



**U.S. Department of
Transportation**

BUDGET ESTIMATES

FISCAL YEAR 2011

**RESEARCH AND
INNOVATIVE TECHNOLOGY
ADMINISTRATION**

SUBMITTED FOR THE USE OF
THE COMMITTEES ON APPROPRIATIONS

**Research and Innovative Technology Administration
FY 2011 Congressional Budget Submission
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**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION (RITA)
FY 2011 Congressional Budget Submission**

Administrator's Overview

The FY 2011 budget request reflects the Research and Innovative Technology Administration's (RITA) mission to:

- coordinate, facilitate and review the Department of Transportation's (DOT) research, development and technology (RD&T) portfolio;
- advance innovative technologies, including intelligent transportation systems;
- provide comprehensive transportation statistics research, analysis, and reporting;
- and
- further education and training in transportation and transportation-related fields.

RITA works with the Department's Operating Administrations and with transportation partners from other federal agencies, state and local governments, universities, stakeholder organizations, transportation professionals and system operators to advance the Department's strategic goals by serving as the Department's research and innovation focal point. From carrying out advanced research to providing funding to test and evaluate new approaches across modes, collecting and analyzing data and training transportation professionals, RITA enables and expedites transportation innovation.

A number of requirements are delegated to RITA by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU; P.L. 109-59).

- Sec. 1801(e) – National Ferry Database.
- Sec. 5201(m) – Biobased Transportation Research.
- Sec. 5208 – Transportation Research and Development Strategic Planning.
- Sec. 5209 – National Cooperative Freight Research Program.
- Subtitle C – Intelligent Transportation System Research (Secs. 5301-5310).
- Secs. 5401/5402/3036(d) – University Transportation Centers (UTC).
- Sec. 5506 – Commercial Remote Sensing Products and Spatial Information Technologies.
- Sec. 5513 – Research Grants.
- Subtitle F/Sec. 5601 – Bureau of Transportation Statistics.

FY 2011 Budget Request Summary:

RITA's FY 2011 Budget Request is \$47.2 million. This request aligns with RITA's efforts to achieve the objectives outlined in the Norman Y. Mineta Research and Special Programs Improvement Act (P.L. 108-426), the *DOT Strategic Plan FY 2006-2011* and the *RITA Strategic Plan FY 2008-2012*. RITA's budget also includes over \$300 million in reimbursable funding for multimodal transportation-related research, analysis, technology transfer, education and training activities performed at the John A. Volpe

National Transportation Systems Center (Volpe Center; Cambridge, MA) and the Transportation Safety Institute (Oklahoma City, OK).

Highlights of the Request

Research and Development Account (General Fund): The budget request is \$17.2 million, which includes \$7.2 million for salaries and administrative expenses and \$10 million for Research, Development and Technology programs.

- Salaries and Administrative Expenses: The budget request is \$7.2 million and provides funding for direct staff for the Office of Research, Development and Technology (RD&T) and associated overhead staff to support RITA's administrative infrastructure. Funding is provided to support 1 position for one half year, or .5 FTE for the RD&T Coordination Program. This funding also provides for administrative expenses, including travel, training, rent, working capital, IT support and E-Government initiatives.
- Research, Development and Technology: The program budget request is \$10 million. RITA manages and carries out the Department's strategic planning, coordination, facilitation and review for the Department's research programs; manages DOT's responsibilities for coordinating and developing Positioning, Navigation and Timing (PNT) technology, PNT policy coordination, and spectrum management; and overseeing the Nationwide Differential Global Positioning System (NDGPS). The following initiatives are included in this request:
 - Alternative Fuels R&D (\$.5 million);
 - RD&T Coordination (\$.9 million);
 - Nationwide Differential Global Positioning System (NDGPS) (\$7.6 million)
 - Positioning, Navigation and Timing (PNT) (\$1 million)

Bureau of Transportation Statistics (BTS) Account (Highway Trust Fund):

The budget request for the BTS account is \$30 million. This program is funded as an allocation under the Federal-aid Highways account. BTS is responsible for developing and disseminating timely, relevant and high quality transportation data and information for all modes to public and private transportation decision makers through programs that address:

- Freight and Travel Statistics (National and International);
- Transportation Economics;
- Geospatial Information Systems;
- Statistical Methods and Standards Performance Measurement and
- Airline Transportation Statistics (Reimbursable from FAA).

BTS also administers RITA's National Transportation Library. The mission of the National Transportation Library (NTL) is to maintain and facilitate access to statistical

and other information needed for transportation decision-making at the Federal, State, and local levels and to coordinate with public and private transportation libraries and information providers to improve information sharing among the transportation community.

Other RITA-Managed Programs: Intelligent Transportation Systems (ITS) Research Program:

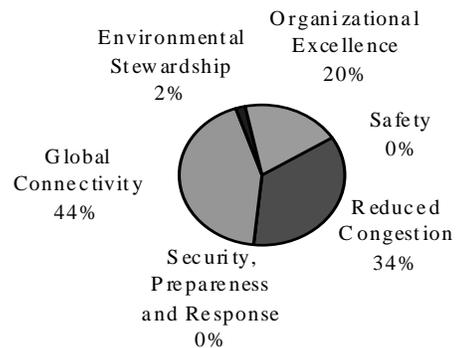
The ITS Research Program is currently funded through the Federal Highway Administration (FHWA) under SAFETEA-LU (Subtitle c) for \$110 million. The ITS program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, operational testing, technology transfer, training and technical guidance. The Secretary has assigned RITA management responsibility for all programmatic elements related to the ITS program.

Reimbursable/Other Programs: In FY 2011, RITA staff will continue to carry out the multi-dimensional activities described above and will continue to conduct, coordinate, facilitate, and review over \$300 million in transportation-related research, analysis, technology transfer, deployment, education and training activities associated with:

- *John A. Volpe National Transportation Systems Center* (Volpe Center, Cambridge, MA) which provides research, analysis, technology deployment, and other technical knowledge and expertise to DOT and non-DOT customers on specific transportation systems projects or issues, on a fee-for-service basis.
- *Transportation Safety Institute* (Oklahoma City, OK) which provides training to more than 30,000 DOT and non-DOT transportation professionals annually in transportation safety and security, on a fee-for-service and tuition basis.
- *University Transportation Centers (UTC) Program* which advances U.S. technology and expertise in many transportation-related disciplines, and advances DOT RD&T priorities, through grants for transportation education, research and technology transfer at university-based centers of excellence.

RITA Support to DOT Strategic Objectives

While pursuing its Mineta Act mandate and the broader RD&T coordination mission for DOT, RITA uses the *DOT Strategic Plan* to guide programmatic and administrative decisions, and to formulate and manage resource requirements. The FY 2011 budget request supports all of the Department’s strategic objectives.



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EXHIBIT I

RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

FY 2010

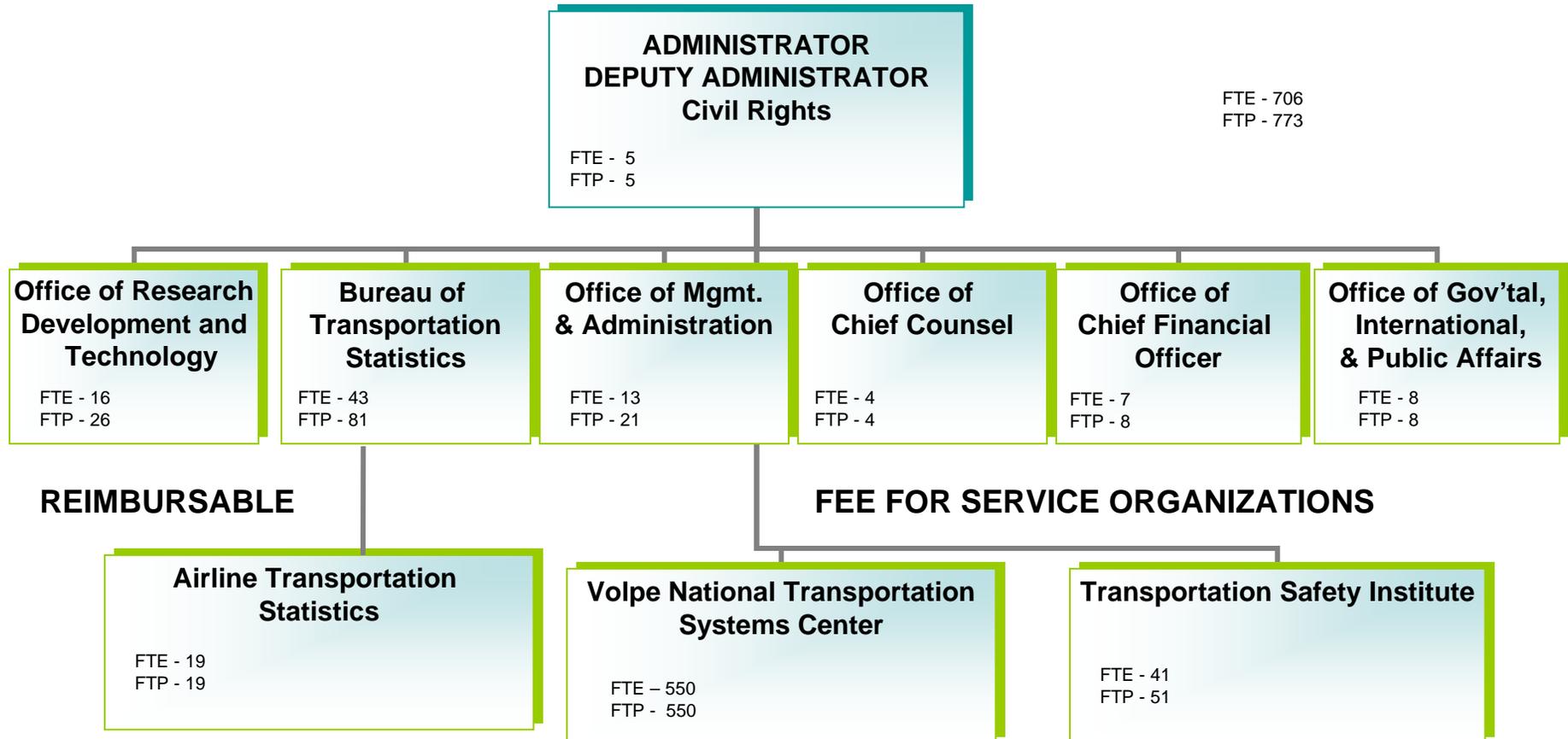


EXHIBIT I

RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

FY 2011

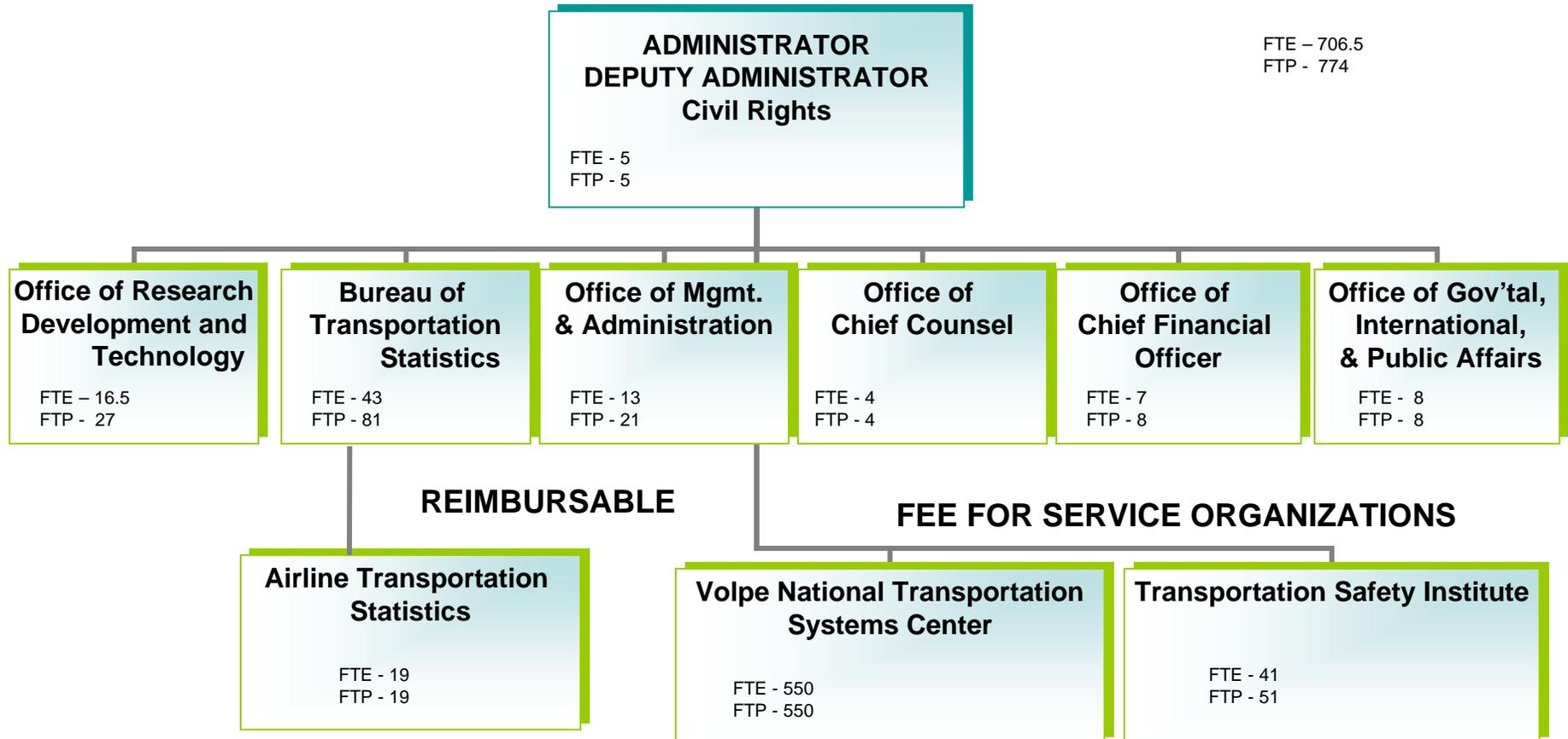


EXHIBIT II-1

**COMPARATIVE STATEMENT OF NEW BUDGET AUTHORITY
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
(\$000)**

<u>ACCOUNT NAME:</u>	FY 2009 <u>ACTUAL</u>	FY 2010 <u>ENACTED</u>	FY 2011 <u>REQUEST</u>
Research and Development	12,900	13,007	17,200
Bureau of Transportation Statistics (HTF) ^{1/}	[27,000]	[28,000]	[30,000]
TOTAL	12,900	13,007	17,200

¹ Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highways program.

EXHIBIT II-2

**FY 2011 BUDGET REQUEST BY APPROPRIATION ACCOUNT
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
Research and Development
Appropriations, Obligation Limitations and Exempt Obligations
(\$000)**

<u>ACCOUNT NAME:</u>	<u>FY 2009 ACTUAL</u>	<u>FY 2010 ENACTED</u>	<u>FY 2011 REQUEST</u>
<u>Research and Development:</u>			
Salaries and Administrative Expenses	5,964	6,971	7,200
Alternative Fuels Research & Development (R&D) (Formerly Hydrogen Fuels Safety)	1,400	500	500
RD&T Coordination	536	536	900
Nationwide Differential Global Positioning System	5,000	4,600	7,600
Positioning, Navigation and Timing (PNT)	<u>0</u>	<u>400</u>	<u>1,000</u>
TOTAL: [Discretionary]	12,900	13,007	17,200
<u>Reimbursable Programs/Other:</u>			
University Transportation Centers ^{1/}	[76,700]	[76,700]	[76,700]
Transportation Safety Institute	[20,000]	[20,000]	[20,000]
VOLPE National Transportation Systems Center	[250,000]	[250,000]	[250,000]
Intelligent Transportation Systems	<u>[102,960]</u>	<u>[107,690]</u>	<u>[110,000]</u>
TOTAL: [Reimbursable/Other]	[449,660]	[454,390]	[456,700]

¹ Beginning in FY 2009, FHWA allocation, \$69,100,000; FTA reimbursable, \$7,600,000.

EXHIBIT II-2

FY 2011 BUDGET REQUEST BY APPROPRIATION ACCOUNT
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
Bureau of Transportation Statistics
(Allocation Account under FHWA's Federal-Aid Highways)
Appropriations, Obligations Limitations and Exempt Obligations
(\$000)

<u>ACCOUNT NAME:</u>	<u>FY 2009 ACTUAL</u>	<u>FY 2010 ENACTED</u>	<u>FY 2011 REQUEST</u>
<u>Bureau of Transportation Statistics:</u>			
Travel Statistics	2,947	3,056	3,056
Freight Statistics	10,723	11,120	13,120
Transportation Economics	1,811	1,878	1,878
Geospatial Information	1,758	1,823	1,823
Compilations, Methods and Standards	7,416	7,691	7,691
National Transportation Library	<u>2,345</u>	<u>2,432</u>	<u>2,432</u>
	TOTAL:^{1/} [27,000]	[28,000]	[30,000]
<u>Reimbursable Programs:</u>			
Air Transportation Statistics	[4,000]	[4,000]	[4,000]

^{1/} Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highway program.

Exhibit II-3

FY 2011 BUDGET REQUEST BY APPROPRIATION ACCOUNT AND STRATEGIC GOAL
 RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
 RESEARCH AND DEVELOPMENT
 Appropriations, Obligation Limitations, and Exempt Obligations
 (\$000)

<u>APPROPRIATION/PROGRAM</u> <u>ACTIVITY/PERFORMANCE GOAL</u>	<u>REDUCED</u> <u>CONGEST.</u>	<u>GLOBAL</u> <u>CONNECT.</u>	<u>ENVIRON.</u> <u>STEWARD.</u>	<u>SECURITY</u>	<u>SAFETY</u>	<u>ORG.</u> <u>EXCEL.</u>	<u>TOTAL</u>
<u>Research and Development:</u>							
Alternative Fuels Research & Development (R&D) (Formerly Hydrogen Fuels Safety)	0	0	1,213	0	0	0	1,213
Research, Development & Technology Coordination	0	0	0	0	0	6,761	6,761
Nationwide Differential Global Positioning System	7,913	0	0	0	0	0	7,913
Positioning, Navigation and Timing	<u>1,313</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,313</u>
TOTAL	9,226	0	1,213	0	0	6,761	17,200
TOTAL Direct FTE	2	0	1	0	0	23.5	26.5

Exhibit II-3

FY 2011 BUDGET REQUEST BY APPROPRIATION ACCOUNT AND STRATEGIC GOAL
 RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
 Bureau of Transportation Statistics
 (Allocation Account under FHWA's Federal-Aid Highways)
 Appropriations, Obligation Limitations, & Exempt Obligations
 (\$000)

<u>APPROPRIATION/PROGRAM ACTIVITY/PERFORMANCE GOAL</u>	<u>REDUCED CONGEST.</u>	<u>GLOBAL CONNECT.</u>	<u>ENVIRON. STEWARD.</u>	<u>SECURITY</u>	<u>SAFETY</u>	<u>ORG. EXCEL.</u>	<u>TOTAL</u>
<u>Bureau of Transportation Statistics:</u>							
Travel Statistics	0	3,056	0	0	0	0	3,056
Freight Statistics	0	13,120	0	0	0	0	13,120
Transportation Economics	0	1,878	0	0	0	0	1,878
Geospatial Information	1,823	0	0	0	0	0	1,823
Compilations, Methods and Standards	0	5,153	0	0	0	2,538	7,691
National Transportation Library	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2,432</u>	<u>2,432</u>
TOTAL	[1,823]	[23,207]	[0]	[0]	[0]	[4,970]	[30,000]
TOTAL Direct FTE	6	53	0	0	0	11	70

EXHIBIT II-4

**FY 2011 BUDGET AUTHORITY
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
Appropriations, Obligation Limitations, and Exempt Obligations
\$(000)**

<u>ACCOUNT NAME:</u>	<u>FY 2009 ACTUAL</u>	<u>FY 2010 ENACTED</u>	<u>FY 2011 REQUEST</u>
Research and Development	12,900	13,007	17,200
Bureau of Transportation Statistics			
Travel Statistics	2,947	3,056	3,056
Freight Statistics	10,723	11,120	13,120
Transportation Economics	1,811	1,878	1,878
Geospatial Information	1,758	1,823	1,823
Compilations, Methods and Standards	7,416	7,691	7,691
National Transportation Library	<u>2,345</u>	<u>2,432</u>	<u>2,432</u>
Total - Bureau of Transportation Statistics ^{1/}	[27,000]	[28,000]	[30,000]
TOTAL: [Discretionary]	12,900	13,007	17,200

^{1/} Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highways program.

EXHIBIT II-5

**FY 2011 OUTLAYS
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
(\$000)**

	(A)	(B)	(C)
<u>ACCOUNT NAME:</u>	<u>FY 2009 ACTUAL</u>	<u>FY 2010 ENACTED</u>	<u>FY 2011 REQUEST</u>
Research and Development	73,032	169,943	16,781
VOLPE National Transportation Systems Center	<u>-70,731</u>	<u>0</u>	<u>0</u>
TOTAL	2,301	169,943	16,781

EXHIBIT II-6

**SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)
RESEARCH AND DEVELOPMENT**

Baseline Changes

	2010 ENACTED	2010 PC&B BY PROGRAM	2010 # FTE PER PROGRAM	2010 CONTRACT EXPENSES	ANNUALIZATION OF 2010 PAY RAISE	2011 PAY RAISES	GSA RENT	WCF INC/DEC	INFLATION/ DEFLATION	FY 2010 ADJUSTED BASE	Program INCREASES/ DECREASES	2011 PC&B PROGRAM INCREASE	2011 # FTE PER PROGRAM INCREASE	2011 CONTRACT EXPENSE PROGRAM INCREASES	FY 2011 REQUEST
		Note Non-Add										Note Non-Add			
PERSONNEL RESOURCES	<u>26</u>														
Direct FTE	26									26			0.5		26.5
FINANCIAL RESOURCES:															
ADMINISTRATIVE EXPENSES															
Salaries and Benefits	3,990		26		20	42			-	4,052	120				4,172
Travel	135								-	135					135
Training	53								-	53					53
GSA Rent	563						-		-	563					563
Printing	5								-	5					5
Other Services:															
-WCF	928							26	-	954					954
-Common Services	1,183								-	1,183	21				1,204
Equipment	73								-	73					73
Supplies	41								-	41					41
Admin Subtotal	6,971		26		20	42	-	26	-	7,059	141	-	-	-	7,200
PROGRAMS															
Alternative Fuels R&D (Formerly Hydrogen Fuels Safety)	500									500	-				500
RD&T Coordination	536									536	364				900
NDGPS	4,600									4,600	3,000				7,600
PNT	400									400	600				1,000
Programs Subtotal	6,036				-	-	-	-	-	6,036	3,964	-	-	-	10,000
TOTAL	13,007		26		20	42	-	26	-	13,095	4,105	-	-	-	17,200

EXHIBIT II-6

**SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)**

BUREAU OF TRANSPORTATION STATISTICS (Highway Trust Fund Allocation)

Baseline Changes

	2010 ENACTED	2010 PC&B BY PROGRAM	2010 # FTE PER PROGRAM	2010 CONTRACT EXPENSES	ANNUALIZATION OF 2010 PAY RAISE	2011 PAY RAISES	GSA RENT	WCF INC/DEC	INFLATION/DE FLATION	FY 2010 Adjusted Base	Program INCREASES/DEC REASES	2011 PC&B PROGRAM INCREASE	2011 # FTE PER PROGRAM INCREASE	2011 CONTRACT EXPENSE PROGRAM INCREASES	FY 2011 REQUEST
			Note Non-Add										Note Non-Add		
PERSONNEL RESOURCES (FTE)	70														
Direct FTE	70									70					70
FINANCIAL RESOURCES:															
ADMINISTRATIVE EXPENSES															
Salaries and Benefits	12,315		70		62	129				12,506					12,506
Travel	200									200					200
Training	188									188					188
GSA Rent	1,521						82			1,603					1,603
Transportation of Things	5									5					5
Printing	10									10					10
Other Services:															
-WCF	3,357							283		3,640					3,640
- Common Services	3,445									3,445					3,445
Supplies	40									40					40
Equipment	2,150									2,150					2,150
Admin Subtotal	23,231		70		62	129	82	283	0	23,787	0	0	0	0	23,787
PROGRAMS															
Travel Statistics	566									566	-116				450
Freight Statistics	2,500									2,500	2,000				4,500
Transportation Economics	201									201	-41				160
Geospatial Information	400									400	-40				360
Compilations, Methods and Standards	650									650	-255				395
National Transportation Library	452									452	-104				348
Programs Subtotal	4,769				0	0	0	0	0	4,769	1,444	0	0	0	6,213
TOTAL	28,000		70		62	129	82	283	0	28,556	1,444	0	0	0	30,000

