



NATIONAL TRAINING AND SIMULATION ASSOCIATION

**Department *of*
Transportation**

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RADM Fred Lewis (U.S. Navy Ret.), President

National Training Systems Association

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Department of Transportation

“The national objectives of general welfare, economic growth and stability, and the security of the United States require the development of transportation policies and programs that contribute to providing fast, safe, efficient, and convenient transportation at the lowest cost consistent with those and other national objectives, including the efficient use and conservation of the resources of the United States.”

(<http://www.dot.gov/par/2008/MDA.htm>)

1.0 Introduction

The Department of Transportation (DOT) functions to promote National transportation safety, efficiency, and functionality. In conjunction with state, local and private sectors, DOT works toward its guiding principle of “creating a safer, simpler, and smarter transportation program” (DOT, 2010). DOT sets Federal transportation policy. It employs over 60,000 people nationwide (<http://www.dot.gov/par/2008/MDA.htm>).

1.1 Department of Transportation Organization Overview

DOT is comprised of the Office of the Secretary, Surface Transportation Board (STB), Office of the Inspector General (OIG), and operating administrations (OAs). Responsibilities of the Office of the Secretary include overall DOT leadership and management direction and aviation economic program administration. The OIG and STB, though a part of DOT, are independent entities. The OIG functions as an objective organization which prevents and detects fraud, waste, and abuse in DOT operations and programs. The STB promotes reform in the economic regulation of surface transportation, provides a forum dispute resolution, and facilitates business transactions (<http://www.dot.gov>).

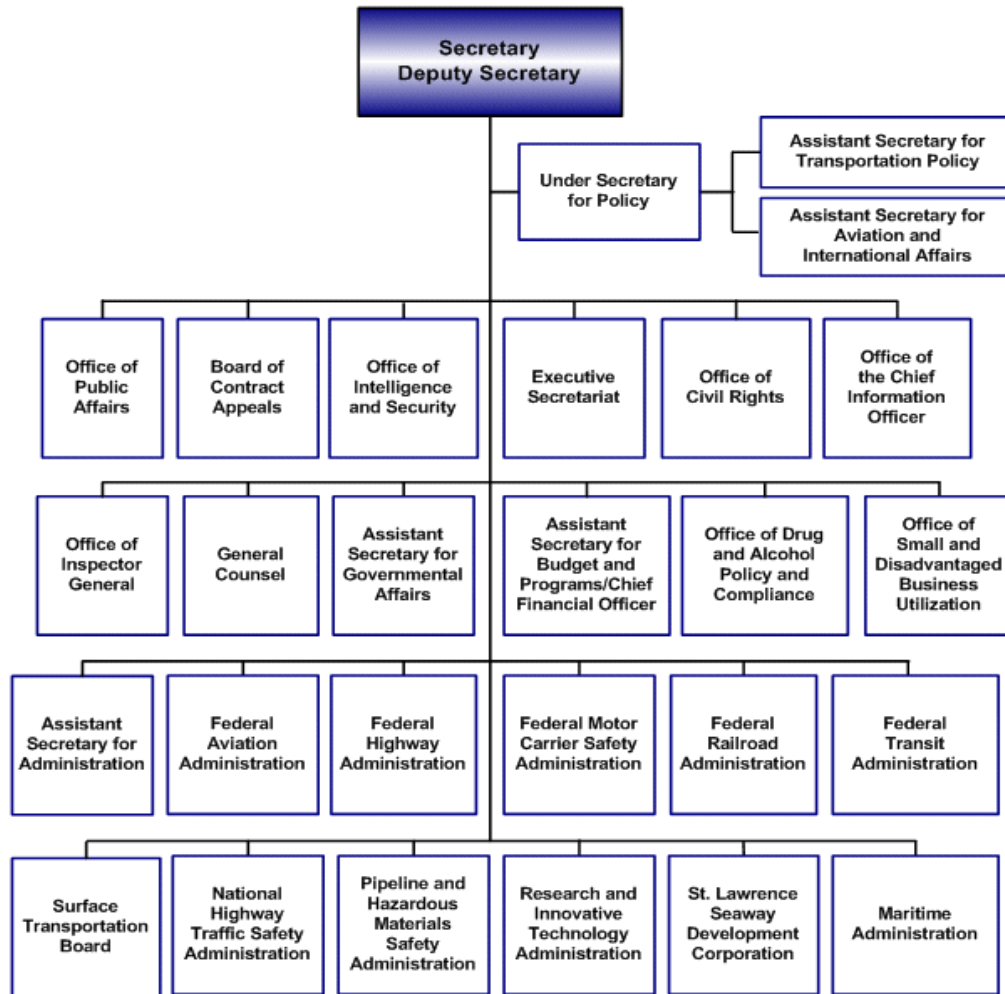
The Saint Lawrence Seaway Development Corporation (SLSDC) is owned by the federal government and considered an OA of DOT. It operates and maintains the U.S. portion of the Seaway between Montreal and Lake Erie. Other OAs and their responsibilities include:

- Federal Aviation Administration (FAA) — builds, maintains, and operates the Nation’s air traffic control system; oversees aviation safety; and improves airport capacity and safety
- Federal Highway Administration (FHWA) — improves highway mobility through leadership, innovation, and program delivery
- Federal Motor Carrier Safety Administration (FMCSA) — prevents commercial motor vehicle-related fatalities and injuries
- Federal Railroad Administration (FRA) — ensures safety, security, and efficiency of rail transportation

