U.S. Department of Transportation
Federal Motor Carrier Safety Administration

May 2018

The Innovative Technology Deployment (ITD) Grant Program, 2017 Annual Report

On December 4, 2015, the Fixing America's Surface Transportation Act, 2015 (FAST Act) (Pub. L. 114-94) established the Innovative Technology Deployment (ITD) Grant Program, replacing the long-standing Commercial Vehicle Information Systems and Networks (CVISN) Deployment Grant Program, effective October 1, 2016. This change consolidated seven agency grants into four, and placed the ITD Grant Program under the Motor Carrier Safety Assistance Program (MCSAP) High Priority (HP) program which reduced the burden on States that apply for multiple grants annually. The change also allowed for at least an 85/15 federal funding to State match split where it was previously 50/50, expanding States' access to these critical technology projects. Lastly, the FAST Act removed the annual caps for funding requests, as well as other statutory program requirements, allowing the FMCSA the flexibility to make necessary program changes through policy.

This report details ITD funding activities for fiscal year (FY) 2017 and ITD program activities for calendar year 2017.

BACKGROUND

Established as a separate operating administration within the U.S. Department of Transportation (USDOT) on January 1, 2000, pursuant to the Motor Carrier Safety Improvement Act of 1999, the Federal Motor Carrier Safety Administration (FMCSA) works to reduce crashes, injuries, and fatalities involving large trucks and buses.

The ITD program is a key component of FMCSA's drive to improve commercial motor vehicle (CMV) safety. The ITD program supports this safety mission by providing grant funds to States for:

- Improving safety and productivity of motor carriers, CMVs, and their drivers.
- Improving efficiency and effectiveness of CMV safety programs through targeted enforcement.
- Improving CMV data sharing among States and between States and FMCSA.
- Reducing Federal, State, and industry regulatory and administrative costs.

ITD PROGRAM FUNDING

Eligibility

To be eligible for ITD deployment funds, States must meet the following requirements:

- Have an FMCSA-approved ITD Program Plan and Top-Level Design (PP/TLD).
- Certify that its ITD deployment activities are consistent with the National Intelligent Transportation Systems and commercial vehicle information systems and networks architectures and standards, and agree to execute interoperability tests developed by FMCSA.
- Agree to promote interoperability and efficiency to the extent practicable.[1]

[1] FAST Act, Section 31104(a)(3)(C)

Use of Funds

Grant funds may be used for deployment activities and to develop new and innovative advanced technology solutions that support commercial vehicle information systems and networks.

Funds may also be used for planning activities, including the development or updating of a PP/TLD, and for the operation and maintenance costs associated with innovative technology.

Program Plan

States may apply for ITD funds for planning activities, including the development of the PP/TLD. The PP/TLD is a technical document that provides management framework and system architecture to guide program deployment and to advise policy and decision makers regarding the funding and technical resources required for successful program implementation. The PP/TLD describes the various systems and networks at the State level that must be refined, revised, upgraded, or built to accomplish Core or Expanded capabilities.

CORE ITD

ITD consists of Core and Expanded functionality. Core ITD capabilities exist in three program areas:

1. Safety Information Exchange

Designed to ensure the safety of motor carriers and CMVs through improved data collection and enhanced data sharing (e.g., inspection reports, credentials status) across Agency and jurisdictional boundaries. Specific Safety Information Exchange items include:

— Using the Aspen (or equivalent) automated inspection software at all major inspection sites.
— Connecting to the national Safety and Fitness Electronic Records (SAFER) system to provide exchange of interstate carrier and vehicle safety data among States.
— Implementing a State-specific Commercial Vehicle Information Exchange Window (CVIEW) system or equivalent to exchange credential and safety data with the national SAFER system, which then makes the data available to other jurisdictions.

2. Electronic Credentials Administration

Designed to automate the application, processing, and issuance of motor carrier operating credentials and permits to improve the efficiency of both motor carriers and State credentialing agencies. Specific Electronic Credentials Administration items for States include:

— Automating the processing of International Registration Plan (IRP) and International Fuel Tax Agreement (IFTA) credentials and conducting at least 10 percent of transaction volume electronically.
— Participating in the IRP Clearinghouse to share information across jurisdictions and automate funds settlement between jurisdictions.
— Participating in the IFTA Clearinghouse to share information across jurisdictions and automate funds settlement between jurisdictions.