EXHIBIT II-7

**WORKING CAPITAL FUND
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
(\$000)**

	<u>FY 2010 ENACTED</u>	<u>FY 2011 REQUEST</u>	<u>CHANGE</u>
<u>DIRECT ACCOUNT:</u>			
Research and Development	928	954	26
<u>ALLOCATION ACCOUNT:</u>			
Bureau of Transportation Statistics	3,357	3,640	283
<u>REIMBURSABLE ACCOUNT:</u>			
Airline Transportation Statistics	873	828	-45
VOLPE National Transportation Systems Center	<u>236</u>	<u>437</u>	<u>201</u>
SUBTOTAL:	1,109	1,265	156
TOTAL:	5,394	5,859	465

EXHIBIT II-8

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
PERSONNEL RESOURCE - SUMMARY
TOTAL FULL-TIME EQUIVALENTS**

	<u>FY 2009</u> <u>ACTUAL</u>	<u>FY 2010</u> <u>ENACTED</u>	<u>FY 2011</u> <u>REQUEST</u>
<u>DIRECT FUNDED BY APPROPRIATION:</u>			
Research and Development	<u>21</u>	<u>26</u>	<u>26.5</u>
SUBTOTAL, DIRECT FUNDED	21	26	26.5
<u>REIMBURSEMENTS/ALLOCATIONS/OTHER:</u>			
<u>ALLOCATION ACCOUNT:</u>			
Bureau of Transportation Statistics	68	70	70
<u>REIMBURSABLE:</u>			
Air Transportation Statistics	16	19	19
Transportation Safety Institute	37	41	41
Volpe National Transportation Systems Center	511	550	550
<u>OTHER:</u>			
Intelligent Transportation Systems [non-add]	<u>[17]</u>	<u>[17]</u>	<u>[17]</u>
SUBTOTAL/REIMBURSE./ALLOC./OTHER:	<u>632</u>	<u>680</u>	<u>680</u>
TOTAL FTEs:	653	706	706.5

EXHIBIT II-9

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
RESOURCE SUMMARY - STAFFING
FULL-TIME PERMANENT POSITIONS**

	<u>FY 2009 ACTUAL</u>	<u>FY 2010 ENACTED</u>	<u>FY 2011 REQUEST</u>
<u>DIRECT FUNDED BY APPROPRIATION:</u>			
Research and Development	<u>21</u>	<u>36</u>	<u>37</u>
SUBTOTAL, DIRECT FUNDED	21	36	37
<u>REIMBURSEMENTS/ALLOCATIONS/OTHER:</u>			
<u>ALLOCATION ACCOUNT:</u>			
Bureau of Transportation Statistics	68	117	117
<u>REIMBURSABLE:</u>			
Air Transportation Statistics	16	19	19
Transportation Safety Institute	37	51	51
Volpe National Transportation Systems Center	511	550	550
<u>OTHER:</u>			
Intelligent Transportation Systems [non-add]	[17]	[17]	[17]
SUBTOTAL/REIMBURSE./ALLOC./OTHER:	<u>632</u>	<u>737</u>	<u>737</u>
TOTAL FTEs:	653	773	774

EXHIBIT II-10

**FY 2011 BUDGET REQUEST FOR NATIONAL SECURITY,
EMERGENCY PREPAREDNESS AND RESPONSE
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)**

	FY 2009	FY 2010	FY 2011
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>
<u>ACCOUNTS</u>			
Bureau of Transportation Statistics			
Emergency Response ¹	____ [40]	____ [67]	____ [69]
TOTAL, NATIONAL SECURITY, EMERGENCY PREPAREDNESS AND RESPONSE¹	[40]	[67]	[69]

^{1/} Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highway program.

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RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

Research and Development

For necessary expenses of the Research and Innovative Technology Administration, [\$13,007,000] \$17,200,000, of which [\$6,036,000] \$10,000,000 shall remain available until September 30, [2012]2013: *Provided*, That there may be credited to this appropriation, to be available until expended, funds received from States, counties, municipalities, other public authorities, and private sources for expenses incurred for training. (*Department of Transportation Appropriations Act, 2010.*)

EXHIBIT III-1

**RESEARCH AND DEVELOPMENT
Appropriations Summary by Program Activity
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>CHANGE</u>
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>	<u>FY 2010-2011</u>
<u>Research and Development:</u>				
Salaries and Administrative Expenses Alternative Fuels Research and Development (R&D)	5,964	6,971	7,200	229
(Formerly Hydrogen Fuels Safety)	1,400	500	500	0
RD&T Coordination	536	536	900	364
Nationwide Differential Global Positioning System	5,000	4,600	7,600	3,000
Positioning, Navigation and Timing (PNT)	<u>0</u>	<u>400</u>	<u>1,000</u>	<u>600</u>
TOTAL: [Discretionary]	12,900	13,007	17,200	4,193
<u>FTEs:</u>				
Direct Funded:	21	26	26.5	0.5
Reimbursable, allocation, other:				
Transportation Safety Institute	37	41	41	0
Volpe National Transportation Systems Center	511	550	550	0
Intelligent Transportation Systems [non-add]	[17]	[17]	[17]	0

EXHIBIT III-2

**RESEARCH AND DEVELOPMENT
SUMMARY ANALYSIS OF CHANGE FROM FY 2010 TO FY 2011
Appropriations, Obligations, Limitations and Exempt Obligations
(\$000)**

Item	Change from FY 2010 to FY 2011	FY 2011 PC&B by Program	FY 2011 FTEs by Program	FY 2011 Contract Expenses	Total
FY 2010 BASE (ENACTED)	13,007	Note: Columns are Non-Add			
RESEARCH AND DEVELOPMENT					
Adjustments to Base					
2010 Pay Raise Annualization (2.0%)	20				
2011 Pay Raise (1.4%)	42				
Working Capital Fund Increase	26				
Subtotal, Adjustments to Base	88				
New or Expanded Programs					
Salaries & Admin Expenses	141	7,200	26.5	0	7,200
Alternative Fuels Research and Development (R&D) (Formerly Hydrogen Fuels Safety)	0			500	500
RD&T Coordination	364	0	0	900	900
Nationwide Differential Global Positioning System (NDGPS)	3,000	0	0	7,600	7,600
Positioning, Navigation and Timing (PNT)	600	0	0	1,000	1,000
Subtotal, New or Expanded Program					
Increases/Decreases	4,105	7,200	26.5	10,000	17,200
Total FY 2011 Request	17,200	7,200	26.5	10,000	17,200

RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

Research and Development Program and Performance

The Research and Innovative Technology Administration (RITA) is responsible for coordinating, facilitating, and reviewing the Department's research and development programs and activities. Coordination and advancement of research and technology activities is led by the RITA Office of Research, Development and Technology and is funded through the General Fund. RITA is also responsible for coordinating and developing Positioning, Navigation and Timing (PNT) technology, PNT policy coordination, and spectrum management. RITA is the program manager for the Nationwide Differential Global Positioning System.

RITA also oversees and provides direction to the following programs and activities.

The Bureau of Transportation Statistics (BTS) manages and shares statistical knowledge and information on the Nation's transportation systems, including statistics on freight movement, geospatial transportation information, and transportation economics. BTS is funded by an allocation from the Federal Highway Administration's Federal-Aid Highways account.

The Intelligent Transportation Systems (ITS) Joint Program Office (JPO) facilitates the deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, operational testing, technology transfer, training and technical guidance. The ITS Research Program is currently funded through the Federal Highway Administration (FHWA) under SAFETEA-LU (Subtitle C).

The University Transportation Centers (UTC) advance U.S. technology and expertise in many transportation-related disciplines through grants for transportation education, research, and technology transfer at university-based centers of excellence. The UTC Program funding is provided to RITA through an allocation from the Federal Highway Administration and a reimbursable agreement from the Federal Transit Administration.

The John A. Volpe National Transportation Systems Center (Cambridge, MA) provides expertise in research, analysis, technology deployment, and other technical knowledge to DOT and non-DOT customers on specific transportation system projects or issues, on a fee-for-service basis.

The Transportation Safety Institute develops and conducts safety, security, and environmental training, products, and services for both the public and private sector on a fee-for-service and tuition basis.

RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

**RESEARCH AND DEVELOPMENT
PROGRAM AND FINANCING**

(In thousands of dollars)

Identification code 69-1730-0

	FY 2009	FY 2010	FY 2011	
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>	
Obligations by Program Activity:				
0001	Salaries and administrative expenses	5,964	6,971	7,200
0002	Research development and technology coordination	329	837	500
0003	Alternative fuels R&D (formerly hydrogen fuels safety)	1,028	872	900
0004	Nationwide differential global positioning system	5,000	4,600	7,600
0005	Positioning navigation & timing	0	400	1,000
0100	Direct Program by Activities - Subtotal (running)	<u>12,321</u>	<u>13,681</u>	<u>17,200</u>
0901	University transportation centers	54,149	7,600	7,600
0902	Transportation safety institute	16,319	20,000	20,000
0903	Other programs	<u>4,799</u>	<u>10,000</u>	<u>10,000</u>
0909	Reimbursable program - subtotal line	<u>75,267</u>	<u>37,600</u>	<u>37,600</u>
1000	Total new obligations	87,588	51,281	54,800
Budgetary resources available for obligation:				
2140	Unobligated balance - start of year	91	674	0
2200	New budget authority (gross)	88,165	50,607	54,800
2210	Resources available from recoveries of prior year obligations	<u>0</u>	<u>0</u>	<u>0</u>
2390	Total budgetary resources available for obligation	55	0	0
2395	Total new obligations	-87,588	-51,281	-54,800
2398	Unobligated balance expiring or withdrawn	<u>-49</u>	<u>0</u>	<u>0</u>
2440	Unobligated Balance - End of year	674	0	0
New Budget Authority (gross), detail:				
Discretionary:				
4000	Appropriation	<u>12,900</u>	<u>13,007</u>	<u>17,200</u>
4035	Appropriation permanently reduced	<u>0</u>	<u>0</u>	<u>0</u>
4300	Appropriation (total discretionary)	12,900	13,007	17,200
Spending auth from offsetting collections:				
5800	Offsetting collections: cash	36,049	37,600	37,600
5810	Change in orders on hand from federal sources	<u>39,215</u>	<u>0</u>	<u>0</u>
5890	Spending auth from offsetting collections (total discretionary)	<u>75,265</u>	<u>37,600</u>	<u>37,600</u>
7000	Total new budget authority (gross)	88,165	50,607	54,800
Change in obligated balances:				
7240	Obligated balance, start of year	218,735	157,562	1,300
7310	Total new obligations	87,588	51,281	47,200
7320	Total Outlays (Gross)	-113,604	-207,543	-46,781
7340	Adjustments in expired accounts (net)	582	0	0
7345	Recoveries of prior year obligations	-55	0	0
7400	Change in uncollected customer payments (unexpired)	-39,215	0	0
7410	Change in uncollected customer payments (expired)	<u>3,534</u>	<u>0</u>	<u>0</u>
7440	Obligated balance, end of year	157,564	1,300	1,720
Outlays (gross), detail:				
8690	Outlays from new permanent authority	16,215	49,306	53,080
8693	Outlays from permanent balances	<u>97,390</u>	<u>158,236</u>	<u>1,301</u>
8700	Total Outlays (gross)	113,604	207,543	54,381
Offsets:				
8800	Federal funds	40,572	37,600	37,600
8895	Change in uncollected customer payments (unexpired)	39,215	0	0
8896	Portion of offsetting collection (cash) credited to expired accounts	-4,523	0	0
Net budget authority and outlays:				
8900	Budget Authority	12,900	13,007	17,200
9000	Outlays	73,032	169,943	16,781
9502	Unpaid Obligations, EOY	173,885		

RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

**RESEARCH AND DEVELOPMENT
OBJECT CLASSIFICATION**

(In thousands of dollars)

	FY 2009	FY 2010	FY 2011
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>
<u>Direct Obligations:</u>			
Personnel compensation:			
1111 Personnel compensation, full-time permanent	2,390	2,940	2,986
1115 Other personnel compensation	82	53	68
Total personnel compensation	<u>2,472</u>	<u>2,993</u>	<u>3,054</u>
1121 Civilian personnel benefits	839	997	1,012
1210 Travel and transportation of persons	76	135	135
1220 Transportation of things	-	-	-
1231 Rent to GSA	938	563	563
1240 Printing and reproduction	-	-	5
1251 Advisory and assistance services	942	1,450	1,800
1252 Other services	4	6	10
1253 Other purchases of goods and services	6,739	7,323	10,357
1257 Operation and maint of equipment	94	100	150
1260 Office supplies	20	41	41
1310 Equipment	97	73	73
1420 Insurance Claims and Indemnities	<u>100</u>	<u>-</u>	<u>-</u>
1990 Subtotal, direct obligations	12,321	13,681	17,200
2990 Reimbursable obligations	75,267	37,600	30,000
9999 Total obligations	87,588	51,281	47,200

Employment Summary:

Direct:

1001 Civilian Full-time Equivalent Employment	21	26	26.5
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Reimbursable:

2001 Civilian Full-time Equivalent Employment	53	60	60
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Allocation account:

3001 Civilian Full-time Equivalent Employment	68	70	70
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RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

RESEARCH AND DEVELOPMENT

Funding History

(In thousands of dollars)

<u>YEAR</u>	<u>REQUESTED</u>	<u>ENACTED</u>
2006	6,274	5,716 ^{1/}
2007	8,217	7,736 ^{2/}
2008	12,000	12,000 ^{3/}
2009	12,000	12,900 ^{4/}
2010	13,179	13,007 ^{5/}
2011	17,200	-

1/ FY 2006 reflects a 1% across the board rescission of \$58,000 as stated in P.L. 109-148, section 3801.

2/ FY 2007 reflects Continuing Resolution (H.J. Resolution 20) at the FY 2006 budget level of \$5,736,000 and funding to support the Air Transportation Statistics program.

3/ FY 2008 reflects funding provided in P.L. 110-161.

4/ FY 2009 reflects funding provided in P.L. 111-8.

5/ FY 2010 reflects funding provided in P.L. 111-117.

Detailed Justification for Salaries and Administrative Expenses

Salaries and Administrative Expenses

FY 2011 Request: \$7,200,000

FTE: 26.5

Overview:

The Research and Innovative Technology Administration (RITA) was established by the Norman Y. Mineta Research and Special Programs Improvement Act, November 2004. The component functions transferred into RITA were the following: the Bureau of Transportation Statistics, the Transportation Safety Institute, the Volpe Center, the Office of Innovation, Research and Education (formerly in RSPA) and staff from the Office of Intermodalism (formerly in OST Policy).

FY 2010 Base:

Base funding for salaries and administrative expenses provides for 26 FTE. The FTE consists of overhead staff supporting the RITA administrative functions, as well as direct program staff supporting the Office of Research, Development and Technology (RD&T). In addition, funding provides for administrative expenses, including travel, training, rent, working capital, IT support and E-government initiatives.

RITA anticipates the FY 2010 Working Capital Fund (WCF) estimate to be \$5,393,883, of which the R&D account share is \$928,000 or 17.2%. The WCF estimate also includes cross-servicing agreements to provide for procurement operations (\$375,863), human capital administration (\$540,368), and Information Technology (\$2,501,632).

RITA supports the E-Government initiatives through a Department-wide distribution based on a specified algorithm. The RITA contribution to E-Government is estimated to be \$43,490 in FY 2010. This benefit allows RITA's business process improvements to be more efficient. The E-Government initiatives serve citizens, businesses, and federal employees by delivering high quality services more efficiently and at a lower price. Instead of expensive "stove-piped" operations, agencies work together to develop common solutions which achieve mission requirements at a reduced cost, thereby making resources available for higher priority needs.

Anticipated FY 2010 Accomplishments:

In FY 2010 RITA anticipates improving employee morale through a variety of process improvement initiatives.

FY 2011 Budget Request:

The funding level for RITA's salaries and administrative expenses is \$7.2 million. RITA anticipates the FY 2011 Working Capital Fund (WCF) estimate to be \$5,859,258, of which the R&D account share is \$954,000 or 16.3%. The WCF estimate also includes cross-servicing agreements to provide for procurement operations (\$127,011), human capital

administration (\$607,098), and Information Technology (\$3,055,095). This includes an increase of .5 positions (1 position/half year) to support priority RITA functions:

.5 FTE to support the RD&T Coordination Program:

- This position (.5 FTE) will focus on managing and coordinating the strategic planning process for transportation RD&T across the Department; in addition to, delivering more focused, systematic approaches for identifying synergies in Energy/Climate Change R&D programs, as well as other salient research areas critical to meeting the challenges associated with providing new, innovative transportation solutions. The focus will also be on developing tools and methodologies for measuring and evaluating the effectiveness of RITA's coordination activities.

Explanation of Funding Changes for Salaries and Administrative Expenses:

Amount: +\$229,000

The funding change represents the activities delineated under the FY 2011 Budget Request line item; funding to support .5 FTE (1 position/half year) (\$120,000); FY 2010 pay raise annualization (\$20,000); FY 2011 pay raise (\$42,000); common services (\$21,000) and WCF program increase (\$26,000).

Detailed Justification for Alternative Fuels Safety Research and Development (R&D)

FY 2011 Request: \$500,000

Overview:

RITA was created by Congress with the primary objective of serving as the Department's focal point for coordination of crosscutting research and clearing the pathway to technology deployment. To fulfill its role as Department of Transportation's lead agency in support of the Alternative Fuels, RITA will continue to coordinate, manage and execute key components of the Department's alternative fuel activities. Many of these activities will be conducted in collaboration with DOT Modal Administrations, DOE, EPA, Federal, State, academic, and industry partners.

Funding reflects redirection of the program to broaden focus from only hydrogen to the broader category of alternative fuels.

FY 2010 Base:

The enacted level for RITA's Hydrogen program in FY 2010 was \$500,000. Funding provides for increased alternative fuels distribution, shipping and safety standards development, coordination and outreach activities.

Anticipated FY 2010 Accomplishments:

- Continue to conduct multi-modal research to further RITA's mission and respond to direct stakeholder and industry needs in advancing alternative fuels (including hydrogen) as part of the Administration's goal of a greener, more secure and sustainable economy.
- Continue involvement in alternative fuels transportation system safety through domestic and international partnerships. Monitor and develop safety codes, standards, and regulations.
- Continue partnership with public and private sector representatives to continue to educate and train state and local public safety officials and first responders.
- Continue research to develop, evaluate, and validate under real world conditions non-destructive testing and other safety and inspection technologies that will facilitate the reliable and safe operation of components of the alternative fuels transportation systems.
- Continue to execute individual projects and participate in collaborative efforts that analyze and facilitate an effective transition to the use of alternative fuels.
- Facilitate coordination and disseminate information to the DOT modes through DOT Alternative Fuels Working Group.

FY 2011 Budget Request:

- This funding will enable RITA to continue the progress made in prior years. The programs enumerated in the proposal are directly in line with RITA's mission and objectives to coordinate and lead multi-modal research. Each program has broad reaching benefits to multiple operating administrations within DOT. The funding also supports direct stakeholder and industry needs in advancing alternative fuels as part of the Administration's goal of a greener, more secure and sustainable economy.
- Funding will support work with the DOT Alternative Fuels Working Group, including PHMSA, NHTSA, FMCSA, and other DOT modes to execute accelerated testing and validation of materials and components and identifying opportunities for cross cutting and multi-modal research within DOT.
- Funding will support work with external partners, including other federal agencies, to heighten awareness and leverage resources in conducting research on alternative fuel-related topics.
- Funding will support monitoring and facilitating the application to transportation of long-term enabling research performed by other Federal agencies, including the Department of Energy, the National Science Foundation, the National Bio-mass Board, Academia and the private sector.

Explanation of Funding Changes for Alternative Fuels Safety R&D**Amount: \$0**

Detailed Justification for Research, Development and Technology Coordination

FY 2011 Request: \$900,000

Overview:

RITA was created by Congress with the primary objective of serving as the Department's focal point for coordinating, facilitating and reviewing crosscutting and cross-modal research, and for enabling new technology deployment across all modes. To fulfill this role, RITA provides strategic direction and coordinates the Department's research programs through annual program reviews, budget and performance planning and prioritization, and performance tracking and reporting.

FY 2010 Base:

The base funding in FY 2010 for the RD&T Coordination program is \$536,000. RITA will continue to lead the RD&T Planning Council and Team to identify research priorities and opportunities for collaboration on crosscutting RD&T. It will identify innovative approaches to coordinating, facilitating, and reviewing DOT's \$1 billion research investment.

Anticipated FY 2010 Accomplishments:

In direct support of the DOT Organizational Excellence strategic objective, RITA managed RD&T coordination through the RD&T Planning Council and Team (per DOT Order 1120.39A) to promote the efficient use of DOT RD&T funds, identify synergies among programs, and encourage joint RD&T efforts. In FY 2010, the following accomplishments are planned:

1. Continue to enhance and refine the implementation of a Web-based information sharing capability for research coordination.
2. Continue to conduct Research Forums on cross modal research priorities or emerging technologies.
3. Continue to support and facilitate the department wide coordination to ensure collaborative RD&T portfolio management.
4. Continue to provide staff support to the RD&T Planning Council and RD&T Planning Team and other cross modal working groups.
5. Provide recommendations to the Secretary on strategic RD&T priorities.
6. Prepare the FY 2012 RD&T budget priorities for inclusion in the Department's FY 2012 budget guidance.
7. Review FY 2012 RD&T budget requests to ensure alignment with DOT strategic objectives

and priorities.

8. Develop the annual RD&T Funding Report to Congress (SAFETEA-LU, sec. (5208)).
9. Prepare the DOT portion of the annual Federal Laboratory Technology Transfer Summary Report to Congress as required in 15 USC Sec 3710(g) (2).
10. Develop common performance measures related to DOT's RD&T activities in consultation with the Operating Administrations.

FY 2011 Budget Request:

The proposed FY 2011 activities will enhance Department-wide coordination by focusing efforts to increase internal and external stakeholder outreach: Manage and coordinate the strategic planning process for transportation RD&T across the Department, through the RD&T Planning Council and Planning Team; promote excellence in research management, developing guidance on peer review processes and research ethics; increase DOT participation in initiatives of the Office of Science and Technology Policy (OSTP)/National Science and Technology Council to communicate DOT RD&T needs; strengthen existing public private technology partnerships and promote new collaborations through outreach to the entire transportation community.

These activities will enable RITA to recognize and identify synergies in R&D Programs and to identify areas of opportunities for concentrating research efforts to gain the best investment. In addition to ongoing planning and coordination activities, such as the Annual Report to Congress, Federal Laboratory Technology Transfer Annual Summary Report to Congress, staff support to the Planning Council, updates to the strategic plan, budget guidance, budget reviews, and program reviews.

RITA will initiate or enhance the following activities in FY 2011:

1. Operate and maintain in a production environment the Web-based information sharing capability for research coordination started in a prior year.
2. Continue to conduct Research Forums on cross modal research priorities and emerging technologies identified by the RD&T Planning Team.
3. Develop a Technology Transfer support program with the capability to support all research areas.
4. Provide staff support to the RD&T Planning Council, the RD&T Planning Team and other cross modal working groups.
5. Measure performance of RD&T coordination efforts and other RD&T activities.
6. Develop tools for the aggregation of research information across the department at the project level for comparison and for facilitation and leveraging of resources.

Explanation of Funding Changes for RD&T Coordination Amount: + \$364,000

The funding increase will allow RITA to develop the tools, such as a knowledge management system aggregating research information across the department to lead to a better awareness of R&D programs, facilitate new collaborations, and strengthen existing partnerships with the international transportation R&D community. The funding increase will also provide tools for measuring and evaluating RITA's coordination activities, including how well the Department's research activities are leading to technologies implemented in the transportation community.

The funding increase will also allow RITA to develop capabilities to deliver more focused systematic approaches for identifying synergies in Energy/Climate Change R&D programs, as well as other salient research areas critical to meeting the challenges associated with providing new, innovative transportation solutions. In addition, the funding will enable an increased level of coordination and communication of DOT RD&T needs with other Federal, state, and local organizations, including the Office of Science and Technology Policy (OSTP)/National Science and Technology Council, Inter-departmental and agency working groups, and other stakeholder organizations.

