



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219 2000

Charles A. Kilpatrick, P.E.
Commissioner

November 30, 2017

The Honorable Governor Terry McAuliffe
Members of the Virginia General Assembly

Dear Ladies and Gentlemen:

Section 33.2-1531 of the *Code of Virginia* directs the Commissioner of Highways to report annually on the use of moneys in the Innovation and Technology Transportation Fund (ITTF). This letter provides the information as required by the statute.

ITTF monies are to be used solely for the purposes of funding pilot programs and fully developed initiatives pertaining to high-tech infrastructure improvements. "High-tech infrastructure improvements" pertain to projects or programs that reduce congestion, improve mobility, improve safety, provide up-to-date travel data, or improve emergency response.

The Virginia Department of Transportation (VDOT) developed a Transportation Technology Plan that aligned its goals and technology strategies with the purpose of the monies allocated to the ITTF. Projects utilizing ITTF monies originate from the Transportation Technology Plan.

The Transportation Technology Plan was developed to improve the efficiency, safety, and convenience of all modes of transportation throughout the Commonwealth. This plan incorporated recommendations from the VTrans2040 needs assessment for the 12 corridors of statewide significance and other VDOT planning documents. The eight technology strategies of the Transportation Technology Plan are:

1. **Enhance operations traffic management** – to improve corridor efficiency through active traffic management across multiple parallel freeways, arterial highways and transit systems.
2. **Strengthen incident and emergency response** – to detect, respond and clear incidents on the roadway, which include collisions, disabled vehicles, weather events, emergencies, and man-made disasters.

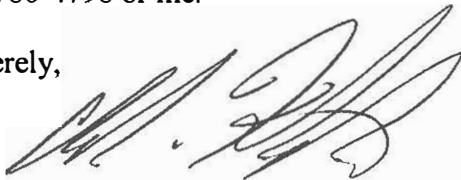
3. **Support multimodal travel promotion** – to increase multimodal travel by increasing access and improving its efficiency.
4. **Manage arterials** – to optimize the performance of arterial roadways through signal operations improvements and performance monitoring.
5. **Furnish traveler information** – to provide real time, multi-corridor and multi-modal travel information to enable pre-trip and in-route trip planning.
6. **Support commercial vehicle/freight** – to manage and support freight mobility.
7. **Conduct emerging technology research** – to promote the development of new technologies to improve safety, convenience and efficiency of travel through connected and autonomous vehicle technologies, and bicycle/pedestrian programs.
8. **Enhance enabling technology infrastructure** – to promote future expansion and resiliency of technologies by deploying and upgrading supporting communication and utility services.

The current estimated total value of allocations for projects eligible for ITTF funding (“ITTF Projects”) is \$137M. This number consists of \$99.9M, which was allocated to the ITTF for FY-17 through FY-22 by the Commonwealth Transportation Board (CTB) pursuant to an action dated June 14, 2016, and \$37.2M of allocations/projections of the CTB pursuant to the portion of the alternative CTB formula dedicated to smart roadway technology projects, prior to enactment of the ITTF, for FY-17 through FY-22.

In FY-17, \$13.6M was allocated to the ITTF. The attached tables provide information concerning ITTF Projects that were allocated funding, incurred expenditures, and /or are ongoing in FY17.

If you have any questions, please do not hesitate to contact Garrett Moore, Chief Engineer, at 804-786-4798 or me.

Sincerely,



Charles A. Kilpatrick, P.E.
Commissioner of Highways

Cc: The Honorable Aubrey L. Layne, Jr.
Mr. Garrett Moore, P.E.

"ITTF Projects" Allocated Funding in FY17¹				
UPC / Location	Project Purpose	Funding Allocation FY17 Final SYIP	Expenditures FY 17	Status
104591 Statewide	Statewide Equipment Upgrades	\$128,668	\$0	This line item is a funding source for breakout projects. Breakout projects will be developed and funded by this source. Refer to the following table for list of projects funded.
108423 Hampton Roads	I-64 WB Over-Height Vehicle Detection System to prevent closures at the Hampton Roads Bridge Tunnel to prevent congestion.	\$900,000	\$263,104	Construction is underway
108587 Fredericksburg	I-95 Hard / Dynamic Shoulder Running to expand capacity to improve mobility.	\$3,200,000	\$0	Ad date is 02/2023
109232 Hampton Roads	Arterial Operations Improvements US 60, Rt. 143, Rt. 199 to improve alternative capacity for the adjacent I-64 corridor.	\$1,560,000	\$0	Ad date is 01/2018
109482 Richmond	Richmond TOC Upgrade to house future transportation technology equipment and operations to improve traffic surveillance and management.	\$3,351,297	\$0	Scheduled for October 2017 advertisement date

