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Best Practices in Managing STIPs, TIPs, And Metropolitan Transportation Plans In Response To Fiscal Constraints

REQUESTED BY THE

American Association of State Highway and Transportation Officials

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Executive Summary

Overview

With the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, federal fiscal constraint requirements for the first time became a significant element of the transportation planning process for state departments of transportation (DOTs) and Metropolitan Planning Organizations (MPOs). After 1991, federal guidance evolved over the years until publication of the February 2007 Final Rule on statewide and metropolitan transportation planning and programming. The Final Rule, in addition to addressing fiscal constraint, added the requirement that approved plans and programs express costs in terms of Year of Expenditure (YOE). The Federal Highway Administration (FHWA) followed these regulations with additional policy guidance in April 2009 in the form of questions and answers.

Since 1991, both states and MPOs have expressed concerns about the way in which fiscal constraint is defined and applied. The draft rule received a large volume of comments and criticism from around the country. The major concerns were:

- The resources required to manage fiscal constraint and the potential loss of focus on other important planning objectives
- The requirement for fiscal balance *by year* rather than over *the life* of a plan or program
- The conflict created between fiscal constraint and need for a visionary long-term plan that may consider options unconstrained by known resources
- Its value in a time of extreme price volatility and uncertainty about future federal revenues

Several peer exchanges, a national scan, and a white paper supported by the American Association of State Highway and Transportation Officials (AASHTO) published in 2008 demonstrate the importance of this subject to the transportation community. Many states expressed interest in learning more about how others are complying with the recent regulations.

As a result, this scan was initiated to identify some of the best practices that states and MPOs are using to comply with current law and regulation. The scan team identified the following states to visit and thoroughly review their approach to achieving fiscal constraint and YOE compliance:

- New York (NYSDOT)
- Vermont (VTrans)
- Kansas (KDOT)
- Missouri (MoDOT)

- Colorado (CDOT)
- Texas (TxDOT)
- Washington (WSDOT)

These states are geographically diverse, and they vary in the size and complexity of their transportation programs. Several have been active in national and regional efforts to address the compliance concerns of the states.

In addition, the scan team also met with selected MPOs in these states to identify best practices in a diverse sample of MPOs, including Transportation Management Areas (TMAs), non-TMAs, and those in air quality nonattainment or maintenance areas. These MPOs include:

- New York Metropolitan Transportation Council (NYMTC) (New York, NY)
- Capital District Transportation Committee (CDTC) (Albany, NY)
- Chittenden County Metropolitan Planning Organization (CCMPO) (Greater Burlington, VT)
- Mid-America Regional Council (MARC) (Kansas City, MO)
- Pikes Peak Area Council of Governments (PPACG) (Colorado Springs, CO)
- Houston-Galveston Area Council (HGAC) (Houston, TX)
- Capital Area Metropolitan Planning Organization (CAMPO) (Austin, TX)
- Thurston Regional Planning Council (TRPC) (Olympia, WA)
- Puget Sound Regional Council (PSRC) (Seattle, WA)

The scan team also reviewed written responses to its amplifying questions (see Appendix A) provided by the Wichita Area Metropolitan Planning Organization (WAMPO) (Wichita, KS).

While the scan team identified best practices in both the states and MPOs it reviewed, it is important to note that the team, following its site visits, has concluded that *numerous variables will usually determine which practices are applicable, practical, or even effective in an individual state or MPO.* Size, complexity, governmental structure, and interagency relations all help determine practices that help states and MPOs comply with fiscal constraint and YOE. Not all practices will have value everywhere. Nevertheless, certain of the best practices identified could be adapted and applied in appropriate ways so that many states and MPOs could benefit.