Detailed Justification for Nationwide Differential Global Positioning System (NDGPS) Program

FY 2011 Request: \$7,600,000

Overview:

The Nationwide Differential Global Positioning System (NDGPS) is an enabling positioning and navigation technology for civil, commercial and scientific applications, through local broadcast of accurate GPS position corrections. Inland NDGPS is a robust, fully-redundant terrestrial expansion of the U.S. Coast Guard Maritime DGPS. With inland waterway sites (Army Corps of Engineers), combined NDGPS provides a national positioning, navigation and timing (PNT) utility on which there is significant public and private sector reliance for transportation, agricultural, environmental, natural resource management, surveying, weather forecasting and other applications. NDGPS provides support infrastructure for several USDOT research projects, and bears opportunities for future cross-modal transportation safety, security, efficiency and emergency response applications.

FY 2010 Base:

Base funding is \$4,600,000. This funding supports systems operations and maintenance (O&M).

Anticipated FY 2010 Accomplishments:

DOT will preserve the government’s investment in the inland segment of the Nationwide Differential Global Positioning System (NDGPS); and operate and maintain the inland segment in coordination with the U.S. Coast Guard’s Maritime DGPS, as a single Nationwide Differential GPS public utility. The system will maintain 98.5% system availability or better.

FY 2011 Request:

The requested funding for NDGPS will support the following:

- Operations and Maintenance (O&M): \$5,600,000
 1. Technical risk: Funding is required to prevent a loss of NDGPS service, and to increase ability to recover from service loss. Risk increases significantly with time and increased maintenance backlog.
 2. Cost risk: Funding is required to properly maintain existing NDGPS services to reduce the likelihood of significant service loss, and the high costs of recovery from a major system failure.

- Equipment Recapitalization (“Refresh”): \$2,000,000

Inland NDGPS requires completion of a delayed equipment upgrade to keep up with the Coast Guard’s DGPS technology, which through refresh has significantly increased reliability. Coast Guard completed the Maritime DGPS refresh in 2009.

1. Technical risk: If refresh is not initiated in FY 2011, there is an immediate risk of loss of service due to equipment failure; the risk increases with time and increased deferred maintenance.
2. Cost risk: NDGPS equipment beyond serviceable life is being maintained at increased expense by purchasing/stocking expensive (and not always available) replacement parts (new or refurbished) for the old equipment. If funding is received for refresh in FY 2011, work may be completed by the end of FY 2012 (timeline based on Coast Guard workload constraints). If refresh is not initiated in FY 2011, recap costs may be expected to increase significantly as new contracts will need to be let; cost increases with time.
3. Programmatic risk: Refresh is foundational to reducing O&M cost growth in outyears, as the new equipment allows 80% of trouble calls to be resolved remotely. For efficiency, the Coast Guard operates both Maritime and inland systems as a combined national PNT utility. There are direct operational impacts to both segments of needing to maintain two distinct operating systems if NDGPS refresh continues to be delayed. These impacts both increase total Federal costs of continuing current DGPS services, and decrease service reliability.

Explanation of Funding Changes for NDGPS

Amount: +\$3,000,000

The increased funding will allow the NDGPS program to perform all the activities as delineated under the FY 2011 Budget description above. This funding change provides for all the activities described except the routine minimal operations and maintenance costs provided in the base program.

Detailed Justification for Positioning, Navigation and Timing

FY 2011 Request: \$1,000,000

Overview:

The National Security Presidential Directive on Space-Based Positioning Navigation and Timing Policy gives the Secretary of Transportation broad responsibilities in providing for and implementing positioning, navigation and timing (PNT) services for the civil community. The fundamental goal of this policy is to ensure that the United States maintains space-based positioning, navigation, and timing services, augmentation, back-up, and complementary capabilities.

Within the Department of Transportation, the Research and Innovative Technology Administration (RITA) has the responsibility to represent the civil departments and agencies in the development, acquisition, management, and operations of GPS, as well as to provide civil PNT system analysis including requirements and architecture development and performance monitoring. RITA serves as the civil lead of the National PNT Architecture effort, a cross-modal interagency effort, to guide future PNT system-of-systems investment and implementation decisions. The objective of this effort is to provide more effective and efficient PNT capabilities, and an evolutionary path for government-provided PNT systems and services. Finally, RITA has the responsibility for the development of DOT positions on PNT and spectrum policy matters, including the protection of GPS and other important frequencies from harmful radio frequency interference and operational degradation.

FY 2010 Base:

The FY 2010 enacted level is \$400 thousand.

Anticipated FY 2010 Accomplishments:

Through direct and indirect funding, RITA will begin execution of a time-phased, fiscally informed roadmap of PNT activities, including research and development needs based on the FY 2008 recommendations of the National PNT Architecture and the FY 2009 National PNT Architecture Implementation Plan. RITA also will develop and publish the 2010 Federal Radionavigation Plan, in conjunction with DOD and DHS, and produce the first version of the Civil PNT Requirements Document.

FY 2011 Request:

The requested funding will support RITA's responsibilities for coordinating PNT technology, PNT policy, and spectrum management.

National PNT Architecture (\$604,000)

Funding will provide staff support to the National PNT Architecture Integration Office to further research and development efforts identified in the National PNT Architecture Implementation Plan which addresses PNT capability gaps (predominantly environments where GPS does not work well) and develop a PNT science and technology roadmap. In conjunction with the architecture team, RITA will perform assessments on alternative future mixes of global (space and non-space based) and regional PNT solutions, PNT augmentations, autonomous PNT capabilities, and integration of systems to meet identified capability gaps and provide a more efficient and effective PNT capabilities. The goal of the architecture is to develop an effective and efficient approach to meet the PNT needs of 2025 and beyond and to provide transparency of decision making and funding allocations.

PNT and Spectrum Policy Coordination (\$100,000)

Funding will provide support for the Deputy Secretary of Transportation and Under Secretary of Transportation for Policy with preparation of materials and briefings for their participation as the co-chairs of the Space-Based PNT Executive Committee and Executive Steering Group, respectively.

Funding will allow RITA to support development of the 2011 DOT Biennial Spectrum Plan. This document outlines DOT's spectrum requirements, including bandwidth and frequency allocations for future technologies or services.

Radionavigation Planning (\$100,000)

Funding will allow RITA to support the revision of the Federal Radionavigation Plan (FRP) in FY 2011. Development of the FRP is directed by the National Defense Authorization Act for Fiscal Year 1998 (10 U.S.C. 2281(c)). The FRP is developed biennially by DOT in conjunction with DoD and DHS and is signed by the Secretaries of DOT, DOD and DHS. The FRP reflects national policies and plans for U.S. government radionavigation systems and is used as a reference document both nationally and internationally. RITA represents DOT and the civil community in Federal radionavigation planning and requirements development activities and is responsible for publication and distribution of the document.

Civil PNT Requirements (\$150,000)

Funding will allow RITA to perform outreach to stakeholders (internal and external to the government) to further identification of civil PNT requirements. These requirements are documented in a Civil PNT Requirements Document which serve as the foundation for the National PNT Architecture effort and allows program assessments to be performed to determine if the capabilities of the National PNT Architecture meet the needs of the civil community.

Civil GPS Service Interface Committee (\$46,000)

Funding will allow RITA to conduct meetings of the Civil Global Positioning System Service Interface Committee (CGSIC) and its subcommittees to promote public awareness of U.S. Government GPS plans and programs. At least one meeting will be conducted in the U.S. and one meeting internationally. CGSIC comprises members from U.S. and international private, government, and industry user groups. RITA chairs the CGSIC and it is co-chaired by United States Coast Guard. The CGSIC is the recognized worldwide forum for effective interaction between all civil GPS users and the U.S. GPS government authorities.

Explanation of Funding Changes for Positioning, Navigation and Timing

Amount: + \$600,000

The funding increase represents all the activities delineated under the FY 2011 Budget Request line item. Support will continue for the National PNT Architecture effort on behalf of the civil community which includes leading an interagency, cross-modal effort for the development and assessment of requirements for civil applications of PNT services. DOT has the lead responsibility for PNT requirements, architecture development, and GPS acquisition, development, and operations for all United States Government civil departments and agencies. Within DOT, these responsibilities for coordinating and developing PNT technology, PNT Policy, and Spectrum Management, have been delegated to RITA.

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RESEARCH AND DEVELOPMENT
REIMBURSABLE/OTHER PROGRAMS

University Transportation Centers (UTC)

Authorized Level: \$76,700,000

The University Transportation Centers (UTC) Program mission is to advance U.S. technology and expertise in the many disciplines comprised of transportation through the mechanisms of education, research and technology transfer at university-based centers of excellence.

The UTC Program is a congressionally mandated financial-assistance program to support transportation education, research and technology transfer activities at university-based centers. Under the program, UTCs receive grant funds from DOT to educate the future transportation workforce and to conduct research to advance the field of transportation. UTC grant funds require grantees to provide a dollar-for-dollar match on the Federal funds (except eight UTCs exempted by Congress), thus doubling DOT's investment in transportation research and education.

The UTC Program awards funding to sixty grantees. Forty of the grantees were designated in SAFETEA-LU and twenty were chosen from two competitions held in FY 2006. The amount of each grant is specified in SAFETEA-LU. Success is measured by the number of students graduating with transportation-related advanced degrees from universities funded under the UTC program.

SAFETEA-LU expired at the end of FY 2009. The FY 2011 Budget represents a baseline level of \$76,700,000 in grants to the UTCs to perform program-coordination functions such as operating a clearinghouse for UTC research. UTC Program funding is provided to RITA through an allocation from the Federal Highway Administration (\$69,100,000) and a reimbursable agreement from the Federal Transit Administration (\$7,600,000).

Advanced Research Program (ARP)**Authorized Level: \$32,750,000**

The Advanced Research Program manages the integration and coordination of cross cutting and multimodal research and development to promote advanced and innovative solutions to transportation issues. The SAFETEA-LU authorization earmarked a total of \$131 million for various research initiatives. The funding to support these programs is transferred to RITA from the Federal Highway Administration. The following programs are managed by RITA:

1. Biobased Transportation Research
2. Commercial Remote Sensing Research
3. Rural Transportation Research Initiative
4. Technology Transfer Hydrogen-Powered Research Initiative
5. Cold Region and Rural Research, Maintenance, and Operations
6. Advanced Vehicle Technology
7. Renewable Transportation Systems Research
8. Alternative Fuels and Life Cycle Engineering
9. Hydrogen Storage Research
10. National Cooperative Freight Research

RITA also collects reimbursable funds to manage the Department's Climate Change Center, a congressionally authorized virtual office. Funding is provided to RITA through interagency agreements from DOT's participating Operating Administrations. Funding received over four fiscal years (2006-2009) for the Climate Change Center totaled \$1,171,878.32.

There is considerable Congressional interest in environmental and energy transportation research and policy analysis. With this funding, a range of biobased research, hydrogen, fuel cell, alternative fuel research as well as climate change adaptation, mitigation and modeling is performed to support the Presidential environmental and energy initiatives and Secretarial objectives supporting environmental sustainability.

Anticipated FY 2010 Accomplishments:

1. Continue to provide staff support for the DOT Center for Climate Change and Environmental Forecasting through website maintenance and financial and organizational support.
2. Submit the Report to Congress on Transportation's Role in Reducing Green House Gas Emissions as mandated by the Energy Independence and Security Act (December 2007).
3. Begin multi-year study entitled "Impacts of Climate Change and Variability on Transportation Systems and Infrastructure: Gulf Coast Study, Phase II."
4. Increase utilization of the Transportation Research Analysis and Computing Center to provide quicker and more accurate solutions to key problems of interest to the transportation community including but not limited to traffic planning, congestion management, evacuations planning, bridge flooding and scour, bridge dynamics and structural health, pavement design, and roadside hardware performance.

5. Increase utilization of TRANSCEND to conduct basic and applied research and testing on surface transportation issues facing rural regions related to design, maintenance and operations in a colder climate.
6. Continue conducting applied research on problems facing the freight industry to develop reliable data and tools for analysis, explore operational improvements, and evaluate investment decisions for additional capacity and to identify ways to strengthen the institutional framework for the U.S. freight transportation system.
7. Continue researching paved and unpaved roadways, bridge management and condition assessment systems, freight congestion management at ports, border crossings and gateways, and optimizing corridor planning and data collection for environmental assessment procedures.
8. Continue funding biobased research through the Sun Grant Initiative and the National Biodiesel Board to further the development of better, more efficient biofuels.
9. Produce a technology readiness assessment of the four alternative fuel propulsion technologies: biodiesel, ethanol, hydrogen, and electricity.
10. Develop an alternative fuel handbook or reference tool for public/private fleet managers seeking to embark on alternative fuel programs.
11. Continue researching and developing hydrogen storage materials for preparation and characterization of selected metal hydrides and better determine their suitability for hydrogen storage.

Transportation Safety Institute (TSI)

Funding Level: \$20,000,000

FTE: 51

The Transportation Safety Institute in Oklahoma City, Oklahoma, is the Nation's leading provider of transportation safety training. The TSI educates more than 50,000 professionals each year in state-of-the-art safety methods and technologies.

The TSI assists DOT modal administrations in accomplishing their mission-essential training requirements. Since its inception, TSI has expanded its clientele to keep up with the needs of the Department and transportation industry. The Institute offers premier transit, aviation, motor carrier, traffic safety, hazardous material, and risk management training nationally and internationally.

The TSI supports several key strategies in the Department's Strategic Plan. It sponsors and participates in conferences, seminars, and meetings at which transportation consumers and providers can share advances in safety technology, regulation, and procedures. The TSI uses DOT web sites to communicate information on best safety practices, educational materials, consumer information, and other materials relating to safety. The TSI also improves safety in all modes through outreach, education, collaboration with public and industry safety partners, demonstration programs, consumer information and strategic media usage. Through training transportation industry safety professionals in accident investigation and prevention, TSI accomplishes these strategies and supports the Department's safety objectives. At the same time, TSI provides subject matter expertise to decisionmakers and the public in transportation safety.

How TSI Operates

- Direction and budget oversight provided by RITA
- Funded via reimbursable agreements, tuitions, and fees
- Associate and contract staff (industry experts) are instrumental in delivery/development of the training.

RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER

**Working Capital Fund
Program and Performance**

The Working Capital Fund finances multidisciplinary research, evaluation, analytical and related activities undertaken at the Volpe Center in Cambridge, MA. The fund is financed through negotiated agreements with the Office of the Secretary, Departmental operating administrations, and other governmental elements requiring the Center's capabilities. These agreements also define the activities undertaken at the Volpe Center.

RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
WORKING CAPITAL FUND,
VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER
PROGRAM AND FINANCING (in thousands of dollars)

Identification code 69-4522-0-4-407

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>
Obligations by Program Activity			
1000 Total Obligations	248,438	248,198	250,000
Budgetary resources available for obligation			
2140 Unobligated balance - start of year	250,560	236,534	236,534
2200 New budget authority (gross)	<u>234,412</u>	<u>248,198</u>	<u>250,000</u>
2390 Total budgetary resources available for obligation	484,972	484,732	486,534
2395 Total new obligations	<u>-248,438</u>	<u>-248,198</u>	<u>-250,000</u>
2440 Unobligated Balance - End of year	236,534	236,534	236,534
Permanent authority: Spending authority from offsetting collections:			
5800 Offsetting collections: cash	307,371	240,000	250,000
5810 Change in orders on hand from federal sources	<u>-72,959</u>	<u>0</u>	<u>0</u>
5890 Spending auth from offsetting collections (total)	234,412	240,000	250,000
Changes in unpaid obligations			
Unpaid obligations, start of year			
7240 Obligated balance: Fund Balance	-92,956	-8,198	0
7310 Total Obligations	248,438	248,198	250,000
7320 Total Outlays (Gross)	-236,640	-248,198	-250,000
Unpaid obligations, end of year			
7400 Change in uncollected customer payments from Fed sc	72,959		
7440 Obligated balance, end of year	-8,198	0	0
Outlays (gross), detail			
8690 Outlays from new discretionary authority	174,095	248,198	250,000
8693 Outlays from discretionary balances	<u>62,545</u>	<u>0</u>	<u>0</u>
8700 Outlays (Gross)	236,640	248,198	250,000
Offsets			
8800 Federal funds	307,371	248,198	250,000
8840 Non-federal funds	0	0	0
8890 Total offsetting collections	<u>307,371</u>	<u>248,198</u>	<u>250,000</u>
8895 Change in orders on hand from federal sources	<u>-72,959</u>	<u>0</u>	<u>0</u>
8900 Budget Authority (net)	0	0	0
9000 Outlays (net)	-70,731	0	0
9502 Unpaid obligation, end of year	117,659	0	0

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
WORKING CAPITAL FUND
VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER**

Object Classification (in thousands of dollars)

Identification code 69-4522-0-4-407

Reimbursable Obligations

Obj Code Item	FY 2009 <u>ACTUAL</u>	FY 2010 <u>ENACTED</u>	FY 2011 <u>REQUEST</u>
Personnel compensation			
2 111 Full-time permanent	47,909	49,050	50,000
2 113 Other than full-time permanent	3,432	3,025	3,000
2 115 Other personnel compensation	<u>1,162</u>	<u>1,033</u>	<u>1,000</u>
2 119 Total personnel compensation	52,503	53,108	54,000
2 121 Civilian personnel benefits	12,983	13,090	14,000
2 130 Benefits for former personnel	0	0	0
2 210 Travel & transportation of persons	4,366	4,000	5,000
2 220 Transportation of things	169	0	0
2 233 Commun, utilities & misc. charges	2,645	4,000	4,000
2 240 Printing and reproduction	53	0	0
2 251 Advisory and assistance services	1,437	0	0
2 252 Other services	60,151	60,000	60,000
2 253 Purch of G&S from Govt accounts	86	1,000	1,000
2 254 O&M of facilities	4,041	5,000	5,000
2 255 R&D Contracts	95,699	95,000	94,000
2 257 O&M of equipment	513	1,000	1,000
2 260 Supplies and materials	1,120	1,000	1,000
2 310 Equipment	12,234	8,000	8,000
2 320 Land and structures	<u>438</u>	<u>3,000</u>	<u>3,000</u>
2 999 Total new obligations	248,438	248,198	250,000

EMPLOYMENT SUMMARY

Reimbursable:			
2 001 Civilian full-time equivalent employment	511	550	550

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RESEARCH AND DEVELOPMENT

Intelligent Transportation Systems

FY 2011 Request: [\$110,000,000]

FTE: [17]

Overview:

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) established a Federal Program to research Intelligent Transportation Systems (ITS). The ITS program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, operational testing, technology transfer, training and technical guidance.

In 2005, Congress enacted the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorizing \$550 million for the ITS program over five fiscal years (2005-2009). The ITS program continues to play a vital role in addressing the transportation problems which our Nation faces and in preparing the Nation's surface transportation system to serve in the digital age.

FY 2010 Base:

The FHWA on behalf of RITA is requesting \$110 million for Intelligent Transportation Systems (ITS) programs. The ITS Program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, operational testing technology transfer, training and technical guidance. The ITS program continues to play a vital role in addressing the transportation problems which our Nation faces and in preparing the Nation's surface transportation system to serve in the digital age. The ITS Program is organized around major research initiatives, and technology transfer and evaluation program. The major research initiatives are large multi-year programs focused on a particular transportation issue with specific milestones and end goals. Technology transfer consists of several programs all focused on providing the necessary tools, guidance, and training to support deployment and operation of ITS by State and local governments. These programs consist of Architecture and Standards, Professional Capacity Building, Evaluation and Assessments, and Outreach. The evaluation program independently assesses the results of the ITS research projects and documents the findings for stakeholders and the public.

FY 2010 Accomplishments:

- IntelliDriveSM (formerly Vehicle Infrastructure Integration): In collaboration with both the auto industry and state DOTs, research results from the proof of concept testing and evolutions in technology capability were used to update the system architecture and requirements. A long standing real world test environment was established for use by government and industry for continuing research, evaluation, and demonstration. Research on early deployment scenarios

and applications using IntelliDrive data was initiated as well as follow on technical research based on previous proof-of-concept test results. Technical research was initiated to resolve scalability, security, positioning and other issues, including a variety of institutional issues such as data ownership and access, liability, and governance.

- Congestion Initiative: Field operational tests of ITS and other congestion reduction strategies were initiated at multiple partner sites. In some cases, evaluation of results was begun. For other sites, evaluation plans were completed to guide the process and expectations for assessing the effectiveness of the congestion reduction strategies.
- Integrated Vehicle Based Safety Systems (IVBSS): Full-scale, one-year field operational tests (FOTs) of both heavy truck and light vehicle systems in which were begun in FY 2009 were completed in FY 2010. The results of the FOTs will provide both systems effectiveness data to assess the potential real-world safety benefits of the systems along with user acceptance and user acceptance data.
- Mobility Services for All Americans (MSAA): Completed and evaluated the demonstration of the three operational test sites for development of scaleable, replicable architectures for Travel Management Coordination Centers that connect various transportation service providers for simplified access for customers.
- Clarus: Completed further integration of road weather data into the Clarus national database. Completed development of applications that were initiated in 2008. Further the migration of the Clarus database and software to the National Weather Service. Developed algorithms that convert vehicle sensor data into weather observations to be integrated into the Clarus system.
- Electronic Freight Management (EFM): Completed case studies with a variety of supply chain partners to document the effectiveness of the EFM service oriented architecture in improving operational efficiency and transportation within intermodal supply chains.
- Integrated Corridor Management (ICM): The integrated corridor management system initiative finalized the design of three systems and initiated implementation. An independent evaluator was selected and completed evaluation plans for the demonstration sites.

FY 2011 Budget Request:

FY 2011 marks a new phase of ITS research. Several previous research initiatives will continue their work begun in previous years. In addition, the ITS program will initiate new research in key areas to support USDOT goals in safety, mobility and the environment. The new ITS research will focus on high risk, high profile, high impact research that is primarily multi-modal in nature. The research will address specific problems and needs, have a high level of stakeholder commitment, involve the private sector extensively, and have significant potential benefits to the transportation community and the Nation. ITS will initiate and/or complete the following in FY 2011:

- Congestion Initiative: Evaluation will be completed of previously implemented operational tests of ITS technologies at congestion initiative sites. No new funding is required in FY 2011.

- Integrated Corridor Management (ICM): The integrated corridor management initiative will complete system implementation and initiate evaluation of up to three real-world systems at partner sites.
- Clarus: Migration of Clarus database and software to the National Weather Service will be finalized.
- IntelliDriveSM for Safety: System engineering work will be completed. Additional research will be initiated to address positioning, scalability and national interoperability. Additional field tests are anticipated that will engage state and local governments, the automotive industry and aftermarket suppliers. Test applications will be developed and will incorporate driver interface studies to evaluate effectiveness of the technologies in reducing crashes.
- Optimized multi-modal transportation: Continue research to develop and assess new data sources across all modes of transportation. Field tests of trial applications using new data sources will be pursued in partnership with state and local governments and industry. Applications will include traffic management, traveler information and pricing demonstrations. Portions of this research are encompassed by IntelliDriveSM for mobility.
- Environmental impact: Continue research started in FY 2010 to gather vehicle-based environmental and energy consumption data. Conduct field operational tests of new applications for road managers and travelers to better operate the transportation network to reduce environmental impact. Portions of this research are encompassed by IntelliDriveSM for the environment.
- E-Payment technology demonstrations: Continue research started in FY 2010 on the range of e-payment options that may be available to support seamless payment across all modes and/or policy decisions for nationwide payment. Portions of this research are encompassed by IntelliDriveSM for mobility. Also included will be demonstrations of technology options to support mileage-based user fees or other pricing alternatives.

DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
Obligation Limitation
(in thousands of dollars)

	FY 2009 ACTUAL	FY 2010 ENACTED	FY2011 REQUEST
	<u>102,960</u>	<u>107,690</u>	<u>110,000</u>
IntelliDrive (SM)	26,433	20,400	0
Integrated Vehicle Based Safety Systems	1,534	0	0
Next Generation 911	0	77	0
Integrated Corridor Management	7,400	10,200	11,500
Mobility Services for All Americans	520	620	0
Clarus	2,860	2,000	3,500
Road Weather Research and Development	1,910	4,590	1,500
I-95 (T)	6,587	6,669	7,800
Architecture and Standards (T)	8,468	6,260	6,000
Professional Capacity Building (T)	3,100	3,000	3,000
Program Assessment (T)	4,550	4,100	6,000
Outreach & Policy (T)	800	975	4,000
Congestion Relief Research and Development (T)	32,994	0	0
ITS Program Support	5,779	5,501	6,000
Rural Communications Corridor Study	25	0	0
Multi-Modal Mobility	0	31,383	46,000
Environment	0	1,910	7,000
E-Payment	0	1,500	2,700
Modal-specific research	0	8,505	5,000

EXHIBIT III-1
BUREAU OF TRANSPORTATION STATISTICS
(HIGHWAY TRUST FUND ALLOCATION)
Appropriations Summary by Program Activity
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)

	FY 2009	FY 2010	FY 2011	CHANGE
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>	<u>FY 2010-2011</u>
<u>Bureau of Transportation Statistics</u>				
Travel Statistics	2,947	3,056	3,056	0
Freight Statistics	10,723	11,120	13,120	2,000
Transportation Economics	1,811	1,878	1,878	0
Geospatial Information	1,758	1,823	1,823	0
Compilations, Methods and Standards	7,416	7,691	7,691	0
National Transportation Library	<u>2,345</u>	<u>2,432</u>	<u>2,432</u>	<u>0</u>
TOTAL: [Discretionary] ^{1/}	[27,000]	[28,000]	[30,000]	[2,000]
Direct Funded	68	70	70	0
Reimbursable FTE	16	19	19	0

^{1/} Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highways program.

