are:

- Evaluation of 11 new symbols (expected completion is Fall of 2006)
- Stutter flash for overhead beacons (expected completion is Winter of 2006)

2. Visual Detection of Various Detectable Warning Materials for Pedestrians with Visual Impairments (Hari Kalla, Hari.kalla@fhwa.dot.gov) - The objective of the project is to assess the relative visual detection of color, contrast, reflectance, and other factors in a range of detectable warning materials. Findings and recommendations of the study will help determine color and contrast standard for detectable warning to be included in the MUTCD. Expected completion FY06.

3. Developing Traffic Control Strategies at Toll Booth Plazas (Linda Brown, Linda.L.Brown@fhwa.dot.gov) - This best practice report will provide a consistent strategy for guiding and controlling the movement of vehicles through toll facilities in an orderly manner so that safety and operations are enhanced, better efficiency and economy of design are achieved, potential points of conflict are minimized, and motorist recognition and comprehension are improved. Expected distribution early 2006.

4. 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. Currently there are 5 sessions scheduled for fiscal year 2006. We plan to put this training on CD and make it available as a classroom training tool or self-instructional tool to interested persons upon request.

5. MUTCD Strategic Planning Initiative (Scott Wainwright, Scott.Wainwright@fhwa.dot.gov) - HOTO has identified the need for a strategic long term plan for the MUTCD, to 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. HOTO has asked a group of respected leaders from the NCUTCD to play a key role in developing an MUTCD strategic plan with a 20-year vision. The initial meeting of the group will take place in January and, over a 2-year period, the plan will be developed and recommended to FHWA.

6. Policy Memorandum on Traffic Control Plans for US Border Patrol Checkpoints (Hari Kalla, Hari.kalla@fhwa.dot.gov) - The FHWA issued a policy memorandum on December 20, 2005 to transmit traffic control plans for US Border Patrol checkpoints on high-speed roadways. This memo was in response to NTSB recommendations resulting from two severe crashes in the State of New York at a US Border Patrol checkpoint. Development of traffic control plans for US Border Patrol checkpoints was a collaborative effort among FHWA, AASHTO, US Border Patrol, and the National Committee on Uniform Traffic Control Devices (NCUTCD), an organization of over 250 transportation professionals with traffic control devices expertise.

B. Operations Asset Management: Program Manager, John Harding
(John.Harding@fhwa.dot.gov), http://www.ops.fhwa.dot.gov/program_areas/ops-asset-mgmt.htm

1. The Operations Asset Management Program has taken steps to increase awareness of operations assets and begin to build an economic management foundation for operations assets. Investigations to date have identified the elements of operations asset management through initial investigation of asset management for signal systems. Three reports are currently available. Two reports, “**The State-of-the-Practice report for Signal System Asset Management**”, and “**The Elements of a Comprehensive Signal System Asset Management System**” provide insights concerning the gaps between what is current signal system asset management practice and what is need to support a true signal system asset management approach. The third report, “**Identification of Operations Assets**”, provides an organized list of all operations based assets. The report establishes a generic operations asset management organizational structure to identify and categorize operations assets.
2. **Life Cycle Costs for Signal Systems** - This investigation, scheduled for completion in July 2006, will focuses on developing the techniques, and procedures needed to calculate total costs of signal cost items and develop a sound basis by which signal system options can be economically evaluated, consistent with practices learned from asset management.
3. **Development of a Theoretical Framework for Operations Asset Management** - This study will be initiated in January 2006 and will investigate all the aspects of operations assets management and develop a logical framework by which all operations assets can be managed and evaluated against collective goals and objectives; alternative operational investment strategies can be analyzed; and information produced for decision-makers need to select the appropriate operations asset investment strategies.

