



Best Practices in Electronic Grant Management

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Executive Summary

The Federal Transit Administration (FTA) administers some grants directly to transit agencies as eligible designated recipients. Other programs are granted to the state departments of transportation (DOTs), who in turn administer and allocate grant funds to subrecipients. FTA designed and built a web-based project and financial management application called Transportation Electronic Award and Management (TEAM). FTA also developed the Electronic Clearing House Operation System (ECHO) for disbursements. The purpose of these applications was to automate grants management and eliminating burdensome paper processes between FTA and its recipients. Over the past several years, federal transportation policy has called for states to take on increasing responsibility for administering federal grant programs. This study examined best practices in automating grants management activities in web-based grants management system through the following tasks:

- Literature Review
- Survey of DOTs
- Interviews with four state DOTs
- Review of State Management Plans
- Synthesis and Conclusions

Survey of DOTs

The project team conducted a web-based survey of DOTs. A total of 43 responses were received representing 25 states. The survey contained 27 questions. States were asked to provide how certain grant activities are currently managed and about the benefits of moving toward an integrated web-based grants management system. For most grant activities, the majority (or plurality) of respondents agreed that moving toward a web-based grants management system would enhance overall operations.

A majority of respondents indicated responsibility for managing Sections 5310, 5311, 5316, and 5317 programs; less than half indicated managing Sections 5307, 5303, and 5304 programs. Just over half of respondents indicated having a fully or partially integrated web-based grants management system. However, when pre-award and post award categories were listed, a majority of respondents indicated that pre-award and post award grant activities are not electronic but rather paper processes. Although paper processes are still used, there is little resistance to converting to electronic management processes. Most grantees use TEAM at some point, and a smaller percentage use ECHO. Most DOTs articulated that TEAM is cumbersome, not intuitive to use, and not user-friendly. Some DOTs remarked that there is no way to interface any state-operated system with TEAM.

Interviews with DOTs

Interviews with four DOTs were conducted, all of which are at varying stages in the process of pursuing web-based grants management systems. South Dakota DOT is currently managing grants through paper and Excel spreadsheets but is seeking to have the State Information Technology (IT) staff develop an

automated system internally. Minnesota DOT has a partially integrated web-based grants management system that allows some interface between grantees and DOT, but the system is now considered obsolete and the State is in the process of procuring a new web-based grants management system. Colorado DOT is also in the process of developing a new system using a commercial product and an internal developer within the DOT to customize. Finally, the Idaho Transportation Department has a fully integrated web-based grants management system that creates a full interface between grantees and the DOT for every aspect of pre-award, post-award, and close-out activities.

State Management Plan Review

The State Management Plan (SMP) describes the State's policies and procedures for administering state-managed grants. Each state is required to file/submit an approved SMP with the appropriate FTA regional office and to update it regularly to incorporate any changes in program management or new requirements. States may maintain an SMP for all programs together or in separate documents. SMPs are relevant to the context of electronic grants management because they connect a state's procedures and policies for administering the various grant programs with the basis for FTA state-level management reviews of the programs.

The project team reviewed 12 State Management Plans representing agencies within nine FTA regions. They were Alabama, Alaska, Arizona, Colorado, Montana, Nebraska, New Mexico, Pennsylvania, Rhode Island, Tennessee, West Virginia, and Wisconsin. The review found that there is significant variability in the organization and presentation of grants management policies and procedures as well as in the preparation of SMPs. While SMPs are used to document the framework by which FTA grants are managed, there is no requirement to demonstrate how state-level programs are managed. States have a great deal of latitude to include other aspects of their management processes. Even if states use automated grants management tools, they are not documented in the SMP in the same way that they would be with TEAM and ECHO programs.

Synthesis and Conclusions

DOTs face many challenges in ensuring the DOT's compliance with FTA requirements as well as ensuring the compliance of grantees. Grants administration is highly procedural. Web-based grants management is not only a major adjustment for grantees, but the conversion also affects the culture of the DOT organization. Addressing the needs of stakeholders within the organization is as important as addressing the needs of grantees.

Non-urban grant programs administered by the DOTs are not using TEAM and ECHO with regularity because their subgrantees are not using those systems. TEAM and ECHO are designed to meet the standards of the FTA but may not be suitable in managing state-level grants. Even in states that have a fully or partially integrated web-based system, there is no interface with the financial activities that take place in the overall process.

Introduction

The Federal Transit Administration (FTA) administers seven grant formula programs and five discretionary programs. In some cases, grants are awarded directly to transit agencies as eligible designated recipients. Other programs are granted to the state DOTs who in turn administer and allocate grant funds to subrecipient transit agencies.¹ FTA allows the states to maintain expenses for each of the grant programs to cover the cost of administration. Since the 1990s, federal transportation policy has called for states to take on increasing responsibility for administering federal grant programs, including oversight of transit operators and financial management.

This research project is intended to help understand the systems used by state DOTs to manage grants. As technology has advanced, some transit grant administrators have migrated to electronic systems, including systems created by FTA (TEAM/ECHO). Little information was known on the prevalence of electronic transit grants management and which platforms were being used for this purpose. Further, this project addresses the methodologies used for managing grants in general. Although the project focuses on federal grants management, state grant management is also included in the scope. This project was developed by the AASHTO Standing Committee on Public Transportation and funded through the National Cooperative Highway Research Program.

The methodology for collecting information for this project included:²

- A literature review
- A survey of state DOT transit grants managers
- Interviews and case studies on four state DOTs with varying levels of experience with electronic transit grants management
- A review of State Management Plans (SMP) for content and future outlook

Transportation Electronic Award and Management (TEAM)

FTA designed and built a web-based project and financial management application known as the Transportation Electronic Award and Management (TEAM). FTA also developed the Electronic Clearing House Operation System (ECHO) for disbursements. The purpose of these applications was to automate the process of managing grants between FTA and its recipients and eliminate burdensome paper processes.

¹ In addition to federal grant programs, many states maintain and administer grant programs for transit operators using only state or local funds. These types of operators have no federal reporting requirements.

² The actual progression of work for this project differs from the order in which it is presented to the reader in this document. The SMP review generated a large volume of information, some of which was not germane to the core of this project. Therefore, this information is presented last.

TEAM enables grantees to interface with FTA to upload applications, receive review and approval from FTA, execute grants, engage in project management, control funds, make funding adjustments, track civil rights complaints, and generate assurance statements. Grantees are given access to the portal for navigation through the site. TEAM was first installed in 2000 and has undergone revisions. TEAM is used by state DOTs and designated recipients for all eligible grant projects. It would be impossible to demonstrate, or even encapsulate, all of the navigation steps throughout the entire TEAM interface. Figure 1 below demonstrates the flow of creating a project. Once the applicant has provided the project information, budget, milestones, environmental findings, and fleet status, FTA reviews the application and provides comments. Once the application is modified, FTA assigns a project number and the project is submitted. FTA can add comments and request further modifications, and the applicant can submit Milestone Progress Reports and Financial Status Reports.

A user guide is available on the TEAM website.³ The TEAM-Web User's Guide provides detailed information on how to access and use the Federal Transit Administration's online TEAM-Web system. It covers the development and administration process of federally assisted projects, from submission of applications to project management and close-out. It also gives a step-by-step procedure for each stage of the project management process. Figure 1 shows a flowchart of TEAM's project creation functionality.

³ Available from: <http://ftateamweb.fta.dot.gov/static/userguide.html>

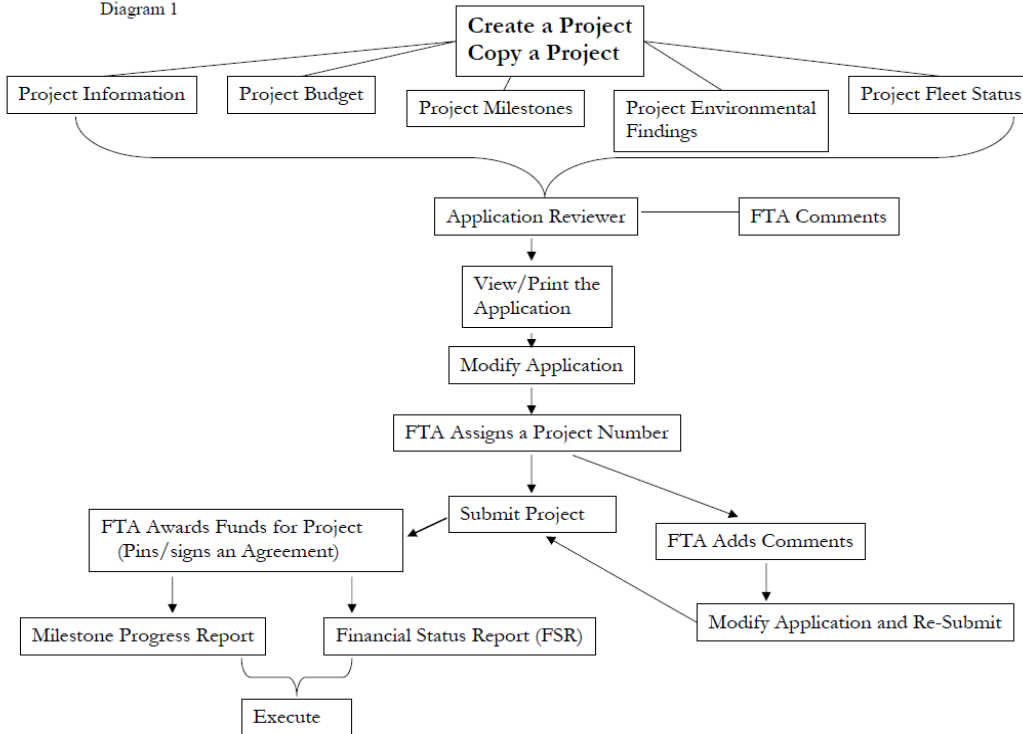
Figure 1- Creating a Project in TEAM



TEAM-Web User Guide

Print Date: 3/10/2008

Diagram 1



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Electronic Clearing House Operation (ECHO)

ECHO is an application that processes disbursement, payment, and account draw down for FTA grantees.⁴ The system is a replacement for the Letter of Credit-Treasury Financial Communication System (LOCTFCS). ECHO came online in 1991, with the first generation software being PC-based. ECHO also replaces the requisition method of payment. ECHO-Web is the second generation of software, and is a web-based application which grantees can access via the Internet to submit their draw down information. ECHO then transmits funds approved for payment to the Grantee's financial institution through the Department of Treasury's Automated Clearing House (ACH) process.

ECHO-Web processes payment requests by validating individual project payment requests against the available project balance maintained by the FTA Accounting Office. The FTA accounting and financial system staff are the only users who will have global access to all ECHO Control Numbers in the system.

⁴ The ECHO system is also used by the Federal Aviation Administration. For the ECHO user manual, visit: http://www.fta.dot.gov/documents/Attachment_18_ECHO_User_Manual.pdf

Overview of Transit Grants Management

Even with the use of TEAM and ECHO, DOTs and designated recipients still have significant grant-related tasks associated with project and financial management in the pre-award, post-award, and close-out phases. FTA requires that states maintain an SMP for each of the grant programs based on specific requirements, eligibility, certification, and reporting requirements. Typical processes maintained by states are as follows:

Pre-Award Tasks
<ul style="list-style-type: none"> • Determining allocations from Federal Register notices • Determining allocations within state based on formulas established or recommended by FTA • Establishing responsibilities for state DOT and associated offices • Disseminating information to potential grant recipients and the public • Developing application process to be followed by eligible grantees • Establishing timelines and annual calendars for application deadlines, evaluation, and award • Rating grant applications for eligibility, viability, and completeness of application
Post-Award Tasks
<ul style="list-style-type: none"> • Establishing agreements with subrecipients for grant award • Project administration • Planning • Technical assistance • Training • Federal compliance and certifications • Financial administration including invoices and back-up documentation • Monitoring of recipients' performance
Close Out Tasks
<ul style="list-style-type: none"> • Final invoices and payments • Final Financial Status Report (FSR) • Final Milestone/Progress Report (MPR) • Record maintenance • Reporting

This study fills an important information gap on how DOTs are administering transit grants. Further, it provides information on the manpower, tools, and resources needed to oversee the federal program.