EXHIBIT III-2

**BUREAU OF TRANSPORTATION STATISTICS
SUMMARY ANALYSIS OF CHANGE FROM FY 2010 TO FY 2011
Appropriations, Obligation Limitations, and Exempt Obligations**

(\$000)

Item	Change from FY 2010 to FY 2011	FY 2011 PC&B by Program	FY 2011 FTEs by Program	FY 2011 Contract Expenses	Total
FY 2010 BASE (ENACTED)	28,000	Note Columns are Non-Add			
BUREAU OF TRANSPORTATION STATISTICS					
Adjustments to Base					
2010 Pay Raise Annualization (2.0%)	62				
2011 Pay Raise (1.4%)	129				
GSA Rent Increase	82				
Working Capital Fund Increase	283				
Subtotal, Adjustments to Base	556				
New or Expanded Programs					
Travel Statistics	-116	2,606	10	450	3,056
Freight Statistics	2,000	8,620	21	4,500	13,120
Transportation Economics	-41	1,718	9	160	1,878
Geospatial Information	-40	1,463	6	360	1,823
Compilation Methods and Standards	-255	7,296	17	395	7,691
National Transportation Library	-104	2,084	7	348	2,432
Subtotal, New or Expanded Program					
Increases/Decreases	1,444	23,787	70	6,213	30,000
Total FY 2011 Request	2,000	23,787	70	6,213	30,000

RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
BUREAU OF TRANSPORTATION STATISTICS
(Allocation Account under FHWA's Federal-Aid Highway)
OBJECT CLASSIFICATION
(In thousands of dollars)

		<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
		<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>
<u>Direct Obligations:</u>				
	Personnel compensation:			
2111	Full-time permanent	7,846	8,978	9,117
2115	Other personnel compensation	<u>221</u>	<u>259</u>	<u>263</u>
	Total Personnel Compensation	8,067	9,237	9,380
2121	Civilian Personnel benefits	1,941	3,078	3,126
2210	Travel and Transportation of persons	123	200	200
2220	Transportation of Things	2	5	5
2231	Rent to GSA	1,235	1,521	1,521
2240	Printing & Production	3	10	10
2251	Advisory and Assistance services	6,028	3,700	5,680
2252	Other Services	467	3,352	4,681
	Other purchases of goods and services			
2253	from gov't accounts	7,300	3,707	4,000
2257	Operation and maint of equipment	997	1,000	1,020
2260	Office Supplies	16	40	20
2310	Equipment	<u>1,882</u>	<u>2,150</u>	<u>357</u>
2990	Subtotal, direct obligations	28,061	28,000	30,000
2990	Reimbursable obligations	9,930	12,000	12,000
9999	Total obligations	37,991	40,000	42,000

Personnel Summary:

Reimbursable:				
2001	Civilian Full-time Equivalent Employment	16	19	19
Allocation:				
3001	Civilian Full-time Equivalent Employment	<u>68</u>	<u>70</u>	<u>70</u>
		84	89	89

RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
BUREAU OF TRANSPORTATION STATISTICS
10-Year Funding History
(In thousands of dollars)

<u>FISCAL YEAR</u>	<u>REQUESTED</u>	<u>ENACTED</u>
2002	43,760	30,808 ^{1/}
2003	35,806	30,499 ^{2/}
2004	35,239	30,235 ^{3/}
2005	32,199	30,015 ^{4/}
2006	32,869	26,730 ^{5/}
2007	27,480	27,562 ^{6/}
2008	27,000	27,000 ^{7/}
2009	27,000	27,000 ^{8/}
2010	28,000	28,000 ^{9/}
2011	30,000	-

^{1/}FY 2002 reflects a reduction of \$192,000 to WCF expenses as stated in P.L. 106-554 based on an across the board rescission.

^{2/}FY 2003 reflects a reduction of \$300,000 for WCF expenses (section 362) and .65% rescission of \$201,500 (section 601) of P.L. 108.7.

^{3/}FY 2004 reflects a reduction of \$581,000 for WCF expenses (section 517) and .59% across the board rescission of \$183,000 (section 168) of P.L. 180-199.

^{4/}FY 2005 reflects a reduction of \$737,000 to WCF expenses (section 197) as stated in P.L. 108-477.

^{5/}FY 2006 reflects a 1% across the board rescission of \$270,000 as stated in P.L. 109-148, section 3801.

^{6/}FY 2007 reflects levels under a year long CR. An increase of \$562,000 over amount is due to Revenue Aligned Budget Authority (RABA) estimates (\$462,000) and a pay increase (\$93,000) provided by H.J. Res 20.

^{7/}FY 2008 reflects funding provided in P.L. 110-161.

^{8/}FY 2009 reflects funding provided in P.L. 111-8.

^{9/}FY 2010 reflects funding provided in P.L. 111-117.

Detailed Justification for Travel Statistics Program

FY 2011 Request: \$3,056,000

FTE: 10.0 [includes 3.0 overhead]

Overview:

The Travel Statistics Program provides information regarding business and personal travel as well as passenger travel facilities. Travel data is prepared and disseminated for Federal, State, and local governments to effectively establish transportation policy, planning, and program management. It provides transportation data to decision makers on such issues as ferry operations and related infrastructure, intermodal connectivity in the passenger transportation network, public accessibility to transportation in rural areas, and risk exposure in transportation. The Travel Statistics Program also develops congestion measures to assist planners in determining the impacts of congestion or in prioritizing mitigation efforts.

FY 2010 Base:

The Omnibus Household Survey has been conducted since 2000. Data is collected from a random digit dialing sample of telephone interviews conducted with over 1,000 nationally representative households and a target sample of 500 households in one of nine selected Metropolitan Statistical Areas. Survey questions cover mode use, journey to work, community livability, distracted driving, telecommuting, and security screening procedures at the Nation's airports and transit system. The current funding is provided by the Transportation Security Administration through a reimburseable agreement.

The Intermodal Connectivity Database (IPCD) when complete will, for each of the estimated 7,000 passenger terminals in the United States, include data on the facility location and show all scheduled passenger transportation modes that serve that terminal. It will be the Department's only measurement of the degree of intermodal connectivity in the system, and the only consolidated database of passenger transportation facilities.

BTS will continue the reimbursable partnership with the Federal Railroad Administration (FRA) to develop and operate the Confidential Close Call Reporting System (C³RS) for the demonstration study, and identify key elements of such system for an industry-wide implementation of a close call system.

The National Census of Ferry Operators, previously conducted in 2006 and 2008, will embark on the next collection and provide updated information on the Nation's ferry operations, including information on ferry operators, their vessels, services, and routes. This information will be used to update the BTS database of all ferry operations that provide domestic service within the United States and its possessions. This includes those operations that provide itinerant, fixed route, common carrier passenger and/or vehicle ferry service.

Anticipated FY 2010 Accomplishments:

- The 2010 National Census of Ferry Operators will collect updated information on the Nation's ferry operations and operators. Online and paper survey forms will be sent to each of the approximate 230 operators operating in the U.S. and its territories. Follow-up efforts will also be made to ensure that the most complete and accurate information is collected from all eligible operators.
- Data collection will begin on transit rail stations (subway and light rail). For the Intermodal Passenger Connectivity Database (IPCD), the data on commuter rail stations will be completed and added to the IPCD, and a Special Report released analyzing that data.
- Assess the public's satisfaction with the Nation's transportation system in light of the DOT's strategic goals, provide a survey vehicle for the operating administrations within the DOT as well as other governmental agencies, survey the public about current transportation issues, and provide National estimates of transportation mode usage through the Omnibus Household Survey (OHS).
- Partner with the Department of Homeland Security, Transportation Security Administration (TSA) to provide the Omnibus Survey as a means for TSA to measure various security procedures at airports and throughout the Nation's transit systems. The partnership also provides complete funding for the project. Each year the survey has revised the questions to meet the needs of TSA and they continue to increase funding. The Omnibus Survey provides TSA with data for the performance measures documents and a summary report of findings for BTS customers. Other customers consist of State and local transportation groups, other DOT modes, TRB, academia, and the general public.
- Organize and summarize the U.S. Customs and Border Protection international border crossing and entry data. The Border Crossing/Entry Data Program will continue to provide data users with comprehensive monthly and annual vehicle, container, passenger and pedestrian entry count information for all United States border land and ferry ports of entry from Canada and Mexico.
- Partner with FRA on the C³RS project. A baseline C³RS safety culture survey will be conducted at a 3rd pilot site. A mid-term C³RS safety culture survey at the 1st pilot site and continue to process confidential data and analyze close calls. BTS will also conduct a baseline survey at the 4th pilot site and a mid-term survey at the 2nd pilot site.

FY 2011 Budget Request

In FY 2011, the Travel Statistics Program will continue to provide unique services to other Federal agencies, particularly within DOT. Staff will continue to augment and refine the National Ferry Database using the 2011 survey of ferry operators, which will provide a published summary report and add data from other sources (U.S. Coast Guard, U.S. Army Corps of Engineers, and the American Association of State Highway and Transportation Officials (AASHTO) on ferry routes, vessels, and terminals. The Confidential Close Call Reporting System will be in its fifth year of data collection. Work will continue on developing statistics for the measurement of congestion and safety risk exposure. U.S. Customs and Border Protection's

Border Crossing/Entry data will be processed and published. The Omnibus Household Survey and other targeted surveys will be conducted on an on-demand basis and results will be summarized and published on the Passenger Travel Program web page. Travel program staff will also continue development of the Intermodal Passenger Connectivity Database and update the rural access analysis. Both of these areas are anticipated to be important elements of the Department's Livability initiatives. The Travel Statistics program will continue to prepare special reports based on the needs of the Administration and Congress on travel data issues, and continue its coordination role with the Census Bureau on travel data.

Explanation of Funding Changes for Travel Statistics Program

Amount: \$0

Detailed Justification for Freight Statistics Program

FY 2011 Request: \$13,120,000
FTE: 21.0 [includes 13.0 overhead]

Overview:

The Freight Data Program develops and compiles data and information on the movement of freight within, through, into and from the United States by all modes of transportation. It is a critical program that focuses on collecting, compiling, analyzing, and publishing a comprehensive set of transportation statistics on the performance and impacts of national and international freight flows on the Nation's transportation system.

The Commodity Flow Survey (CFS) is the program's flagship survey and provides the most comprehensive source of multimodal data on the flow of goods in the Nation. The CFS is the only available source of data for the highway mode that carries nearly 3/4 of the value and 2/3 the tonnage of freight transported in the U.S.

FY 2010 Base:

The Freight Data Program for FY 2010 includes completing the data processing phase of the 2007 Commodity Flow Survey, releasing the final CFS data products in December 2009, and producing additional value-added analysis and reports incorporating CFS results. On a concurrent track, planning and research activities will be fully underway for the next iteration of the Commodity Flow Survey scheduled for 2012.

The FY 2010 base also includes processing and disseminating international trade and freight transportation data and analysis, including data for the formula used in calculating apportionments for border state infrastructure grants. The Freight Data Program will continue to respond to requests from Congress, OST, and the White House, for quick responses on the relationship between transportation and the economy, and provide transportation expertise and technical support for urgent data and analysis needs.

Anticipated FY 2010 Accomplishments:

- Publish *North American Trade 2009*, a special report which provides a comprehensive summary of North American Freight flows for all modes of transportation.
- Release the final 2007 CFS tables in December 2009 and produce other value-added freight reports incorporating CFS data.
- Conduct methodological research and initiate design and planning efforts for the 2012 CFS.
- Release the Transborder and Border Crossing & Entry data, permitting scheduled and reliable access to a wide variety of customers who utilize the U.S. international freight data, including Departmental staff, Congressional staff, state transportation departments, international organizations, and universities.

- Publish *America's Freight Transportation Gateways 2009*, an update of a 2004 report which provides a data profile of the nation's leading international freight transportation gateways for all modes of transportation along with summary trend data.
- Publish *Freight Transportation: Global Highlights*, a new report which provides a snapshot of freight activities from a global perspective, highlighting the physical characteristics and industry output for the U.S. and other leading world economies.
- Complete the design of the International Freight Data System (IFDS), which will serve as the Department's interface with the ITDS and serve as the warehouse for international freight data. The IFDS is a DOT agency partnership which will support the international freight data needs of the participating DOT modal administrations. This also supports the DOT agencies' requirement to interface with ITDS according to the OMB directive under the Import Safety Initiative.
- Provide technical support for the oversight committees and project panels of the National Cooperative Freight Research Program (NCFRP) and the Hazardous Materials Cooperative Research Program (HMCRP).
- Produce a report on the current status of imports and exports with a focus on the U.S. ports that handle freight traffic.
- Produce other relevant, timely, and focused technical and analytical reports on national and international freight transportation-related issues and data.

FY 2011 Budget Request

In FY 2011, the Freight Data Program will complete research efforts and be fully engaged in the design, preparation, and implementation of the 2012 Commodity Flow Survey. In addition, staff will continue to analyze 2007 data and contribute to value-added freight publications and tools, and provide data user assistance.

The CFS as the flagship survey of the Freight Data Program has provided one of the most valued freight data series since its initiation in 1993. The FY 2011 funding will be used to continue the survey in 2012. Although the CFS is a multimodal survey, it is the only available source of data for the highway mode and also provides the most comprehensive set of national data on the movement of hazardous materials. These data are also fundamental in supporting the Department's strategic objectives.

Historically, the CFS has been conducted on a five-year cycle and has previously been conducted in 1993, 1997, 2002, and 2007. The funding increase of \$2 million will be utilized to conduct the following activities in 2011: (1) finalize survey design and data collection methods; (2) print all survey forms; (3) select sample of establishments; (4) program data capture software and finalize edit programs; and (5) initiate the first mailings to survey respondents. For the 2007 CFS, the cost was \$25 million to conduct the survey. This does not include the BTS FTE cost and the cost of conducting the mileage calculation effort. For the next version of the CFS, the \$2 million budget increase is estimated to cover the increase in cost of conducting the survey.

The Freight Data Program will continue to release transborder freight data and border crossing & entry data, providing data users with trade statistics on the commodities and mode of transportation used with our largest trading partners. The Freight Data Program will continue its

international data exchange activities. The Freight Data Program will continue to produce relevant and timely national and international freight transportation data and analysis for all modes of transportation. The Freight Data Program will include outreach to customers to assure that the most important data is provided, and innovative methods for meeting freight data needs at the state and local levels will be encouraged.

The Freight Data Program will lead the deployment of the IFDS for the Department, in cooperation with other DOT agencies and the Department of Homeland Security (DHS). The IFDS is the DOT interface to the DHS Customs and Border Protection's International Trade Data System (ITDS).

Explanation of Funding Changes for Freight Statistics Program

Amount: + \$2,000,000

The funding increase of \$2,000,000 consists of costs to complete research and design efforts and begin the initial implementation phase of the 2012 Commodity Flow Survey (CFS) as delineated under the FY 2011 budget request line item above. This data program provides the core freight data used by policy makers and transportation professionals for a myriad of transportation planning decisions and policy analyses. The CFS is the Nation's largest survey of national, multimodal freight movement.

Detailed Justification for Transportation Economics Program

FY 2011 Request: \$1,878,000

FTE: 9.0 [includes 2.0 overhead]

Overview:

The Transportation Economics Program develops basic economic and financial data to support transportation decision making, including development of economic indicators that explain the relationship between transportation and the economy. Program products provide transportation policy officials with information and data on how decisions influence the larger economy to optimize transportation investments, improve transportation system productivity, and increase the value of transportation to users. The program focuses research on relevant topics including transportation sector productivity, transportation costs, and national accounting for transportation expenditures.

FY 2010 Base:

The Transportation Economics Program in FY 2011 includes continued development of the Transportation Satellite Accounts (extending the transportation component of GDP beyond for-hire services to include transportation services provided in-house by industries), quarterly production of the Air Travel Price Index, measures of productivity, studies of the economic consequences of transportation investments, continued development of a transportation and economic forecasting center, publication of Government Transportation Financial Statistics, research on the Transportation Services Index, estimation of short-term and mid-term travel forecasts, de-seasonalization of travel estimates, development of trends in national congestion levels over time, and modal data and expertise in development of a multi-modal network, and forecasting model for the Federal Highway Administration.

Anticipated FY 2010 Accomplishments:

- Update the 1997 and 2002 Transportation Satellite Account (TSA) estimates for private truck, rail, aviation, and waterborne modes for use by the USDOT Chief Economist, and other economists in measuring the impacts of transportation expenditures on Gross Domestic Product.
- Produce the Air Travel Price Index on a quarterly basis. Continue development of new ATPI automated system components, and user testing.
- Publish total transportation sector multi-factor productivity (MFP) measures and analysis including trucking, aviation, rail, pipeline, and waterborne modes. This effort will develop a combined multifactor productivity index that would combine the MFP indexes of the various transportation sub-sectors: air, rail, truck, pipelines, and water transportation.
- Develop potential metrics for use in identifying characteristics of livable communities.

- Publish the 2010 edition of the Government Transportation Financial Statistics (GTFS).
- Continue to develop a Time Series and Forecasting Center and publish short-term time series and mid-term forecasts.
- Produce the Key Transportation Indicators report on a bi-monthly schedule, add data series that fill in mode gaps, and publish Transportation Trends in Focus (TTiF) reports on requested topics (VMT TTiF forthcoming).
- Provide aviation and other modal data, and modeling and forecasting expertise to the Federal Highway Administration in the construction of a multi-modal network and forecasting model.
- Develop estimates of short-term and mid-term travel forecasts; provide support to FHWA on short-term forecasting of VMT, and estimate of trends in historical nationwide congestion measures. Estimate de-seasonalized monthly travel data for FHWA.
- Make estimates of the economic impacts on the Highway Trust Fund of changes in gasoline prices and total number of vehicle miles traveled. Add travel and program modeling support to modal agencies through development of the Transportation Economic Analysis Modeling System (TEAMS) model for various modes of transport.
- Continue to provide data and statistics to other agencies and organizations within and outside the U.S. for national and international statistics compilations such as OMB, U.S. Census Bureau, the United Nations, and Organization Economic Cooperation and Development (OECD). Take the lead in reporting transportation data and statistics for the DOT in these compilations.

FY 2011 Budget Request

The Transportation Economics Program in FY 2011 includes continued development of the Transportation Satellite Accounts (extending the transportation component of GDP beyond for-hire services to include transportation services provided in-house by industries), quarterly production of the Air Travel Price Index, measures of productivity, studies of the economic consequences of transportation investments, continued development of a transportation and economic forecasting center, publication of Government Transportation Financial Statistics, research on the Transportation Services Index, estimation of short-term and mid-term travel forecasts, de-seasonalization of travel data, development of trends in national congestion levels over time, and modal data and expertise in development of a multi-modal network and forecasting model for the Federal Highway Administration.

In FY 2011, the Transportation Economics Program will produce the core set of economic data and indicators as in 2010, which include the Transportation Satellite Accounts, Air Travel Price Index, Government Transportation Financial Statistics, Multi-factor productivity measures, and

the State Transit Expenditure Survey. The Transportation Economics Program will expand to include forecasting, trending and time series analysis of transportation modal data.

Explanation of Funding Changes for Transportation Economics Program

Amount: \$0

Detailed Justification for Geospatial Information Systems Program

FY 2011 Request: \$1,823,000
FTE: 6.0 [includes 1.0 overhead]

Overview:

The Geospatial Information Systems (GIS) Program provides a comprehensive set of geospatial information as the basis for planning, policy, investment, asset management and improved transportation decision making. The GIS Program provides visual and analytic tools to display transportation data using a geographic reference. Our spatial analysis in GIS with Web based tools allows DOT customers and stakeholders greater access to transportation data and information in a more user friendly and familiar format. In addition, transportation planners and others can use geospatial information systems to prioritize highway maintenance projects, study noise “footprints” around airports, and plan for system disruptions due to natural disasters or national security threats.

FY 2010 Base:

The GIS Program has taken leadership roles in GIS for Transportation and National States Geographic Council and has been instrumental in developing the Transportation for The Nation (TFTN) project. Numerous maps have been produced to support the DOT Crises Management Center, responding to Congressional and other governmental requests. The 2010 National Transportation Atlas Databases (NTAD) was produced and distributed. Finally, a new database was created in cooperation with the Office of Transportation Analysis.

Anticipated FY 2010 Accomplishments:

Industry Participation

BTS has taken leadership roles in GIS for Transportation and National States Geographic Council and has been instrumental in developing the Transportation for The Nation (TFTN) project. TFTN is a project that involves different levels of government and is lead by States’ Geographic Councils. BTS has assisted this effort by identifying potential resources and getting buy in from different Operating Administrations. While this project is still in its initial stages, the TFTN project is now moving forward and is expected to benefit not only state and local governments but the USDOT as well. In cases like this, states would greatly benefit from a project like TFTN, but lack the coordination authority needed to bring these divergent interests together. BTS and the USDOT would benefit from the detailed data gathered by state and local governments. This project has demonstrated how state/federal partnerships can be effectively shaped and utilized.

Geospatial Analysis, Mapping

Numerous maps have been produced to support the Crises Management Center (CMC), responding to Congressional and other governmental requests. BTS’s support for the CMC was recently demonstrated in June when maps prepared by BTS of Maine, Connecticut, New

Hampshire, New York, New Jersey and Vermont depicting transportation infrastructure were used for an exercise the CMC was participating in titled Eagle Horizon. A map was prepared for the Coalition of North East Governors depicting existing and proposed passenger rail routes for New England. This map was presented at this organizations meeting on High-Speed and Intercity Passenger Rail where the USDOT Secretary was present. In all such requests, maps were used to convey important information on the condition and capabilities of the Nation's transportation system.

Development of the National Transportation Atlas Database (NTAD)

BTS produces the National Transportation Atlas Database (NTAD) annually. The NTAD is a set of nationwide geographic databases of transportation facilities, transportation networks, and associated infrastructure. These datasets include spatial information for transportation modal networks and intermodal terminals, as well as the related attribute information for these features. The NTAD has become one of BTS' most popular products and its annual release is anticipated by many in the transportation industry. BTS maintains the relevancy of NTAD by constantly looking for new and useful transportation data to add and updating its existing data sets. This has allowed the NTAD to be used in research, analysis, and decisionmaking across all transportation modes. While the NTAD is most useful at the national level, it has been demonstrated to have major applications at regional, state, and local scales throughout the transportation community. In 2010, a national ferry database will be added to NTAD.

Geospatial Data Development

In FY 2010, a new database on Ferry routes and terminals was created in cooperation with another BTS program office. The GIS Program has participated in many such cooperative data development efforts in the USDOT. This cooperation will continue to grow. The GIS Program works to strengthen its ties with other programs within the USDOT. This cooperation with other modes and programs is made practical by the cross-cutting nature of GIS.

FY 2011 Budget Request

The 2011 Budget Request will continue the activities of FY 2010. The following are the GIS Program's project list.

Industry Participation

Lead DOT and the geospatial transportation community, support the development of the legislatively mandated NSDI, participate in the Federal Geographic Data Committee, the National States Geographic Information Council, the Transportation Research Board, and the AASHTO GIS for Transportation Symposium Planning Committee. As discussed in the 2010 request, BTS's participation in the development of the Transportation for the Nation will continue to grow.

Geospatial Analysis, Mapping and Internet Web Mapping Program Support for Decision Makers

This Program will provide geospatial leadership within the DOT, in the form of mapping, Geospatial analyses and the development and modification of Internet Web Mapping tools for decision makers. The Program staff will provide support to the Department's Crisis Management Center (CMC) and for Continuity of Operations (COOP). In this effort OGIS will be leveraging its existing geospatial analysis and map making skills with new and more dynamic web mapping making tools called Web Mapping Services.