C. Real Time Traveler Information: Program Manager, Bob Rupert
(Robert.Rupert@fhwa.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. The evaluation for the 511 Model Deployment (http://www.ops.fhwa.dot.gov/511/current_activities/511model.htm) has been completed, its final report has been printed and will be available electronically on the EDL in January 2006. The FHWA 511 Web site, <http://www.ops.fhwa.dot.gov/511>, provides status and links to the 28 systems in operation in 24 States as of December 2005. Presentation material from a Web conference on speech recognition is available on *Resource 511* (www.deploy511.org), the Web site for the 511 Deployment Coalition. This main repository of information from the 511 Coalition includes version 3.0 of Guidelines, “Quick Tips” report on interoperability, the 2005 Annual Progress Report, usage statistics, marketing information and contacts for all the 511 systems.
2. The **AMBER Alert Guidance, Support and Implementation Program** includes the AMBER Alert Plan Assistance Program and the AMBER Plan Implementation

Assistance Program. The Plan Assistance Program, that has officially ended, provided up to \$125,000 to States to help them determine how transportation agency resources can best be used when child abduction alerts are issued by law enforcement agencies, and a total of \$5,134,520 in grants had been provided covering 42 States and the District of Columbia. The Implementation Assistance Program provides up to \$400,000 to States for implementing motorist information systems to notify motorists when child abduction alerts are issued, and as of December 2005, a total of \$13,948,000 in grants had been provided to 34 States and the District of Columbia.

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, Oregon) that post travel time messages are available on the Operations web page at: <http://www.ops.fhwa.dot.gov/travelinfo/resources/publications.htm>. The Resource Center or headquarters are available to conduct workshops to assist with travel time messaging. For more information, please contact Brandy Meehan at Brandy.Meehan@fhwa.dot.gov.

4. Intelligent Transportation Infrastructure Program (ITIP): Program Manager, Brandy Meehan (Brandy.Meehan@fhwa.dot.gov) - This ongoing program is designed to enhance regional surveillance and traffic management capabilities in up to 21 metropolitan areas while developing an ability to measure operating performance and expanding traveler information through public/private partnerships. To date, deployment has been completed in the initial cities of Pittsburgh and Philadelphia, and in the expansion cities of Chicago, Providence, Tampa, and Boston. Twelve other cities are in the design or deployment stages. Section 5508 of SAFETEA-LU further expanded the ITIP program. The program, now called the Transportation Technology Innovation and Demonstration (TTID), gives up to 35 cities the opportunity to participate in either Part 1 or Part 2 of the program. Part 1 has funding for up to 11 cities and uses the existing contracting mechanism. Part 2 currently has funding for up to three cities and the contracting mechanism is yet to be determined.

5. iFlorida Model Deployment - The iFlorida model deployment will demonstrate and evaluate how the safety, security and reliability of the surface transportation system can be enhanced through the widespread availability of real-time information. The project was awarded May 1, 2003, deployment of the iFlorida field hardware was completed in April 2005, and systems acceptance testing was completed during the summer of 2005. The operational phase of iFlorida began in November 2005 with a kick off and press event in Orlando. The project evaluation is underway and the Evaluation Design Review has been completed. Project documents, as well as other project information, can be found on the iFlorida website at www.iflorida.net. The iFlorida documents and key evaluation documents are also posted on the ITS Electronic Document Library (EDL). For more information on the iFlorida model deployment, contact Toni Wilbur at Toni.Wilbur@fhwa.dot.gov.

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

- 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. For more information, please visit the NGSIM web site at <http://ngsim.fhwa.dot.gov>.
- 2. TAT Workshops** - Local Workshops to disseminate the TAT products (Primer, et al) and present hands-on methodologies to make best choices when using microsimulation tools, is scheduled are scheduled to begin in February 2006.
- 3. Traffic Analysis Tool Primer** - is an overview of traffic analysis tools, available through the web site at <http://ops.fhwa.dot.gov/trafficanalysistools/toolbox.htm>.
- 4. 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. The report is available through the web site at <http://ops.fhwa.dot.gov/trafficanalysistools/toolbox.htm>.
- 5. 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. These guidelines aid practitioners in the development, calibration, and application of micro-simulation models, and are available through the web site at <http://ops.fhwa.dot.gov/trafficanalysistools/toolbox.htm>.
- 6. 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. In addition, these guidelines will aid the CORSIM user in applying the software to more “advanced” problem applications. The report will be available in the Spring of 2006 through the web site at <http://ops.fhwa.dot.gov/trafficanalysistools/toolbox.htm>.
- 7. Traffic Analysis Tools Case Studies: Benefits and Applications** will serve to document real-world applications of the various available tools, and will address topics such as the rationale for selecting the particular analysis procedure(s) employed, the manner in which each tool was applied, the specific benefits achieved, and possibly even the significant pitfalls that were encountered. The report will be available by March 2006 through the web site at <http://ops.fhwa.dot.gov/trafficanalysistools/toolbox.htm>.
- 8. 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 for FY 2006 and deployment goals of 5 State DOTs and 5 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, Wayne Berman (Wayne.Berman@fhwa.dot.gov)