3. Electronic Screening (e-Screening)

Designed to target enforcement resources on high-risk and non-compliant motor carriers by identifying a CMV, verify its size, weight, and credentials information, and review its carrier's past safety performance while the vehicle is in motion and then communicate safely to the driver to either pull in or bypass the roadside inspection station.

Vehicles that are: 1) properly credentialed; 2) operated by a motor carrier with a history of safe operations; and 3) within weight limits (if the site is instrumented for weight measurements) are allowed to bypass inspection facilities (although such vehicles are still subject to random inspection).
Specific e-screening items include:

— Implementing e-screening at a minimum of one fixed or mobile inspection site, and
— Being ready to replicate this functionality at other sites.

EXPANDED ITD

Once a State is certified as having deployed all of the Core ITD functionality, it is deemed to be Core-compliant and must maintain these capabilities. Once Core-Compliant, a State may

use its Federal ITD Deployment Grant funding to deploy Expanded ITD functionality. The Expanded portion of the ITD program provides more flexibility than the Core component of the program.

States are not required to deploy a set of fixed capabilities or to enable certain technologies as part of Expanded ITD, but rather are able to choose the capabilities they wish to deploy. This "cafeteria approach" allows States to customize their ITD programs and focus their technology resources on the projects that are most important to them.

While States can deploy a variety of capabilities as part of their Expanded ITD programs, FMCSA supports a specific set of key capabilities. FMCSA, in conjunction with public and private stakeholders, initially identified 40 capabilities that could be integrated into the ITD program. These capabilities were segmented into four Expanded ITD program areas:

1. Driver Information Sharing.
2. Enhanced Safety Information Sharing.
3. Smart Roadside.
4. Expanded Electronic Credentialing.

Based on input from industry and State agencies, FMCSA further developed and defined a list of high-priority Expanded ITD capabilities. Table 1 provides a brief description of these capabilities.

Table 1. High-priority Expanded ITD capabilities.

Program Area	Capability	Description
Driver Information Sharing	Driver Snapshots	• Use and maintain driver snapshots in all processes that require information about drivers (e.g., enforcement, credentialing, hiring, inspection).
Driver Information Sharing	Access to Driver Data	• Improve enforcement personnel and carriers' access to driver information to target driver safety risks.
Enhanced Safety Information Sharing	Safety Data Quality	• Establish data quality measures (timeliness, accuracy, and integrity), especially for those data elements used in making safety decisions. • Regularly check data used in ITD processes for quality; purge stale data; and correct errors.
Enhanced Safety Information Sharing	Carrier Access to Safety Data	• Improve carriers' ability to review safety-related data (carrier, vehicle, driver, cargo, crash, citation, inspection) collected by a State or Federal agency in a timely manner. • Consider proactively delivering safety data to the carrier.
Smart Roadside	Roadside Access to Data	• Provide integrated and improved access for roadside personnel to data stored in infrastructure systems (e.g., SAFER, Motor Carrier Management Information System [MCMIS], commercial driver's license [CDL] data systems).
Smart Roadside	Virtual Weigh Stations	• Expand the use and capabilities of virtual/remote enforcement sites to increase the effectiveness of enforcement.
Expanded e-Credentialing	Access to Credentials Data	• Enhance interfaces and systems for information sharing to provide improved access to more current and accurate credentials information for authorized stakeholders.
Expanded e-Credentialing	Better e-Credentialing	• Reduce complexity and redundancy for users by offering access to multiple credentials from a single source. • Expand the types of credentials that are available electronically (e.g., add oversize/overweight [OS/OW] and hazardous materials permitting).

Table 2 summarizes the number and amount of CVISN/ITD grants awarded by FMCSA during FYs 2006–17.

Table 2. Total value and number of Federal CVISN/ITD deployment grants awarded by FMCSA, 2006–17.