- Federal Transit Administration (FTA) — provides leadership and assistance and ensures that transit systems are prepared to function during and after criminal or terrorist attack, and protects the environment
- Maritime Administration (MARAD) — ensures the economic, environmental and security needs of the U.S. Marine Transportation System
- National Highway Traffic Safety Administration (NHTSA) — conducts education, research, and enforcement activities and promotes safety standards
- Pipeline and Hazardous Materials Safety Administration (PHMSA) — protects people and the environment from risks associated with the hazardous materials transportation
- Research and Innovative Technology Administration (RITA) — advances DOT priorities for innovation and research in transportation technologies and concepts

Source: DOT, <http://www.dot.gov/par/2008/MDA.htm>

Figure 1-1 shows the DOT organizational structure.



Source: DOT, <http://www.dot.gov/par/2008/MDA.htm>

Figure 1-1: Department of Transportation Organization Overview

1.2 DOT Organizations Responsible for Education and Training

The FAA Academy provides technical and managerial training and development for the aviation workforce and community, both domestically and abroad. The [FAA Office of International Aviation](#) is responsible for coordinating all of the FAA's international efforts (http://www.faa.gov/about/office_org/headquarters_offices/arc/programs/academy/international_training/).

The FHWA provides Training, Education, Curricula, and Workforce Planning and Development. The FHWA Office of Professional and Corporate Development provides management and direction for transportation education, research, and workforce development through its [Universities and Grants Programs \(U&GP\)](#). U&GP administers both the Dwight David Eisenhower Transportation Fellowship Program (DDETFP) (including [The Eisenhower Freight and Transportation Logistics Scholarship](#) and [Eisenhower Fellowships \(DDETFP\)](#)), and the [Garrett A. Morgan Technology and Transportation Education Program \(GAMTTEP\)](#) (<http://www.fhwa.dot.gov/ugp/>).

FMCSA promotes safety and security initiatives in efforts to reduce crashes, injuries and fatalities involving large trucks and buses (<http://www.fmcsa.dot.gov/safety-security/safety-security.htm>).

FRA develops and implements rail training such as hazardous materials transportation compliance, pilot crew resource management (CRM), communication training programs and security training programs (<http://www.hazmatconsulting.net/>).

Through the U.S. Merchant Marine Academy and six State Maritime Schools, MARAD's mariner education and training programs produce most of the new, skilled U.S. merchant marine officers (<http://www.dot.gov/budget/2011/2011budgethighlights.pdf>).

NHTSA provides educational information on a number of safety topics to auto drivers, bicyclists, automobile consumers, and pedestrians, on a number of topics. It currently leads the effort to counter distracted driving, collaborating with public and private entities and advocacy groups. It also develops and delivers education resources and programs to the Emergency Medical Services workforce.

The PHMSA's Office of Training and Qualifications offers training designed to familiarize government and industry personnel with pipeline safety regulations and to educate Federal and State pipeline safety inspectors in the application of compliance requirements, inspection techniques, and enforcement procedures (<http://www.phmsa.dot.gov/portal/site/PHMSA>).

RITA's Transportation Safety Institute (TSI) develops and provides safety, security, and environmental training, products, and/or services for both public and private sectors, nationally and internationally. TSA provides transit, aviation, motor carrier, highway safety, hazardous materials, risk management, and other training (<http://www.tsi.dot.gov/about.aspx>).

Other workforce development and training programs are administered by the OIG and OAs, singly or jointly through Capacity Building Programs (CBPs), addressed in section 2.3.

2.0 Market Description

Although the U.S. economy is becoming more service-oriented, demand for freight transportation has been rising steadily, and continued growth is forecasted.

(http://www.bts.gov/publications/the_changing_face_of_transportation/chapter_06.html).

High speed rail initiatives are in motion, with \$8 billion from the stimulus plan already dedicated and another \$5 billion over the next five years requested by the president. DOT has announced that the “first round of High Speed Rail funds” will include distributions of \$66.6 million to support preliminary engineering on the [Florida corridor](#), a planned 168-mph route between Tampa and Orlando. According to the U.S. Secretary of Transportation, the rest of the initial funding released, \$12.3M, will finance “critical upgrades to existing passenger rail service in preparation for high-speed projects”, including:

- California's "Capital Corridor" between San Francisco and Sacramento
- Wisconsin's Milwaukee-Madison route
- New York's "Empire Corridor"
- New Mexico's planned rail that will eventually link major cities of the Southwest

Source: U.S. DOT, U.S. Secretary of Transportation, 2010

Implementing the new passenger rail system is expected to create “tens of thousands of jobs” in route planning, track laying, equipment manufacturing and maintenance, and system engineering and operating (U.S. Secretary of Transportation, 2010). Transportation occupational data published by RITA indicates growth in air, rail, and marine transportation occupations over the last decade; rail system implementation and upgrade should dramatically grow rail occupations over the next decade.