1. Demonstration projects on “Regional Transportation Operations Collaboration and Coordination” - Funding is planned in FY 2005 and FY 2006 for demonstration projects in three cities to serve as laboratories to develop and showcase Regional Transportation Operations Collaboration and Coordination. The three demonstration sites are Detroit, MI; Tucson, AZ; and Portland, OR. For more information on this initiative, please contact Wayne Berman (Wayne.Berman@fhwa.dot.gov).

2. Advancing Transportation Systems Management and Operations Training Course and Executive Session - This course and Executive Session are intended to provide instruction on concepts, principles, and experiences needed to advance a regional perspective for Transportation Systems Management and Operations. The course is available through the NHI website. The Executive Session is available by contacting Wayne Berman (Wayne.Berman@fhwa.dot.gov).

3. Regional Concept for Transportation Operations - Work is progressing on a Primer on the “Regional Concept for Transportation Operations (RCTO)” as a management tool for guiding regional transportation operations collaboration and coordination. The Primer will articulate the benefits and importance of an RCTO, and identify the steps necessary to make it an accepted and valued action for transportation operators and public safety managers in metropolitan areas. For more information on this initiative, please contact Wayne Berman (Wayne.Berman@fhwa.dot.gov).

4. Improving the Application of Existing Methods to Advance Transportation Operations - The FHWA Office of Operations and the Office of Planning, Environment, and Realty are collaborating on a new project to improve the way existing analysis tools are used to plan for operations in the planning process. The overall goal of this project is to develop reference and resource materials that will enable planners and operations professionals to use existing transportation planning and operations analysis tools and methods in a more systematic way to better analyze, evaluate, and report the benefits of needed investments in transportation operations. For more information on this initiative, please contact Wayne Berman (Wayne.Berman@fhwa.dot.gov).

5. Plan4Operations Website - A new website, developed joint between the FHWA Office of Operations and the Office of Planning, Environment, and Realty, is available to

serve as a resource for information related to planning for operations. The address is www.plan4operations.dot.gov/.

B. Performance Measurement: Program Manager, Rich Taylor
(Rich.Taylor@fhwa.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 up to 33 cities in 2005. The program tracks three congestion measures (travel time index, percent congested travel, and delay) and two reliability measures (buffer index and planning time index). For more details, visit the mobility monitoring program web site at <http://mobility.tamu.edu/mmp>.

2. Monthly Urban Congestion Reporting - This on-going program acquires travel time data from the MMP from 19 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.

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 currently being created (due January 2006). Workshops/webinars will be developed in 2006 and offered to the operations community. Another good source of information on the reliability and other operations performance measures is the National Transportation Operations Coalition (NTOC) Performance Measures report: http://www.ntoctalks.com/ntoc/ntoc_final_report.pdf.

4. FHWA National State of Congestion Report - FHWA published and distributed the second annual FHWA National State of Congestion Report in September 2005. The second in an annual series, the report focused on trends and advanced strategies for congestion mitigation. The 2005 report may be viewed at http://www.ops.fhwa.dot.gov/congestion_report/index.htm.

5. Sources of Congestion Study - The goal of this study is to help build a more thorough understanding of the causes of congestion and to identify targeted strategies to mitigate those sources of congestion. The study is finalized and will be available the end of January 2006 at http://www.ops.fhwa.dot.gov/perf_measurement/reliability.htm.