The scan team has also established two distinct categories for its recommendations. They are:

1. Best practices that, even if modified when applied to an individual state or MPO, might assist them more effectively *comply with existing federal requirements for fiscal constraint and YOE* while, at the same time, enhance overall management of MPO long-range plans, Transportation Improvement Programs (TIPs), and state TIPs (STIPs).
2. Approaches that *may require a change in existing statute and/or regulation that could*

better accomplish the overriding objectives for these financial requirements while preserving, protecting, and reinforcing the importance of other planning and programming functions.

Fiscal Constraint and YOE Objectives

The fiscal constraint requirements are intended to ensure that metropolitan transportation plans and programs can be delivered within estimated or reasonably anticipated revenue levels, ensuring that they do not represent mere wish lists. These requirements also support transparency between the states, MPOs, and the public regarding both revenue and cost estimates, thus ensuring the ability to hold MPOs and the states accountable for transportation commitments.

YOE, the mostly recent added requirement, is intended to acknowledge the relationship between reasonably projected growth (or lack of growth) in revenues and the potential impact of future inflation on project costs. YOE is also designed to help ensure consistency in project cost estimating between the scoping, project development, and design phases. Historically, this hand-off has often resulted in significant increases in cost estimates, often the result of major scope changes made during the design phase. Further, inflation has often been handled inconsistently at different phases of a project's development, making it difficult to compare cost estimates during the life of a project.

Finally, the final rule requires that TIPs and STIPs demonstrate "with reasonable assurance that the federally supported transportation system is being adequately operated and maintained." This is intended to ensure that federal investments in the federally eligible system are protected with an appropriate commitment to operating and maintaining this critical system.

Fiscal Constraint and YOE Requirements: State and MPO Reactions

The scan team's findings on state and MPO concerns regarding the current application of fiscal constraint and YOE requirements are consistent with earlier national efforts to assess the federal approach. All of the states and MPOs that the team visited or reviewed endorse fiscally constrained short-term plans and programs. Everyone advocates that short-term plans and programs should represent realistic expectations about what can be delivered and that they should be maintained in reasonable fiscal balance for their duration. Most, but not all, of the states and MPOs did not view the requirements for fiscal constraint as overly burdensome. Views differed, in part, based upon the flexibility afforded by the federal agencies.

For example, a state such as Vermont, with a smaller and more centralized programming approach, expressed no concern at all with current requirements governing fiscal constraint and YOE. While some, particularly those with larger and more complex programs, believed that the federal TIP and STIP amendment requirements were burdensome, others concluded that the regulations provided ample flexibility for the states and MPOs to efficiently act upon necessary changes.

Nevertheless, states and MPOs express almost universal concern over the trend in recent years to turn long-range metropolitan plans, TIPs, and STIPs into *"accounting" documents. Some argue that long-range metropolitan plans should provide a vision for the future, which might be compromised by focusing on fiscal constraint.* A few even note that these requirements have contributed to a decline in the hiring of professional transportation planners in the MPOs and an increase in the hiring of fiscally oriented and administrative staff.

While the states and MPOs generally conclude that recent guidance on the application of YOE to project costs has helped clarify options for compliance, there was virtually unanimous agreement that the use of YOE in metropolitan plans, especially beyond the first 10 years, substantially exceeds their ability to forecast project cost inflation and revenue far into the future. They would like relief from this requirement, in part, because these plans are updated regularly enough to adjust longer range revenue forecasts.

In addition, while most conceded that the risks of inadequate revenue growth and cost inflation should be recognized in the near-term TIPs and STIPs, some argued that individual project cost estimates in the later years of these programs often include projected inflationary impacts. Therefore, they argued that further application of across-the-board inflation is duplicative and inappropriate. Others argued that the expression of project costs in constant dollars is a reasonable methodology for achieving transparency while still allowing for acknowledgment of inflationary threats. They contend that the public more easily understands costs expressed in terms of constant dollars rather than costs reflecting years of forecasted compounding inflation rates, especially in long-range plans, where compounding impacts are most acute.

All states and MPOs agree that the federal aid system should be adequately operated and maintained, but are concerned that existing revenue levels may not be sufficient. They are also concerned with the vagueness of these objectives and their ability to demonstrate compliance.