Year	Number of Grants	Total Amount
2006	30	$14,512,884
2007	26	$22,442,372
2008	23	$18,192,327
2009	18	$19,925,000
2010	4	$4,761,848
2011	20	$17,010,364
2012	22	$15,609,917
2013	20	$15,785,861
2014	23	$14,906,179
2015	21	$12,373,949
2016	27	$16,834,069
2017	28	$21,393,837

CALENDAR YEAR 2017 ITD PROGRAM ACTIVITIES

During calendar year 2017, major activities occurred in the following areas:

- States continued their deployment of ITD functionality.
- FMCSA conducted the 2017 HP-ITD Notice of Funding Availability (NOFA) webinar outlining national priorities and grants management information.
- FMCSA hosted monthly program manager teleconference calls with State and industry partners.
- FMCSA awarded FY 2017 HP-ITD grant funding.
- FMCSA conducted a joint ITD-PRISM[2] Deployment Workshop in June 2017.
- FMCSA conducted Core Compliance Reviews in five States in FY17 (Colorado, Illinois, Mississippi, New York and Ohio). Two reviews were conducted remotely via webinar (New York and Ohio)), with three States (Colorado, Illinois and Mississippi) having onsite reviews.

Highlights

Electronic Screening- Beginning in FY16, the FMCSA provided roadside enforcement personnel the ability to differentiate those inspections conducted as a result of an E-Screening decision. When comparing these particular inspections with the most recent data available for all inspections (FY17), we determined the vehicle out-of-service (OOS) rate resulting from e-screening (20.85%), slightly exceeded the overall national OOS rate of 20.74%. The national violation rate for all e-screened inspections in FY17 was 54.62%.

Deployment of ITD Functionality

Michigan and Oklahoma achieved Core ITD certification in calendar year (CY) 2017. By the end of CY 2017, 41 States had completed their deployments of Core ITD functionality and had entered the Expanded portion of the program (as illustrated in Figure 1).

All States and the District of Columbia have deployed at least one element of Core functionality and many States are close to achieving Core compliance. Table 3 summarizes the number of States that have deployed each Core element. As indicated in the table, 46 States have implemented a CVIEW and enabled interstate sharing of credential data. Forty-five States have implemented electronic credentialing for both IFTA and IRP. One State has implemented electronic credentialing for IRP, but not IFTA. All jurisdictions have deployed the Aspen inspection software, or an equivalent, and the vast majority (47 out of 49) are currently participating in both the IRP and IFTA clearinghouses. Alaska and Hawaii are exempted from participating in IRP and IFTA; therefore, only 49 jurisdictions are required to deploy IRP- and IFTA-related functionality. Forty-seven States have some form of e-screening implementation.

[2] Performance and Registration Information Systems Management

Several States in the Expanded phases of their ITD program undertook projects to upgrade their systems (CVIEW, IFTA/IRP electronic credentialing), deploy and/or enhance online OS/OW permit systems, or extend e-screening implementations to other sites within their State.

Figure 1. National map of functionality deployment in FY 2017.