6. Freight Performance Measures: Program Manager, Crystal Jones
(Crystal.Jones@fhwa.dot.gov) - HOFM is developing performance measures for travel time in freight-significant corridors and at border crossings. Private sector data collected from tracking and communications technologies are used to measure travel time variability and border crossing delays. These travel-time measures provide useful insights on intercity highway network performance. Initial proof-of-concept tests have been completed. In January 2006, FHWA will have baseline measurements of travel rates, travel time, and travel time reliability (a buffer index and travel time index) for an initial five Interstate highways identified as freight significant.

C. Facilitating Integrated ITS Deployment

1. Regional ITS Architecture Implementation: Program Manager, Emiliano Lopez (Emiliano.Lopez@fhwa.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. Training, technical guidance and best practices are currently available on the architecture conformity website (http://www.ops.fhwa.dot.gov/its_arch_imp/index.htm).

a.) ITS Architecture Training and Technical Assistance Program - To help those states and metropolitan areas still developing Architectures, FHWA will continue to sponsor a variety of training and technical assistance activities designed to assist in the development, use and maintenance of regional ITS architectures. However, the program is now focusing more on application of regional ITS architectures in the planning and deploying of ITS projects. The one-day facilitated session entitled “Using Your Regional ITS Architecture” that describes elements of the regional ITS architecture to consider in a region’s transportation planning and ITS project development process, is still available through the FHWA Division offices. This workshop/seminar will be re-titled “Using and Maintaining Your Regional ITS Architecture” and will be expanded to show how Architectures are used in implementing projects. This revised course will be made available in mid FY06 through the Division Offices.

b.) Regional ITS Architecture Guidance - The “Regional ITS Architecture Guidance Document” will be updated, with delivery anticipated in mid-to-late CY 2006. The “Regional ITS Architecture Maintenance White Paper” (EDL # 13957) is still available and provides guidance on what should be contained in a regional ITS architecture maintenance plan and on the configuration management and process of maintaining a regional ITS architecture. The “Regional ITS Architecture Maintenance Technical Advisory” provides further information on resources needed to effectively maintain a regional ITS architecture including: estimated resources needed, variables that influence resource allocation, and situations where substantially more resources may be needed.

c.) Major Updating of ITS Architectures - When State and Regional Architectures were first developed stakeholders only had a conceptual idea on how they should look and work. With many now being tested in the real-world stakeholders are finding new areas and better ways to use their Architectures. To capture how Architectures are being validated and enhanced a white paper will be developed that discusses key findings, challenges and recommendations on this process. The white paper will be available in late FY06 at: http://www.ops.fhwa.dot.gov/its_arch_imp/resources.htm.

d.) ITS Architecture Process Improvement Review Workshops - To enhance the Regional ITS Architecture Guidance Document and assist stakeholders better understand 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 through early FY06 and a final report on best practices will be available mid FY06 at: http://www.ops.fhwa.dot.gov/its_arch_imp/resources.htm.

2. ITS Standards Deployment: Program Manager, Tom Stout
(Tom.Stout@fhwa.dot.gov)

The Intelligent Transportation Systems (ITS) Standards Program encourages the widespread use of ITS standards to promote interoperability and interchangeability of traffic management devices and systems by providing deployment support. Deployment support includes helping to build confidence in the standards through testing and case studies, by providing standards resource information, by developing and delivering standards training courses, by providing training and technical assistance to deployers, by collecting and disseminating deployment experience-based guidance such as “lessons learned”, and by assessing the readiness of standards for deployment.

a.) Overview and Introductory Courses delivered in a classroom format provide a basic understanding of the ITS communications standards, including how the standards are defined by the ITS Natural Architecture, their purpose, and how they are combined to achieve an agency’s traffic management objectives. The following introductory 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 **Center-to-Center Communications (C2C)** is an introduction to the information level communications standards. An overview is provided of the Traffic Management Data Dictionary (TMDD), Advanced Traveler Information System (ATIS) standards, IEEE 1512 Incident Management Standards, and XML ITS standards. This course and the next one are intended for designers and deployers of ITS traffic control and management systems;
- A one-day **Dynamic Message Sign** is an introduction to the use of NTCIP 1203 and supporting NTCIP standards.

b.) 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.
- A one-day **Incident Management Workshop** provides guidance for deployment of the incident management related messages addressed by the IEEE 1512[®] incident management family of standards.

c.) 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. A pilot center-to-center session is anticipated summer 2006.

d.) Technical Assistance Program - The technical assistance program can provide short-term, on-call assistance to solve ITS standards implementation issues.