Geospatial Data development

OGIS works with Offices within RITA and the USDOT to create geospatial transportation data that meets needs within the agency and the Department. In certain situations, critical geospatial data is not available that supports programs, if deemed practicable, OGIS will partner with other offices to create and maintain these needed data. Currently several existing Geospatial databases are in the queue to be updated, these include the Intermodal Transfer Facility database and the Transit Fixed Guidway network. Both data sets are highly regarded in the transportation community; however funds have prevented their being updated.

Explanation of Funding Changes for Geospatial Information Systems

Amount: + \$0

Detailed Justification for Compilations, Methods and Standards Program

FY 2011 Request: \$7,691,000

FTE: 17.0 [includes 9.0 overhead]

Overview:

The Compilations, Methods, and Standards Program compiles and publishes multi-modal and intermodal transportation data and analysis covering critical and timely transportation topics with the ultimate goal of providing quality data and information for all modes of transportation for decision-making. The Program assembles data and provides technical support regarding performance measure scope, sources, statistical issues, completeness and reliability for the DOT operating administrations. It also prepares the Performance Data Completeness and Reliability Details Exhibit for the annual Performance and Accountability Report.

FY 2010 Base:

Statistical compilations include recurring print and web publications: the *Transportation Statistics Annual Report* (an annual report to Congress), the *National Transportation Statistics*, the *State Transportation Statistics*, and the *BTS Pocket Guide to Transportation*. The program also produces Key Transportation Indicators, leads the production and release of the monthly Transportation Services Index and disseminates transportation data through multinational exchanges.

The Methods and Standards program will conduct statistical data quality reviews of BTS data compilations and dissemination of information products; provide consulting support to other DOT modes to help ensure that rulemakings and other program actions are based on sound, defensible data; and provide statistical support for the Department's Performance and Accountability Report.

FY 2010 Accomplishments:

- Produce and publish the *Transportation Statistics Annual Report* (TSAR) to provide Congress with key indicators on transportation issues including a summary update on the state of transportation statistics.
- Lead in the production and release monthly the Transportation Services Index (TSI), which is a measure of the movement of freight and passengers, and is an indicator of changes in the economy.
- Update, publish, and distribute the annual *Pocket Guide to Transportation*, including revisions resulting from consultations with key customers.
- Quarterly update the web compendium of the *National Transportation Statistics* and produce an associated volume of the *State Transportation Statistics*.
- Bi-monthly web update of the Key Transportation Indicators.
- Produce relevant and timely focused analytical and technical reports on transportation and statistics-related issues and data (U.S. Ocean Passenger Terminals, Ocean Passenger Vessels, Vessel Piracy).

- Provide leadership and technical support for the North American Transportation Statistics Interchange with Canada and Mexico and continue the international data exchanges with other nations. In partnership with statistics and transportation agencies in Canada and Mexico, release an update of the North American Transportation Statistics Online Database (NATS OD) on the web. The NATS OD houses comprehensive key statistics from the three countries, along with technical documentation related to data collection methods, definitions and applicable standards.
- Support the DOT in the interpretation and implementation of the statistical portion of the DOT Information Dissemination Quality Guidelines. Support other ad hoc requests from DOT such as review of statistical methods in rulemaking processes.

FY 2011 Budget Request

BTS will continue to produce, publish and make available a core set of online and print documents, and scheduled data releases, at a level commensurate with resources. This includes the *Transportation Statistics Annual Report*, quarterly web update of the *National Transportation Statistics*, *State Transportation Statistics*, a *Pocket Guide to Transportation*, and other regularly scheduled data releases including the monthly Transportation Services Index and Key Transportation Indicators. Key Transportation Indicators will be evaluated for expansion in FY 2011. The program will continue to produce relevant and timely focused analytical and technical reports on multimodal and intermodal transportation and statistics-related issues and data.

The program will continue to provide technical support and transportation expertise to international data exchanges and continue to provide data and statistics to other agencies and organizations within and outside the U.S. for national and international statistics compilations such as OMB, U.S. Census Bureau, the United Nations, and OECD.

This program will continue to provide technical assistance to the DOT operating administrations for the DOT performance measurement and perform quality and confidentiality reviews of data systems and information products.

Explanation of Funding Changes for Compilations, Methods and Standards

Amount: \$0

Detailed Justification for National Transportation Library

FY 2011 Request: \$2,432,000

FTE: 7.0 [includes 1.0 overhead]

Overview:

The National Transportation Library (NTL) maintains and facilitates access to statistical and other information needed for transportation decision-making at the Federal, State, and local levels. These goals are achieved through coordination with public and private transportation libraries and information providers to improve information sharing among the transportation community. Established as a digital library, the vast majority of NTL products and services are accessible through the Internet, providing broad access to the nation's transportation research and planning literature. For the Department, NTL provides a knowledge access point through its reference services, which field inquiries from the Department's key stakeholders.

FY 2010 Base:

The FY 2010 base comprises the following major components:

Reference Management: This is the transportation information front door to the Department. The NTL Reference Service team responds to transportation information requests from the community, including DOT, other federal agencies, State DOTs, Congress, and the general public. The library staff handles an average of about 2,500 requests for information each month. Special technology is used to retain canned responses and searchable FAQs to assure consistency and efficiency in delivering repeatedly requested information, and making it more accessible to the user.

Database and Archive Management: Through a partnering agreement with the Transportation Research Board, the NTL publishes the Transportation Research Information Service on the Web as the *TRIS Online* database, which provides researchers and the public with free desktop access to over 680,000 information and research resources. *TRIS Online* has the broadest coverage of transportation resources of any analytical index in the world. The NTL Integrated Search platform also includes a Digital Repository and web portal. The Digital Repository contains 30,000 full-text documents, including significant transportation documents from the University Transportation Centers, State DOTs, transportation associations, and other research and policy institutions. New collections are added to the repository for long-term preservation as agreements are reached. In FY10, collection of additional state reports will continue.

Tools and Standards Management: The NTL's metadata standard for indexing digital resources and use of controlled vocabularies (e.g., Transportation Research Thesaurus or TRT) allows interoperability with other web resources and targeted access to both the Digital Repository and the Portal Collection. NTL also makes its databases available to Internet Search Engines such as Google and Yahoo! through implementation of Google Sitemaps and other protocols. To increase access NTL has joined science.gov, a joint project of 17 federal agencies providing access to federal scientific and technical information. Other NTL access tools include directories,

bibliographies, and taxonomy. NTL houses custom Google searches of all State DOT, UTC, MPO, and transit agency websites. Additionally, the NTL has developed the Rural and Agricultural Transportation Data and Information Resources website. Finally, the NTL maintains the TRT, the international standard transportation taxonomy and controlled vocabulary. These tools are used in tandem with the databases and archives enabling efficient, robust search, retrieval, and access to *TRIS Online*, and other transportation information resources.

Networking: Through partnership with the Federal and State DOT libraries, university transportation libraries, and the largest holder of library catalog records, the Online Computer Library Consortium (OCLC), the NTL has made available to the public a one-stop portal, the Transportation Librarians Catalog (TLCat) to the catalogs of the Nation's most significant transportation libraries. The NTL created TLCat, which provides users with unprecedented desktop access to policy, administrative, operations, and research literature through interlibrary loan. NTL also coordinates the activities of the three regional transportation knowledge networks (TKNs) and continues in the development of a national TKN. Additionally, NTL hosts the Transportation Librarians Roundtable, a monthly forum for transportation librarians to discuss and exchange best practices on issues of mutual interest.

Anticipated FY 2010 Accomplishments:

- NTL will continue to support USDOT TIGER Team efforts on the American Recovery and Reinvestment Act by receiving, reviewing, and responding to all telephone (202-366-0745) and email (tigerteam@dot.gov) inquiries within 24 hours of receipt.
- The NTL will continue to provide quick, courteous, and accurate answers to requests for information from Congress, other federal agencies, academia, industry, the media, and the public within 24 – 48 hours of receipt.
- NTL will continue to develop, maintain, and promote new and existing tools and standards, such as the Transportation Research Thesaurus, that provide better access to information. It will also continue to coordinate national information dissemination and exchange activities through the National Transportation Knowledge Network (NTKN), including coordination of cooperative projects such as adding state, regional, and local research to the USDOT Climate Change Clearinghouse.

FY 2011 Budget Request

The budget request for FY 2011 will enable continuation of the major FY 2010 NTL base activities: (1) reference management, (2) database management; (3) networking; and (4) tools and standards management. Accomplishment of NTL performance goals is most dependent on successful execution of these activities. In addition to maintaining the four key functions, one new program, a discovery application that allows searching across all transportation information resources, will be initiated in FY 2011 to enhance NTL online services.

Explanation of Funding Changes for National Transportation Library

Amount: \$0

Detailed Justification for Office of Airline Transportation Statistics Program

FY 2011 Request: \$4,000,000

FTE: 19

Overview:

The primary purpose of the program is to collect aviation data and provide Congress, DOT, and other Federal agencies with uniform and comprehensive aviation data that are accurate, timely, and relevant for use in making aviation policy decisions and administering aviation-related programs. DOT program uses of BTS airline data include the Airport Improvement Program, Essential Air Service, monitoring the performance of the air transportation industry, and conducting status evaluations at both the individual airline and at industry levels, as well as conducting international negotiations of air service agreements. The use and visibility of this airline data collection, which was originally mandated to enable oversight of airline competition, has grown in recent years as airlines and their markets have increased in complexity and competitiveness.

FY 2010 Base:

The Office of Airline Information Program/BTS collects, processes, and regularly releases/disseminates airline data from four primary data collections: On-Time Flight Performance (including causes of delays), domestic and international passenger and freight traffic, passenger ticket information, and airline financial and employment information. The air passenger itinerary and fare information is disseminated on the BTS website and directly from BTS as datasets and reports. The program also provides specialized reports for DOT and other Government agencies that are required in fulfilling their legislative mandates.

BTS collects and disseminates airline financial, traffic, performance and operational data from 150 U.S. airlines. Traffic data to and from the United States are collected and disseminated from 135 foreign air carriers that operate air service to the United States. Annually, BTS collects over 8,000 reports from U.S. and foreign airlines. BTS continues to enhance its airline data edit and validation procedures in order to maintain a high level of data quality for DOT decision-makers.

FY 2010 Accomplishments:

- Monthly release of traffic data covering air passenger enplanements for the industry; airline rankings by air passenger enplanements, traffic volume, revenue miles, available seat miles, load factors and trip lengths;
- Quarterly release of Air Passenger Origination-Destination Survey of passenger fare and trip itinerary data;
- Quarterly release of domestic operating profit and loss data for individual airlines and by carrier groups (e.g. majors, low cost carriers); airline domestic unit costs; and revenue yield;

- Monthly release of On-Time performance data, providing the overall on-time arrival and departure performance of airlines, airports, and specific flights which includes the new Tarmac Delay data for delayed and cancelled flights;
- Monthly data on causes of flight delays, characterized in five categories: Air Carrier, Extreme Weather, National Aviation System (NAS), Late-Arriving Aircraft, and Security;
- Maintain and operate OAI's data processing environment.
- Make further progress in E-GOV goals and continue to develop and further enhance and expand a pilot program to enable air carriers to file their financial, operational, and traffic data reports with BTS using a more efficient electronic means (Web e-filing), improving data processing efficiency and reducing reporting burden on the industry.
- BTS will continue to support the Office of the Secretary in mail ratemaking and Essential Air Service (EAS) programs.
- Continue to provide airline traffic data collection and processing as required jointly of DOT and the U.S. Postal Service by the Rural Service Improvement Act.
- Continue to provide GAO with request data traffic and financial information.
- Develop further enhancements to the processing system for data validation, improving the edit logic or "business rules" to maintain a high level of airline data quality in a Total Quality Management (TQM) program.

FY 2011 Budget Request

In FY 2011, the Air Transportation Statistics Program will continue the maintenance and operation of the existing airline data collections, ensuring high quality data and maintaining a steady state production of accurate, timely and relevant outputs. BTS will also continue with the implementation of its total quality management program, improving the integrity of its airline data systems, and ensuring data consistency across data systems and across all the historical years of data collection. BTS will continue to do the following releases of data as outlined in our regulations:

- Monthly release of traffic data covering air passenger enplanements for the industry; airline rankings by air passenger enplanements, traffic volume, revenue miles, available seat miles, load factors and trip lengths;
- Quarterly release of Air Passenger Origination-Destination Survey of passenger fare and trip itinerary data;
- Quarterly release of domestic operating profit and loss data for individual airlines and by carrier groups (e.g. majors, low cost carriers); airline domestic unit costs; and revenue yield;

- Monthly release of On-Time performance data, providing the overall on-time arrival and departure performance of airlines, airports, and specific flights;
- Monthly data on causes of flight delays, characterized in five categories: Air Carrier, Extreme Weather, National Aviation System (NAS), Late-Arriving Aircraft, and Security;
- BTS will continue to support the Office of the Secretary in mail ratemaking and Essential Air Service (EAS) programs.
- Continue to provide weekly airline traffic data collection and processing as required jointly of DOT and the U.S. Postal Service by the Rural Service Improvement Act.

Explanation of Funding Changes for Airline Transportation Statistics Program

Amount: \$0

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**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
FISCAL YEAR 2011
PERFORMANCE BUDGET REQUEST
Congressional Budget Submission**

**SECTION IV
PERFORMANCE BUDGET**



A Note About DOT's Strategic Goals

The performance sections of the FY 2011 budget submissions align with current FY 2006-2011 DOT strategic plan. DOT will release a new strategic plan in FY 2011 that will detail the Department's new priorities and areas of emphasis. DOT expects the performance sections of the FY 2012 budget submission will be aligned to this new strategic plan.

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RITA's Support for the Strategic Objectives of the *DOT Strategic Plan*

In accordance with the Mineta Act mandate and the broader RD&T coordination mission for DOT, RITA uses the *DOT Strategic Plan* to guide programmatic and administrative decisions, and to formulate and manage resource requirements. The FY 2011 budget request OF \$59.8 million (*Reimbursable activities not included*) supports all of the Department's strategic objectives.

Reduced Congestion [\$11,049,000]

- Enhancing transportation planning and operations by distributing transportation statistical data through the National Transportation Atlas Database (NTAD), and supporting the transportation component of the National Spatial Data Infrastructure (NSDI).
- Maintaining the Nationwide Differential Global Positioning System (NDGPS).
- Performing system engineering and assessment toward developing a Civil Positioning, Navigation and Timing (PNT) Architecture.
- Advance high-risk, high profile, high impact and high reward research on congestion mitigation and traffic management through intelligent transportation system technologies and capacity building.

Global Connectivity [\$23,207,000]

- Conducting and analyzing the Commodity Flow Survey (CFS), the only national snapshot of freight commodity movement within the U.S.
- Collecting, analyzing and publishing information on transborder surface freight data related to U.S. exports to and imports from Canada and Mexico.
- Providing monthly incoming border crossing/entry data for vehicles, freight containers, passengers, and pedestrians on the U.S.-Canadian and U.S.-Mexican borders.
- Supplying technical support for the International Trade Data System (ITDS) and developing and managing the information portal for DOT users.

Environmental Stewardship [\$1,213,000]

- Identify opportunities for cross cutting and multi-modal energy and environment research within DOT.
- Monitor and facilitate the application to transportation of long-term enabling research performed by other Federal agencies, such as, the Department of Energy, the National Science Foundation, National Bio-mass Board, Academia and the private sector.
- Conduct first ITS environmental research test using vehicle-based data to reduce fuel consumption and vehicle emissions.

Security, Preparedness and Response [\$0]

- Providing sophisticated mapping support to the DOT Crisis Management Center (CMC).
- Providing technical and training support related to DOT and non-DOT transportation security activities through the Volpe National Transportation Systems Center and the Transportation Safety Institute, as part of RITA's reimbursable programs.

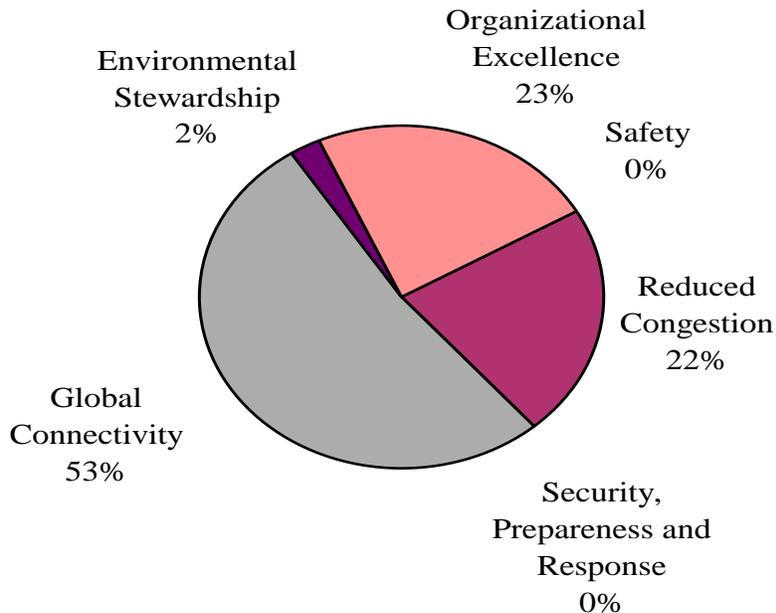
Safety [\$0]

- Operational testing demonstrations of vehicle to vehicle communications and infrastructure communication for safety.

Organizational Excellence [\$11,731,000]

- Tracking and reporting statistical research results against the *Transportation Research, Development and Technology Strategic Plan 2006-2010*.
- Leveraging the resources of the National Transportation Library to develop an accessible transportation knowledge network.
- Increasing the relevance to DOT and national RD&T priorities of transportation research activities undertaken by the university centers funded through the University Transportation Centers (UTC) Program.

RITA Support to DOT Strategic Objectives



Mission
 Identify and facilitate solutions to the challenges and opportunities facing America's transportation system.



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EXHIBIT IV-1
FY 2011 BUDGET REQUEST BY STRATEGIC GOAL AND PERFORMANCE GOAL
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
Appropriations, Obligation Limitations, & Exempt Obligations
(In thousands of dollars)

STRATEGIC & PERFORMANCE GOALS by Performance Measure	FY 2009 <u>ACTUAL</u>	FY 2010 <u>ENACTED</u>	FY 2011 <u>REQUEST</u>
1. REDUCED CONGESTION STRATEGIC GOAL			
A. Reduced Impediments/Urban Congestion			
BTS Program - Geospatial Information ¹	[1,758]	[1,823]	[1,863]
NDGPS Program	5,348	4,948	7,913
PNT Program	0	400	1,313
B. <u>Increased Use of ITS</u>			
ITS/JPO Program ²	<u>[54,382]</u>	<u>[55,535]</u>	<u>[40,000]</u>
Subtotal Performance Goal	<u>5,348</u>	<u>5,348</u>	<u>9,226</u>
Total – Reduced Congestion Strategic Goal	5,348	5,348	9,226
2. GLOBAL CONNECTIVITY STRATEGIC GOAL			
A. <u>Increase the Efficiency of Passenger and Cargo Movement</u>			
BTS Program - Travel Statistics ¹	[2,947]	[3,056]	[3,056]
BTS Program - Freight Statistics ¹	[10,723]	[11,120]	[13,120]
BTS Program - Compilations ¹	[4,945]	[5,128]	[5,153]
B. <u>Enhanced Competitiveness of US Transport Providers and Manufacturers</u>			
BTS Program - Transportation Economics ¹	[1,811]	[1,878]	[1,878]
BTS Program - Airline Transportation Statistics ³	<u>[4,000]</u>	<u>[4,000]</u>	<u>[4,000]</u>
Subtotal Performance Goal	<u>0</u>	<u>0</u>	<u>0</u>
Total – Global Connectivity Strategic Goal	0	0	0
3. ENVIRONMENTAL STEWARDSHIP STRATEGIC GOAL			
A. <u>Reduction in Pollution and Adverse Effects</u>			
ITS/JPO Program ²	[0]	[8,378]	[7,000]
RD&T Program - Alternative Fuels	<u>852</u>	<u>852</u>	<u>1,213</u>
Subtotal Performance Goal	<u>852</u>	<u>852</u>	<u>1,213</u>
Total – Environmental Stewardship Strategic Goal	852	852	1,213
4. SAFETY STRATEGIC GOAL			
A. <u>Reduce Transportation Related Deaths/Injuries</u>			
ITS/JPO Program ²	<u>[34,960]</u>	<u>[43,777]</u>	<u>[44,000]</u>
Subtotal Performance Goal	<u>0</u>	<u>0</u>	<u>0</u>
Total – Safety Strategic Goal	0	0	0
5. ORGANIZATIONAL EXCELLENCE STRATEGIC GOAL			
A. <u>Fulfill the President's Management Agenda</u>			
ITS/JPO Program ²	[13,618]	[0]	[19,000]
BTS Program - Methods & Standards ¹	[2,471]	[2,563]	[2,538]
BTS Program - National Transportation Library ¹	[2,345]	[2,432]	[2,432]
RD&T Program - R&D Coordination	<u>5,800</u>	<u>7,879</u>	<u>6,761</u>
Subtotal Performance Goal	<u>6,700</u>	<u>6,807</u>	<u>6,761</u>
Total – Organizational Excellence Strategic Goal	6,700	6,807	6,761
GRAND TOTAL	12,900	13,007	17,200

^{1/} Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highways program.

^{2/} Resources are shown as non-adds because resources reside in the FHWA budget.

^{3/} Resources are shown as non-adds because resources are reimbursable resources.

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**DEPARTMENT OF TRANSPORTATION
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**

**FISCAL YEAR 2011
PERFORMANCE PLANNING
LOGIC MODEL**

EXHIBIT IV-3

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REDUCED CONGESTION

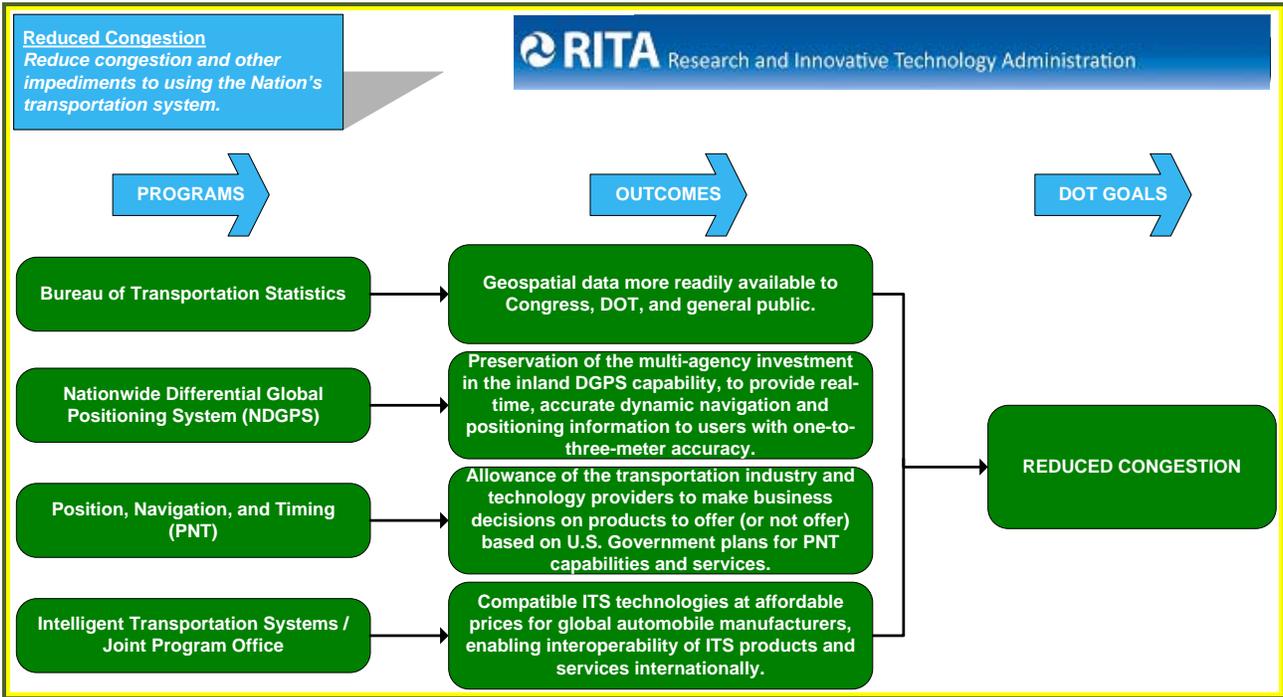
Overview:

RITA contributes to the DOT Reduced Congestion strategic objective. Listed below are FY 2009 and FY 2010 accomplishments:

- Bureau of Transportation Statistics (BTS) provided sophisticated mapping and geospatial analysis, including map products for BTS publications, surveys and the development of Internet Mapping applications to support RITA and other DOT modes.
- BTS, in conjunction with other modal administrations, compiled new transportation data through the National Transportation Atlas Databases (NTAD). The NTAD is distributed on DVD and is available for download from the BTS web site.
- RITA operated and maintained the inland Nationwide Differential Global Positioning System (NDGPS) segment in coordination with the U.S. Coast Guard's Maritime DGPS, as a single Nationwide Differential GPS public utility.
- RITA provided leadership to the civil Positioning, Navigation, and Timing (PNT) federal and private sector user communities by coordinating policy and activities through the Space-Based PNT Executive Committee and the DOT PNT Executive Committee; refined and coordinated future civil sector PNT requirements through the National PNT Architecture and Federal Radionavigation Plan processes; and encouraged R&D into PNT-based transportation and logistics applications.
- The Intelligent Transportation Systems/Joint Program Office (ITS/JPO) completed several new research projects associated with the Congestion Initiative and began independent evaluation activities to implement congestion mitigation strategies.