The process for administering transit grants is clearly a complex, highly procedural issue. This study identifies how states are meeting their administration duties and captures best practices in both federal and state grant administration. Further, it explores the efficiencies offered by electronic grants administration nationwide. Electronic systems take many forms, including custom-built systems and TEAM/ECHO.

FTA Grant Programs Administered by States

In August 2012, the Federal Transit Administration issued FTA Circular C 5010.1D, which was a revision to the original Circular issued in November 2008. The Circular outlines Grants Management Responsibilities for States and Local Governments (49 CFR part 18), which have specific provisions to states in the areas of equipment, procurement, and financial management. These requirements apply to those programs that have states as grantees, including 49 U.S.C. Sections 5305, 5310, 5311, 5316, and 5317.

Since this Circular was issued, Congress passed the Moving Ahead for Progress for the 21st Century (MAP-21), a new transportation authorization legislation that made changes to the programs listed above. Section 5316, Job Access and Reverse Commute, has been rolled into Section 5307, Urbanized Area Formula Program, and Section 5311, Non-urbanized Area Formula Program. Section 5317, New Freedom, has been rolled into Section 5310, Elderly Individuals and Individuals with Disabilities Program. Both of the revised Section 5310 and Section 5311 will allow states and subgrantees to utilize funds for capital and operating purposes, which is a major change for Section 5310 which was previously only granted for capital acquisitions. In addition, Section 5309, Capital Investment Program, is now Section 5339, Bus and Bus Facilities Formula Apportionments. This change is significant because the previous Section 5309 grant funds were allocated based on Congressional direction while the new program will distribute funds to all agencies on a formula basis. Inevitably, FTA Circulars and State Management Plans will be modified; however, current State Management Plans continue to reflect the four core grant programs. State Management Plans, at a minimum, contain procedures in administering the following FTA grant programs:

Non-urbanized Area Formula Program (Section 5311) [now the Rural Area Formula Program]. This program provides formula funding to states for the purpose of supporting public transportation in population areas of less than 50,000. It is apportioned based on each state's non-urbanized population and density factors. Each state prepares an annual program of projects (POP), which must provide for fair and equitable distribution of funds within the states, including any tribal lands, and must provide for maximum feasible coordination with other federal-aid transportation services.

Funds may be used for capital, operating, and administrative assistance to state agencies, local public bodies, non-profit organizations, tribal governments, and other groups), and operators of public transportation services. The state must use 15 percent of its annual apportionment to support intercity bus service, unless the Governor certifies that these state needs are adequately met. Guidance for Section 5311 is found in FTA Circular 9040.1. To be eligible for funding under this program, projects and strategies must come from the applicable transportation planning process.

Elderly Individuals and Individuals with Disabilities (Section 5310) [now the Enhanced Mobility for Seniors and Individuals with Disabilities Program]. The goal of the Section 5310 program is to improve mobility of elderly individuals and individuals with disabilities throughout the country. Toward this goal, FTA provides financial assistance for transportation services planned, designed, and carried out to meet the special transportation needs of elderly individuals and individuals with disabilities in all areas—urbanized, small urban, and rural. Funds for the Section 5310 program are available for capital expenses as defined in Section 5302(a)(1) to support the provision of transportation services to meet the special needs of elderly persons and persons with disabilities.

Section 5310 funds are apportioned among the states by a formula which is based on the number of elderly persons and persons with disabilities in each state according to the latest available U.S. Census data. Up to 10 percent of the states total fiscal year (FY) apportionment may be used to fund program administration costs including administration, planning, and technical assistance. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, the previous federal transportation authorizing legislation) required that projects selected for funding under the Section 5310 program be derived from a locally developed, coordinated public transit-human services transportation plan. This requirement continues under MAP-21.

Job Access and Reverse Commute Program (former Section 5316; not found in MAP-21) [Now an eligible activity under Section 5307 Urbanized Area Formula Program and Section 5311 Rural Area Formula Program]. The JARC formula grant program aims to improve access to transportation services to employment and employment-related activities for welfare recipients and eligible low-income individuals and to transport residents of urbanized areas and non-urbanized areas to suburban employment opportunities. Funds from the JARC program are available for capital, planning, and operating expenses that support the development and maintenance of transportation services designed to transport low-income individuals to and from jobs and activities related to their employment; the funds also support reverse commute projects.

Of the total JARC funds available, FTA apportions 60 percent among designated recipients in large urbanized areas; 20 percent to the states for small urbanized areas; and 20 percent to the states for rural and small urban areas under 50,000 in population. JARC funds are apportioned by formula. The formula is based on the ratio of eligible low-income individuals and welfare recipients in each area to eligible low-income individuals and welfare recipients in all areas. Up to 10 percent of the recipient's total FY apportionment may be used to fund program administration costs including administration, planning, and technical assistance. SAFETEA-LU required that projects selected for funding under the New Freedom program be derived from a locally developed, coordinated public transit-human services transportation plan.

New Freedom Program (Section 5317) [Not found in MAP-21; now an eligible activity under Section 5307 Urbanized Area Formula Program and Section 5311 Rural Area Formula Program]. The New Freedom formula grant program aims to provide additional tools to overcome existing barriers facing Americans with disabilities seeking integration into the work force and full participation in society. New Freedom program funds are available for capital and operating expenses that support new public

transportation services and alternatives beyond those required by the American Disability Act (ADA) designed to assist individuals with disabilities with accessing transportation services.

Of the total New Freedom funds available, FTA apportions 60 percent among designated recipients in large urbanized areas; 20 percent to the states for small urbanized areas; and 20 percent to the states for rural and small urban areas under 50,000 in population. New Freedom funds are apportioned among the recipients by formula. The formula is based on the ratio of individuals with disabilities in each area to individuals with disabilities in all areas. Up to 10 percent of the recipient's total FY apportionment may be used to fund program administration costs including administration, planning, and technical assistance. SAFETEA-LU required that projects selected for funding under the New Freedom program be derived from a locally developed, coordinated public transit-human services transportation plan.

Other Grant Programs

Some grant programs give states a partial grant management role. These programs include Metropolitan Planning, Statewide Planning, and Planning Programs (Section 5303, Section 5304, and Section 5305), Urbanized Area Formula Program (Section 5307), and Capital Investment Program (Section 5309). Some states include these programs in their State Management Plans while many others only include the core grant programs.

Metropolitan Planning, Statewide Planning, and Planning Programs (Section 5303, Section 5304, and Section 5305). These programs provide funding to support cooperative, continuous, and comprehensive planning for making transportation investment decisions in metropolitan areas and statewide.

For planning activities that: support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency; increase the safety of the transportation system for motorized and non-motorized users; increase the security of the transportation system for motorized and non-motorized users; increase the accessibility and mobility of people and for freight; protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns; enhance the integration and connectivity of the transportation system, across and between modes, for people and freight; promote efficient system management and operation; and emphasize the preservation of the existing transportation system.

Funds are apportioned annually by a formula to states that include consideration of each state's urbanized area population in proportion to the urbanized area population for the entire nation as well as other factors. States receive no less than 0.5 percent of the amount apportioned. These funds are sub-allocated by states to metropolitan planning organizations (MPOs) by a formula that considers each MPO's urbanized area population, their individual planning needs, and a minimum distribution. For more information, please refer to the Joint Planning Regulations at 49 CFR part 613 and FTA Circular 8100.1. To be eligible for funding under these programs, projects and strategies must come from the applicable transportation planning process.

Urbanized Area Formula Program (Section 5307). The Urbanized Area Formula Program makes federal resources available to urbanized areas and to the Chief Executive Officer of a state (Governor) for transit planning, capital, and operating assistance in urbanized areas. An urbanized area is an incorporated area with a population of 50,000 or more, designated as such by the Bureau of the Census.

For urbanized areas with a population of 200,000 or more, Urbanized Area Formula Program funds are apportioned and flow directly to a designated grantee(s) selected by the Governor to apply for and receive federal funds. For urbanized areas under 200,000 in population, the funds are apportioned to the Governor of each state for distribution, unless such an area has been designated as a transportation management area at the request of the Governor and the MPO. These areas also receive apportionments directly. Guidance for Section 5307 is found in FTA Circular 9030.1. To be eligible for funding under this program, projects and strategies must come from the applicable transportation planning process and be contained in a local Transportation Improvement Plan and State Transportation Improvement Plan.

Capital Investment Program (Section 5309) [Not included in MAP-21]. The Section 5309 Capital Investment Grants Program funds three different programs: (1) fixed guideway modernization in areas with populations over 200,000 with fixed guideway segments at least seven years old (based on a formula); (2) construction and extension of new fixed guideway systems (New Starts, Small Starts, and Very Small Starts Programs); and, (3) purchase of bus and bus-related equipment and facilities in both urbanized and non-urbanized areas (Bus and Bus Facility Program). States and local governmental authorities are eligible applicants for Section 5309 funds. Eligible applicants may apply for Section 5309 bus grants on behalf of private non-profit agencies, private providers of public transportation services, and public subrecipients.

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Literature Review

There is relatively little literature on the functional and operational relationships between FTA and the states regarding grants management processes. The only significant research on the topic can be found in two National Cooperative Highway Research Program (NCHRP) Research Results Digest publications and a 2009 study by Alexandra Ender and Tom Seekins of the University of Montana. These research documents are summarized below.

Research Results Digest 314: State DOT Staff Resources for Administering Public Transportation Programs (2007)⁵

The purpose of the study was to collect information on the staff resources that state departments of transportation (DOTs) devote to public transportation programs and to evaluate the ability of the states to adequately administer existing and emerging Federal Transit Administration (FTA) public transportation programs. A secondary objective of the project was to develop a method for regularly updating the data in future years. The study categorized the broad and complex core functions required to manage state and federal programs. It should be noted that this study was conducted in 2007 before many of the grant programs listed below were realigned in the MAP-21 legislation. Below is an abridged version of the core functions discussed in the study:

Grants Administration—Federal Grants

- *Maintain updated State Management Plans for Section 5311 and Section 5310 programs*
- *Submit annual grant application to FTA for each federal grant program based on local applications*
- *Report to FTA by activity line item (FSR and MPR)*
- *Administer FTA's TEAM system to apply for grants and to manage grants after award*
- *Administer FTA's payment procedures through ECHO payments*

Grant Administration—Local Operator Grants

- *Allocate Section 5311, Section 5310, Section 5316, and Section 5317 funds to local grantees/operators*
- *Solicit and review grant applications for operating and capital funds (application includes narrative scope, budget, and milestones [timeline] for implementation as well as signed certifications and assurances)*
 - *Distribute, review, and submit grant applications*
 - *Participate in team reviews of responses*
 - *Manage Section 5310 allocation (manage state/local coordinating groups, establish and submit list of prioritized projects, fulfill unique civil rights requirements)*

⁵ Research Results Digest 314, State DOT Staff Resources for administering Federal Public transportation Programs, NCHRP Project 20-65(7), KFH Group, Inc. in association with Cambridge Systematics, April 2007. Available from: <http://www.trb.org/Main/Public/Blurbs/158802.aspx>