- Through the **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 specialists who are prepared to provide short-term, on-call ITS standards assistance in supporting and facilitating deployment of ITS standards.
- e.) **Guidance** – The ITS program has developed numerous documents to help agencies understand and deploy ITS standards. Many are available from http://www.ops.fhwa.dot.gov/int_its_deployment/standards_imp/standards.htm.

3. Systems Engineering: Program Manager, Emiliano Lopez
(Emiliano.Lopez@fhwa.dot.gov)

The clear requirement within the Final Rule/Final Policy is that all ITS projects must be developed using a systems engineering process, which includes: concept of operations, functional requirements, identification of agencies and roles, identification of applicable standards, alternative analysis, procurement options, and system operations and management.

a.) **Systems Engineering Training Series** includes:

- Introduction to Systems Engineering
- Applied Systems Engineering for Adv. Transportation Projects
- Managing High Technology Projects in Transportation
- ITS Procurement/ITS Software Acquisition
- Configuration Management for Traffic Management Systems
- Regional Planning for Operations
- Recommended Practices for Operations of Advanced Transportation Systems

b.) **Systems Engineering Guidance** - A comprehensive “Systems Engineering Guidance Document will be available in mid-to-late FY06. This document will fully detail key systems engineering activities that should be considered when planning, implementing and maintaining an ITS system. To better articulate the systems engineering elements, the document will also provide working examples and templates for deployers to follow.

c.) **Systems Engineering Implementation** - To gain a better understanding on the challenges and best practices in conducting systems engineering analysis and implementing a system engineering program, a number of white papers will be developed from real-world examples of deployers either currently using or planning to use system engineering for the first time on their ITS project. These white papers will be available throughout FY06 and can found at

http://www.ops.fhwa.dot.gov/int_its_deployment/sys_eng.htm as they become available.

d.) The following are current **ITS Systems Engineering Guidance** documents available through the EDL and on the Architecture Conformity area of the ITS website (www.its.dot.gov).

- **“Building Quality Intelligent Transportation Systems Through Systems Engineering” (EDL # 13620)** introduces the topic of systems engineering to

managers and staff working on transportation systems projects, with particular emphasis on Intelligent Transportation Systems (ITS) projects.

- **“Developing Functional Requirements for ITS Projects” (EDL #13621)** discusses the value and importance of good functional requirements, particularly focused on ITS projects, as part of an overall systems engineering development process.
- **“A Guide to Configuration Management for Intelligent Transportation Systems” (EDL #13622)** discusses the configuration management process as a way to manage change and maintain consistency of performance and design of ITS projects.

e.) **Systems Engineering Peer Exchange** – A workshop is being planned for late FY06 that brings together stakeholders to discuss and exchange ideas on challenges and best practices in implementing systems engineering. The workshop will be held at a location central to the most active areas where systems engineering is being done in mid-to-late FY06.

f.) **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 through early FY06 and a final report on best practices will be available mid FY06 at: http://www.ops.fhwa.dot.gov/int_its_deployment/sys_eng.htm.

V. IMPROVING GLOBAL CONECTIVITY BY ENHANCING FREIGHT MANAGEMENT AND OPERATION

A. Freight Analysis

1. **Freight Analysis Framework:** Program Manager, Tianjia Tang (Tianjia.Tang@fhwa.dot.gov) - FHWA’s Office of Freight Management and Operations (HOFM) will release 1) the FAF2 2002 benchmark origin-destination (O-D) database in January 2006, 2) 2005 provisional O-D estimates and forecasts from 2010 through 2035 in July 2006, and 3) the FAF network database in September 2006. These products are described in the FAF plan posted on the HOFM Web site (www.ops.fhwa.dot.gov/freight/freight_analysis).