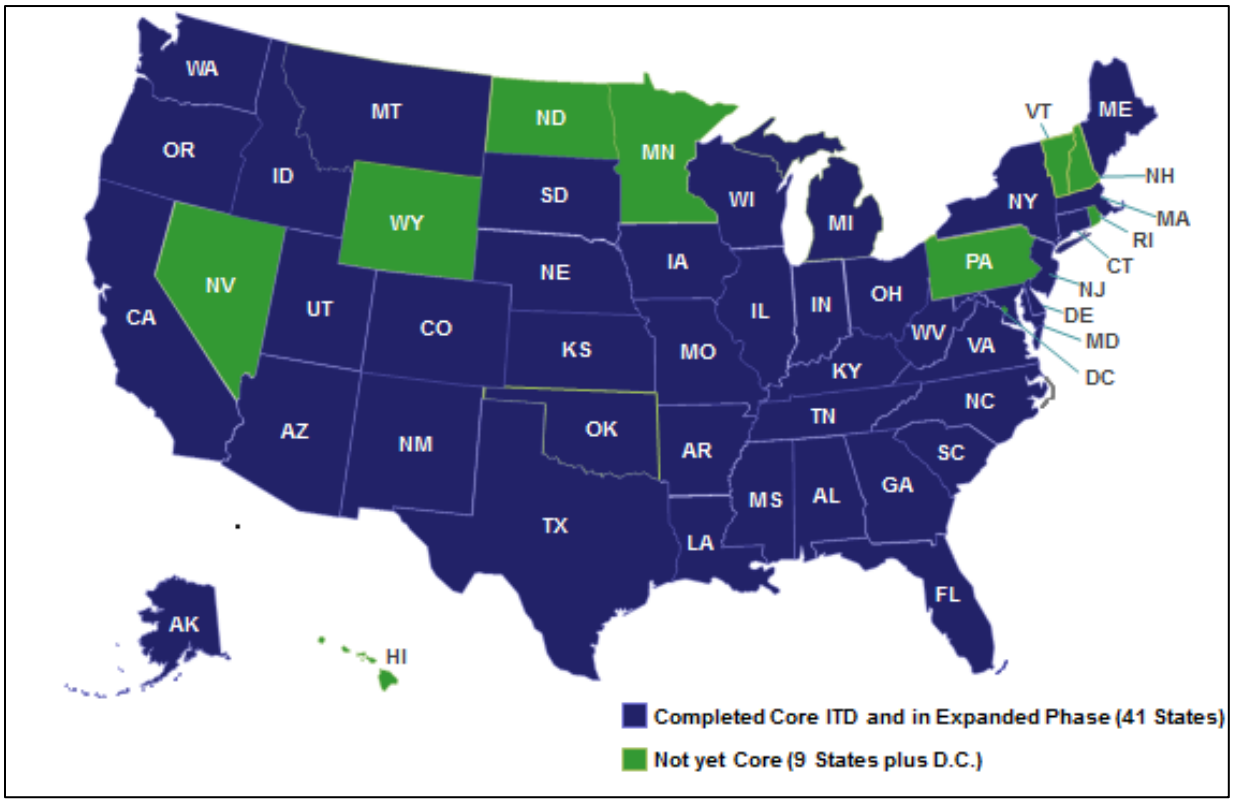


Table 3. Number of States deploying Core ITD elements, December 31, 2017.

Core ITD Element	Number of States That Have Deployed Functionality (a)	Total Number of Applicable States (b)	Percent of Applicable States with Functionality Deployed (a/b)
Safety Information Exchange			
– Aspen or equivalent	51	51	100%
– CVIEW or equivalent	46	51	90.2%
Credentials Administration*			
– Automated processing of International Registration Plan (IRP)	45	49	91.8%
– Automated processing of International Fuel Tax Agreement (IFTA) (includes tax filing)	45	48	93.7%
– Data exchange with IRP Clearinghouse	49	49	100%
– Data exchange with IFTA Clearinghouse	48	48	100%
Electronic Screening (e-Screening)			
– Deployment of e-screening at one site (minimum)	47	51	92%

Note: *States include the District of Columbia.*
**Alaska and Hawaii are exempt from participating in the Credentials Administration (IRP and IFTA).*
**The District of Columbia is exempt from IFTA due to membership eligibility.*