All states and MPOs are also currently struggling with uncertainty regarding current and future federal funding levels. This uncertainty compounds the difficulty of determining fiscal constraint. Finally, all states are presently experiencing sharp declines in state and local revenues supporting transportation. Because of this, some previously approved TIPs and STIPs have become fiscally unbalanced, which will affect their ability to deliver committed programs and heighten the challenge to comply with fiscal constraint.

While states and MPOs have most recently experienced a moderating trend in the inflation rates for critical materials used in construction, the ongoing volatility of these prices makes any effort to project future inflation rates difficult, particularly for long-range plans.

Factors Impacting State and MPO Approaches to and Compliance with Fiscal Constraint and YOE

Best practices for the purposes of this scan are defined as follows:

- Approaches and/or tools that *assist a particular state or MPO to successfully comply with fiscal*

constraint and YOE requirements

- Approaches and/or tools that also represent *good management techniques for meeting the broader objectives of plans and programs while effectively complying with federal fiscal requirements*

The scan's inclusion of any individual best practice is not intended to imply that it is always the preferred means for achieving compliance. Therefore, it is important to emphasize the following factors, which often determine a given state's or MPO's approach to ensuring fiscal constraint. The success of certain approaches or best practices often hinges on the following:

- *The sheer dollar size of the state's or MPO's program and the number of transportation operators* impact both the development and implementation of plans and programs. The volatility in costs and schedules, which adds to the need for amendments, appears to be somewhat related to size and complexity.
- *The working relationship and degree of trust between a state and its MPOs* are important factors in effective fiscal management. *The quality of communication between the state and MPOs* and the consistency *of information sharing* also help determine the ease with which they able to comply with federal requirements.
- *The working relationships of both the states and MPOs with their FHWA divisions and Federal Transit Administration (FTA) regions* are also critical in facilitating compliance. Those states and MPOs that have worked with their respective federal partners *to effectively utilize the available flexibility provided by the planning regulations* are clearly better positioned to meet fiscal constraint requirements.
- *Cooperation between the two respective federal agencies* is also important to effective planning and programming in a given state or MPO.
- *Individual state funding mechanisms for transportation and the role of the legislature, governor, and, in some cases, a transportation commission,* may encourage certain practices for managing fiscal constraint that are not appropriate for another state.
- *The degree to which state law imposes additional requirements for achieving fiscal constraint* may also help to determine which practices are most effective for that state. Specific state legislative requirements may require steps that are not useful and may possibly be prohibited in other states.
- *The relative importance of federal highway and transit funding to state and local funding, including tolls*, is another factor that needs to be considered. For many states, the federal share of their highway and transit programs is declining as a percentage of their total program.

Because these factors affect states and MPOs differently, *the scan team concludes that one size does not fit all when it comes to best practices.*

Methodology for Scan Visits

The scan team reviewed five major areas with each of the sites it visited:

- The role of organizational structure and state context
- Approaches to revenue estimates for plans and programs
- Approaches to cost estimates, which establish the management and technical processes for cost estimation throughout the life of a project
- Methods for ensuring fiscal constraint during the development phase of plans and programs
- Methods for ensuring fiscal constraint throughout the implementation phase of approved plans and programs

The Role of Organizational Structure and State Context

DOT organizations, particularly their placement of planning and program management, are strikingly similar. The role of the chief financial officer (CFO) does vary in terms of responsibility for managing the program, especially the STIP; however, no matter this office's placement, it plays a critical role in the areas that impact fiscal constraint. *Clearly, a strong working relationship and good communications between planning, programming, finance, and cost estimating are crucial to effective compliance with fiscal constraint*. A few states (e.g., Washington and New York) have created a discrete local programs management office, which appears to play a positive role in promoting local project delivery.