- Manage Section 5311 allocation (evaluate transit agency applications using criteria established)*
- *Develop letters of intent for grantees (pending final state and federal grant approval)*
- *Manage and process grant agreements, amendments, and budget revisions*
- *Receive and review grant reimbursement requests*
- *Process grantee reimbursement requests and track expenditures*
- *Process payments*
- *Track grant expenditures*
- *Receive and process data and reports from operators*
- *Close out grant*
- *Conduct performance monitoring of grantees*
- *Participate in FTA program audits*
- *Oversee any district staff managing transit programs*
- *Monitor and report drug and alcohol use (report to FTA)*
- *Monitor transit agencies to ensure compliance with state and federal rules and regulations*
- *Document on-site monitoring*
 - Determine level of deficiency in all areas of noncompliance*
 - Determine improvement action plans*
 - Develop and carry out an improvement action plan in consultation with transit agency*
 - Monitor any amendments and completion*
- *Document informal monitoring activity and retain site visit documentation.*

Grants Administration—Capital Program

- *Manage statewide Section 5309 bus and bus-related capital program, as needed*
- *Maintain public transportation management systems*
- *Determine which vehicles can be replaced and inform operators*
- *Inventory and coordinate disposition and transfer of equipment/facilities*
- *Procure vehicles on statewide basis or oversee grantee procurements*
- *Respond to requests for capital concurrences*
- *Inspect capital assets and vehicles on delivery*
- *Provide fleet planning, management, and support*
- *Maintain inventory of real property purchased with federal funds*
- *Oversee subrecipients' vehicle and facility maintenance plans*

- *Ensure subrecipient procurements contain all federally required clauses, certifications, and assurances (e.g., Buy America) pre- and post-delivery.*

The study noted FTA has been transferring administrative responsibility to the states with significant growth in both programs and funding over the years. Between 1991 and 2009, total federal transit funding for Sections 5310, 5311, 5340, 5316, and 5317 had grown from \$123.8 million to \$936.8 million, a 657 percent increase (not adjusted for inflation). As of 2006, there were a total of 536.3 full time equivalent (FTE) positions working in state DOT transit functional units in 33 states. The mean number of DOT FTE positions was 16. However, states with more federal aid had more employees, while states with less federal aid had considerably less. It was estimated that 406.3 FTEs were devoted to the administration of federal programs.

The study concluded that tight staffing levels have a negative effect on the program. Further, staffing increases were considered unlikely to increase. States report they are not managing the programs as effectively as they would like to be and that program management decisions are based on time availability instead of advancing a preferred outcome. State program managers often report that the bulk of their time is spent monitoring the service offerings and responding to the FTA regional office. Little time remains for actual program management. Yet many monitoring tasks are left undone; and states report that they do not do have enough on-site contract management/oversight of subrecipients.

States reported tasks they are currently unable to perform including: a) assisting local communities with planning/ service design; b) visiting sites for field observations; c) being visible in the local community; d) attending meetings pertaining to local transit services; e) providing technical assistance to subgrantees; f) providing training to grant recipients; and g) working on statewide initiatives on issues such as statewide IT, coordination, and marketing information.

Some tasks were regarded as unnecessary. Often, this perception stems from a perception that the FTA State Management Reviews have put the onus on the state to micromanage local subrecipients. Examples of unnecessary tasks include:

- Continuously increasing oversight and monitoring as well as administrative and data requirements with diminishing returns;
- Micromanaging disadvantaged business enterprise (DBE) (creating a significant workload); and
- Excessive reporting (including the quarterly reporting of Section 5309 data, Buy America Certification, and possibly the new DBE requirements).

Research Results Digest 331: Current Practice and Future Guidance on the Development of SAFETEA-LU-Required Coordinated Public Transit-Human Services Transportation Plans (2009)⁶

The objectives of this research were to identify state departments of transportation (DOTs) that have already designed coordinated planning processes to meet the FTA's requirements and to generate information about key aspects of those processes that will be useful to other state DOTs and their planning partners as they develop or revise their own planning processes.

Twenty-seven states and the District of Columbia responded to a survey on the topic. The survey results offer a qualitative look at the SAFETEA-LU coordinated planning requirements from the perspective of state DOTs. Key points about current practices among state DOTs as they develop coordinated plans include the following:

- Between 86 percent and 95 percent of the state DOTs that responded to the survey are designated recipients for funds from one of the three grant programs covered by the coordinated planning requirements (the percentage varies by funding source).
- Seventy-five percent of the state DOTs that responded to the survey and have direct responsibility for preparing a coordinated plan have completed a plan for FFY 2007; 42 percent were in the process of preparing a plan for FFY 2008 at the time of the survey.
- Other entities that are responsible for preparing a coordinated plan for funds that are administered by the state DOT include Metropolitan Planning Organizations (MPOs) and regional planning organizations, counties, municipalities, and local transportation providers and human services agencies.
- A number of responding state DOTs have embraced the planning requirements and established ongoing statewide or regional planning groups or networks to develop the coordinated plans. Coordinated planning in those states continues to evolve and mature.
- Several states have provided robust technical assistance and support to enable other entities to develop coordinated plans.
- Sixty-five percent of responding state DOTs are also involved in the coordinated planning activities in large urbanized areas and are playing a variety of roles, most notably providing policy direction or guidance, serving on advisory or stakeholder committees, providing funding to support the efforts, and supplying planning process materials or templates.
- Staff time constraints, the level of effort needed to meet the planning requirements relative to the amount of funding available from the three grant programs, and convincing stakeholders to participate in the planning process were among the top challenges noted by the state DOTs responding to the survey.

⁶ Research Results Digest 331, April 2009, NCHRP Project 20-65, Task 14, "Current Practice and Future Guidance on the Development of SAFETEA-LU-Required Coordinated Public Transit-Human Services Transportation Plans." Available from: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rrd_331.pdf

Enders, A. & Seekins, T. A Review of FTA Section 5310 Program's State Management Plans (2009)⁷

In 2009, a study examined how states administer the Section 5310 program.⁸ This study was focused on the programmatic aspects of how states interpret grant guidelines in the decision making process for how grant funds are distributed.

The study found that some states consistently have used their federal allocations to address rural transportation needs, while others have used these dollars to fill other public transportation system gaps. The report showed that states have many different interpretations of how to focus and distribute FTA's Elderly and Persons with Disabilities Program (now known as "Enhanced Mobility of Seniors and Individuals with Disabilities) grant resources.

States use differing assumptions and measure success with different outcome measures. Some states (e.g., Iowa) have used Section 5310 funds to build inclusive, accessible transportation systems for the general public. This is more common in rural areas where no public transportation had been available. Where human service agencies for seniors and people with disabilities provided the only available transportation, states may have developed or are developing a general public transportation on the backbone of the Section 5310 program (e.g., Idaho, Nevada). States with some limited transportation may have used Section 5310 to supplement rural and/or regional transportation systems (e.g., North Carolina, Iowa, and Rhode Island). States with more developed public transportation systems used Section 5310 to fill general transportation gaps and to support human service agencies that are still an important resource in filling those gaps (e.g., California, Maryland, and Ohio). Some SMPs have statements about equity, but few include operational definitions in project selection criteria.

⁷ Enders, A. & Seekins, T. (2009). A review of FTA Section 5310 Program's State Management Plans: A legacy program in transition. [Technical Report]. Missoula: The University of Montana Rural Institute. Available from: <http://rtc.ruralinstitute.umn.edu/trn/5310%20smp%20technical%20report%202009.pdf>

⁸ The 5310 program underwent significant revision in MAP-21, with a new mission, funding levels, and project eligibility. Even though the program has changed, this research report's findings on grants administration are still instructive to this project.

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Survey of DOTs

To better understand the current state of the practice in transit grants management, the project team developed a web-based survey of DOTs. A database of DOT transit managers was obtained from the Government Affairs section of the American Bus Association. An e-mail was sent to DOT managers in all 50 states. Then, follow-up calls were made to each DOT. The transit manager or a designee completed the survey. A total of 43 responses were received representing 25 states. The survey instrument was comprised of 27 questions. In preparing the survey instrument, the project team asked DOTs if they have an electronic web-based grants management that is fully or partially integrated. Thus, when it came to individual grant management activities, respondents could respond with “Paper,” “Fully integrated web-based grants management system,” “Partially integrated web-based grants management,” “TEAM,” or “ECHO.”

Results

The survey asked respondents for their name, position, and e-mail address. Then, respondents were asked for their role in managing grants on behalf of FTA. Table 1 below shows the responses, with more than 75 percent indicating they have a role in notification of grant funding, application reviews, approvals and programming, grant awards to recipients, progress reporting for FTA, and grant close-out activities.

Table 1. DOT Roles and Responsibilities

Pre-Award Grant Activities	Paper	% of Total	Partially Integrated State Web-based System	% of Total	Fully Integrated State Web-based System	% of Total	TEAM	% of Total	ECHO	% of Total	Response Count
Notification of Grant Funding Availability	9	37.5%	9	37.5%	3	12.5%	3	12.5%	0	0.0%	24
State Grant Application Process	11	44.0%	9	36.0%	2	8.0%	3	12.0%	0	0.0%	25
Selection and Screening	13	65.0%	3	15.0%	2	10.0%	1	5.0%	0	0.0%	20
Scoring Methodology	14	73.7%	3	15.8%	1	5.3%	1	5.3%	0	0.0%	19
Technical Assistance and Training	10	45.5%	7	31.8%	2	9.1%	1	4.5%	0	0.0%	22
Development of Program of Projects	7	38.9%	5	27.8%	2	11.1%	3	16.7%	0	0.0%	18
Approval of Program of Projects	11	57.9%	2	10.5%	2	10.5%	4	21.1%	0	0.0%	19
Grant Awards	10	50.0%	3	15.0%	2	10.0%	5	25.0%	0	0.0%	20
Recipient Agreements	12	66.7%	3	16.7%	2	11.1%	1	5.6%	0	0.0%	18

Next, respondents were asked to list the FTA programs for which their DOT is responsible. More than 80 percent of respondents indicated that their office is responsible for Sections 5310, 5311, 5316, and 5317. Less than half of respondents indicated that their office maintained responsibility for Sections 5303, 5304, and 5307.

The first section to probe respondents regarding grants management activities began by asking the general question of whether the DOT has a web-based grants management system that grantees can access and DOT administrators use for pre-, post-, and close-out grant activities. While 53.5 percent of respondents answered affirmatively, when questions were asked for sub-activities of each, the responses varied between the use of paper processes and electronic grants management. For instance,

for the pre-award grant activities sub-activity of “Notification of grant funding availability,” 38 percent responded “paper” while 38 percent responded “Partially integrated web-based system.” For the sub-activity “State grant application process,” 44 percent responded that it is a paper-based activity while 36 percent indicated that the activity is partially integrated. For the sub-activity “Selection and screening,” 65 percent indicated that the activity is paper-based and 12.5 percent indicated partially integrated. Eight percent indicated that the activity is part of a fully integrated web-based system.

A total of 67 percent indicated that recipient agreements are achieved with paper while only 28 percent indicated partially or fully integrated web-based system. Table 2 below displays the full results for this question.