¹ Information concerning FY16 allocations and expenditures for "ITTF Projects" may be found in the FY16 report published on Virginia's Legislative Information System at: <http://leg2.state.va.us/dls/h&sdocs.nsf/0/97984df5e27b98e385257fef0063bf36?OpenDocument>

"ITTF Projects" Allocated Funding in FY17

UPC / Location	Project Purpose	Funding Allocation FY17 Final SYIP	Expenditures FY 17	Status
109506 Statewide	Statewide Communitywide Adaptive Signal Control	\$470,000	\$0	This line item is a funding source for breakout projects; Awaiting additional funding to develop a new breakout project.
109536 Statewide	I-95 / I-395 ICM Multimodal Traveler Information to develop an integrated corridor management program to improve mobility.	\$2,000,000	\$0	This line item is a funding source for breakout projects. Breakout projects will be developed and funded by this source. Refer to the following table for list of projects funded.
109545 Statewide	Statewide Emerging Technology Research	\$500,000	\$0	This line item is a funding source for breakout projects. Breakout projects will be developed and funded by this source. Refer to the following table for list of projects funded
109547 Statewide	Statewide 511 System Enhancements	\$1,572,711	\$0	This line item is a funding source for breakout projects. Breakout projects will be developed and funded by this source. Refer to the following table for list of projects funded
Grand Total FY-17 Funding Allocation		\$13,682,676		

Breakout Projects / Ongoing / Completed Projects

UPC / Location	Project Purpose	Total Allocations	Expenditures FY-17	Status
105363 Northern Virginia	Expand ramp metering on I-395 to reduce congestion	\$1,500,000	\$529,253	Construction is underway
105368 Hampton Roads	Prepare design plans for an upgraded control room to improve traffic operations at the Hampton Roads Bridge Tunnel	\$695,371	\$147,361	Design plans are underway
105369 Richmond	Prepare design plans for signal improvements for Route 1 from Caroline County to Colonial Heights to improve traffic flow	\$525,000	\$80,448	Design plans are underway
105372 Northern Virginia	Upgrade outdated traveler information signs in Northern Virginia	\$1,172,310	\$871,485	Complete
105380 Bristol	Improve traffic management at the Big Walker Mountain Tunnel	\$368,233	\$121,999	Preliminary design underway; Removed surplus to partially fund UPC 110912
105381 Bristol	Improve traffic management at the East River Mountain Tunnel	\$588,233	\$109,377	Preliminary design underway
105388 Hampton Roads	Prepare design plans to improve traffic operations at the I-664 Monitor Merrimac Tunnel	\$620,448	\$120,066	Design plans are underway
105400 Northern Virginia	Prepare design plans for signal improvements for arterial highways in Northern Virginia to improve traffic flow for north-south travel. Routes include 28, 234, 286, and 294 – Phase 1	\$79,362	\$15,997	Design completed in FY-16. Expenditures posted in FY-17

UPC / Location	Project Purpose	Total Allocations	Expenditures FY-17	Status
105401 Northern Virginia	Prepare design plans for signal improvements for arterial highways in Northern Virginia to improve traffic flow for US 1 from Alexandria to Stafford – Phase 1	\$112,931	\$57	Design completed in FY-16. Expenditures posted in FY-17
105404 Hampton Roads	Signal improvements for US 60 between New Kent and Newport News to improve traffic flow	\$385,000	\$10,771	Design plans are underway
105443 Fredericksburg	I-95 Corridor Technology 1, 17 ; Signal Communications Camera – Prince William to Hanover to improve situation awareness and the management of traffic	\$540,000	\$83,691	Scoping is underway; Funded by UPC 104593
105444 Richmond	Signal improvements for US 60 between New Kent and Richmond to improve traffic flow	\$180,000	\$942	Complete
105476 Hampton Roads	Install traffic monitoring devices and traveler information signs on I-64 near the Mercury Boulevard interchange to improve incident management & improve traffic flow	\$1,346,898	\$97,808	Complete; Partially funded by UPC T15660
107540 Northern Virginia	Install signal improvements with CCTV improvements for arterial highways in Northern Virginia to improve traffic flow for US 1 - Phase 2	\$230,000	\$153,481	Construction is underway
107541 Northern Virginia	Install signal improvements with CCTV improvements for arterial highways in Northern Virginia to improve traffic flow for US 1 - Phase 3	\$385,000	\$41,965	Construction is underway