Table 2-1: Transportation-Related Job Growth, 1999-2009

Vehicle operators, pipeline operators, and primary support	1999	2009	% change
Airline pilots, copilots, and flight engineers	88,040	74,420	-15.47%
Commercial pilots	18,780	29,180	55.38%
Air traffic controllers	22,620	24,420	7.96%
Airfield operations specialists	4,510	7,670	70.07%
Bus drivers, transit and intercity	160,210	177,510	10.80%
Truck drivers, heavy and tractor-trailer	1,558,400	1,550,930	-0.48%
Truck drivers, light or delivery services	1,085,050	834,780	-23.07%
Locomotive engineers	19,940	43,560	118.46%
Rail yard engineers, dinkey operators, and hostlers	5,070	5,360	5.72%
Railroad brake, signal, and switch operators	14,500	24,270	67.38%
Railroad conductors and yardmasters	36,680	41,540	13.25%

Vehicle operators, pipeline operators, and primary support	1999	2009	% change
Sailors and marine oilers	27,200	31,950	17.46%
Captains, mates, and pilots of water vessels	20,660	30,450	47.39%
Motorboat operators	4,000	3,070	-23.25%
Ship engineers	6,800	10,850	59.56%
Transportation Infrastructure construction and maintenance	1999	2009	% change
Paving, surfacing, and tamping equipment operators	58,410	54,850	-6.09%
Highway maintenance workers	139,540	139,490	-0.04%
Rail-track laying and maintenance equipment operators	8,620	14,880	72.62%
Signal and track switch repairers	3,720	6,450	73.39%

Source: Adapted from U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics. (2010, June 30). *Occupational Employment and Wages* (Washington, DC: Annual Issues), available at http://www.bls.gov/oes/current/oes_nat.htm, as in RITA, Bureau of Transportation Statistics, *National Transportation Statistics*, http://www.bts.gov/publications/national_transportation_statistics/html/table_03_20b.html

2.1 Market Value (Budget)

The table below summarizes recent budget authority for each of the DOT administrations and offices.

Table 2-2: DOT Budget Authority by Administration, FY 2009-2011 Data

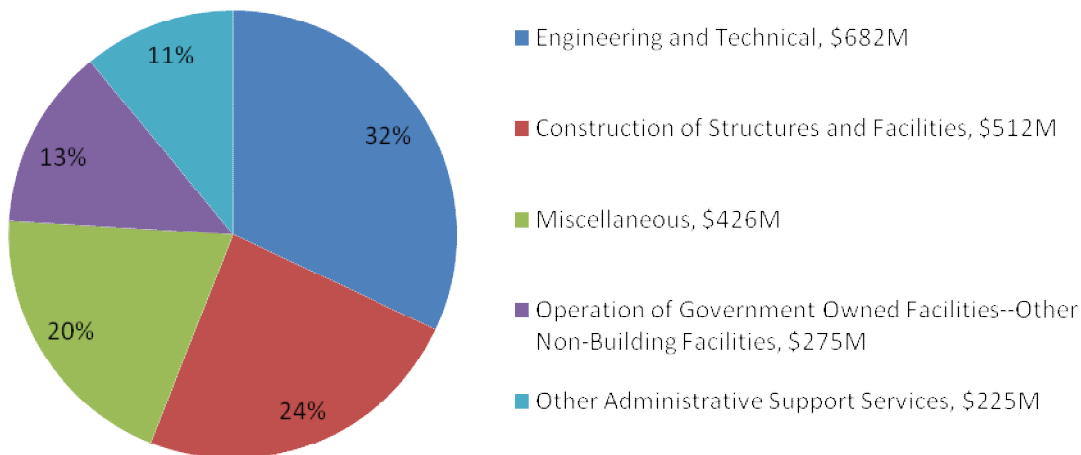
ADMINISTRATION	ACTUAL FY 2009 (\$M)	ENACTED FY 2010 (\$M)	PRES BUD FY 2011 (\$M)
Federal Aviation Administration	17,066	16,083	16,468
Federal Highway Administration 2/	64,696	44,152	42,801
National Highway Traffic Safety Administration	3,785	856	864
Federal Motor Carrier Safety Administration	508	530	541
Federal Transit Administration	19,904	10,749	10,527
Federal Railroad Administration	11,108	4,374	2,827
Pipeline and Hazardous Materials Safety Admin	170	193	202
Research and Innovation Technology Admin	13	13	17
Maritime Administration	665	595	528
Saint Lawrence Seaway Development Corporation	32	32	32

ADMINISTRATION	ACTUAL FY 2009 (\$M)	ENACTED FY 2010 (\$M)	PRES BUD FY 2011 (\$M)
Surface Transportation Board	26	28	25
Office of the Secretary	1,733	940	402
Inspector General	93	77	82
National Infrastructure Innovation and Finance Fund	-	-	4,000

Source: U.S. DOT, Fiscal Year 2011 Budget Highlights

The Department's FY 2011 request totals \$79B, a nearly \$2B or 2% increase. The request targets the Administration's three key transportation priorities: improving transportation safety; investing for the future; and, promoting livable communities.

Nearly one-third of the DOT FY 2009 budget was spent on Engineering and Technical Services, while one-quarter of the budget was spent on construction of structures of facilities. The figure below illustrates the products and services spent by DOT during FY 2009, as of March 2009 — dollars (\$) in millions (M).