The larger context in which DOTs and MPOs operate in their respective states varies significantly and plays some role in their approach to fiscal management. For example, some state legislatures play a major role in approving transportation programs and overseeing any major changes. In others, a transportation commission can make program decisions with little if any role for the legislature or governor. Still other DOTs report directly to the governor. Colorado has its own state law requiring fiscal constraint, which impacts CDOT's approach to fiscally managing its transportation programs.

The MPOs that were examined also reflected differing approaches to membership, voting procedures, and organizational structure. For example, while MPO voting membership generally includes local elected officials, transit operators, and state DOTS, Texas also includes legislative representation, and CDOT sits on only one of its five MPO policy boards. Some use weighted voting while others, such as New York, use consensus voting. The exact role of policy boards and planning or technical committees differed between MPOs, but without significant impact on fiscal constraint. All articulated the importance of close working relationships between MPOs and the state DOTs as being essential to sound transportation planning and fiscal management.

Approaches to Revenue Estimating

The states and MPOs use very different approaches to estimating future revenues. All agree

that estimating is more art than science and that current methodologies can be improved upon. As stated above, all states and MPOs confront large gaps between existing revenues and defined transportation system needs and are seriously concerned about two realities:

- Future federal funding is uncertain at best, with new revenue needed just to maintain current funding levels.
- State transportation revenues have sharply declined because of the national economic recession and the growth limitations inherent in the nature of motor fuel taxes, which most states rely upon.

Both factors are contributing to financial instability in long-range plans and, perhaps, inhibiting the visionary planning that many feel is essential. Universally, the severe revenue shortfalls are forcing states to increase focus on infrastructure maintenance and rehabilitation and to commit less to needed facility expansion. Shortfalls are especially impacting some TIPs and STIPs that recently have become fiscally imbalanced almost immediately upon approval. While all concur that fiscal constraint is an important objective, the current situation has made compliance efforts more challenging.

There is also wide variation among states in their approaches to revenue estimation and applying these estimates uniformly among their MPOs. Several states are reviewing their current revenue estimation procedures, and others reflect best practices that might be applicable to other states. All of the selected states and MPOs take what they consider conservative approaches to revenue forecasting, particularly in the current economic climate. Many are concerned that this approach may not prepare them to obligate any unanticipated revenue increases, which have surprised states in the past.

Bonding of state revenues is common, with state legislatures generally establishing limits to the amount permitted. Several states expressed concern that future debt service requirements were adversely impacting the availability of future revenues for their programs, hence contributing to revenue shortfalls.

Each of the states visited maintains the importance of the *DOT playing a significant role in forecasting transportation revenues, especially federal revenues.*

Examples of best practices in revenue estimating include:

- States such as Kansas, New York, and Washington have centralized revenue estimating organizations. KDOT participates on the state's Highway Revenue Estimating Group (HREG) along with the Department of Revenue & Legislative Research, relying upon both historical and current data for state revenues. New York State's Division of the Budget, reporting to the governor, is responsible for the governor's overall revenue estimate; however, NYSDOT's CFO also has the capability of estimating future state and federal transportation revenues for upcoming TIPs and the STIP. Washington DOT's CFO sits on the state's Revenue Council, a separate state agency for overall revenue forecasting. The DOT does play a major role on that council forecasting transportation revenues.

- MoDOT is one of the few state DOTs to hire a staff professional economist to assist in revenue forecasting.
- Colorado uses a committee, including members of its transportation commission and its MPOs, to establish a consensus revenue forecast and requires that CDOT and the MPOs utilize it.
- TxDOT has carried out revenue forecasting in its finance division, with MPOs permitted to develop their own individual forecasts. However, Texas is now initiating a statewide effort, cooperatively with its MPOs, to develop a uniform approach throughout the state on future forecasts.
- Longer term revenue forecasting for MPO metropolitan plans presents a special challenge, considering the greater uncertainties in beyond year 10. CDTC and PSRC both work with their state DOTs, but are also good examples of proactive MPOs trying to marry realistic revenue forecasting with the visioning purpose of their plans. PSRC has developed its own models to forecast revenue in its region.