ITD FY 2017 Grant Funding

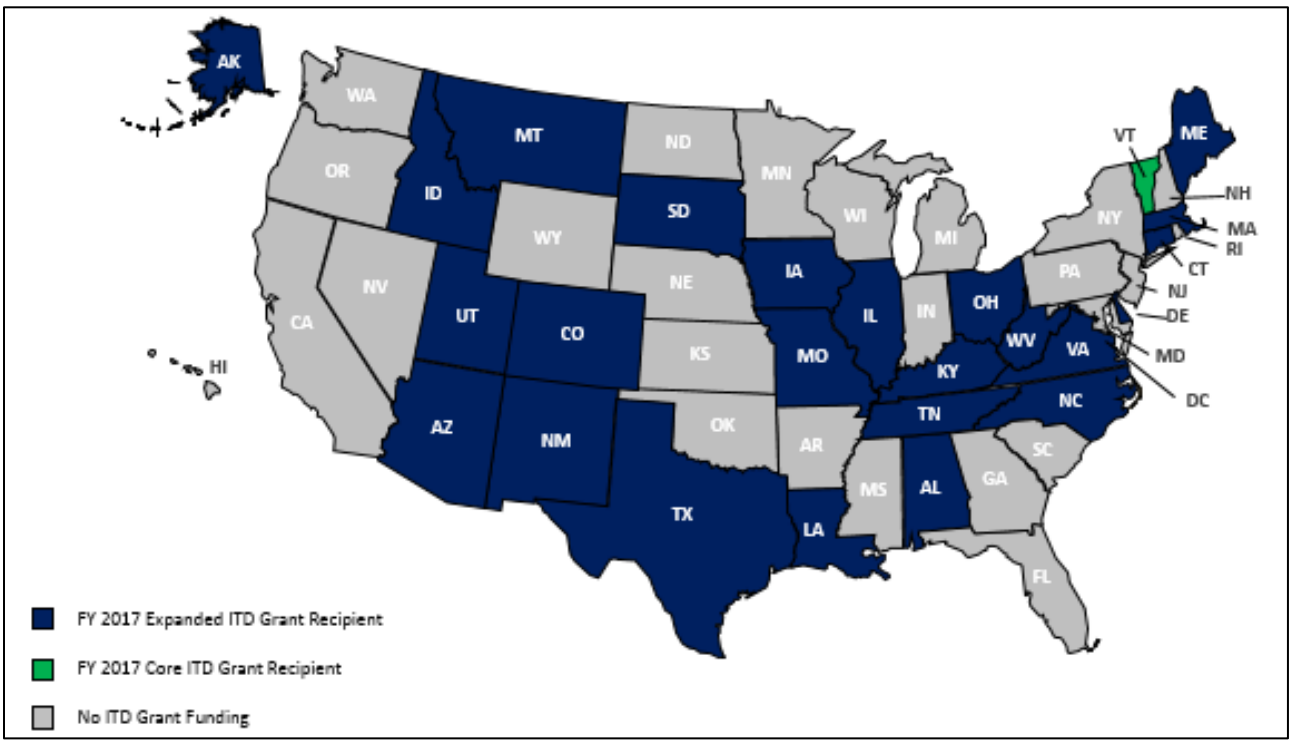
In FY 2017, FMCSA distributed a total of $21,393,837.00 in Federal HP-ITD deployment funding to 28 States. Of the 28 States, VT received a total of $182,300 in Federal ITD funding to support deployment of Core program functionality, while the remaining 27 States received a total of $21,393,837.00in Federal HP-ITD funding to support the deployment of Expanded functionality.

Deploying a Work-Zone and incident notification system was identified as a national priority within the 2017 HP-ITD NOFA to help mitigate CMV involvement in these crashes. Alabama and Arizona were previously awarded CVISN grants addressing this priority, and in 2017 Kentucky was also awarded funds for an in-cab alert system to notify CMV drivers of impending road conditions.

In addition, both Massachusetts and Kentucky were awarded funding to address truck parking availability.

Appendix A provides the breakdown of FY 2017 funded ITD projects/activities. Figure 2 illustrates the States that received Federal HP-ITD funding in FY 2017.

Figure 2. States receiving Federal HP-ITD funding in FY 2017.



For more information about the ITD Grant Program, please visit:
https://www.fmcsa.dot.gov/information-systems/itd/innovative-technology-deployment-itd

FMCSA's primary contact for the ITD Grant Program:

Mr. Thomas Kelly
ITD Program Manager
FMCSA, Technology Division
1200 New Jersey Avenue, SE
Washington, DC 20590
(202) 480-5240
Email: thomas.kelly@dot.gov

APPENDIX A: SUMMARY OF STATE ITD 2017 GRANT RECIPIENTS AND FUNDED ACTIVITIES

State	Core Compliant	FY 2017 Core Grant	FY 2017 Expanded Grant	Funded Projects/Activities
Alabama	Yes	$0	$495,200	The Alabama Law Enforcement Agency received funding for the electronic screening deployment extension project.
Alaska	Yes	$0	$379,304	The State of Alaska received funding for the installation of an Intelligent Roadside Operations Computer at the Glenn Highway inspection/weigh station. This will allow for the prescreening of CMVs based on credentials, and safety and weight data.
Arizona	Yes	$0	$361,000	The Arizona Department of Transportation received funding for maintenance and enhancement activities for the CVIEW system, and CMV permitting and truck screening systems. These resources will allow Arizona to continue to be core compliant in the ITD program and assure that the Expanded ITD initiatives in Arizona continue to operate.
Colorado	Yes	$0	$1,303,548	The State of Colorado, Colorado State Patrol, received funding for one fixed virtual weigh station (VWS), an ITD program manager's position, and indirect costs associated with the program. Funding the VWS will provide a measurable safety benefit that can be built upon in future years.
Connecticut	Yes	$0	$1,390,000	The Connecticut Department of Motor Vehicles received funding for the replacement of the current IRP application with a modern and expandable application. This enhancement effort will provide for the foundation of a new IRP information system and will better position Connecticut for future customer needs. This award will also fund a motor carrier portal development integration consultant that will aid Connecticut in enhancing the new motor carrier service portal and integrating the CVIEW environment with the new e-screening systems.