Table 2. Pre-Award Grant Activities

Close-out Activities	Paper	% of Total	Partially Integrated State Web-based System	% of Total	Fully Integrated State Web-based System	% of Total	TEAM	% of Total	ECHO	% of Total	Response Count
Performance Measurement	7	41.2%	3	17.6%	2	11.8%	3	17.6%	0	0.0%	17
Inventory and Statistics Tracking	7	38.9%	7	38.9%	2	11.1%	1	5.6%	0	0.0%	18
Planning and Policy Evaluation	10	71.4%	1	7.1%	1	7.1%	1	7.1%	0	0.0%	14
Audit	11	73.3%	2	13.3%	1	6.7%	0	0.0%	0	0.0%	15
Final Invoices and Payments	7	38.9%	5	27.8%	1	5.6%	0	0.0%	4	22.2%	18
Final Financial Status Report (FSR)	2	14.3%	1	7.1%	1	7.1%	9	64.3%	0	0.0%	14
Final Milestone/Progress Report	3	20.0%	1	6.7%	1	6.7%	9	60.0%	0	0.0%	15
Record Maintenance	7	46.7%	4	26.7%	1	6.7%	2	13.3%	0	0.0%	15
Federal Reporting	3	17.6%	3	17.6%	1	5.9%	9	52.9%	0	0.0%	17

Similar results were found for close-out activities. Of the 16 respondents, 71 percent indicated that planning and policy evaluation is managed by paper and 73 percent indicated that the audit is a paper-based activity. The FTA FSR and milestone/progress report are reported only in 64 and 60 percent of respondents, respectively. Federal reporting is accomplished in TEAM by 53 percent of respondents. Inventory and statistics tracking are managed by a partially integrated statewide system for 39 percent of respondents and 28 percent manage final invoices and payments with a partially integrated web-based system. Table 3 below displays the results for close-out activities.

Table 3. Grant Close-out Activities

Close-out Activities	Paper	% of Total	Partially Integrated State Web-based System	% of Total	Fully Integrated State Web-based System	% of Total	TEAM	% of Total	ECHO	% of Total	Response Count
Performance Measurement	7	41.2%	3	17.6%	2	11.8%	3	17.6%	0	0.0%	17
Inventory and Statistics Tracking	7	38.9%	7	38.9%	2	11.1%	1	5.6%	0	0.0%	18
Planning and Policy Evaluation	10	71.4%	1	7.1%	1	7.1%	1	7.1%	0	0.0%	14
Audit	11	73.3%	2	13.3%	1	6.7%	0	0.0%	0	0.0%	15
Final Invoices and Payments	7	38.9%	5	27.8%	1	5.6%	0	0.0%	4	22.2%	18
Final Financial Status Report (FSR)	2	14.3%	1	7.1%	1	7.1%	9	64.3%	0	0.0%	14
Final Milestone/Progress Report	3	20.0%	1	6.7%	1	6.7%	9	60.0%	0	0.0%	15
Record Maintenance	7	46.7%	4	26.7%	1	6.7%	2	13.3%	0	0.0%	15
Federal Reporting	3	17.6%	3	17.6%	1	5.9%	9	52.9%	0	0.0%	17

Next, respondents were asked about the benefits of moving toward a web-based grants management system. On a scale of 1 to 5, with 1 signifying “strongly disagree” and 5 “strongly agree,” respondents were asked which activities would be most enhanced if the organization moved to a fully integrated

web-based management system. This was an important element of this research because there may be some aspects of grants management that are not well-suited for an electronic process. Table 4 below displays the average rating for each of the benefits of certain pre-award grant activities. Virtually all of the respondents agreed that it would be beneficial for these activities to be conducted by a fully integrated web-based grants management system with technical assistance and training as the only activity receiving a rating less than 4.0.

Table 4. Benefits of a Fully Integrated Web Based Management System: Pre-award Activities

Pre-Award Activities	Average Rating
Notification of Grant Funding Availability	4.56
State Grant Application Process	4.31
Selection and Screening	4.19
Scoring Methodology	4.00
Technical Assistance and Training	3.94
Development of Program of Projects	4.53
Approval of Program of Projects	4.25
Grant Awards	4.25
Recipient Agreements	4.31

Table 6 shows the results for agreement on features of grant close-out activities. Greater than 50 percent indicated “agree” or “strongly agree” that all activities would enhance operations. There was slightly less agreement that planning and policy evaluation and audit would be enhanced. Planning and policy evaluation and audit received an average rating of less than 4.0 for this question; however, all of the other activities received an average rating of greater than 4.0 in terms of benefits to the DOT in moving to a fully integrated web-based management system.

Table 5. Benefits of a Fully Integrated Web-Based Management System Post-award Activities

Post-award Activities	Average Rating
Reporting	4.62
Project Review and Monitoring	4.07
Compliance and Good Practice Reviews	3.81
Drug and Alcohol Testing Compliance	4.00
Complaint Procedures	4.50
Financial Management	4.67
Invoicing (grantees)	4.53
Invoicing/Drawdowns (FTA)	4.33
Federal Assurances	4.63
Title VI and ADA Compliance	4.31
Annual Program of Projects Status Report	4.67
National Transit Database	4.67
Financial Status Report	4.58

Table 6. Benefits of a Fully Integrated Web-Based Management System: Close-out Activities

Close-out Activities	Average Rating
Performance Measurement	4.07
Inventory and Statistics Tracking	4.29
Planning and Policy Evaluation	3.81
Audit	3.69
Final Invoices and Payments	4.29
Final Financial Status Report (FSR)	4.08
Final Milestone/Progress Report	4.08
Record Maintenance	4.27
Federal Reporting	4.29

Next, the survey turned to identifying barriers that DOTs detect in moving to an integrated web-based grants management system. Respondents were asked to rate the difficulty of overcoming a list of barriers, with 1 being not difficult and 5 being the most difficult. Few of the barriers were considered difficult to overcome. Respondents generally felt that DOT financial resources were adequate and that the DOT would embrace electronic grants management. The only two barriers that respondents rated notably more difficult to overcome were the possibility that grantees may not have the necessary computer and internet infrastructure (average rating of 3.27) and that grantees may not have trained staff to handle a web-based system (average rating of 3.7). Table 7 below shows the average ratings for reactions to statements regarding electronic grants management.

Table 7. Reaction to Statements regarding Electronic Grants Management

Reaction to statements regarding electronic grants management	Average Rating
Our state does not have the financial resources to procure electronic grants management software.	2.27
Our state has not embraced electronic grants management.	2.47
Original signatures are legally required; electronic signatures have not been legalized in our state.	2.47
Grantees may not have equipment and internet service required to engage in full electronic grants management.	3.27
Our grantees may not have qualified or trained staff to manage grants through electronic grants management.	3.67
The current system of grants management works fine for DOT and grantees.	2.67
Our state mandates that we maintain paper files of all grants for a period of years. Electronic storage is not accepted.	2.40
It would be too expensive and resource-intensive to procure, install, train personnel and train grantees on how to use electronic grants management software.	2.20

Respondents were asked to indicate the programs for which they utilize TEAM and ECHO. Virtually all respondents (96 percent) indicated using one or both. Table 8 displays the results for this question. DOTs appear to use TEAM/ECHO for the programs they administer. Less than half use TEAM and ECHO for Sections 5307, 5303, and 5304 while virtually all respondents use TEAM and ECHO for Sections 5310, 5311, 5316, and 5317.

Respondents were then asked which features of TEAM and ECHO are used. Most respondents indicated that all are used, with 66.7 percent indicating they use TEAM/ECHO for filing project environmental findings and project fleet status.

Table 8. Features of TEAM/ECHO used by Respondents' DOT

Features of TEAM/ECHO used by DOT	Response Percent	Response Count
Create project	83.3%	15
File project budget	83.3%	15
Manage all current projects	94.4%	17
Affirm certifications and assurances	88.9%	16
File project milestones	94.4%	17
File project environmental findings	66.7%	12
Project fleet status	66.7%	12
File Milestone Progress Reports (MSR)	88.9%	16
File Financial Status Reports (FSR)	88.9%	16
Make amendments/budget revisions	88.9%	16
Attach supporting documents	77.8%	14
Grant drawdowns - ECHO	83.3%	15
Other (please specify)	5.6%	1

One of the objectives of this research was to determine the utilization of TEAM and ECHO. A secondary purpose was to determine whether states would manage non-federal grant programs if the FTA web-based interfaces could be expanded to accommodate this functionality. Respondents generally felt that TEAM/ECHO would not be useful for non-federal grants management. In narrative comments, respondents explained that their state has a fully integrated web-based management system, and the closed architecture of TEAM/ECHO does not allow an interface between the state and FTA. Another respondent said that TEAM and ECHO are static, not user-friendly, and not intuitive to use.

Respondents were then asked to provide narrative answers on which features of TEAM and ECHO would be used if the software could be modified to make it more useful. Eight respondents answered:

- [Provide] a way to automate POPs.
- Both are not user friendly. The last update to TEAM made it a little better, but it's still quirky and complicated. The user interface needs a more web-based customer service approach.
- TEAM could be more user friendly, allowing users to navigate smoothly from one screen to the next.

- Better flow of information between different screens in TEAM. More user friendly design.
- [Enable] interface with CDOT's accounting system
- [Provide] larger areas to input dialogue.
- TEAM seems "clunky" and a bit outdated. I know it serves the purposes, and grants can be complex things – it seems it could "flow" better.
- [Make] more user friendly.

Respondents were asked if their DOT has an internal statewide web-based grants management system. One-third of respondents reported having a state-level system. Next, respondents were asked if their DOT has a partially web-based grants management system, which was defined as a "website that allows grantees to download grant related documents but not necessarily the ability to upload." For this question, 46 percent of reported having a partially integrated state-level grants management system. In narrative comments, some states described dedicated transit grant management websites where resources, grant applications, manuals, links to other resources, and other materials are available. Respondents with state-level grants management systems were asked to provide the name of their grants management system. Responses included:

- Passenger Transportation Management System (PTMS)
- PTT – Public Transit Team
- Public Transit Application
- Transit Program Management System
- Sales Force
- I-TRIPS - Intelligrants

The next question asked respondents to indicate who developed their system. Responses include:

- Cambridge Systematics (with in-state IT staff maintaining the system)
- State ITS staff (4 states)
- Vertiba consultant building applications for Salesforce platform
- AASHTO
- Agate Software

Respondents who said they have a partially integrated web-based grants management system were asked how pre-award grant management activities are conducted. Table 9 below displays the results for this question. Notification of grant funding availability (44 percent), Technical Assistance and Training (38 percent) and Development of Program of Projects (41 percent) appear to be commonly managed

with a partially integrated web-based management system. Approval of Program of Projects (41 percent) and Grant Awards (44 percent) are managed with TEAM.

Table 9. Management of Pre-Award Activities

Pre-award Activities	Not Applicable	% of Total	Paper	% of Total	Partially Integrated State Web-based System	% of Total	Fully Integrated State Web-based System	% of Total	TEAM	% of Total	ECHO	Response Count
Notification of Grant Funding Availability	2	11.1%	7	38.9%	8	44.4%	1	5.6%	1	5.6%	0	18
State Grant Application Process	1	5.6%	6	33.3%	5	27.8%	5	27.8%	2	11.1%	0	18
Selection and Screening	3	16.7%	9	50.0%	5	27.8%	1	5.6%	1	5.6%	0	18
Scoring Methodology	3	16.7%	9	50.0%	5	27.8%	1	5.6%	1	5.6%	0	18
Technical Assistance and Training	1	6.3%	5	31.3%	6	37.5%	1	6.3%	3	18.8%	0	16
Development of Program of Projects	1	5.9%	5	29.4%	7	41.2%	1	5.9%	4	23.5%	0	17
Approval of Program of Projects	1	5.9%	3	17.6%	6	35.3%	1	5.9%	7	41.2%	0	17
Grant Awards	1	5.6%	2	11.1%	4	22.2%	3	16.7%	8	44.4%	0	18
Recipient Agreements	2	11.1%	7	38.9%	5	27.8%	2	11.1%	2	11.1%	0	18

Respondents were asked to indicate how close-out activities are managed. Record maintenance (41 percent), Audit (38 percent), and Inventory and Statistics Tracking (40 percent) are often managed with a partially integrated state web-based system. Financial Status Report (77 percent), Milestone/Progress Reports (88 percent) and Federal Reporting (77 percent) are commonly managed with TEAM. Table 10 below displays the full results for this question.