Source: U.S. DOT, Customer Guide to Procurement, 2009

Figure 2-1: FY 2009 DOT Products and Services Expenditures

MARAD has requested \$164.4M for its Operations and Training account in FY 2011. This is a \$14.6 million increase above FY 2010 enacted level; \$15M will be dedicated for State Maritime Academies and their activities (<http://www.dot.gov/budget/2011/2011budgethighlights.pdf>).

2.2 Training Products

The FAA Academy develops and conducts training courses; plans, maintains and manages FAA's distance learning systems; and provides training program management and consultation services (http://www.faa.gov/about/office_org/headquarters_offices/arc/programs/academy/). The FAA offers a variety of training programs (http://www.faa.gov/training_testing/training/). The Aircraft Certification Technical Training Program uses classroom instruction, distance learning and workshops to develop a highly technical workforce. Most of this technical training is available to non-FAA personnel including Civil Aviation Authorities, Designee Training and Seminars, Industry, Military, and Other Government Agencies (http://www.faa.gov/training_testing/training/air_training_program/).

Through the FHWA, the [National Highway Institute](#) offers training courses, resources, and materials including instructor led training courses, web-conference and web-based seminar training, and blended formats (http://www.nhi.fhwa.dot.gov/about/intro_nhi.aspx). The NHI provides individual training materials (e.g., manuals, workbooks, and guides), utilized as stand-alone items or in conjunction with course offerings (http://www.nhi.fhwa.dot.gov/training/training_products.aspx).

Several Programs promoting training and enabling workforce development are offered through the FHWA, called [Professional Capacity Building \(PCB\) Programs](#). PCB programs are designed to develop workforce knowledge, skills, and abilities by making learning available to the transportation workforce, facilitating the integration of new graduates and new hires into the workforce.

- [Environment Competency Building \(ECB\)](#) – provides a central source of information for transportation and environmental professionals to develop competency in the environmental disciplines required for their work
- [Freight Professional Development Program \(FPD\)](#) – provides training, technical assistance, a resource library, and education to assist state DOTs and MPOs staffs with gaining the skills and knowledge to handle increasing flow of freight on the nation's transportation system
- [Highway Infrastructure Security and Emergency Management Professional Capacity Building \(HIS/EM PCB\)](#) – enables highway infrastructure security and emergency management training through independent online-delivered study programs
- [Intelligent Transportation Systems Professional Capacity Building \(ITS PCB\)](#) – offers technical assistance resources to State and local transportation agencies and to FHWA Field Offices through online webinars and peer assistance programs (Highway Safety Improvement HSIP Peer-to-Peer Program); also provides classroom based, online and blended learning courses
- [Roadway Safety Professional Capacity Building \(RSPCB\)](#) – program works with TRB Highway Safety Workforce Development Task Force, The Transportation Curriculum Coordinating Council (TCCC), the National Highway Institute (NHI), the National Cooperative Highway Research Program (NCHRP), National LTAP Association (NLTAPA) and other partners to support existing education, recruitment, and

professional development and competencies and suggested curricula for highway technicians

- Public-Private Partnerships (P3s) – used in the development of transportation improvements in order to address complex transportation problems facing State and local governments. [The Office of IPD](#) provides information and expertise in the use of different P3 approaches and provides access to an Innovative Project Delivery (IPD) Website offering case studies, training materials, lessons learned, and other resources to facilitate project activities such as cost estimating and financial planning.
- [Transportation Curriculum Coordination Council \(TCCC\)](#) – provides national leadership in the development and maintenance of a national curriculum for various transportation disciplines, identification of training and certification requirements, and coordination of training efforts in order to train highway construction and maintenance personnel; accomplished in partnership with the FHWA, State DOTs, and the highway transportation industry (<http://www.nhi.fhwa.dot.gov/tccc/>)

[National Transportation Training Resources \(NTTR\)](#) are comprised of online metadata about training resources used by training managers to identify course developers and guide their own course development (<http://www.nttr.dot.gov>). Transportation professionals in agencies can use the NTTR to identify resources that can improve their skills within a transportation discipline, or within a competency. Topics include highway safety, maintenance, construction, materials, operations, management, and general skills. Future inclusion of Intelligent Transportation Systems and commercial vehicle operations is planned. Also offered is the [Safety Training Resource Database \(STRD\)](#) which is comprised of DOT's RSPCB and HSIP Peer-to-Peer Programs (<http://www.nttr.dot.gov>).

FMCSA has “developed a series of product guides to assist carriers, drivers, fleet managers, and other interested individuals in learning more about available safety and security systems”, to include a variety of commercial, off-the-shelf systems (<http://www.fmcsa.dot.gov/facts-research/art-productguides.aspx>).

NHTSA Office of Emergency Medical Services (OEMS) supports workforce research and develops resources designed specifically for Emergency Medical Services (EMS) providers (<http://www.ems.gov/>) and coordinates efforts with the Department of Homeland Security (DHS), FEMA, and the Department of Health & Human Services (DHHS) to deliver preparedness training <http://www.ems.gov/preparedness/index.html>.

PHMSA provides multi-modal education, training, and technical assistance, including joint industry training in hazardous materials safety and pipeline safety. General safety awareness courses, publications and modules web-based training, classroom training (including hands-on laboratory and field exercises) is provided at various national locations, including the [Pipeline Safety Training Center](#) in Oklahoma and at various [Regional and State-hosted Seminars](#) (<http://www.phmsa.dot.gov/training>).