State	Core Compliant	FY 2017 Core Grant	FY 2017 Expanded Grant	Funded Projects/Activities
Delaware	Yes	$0	$1,334,667	The Delaware Department of Transportation received funding for virtual weigh station (VWS) and auto routing system development/ implementation projects. The proposed VWS sites will expand enforcement by providing e-screening capabilities on CMV routes that bypass existing weigh stations. The CMV auto routing system is necessary to enhance and increase the efficiency of the hauling permitting process. The proposed system will be developed and integrated with the existing Oversize Overweight Hauling Permitting System (OOPS). The system will pull critical data from OOPS and develop a route for the customer using the origin and destination the customer identified.
Idaho	Yes	$0	$1,360,00	The Idaho Department of Transportation received funding for the installation of a port-of-entry (POE) roadside operations computer and associated maintenance. This installation at the Sage POE will include equipment to support weigh-in-motion (WIM) and automated vehicle identification (AVI) technologies. The long-term goal is to utilize WIM/AVI equipment at the various strategic sites to create a network of shared information to enhance e-screening in support of FMCSA's ITD program goals.
Illinois	Yes	$0	$212,500	The Illinois Department of Transportation received funding for the complete re-write of the State's program plan (PP) and top-level design (TLD). Having an updated PP/TLD will allow Illinois to guide its ITD program, increase its capabilities, and will allow the State to apply for grant monies for future e-screening and other ITD enhancement projects.

State	Core Compliant	FY 2017 Core Grant	FY 2017 Expanded Grant	Funded Projects/Activities
Iowa	Yes	$0	$1,700,000	The Iowa Department of Transportation received funding for the modernization of the existing IRP/IFTA system. Additionally, Iowa's online customer participation has outgrown the current system. IFTA currently has 95% web filings, yet less than 30% of motor carriers in Iowa can complete the entire transaction online because of the system's limitations and lack of integration. This grant will fund Iowa's effort to put the entire IFTA transaction online and save time for Iowa motor carriers.
Kentucky	Yes	$0	$1,845,000	The Executive Office of the Commonwealth of Kentucky received funding for several projects, including: monitoring enhancements at truck parking locations to enhance security and real-time parking information; upgrades to Kentucky's motor carrier ITD portal system; an in-cab alert system to notify CMV drivers of impending road conditions; upgrades to the over-weight/over-dimensional load permitting system; O&M for Kentucky's IFTA system consortium for fuel tax purposes; and an automated infrared brake screening system at Kentucky inspection stations to enhance safety and brake inspections.
Louisiana	Yes	$0	$801,125	The Louisiana Department of Transportation and Development received funding for several projects, including: CVIEW Enhancements; CVIEW O&M fees; VWS improvements; updates to meet FMCSA interface requirements; participation in the ITD Workshop from 2018 through 2021; and the "Contract Projects Management/System Architect Assistance" project, which will provide resources to manage the various ITD projects.
Maine	Yes	$0	$529,313	The Maine Department of Public Safety, Maine State Police, received funding for projects relating to upgrading the CMV safety screening systems and enhancements at the Kittery Weigh Station.

State	Core Compliant	FY 2017 Core Grant	FY 2017 Expanded Grant	Funded Projects/Activities
Massachusetts	Yes	$0	$878,000	The Massachusetts Registry of Motor Vehicles received funding for multiple projects, including: CMV operator online portal enhancements; truck parking feasibility study; CVIEW O&M; ITD program administration; information system architect consultant; IRP support and maintenance; and ITD workshop participation.
Missouri	Yes	$0	$33,901	The Missouri Department of Transportation received funding for the "Modify Intrastate Vehicle Registration/ Credentialing Process – Phase II" project. This project is the second phase of the State's intrastate credentialing project. The new module will enhance and further automate manual processes, and expand customers' ability to electronically apply for operating credentials.
Montana	Yes	$0	$763,521	The State of Montana, Montana Department of Transportation, received funding for the customer credentialing document system which will make the issuance and processing of carrier documentation more timely and efficient. It will also support the efforts to more safely route CMVs operating on Montana roadways.
New Mexico	Yes	$0	$39,117	The New Mexico Department of Public Safety received funding for State staff to attend ITD workshops over the period of performance.
North Carolina	Yes	$0	$722,499	The North Carolina State Highway Patrol received funding for the upgrade of the northbound side of the Mount Airy weigh station with mainline WIM and license plate reader (LPR) capabilities. This goal is part of the statewide objective to install WIM and automated LPR technologies at all weigh stations throughout the State.
Ohio	Yes	$0	$516,712	The Public Utilities Commission of Ohio received funding for the "72-Hour Registration Trip Permit Automation" project; the "Ohio Motor Carrier Information System (OMCIS)" conversion to an enterprise-based platform; and for funding the purchase of 15 LPRs with the associated back-end systems, installation, and warranty.