Approaches to Cost Estimating

All of the states and MPOs reviewed by this scan acknowledge that poor project cost estimating and cost volatility during a project's lifetime present major challenges for fiscal management. Through long-established project scoping and design procedures, state DOTs, in particular, have substantial experience with this critical issue. Several of them believe that their estimating procedures are working well and that cost increases are managed effectively to minimize impacts on fiscal constraint.

For some, however, unanticipated cost increases continue to drive the need for amendments, especially to TIPs and STIPs. Unusually high inflation rates for key construction materials (e.g., concrete, steel, and asphalt) have recently contributed to bid prices well in excess of estimates, even those that included some amount for contingencies. While these rates have moderated, price volatility is likely to continue fiscal uncertainty in future transportation planning and programming.

DOTs have generally placed responsibility for cost estimation during design under their Chief Engineer. They all have established databases regarding recent experience with unit costs and various types of pavement and bridge rehabilitation strategies. Nevertheless, with the notable exception of MoDOT, which uses a concept-through-construction-management strategy and a one or two others, most DOTs expressed ongoing concern over their ability to fully control unanticipated project cost increases during the design phase, as well as at contract letting and award.

Examples of best practices in cost estimating include:

- Renewed focus on improving the scoping phase to develop more complete scopes with more accurate cost estimates. Washington, in particular, is giving special attention to scoping for larger and more complex projects.

- Project costs are regularly updated for TIPs, STIPs, and long-range plans.
- Updates to cost estimates are coordinated between program offices within a DOT as appropriate (i.e., planning, bridge, ROW, design, construction, finance, and National Environmental Policy Act [NEPA]).
- Program and project management principles are applied, in part, to control cost increases throughout a project's life. Colorado, Washington, and Missouri, in particular, have installed rigorous project management approaches to control scopes and costs with great success. Using cost-estimating teams that include all critical functional groups within a DOT (e.g., planning, design, maintenance, environment, and construction) facilitates cost control efforts.
- New York, which has faced substantial unanticipated cost increases in recent years, particularly on large, complex projects, has reviewed its cost estimating procedures and is increasing the use of risk management and performance measurement, as well as newer automated project management systems, to improve cost control.
- Washington assists local governments with project estimates to improve their estimating, an area that is of significant concern for many state DOTs.

Approaches to Metropolitan Plan, TIP, and STIP Development

Compliance with fiscal constraint and YOE requirements comprises only one important element among many that contribute to successful development of metropolitan plans, TIPs, and STIPs. States and MPOs use widely varying time periods, update cycles, and approaches to developing these plans and programs, but universally they utilize methods that encourage *public involvement and transparency*.

Best Practices in Metropolitan Plans

Some MPOs are including *all sources of transportation funding* in their plans' revenue and cost estimations, not just federal funds. This provides a comprehensive foundation for establishing fiscal constraint in the plans as well as the TIPs, which flow from them. Certain MPOs, such as the CCMPO, have simply straight-lined future federal revenue increases based upon historical data and applied a percentage inflation rate uniformly to its plan and TIP.

Other best practices in addressing fiscal constraint and YOE include:

- The Colorado Transportation Commission, relying upon CDOT, provides policy- and corridor-based guidance for the MPO plans as well as for the state's 10 rural planning districts. This guidance, in part, seeks to achieve consistent approaches to fiscal constraint and YOE at the local planning level.
- PSRC, after settling its revenue forecast, works closely with operators on developing the cost side of its plan. A cost/benefit analysis of the entire system helped determine the most cost-effective investments.
- TRPC includes only regionally significant projects and programs in its plan. The operator, who

works closely with the council, prepares the estimates for these projects.