2. **Freight Model Improvement Program:** Program Manager, Tianjia Tang (Tianjia.Tang@fhwa.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. A major feature of the program is the FMIP Web site (www.fmip.gov), it provides a forum for transportation professionals to share information on freight models and modeling studies and supplies links to other sites of interest to the transportation community. HOFM is working with its DOT partners and the Transportation Research Board to organize a national conference on freight demand modeling in September 2006 in Washington, DC.

3. Benefit/Cost of Freight: Acting Program Manager, Rolf Schmitt (Rolf.Schmitt@fhwa.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. Initial research suggests the benefits may be understated by 15 percent using traditional cost-benefit analysis, which does not capture long-term productivity gains. The next phase of research will focus on creating a planning tool that captures the full benefits associated with freight transportation (infrastructure and operational) improvements. Research will be completed in September 2006. More information is available at www.ops.fhwa.dot.gov/freight/freight_analysis/econ_methods.htm.

B. Freight Professional Development (FPD): Program Manager, Carol Keenan, (Carol.Keenan@fhwa.dot.gov)

1. Advanced Freight Planning course and Financing Multimodal Freight Improvements workshop - In response to customer needs, an Advanced Freight Planning course and Financing Multimodal Freight Improvements workshop are also being developed. In partnership with the Office of Planning and the Resource Center Planning Team, HOFM provides targeted training to build the knowledge base and skills of freight transportation and planning professionals. A list of available courses is located at www.ops.fhwa.dot.gov/freight/fpd.

2. The “Talking Freight” Seminar Series, offered via web conference, discusses topics relevant to the freight community on the third Wednesday of every month from 1:30 – 3:00 p.m. The upcoming sessions will focus on new 2002 commodity flow data from the updated Freight Analysis Framework database, innovative freight projects, and operations as a solution to freight congestion. Registration for upcoming sessions is at <http://talkingopsandfreight.webex.com>.

3. Position Description for State-Level Freight Coordinator - The FHWA Freight Council continues to facilitate information sharing between FHWA units and respond to customers’ needs. The Council helped to develop a position description for a state-level freight coordinator that is posted at www.ops.fhwa.dot.gov/freight/documents/pd_framework.htm. States can use the position description in its entirety or in part when filling freight-related positions.

C. Vehicle Size and Weight

1. Training and Technical Assistance: Program Manager, Julie Strawhorn (Julie.Strawhorn@fhwa.dot.gov) - HOFM will offer two new training and technical assistance opportunities for States, FHWA Division staff, and the public on the various requirements of the Size and Weight program. The first program is a formal classroom course for FHWA Division and State enforcement personnel who provide guidance on how to run an effective size and weight enforcement program. Development of the NHI training course will be completed in late 2006. The second program is an on-line technical assistance tool. The comprehensive and searchable database for size and

weight frequently asked questions and technical interpretations is available at <http://vsw.fhwa.dot.gov/qa/index.jsp>.

2. Electronic Reporting and Access: Program Manager, Julie Strawhorn (Julie.Strawhorn@fhwa.dot.gov) - HOFM developed an automated system, called the Vehicle Size and Weight Enforcement page, that allows FHWA Division Offices and State DOTs to develop and submit required annual Enforcement Plans and Certifications of activities electronically. The system is now available to pre-approved users and is being used to submit required reports.

D. Intermodal Freight Technology: Program Manager, Mike Onder (Michael.Onder@fhwa.dot.gov)

1. The Freight Technology Story - The Office of Freight Management (HOFM) published a report, *The Freight Technology Story*, in June 2005. The report discusses the results of several FHWA-conducted operational tests, such as the Air Cargo Supply Chain Manifest System, electronic seals, and asset cargo tracking. The report is available at: www.ops.fhwa.dot.gov/freight/intermodal.

2. Freight ITS Technologies Research Program to Streamline Information Exchange - HOFM is currently involved in an ITS initiative that builds on previous operational tests and streamlines information exchange between supply chain partners. The initiative involves private sector participants and agencies within the Department of Homeland Security. A deployment test is planned to begin in March 2006 and completed by 2007. FHWA is also working with industry through the Intermodal Freight Technology Working Group to identify future projects for consideration.