The FY 2011 RITA budget request for the Reduced Congestion strategic goal is \$51.1 million. In 2011, RITA programs will:

- Make expanded range of geospatial data more readily available to Congress, DOT, and the general public (*Bureau of Transportation Statistics*).
- Preserve the government investment in the inland NDGPS utility, to provide real-time, accurate, and dynamic navigation and positioning information. (*Nationwide Differential Global Positioning System*).
- Provide data to allow the transportation industry to make business decisions on products based on U.S. government plans for PNT capabilities. (*Positioning, Navigation, and Timing*).
- Better manage the transportation system using real-time data and adoption of systems by automotive manufacturers and major electronics companies (*Intelligent Transportation Systems/Joint Program Office*).
- Develop the first set of harmonized vehicle-based ITS standards within the international ITS community for mobility applications (*Intelligent Transportation Systems/Joint Program Office*).



Program Name: Bureau of Transportation Statistics (BTS)			FY 2011 Inputs: \$1.9 million, 6 FTE		
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>BTS creates, manages, and shares transportation statistical knowledge with public and private transportation communities, decision-makers and the public, in order to anticipate future needs and policy issues.</p> <p>Customers and beneficiaries include the United States Congress, private citizens, researchers, policy-makers, industry and federal, state and local governments.</p>	<ul style="list-style-type: none"> Release National Transportation Atlas Database (NTAD) CD. Serve as designated Geographic Information Office for DOT. Provide geospatial information analysis and technical support on demand for improved transportation investment and decision making. 	<ul style="list-style-type: none"> Lead DOT and the geospatial transportation community to make a wider range of geographic information available to transportation decision makers and the public. New mapping capability available by October 2010. 	<ul style="list-style-type: none"> Produce NTAD CD. Deliver recommendations on the Geospatial Line of Business for DOT. 	<ul style="list-style-type: none"> Congress, DOT, and general public have improved their ability to assess transportation congestion issues through use of geospatial data. 	<p><u>Goal:</u> Reduced Congestion</p> <p><u>Outcome:</u> Reduction in urban congestion.</p> <p>Increased access for all Americans</p> <p>Longer lasting, high performance transportation infrastructure</p>

REDUCED CONGESTION

Bureau of Transportation Statistics (BTS)

Program Purpose and Customers/Beneficiaries

- BTS creates, manages, and shares transportation statistical knowledge with public and private transportation communities, decision-makers and the public, in order to anticipate future needs and policy issues.
- Customers and Beneficiaries include Congress, private citizens, researchers, policy-makers, industry and federal, state and local governments.

2010 Accomplishments

- The BTS Geospatial Information Systems (GIS) office took a leadership role in participating in the Transportation and National States Geographic Council and has been instrumental in developing the Transportation for the Nation (TFTN) project involving different levels of government lead by States' Geographic Councils. BTS assisted in identifying potential resources and getting several Operating Administrations' support. This project is still in its initial stages, but is moving forward which will allow USDOT, along with the state and local governments, to benefit.
- BTS produced the annual National Transportation Atlas Database (NTAD), a set of nationwide geographic databases of transportation facilities, transportation networks, and associated infrastructure. These datasets include new spatial information for transportation modal networks and intermodal terminals, as well as the related attribute information for these features. While the NTAD is most useful at the national level, it has been demonstrated to have major applications at regional, state, and local scales throughout the transportation community.
- In FY 2010, a new database on ferry routes and terminals was created and added to the national GIS inventory.
- The program will produce web-mapping applications for the TransBorder Data and various OAI datasets. The TransBorder and OAI datasets are updated on a monthly and scheduled basis. Customers will be able to map the most recent data available via the online queries.

2011 Program Inputs

- No anticipated changes in inputs from prior fiscal year.

2011 Program Activity

- The National Transportation Atlas Database, mapping, and geospatial analysis support are recurring activities. These are critical to the Department and transportation in general since they are used to convey important information on the condition and capabilities of the Nation's transportation system including information related to congestion.

2011 Program Achievements

- Will develop software to improve the estimation of travel routes. Travel route estimation software is scheduled for completion by October 2010. This software will make geographic information more available to transportation decision-makers and the public by including it as a standard input into the major BTS publications and encouraging its use in special reports.

2011 Program Outputs

- Ensure the annual release of National Transportation Atlas Database (NTAD) CD is available prior to the start of the annual Environmental Systems Research Institute (ESRI) International

User Conference on GIS and mapping software (to provide timely support for research, analysis, and decision-making across all modes of transportation).

- Increase the number of National Atlas Transportation Database (NTAD) CD-ROMs distributed (to broaden the customer base for this product).
- BTS will make geospatial data more readily available to Congress, DOT, and the general public, enabling transportation data users to better understand congestion through geospatial analysis. BTS measured the number of National Transportation Atlas Databases disseminated annually. In 2007, 24,512 databases were downloaded. In 2008 this number increased to 35,912 with a target of 25,000. In 2011 the target is 32,500 downloads.

2011 Program Outcomes

- Congress, DOT and the public will be better able to understand transportation congestion and related issues through the use of expanded geospatial data and analysis.

Contribution to DOT Goal

- This program supports the DOT Reduced Congestion goal by providing data and information on the Nation’s transportation network and facilities for all modes of transportation. This information can then be used with other kinds of data including safety and security information to formulate decisions on infrastructure development and congestion mitigation.

Program Name: Nationwide Differential Global Positioning System (NDGPS) FY 2011 Inputs: \$7.9 million, 1 FTE					
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>NDGPS provides a national positioning, navigation and timing (PNT) utility on which there is significant public and private sector reliance for transportation, agricultural, environmental, natural resource management, surveying, weather forecasting, and other applications.</p> <p>Beneficiaries include the private sector, Federal agencies, state and local governments, academia, and the public.</p>	<ul style="list-style-type: none"> • Operations and maintenance of the NDGPS, to properly maintain reliable existing services. • Initiate Equipment Recapitalization (equipment upgrade required to maintain existing service). 	<ul style="list-style-type: none"> • Initiate the NDGPS Equipment Recapitalization, allowing reliable service to be maintained. 	<ul style="list-style-type: none"> • Maintain NDGPS service at 98.5% system availability or better. 	<ul style="list-style-type: none"> • Preserve the multi-agency investment in the inland DGPS capability, to provide real-time, accurate dynamic navigation and positioning information to users with one-to-three-meter accuracy. 	<p><u>Goal:</u> Reduced Congestion</p> <p><u>Outcome:</u> Reduction in urban congestion.</p> <p>Increased access for all Americans</p> <p>Longer lasting, high performance transportation infrastructure</p>

REDUCED CONGESTION

Nationwide Differential Global Positioning System (NDGPS)

Program Purpose and Customers/Beneficiaries

- NDGPS provides a national positioning, navigation and timing (PNT) utility on which there is significant public and private sector reliance for transportation, agricultural, environmental, natural resource management, surveying, weather forecasting, and other applications. NDGPS provides support infrastructure for several USDOT research projects and bears opportunities for future cross-modal transportation safety, security, efficiency, and emergency response

applications. NDGPS provides real-time, accurate dynamic navigation and positioning information to users with one-to-three meter accuracy (.1 to 1 meter accuracy “standing still”).

- Beneficiaries include the private sector, Federal agencies, state and local governments, academia, and the public.

2010 Accomplishments

- National PNT utility was maintained at an acceptable service level, given significantly constrained resources.
- DOT preserved the government’s investment in the inland Nationwide Differential Global Positioning System (NDGPS); operated and maintained the inland NDGPS segment in coordination with the U.S. Coast Guard’s Maritime DGPS as a single Nationwide Differential GPS public utility; and maintained 98.5% system availability or better.

2011 Program Inputs

- NDGPS will receive \$7.9 million to re-baseline operations and maintenance of the NDGPS at a level necessary for properly maintaining the existing public utility and initiate the Equipment Recapitalization required to maintain system availability and improve system reliability.

2011 Program Activity

- Continue to support the operations and maintenance of the NDGPS and initiate the required Equipment Recapitalization Plan.

2011 Program Achievements

- NDGPS will continue providing real-time, accurate and dynamic navigation and positioning information to users with one-to-three meter accuracy under the Equipment Recapitalization Plan. The Equipment Recapitalization will increase system reliability over the existing system, which has reliability issues due to the aging equipment.

2011 Program Outputs

- Operate and maintain the inland NDGPS segment in coordination with the U.S. Coast Guard’s Maritime DGPS as a single Nationwide Differential GPS public utility; and maintain 98.5% system availability or better.

2011 Program Outcomes

- Real-time, accurate, dynamic navigation and positioning information will allow users to improve infrastructure operations and performance.

Contribution to DOT Goal

- The Nationwide Differential GPS Program supports the DOT Reduced Congestion goal by providing the terrestrial DGPS public utility to increase operating and environmental management efficiencies for private and public sector users in the transportation, agriculture, environment, natural resource management, surveying, and weather forecasting sectors; supporting the infrastructure for several USDOT research projects, and bearing opportunities for future cross-modal transportation safety, security, efficiency, and emergency response applications.

REDUCED CONGESTION

Program Name: Positioning, Navigation, and Timing (PNT)			FY 2011 Inputs: \$1.3 million, 1 FTE		
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>The PNT and Spectrum Policy Program coordinates DOT PNT technology, policy, and spectrum management, as well as providing civil PNT systems analysis which is critical to supporting intermodal transportation applications.</p> <p>Customers and beneficiaries include civil agencies in the development, acquisition, management, and operations of GPS and other PNT services, and external users of government-provided PNT services.</p>	<ul style="list-style-type: none"> • Develop 2012 <i>Federal Radionavigation Plan</i>, the national policy and programs document for government-provided PNT services. • Develop 2011 <i>DOT Spectrum Plan</i>. • Expand further research and development efforts toward implementation of the 2025 National PNT Architecture. 	<ul style="list-style-type: none"> • Demonstrate ability to close identified PNT capability gaps through implementation of the 2025 National PNT Architecture. 	<ul style="list-style-type: none"> • Publish the 2011 <i>DOT Spectrum Plan</i>. • Provide a draft 2012 <i>Federal Radionavigation Plan</i> for internal government stakeholder review based on public feedback from the 2010 FRP. • Provide a refined National PNT Architecture Implementation Roadmap for use by government and industry stakeholders and applications developers. 	<ul style="list-style-type: none"> • Allows the transportation industry and technology providers to make business decisions on products to offer (or not offer) based on U.S. Government plans for PNT capabilities and services. • U.S. government agencies align their programs, plans, and budgets to support the activities of the National PNT Architecture Implementation Roadmap. 	<p><u>Goal:</u> Reduced Congestion</p> <p><u>Outcome:</u> Reduction in urban congestion.</p> <p>Longer lasting, high performance transportation infrastructure.</p>

Positioning Navigation, and Timing (PNT)

Program Purpose and Customers/Beneficiaries

- The PNT and Spectrum Policy Program coordinates DOT PNT technology, policy, and spectrum management, as well as provide civil PNT systems analysis which is critical to supporting intermodal transportation applications. The Program coordinates all civil sector PNT requirements and provides outreach to communities associated with PNT plans and policy.
- Customers and Beneficiaries include agencies that acquire, manage and operate GPS and other PNT services.

2010 Accomplishments

- Published the 2010 Federal Radionavigation Plan, the national policy and programs document for government-provided PNT services, upon which applications developers rely for product planning and R&D.
- Published the first-ever Civil PNT Requirements Document.
- Execute a time-phased, fiscally informed roadmap of PNT activities, including research and development needs based on the FY 2008 recommendations of the National PNT Architecture and the FY 2009 National PNT Architecture Implementation Plan.

2011 Program Inputs

- PNT will receive \$1.3 million which will assist in the development of the 2012 Federal Radionavigation Plan and the 2011 DOT Spectrum Plan, in addition to the expansion of research and development efforts toward the implementation of the 2025 National PNT Architecture.

2011 Program Activity

- RITA will lead the development of the 2011 DOT Spectrum Plan. This document outlines DOT's spectrum requirements, including band width and frequency allocations for future technologies or services. RITA will also participate in the Interagency Radio Advisory Committee and represent the DOT position in proceedings involving other agencies such as the Federal Communications Commission and the National Telecommunications and Information Administration of the Department of Commerce.
- PNT will develop the draft 2012 Federal Radionavigation Plan (FRP). The FRP is directed by the National Defense Authorization Act for Fiscal Year 1998 (10 U.S.C. 2281(c)). The FRP is developed biennially by DOT in conjunction with DoD and DHS and is signed by the Secretaries of DOT, DoD, and DHS. The FRP reflects national policies and plans for U.S. government radionavigation systems and is used as a reference document both nationally and internationally. RITA represents DOT and the civil community in Federal radionavigation planning and requirements development activities and is responsible for publication and distribution of the document.
- PNT will also begin working on the expansion to further research and develop efforts toward the implementation of the 2025 National PNT Architecture Plan.

2011 Program Achievements

- The program will begin to meet advanced civil PNT requirements by closing identified PNT capability gaps as a result of implementing the national Positioning, Navigation and Timing architecture.

2011 Program Outputs

- Publish the 2011 DOT Spectrum Plan.
- Provide a draft 2012 Federal Radionavigation Plan for internal government stakeholder review based on public feedback from the 2010 FRP.
- Provide a refined National PNT Architecture Implementation Roadmap for use by government and industry stakeholders.

2011 Program Outcomes

- The transportation industry can make business decisions on products to offer (or not offer) based on U.S. government plans for PNT capabilities and services.
- U.S. government agencies can align their programs, plans, and budgets to support the activities of the national PNT architecture implementation roadmap.

Contribution to DOT Goal

- The PNT and Spectrum Policy Program support the DOT Reduced Congestion goal by developing and implementing the national PNT architecture. This will enable reduced congestion in all modes of transportation by implementing improved PNT capabilities upon which advanced safety and logistics systems will rely.

REDUCED CONGESTION



Program Name: Intelligent Transportation Systems (ITS) / Joint Program Office (JPO)					
FY 2011 Inputs: \$40.0 million, 4 FTE					
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>ITS program supports the overall advancement of ITS through investments in major initiatives, exploratory studies, and a deployment support program</p> <p>Customers and beneficiaries include private citizens traveling on the roadway and state transportation agencies.</p>	<ul style="list-style-type: none"> • Execute a real time data demonstration using IntelliDriveSM data for congestion reduction. • Perform independent evaluation of demonstration. • Provide data sets for applications developers. 	<ul style="list-style-type: none"> • Initiate 2 major ITS field operational tests in coordination with State and local governments and the ITS industry. • Develop the first set of harmonized vehicular-based ITS standards within the international ITS community for mobility applications. 	<ul style="list-style-type: none"> • Provide Real Time data sets for applications developers for use by the traveling public. • Provide new modeling and integrated corridor operational strategies that will benefit the traveling public. • Complete vehicular-based ITS standards for use by ITS manufacturers. 	<ul style="list-style-type: none"> • Demonstrated ability to better manage the transportation system using real time data and adoption of systems by automotive manufacturers and major electronics companies. • Proven techniques to model and manage entire corridors for greater efficiency and capacity to the benefit of the traveling public. • Global automobile manufacturers will contain compatible ITS technologies at affordable prices, enabling interoperability of ITS products and services internationally. • The intended outcome is to encourage and facilitate the use of ITS through deployment by state and local governments or by incorporation of ITS into private sector products and services. 	<p><u>Goal:</u> Reduced Congestion</p> <p><u>Outcome:</u> Increased use of integrated Intelligent Transportation System (ITS) networks and new incident management approaches.</p>

Program Purpose and Customers/Beneficiaries

- The ITS program supports the overall advancement of ITS through investments in major initiatives, exploratory studies, and a deployment support program. Increasingly, the Federal investments are directed at targets of opportunity – major initiatives – that have the potential for significant payoff in improving safety, mobility, and productivity.
- Customers and Beneficiaries include private citizens traveling on the roadway and state transportation agencies.

2010 Accomplishments

- Awarded two ICM demonstration sites and initiated a real time data program.
- Completed technical work required to approve the DSRC standard for automotive use. Developed a common standard to facilitate lower equipment costs, and signal to the market that the DSRC technology has matured to a point that investment risks are low enough to expedite deployment of critical mobility technologies.

2011 Program Inputs

- A decrease of approximately \$16,726,000 below the 2010 budget and a reduction of 5 FTE. The decrease represents the completion of the DOT Congestion Initiative.

2011 Program Activity

- ITS Mobility Research - Conduct research on the collection and use of real time travel information data, DOT will develop approaches to decrease operations and maintenance costs, increase capacity, and decrease congestion on highways and arterials. Use of advanced modeling and management strategies can also apply multimodal solutions to congestion challenges.
- ITS Architecture and Standards will provide common industry standards for interoperable ITS systems. Balloting, approval, and publication of revised and new standards for ITS mobility technologies will be developed.

2011 Program Achievements

- Will conduct the first real time data demonstration for enhanced mobility and reduced congestion will show operators and travelers quantifiable time savings by utilizing new data sources and increasing overall multi-modal efficiency. The completion of the ICM project will also provide concrete data that shows how to manage regional and multi-modal transportation corridors to maximize capacity.
- The DSRC standard will be adopted by the automotive industry.

2011 Program Outputs

- Real time data sets for applications developers and ICM technology transfer information for regional transportation managers.
- An updated ITS architecture will be provided to state DOTs to assist them procure new ITS equipment for enhanced mobility operations.

2011 Program Outcomes

- New operational concepts for both travelers and transportation managers will result in reduced congestion and travel times from a multi-modal standpoint. These outcomes are shared by DOT modal partners (FHWA and FTA) and state DOTs and transit operators.
- Adoption of DSRC standards would lead to potential new mobility applications and congestion reduction benefits in the United States. These outcomes are shared by DOT modal partners and state DOTs involved in the ITS program research.

Contribution to DOT Goal

- By researching new technologies, techniques, and data to maximize transportation efficiency, DOT can facilitate the reduction of congestion in many modes of transportation by applying these strategies.
- Common standards and architectures are required for industry and public sector organizations to manage their investments in technology to reduce cost, ensure interoperability, and secure a solid return on investment. By conducting the necessary standards work on mobility technology, DOT is facilitating reduced congestion for many modes of transportation.

GLOBAL CONNECTIVITY

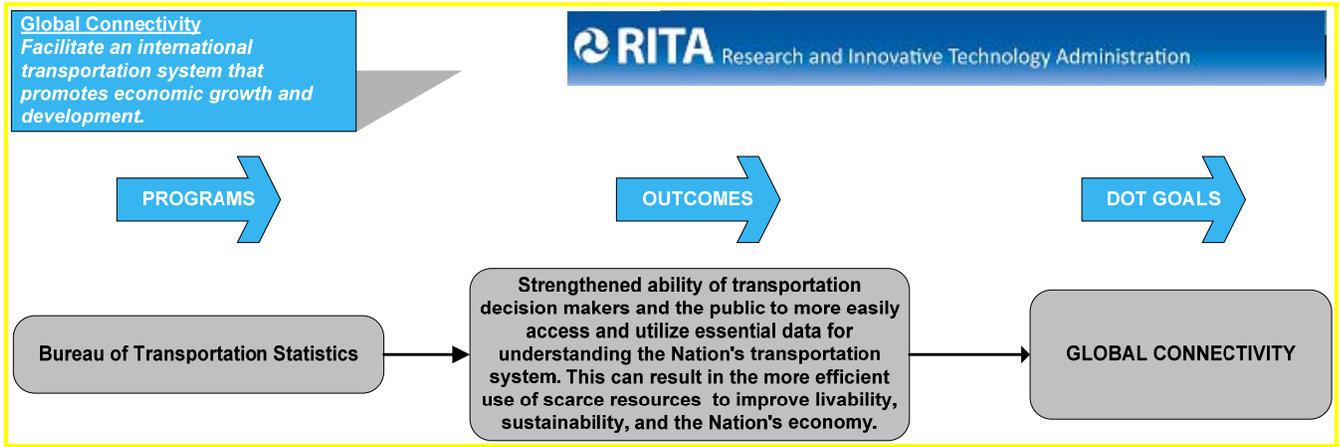
Overview:

RITA contributes to the DOT Global Connectivity strategic objective. Listed below are FY 2009 and FY 2010 accomplishments:

- Released the 2008 National Census of Ferry Operators, updated the public use file for the National Ferry Database, and published a summary report of findings.
- Maintained the reimbursable partnership with the FRA on the Confidential Close Call Reporting System (C3RS) Demonstration Project to develop a database of observational and corporate data, and assisted FRA's Human Factors Program in data collection and analysis of behavioral-based safety studies and program evaluation data.
- Produced the quarterly Air Travel Price Index (ATPI). Continued development of new ATPI automated system components into the experimental production system, including an operational seasonal adjustment component.
- Finalized Commodity Flow Survey (CFS) data products for the 2007 CFS, a major national benchmark survey of the flow of commodities nationwide.
- Produced, published, and made available, a core set of online and print documents, and scheduled data releases, including the Transportation Services Index, the Air Travel Price Index, and Key Transportation Indicators.
- Maintained and operated existing airline data collections, ensuring high quality data and maintaining a steady state production of accurate, timely, and relevant outputs.

The FY 2011 RITA budget request for the Global Connectivity strategic goal is \$27.2 million. In 2011, RITA programs will:

- Augment and refine the National Census of Ferry Operators database using the 2010 survey of ferry operators (*Bureau of Transportation Statistics*).
- Complete research efforts and be fully engaged in the design, preparation, and implementation of the 2012 Commodity Flow Survey. (*Bureau of Transportation Statistics*).
- Produce the core set of economic data and indicators as in 2010, which include the Transportation Satellite Accounts, Air Travel Price Index, and Government Transportation Financial Statistics (*Bureau of Transportation Statistics*).



Program Name: Bureau of Transportation Statistics (BTS)				FY 2011 Inputs: \$27.2 million, 53 FTE	
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>BTS creates, manages, and shares transportation statistical knowledge with public and private transportation communities, decision-makers, and the public, in order to anticipate future needs and policy issues.</p> <p>Customers and beneficiaries include the United States Congress, private citizens, researchers, policy-makers, industry, and federal, state, and local governments.</p>	<ul style="list-style-type: none"> • Provide passenger travel statistical data and reports. • Provide freight travel statistical data and reports. • Provide multi-modal compilation statistical reports. 	<ul style="list-style-type: none"> • Expanded Intermodal Passenger Connectivity Database. • Improved design and enhanced methodology for the 2012 Commodity Flow Survey. • As the coordinating agent for DOT international freight data, successfully coordinated and integrated the data needs of DOT modes in leading the deployment of the International Freight Data System (IFDS). 	<ul style="list-style-type: none"> • High quality statistical products, both published and electronic, that provide essential freight and travel data to the Nation's transportation community. 	<ul style="list-style-type: none"> • Strengthened ability of transportation decision makers and the public to more easily access and utilize essential data for understanding the Nation's transportation system. This can result in the more efficient use of scarce resources to improve livability, sustainability, and the Nation's economy. 	<p><u>Goal:</u> Global Connectivity.</p> <p><u>Outcome:</u> Safer, more efficient and cost effective movement of passengers and cargo throughout international and domestic transportation systems, including U.S. ports of entry, modal and intermodal supply chains</p>

GLOBAL CONNECTIVITY

Bureau of Transportation Statistics (BTS)

Program Purpose and Customers/Beneficiaries

- BTS creates, manages, and shares transportation statistical knowledge with public and private transportation communities, decision-makers, and the public, in order to anticipate future needs and policy issues.