TSI is organized into five training divisions, each offering various training products (<http://www.tsi.dot.gov/about.aspx>). The following descriptions are taken from the TSI website:

- **Aviation Safety Division**— home of the National Aircraft Accident Investigation School, providing training in instrument flight procedures, aviation safety and accident investigation techniques and management through workshops, field activities, individual studies and hands-on training. Overall the Aviation Safety Division currently manages sixteen courses; seven Instrument Flight Procedures training courses and nine courses in aviation safety and accident investigation management.
- **Multi-Modal Safety Division**— provides a variety of transportation safety related courses to federal, state and private industry audiences including hazardous materials, risk management, and motor carrier compliance. Other products and services include course development, program management, and event scheduling.
- **Traffic Safety Division**— develops and delivers highway safety training programs for local, state, and federal highway professionals to include occupant protection, law enforcement, impaired driving, emergency medical services, and comprehensive traffic safety program management training.
- **Transit Safety And Security Division**— Develops and delivers safety and security training and education to private and public sectors, equipping personnel with high performance skills needed to operate, maintain, and manage transportation systems.
- **Special Programs**— Agency-specific professional safety training developed and delivered by TSI to meet specified training requirements.

2.3 Training Priorities

As illustrated above, current and future workforce development, safety, environmental responsibility, and the integration of technology into transportation activities are key DOT training priorities.

The Transportation Planning Capacity Building (TPCB) Program is a collaborative effort among the FHWA, Federal Transit Administration (FTA) and various public and private organizations to provide training, technical assistance, and support to State, local, regional, and tribal governments and to transit operators and community leaders in order to help them create plans and programs that respond to the needs of the many users of their local transportation systems. The TPCB Program focuses on transportation officials, professional staff, and FHWA and FTA field staff (<http://www.planning.dot.gov/>).

The Transportation Safety Institute provides training to transportation professionals in state-of-the-art safety methods and technologies.

RITA supports education and training in transportation-related fields, molding the future transportation workforce. Through RITA's University Transportation Centers Program, DOT awards grants to Universities to advance transportation research and promote the development of the transportation workforce (U.S. Department of Transportation, Research and Innovative Technology Administration (2009, October 30) Rita University Transportation Centers Program: Point of Pride 2009 http://utc.dot.gov/publications/points_of_pride/2009/pdf/entire.pdf). As an example, the John A. Volpe National Transportation Systems Center, part of RITA's University Transportation Centers Program, which generates approximately \$2M annually in project work,

assists governments, industry, and academia in areas such as system design, human factors research, and program implementation, including the FAA's Enhanced Traffic Management System (ETMS) and Safety Performance Analysis System (SPAS), and the FMCSA's SafeStat Online (U.S. DOT RITA, 2009).

Demand for transportation workers will increase, providing a greater need for education and training. For example, the FAA plans to hire and train 15,000 new controllers by 2018, (<http://www.oig.dot.gov/library-item/5405>) and the implementation of the High Speed Rail System is anticipated to create jobs for tens of thousands of people. The DOT FY 2011 procurement forecast includes seven opportunities in education services that also highlight training priorities of the Department, presented in section 4.2.

3.0 Goals

DOT policy goals focus on five strategic areas: Safety, Reduced Congestion, Global Connectivity, Environmental Stewardship, and Security, and Preparedness and Response. To achieve these policy goals, DOT established the four "High Priority Performance Goals" for FY 2010 and FY 2011 as listed below

(<http://www.whitehouse.gov/sites/default/files/omb/budget/fy2011/assets/management.pdf>).

These goals focus on improving safety for Americans while investing in future infrastructure.

1. Reduce Highway Fatalities — By the end of FY 2011, DOT intends to reduce the rate of highway fatalities to between 1.13 and 1.16 per 100 million vehicle miles traveled. This aggressive target would result in a 9.6 percent reduction in the fatality rate -- a 7.4 percent reduction in fatalities from 2008 levels. DOT will work to reduce highway fatalities by FY 2011 through a variety of nationwide initiatives aimed at drivers including increasing awareness of the dangers of distracted driving. The Department will also focus on improved roadway design, vehicle safety initiatives and the use of technology to reduce fatalities by creating a safer driving experience.
2. Limit the Rate of Aviation Risks on Runways — The runway remains one of the highest risk areas in our national airspace system. The unauthorized presence of an aircraft, vehicle, or pedestrian on a runway increases the likelihood of incidents which could evolve into serious injuries, significant property damage, and even fatalities. By the end of FY 2011, the FAA's strategy is to reduce the risk of accidents during aircraft departures and landings by reducing the number of runway incursions by 5 percent from the FY 2008 baseline.
3. Improve Rail Transit Industry Focus on Safety Vulnerabilities — Ensuring the safety of America's transportation systems is the primary goal of the Department. A series of recent serious rail transit accidents has shaken public confidence in the safety of public transit. While FTA lacks legislative authority to directly oversee transit systems, there are several activities it will pursue to improve this situation. These include: improving the State Safety Oversight programs' compliance with existing requirements, forming a compliance advisory committee - in accordance with the Federal Advisory Committee Act - to provide input on potential future regulation, and conducting workshops and training on transit asset management, including a focus on safety critical assets.