- WAMPO is developing project selection criteria for its 2035 plan to assist members to establish priorities within very tight revenue projections.
- CDTC, in light of severe revenue constraints and high inflation rates, has recently adopted a new approach for its 2030 plan in which it identified a minimally acceptable plan for infrastructure rehabilitation, together with only modest investments in system enhancement. The plan is described as fiscally balanced over the 20-year period, but only if public funding increases regularly over the next 25 years as it has in the past.
- Some, but not all, MPOs are using the flexibility to estimate project costs beyond 10 years with cost ranges or bands.
- All of the MPOs the scan team reviewed struggle with YOE, and some prefer to use constant dollars, especially for their plans. Most have established YOE compliance utilizing the flexibility afforded by FHWA and FTA.

Best Practices in MPO TIPs

Clearly, fiscal constraint requirements have largely eliminated excessive over-programming and, hence, the inability to deliver upon project commitments that had been common prior to ISTEA. Unfortunately, today's steep revenue declines and ongoing project cost volatility continue to adversely impact programs. This scan reinforces the view that strong working relationships between MPOs and their member state and local agencies are critical to the entire planning process, including TIP development.

Most MPOs work closely with their respective DOTs to develop the fiscal constraint parameters for their TIPs. Examples of best practices for developing constrained TIPs and applying YOE include:

- While TIP update cycles vary, they are generally coordinated with more comprehensive statewide program updates and production of the STIP. NYSDOT presents one effective means for preparing a rolling five-year statewide program on a two-year cycle that is tied closely to MPO TIP updates. The CDTC provides an example of an MPO programming all federal funds within priority categories; other MPOs are only responsible for competitively programming certain funds, such as Urban STP and Congestion Mitigation and Air Quality (CMAQ).
- To reinforce the current fiscal constraint, states are generally *assuming federal revenue available for a TIP or STIP at the anticipated level of Obligation Authority (OA) rather than at the authorized levels.*
- The legislature has approved Kansas' current but expiring statewide program (1999–2009), including project listings. The Comprehensive Transportation Program (CTP) is a 10 year transportation program that largely drives the TIP update of MPOs like MARC.
- Many MPOs, including CCMPO, CDTC, and others, only place projects on a new TIP that are clearly ready to proceed. In Vermont, since the state develops most projects for the

CCMPO TIP, the MPO plays only an advisory role in project selection for the TIP within fiscal constraints.

- TRPC's efforts to establish fiscal constraint in a new TIP includes placing an appendix in the TIP specifically listing projects that cannot be funded within existing revenues. It then completes the public review and comment for these projects so that they can readily be added through amendment, should funding become available.
- Most states develop inflation rates to express projects in YOE, and the MPOs generally adopt them for their new TIPs. PSRC, however, uses its flexibility on applying inflation because many project estimates already include projected inflation.

Best Practices in STIPs

Under federal law, the STIP remains as the primary mechanism for authorizing projects using federal funds. Many states include all funds in their STIP. States like New York, with the exception of the Metropolitan Transit Authority, which also includes locally funded projects that serve as a match to federal aid, lists projects with non-federal funding for information only. There is significant variation in how states develop and utilize the STIP. Because the state DOTs play a major role in both revenue and cost estimating, STIPs by and large are both fiscal constraint and YOE compliant when approved by FHWA and FTA.

Examples of best practices in STIP development and use include:

- KDOT uses its official, legislatively approved Comprehensive Transportation Program to develop its STIP directly. Unlike other states, KDOT's STIP only includes individual TIPs by reference.
- The FHWA New York Division, in cooperation with NYSDOT personnel, developed NYSDOT's Electronic State Transportation Improvement Program (ESTIP). The four downstate MPOs have used it to develop the TIPs and manage the STIP in these areas. NYSDOT now houses and manages the ESTIP. In addition, access to ESTIP was recently expanded to the upstate MPOs and the NYSDOT regional offices, for the rural portions of the STIP. NYSDOT intends to use it statewide to develop the next STIP.
- WSDOT has an electronic system for STIP development and is developing a new one for future use. All MPOs, with the exception of PSRC, directly input to this system.
- CDOT coordinates STIP development with budget development to ensure that the first year of the STIP precisely mirrors the fiscal constraint reflected in the annual state budget and to comply with state law requiring fiscal constraint.
- Most states use a rolling multiyear STIP updated annually or biennially to keep the program current.
- Most states apply an inflation rate determined by their own methodology to achieve YOE compliance.