- Customers and beneficiaries include the Congress, private citizens, researchers, policy-makers, industry and federal, state, and local governments.

2010 Accomplishments

- Completed the addition of data on commuter rail stations to the Intermodal Passenger Connectivity Database (IPCD). Released special report that analyzes the data, which offers transportation authorities key insights into commuter rail passenger flows.
- Released the Transborder and Border Crossing & Entry data, permitting scheduled and reliable access to a wide variety of customers who utilize the U.S. international freight data, including Departmental staff, Congressional staff, state transportation departments, international organizations, and universities.
- Published total transportation sector multi-factor productivity (MFP) measures and analysis for the first time, including trucking, aviation, rail, pipeline, and waterborne modes.
- Published the 2010 edition of the Government Transportation Financial Statistics (GTFS), which provides detailed data on state and local transportation expenditures.
- Congress received key indicators on transportation issues through the Transportation Statistics Annual Report (TSAR).

2011 Program Inputs

- The budget request for this activity is \$23.2 million.

2011 Program Activity

- Provide Passenger Travel Statistics - During 2011 BTS will provide state agencies, other DOT agencies and Congress statistical data relating to personal and business travel, both surface and air, used to manage infrastructure projects and improve transportation projects. BTS will continue to augment and refine the National Ferry Database using the 2011 survey of ferry operators, which will provide a published summary report and add data from other sources (U.S. Coast Guard, U.S. Army Corps of Engineers, and the American Association of State Highway and Transportation Officials (AASHTO)) on ferry routes, vessels, and terminals. Through the Confidential Close Call Reporting System, work will continue on developing statistics for the measurement of congestion and safety risk exposure. U.S. Customs and Border Protection's Border Crossing/Entry data will be processed and published. The Omnibus Household Survey and other targeted surveys will be conducted on an on-demand basis and results will be summarized and published on the Travel Statistics Program web page. These recurring activities provide the Nation's most comprehensive statistical data for understanding travel behavior.
- Provide Freight Statistics - During 2011 BTS will provide Congress, federal and state agencies, and international organizations data relating to the movement of national goods, through transborder/border freight crossing. The Freight Data Program will complete research efforts in the design, preparation, and implementation of the 2012 Commodity Flow Survey. The Freight Data Program will lead the deployment of the Intermodal Freight Data System (IFDS) for the Department, in cooperation with other DOT agencies and the Department of Homeland Security (DHS). The IFDS is the DOT interface to the DHS Customs and Border Protection's International Trade Data System (ITDS).
- Provide Multi-modal Compilations and Statistical Reports - During 2011 BTS will provide transportation statistical data on the transportation industry for all modes. BTS will continue to develop the Intermodal Passenger Connectivity Database and update the rural access analysis.

2011 Program Achievements

- Expansion of the intermodal passenger connectivity database, methodological review and design of the 2012 Commodity Flow Survey, and the development of the International Freight Data System.

2011 Program Outputs

- Transportation professionals rely on BTS data to analyze trends in goods movement, conduct hazardous materials risk assessments, forecast future demand for goods movements and associated infrastructure equipment needs, and analyze commodity and vehicle flow patterns. Likewise, BTS travel data are used by aviation industry, such as the air carriers, regulators, Congress, and the Department to better understand passenger travel behavior and anticipated resource demands.

2011 Program Outcomes

- Comprehensive transportation data for improved decision-making directly influences the Nation's livability, sustainability, and economic well-being.

Contribution to DOT Goal

- BTS data contribute to the safer, more efficient and cost effective movement of passengers and cargo throughout international and domestic transportation systems, by providing the data needed by both Federal and State transportation departments as well as transportation providers to develop a safer, more effective intermodal passenger transportation system. For example, the National Census Ferry Operators, Intermodal Passenger Connectivity Database, and annual Omnibus Surveys provide background on the infrastructure and operation of the passenger transportation system which is important for focusing efforts to improve connectivity for travelers to both the national and global passenger transportation systems. Improved connectivity contributes to Performance Outcome 2 by providing a more efficient system for the movement of passengers. Improved safety and connectivity contributes to enhanced competitiveness for U.S. transportation providers, as included in Performance Outcome 4, by lowering operating costs and expanding passenger markets.

ENVIRONMENTAL STEWARDSHIP

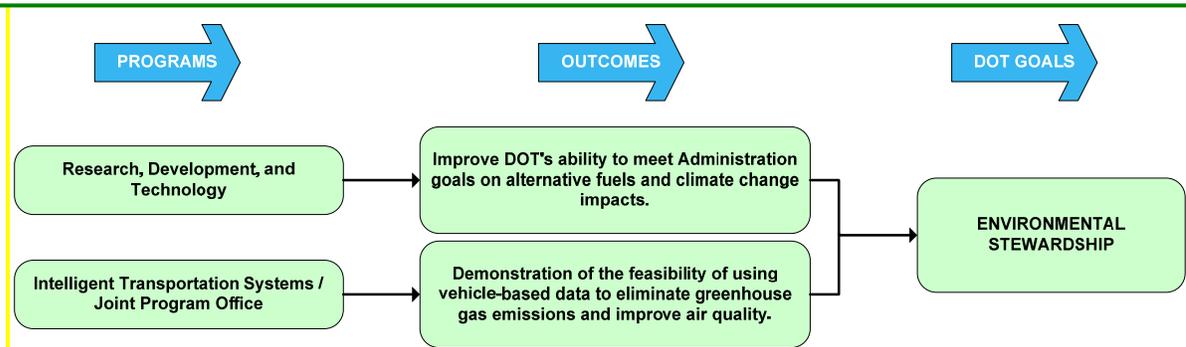
Overview:

RITA contributes to the DOT Environmental Stewardship strategic objective. Listed below are FY 2009 and FY 2010 accomplishments:

- Coordinated, managed, and conducted the Department's R&D activities involving alternative fuels technology, advanced propulsion systems for these fuels, and other alternative fuels projects including hydrogen materials compatibility.
- The Intelligent Transportation Systems / Joint Program Office (ITS/JPO) developed a strategic plan for environmental ITS research projects.
- Initiated exploratory ITS research projects for environmental work while better understanding the potential for IntelliDriveSM to provide vehicle emissions data and eco-driving applications.
- Coordinated the collaborative intermodal hydrogen research initiative within DOT.
- Supported department-wide rulemaking and other regulatory activities.

The FY 2011 RITA budget request for the Environmental Stewardship strategic goal is \$8.2 million. In 2011, RITA programs will:

- Demonstrate applications that utilize data from the vehicle data port, and how the data can be used to manage operations or change driving behavior to reduce environmental impacts (*Intelligent Transportation Systems / Joint Program Office*).
- Execute an operational test of applications using vehicle-based environmental data in the IntelliDriveSM testbed (*Intelligent Transportation Systems / Joint Program Office*).
- Respond to direct stakeholder and industry needs in advancing alternative fuels as part of the Administration's goal of a greener, more secure, and sustainable economy (*Research, Development, and Technology*).
- Identify opportunities for cross cutting and multi-modal research within DOT (*Research, Development, and Technology*).
- Monitor and facilitate the application to transportation of long-term enabling research performed by other Federal agencies, such as the Department of Energy, the National Science Foundation, National Biomass Board, academia, and the private sector (*Research, Development, and Technology*).



Program Name: Research, Development, and Technology (RD&T)				FY 2011 Inputs: \$1.2 million, 1 FTE	
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>Perform research and related activities to advance technologies and tools needed facilitating transportation's transition to alternative fuels and vehicles.</p> <p>Customers and beneficiaries include DOT OAs with R&D programs, other Federal agencies studying common areas, academia, public and private sector entities conducting related activities, international codes, and standards organizations.</p>	<ul style="list-style-type: none"> Coordinate, manage, and leverage DOT's R&D activities involving alternative fuels and vehicles technologies including codes/standards development and emergency response training. Conduct outreach and other collaboration with federal and other key stakeholders. Provide multi-modal compilation statistical reports. 	<ul style="list-style-type: none"> Use the DOT Alternative Fuels Working Group to review progress on funded projects. Use the DOT Working Group to identify / implement new areas of cooperation/ coordination. Assess standards for alternative fuels and identify gaps and possible remediation strategies. 	<ul style="list-style-type: none"> Research papers, public presentations, studies, technical demonstrations and codes/standards facilitating the deployment and use of alternative fuels and vehicles. 	<ul style="list-style-type: none"> Improve DOT's ability to meet Administration goals on alternative fuels and climate change impacts. 	<p><u>Goal:</u> Environmental Stewardship</p> <p><u>Outcome:</u> Reduction in pollution and other adverse environmental effects from transportation and transportation facilities</p>

ENVIRONMENTAL STEWARDSHIP

Research, Development, and Technology (RD&T)

Program Purpose and Customers/Beneficiaries

- Perform research and related activities to advance technologies and tools needed facilitating transportation's transition to alternative fuels and vehicles.
- Customers and beneficiaries include DOT OAs with R&D programs, other Federal agencies studying common areas, academia, public and private sector entities conducting related activities, international codes, and standards organizations.

2010 Accomplishments

- Planned and developed preliminary curriculum for training personnel for inspecting safety of hydrogen systems on commercial motor vehicles and training commercial drivers for hazard awareness of hydrogen systems.
- Supported development of the industry safety standard, SAE 2579, Recommended Practice for Fuel Systems in Fuel Cell and Other Hydrogen Vehicles.
- Advanced the general knowledge related to the fatigue and fracture properties of pipeline steels subject to high pressure hydrogen atmosphere by generating much needed data on the fatigue, crack propagation, and fracture toughness of several steels in a high-pressure hydrogen atmosphere.

2011 Program Inputs

- No change in funding levels from FY 2010. In 2011, RD&T will finish funding DOT's collaborative research agenda by assisting emergency responders nationally in obtaining the necessary training and education to effectively respond to hydrogen-related hazardous materials incidents. Achieving this goal includes researching hydrogen and hydrogen fuel cell technologies training and effective online and distance training strategies to develop a distance learning training system focused on hydrogen and new energy sources entering the U.S. market.

2011 Program Activity

- In 2011, RD&T will conduct multi-modal research to further RITA's mission and respond to direct stakeholder and industry needs in advancing alternative fuels (including hydrogen) as part of the Administration's goal of a greener, more secure, and sustainable economy. It will facilitate coordination and disseminate information to the DOT modes.
- RD&T will also collaboratively conduct demonstration efforts for alternative fuel stations, vehicles, and infrastructure with federal, state, local, industry, and academia partners. These demonstrations will focus on evaluating real world, real use operational scenarios. It will also continue existing projects and participate in collaborative efforts that analyze and facilitate an effective transition to the use of alternative fuels.

2011 Program Achievements

- Through the DOT Alternative Fuels Working Group, RD&T will facilitate better awareness of research initiatives to identify synergies and to improve the coordination of modal research supporting issuance of standards allowing alternative fuel distribution, including University Transportation Centers and other DOT-funded universities conducting basic and developmental research in these topic areas.

2011 Program Outputs

- Knowledge products such as research papers and public presentations;
- Published standards needed for fuel distribution and training courses that will be shared with internal and external stakeholders to improve the safe handling of alternative fuels including hydrogen.

2011 Program Outcomes

- Better trained emergency response officials using training materials disseminating information on published standards;
- Adoption and consistent application of standards and codes needed for use of non-fossil fuels;
- Higher levels of understanding, and better coordination with internal and external stakeholders.

Contribution to DOT Goal

- This program contributes to the goal of Environmental Stewardship by facilitating the deployment of alternative fuels and performing the research and development needed for this deployment. This deployment supports a reduction in pollution and other adverse environmental effects from transportation and transportation facilities.

Program Name: Intelligent Transportation Systems (ITS) / Joint Program Office (JPO)

FY 2011 Inputs: \$7.0 million, 2 FTE

Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>The execution of environmental applications within the IntelliDriveSM testbed to demonstrate the feasibility of using vehicle-based data to reduce the transportation impact on the environment.</p> <p>Customers and beneficiaries include private citizens, state DOTs, automotive, consumer electronics, and the communications industries.</p>	<ul style="list-style-type: none"> The execution of environmental applications within the IntelliDriveSM testbed to demonstrate the feasibility of using vehicle-based data to reduce the transportation impact on the environment. 	<ul style="list-style-type: none"> Development of first vehicle-based environmental data applications. 	<ul style="list-style-type: none"> Testbed data showing the raw data results of the environmental applications performed in the IntelliDriveSM testbed. 	<ul style="list-style-type: none"> Independent evaluation and environmental data sets for applications developers, travelers, and transportation operators. Demonstration of the feasibility of using vehicle-based data to eliminate greenhouse gas emissions and improve air quality. 	<p><u>Goal:</u> Environmental Stewardship</p> <p><u>Outcome:</u> Reduction in pollution and other adverse environmental effects from transportation and transportation facilities</p>

ENVIRONMENTAL STEWARDSHIP

Intelligent Transportation Systems (ITS) / Joint Program Office (JPO)

Program Purpose and Customers/Beneficiaries

- Provide environmental data to both drivers and transportation managers to enable lower greenhouse gas emissions and a reduction of vehicle pollutants.
- Customers and beneficiaries include private citizens, state DOTs, automotive, consumer electronics, and the communications industries.

2010 Accomplishments

- Executed an exploratory research program of work to determine exactly what data can be captured from the vehicle, how it can be used, and what applications can be developed with it.

2011 Program Inputs

- This is a new program area not reflected in the 2010 budget. Funds will be used to develop data sets and applications for an operational test at the IntelliDriveSM testbed designed to reduce energy use and vehicle emissions.

2011 Program Activity

- Feasibility research on using data from the vehicle computer port in real time for eco-driving applications.

2011 Program Achievements

- Will conduct the first-ever ITS environmental operational test using vehicle-based data to reduce fuel consumption and vehicle emissions.

2011 Program Outputs

- Data sets and independent evaluation of ITS environmental research that could lead to private sector applications and uses of the environmental data.

2011 Program Outcomes

- Initial adoption of environmental applications by fleet operators and trucking companies and well as private travelers to enable the measurement, management, and reduction of the amount of fuel consumption to improve overall air quality. This program involves DOT modal partners for achievement of this outcome.

Contribution to DOT Goal

- The development of eco-driving applications as well as providing data to traffic system operators can allow more environmentally friendly highway, transit, and commercial vehicle operations. Continuing the training of state DOT and transportation officials to better utilize real time data in the operation and optimization of the system to smooth traffic flows will reduce fuel consumption and corresponding harmful emissions.

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SAFETY

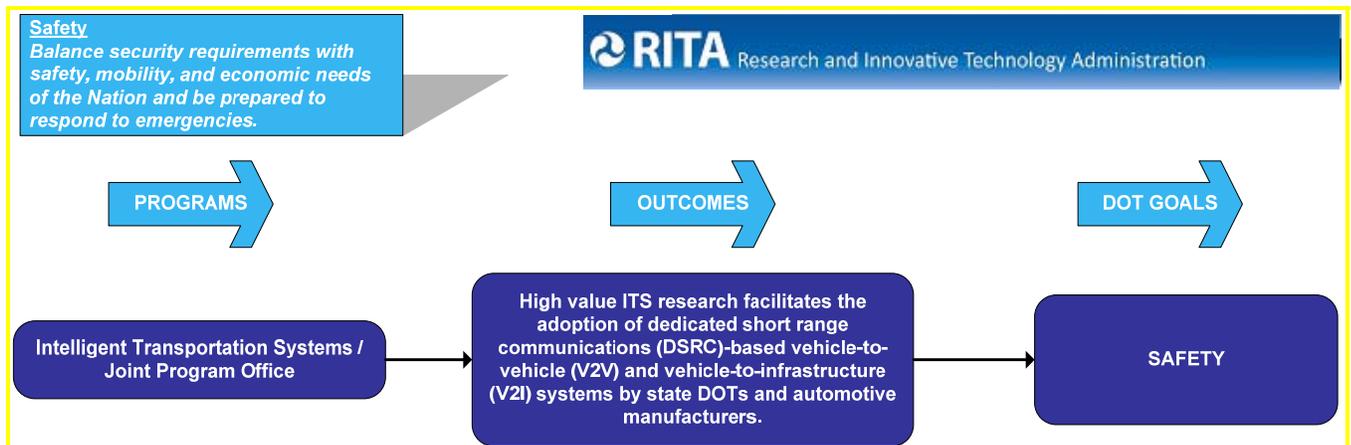
Overview:

RITA contributes to the DOT Safety strategic objective. Listed below are FY 2009 and FY 2010 accomplishments:

- Completed strategic planning and executed the upgrade of the IntelliDriveSM test bed (IntelliDriveSM Program), allowing private sector companies to test and develop IntelliDriveSM products and services to increase safety through the use of vehicle-to-vehicle (V2V) and vehicle-to- infrastructure (V2I) communications.

The FY 2011 RITA budget request for the Safety strategic goal is \$44.0 million. In 2011, RITA programs will:

- Allow execution of vehicle-to-vehicle and vehicle-to-infrastructure research to enable crashless vehicles. This work is in cooperation with state DOTs, auto manufactures, as well as communications and electronics companies (*Intelligent Transportation Systems / Joint Program Office*).
- Conduct an operational test demonstration of vehicle-to-vehicle communications for safety (*Intelligent Transportation Systems / Joint Program Office*).
- Conduct an operational test demonstration of vehicle-to-infrastructure communications for safety (*Intelligent Transportation Systems / Joint Program Office*).
- Expand *Clarus* transportation weather observing, forecasting and data management network coverage to 80% of US states (*Intelligent Transportation Systems / Joint Program Office*).
- Develop the first set of harmonized vehicular-based ITS standards within the international ITS community (*Intelligent Transportation Systems / Joint Program Office*).



Program Name: Intelligent Transportation Systems (ITS) / Joint Program Office (JPO)					
FY 2011 Inputs: \$44.0 million, 8 FTE					
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>Advances the research, development and deployment of intelligent vehicles, intelligent infrastructure in order to improve the safety of the surface transportation system.</p> <p>Customers and beneficiaries include private citizens, state DOTs, private industry, academia, and standards development organizations.</p>	<ul style="list-style-type: none"> • IntelliDriveSM. • CLARUS. • ITS Architecture Implementation Program. 	<ul style="list-style-type: none"> • Perform state of the art V2V and V2I operational test demonstrations. • Expand Clarus network coverage to 80% of US states. • Develop the first set of harmonized vehicular-based ITS standards within the international ITS community. 	<ul style="list-style-type: none"> • Release research data showing the effectiveness of V2V and V2I applications for a majority of non-impaired driver scenarios. • Release the model deployment evaluation of the Clarus operational test. • Complete vehicular-based ITS standards for use by ITS manufacturers. 	<ul style="list-style-type: none"> • High value ITS research facilitates the adoption of DSRC-based V2V and V2I systems by state DOTs and automotive manufacturers. • State DOTs incorporate the use of Clarus data in daily operations to warn travelers of hazardous weather conditions on the roadways. • Private industry begins development of road weather data safety applications for drivers, commercial fleets, and transportation managers. 	<p><u>Goal:</u> Safety</p> <p><u>Outcome:</u> Reduce the number of transportation-related deaths .</p>

SAFETY

Intelligent Transportation Systems (ITS) / Joint Program Office (JPO)

Program Purpose and Customers/Beneficiaries

- The ITS program advances the research, development and deployment of intelligent vehicles, intelligent infrastructure in order to improve the safety of the surface transportation system.
- Customers and beneficiaries include private citizens, state DOTs, private industry, academia, and standards development organizations.

2010 Accomplishments

- In 2010, the IntelliDriveSM effort redesigned the program scope to include systems engineering, test bed upgrades and the development of vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) research.
- The V2V work encompassed efforts with the major automotive companies to implement dedicated short range communications (DSRC) technology into vehicles to provide forward collision warning, blind spot detection, and lane departure warnings.

- The V2I work involved developing DSRC communications between vehicles and the roadway infrastructure to provide stop light or stop sign violations, signal time and phasing intersection safety alerts, speed warnings, and alerts such as hazardous surface conditions.
- Increased to 70% the participation of states linked to the Clarus network, making road weather data available for improved management of transportation system safety.
- Completed the technical work required to approve the DSRC standard for automotive use. Developed a common standard to facilitate lower equipment costs, and signal to the market that the DSRC technology has matured to a point that investment risks are low enough to expedite deployment of critical safety technologies.

2011 Program Inputs

- ITS safety programs encompass \$44 million and 8 FTE for 2011, a decrease of \$716,000 but an addition of one FTE. The additional staff resource has been assigned to assist with the systems engineering work and the testbed operation.
- The funds will be used to develop, test, and adopt industry standards for commercial ITS technology to enable uniform implementation of ITS products and services domestically and internationally.

2011 Program Activity

- IntelliDriveSM - Works with USDOT stakeholders, state transportation agencies, automotive manufacturers, and system integrators to create a crashless vehicle environment by providing timely warnings to drivers in the event of hazardous conditions, including stopped traffic ahead, blind spot detection, lane departure warnings, stop light or stop sign violations, and other hazards, offering the potential to dramatically decrease the number of highway fatalities and injuries in the United States. This work builds on the multi-modal research conducted on integrated vehicle based safety systems, intersection collision avoidance systems, and vehicle to infrastructure and vehicle to vehicle research that have the potential to address the majority of crash scenarios involving non-impaired drivers. Two operational demonstrations involving V2V and V2I applications at the IntelliDriveSM test bed will be conducted.
- CLARUS - (Latin for "clear"), is an initiative to develop a nationwide, integrated surface transportation weather observing, forecasting, and data management network to improve roadway safety during adverse weather conditions. In 2011, the program will increase Clarus coverage, complete the independent evaluations, and incorporate Clarus into the National Weather Service (NWS).
- The ITS Architecture Implementation Program provides common industry standards for interoperable ITS systems. Supports balloting, approval, and publication of revised and new standards for ITS safety technologies for the use by state DOTs, transit operators, and private industry.

2011 Program Achievements

- The V2V and V2I operational test demonstrations will produce the data necessary for NHTSA and FHWA to support future rulemakings regarding V2V and V2I technologies, which could result in expedited deployment and realization of DOT safety goals.
- The program will achieve 80% coverage of the Clarus network, which will enable refinements to the weather algorithms, increase data accuracy, and provide better road weather performance and alerting capabilities that will increase safety for travelers. This will also enable expanded coverage in the Canadian areas where U.S. motorists are exposed to harsher winter weather

conditions. The expanded Clarus information will increase the accuracy and availability of road weather advisories for travelers.

- The ITS program will achieve the successful adoption of the DSRC standard by the automotive industry.

2011 Program Outputs

- DSRC safety test data will be released in the third quarter of 2011 via the ITS website and the National Transportation Library for use by state transportation agencies, private industry, academia, and the auto industry to advance the development and installation of commercially available V2V and V2I solutions.
- Improved road weather data sets will be made available for transportation managers, and ultimately travelers. The evaluation results of the multi-state regional demonstration will also be available to external customers to include private industry.
- An updated ITS architecture will be provided to state DOTs to assist them in procuring new ITS equipment for enhanced safety operations.

2011 Program Outcomes

- State transportation agencies and automotive manufacturers will adopt V2V and V2I systems through in-vehicle communications systems and through infrastructure deployments. These outcomes are shared by DOT modal partners and state DOTs.
- Adoption of Clarus by the NWS would indicate sufficient confidence in the data quality and accuracy to become a ubiquitous service for the transportation manager and daily traveler to ensure roads are treated timely and at the areas of most importance. This could lead to safer operations in the areas where extreme weather causes safety impacts. These outcomes are shared by DOT modal partners and state DOTs.
- Harmonized international standards and adoption of DSRC safety standards have the potential to dramatically reduce crashes, injuries, and fatalities in the United States. These outcomes are shared by DOT modal partners and state DOTs involved in the ITS program research.

Contribution to DOT Goal

- Rear-end, road departure, and lane-change crashes account for 60 percent of all police-reported vehicle crashes. In 2008, NHTSA reports that 37,261 persons were killed in traffic crashes, and another 2,346,000 were injured. ITS technologies, such as on-board collision warnings systems, could prevent many of these crashes.
- The IntelliDriveSM program is accelerating the research, development, and deployment of these time-critical safety applications, which will significantly contribute to the Department's strategic goal of reducing the number of transportation-related deaths and injuries through innovation and technology.
- Utilizing more accurate road weather data in the management of traffic and transit services will lead to improved overall safety performance by facilitating a more effective assessment of weather conditions by authorities, improving the response to adverse events, and assisting travelers in making safer decisions.