Table 10. Management of Close-out Activities

Close-out Activities	Not Applicable	% of Total	Paper	% of Total	Partially Integrated State Web-based System	% of Total	Fully Integrated State Web-based System	% of Total	TEAM	% of Total	ECHO	Response Count
Performance Measurement	3	20.0%	3	20.0%	3	20.0%	3	20.0%	3	20.0%	0	15
Inventory and Statistics Tracking	1	6.7%	3	20.0%	6	40.0%	4	26.7%	3	20.0%	0	15
Planning and Policy Evaluation	3	20.0%	5	33.3%	4	26.7%	2	13.3%	1	6.7%	0	15
Audit	2	12.5%	6	37.5%	5	31.3%	3	18.8%	2	12.5%	1	16
Final Invoices and Payments	0	0.0%	8	47.1%	5	29.4%	2	11.8%	2	11.8%	2	17
Final Financial Status Report (FSR)	0	0.0%	1	5.9%	2	11.8%	1	5.9%	13	76.5%	3	17
Final Milestone/Progress Report	0	0.0%	1	5.9%	2	11.8%	1	5.9%	15	88.2%	1	17
Record Maintenance	0	0.0%	8	47.1%	7	41.2%	1	5.9%	2	11.8%	0	17
Federal Reporting	0	0.0%	1	5.9%	4	23.5%	2	11.8%	13	76.5%	2	17

For those who responded that they have a partially integrated system, respondents were asked how the DOT's grants management process would be enhanced by moving to a fully integrated web-based management system. On a 1 to 5 scale, with 1 signifying "strongly disagree" and 5 "strongly agree," the average ratings are presented in Table 11 below. Most activities received an average rating of greater than 4.0. However, selection and screening had an average rating of 3.8, scoring methodology had an average rating of 3.4, and technical assistance had a rating of 3.47, indicating that these activities would be enhanced by an integrated grants management system.

Table 11. Benefit of Integrated Grants Management: Pre-Award Activities

Pre-Award Activities	Average Rating
Notification of Grant Funding Availability	4.14
State Grant Application Process	4.00
Selection and Screening	3.80
Scoring Methodology	3.50
Technical Assistance and Training	3.47
Development of Program of Projects	4.00
Approval of Program of Projects	4.07
Grant Awards	4.43
Recipient Agreements	3.93

For post-award activities, respondents indicated that a fully integrated web-based management system would be appropriate for federal reporting activities that are currently required to be managed in TEAM, with all of the activities (Federal assurances, Title VI and ADA compliance, Status report, and Financial Status Report) receiving an average rating of less than 4.0. Table 12 below displays the results for this question.

Table 12. Benefits of Integrated Grants Management: Post-Award Activities

Post Award Grant Activities	Average Rating
Reporting	4.31
Project Review and Monitoring	4.29
Compliance and Good Practice Reviews	4.13
Drug and Alcohol Testing Compliance	4.13
Complaint Procedures	4.07
Financial Management	4.07
Invoicing (grantees)	4.27
Invoicing/Drawdowns (FTA)	4.08
Federal Assurances	3.77
Title VI and ADA Compliance	3.80
Annual Program of Projects Status Report	3.86
National Transit Database	3.69
Financial Status Report	3.92

For close-out activities, respondents have lower levels of agreement with the benefits of moving to a fully integrated web-based system, with only two activities scoring an average rating of 4.0 (Table 13). Those are the Final Financial Status Report and the Final Milestone Program Report. The other activities scored an average rating of less than 4.0.

Table 13. Benefits of Integrated Grants Management: Close-out Activities

Close-out Activities	Average Rating
Performance Measurement	3.92
Inventory and Statistics Tracking	3.93
Planning and Policy Evaluation	3.43
Audit	3.77
Final Invoices and Payments	3.87
Final Financial Status Report (FSR)	4.00
Final Milestone/Progress Report	4.00
Record Maintenance	3.93
Federal Reporting	3.92

Analysis of Survey Results

A majority of respondents indicated responsibility for managing Sections 5310, 5311, 5316, and 5317 programs, and less than half indicated managing Sections 5307, 5303, and 5304 programs. Although 53.5 percent of respondents indicated having a fully or partially integrated web-based grants management system, when pre-award and post-award categories were listed, a majority of respondents indicated that pre-award and post-award grant activities are not electronic but rather are accomplished with traditional paper processes. While paper processes are used, there is little resistance among respondents in establishing the benefits of converting to a more electronic management process. When respondents were asked to provide their agreement with the benefits of managing grant activities via a web-based management system, most had an average rating of greater than 4.0 on a scale where 1 is “strongly disagree” and 5 is “strongly agree.” Respondents felt that financial resources are not a barrier to conversion. However, the level of technology and staff resources available to grantees was viewed as a barrier.

Most grantees use TEAM and a smaller percentage use TEAM and ECHO (in some DOTs, there is a central finance department that is responsible for all state finances, not just DOT). Most DOTs did not respond to expanded uses of TEAM but provided feedback that TEAM is cumbersome, not intuitive to use, and not user-friendly. Some DOTs remarked that there is no way to interface any state-operated system with TEAM.

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Interviews

In-depth interviews were conducted with state DOTs to garner additional insights on grant management, TEAM, and ECHO. Based on survey answers, seven states were selected as finalists for follow-up interviews. Finalists were selected based on their use of an electronic grants management system, maturity of the grants management system, and population size of the state. All seven states were contacted, but only four states agreed to be interviewed: South Dakota, Minnesota, Colorado, and Idaho – which represent varying degrees of integration of web-based systems for transit grant management, from no web-based system to a sophisticated web-based system.

The interviews offered a comprehensive overview of the multiple phases of transit grant management at state DOTs. The research team conducted 30-60 minute semi-structured interviews with representatives from each of the four DOTs. The manager of the DOT transit functional unit/office was the initial point of contact and participated in all four interviews. The transit manager was given latitude to bring additional participants to the interview. A list of questions were developed to guide the discussion, covering topics such as: a) features and specifications of their grant management systems; b) the use of TEAM and ECHO, including for non-federal grants; c) pre-award, post-award, and close-out functionality; d) aspects of their grant management process that are and are not suited for a web-based system; and e) general lessons learned. The interview questions were sent to the subjects in advance.

South Dakota – Considering a Web-based Grant Management System

Grant Management System, Thoughts on TEAM and ECHO

The South Dakota Department of Transportation (SDDOT) currently uses Microsoft Excel and TEAM for grant management. The department uses Excel to track both state and federal grants, though the majority of funds are from FTA grant programs. The grant management process is cumbersome – as Excel and TEAM do not interface and the process involves duplication of effort, specifically data entry. SDDOT would consider using TEAM or ECHO to manage non-FTA grants if the systems were more comprehensive. For now, the department is interested in using as few systems as possible.

SDDOT is interested in moving to a web-based system that would standardize the grant management process; however, staffing limitations and subrecipients' technological capabilities present challenges to implementing such a system. With less FTA program funding now available for administrative expenses and increased regulatory requirements, the staff is unable to devote much time to improving the current grant management system. Additionally, the department is concerned that some subrecipients lack the technological knowledge to utilize a web-based system. In the meantime, SDDOT is exploring how other functionalities in Microsoft Excel or Access might improve the process until the department embarks on developing a web-based system. When the department moves forward with a web-based system, it plans to document its business processes and work within the state's Information Technology Department. The department will likely develop the system internally due to the cost.

Overview of Pre-Award, Post-Award, and Close-out Activities

The grant application is available electronically as a Word document. SDDOT staff review the applications and rank them based on a set of evaluation criteria in an Excel spreadsheet. The department funds as many projects as possible, pending available funding. SDDOT staff use a Microsoft Word template to generate award and denial notices. Then the department prepares a Program of Projects (POP) using Microsoft Excel, and submits to FTA using TEAM. If using funds left over from previous fiscal years, the staff may be required to make budget revisions in TEAM as well.

SDDOT handles all procurement for construction projects and vehicle purchases; all invoices are sent to the department. SDDOT uses Microsoft Excel to track reimbursement and forwards them to its Finance and Management Office for final review and payment. This Finance and Management Office uses ECHO to drawdown the funds from FTA. The South Dakota State Auditor then prepares a check and sends it directly to the subrecipient; for vehicle purchases the checks may be sent directly to the vendor.

For the close-out process, SDDOT uses the Excel spreadsheets used for grant tracking and Finance and Management Office records to generate financial data and other information needed to meet FTA funding requirements.

Working with tribal nation grantees is one exception to this process. SDDOT has two direct tribal nation grantees and one non-profit that contracts with a tribe. Though tribal governments receive direct funding from FTA, they are still eligible for Urbanized Area Formula Funding (Section 5307). SDDOT has found managing grants with tribal grantees to be challenging due to the fact that tribes must comply with FTA requirements despite having sovereignty. In some case, tribal governments do not have adequate staff or resources and provide service to remote, rural areas. SDDOT makes significant efforts to work with tribal governments so that that mobility is not impacted in tribal areas.

Lessons Learned

- **Gaps in FTA guidance can present issues for grant management processes** – SDDOT is currently involved in an issue of discrepancy regarding Formula Grants for Other than Urbanized Areas (Section 5311). The department fronted money to grantees, but FTA is questioning the eligibility of the applications.
- **Consider what is really necessary for an electronic or web-based management system** – A few vendors have approached SDDOT about the possibility of developing automated grant management systems, but the department feels that commercial products may offer more functionality than SDDOT needs to manage its grant system. Funding for a commercial product would come out of the grant funds, but SDDOT prefers to spend its limited resources on transit projects that directly serve the public and would likely develop a system in-house in the future.
- **Lack of staff resources makes developing and implementing an electronic or web-based system difficult** – Currently, the primary barrier to using an automated grant management system is the lack of staff time. The grant management team is comprised of 1.5 full-time

equivalent employees, and they are unable to invest time into getting the system developed and deployed.

Minnesota – Partially Integrated Web-based Grant management System

Grant Management System, Thoughts on TEAM and ECHO

The Minnesota Department of Transportation (MnDOT) has had a grant management system for about 20 years and has had a web-based system for about ten years. The department's current system, Public Transportation Application (PTA), was developed by an outside vendor. PTA is partially integrated; the system allows for grantees to input information, and the system interfaces with the department's contracts system but does not interface with TEAM. PTA generates spreadsheets that are used to upload information into TEAM.

However, PTA is now in the process of developing a new, more comprehensive web-based system. MnDOT considered using one of the existing web-based products available but wanted additional functionalities that these products did not offer (i.e., ability to interface with the statewide financial management system, etc.). Therefore, the department is scoping and developing an RFP to hire a vendor to build a new customized system. As part of this scoping process, MnDOT is also conducting an assessment of its business processes to inform the specifications for the new grant management system.

Overview of Pre-Award, Post-Award, and Close-out Activities

MnDOT does not advertise to grantees. The Notice of Funding Availability for the FTA funding programs is used internally, and otherwise, MnDOT uses standard state appropriations. The department does host an application workshop every year to provide technical assistance to potential grantees regarding changes to the application process.

Applicants submit their application through PTA, and the system generates application reports which are reviewed by project managers in the district offices for accuracy and completeness. A review team comprised of the same project managers conduct a second round of review during which the applications are evaluated and scored. Typically, MnDOT gives all grantees a standard percentage of the amount requested; some grantees may receive the standard percentage, plus additional funds based on the application scoring.