4. Establish High Speed Rail Capability — The President's vision for High Speed Rail is to transform America's transportation system by developing a national network of high-speed rail corridors through a collaborative effort among the Federal Government, States, and railroads. This program will provide funding for major corridor development and other projects to improve passenger rail across the nation in support of the Department's national objectives of fast, safe, efficient, and convenient transportation alternatives.

4.0 Organizational Acquisition Strategies

The [Office of the Senior Procurement Executive](#) (OSPE) is responsible for finding business solutions to accomplish DOT's mission. Descriptions of the five divisions under OSPE and their primary functions (below) are taken from <http://www.dot.gov/administration/ospe.htm>.

1. The Acquisition Policy and Oversight Division manages e-Government initiatives and the procurement performance management program; responsibilities include the oversight of the Transportation Acquisition Regulation (TAR) and the Transportation Acquisition Manual (TAM), managing the Department's acquisition career program, and collaborating with the Office of Small and Disadvantaged Business Utilization (OSDBU).
2. The Financial Assistance Policy and Oversight Division is responsible for developing and promulgating regulations, policy, procedures, and guidance related to all financial assistance transactions (grants, cooperative agreements, loans, and other transactions). In addition, the division has oversight responsibilities for the DOT Suspension and Debarment program. Also, this division manages the e-grants program at DOT.
3. The Integrated Systems, Management and Reporting Division manages the implementation and maintenance of One DOT PRISM, manages DOT's relationship with the Integrated Acquisition Environment office and its related systems, and manages all Information Technology needs of the office.
4. The Acquisition Services Division provides a full range of acquisition services from acquisition planning to contract closeout. The Acquisition Services Division is responsible for the award and administration of business arrangements as a Headquarters service organization, which includes contracts and grants.
5. The Commercial Services Management Division supports DOT operating administrations in implementing workforce management and business process reengineering.

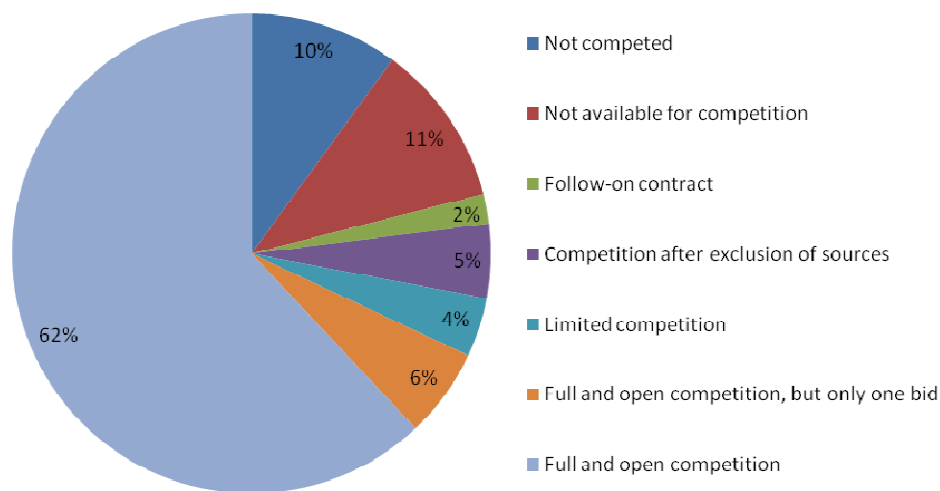
As of March 2010, over \$1.3B in Economic Recovery Act contracts have gone to small, disadvantaged and minority-owned businesses (U.S. DOT, Office of Public Affairs, 2010). The DOT has directed 37.4% of their Recovery Act funds toward small businesses (DOT 2009 Small Business Procurement Scorecard). DOT strives to ensure small business participation in contracting and subcontracting processes; to this end, DOT provides networking, assistance, and other opportunities to small businesses (see website at <http://www.osdbu.dot.gov>).

RITA serves as DOT's lead organization for research and innovation. The administration manages and carries DOT's strategic planning, coordination, facilitation and review of research programs. RITA conducts transportation-related research, education, and technology

application on behalf of other agencies on a reimbursable basis, though its budget is considerably smaller than other DOT administrations. For FY 2011, over \$300 million in such activities will be conducted, including those programs operated by University Transportation Centers. Through these centers, RITA supports the education of transportation professionals in obtaining advanced degrees in transportation-related programs from participating universities. One such example, the John A. Volpe National Transportation Systems Center, provides technical knowledge and expertise to customers with specific transportation systems and logistics projects or issues.

4.1 Major Contract Vehicles

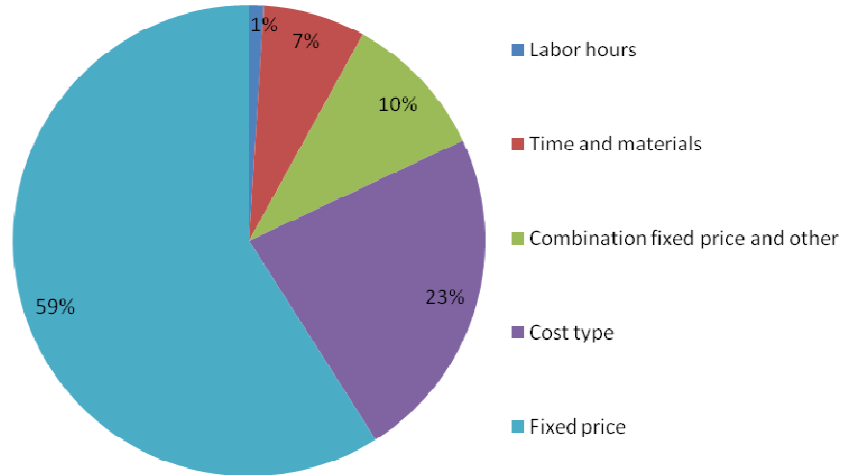
Nearly two-thirds of DOT contracts were awarded through full and open competition in FY 2009.