ORGANIZATIONAL EXCELLENCE

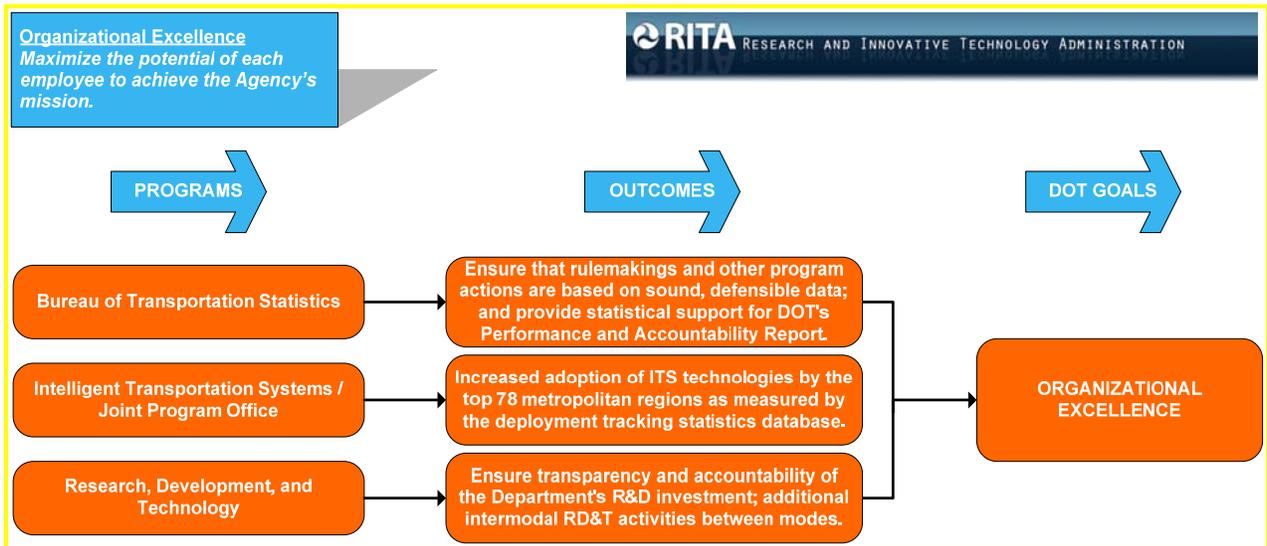
Overview:

RITA contributes to the DOT Organizational Excellence strategic objective. Listed below are FY 2009 and FY 2010 accomplishments:

- Integrated the USDOT Library and National Transportation Library (NTL) tools and services into one website.
- Supported USDOT TIGER Team efforts on the American Recovery and Reinvestment Act by receiving, reviewing, and responding to all inquiries within 24 hours of receipt.
- Provided online reference services, answering the thousands of questions received each month related to the business of the Department of Transportation.
- Developed a national plan for the exchange and dissemination of transportation information with US transportation librarians and information providers through transportation knowledge networks (TKNs).
- Implemented an ITS/JPO enterprise project management office (PMO) and completed an assessment of the entire web environment.
- Supported DOT in the interpretation and implementation of the statistical portion of the DOT Information Dissemination Quality Guidelines.
- Monitored agency-wide confidentiality procedures. Reviewed information products for potential disclosures of confidential information. Provided annual confidentiality training to all BTS employees and contractors. Assessed privacy compliance of RITA information systems.
- Supported and facilitated department-wide coordination to ensure collaborative RD&T portfolio management and supported RD&T Planning Council and Planning Team
- Implemented and enhanced (within RITA) a research planning prototype to obtain transparency and visibility of research and development activities including implementation of a Web-based data tracking system for research coordination.
- Collaboratively identified demonstration projects for alternative fuel stations, vehicles, and infrastructure with federal, state, local, industry, and academia partners.

The FY 2011 RITA budget request for the Organizational Excellence strategic goal is \$30.7 million. In 2011, RITA programs will:

- Validate performance and accountability measures and methodology for DOT and uphold the statistical quality and confidentiality (*Bureau of Transportation Statistics*).
- Provide a central source for transportation and R&D information primarily through electronic means, through the National Transportation Library (*Bureau of Transportation Statistics*).
- Implement the first automated ITS enterprise project tracking system through the Project Management Office (*Intelligent Transportation Systems / Joint Program Office*).
- Have all modal R&D programs reflected in the web-based tracking system and analyze data on performance measures related to DOT's RD&T activities (*Research, Development, and Technology*).
- Enhance DOT RD&T coordination and collaboration opportunities (*Research, Development, and Technology*).



Program Name: Bureau of Transportation Statistics (BTS)				FY 2011 Inputs: \$5.0 million, 11 FTE	
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>Creates, manages, and shares transportation statistical knowledge with public and private transportation communities, decision-makers and the public, in order to anticipate future needs and policy issues.</p> <p>Customers and beneficiaries include private citizens, researchers, policy-makers, industry and federal, state and local governments.</p>	<ul style="list-style-type: none"> Provide training on confidentiality standards. Assessments & recommendations on data quality and data transparency validation for the DOT PAR. National Transportation Library website integration. 	<ul style="list-style-type: none"> Perform data quality reviews. Review performance measures. Develop, maintain, and promote the Transportation Research Thesaurus. 	<ul style="list-style-type: none"> Data quality evaluations and guidance. Confidentiality assessment and training. Increase the number of documents in the NTL Digital Collection and provide updated policies via the NTL website. 	<ul style="list-style-type: none"> Ensure that rulemakings and other program actions are based on sound, defensible data; and provide statistical support for the Department's Performance and Accountability Report. Support transportation professionals and the public sector with an accessible electronic transportation research library. 	<p><u>Goal:</u> Organizational Excellence</p> <p><u>Outcome:</u> Achieve budget and performance integration goals.</p>

ORGANIZATIONAL EXCELLENCE

Bureau of Transportation Statistics (BTS)

Program Purpose and Customers/Beneficiaries

- BTS creates, manages, and shares transportation statistical knowledge with public and private transportation communities, decision-makers, and the public, in order to anticipate future needs and policy issues.

- Customers and beneficiaries include private citizens, researchers, policy-makers, industry, and federal, state, and local governments.

2010 Accomplishments

- Supported DOT in the interpretation and implementation of the statistical portion of the DOT Information Dissemination Quality Guidelines. Supported other ad hoc requests from DOT such as review of statistical methods in rulemaking processes.
- Monitored agency-wide confidentiality procedures. Reviewed information products for potential disclosures of confidential information. Continued annual confidentiality training to all BTS employees and contractors. Assessed privacy compliance of RITA information systems.
- Took the lead in reporting transportation data and statistics for the DOT to other agencies and organizations within and outside the U.S. for national and international statistics compilations such as OMB, U.S. Census Bureau, the United Nations, and Organization for Economic Cooperation and Development (OECD).
- Supported USDOT TIGER Team efforts on the American Recovery and Reinvestment Act by receiving, reviewing, and responding to all telephone (202-366-0745) and email (tigerteam@dot.gov) inquiries within 24 hours of receipt.
- Developed, maintained and promoted new and existing tools and standards, to coordinate national information dissemination and exchange through the National Transportation Library.

2011 Program Inputs

- There is no anticipated change in requested inputs.

2011 Program Activity

- Methods and Standards assembles data and provides technical support regarding performance measure scope, sources, statistical issues, completeness, and reliability for the DOT operating administrations. It also prepares the Performance Data Completeness and Reliability Details Exhibit for the annual Performance and Accountability Report. FY 2011 program activities for Methods and Standards are recurring. Activities are critical to ensuring that Departmental performance measures are sound and reasonable. Activities are also to set standards for data quality.
- National Transportation Library (NTL) maintains and facilitates access to statistical and other information needed for transportation decision-making at the Federal, State, and local levels. These goals are achieved through coordination with public and private transportation libraries and information providers to improve information sharing among the transportation community. As a virtual library, NTL is accessible through the Internet, providing broad access to the nation's transportation research and planning literature. For the Department, it provides a knowledge access point through its reference services, which field inquiries from the Department's key stakeholders. The NTL budget request for FY 2011 will enable continuation of the major FY 2010 NTL base activities: (1) reference management; (2) database management; (3) networking; and (4) tools and standards management. Accomplishment of NTL performance goals is most dependent on successful execution of these activities. In addition to maintaining the four key functions, one new program, a discovery application that allows searching across all transportation information resources, will be initiated in FY 2011 to enhance NTL online services.

2011 Program Achievements

- Will perform data quality reviews to ensure that data used for decision making are reliable.

- Will review quality performance measures critical to ensuring that Departmental monitoring and evaluation of performance is accurate.
- Will promote new and existing tools and standards, such as the Transportation Research Thesaurus, to ensure that NTL provides better access to information. It will also continue to coordinate national information dissemination and exchange activities through the National Transportation Knowledge Network (NTKN), including coordination of cooperative projects such as adding state, regional, and local research to the USDOT Climate Change Clearinghouse.

2011 Program Outputs

- Interpretation and implementation of the statistical portion of the DOT Information Dissemination Quality Guidelines provide timely review of ARRA data submitted to DOT. Support other ad hoc requests from DOT such as review of statistical methods in rulemaking processes.
- Ensure confidentiality through review of information products for potential disclosures of confidential information; continue annual confidentiality training to all BTS employees and contractors; assess privacy compliance of RITA information systems; and prepare the annual Performance and Accountability Report.
- Increase numbers of documents in the NTL Digital Collection. Interface and improve functionality in the electronic services and products of NTL. Update policies, standards and guidance available via the NTL website.

2011 Program Outcomes

- BTS technical guidance to other DOT modes helps to ensure that rulemakings and other program actions are based on sound, defensible data; provides statistical support for the Department's Performance and Accountability Report; and protects confidentiality of DOT data and programs through BTS training and review of programs.
- The NTL digital collection and information dissemination tools provide transportation professionals and the public sector with readily accessible electronic transportation research information.

Contribution to DOT Goal

- BTS provides statistical standards and guidelines for DOT data products and provides procedural tools and specific descriptions of minimum levels of quality and expert statistical advice in support of rulemakings, the Department's Performance and Accountability Report, and other DOT matters.
- The NTL, a virtual library, fills the need for national leadership and coordination among transportation libraries. It serves as an on-line knowledge access point of reference for DOT, enabling customers to access web-based information more thoroughly and quickly supporting e-government outcomes.

ORGANIZATIONAL EXCELLENCE

Program Name: Intelligent Transportation Systems (ITS) / Joint Program Office (JPO)					
FY 2011 Inputs: \$19.0 million, 3 FTE					
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>The ITS/JPO program supports the successful adoption of ITS technologies by providing the ITS community with tools, guidance, and training; policy research designed to address the institutional, legal, financial, governance, or other challenges in the ITS research program; independent program evaluation and assessment; and support to ensure excellence in program management.</p> <p>Customers and beneficiaries include state DOTs, university researchers, and private industry.</p>	<ul style="list-style-type: none"> Conduct ITS training courses. Develop IntelliDriveSM deployment scenarios, governance models, and certification policy. Conduct program management and evaluation tools. 	<ul style="list-style-type: none"> Implement new training courses through web 2.0 technologies to reach a broader training audience and deliver information more quickly. Develop a financial and governance model for IntelliDriveSM. Fully implement the first automated ITS enterprise project tracking system through the Project Management Office. 	<ul style="list-style-type: none"> Continued delivery of multi-modal training programs through various media and formats. Actual adoption and use of new technologies in the transportation sector, and independent evaluation data of major research initiatives for the public and private sector to utilize in their businesses. Research results on the governance, financial, and certification studies for the IntelliDriveSM program. 	<ul style="list-style-type: none"> Increased adoption of ITS technologies by the top 78 metropolitan regions as measured by the deployment tracking statistics database. Successful technology transfer occurs demonstrating the effectiveness of DOT programs and training. Rigorous ITS program management of all ITS research resulting in projects delivering research benefits on time and within budget. 	<p><u>Goal:</u> Organizational Excellence</p> <p><u>Outcome:</u> Achieve budget and performance integration goals.</p>

Intelligent Transportation Systems (ITS) / Joint Program Office (JPO)

Program Purpose and Customers/Beneficiaries

- The ITS/JPO program supports the successful adoption of ITS technologies by providing the ITS community with tools, guidance, and training; policy research designed to address the institutional, legal, financial, governance, or other challenges in the ITS research program; independent program evaluation and assessment; and support to ensure excellence in program management, so that research results are delivered on time, and within budget.
- Customers and beneficiaries include state DOTs, university researchers, and private industry.

2010 Accomplishments

- Engaged in new Professional Capacity Building training for operational personnel; implemented the IntelliDriveSM policy roadmap; revised deployment tracking statistic survey to address cutting edge ITS innovations; and implemented pilot project tracking system to increase visibility into the status and performance of research projects.

2011 Program Inputs

- This is an increase of \$29,000,000 and 3 FTE since this program is not reflected in the 2010 organizational excellence goal. These funds are used to develop and deliver interactive training to transportation professionals and conduct independent evaluation of research projects, develop policy research, and execute rigorous program management.

2011 Program Activity

- In 2011, the Professional Capacity Program will deliver 5 new ITS training courses through new media. As new technology and processes emerge, transportation professionals need to be trained on the acquisition, use, and maintenance of ITS technology. This program provides the training to ensure the investment in research is actually adopted by users.
- Conduct policy workshops with state DOTs, auto manufacturers, and electronics companies, as well as financial and PPP experts. Promotion of IntelliDriveSM research concepts and test results through conference participation and articles in key trade magazines.
- Conduct deployment tracking survey in the largest 78 metropolitan regions and complete independent evaluations of all completed major initiative research. All information will be populated in the ITS databases for public consumption. Development of monthly reporting, quarterly review data, and annual programmatic information to assist in research investment decisions.

2011 Program Achievements

- Will implement new training courses through web 2.0 technologies to reach a broader training audience and deliver information more quickly. An interactive dialogue will allow peers to provide value added information that can be shared with an exponential number of users.
- Will develop a financial and governance model for IntelliDriveSM. This accomplishment will signal the community's willingness to fund, deploy, and operate an IntelliDriveSM network for safety, mobility, and environmental applications.
- Will fully implement the first automated ITS enterprise project tracking system through the Project Management Office. This will provide more timely reporting of contract performance data, better risk mitigation capabilities, and more efficient oversight of projects which provides more time for project managers to actively manage work instead of spending time collecting project data. By increasing oversight, customers will receive higher quality and a higher number of products in a more timely fashion.

2011 Program Outputs

- Five new training modules will be developed for transportation professionals.
- ITS research data on the actual adoption and use of new technologies in the transportation sector, and independent evaluation data of major research initiatives for the public and private sector to utilize in their businesses.
- Research results on the governance, financial, and certification studies for IntelliDriveSM.

2011 Program Outcomes

- Increased adoption of ITS technologies by the top 78 metropolitan regions as measured by the deployment tracking statistics database. This measure will demonstrate that the ITS research provides value in terms of increased safety, reduced congestion, and decreased environmental impacts. Other DOT modal administrations involved in training (FHWA, FTA) share the responsibility for the achievement of this outcome.

- Successful technology transfer with stakeholders that expedites deployment of needed technology improvements demonstrating the effectiveness of DOT programs and training. These outcomes are shared by DOT modal partners and state DOTs.
- Rigorous ITS program management of all ITS research resulting in projects delivering research benefits on time and within budget. This will support greater adoption of ITS by the industry and faster technology transfer of information to industry. These outcomes are shared by DOT modal partners and state DOTs.

Contribution to DOT Goal

- By providing high quality training to transportation professionals, DOT is promoting ITS program effectiveness among our state DOT partners and private industry. By addressing the primary institutional challenges associated with complex technological research, DOT ensures that actual achievements of benefits are accrued by the stakeholders of our research investments. By providing independent, high quality data to stakeholders, the DOT's role as a provider of valuable information and a facilitator in the adoption of new technologies is enhanced. By providing rigorous oversight of research investments, DOT demonstrates a commitment to maximizing returns on taxpayer funds and ensuring excellence in the performance of research execution. This increases the overall performance of the entire transportation system and demonstrates DOT's excellence in the community.

ORGANIZATIONAL EXCELLENCE

Program Name: Research, Development, and Technology (RD&T)			FY 2011 Inputs: \$6.8 million, 23.5 FTE		
Program Purpose and Customers/Beneficiaries	2011 Activity	2011 Achievements	2011 Outputs	2011 Outcomes	Contribution to DOT Goal
<p>Coordination, facilitation and review of crosscutting and cross-modal research, and development programs to foster innovations for an effective, integrated, and intermodal transportation system.</p> <p>Customers and beneficiaries include DOT modal administrations, other federal agencies and public/private transportation stakeholders.</p>	<ul style="list-style-type: none"> Operate and maintain a web-based data tracking system for research coordination. Collect data on performance measures related to DOT's RD&T activities. Provide support to the DOT RD&T community. 	<ul style="list-style-type: none"> All modal R&D programs reflected in the web based tracking system. Analyze data on performance measures related to DOT's RD&T activities. Enhance DOT RD&T coordination and collaboration opportunities. 	<ul style="list-style-type: none"> All modal access to the departments R&D projects for collaboration and coordination purposes. Present data results to the RD&T Planning Team. Hold monthly Planning Team meetings in FY 2011. 	<ul style="list-style-type: none"> Ensure transparency and accountability of the Department's R&D investment. Provide measureable results of DOT RD&T programs. Additional intermodal RD&T activities between modes. 	<p><u>Goal:</u> Organizational Excellence</p> <p><u>Outcome:</u> Achieve budget and performance integration goals.</p>

Research, Development, and Technology (RD&T)

Program Purpose and Customers/Beneficiaries

- RD&T coordinates, facilitates and reviews the DOT crosscutting and cross-modal research, and development programs to foster innovations for an effective, integrated, and intermodal transportation system.
- Customers and beneficiaries include DOT modal administrations, other federal agencies, and public/private transportation stakeholders.

2010 Accomplishments

- The RD&T Coordination initiative led the RD&T Planning Council to identify research priorities and opportunities for collaboration on crosscutting RD&T activities.

2011 Program Inputs

- The funding request is for the amount of \$900,000; this reflects an increase of \$364,000 from the previous baseline amount of \$536,000. The funding increase will provide for the development of a technology transfer support program and the enhancement of Department-wide coordination to increase research collaboration activities and the engagement of internal and external stakeholders.

2011 Program Activity

- Operate and maintain a web-based data tracking system for research coordination.
- Collect data on performance measures related to DOT's RD&T activities.
- Provide support to the DOT RD&T community.

2011 Program Achievements

- Will facilitate more efficient research initiatives, well-informed objectives and expectations, and enhanced value to the transportation community.

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EXHIBIT IV-4

**KEY PROGRAM REVIEWS, ASSESSMENTS OR EVALUATIONS
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**

A. Recent Reviews, Assessments and Evaluations

Name/Title	Type	Result
POSITIONING, NAVIGATION AND TIMING PROGRAM		
Space-Based PNT Executive Committee	Review	Effective
Space-Based PNT Executive Steering Group	Review	Effective
National PNT Architecture Review and Validation Team	Evaluation	Effective
National PNT Architecture Decision Coordination Group	Review	Effective
RESEARCH, DEVELOPMENT AND TECHNOLOGY PROGRAM		
GAO -09-361T – Transportation Research	Assessment	Implemented five recommendations.
OMB PART - Transportation Research and Development Program	Assessment	Implemented Improvement plan.
Intelligent Transportation Systems (ITS)/Joint Program Office (JPO)		
ITS/JPO - IG - AUDIT	Assessment	Implemented 7 recommendations.
Bureau of Transportation Statistics Program (BTS)		
Transportation Customer Feedback Database	Review	Effective

Program: Positioning, Navigation and Timing -- Space-Based PNT Executive Committee and Executive Steering Group

DOT Strategic Goal: Reduced Congestion

Purpose, Scope and Methodology: To review progress in implementing the 2004 National Security Policy Directive on Space-Based Positioning, Navigation, and Timing (NSPD-39).

Results and Conclusions: Effective progress on DOT’s work plan items to implement space-based PNT policy.

Recommendations and Improvement Plans: Continue DOT input to National Space-Based PNT 5-year plan.

Progress: DOT is gathering space-based PNT budget and program data to incorporate into the 5-Year Plan to be published in 2010.

Program: Positioning, Navigation and Timing -- National PNT Architecture Review and Validation Team and Decision Coordination Group

DOT Strategic Goal: Reduced Congestion

Purpose, Scope and Methodology: To review progress in developing a National Positioning, Navigation, and Timing architecture for 2025

Results and Conclusions: Effective progress on developing PNT Architecture vision, strategy, and recommendations for 2025 and implementation plan to carry out the architecture recommendations.

Recommendations and Improvement Plans: Continue DOT co-leadership of the architecture with DoD and encourage interagency participation.

Progress: DOT is participating in interagency teams to implement the 19 National PNT Architecture recommendations.

Program: RD&T Coordination -- GAO -09-361T – Transportation Research

DOT Strategic Goal: Organizational Excellence

Purpose, Scope and Methodology: To assess the methods to improve the RD&T coordination process.

Results and Conclusions: Achieved implementation of recommended actions.

Recommendations and Improvement plans: GAO made five recommendations in 2006 aimed at enhancing the effectiveness of RD&T activities. An improvement plan was implemented.

Progress: The five recommendations made by GAO were fully implemented.

Program: RD&T Coordination -- OMB PART - Transportation Research and Development Program

DOT Strategic Goal: Organizational Excellence

Purpose, Scope and Methodology: To establish and improve long-term measures for the RD&T program; establish a database and continue the development of R&D review criteria.

Results and Conclusions: Recommended actions are being executed in a timely manner.

Recommendations and Improvement Plans: Creation of a database, development of R&D investment criteria and establishment of long-term measures.

Progress: All recommendations are being implemented to achieve the targeted goals in a timely manner.

Program: Intelligent Transportation Systems (ITS)/Joint Program Office (JPO) -- IG Baseline Audit

DOT Strategic Goal: Organizational Excellence

Purpose, Scope and Methodology: To implement the IG Audit recommendations to improve overall program effectiveness.

Results and Conclusions: Recommended actions were implemented.

Recommendations and Improvement Plans: The IG Audit identified 10 recommendations for improving program effectiveness. The ITS JPO concurred with all recommendations and has developed implementation targets. Periodic progress updates are provided to the IG.

Progress: Of the 10 recommendations, 7 have been implemented. Active progress to implement the remaining 3 is underway.

Program: Bureau of Transportation Statistics Program -- Transportation Customer Feedback Database

DOT Strategic Goal: Organizational Excellence

Purpose, Scope and Methodology: The purpose of the transportation customer feedback database is for BTS to establish an internal web-based customer request and outreach database to inventory customer inquiries.

Results and Conclusions: Information from the database is used to identify new areas of interest from among the wide range of transportation customers served by BTS.

Recommendations and Improvement Plans: BTS uses these data to assist in implementing its continuous improvement process by aligning agency priorities and allocation of resources with customer demands.

Progress: The system is complete and has been implemented across BTS with over 400 customer exchange entries to date. Information generated by the system is reviewed by BTS program managers on a regular basis.

B. Planned Reviews, Assessments and Evaluations

Name/Title	Type	Result
BUREAU OF TRANSPORTATION STATISTICS PROGRAM		
Customer Satisfaction Survey and Outreach Plan	Assessment	Establish a baseline for customer satisfaction for future project evaluations to determine strategic allocation of resources.

Bureau of Transportation Statistics Program

Program Assessment:

The purpose of the customer satisfaction survey is to reach out to customers requesting objective feedback on BTS programs, projects and resource allocation. These assessments will assist in developing user-friendly products and services for the transportation community. By using commercial web-survey technology, BTS will be able to continue providing real-time results to enhance customer data requests. The survey was implemented in September 2009 and will be an ongoing project.

EXHIBIT V-1

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
RESEARCH, DEVELOPMENT AND TECHNOLOGY
(\$000)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2011</u>	<u>FY 2011</u>
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>	<u>Applied</u>	<u>Development</u>
<u>Research and Development</u>					
Salaries and Administrative Expenses	4,201	4,701	4,625	3,376	1,249
Alternative Fuels Research & Development (R&D) (Formerly Hydrogen Fuels Safety)	1,400	500	500	200	300
RD&T Coordination	536	536	900	657	243
Nationwide Differential Global Positioning System	5,000	4,600	0	0	0
Positioning, Navigation, and Timing	0	400	1,000	0	1,000
Intelligent Transportation Systems	[102,960]	[107,690]	[110,000]	[110,000]	<u>0</u>
Total RITA	11,137	10,737	7,025	4,233	2,792