Upon award notification, grantees submit a request for funds (RFF) and supporting documentation through PTA. Grantees can use PTA to upload Title VI plans and other compliance documents required for FTA funding. The project managers review, print and sign, and then forward the RFF and other documents to MnDOT's accounting team. The accounting team processes the payment using the statewide financial management system, which does not interface with PTA.

MnDOT does not think that TEAM is very user-friendly, though it may have once been a state-of-the-art program. The department is eagerly awaiting the release of TRAM, the new version of TEAM slated for a 2015 unveiling. When MnDOT's new customized system is launched (also expected in 2015), the

department hopes that it will be able to interface with TEAM/TRAM. The department expressed that there are software vendors seeking permission to be able to interface their products with the new TRAM system. Likewise, there is a new version of ECHO being developed as well, and MnDOT is seeking approval from FHWA to allow the statewide financial system to interface with this new version.

There is a new version of ECHO coming as well, and MnDOT is trying to get approval for its financial system to interface with the new version.

The requirement of original signatures is challenge for MnDOT. Per state regulations, agencies must have original signatures for grant submission and contract execution, so grantees must continue to print, sign, and scan documents requiring signatures, despite process automation efforts.

Lessons Learned

- **Save time and resources by learning from other DOTs** – When developing PTA, MnDOT had many false starts which wasted significant time and money. MnDOT urges that it is important to learn what other states are doing and which vendors and software packages are being used.

Colorado – From Partially Integrated System to New Web-based System

Grant Management System, Thoughts on TEAM and ECHO

The Colorado DOT (CDOT) currently uses a partially integrated grant management system, comprised of a database and online portal for applying for funds and reimbursements. However, the department is in the process of developing a new system due to a few reasons: 1) the current system is no longer compatible with the department's IT functionality; 2) there is a desire to have a more transparent grant making process; and 3) the department is undergoing a process to improve business processes.

CDOT has contracted with an external vendor to develop the new system using the Salesforce platform, a cloud data management system. The project is being funded exclusively with state money; no federal funds are being used. CDOT decided to use the Salesforce platform because it offers flexibility on both the user and administrator sides and can perform a range of functionalities, such as simulating forms currently being used for the grant management process. This new system will not be fully integrated with TEAM or ECHO; manual steps will be required to exchange information between the two systems. Eventually the system will interface with CDOT's financial software (an SAP platform).

However, even with this new system, CDOT will not eliminate the paper application process because some grantees live in rural areas that do not have access to high-speed internet service. While CDOT is working to reduce the bandwidth required to use the web-based system, it must still accept paper applications because it is a competitive grants program.

CDOT did not have documentation of its existing business processes, so a component of developing this new web-based system is to produce this documentation. This has proven to be a challenging process. While the vendor brings Salesforce and business analysis expertise, the developer has had to learn the roles, priorities, and jargon of the various stakeholders involved in the process (i.e., grants management,

IT, finance, etc.). CDOT held a half-day workshop with the stakeholders to ensure that the vendor has a comprehensive understanding of the existing business process to inform the development of the new system.

The new system will generate information to input into TEAM but will not direct interface. An intermediate software program, Conga, will extract data from the Salesforce system and generate documents to be uploaded into TEAM.

The CDOT representative interviewed for this project had very limited experience with TEAM and none with ECHO. His basic assessment of TEAM is that it was not user-friendly, though he expressed that CDOT employees that use the tool regularly know it well and do not seem to have problems with the system.

Overview of Pre-Award, Post-Award, and Close-out Activities

As mentioned above, each applicant receives a user portal license, which is used to collect background and performance information through a unique user login. CDOT will send the Notice of Funding Availability via email. When an applicant logs into the web-based system, Salesforce will only show applications for the grant program(s) for which that particular applicant is eligible. Applicants complete and submit an online application form with the option of saving a partially complete form to return to later. Once the application is submitted, the system will automatically send emails to the applicant to confirm completion and notify the grant coordinator that the application is ready to review. Application scoring will be automated as well. CDOT is working to incorporate performance-based evaluation into the review process, and in the next few years, the web-based system will use formulas to score and rank applications for the selection committee to review and make the final decisions. At any point, the applicant can log in to the system to check on the application status.

Once awards are made, CDOT's Business Office creates a group for each set of grantees through the administrator's side of the web-based system to help with grant tracking. Then the CDOT produces the scope of work agreement, contracts, and other necessary documents. The Salesforce platform automatically generates a draft scope of work populated with information pulled from the grant application. As Salesforce is a "relational database," it can pull information from all documents to generate other documents, saving staff time.

Grantees will log into the portal to submit status updates on the project milestones identified in the application. The new system has the capability to generate these milestone reports that can be uploaded directly into TEAM.

A drawdown of all the funds for a project will automatically initiate the grant close-out process for the Business Office. If a project is complete but there are funds remaining, the grantee will be able to log into the system and indicate that CDOT may de-obligate the balance; this would also initiate the close-out process. This feature solves the past problem of projects lingering due to small amounts of grant funds remaining once a project was complete.

As with Minnesota, original signatures are required, particularly on contracts. This challenge cannot be addressed with the new portal and prevents complete elimination a paper process. Though e-signatures or electronic copies of signed document are allowed on low-level documents (e.g., match verification letter, etc.), grantees will still be required to sign hard copies of contracts. Given the risk-averse nature of the Attorney General's office, it would likely not be easy to have the requirement of original signatures waived for the DOT's documents.

Lessons Learned

- **If developing a customized system, it helps to have a vendor that understands federal grant management** – Make sure that the developer understands the nuances of the business process before delving into the project. CDOT had to revise many elements of the new system due to initial confusion about the business process, at times discarding substantial amounts of previous work. It can be challenging to adequately address stakeholder needs and requests into the actual project, but this can be easier if the developer has a good understanding of the grant management process and requirements.
- **Document the business process before developing an e-grants system** – CDOT has documented business processes as the new system is being developed, which has been challenging and more costly. For a more efficient process, document the system beforehand.
- **Beta test system with users before the official launch** – CDOT offered previews of the new system with users (grant applicants), and it was largely well received. These test users provided useful feedback that the developer will use to further refine the system before it is officially launched.

Idaho – Fully Integrated Web-based Grant Management System

Grant Management System, Thoughts on TEAM and ECHO

The Idaho Transportation Department (ITD) has a fully integrated web-based grant management system, referred to as iTrips. It interfaces with the state's financial management system, but does not interface with TEAM or ECHO. ITD is currently developing additional interface capabilities so that they system can store and generate data for National Transit Database (NTD) reporting and to populate the Statewide Transportation Improvement Program (STIP).

ITD developed the system with an outside vendor, Agate, over the period of about 20 months. The system enhanced the vendor's product Intelligrants grant management system with additional customized functionalities to better meet ITD's needs. During the development of ITD's system, Agate made significant changes to improve the efficiency of the core Intelligrants package, which benefitted subsequent clients.

Prior to procurement, ITD conducted an assessment of its business processes in order to develop detailed project specification. This was an extensive, months-long effort to capture the life-cycle of the grant management process, which had not been documented previously.

ITD's grant management system is used to manage all federal and state grant programs (FTA, FHWA, state-funded programs, etc.). The system database has three types of "modules" (or records):

- Organization – Information about subrecipients, contractors, etc.
- Strategy – A project or program that may receive funding (e.g., mobility service, public transportation, or operations). Operations strategies are distinguished from capital strategies. Each strategy is assigned a unique number.
- Grant – Information about various grant programs managed in the system.

The logic of the database system is relational. For instance, an organization module may be linked to multiple strategy modules, and these strategies may be funded by multiple grants.

Compared to Intelligrants and other similar systems that have evolved incrementally over time, ITD expressed that TEAM and ECHO are static. The agency urged FTA to allow incremental updates to these existing programs (instead of less frequent overhauls) to keep up with the pace of technology.

Overview of Pre-Award, Post-Award, and Close-out Activities

Every year, each grantee goes through an annual certification process and submits a pre-application. The certification process includes submitting drug and alcohol policies, Title VI compliance, and other requirements that are updated in the organization module record. Next, the grantees also indicate the projects or programs for which they want to apply for funds; this step links their organization module to the relevant strategy modules.

Once pre-applications are submitted, they are reviewed by their ITD district offices, which identify if there are any needed modifications and indicate whether a pre-application can move forward in the process. If approved, the system sends an email notification to grantees that they may proceed with the full application. To save time, iTrips populates the full application with information from the pre-application. Once the grantees submit the application, the ITD headquarters staff completes a technical review and then the district offices review the applications again to recommend which projects should be funded. Then the Idaho Transportation Board – comprised of seven citizens appointed by the Governor and confirmed by the state Senate – make the final project selection. iTrips then generates information about the selected projects for the STIP.

Next, the strategy modules are linked to the appropriate grant module(s), and iTrips generates a subrecipient contract (i.e., project agreement) between ITD and each grantee. Also at this time, the grantees upload proof of their local match commitments to validate the amounts submitted in the application. Using this information, iTrips generates data to be filed in TEAM and ECHO.

ITD requires grantees to complete monthly progress reports in iTrips throughout the project implementation process. This monthly reporting is comprised of three screens, and grantees must fill out all of the fields in one screen to advance to the next. The first two screens collect operating data and financial information, and the third screen allows the grantee to submit a reimbursement request; this helps to ensure that grantee provide complete information. ITD staff review the monthly reports and

send approved reports for payment processing. Payments are processed through the state financial system, which is in the process of being revamped. A planned state financial system interface will allow grantees to track the status of reimbursement requests through iTrips.

Once a grant draws down, iTrips generates reports for the close-out process to enter into TEAM. Though ITD's system is configured to comply with the FTA reporting structure, because it does not interface with TEAM, iTrips generates a form that is identical to what appears in TEAM to be manually filed.

Though most of the grant management process occurs online, a physical signature is still needed on the subrecipient contract. So, grantees must sign, scan, and upload the document into iTrips.

Lessons Learned

- **Transitioning to a fully integrated web-based system requires a cultural change** – Developing iTrips was a very challenging project, but with the complexities of federal grant programs, managing a paper-based system is more difficult than an electronic one. iTrips is already showing significant dividends (e.g., improved efficiency, etc.). It is important to work with stakeholders early in the process to ensure buy-in.
- **Do not reinvent the wheel** – ITD tried to make iTrips as generic as possible for the federal grant system and hopes that other states will use their resources to further enhance the system, as opposed to creating a web-based system from scratch.

Review of State Management Plans

FTA's requirement that states maintain SMPs is found in the Circulars providing guidance on each of the major grant programs for which states are responsible for administering. FTA Circular 9070.1F, the program guidance for Section 5310, states, "The State Management Plan (SMP) is a document that describes the state's policies and procedures for administering FTA's § 5310 and 5311 programs, and the state-managed portions of the Job Access and Reverse Commute (JARC) and New Freedom programs. Each state is required to have an approved SMP on file with the appropriate FTA regional office and to update it regularly to incorporate any changes in program management or new requirements. States may maintain an SMP for all programs together or in separate documents.

SMPs are relevant to the context of electronic grants management because they connect a state's procedures and policies for administering the various grant programs with the basis for FTA state-level management reviews of the programs.

The circular goes on to state, "While there is no prescribed format for the SMP, the plan should address the following topics and provide the information as requested for each topic below.