Source: U.S. DOT, Customer Guide to Procurement, 2009

Figure 4-1: FY 2009 competition

Most commonly used contract types by DOT include Firm Fixed Price, Cost Reimbursement, Time-and-Materials (T&M), Labor Hour (LH) and Letter, Indefinite Delivery (U. S. Department of Transportation, The DOT Customer Guide to Procurement, 2009). DOT conducts most business using Fixed Price contracts (see Figure 4-2, below).



Source: U.S. DOT, Customer Guide to Procurement, 2009

Figure 4-2: FY 2009 Contract Types

Information Technology Omnibus Procurement (ITOP) is a MA/IDIQ GWAC that has been used to procure information technology (IT) services. ITOP I and II have both expired. The Secretary of Transportation served as ITOP's executive agent <http://www.gsa.gov/portal/category/25305>. A review by the DOT OIG revealed that ITOP actually failed to fulfill DOT's goal of consolidating IT procurements. The review also found that activities of the Transportation Administrative Service Center which administered ITOP, actually subsidized other agencies' primary use of the vehicle (92% of other agencies' IT procurements), while DOT use declined (DOT, 2002).

4.2 Projected Future Training Acquisitions

Through the American Recovery and Reinvestment Act, the Transportation Investment Generating Economic Recovery (TIGER) program awards funds on a competitive basis for projects that will have a significant impact on the Nation, a metropolitan area or a region. DOT is authorized to award \$600M in TIGER II Discretionary Grants (<http://www.dot.gov/recovery/ost/tigerii/>). Of this, \$75 million was appropriated for FTA to providing direct funding to public transit agencies for "capital investments that will assist in reducing the energy consumption or greenhouse gas emissions of their public transportation systems..." (http://www.fta.dot.gov/assistance/research_11424.html).

The OSDDBU has released the following items in its DOT FY 2011 Procurement Forecast (<http://www.osdbu.dot.gov/Procurement/results.cfm?criteria=cat&release=All&key=8&ProcurementYear=2011&ProcurementStatus=2>):

1. FHWA anticipates a 3 or 4-year cooperative agreement to support a program to train people in outdoor environmental ethics related to motorized and mechanized recreation. The program will work with Federal and State land management agencies and with trail-related nonprofit organizations.

2. FHWA anticipates a 3 to 5-year cooperative agreement to support snowmobile safety programs. Major tasks include: (1) Develop and revise materials for snowmobile safety and access; (2) Enhance national and statewide snowmobile programs; (3) Maintain and expand a snowmobile safety website and calendar; and (4) Convene and coordinate partner meetings with Federal and State agencies and nonprofit snowmobile organizations.
3. FHWA anticipates a 3 or 4-year cooperative agreement to support a national training program for trails. Major tasks include; (1) Develop and deliver training on trail accessibility and assessments; (2) Enhance statewide trail training programs; (3) Maintain and expand a trail training website and calendar, and inform the public of training resources; (4) Provide technical assistance and trail training; and (5) Convene and coordinate partner meetings with Federal and State agencies and nonprofit trail-related organizations.
4. FHWA anticipates a 3 to 5-year cooperative agreement to support off-highway vehicle (OHV) safety and access programs. Major tasks include: (1) Develop and revise materials for OHV safety and access; (2) Enhance national and statewide OHV programs; (3) Maintain and expand an OHV website and calendar; and (4) Convene and coordinate partner meetings with Federal and State agencies and nonprofit OHV organizations.
5. FHWA anticipates a 3 to 5-year grant to a not-for-profit organization to support a national pedestrian and bicycle clearinghouse. Major tasks include: (1) Develop and deliver technical assistance and training related to walking and bicycling; (2) Enhance statewide training programs; (3) Maintain and expand a website and calendar, and inform the public of training resources; and (4) Convene and coordinate partner meetings with Federal and State agencies and nonprofit organizations.
6. FMCSA Federal Motor Carrier Safety Administration will require Training support services for the National Training Center: professional services training development support (instructional system design); budgeting; multimedia/graphics support; professional development training, Federal, State, DIAP program training support; general administrative support; information technology (IT) support; and web development support. It may also include other functions and capabilities required to support the National Training Center.
7. The TQ within the PHMSA is responsible for providing economical, timely state-of-the-art training programs on pipeline safety regulatory requirements and educational opportunities to mission-critical occupations. The objective of this proposed training program is to provide training to PHMSA/PHP personnel in accident investigation and root cause analysis by delivering four (4) five (5) day courses, one each in the Eastern Region (Baltimore, MD), Central Region (Minneapolis, MN), Southwest Region (Ft. Worth, TX), and the Southern Region (Nashville, TN).