3. Border Information Flow Architecture Framework - HOFM, in coordination with the Office of Interstate and Border Planning and Transport Canada, is spearheading the development of a border-information flow architecture to promote information sharing and coordination among government agencies and other stakeholders. The final product—a framework that depicts the flow of information as it relates to border processes was completed in December 2005. Additional information is available at www.ops.fhwa.dot.gov/freight/intermodal.

VI. IMPROVING MOBILITY AND SECURITY THROUGH BETTER EMERGENCY MANAGEMENT

A. Emergency Transportation Operations: Program Manager, Dave Helman (David.Helman@fhwa.dot.gov)

1. Reducing Vulnerability of Transportation Management Centers - This project is examining the security of transportation management centers and what measures can be taken to reduce their vulnerability. The document will be electronically available by March 2005.

2. Emergency Management Integration - This project on integration of TMC and emergency management information/systems, jointly managed between the Emergency

Transportation Operations and Road Weather programs, is looking at how information can be integrated to support decision-making. The report will be finalized in early 2006.

3. Communications Interoperability - This project is examining the voice communication needs of transportation agencies during emergencies, what technologies are available to provide interoperability, and what initiatives are underway in the public safety community that transportation agencies should participate in so that they are able to interoperate with other responders. The final report will be electronically available in March 2005.

4. Transportation Emergency Response/Recovery Workshop Followup - Having successfully completed the 30 highly popular workshops, a lessons-learned and successful practices report is being updated, and sites will be surveyed to determine what progress they have made on the action items they identified. The updated report will be available by June 2006.

5. Alternate Route Development - Not all states have well defined processes for identifying alternative routes around critical transportation infrastructure that might be damaged or destroyed. This report is documenting a recommended methodology for developing such routes. The final report will be electronically available March 2005.

6. Security Training Plan - HOTO is working with John Gerner in the Administrator's office to finalize a draft professional capacity building strategic plan. The final training strategy will be available for implementation by FHWA, AASHTO and DHS by April 2006.

7. Evacuation Primer Series - The Office of Operations is developing a multi-modal Primer Series that will comprehensively address all aspects of transportation evacuations. The first Primer delivered will focus on Highway Evacuations and will be available by July 2006.

8. Emergency Transportation Operations ITS Initiative - This Initiative is now under review and will be revised based on findings from the Primer Series and DHS and DOT reviews of emergency and evacuation plans from select localities throughout the country.

B. FHWA Emergency Operations

1. Emergency Preparedness and Response Training - Planning is underway for 2006 annual Emergency Coordinator training. Based upon a needs assessment and comments made by attendees following 2005 annual training, a series of Web cast training sessions is being developed and presented. The first session, The Emergency Relief Program, was presented in December 2005. Classes being developed for future presentation include Duties of the Emergency Coordinator (February), Maintaining Communications During Emergencies (April), Continuity of Operations (COOP) Planning (June), and Establishing Relationships (August). Point of Contact, Butch Morgan, (bmorgan@fhwa.dot.gov)

2. Continuity of Operations (COOP) - Emergency Coordinators were made aware on 22 November of the posting of TRB report, [Continuity of Operations Plans for Transportation Agencies](#), a result of a National Cooperative Highway Research program project. This document can be used to facilitate office COOP planning and revisions and to assist State counterparts with COOP planning efforts. The headquarters COOP

Program Manager is available to conduct COOP planning assistance visits at division offices provided travel funds are available. Offices desiring assistance can contact Dan Ferezan, 202-366-4628.

3. Emergency Preparedness - An Emergency Preparedness Web site has been added to StaffNet (<http://staffnet.fhwa.dot.gov/emergency/index.htm>) replacing a public page on the FHWA site that had not been updated in years and provided very little information.

Purpose of the site is to consolidate emergency preparedness and management information for use by FHWA staff nationwide for personal and professional planning and response. There are currently two links, one to a listing of emergency management agencies in each state and one to useful links arranged by subject area and government agency. A third link is being developed for general COOP related information. A password-protected link for COOP staff is being considered. Point of Contact, Butch Morgan (bmorgan@fhwa.dot.gov).