UPC / Location	Project Purpose	Total Allocations	Expenditures FY-17	Status
107542 Northern Virginia	Install signal and camera improvements on Routes 28, 234, 286, & 294 in Northern Virginia to improve traffic flow - Phase 2	\$200,000	\$123,107	Construction is underway
107543 Northern Virginia	Install signal and camera improvements on Routes 28, 234, 286, & 294 in Northern Virginia to improve traffic flow - Phase 3	\$290,000	\$44,197	Advertised for construction
107544 Northern Virginia	Install signal and camera improvements on Routes-29, 50, 7, 236 in Northern Virginia to improve traffic flow - Phase 1	\$230,000	\$0	Construction is underway
107545 Northern Virginia	Install signal and camera improvements on Routes-29, 50, 7, 236 in Northern Virginia to improve traffic flow - Phase 3	\$423,829	\$83,836	Advertised for construction
107548 Northern Virginia	Install infrastructure to support adaptive / real time signal improvements for US Route 1 in Northern Virginia to improve traffic flow – Phase 4	\$280,000	\$229,039	Advertised for construction
107549 Northern Virginia	Install infrastructure to support adaptive / real time signal improvements for Routes 28, 234, 286 and 294 in Northern Virginia to improve traffic flow – Phase 4	\$386,000	\$151,424	Advertised for construction
107550 Northern Virginia	Install infrastructure to support adaptive / real time signal improvements for Routes 29, 50, 7 and 236 in Northern Virginia to improve traffic flow	\$744,431	\$264,403	Advertised for construction

UPC / Location	Project Purpose	Total Allocations	Expenditures FY-17	Status
107663 Fredericksburg	Intelligent Transportation System Deployment – District wide Fredericksburg District – Deployment of various signal related technology	\$3,800,000	\$4,147	Construction is underway
107818 Richmond	Intelligent Transportation System Deployment – Districtwide Richmond District – Deployment of various signal related technology	\$350,000	\$725	Construction is underway; Funded by UPC 104593
109487 Northern Virginia	I-66 Corridor Technology Advancements for Route 29, 50, 7, 236 Connected Vehicle Development to promote this emerging technology to improve safety and mobility	\$300,000	\$67,986	Scoping is underway; Funded by UPC 104590
109542 Statewide	Statewide Transit Efficiency to promote ridership to improve mobility.	\$250,000	\$0	This line item is a funding source for breakout projects. Breakout projects will be developed and funded by this source.
110208 Statewide	Safety Service Patrol Communications Upgrade to improve incident management to minimize delays.	\$225,000	\$121,222	Procurement is underway; Funded by UPC 104591
110497 Northern Virginia	I-95 & I-66 Corridor Technology Advancement – System Security Enhancement for networks & I/T systems	\$441,047	\$0	Scoping is underway; Funded by UPC 104590
110526 Statewide	Enhancements to Statewide 511 to provide greater travel information to improve mobility	\$376,939	\$326,899	Construction is underway; Funded by UPC 109547
110561 Statewide	I-95 Ramp Metering to improve traffic management and reduce congestion (Design only)	\$200,000	\$15,520	Design plans are underway; Funded by UPC 109536

UPC / Location	Project Purpose	Total Allocations	Expenditures FY-17	Status
110912 Statewide	Statewide Truck Parking Management System – Phase 1 to improve safety for commercial vehicle operations.	\$925,000	\$0	Awarded; Funded by multiple UPCs 109545, T15660, 109547, 105380
111613 Statewide	Statewide Truck Parking Management System – Phase 2 to improve safety for commercial vehicle operations.	\$1,807,000	\$0	Design plans are underway; Funded by UPC 109536
111943 Statewide	Network Operations Center Support 24/7 to improve the reliability of transportation technology devices used to manage traffic operations.	\$554,000	\$0	PE is underway for support services; Funded by UPC 104591
T15660 Statewide	Innovative Statewide Smart Roadway Technology Implementation to fund project deficits or breakout projects	\$696,562	\$696,562	Funding source for balancing deficits on Smart Roadway Technology Projects and / or funding for breakout Smart Roadway projects yet to be determined; Funded deficit on UPC 105476 & partially funded UPC 110912; Complete