5.0 Technological Initiatives

Next-generation technologies are anticipated to allow 911 call centers to receive automatic location information for wireless callers or automatic crash information; allow delivery of text, photo or video messages sent by wireless callers, or enable other features that could improve

emergency response or enhance safety. Over \$40M million in grants have been announced by the NHTSA and the U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA) to help 911 call centers nationwide implement next-generation technologies, authorized by the ENHANCE 911 Act. Grants were awarded to 30 states and territories, ranging from \$200,000 (awarded to American Samoa) to \$5.4 million (awarded to Texas). (<http://www.911.gov/grants.html>).

The Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) Program works directly with public transit agencies to implement new strategies for reducing greenhouse gas emissions or reduce energy usage from their operations. These strategies can be implemented through operational or technological enhancements or innovations. To align the TIGGER Program with other strategic initiatives, FTA encourages projects that will demonstrate innovative electric drive and related technology approaches to achieving these goals. Electric drive initiatives and TIGGER supported projects could include, but are not limited to:

- On-Board Vehicle Energy Management (energy storage, regenerative braking, fuel cells, turbines, engine auto start/stop, etc)
- Electrification of Accessories (air conditioning, air compressor, power steering, etc.)
- Bus Design (lightweight materials, component packaging, maintainability, etc.)
- Rail Transit Energy Management (energy storage, regenerative braking, solar propulsion engine systems, power load-leveling, etc.)
- Locomotive Design (energy storage, regenerative braking, fuel cells, turbines, engine auto start/stop, lightweight material etc).

The National Simulator Program's goal is to improve aviation safety through the application of regulations and standards governing the qualifications of flight simulation training devices (FSTD), and to seek continuous improvement of flight simulation (<http://www.faa.gov/about/initiatives/nsp/>).

Technological initiatives will also continue to be driven by Department priorities. FY2011 budget requests focusing on safety include:

- \$3 million for initiatives in NHTSA to improve the safety of teen and older drivers.
- \$1 million to fully implement an enhanced motor carrier applicant screening system to detect unsafe motor carriers that are attempting to avoid a previous history of poor safety performance by registering with FMCSA under a new name.
- \$14 million for the Federal Aviation Administration (FAA) to hire 82 new safety and certification inspectors and safety technical specialists.

The Department must invest in the transportation infrastructure to remain competitive in the future. FY2011 budget requests with an emphasis on this include:

- \$4 billion to establish the National Infrastructure Innovation and Finance Fund (NIIFF) that will issue grants, loans, or a combination to support transportation projects that provide a significant economic benefit to the Nation or a region.

- \$1 billion for the High Speed Rail program to continue the implementation of the President's vision of a high speed rail for America.
- \$1.1 billion to implement the NextGen air traffic control system, an increase of \$275 million over the FY 2010 Enacted levels.
- Air-to-Ground Data Communications: \$153 million for data communications, an increase of \$106 million over FY 2010. FAA will use the additional funding to accelerate the transition from the current voice-based communication system to a data communication system.

Through the Partnership for Sustainable Communities, DOT will allocate \$527M to its Livable Communities Program to support initiatives that increase transportation choice and integrate housing and land use into transportation decisions. This includes \$20M to establish an Office of Livable Communities in the Office of the Secretary to coordinate multimodal and interagency (HUD and EPA) livability efforts and lead DOT's investment decisions that focus on livable communities. In partnership with other agencies, the office would identify impediments to livability initiatives and assess their overall effectiveness. The office would also provide grants and assistance to execute DOT goals (DOT FY 2011 Budget)

Further insight into DOT growth areas can be gleaned from budget allocations of the American Recovery and Reinvestment Act of 2009. The DOT stimulus package is \$48.1B and includes \$100M for 43 transit agencies to pursue cutting-edge environmental technologies to reduce global warming, lessen US dependence on oil, and create green jobs. Among the notable areas for growth, the FRA is scheduled to receive \$9.3B through September 2014, marking the first significant U.S. investment in a national high-speed rail system (<http://www.dot.gov/budget/2011/2011budgethighlights.pdf>).

Sources: Department of Transportation FY11 Budget Highlights, February 1, 2010; Department of Transportation News Release, "\$100 Million in Obama Administration Economic Recovery Act Funds Charts New Course for Green Transportation", September 21, 2009.

6.0 Summary

The DOT, in terms of policy and innovation creating demand for training and education of workers, is certainly an agency "where the rubber meets the road." First, the DOT's focused efforts on safety in the operations conducted by its workforce present numerous opportunities for job training and education. Secondly, DOT, like many Departments, faces a depletion of its experienced personnel resulting from attrition and an aging workforce. At the same time, new industry technologies demand new skills and knowledgeable personnel.

DOT programs and initiatives will also develop further as result of other Cabinet-level Departments. For example, technological advances realized through research spearheaded by the Department of Energy will fuel future modes of transportation— and those advances will be implemented by the transportation workforce. Likewise, efforts to secure transportation lines will largely be implemented with Department of Homeland Security guidance. Furthermore, DOT's acknowledgement of the increasing role of technology in the transportation industry encourages

training research and development efforts, as the face of the transportation workforce evolves to meet the demands of the future.

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