- a. Program Goals and Objectives.
- b. Roles and Responsibilities.
- c. Coordination.
- d. Eligible Subrecipients.
- e. Local Share and Local Funding Requirements.
- f. Project Selection Criteria and Method of Distributing Funds.
- g. Annual Program of Projects Development and Approval Process.
- h. State Administration, Planning and Technical Assistance.
- i. Transfer of Funds.
- j. Private Sector Participation.
- k. Civil Rights.
- l. Section 504 and ADA Reporting.
- m. Program Measures.
- n. State Program Management.
- o. Other Provisions."

At the state level, SMPs range from succinct descriptions of the state's grants management process to very detailed descriptions with associated forms and applications. The project team reviewed 12 State Management Plans (SMP) representing agencies within nine FTA regions. The states reviewed were Rhode Island, West Virginia, Pennsylvania, Tennessee, Alabama, Wisconsin, New Mexico, Nebraska,

Colorado, Montana, Arizona, and Alaska. There is significant variability in the organization and presentation of grants management policies and procedures.

The SMPs were reviewed for content to identify the overall broad scope of grants management activities for the various programs. While there are common elements between SMPs, there is very little uniformity in terms of how they are assembled. Overall, a matrix was developed and SMPs were categorized by the following:

- General Provisions
- Pre-Award and Program of Projects Development
- Rural Transit Assistance Program (RTAP) and Other Provisions
- Asset Management

General Provisions

General provisions encompass the state's overall approach to the SMP. Virtually all of the SMPs reviewed contained goals and objectives. Many defined roles and responsibilities, funding procedures, financial management, and program and service coordination, and some contained complaint procedures. Table 14 below shows general provisions as they are included in the 12 SMPs. The most common general features of SMPs include: description of goals and objectives, description of roles and responsibilities of MPOs and FTA, financial management, and private sector participation.

Table 14. General Provisions – State Management Plans

State Management Plan Elements	FTA Region 1		FTA Region 3		FTA Region 4		FTA Region 5	FTA Region 6	FTA Region 7	FTA Region 8		FTA Region 9	FTA Region 10
	RI	WV	PA	TN	AL	WI	NM	NE	CO	MT	AZ	AK	
Overview of Public Transportation							✓			✓	✓		
Goals and Objectives	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Roles and Responsibilities		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Federal Transit Administration		✓		✓	✓		✓		✓	✓	✓	✓	✓
State Transit Office		✓	✓	✓	✓				✓	✓	✓	✓	✓
Metropolitan Planning Organizations	✓	✓		✓	✓		✓			✓	✓	✓	✓
Advisory Committee									✓	✓			
Regional Planning Organizations (RPO)							✓		✓				
Statewide Transportation Improvement Program (STIP)				✓	✓		✓						
(TIP)				✓	✓		✓						
Funding Procedures			✓	✓		✓			✓				
Method for Distribution of Funds			✓	✓	✓			✓	✓				
State Program Management	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓
Financial Management	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Project Review and Monitoring		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Compliance and Good Practices Reviews		✓			✓			✓	✓	✓	✓	✓	✓
Program and Service Coordination				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Public Outreach					✓			✓					✓
Human Services Coordination Plans	✓	✓		✓			✓	✓					✓
Private Sector Participation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Local Planning Process for Large Communities									✓				✓
Local Planning Process for Small/Rural Communities		✓							✓				✓
State Role in Program and Service Coordination		✓		✓						✓			✓
Policy on Publicizing Service as Open to the General Public									✓				✓
Program Complaint Procedures				✓			✓			✓			✓
Local Complaint Procedures				✓			✓						
State compliant Procedures				✓			✓						
Charter regulations	✓	✓	✓	✓						✓			✓

SMPs can contain considerable discussion on general provisions. Two examples are shown below. The Tennessee DOT describes its roles and responsibilities as follows:

[T]he Department of Transportation and the executive director thereof have been designated as the agency responsible for administering the Sections 5310, 5311, 5316 and 5317 programs. In so doing, the Department is responsible for ensuring the fair and equitable distribution of Federal funds within the State; coordinating the implementation of the program with similar programs administered by other agencies; announcing the program and the availability of funds, particularly to minority organizations and Disadvantaged Business Enterprises (DBEs); developing an application package; providing management and technical assistance to applicants and grantees; conducting a competitive selection process; developing project selection criteria;

determining applicant eligibility; evaluating applications; selecting projects for funding; ensuring that projects State Management Plan, Sections 5310, 5311, 5316 and 5317 provide for the maximum feasible coordination of transportation services assisted under JARC and New Freedom with other transportation services assisted by other federal, non-DOT sources; transferring funds between other FTA programs if and when appropriate; preparing and submitting the annual program of projects to the FTA for approval; providing technical, management and regulatory assistance to grantees; providing copies of applicable federal regulations and circulars; and administering and monitoring contracts.

In Rhode Island, the Rhode Island Public Transit Authority is responsible for preparing the State Management Plan and administering the grant programs. Below is a description of this arrangement found in the Rhode Island SMP:

FTA provides funding for transit services for Elderly and Individuals with Disabilities (FTA Section 5310 Program), Nonurbanized Area Formula Program (Section 5311), Job Access Reverse Commute (Section 5316) and increased transportation options for disabled individuals (New Freedom Program, Section 5317). These grants are available to agencies that the Governor, responsible local officials, and/or publicly owned operators of transit services designate as recipient. Rhode Island Public Transit Authority, known as RIPTA, is the Rhode Island's designated recipient for these federal funds and is charged with administering these programs. As designated recipient, RIPTA is required to develop a state program management plan for these grant programs.

Pre-Award and Program of Projects Development

The SMP also includes pre-award and project development information. Most SMPs have a clear articulation of the timelines, application processes, eligible recipients, and the selection criteria. Also, most states include specific grant program requirements such as drug and alcohol testing and reporting and monitoring requirements. Table 15 displays the common elements among states in pre-award and program of projects development. The most common SMP features include:

- For Planning Funds: a) eligibility criteria; b) planning requirements; and c) description of the categories of eligible applicants.
- For special needs programs (Sections 5310, 5316, 5317): a) grant timeline; b) minimum requirements; c) selection criteria; d) reporting; and e) monitoring.
- For Section 5311 funding: a) description of minimum requirements; b) selection criteria; and c) drug and alcohol testing.

Table 15. Pre-Award and Program of Projects Development

State Management Plan Elements	FTA Region 1	FTA Region 3		FTA Region 4		FTA Region 5	FTA Region 6	FTA Region 7	FTA Region 8		FTA Region 9	FTA Region 10
	RI	WV	PA	TN	AL	WI	NM	NE	CO	MT	AZ	AK
State Grant Application Process							✓			✓		✓
Section 5303/5304				✓			✓			✓	✓	✓
Human Services Grant (5310, 5316, 5317)	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓
Rural (5311)			✓	✓			✓	✓	✓	✓	✓	✓
Rural Transit Assistance Program (RTAP)				✓			✓	✓	✓	✓	✓	✓
Planning				✓	✓					✓		✓
Eligibility		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Categories of Eligible Applicants		✓		✓	✓	✓	✓	✓		✓	✓	✓
Requirements		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
State Administration (Costs)		✓			✓	✓					✓	✓
Service and Service Area				✓		✓		✓				
Program of Projects	✓			✓	✓				✓	✓	✓	✓
Application Process - 5303/5304					✓					✓	✓	✓
Grant Timeline and Allocation					✓					✓	✓	✓
Minimum Requirements					✓					✓	✓	✓
Selection Criteria					✓					✓	✓	✓
Reporting					✓					✓	✓	✓
Application Process - 5310, 5316, 5317		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Grant Timeline and Allocation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Minimum Requirements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Selection Criteria	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reporting	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Monitoring	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Application Process - 5311				✓	✓	✓	✓	✓	✓	✓	✓	✓
Grant Timeline and Allocation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Minimum Requirements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Selection Criteria	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reporting			✓	✓	✓		✓		✓	✓	✓	✓
Monitoring	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
Drug and Alcohol Testing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Intercity Bus Transportation	✓	✓	✓	✓		✓		✓	✓	✓		
Selection and Screening Process		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Technical Assistance and Training	✓	✓		✓	✓	✓	✓	✓		✓		✓
Scoring Methodology									✓			

Pre-award activity is described in depth in SMPs. Two examples are shown below. The Tennessee DOT describes pre-award activities as follows:

State grant applications to FTA are prepared each year and submitted electronically via TEAM for Sections 5310, 5311, 5316 and 5317. Once notification is received from FTA of Tennessee’s forthcoming year’s program allocation, the State’s grant application begins. Transit organizations including cities, counties, agencies which serve elderly persons with disabilities, and agencies which serve the elderly are notified of the beginning of the funding process. The Division of Multimodal Transportation Resources also places

notices in newspapers Statewide to announce the solicitation of applications. The Division of Multimodal Transportation Resources has an established time line of tasks and responsibilities which it follows during the fiscal year to administer transit grants.

New Mexico describes its pre-award activities as follows:

State grant applications to FTA are prepared each year and submitted electronically via TEAM for Sections 5307, 5309, 5310, 5311, 5316 and 5317. Once notification is received from FTA of New Mexico's forthcoming year's program allocation, the State's grant application begins.

Over 620 organizations including cities, counties, tribal governments, agencies which serve elderly persons with disabilities, and agencies which serve the elderly are notified of the beginning of the funding process. The Transit and Rail Division also places notices in over 15 newspapers Statewide to announce the beginning of the new funding cycle.

The Transit and Rail Division has an established timeline of tasks and responsibilities which it follows during the fiscal year to administer transit grants.

Many states include the Rural Transit Assistance Program (RTAP) as part of the SMP, with some states including more detail than others. Most states include civil rights elements to the SMPs as well as FTA reporting requirements. Table 16 displays RTAP and other provisions.

Table 16. RTAP and Other Provisions

State Management Plan Elements	FTA	FTA		FTA		FTA	FTA	FTA	FTA		FTA	
	Region 1	Region 3		Region 4		Region 5	Region 6	Region 7	Region 8		Region 9	Region 10
	RI	WV	PA	TN	AL	WI	NM	NE	CO	MT	AZ	AK
Rural Transit Assistance Program (RTAP)	✓	✓	✓	✓		✓	✓	✓		✓		✓
Application Process				✓		✓	✓	✓		✓		✓
RTAP Scholarship Program				✓				✓		✓		✓
Minimum Requirements		✓		✓		✓	✓	✓		✓		✓
Selection Criteria		✓		✓		✓	✓	✓		✓		✓
Reporting				✓			✓			✓		✓
Certifications and Assurances				✓		✓	✓	✓		✓		✓
Clean Air Act (CAA)				✓								
Construction				✓			✓					
Other Provisions	✓			✓	✓				✓		✓	
Section 533 (b) Labor Provisions			✓			✓		✓	✓		✓	
Environmental Protection			✓	✓	✓	✓	✓		✓		✓	
School Transportation Grantees						✓		✓			✓	
Charter Bus Rule				✓		✓	✓	✓	✓		✓	
Pre-award & Post Delivery Reviews				✓	✓							
Drug Free Workplace				✓	✓	✓						
Grievance Procedure								✓		✓		
Limited English Proficiency				✓								
Consultation Compliance					✓						✓	
Regional and Statewide Prioritization of Transit Applications				✓			✓				✓	
Regional Prioritization of Transit Applications				✓			✓				✓	
Statewide Prioritization of Transit Projects				✓			✓				✓	
Civil Rights	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
General							✓	✓				
Title VI	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓
Equal Employment Opportunity	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Requirements	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
On-site reviews		✓	✓	✓	✓	✓	✓		✓	✓		✓
Section 504 and ADA	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	
FTA Reports					✓					✓	✓	✓
Annual Program of Projects Status Report (5303/5304)										✓	✓	✓
Annual Program of Projects Status report (5310/5311/5316/5317/Title IV/RTAP)				✓	✓	✓	✓		✓	✓	✓	
Financial Status Report		✓				✓	✓	✓				✓
Milestone Update						✓	✓					✓
National Transit Database		✓	✓			✓	✓	✓	✓			✓
Sub-recipient Quarterly Report		✓		✓			✓		✓	✓		✓
Disadvantaged Business Enterprise							✓			✓		✓
Project Closeout		✓		✓	✓	✓	✓		✓	✓		✓
Newsletter and Notifications										✓		
ADA Requirements			✓		✓	✓		✓		✓		✓