State	Core Compliant	FY 2017 Core Grant	FY 2017 Expanded Grant	Funded Projects/Activities
South Dakota	Yes	$0	$2,000,000	The South Dakota Department of Transportation received funding for the I-90 Valley Springs weight/inspection station with electronic screening. A WIM scale, automatic vehicle classification, transponder-based AVI, LPR, overview camera, dynamic message sign, and roadside operations computer will be installed. All CMVs entering the port-of-entry (POE) will pass over the infrared braking/tire anomaly system located at the weigh station entrance ramp. The fully automated system will check for non-operational brakes on both sides of the vehicle and provide tire width and single/dual configuration information. Individual vehicle progression through the system will be tracked, allowing the system to identify vehicles not obeying signals. Additional support has been provided for the renovation of the IFTA/IRP e-correspondence and information website. The project will enable South Dakota's IRP/IFTA system to issue, accept, track, and archive electronic correspondence to and from customers.
Tennessee	Yes	$0	$53,000	The Tennessee Department of Safety and Homeland Security received funding for the ITD program manager and system architect positions.
Texas	Yes	$0	$637,500	The Texas Department of Motor Vehicles (TxDMV) received funding for the oversize/overweight (OS/OW) permit exchange and validation project. TxDMV recognizes the need to incorporate FOOS checks into its OS/OW permit issuance process to ensure that FOOS carriers and vehicles are not issued permits. TxDMV can accomplish this by utilizing web service queries in the CVIEW that check for current FOOS status prior to issuing permits.

State	Core Compliant	FY 2017 Core Grant	FY 2017 Expanded Grant	Funded Projects/Activities
Utah	Yes	$0	$1,419,854	The State of Utah Department of Transportation received funding for projects, including: engineering design activities and installation of WIM and related infrastructure; enhancement to Utah's screening systems allowing for integration of Utah OS/OW permit information with screening records; data reporting; and provision of a motor carrier on-line system to support multiple business processes, including POE operations, permit verifications, citations, warnings and other agency functions. In addition, funding was approved for the initial phase of a project that will fully integrate statewide PRISM registration and enforcement processes. Funds were also approved for projects that enhanced permit/route analysis and data quality for roadside verification of route/permit status.
Virginia	Yes	$0	$1,012,451	The Commonwealth of Virginia, DMV, received funding for the WIM replacement project which will maintain existing electronic screening capabilities through replacement of end-of-life WIM technology and continue maintenance fees on all existing WIM systems. This award will fund O&M fees. In addition, the Virginia Department of State Police was awarded funding for the purchase of seven LPRs and the associated back-end system support.
Vermont	No	$182,300	$0	The Vermont Agency of Transportation DMV received funding for a CVIEW. This will allow the State to interface with FMCSA systems, simplify and standardize CMV inspections, and interface with the State's commercial vehicle operations system.

State	Core Compliant	FY 2017 Core Grant	FY 2017 Expanded Grant	Funded Projects/Activities
West Virginia	Yes	$0	$1,423,325	The West Virginia Division of Motor Vehicles received funding for ITD program management – training and workshop attendance; modernization of the electronic credentialing for IRP/IFTA; replacement of other legacy systems; maintenance for CVIEW project; and enhancements to expand the CVIEW functionality. Additionally, a one-time purchase of centralized networking software that will allow the State's current and future enhanced screening stations to share data and management functions was also approved.
Total FY 2017 Funds Awarded				**$21,393,837.00**