4. Emergency Communications Improvement - Modern, lightweight Global or Iridium phones have been distributed to replace the old Mitsubishi satellite phones. These phone are provided for back-up communications should land line and cell service not be available. Procurement of the remaining phones is expected as soon as FY 06 GOE funds are released. Intent is to distribute remaining phones by the end of summer 2006. Point of Contact, Dan Ferezan (dferezan@fhwa.dot.gov).

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. Office of Operations (HOTO) is working with the FHWA Offices of Infrastructure and Safety to determine the best approach. Will take initial rulemaking action within one year.

- **Section 1121 - HOV Facilities** - 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.

State pursuing exceptions to minimum occupancy requirements must submit a certification to FHWA for approval before allowing any exempted vehicles to use HOV lanes. The certification must indicate that the State is establishing, maintaining, and supporting a performance monitoring, evaluation, and reporting program and an enforcement program for continuous monitoring, assessment, and reporting on the impacts that exempted vehicles may have on the operation of the facility and adjacent highways. A State must take necessary actions to correct degraded operational performance, including limiting or discontinuing the use of HOV facilities by these vehicles.

Current Status - Requires a rulemaking from EPA within 180 days of enactment that establishes the certification and labeling requirements for low emission & energy-

efficient vehicles. The EPA must also establish guidelines and procedures for making performance comparisons between low emission & energy-efficient vehicles and comparable gasoline-fueled internal combustion powered vehicles. Revised HOV Program Guidance will be published in the *Federal Register* for public comment in January 2006.

- **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, in real-time, 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 establish systems of basic real-time information for managing and operating the surface transportation system, and will identify longer range real-time highway and transit monitoring needs and develop plans and strategies for meeting such needs.

Current Status - Office of Operations (HOTM) is preparing a program announcement to be published in January 2006 and detailed program guidance, that will be published by Summer 2006. Data exchange formats to facilitate sharing of program information must be established within two years.

- **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. Program provides funding beyond the state apportionment levels for high cost transportation infrastructure facilities for critical national economic and transportation needs. Critical high cost transportation infrastructure facilities 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 Jan. 4, 2006 (this guidance is available on the FHWA Policy website.) An NPRM that establishes this program is currently in draft stage and is being vetted within the Department.

- **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 Jan. 4, 2006 (this guidance is available on the FHWA Policy website.)

- **Section 1305 - Truck Parking Facilities** - Requires establishment and 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 in three years.

Current Status - The Office of Operations (HOFM) is preparing an NPRM that establishes this program.

- **Section 1306 - Freight Intermodal Pilot Grant Program** - Requires establishment and 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, and improve safety. These efforts should 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 on Jan. 4, 2006 (this guidance is available on the FHWA Policy website.)

- **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 technical amendment and it is being vetted within the Department.

- **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 has held a stakeholders' workshop with AASHTO and organizations representing truck stop operators and independent truckers, to help define issues for the program. A non-rulemaking request for information is anticipated for publication in the Federal Register by the end of January. The notice

will provide a basic draft framework for the Oasis program and request public comments.

- **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) will issue regulation requires for high visibility garments within one year.

- **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 - Two Federal Register notices will be published on January 6, 2006 to announce tolling and pricing programs under the Federal-aid highway program and solicit applications for Value Pricing program projects. Work is also underway on rulemaking required in section 1604(b) to establish interoperability requirements for electronic toll collection systems implemented in projects pursued under this section. An NPRM is expected to be published by June 2006.

- **Section 1910 - Motorist Information Concerning Full Service restaurants** - Not later than February 2006, 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. 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.

- **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 milo during harvest months as defined by the State of Nebraska.

Current Status - The Office of Operations (HOFM) prepared the required technical amendment and it is being vetted within the Department.

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

Current Status - The Office of Operations (HOFM) prepared the required technical amendment and it is being vetted within the Department.

- **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 earmark against ITS research funds will be administered by the Office of Operations.

- **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. Federal Register notice soliciting expressions of interest from eligible metropolitan areas published on October 19, 2005 with responses due February 6, 2006.

- **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 will be 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 scope and content being finalized; process to acquire the evacuation plans under development; and good practice material being gathered and documented. A final report is due to Congress by June 1, 2006.