The Tennessee DOT is one state that administers RTAP. Annually each grantee is provided an allocation of RTAP dollars for training purposes. The remaining RTAP funds assist in providing for the continuation of the Tennessee Training Transportation Center (TTTC) activities. TTTC provides annual training classes for rural transportation employees, hires trained professionals as presenters at training sessions, provides videos for Tennessee transportation providers and provides technical assistance to all

transportation providers in the state. States have broad discretion in deciding how best to provide assistance and implementing projects under the state program. Delivery mechanisms include:

- 1) assistance by TDOT Division of Multimodal Transportation Resources staff
- 2) contracts with private consultants, universities, nonprofit organizations, state transit associations or other organizations of operators
- 3) hiring of college interns interested in working in various transportation fields
- 4) support of peer-to-peer networks of individuals to provide assistance to each other
- 5) interagency agreements with other state agencies, both within the state and in other states
- 6) tuition and expenses for individuals to attend training courses or workshops

Both Tennessee and West Virginia provide detail on how grants are managed in TEAM and ECHO. The Tennessee describes close-out activities as follows: As indicated in FTA Circular 5010.1, "Close-out is the process by which FTA determines that all responsibilities and work by the grantee are completed and the associated financial records are closed. FTA grant close-out must begin immediately after all work activities under the grant are completed. All close-out documentation must be submitted within the following 90 days." In Tennessee, most state contracts have a 45- to 90-day window for the submission of final invoices related to a TEAM grant and/or matching state monies contract. State contracts for matching funds may exceed the ending date for the federal funding. Upon the close of the time period required for submission of final invoices for the state matching funds, the Division of Multimodal Transportation Resources (DMTR) staff will begin close-out procedures for said grant.

West Virginia describes its uses of TEAM and ECHO as follows:

Financial Management: The Division expends and accounts for grant funds in accordance with West Virginia State Law which requires detailed records sufficient to permit tracking of funds to a level adequate to establishing propriety of expenditures and to permit preparation of reports. All payments from FTA are requested utilizing the Electronic Clearing House Operation (ECHO-Web). The Division follows the requirements established in FTA's ECHO-Web Users Manual. Also, financial records with supporting documentation and any other records are retained by the Division for a period of at least three (3) years from the date of submission of the final financial status report.

The Division submits to FTA an annual program status report, through TEAM-Web, for the program of projects of each active grant. These reports cover the 12-month period ending September 30th and will be sent, through TEAM-Web, to the FTA Regional III office within 30 days after the reporting period. Reports consist of an updated program of projects and revised budget for each active project reflecting revised project descriptions, changes in projects from one category to another and adjustments within budget categories; and, an updated Federal Financial Report (SF-425).

Finally, many SMPs contain provisions for asset management, mostly as they relate to vehicles and facilities. Ownership and title, capital inspection and maintenance, insurance, transfers, and useful life are among the items addressed in SMPs. Table 17 below displays provisions for Asset Management.

Table 17. Asset Management

State Management Plan Elements	FTA Region 1		FTA Region 3		FTA Region 4		FTA Region 5	FTA Region 6	FTA Region 7		FTA Region 8		FTA Region 9	FTA Region 10
	RI	WV	PA	TN	AL	WI	NM	NE	CO	MT	AZ	AK		
	Procurement	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Capital Ownership and Title					✓		✓	✓	✓	✓	✓	✓	✓	
Capital Inspection and Maintenance	✓			✓	✓	✓	✓	✓		✓			✓	
Vehicles	✓	✓	✓			✓	✓	✓		✓			✓	
Facilities		✓	✓	✓		✓				✓			✓	
Insurance					✓					✓			✓	
Vehicle Transfers	✓	✓			✓			✓	✓	✓			✓	
Vehicle Useful Life	✓	✓			✓	✓		✓		✓	✓		✓	
Vehicles Rehabilitation										✓	✓		✓	
Disposition	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	
Annual Depreciation Factor	✓					✓				✓			✓	
Disposing of Vehicles and Equipment	✓	✓			✓	✓	✓	✓	✓	✓			✓	
Early Lien Release	✓									✓			✓	
School Bus Transportation	✓	✓		✓		✓	✓							
Labor Protection	✓			✓						✓				
Lobbying	✓	✓			✓	✓	✓	✓		✓				
Debarment and Suspension	✓	✓					✓		✓	✓				
Buy America		✓	✓	✓	✓	✓			✓	✓				
Accounting System				✓	✓	✓								
Audit					✓									
Safety and Security				✓			✓							

Rhode Island describes its asset management as follows:

RIPTA retains title to all real property and capital equipment, including vehicles, purchased with federal assistance. RIPTA ensures that all facilities and equipment are used in transit service and in accordance with state laws and procedures. RIPTA has procedures for disposing of federally funded capital property and equipment. When a federally funded property can no longer be used for transit operations, RIPTA’s Maintenance Department requests a disposal form from Procurement; Procurement then checks with the Finance Department to see if the equipment has met its useful life. Procurement advertises for bids and sells to the highest bidder, usually for scrap value. The Procurement and Planning Departments coordinate to notify FTA about proposed vehicle dispositions.

Nebraska describes its maintenance requirements as follows: “As new vehicles are procured, a minimum preventative maintenance plan is developed by Nebraska Department of Roads (NDOR) Transit Unit

staff for each type of vehicle. Transit agencies are required to have a documented maintenance plan along with preventative maintenance forms and checklists on file. Requirements in that plan include pre-trip inspections and wheelchair lift inspections and maintenance.”

These maintenance plans must be followed and all maintenance performed on the vehicles must be documented. Such documentation must be available for inspection by NDOR or Federal Transit administration staff or their representatives.

Local grantees are responsible for ensuring that each vehicle is maintained in accordance with vehicle manufacturers' standards and any neglect or misuse of equipment will be the responsibility of the local organization. Thus, local grantees will be financially responsible if the vehicle or other equipment cannot be resold at its fair market value.”

Summary of SMP Review

There is significant variability in the preparation of SMPs. Core elements are required by the FTA Circular; however, states have a great deal of latitude to include other aspects of their management processes. While SMPs are used to document the framework by which FTA grants are managed, there is no requirement to demonstrate the means by which grant programs are managed at the state level. The Circulars do contain references to the use of TEAM and ECHO in the grant procedures. Even if states use automated grants management tools, they are not documented in the SMP in the same way that training materials for TEAM and ECHO contain screen captures clearly demonstrating how the programs are to be used. Thus a procedure can state that “final invoices must be submitted” but may not contain the detail of how this occurs. Paper processes can be gleaned from statements such as, “application packets are sent to eligible recipients around the state and advertised in newspapers.” Other SMPs simply include the entire process with the SMP itself.

Synthesis and Conclusions

DOTs face many challenges in ensuring the DOT's compliance with FTA requirements as well as ensuring the compliance of grantees. The FTA grants management process is procedural. In reviewing SMPs, many states include step-by-step descriptions of how every facet of the grant process is managed, very similar to an instruction manual. The procedural nature of grants management is exactly why the process is so conducive to a web-based management approach for grantees and the DOT. Modules can be built in such a way as to exactly replicate the step-by-step procedures and even be programmed to not allow a user to progress if one procedure has not been followed. However, the use of traditional paper-based management will likely never be totally eliminated.

DOTs face many intricacies involved in their interface with FTA and their grantees. There are varying levels of capabilities and technologies available to grantees. This was identified in the survey of DOTs in which respondents identified the sophistication and technology of grantees as the greatest barrier of moving to a web-based management system. Also, grantees still have to place a grant application on their Board agendas and have original signatures to complete an application and execute a contract.

The survey showed that while paper-based processes are still heavily used, DOTs clearly see the benefits of moving most functions in the grants management process to a web-based management system, with agreement levels at 4.0 or greater on a 1 to 5 scale. States differ in the extent to which they have embraced web-based grants management. In the interviews, South Dakota said that the most difficult barrier is obtaining time and resources to commence the process.

The interviews showed that converting to web-based grants management is a major adjustment for grantees. Conversion also affects the culture of the DOT organization. Addressing the needs of stakeholders within the organization is as important as addressing the needs of grantees. CDOT indicated that the computer program developer tried to interpret the needs of stakeholders but did not understand the business. Adapting to change has always been one of the great challenges for DOTs as well as the greatest success; DOT road construction engineers struggled to adapt to ADA and pedestrian requirements for roadway projects, but they did adapt, and many people have benefitted from the enhancements to safety. The literature review revealed that FTA requirements have increased over the years, but staffing levels for state transit staff have not kept pace. During the survey, DOT staff indicated that they did not have the time for activities such as monitoring and compliance reviews.

The case of the Idaho Transportation Department provides three significant insights into how DOTs can improve their grants management processes. The most significant finding from this entire report is that DOTs will greatly improve the success of any transition by documenting their business processes prior to procurement and/or development. The same principles apply if the system is to be developed internally. CDOT indicated that if the agency starts with a programmer and guiding concepts, business practices will ultimately be documented along the way. Programmers understand programming but not business; DOT officials understand business but not programming. Thus, initial development phases proved to be insufficient for stakeholders.

The second principle demonstrated by ITD is that the process must be collaborative in order to produce the best system for the agency as well as to improve products for future clients. DOTs should consider bringing as many grant programs into the system as possible to maximize the capabilities and the performance of the web-based system. The Idaho Transportation Department is able to use the same web-based system to manage FTA and FHWA grant programs.

The third principle is that there will be resistance by all stakeholders, internally and externally. It is important that the DOT's senior leadership have strong buy-in regarding the benefits of a web-based electronic grants management process.

One objective of this research is to determine the degree to which states might use TEAM and ECHO to manage other programs. TEAM and ECHO are designed to meet the standards of the FTA and may not be suitable for managing state-level grants. Urban transit operators—which are required to use TEAM and ECHO—may find that the systems can be modified to cover state-level grants. However, for non-urban grant programs, TEAM and ECHO would not be useful due to the rigidity of the software's functionality.

Electronic grants management tools can also be useful for state-level transit grants. Future research or replacements of TEAM/ECHO should address the architecture of the software. Ideally, federal grants management software should be capable of generating mandatory federal filings, along with the flexibility to manage state grants.

Even in states that have a fully or partially integrated web-based system, there is no interface with the financial activities that take place in the overall process. All of the interviewees indicated that the state has a central finance department that manages finances for all state departments, not just the DOT. Minnesota DOT stated that the lack of interface with the state's financial system is one of the reasons they deemed the current system to be obsolete. Future procurements will entail such an interface for a minimum capability of processing invoices from grantees.

Finally, DOTs should consider the cost of transitioning to a more advanced grants management in relation to the cost of not doing it. DOTs should assess the resource requirements of staff training, grantee training, customizing a new system, troubleshooting, and making modifications. The ultimate benefit of any web-based grants management is to streamline activities for both grantees and the DOT. This study has demonstrated that this streamlining can be achieved. However, there will always have to be a Plan B in place for those grantees who cannot participate in a web-based management system. This is especially true for Section 5310 grantees who are often not governmental entities, are not accustomed to compliance, and provide simple mobility services for a small, targeted population.