Approaches to Metropolitan Plan, TIP, and STIP Implementation and Management

This area presents states and MPOs with the biggest challenges in fiscal constraint compliance. Consequently, the scan team spent the greatest amount of time reviewing state and MPO practices in this area.

The volatility in TIPs and STIPs, in particular, results in the need for changes to project costs and schedules, as well as the addition of new projects. Metropolitan plans require changes less frequently, and, therefore, present far less of a challenge. The number of amendments and administrative actions that MPOs and DOTs take for TIPs and STIPs varies widely. Large, complex MPOs, such as NYMTC, require hundreds of actions each year, while smaller MPOs and states may only require a handful. MPOs vary the frequency of amendments, generally from daily to at least quarterly.

Requirements for public review combined with the state and federal reviews result in a delay of several months before an amendment may ultimately be approved. Despite these challenges, almost all DOTs and MPOs reviewed maintained that they were managing fiscal constraint effectively.

Example of best practices include:

- Most states and MPOs work closely with FHWA and FTA to maximize the flexibility to utilize a streamlined administrative process, rather than more formal amendments, to accommodate routine or minor changes.
- Plans are generally amended less frequently, sometimes only annually.
- PSRC addresses fiscal constraint in its approved plan by performing regular updates and annual amendments rather than waiting for the lengthy process of developing a new long-range plan.
- Among the states that the scan examined, only CDOT uses the STIP as its sole program management tool, including ensuring that the transportation program remains fiscally constrained during its lifetime. CDOT provides FHWA weekly reconciliation reports on STIP changes and daily reports on its website.
- *Program and project management*, strongly supported by executive management and best illustrated in MoDOT, is an essential element to maintaining fiscal constraint. MoDOT's project scope and cost control efforts and use of innovative contract bid practices have minimized the need for changes to the STIP, with only a small number of amendments requiring approval by the transportation commission.
- KDOT is committed to effective program and project management, relying heavily upon its Comprehensive Program Management System (CPMS) to track and manage projects. An updated CPMS is nearing completion.

- WSDOT's use of *performance management techniques* has helped to control scopes and costs in its program. While The Grey Notebook is used largely to demonstrate accountability to the legislature and transportation stakeholders, it is also the foundation for using *performance measures, in part*, to manage WSDOT's program fiscally.
- CDOT's and WSDOT's efforts to *improve project scoping* have also decreased cost volatility.
- Several states (e.g., WSDOT, NYSDOT, MARC, and WAMPO) control the local side of their TIPs and STIPs by either working closely with local governments on cost estimating or *capping the amount of federal aid available for a local project* to the amount approved in the original program.
- NYMTC's use of the *ESTIP to manage TIP amendments* assists greatly in tracking the many changes in its program and electronically facilitating the member balloting procedure to expedite approval of amendments. NYMTC staff plays a constructive role in assisting their member operators to identify cost offsets to their own amendments.
- NYSDOT is using ESTIP to keep a current version of STIP available on its website.
- Vermont, CDTC, and others make an effort to place projects on a STIP or TIP only after they are funded and clearly ready to proceed.
- CDOT does not repeat the public review process that is used for TIP amendments when it amends its STIP, a significant time saver in processing amendments.
- All states that the team visited utilize Advanced Construction (AC) to help manage cash flow and the use of annual OA; some have established guidelines for its use. Most states are not yet showing the impact of AC on STIP fiscal constraint. NYSDOT does show which federal funds will be obligated for a project's AC, once it is converted.

Preliminary Recommendations for Improved Compliance with Fiscal Constraint and YOE within Current Law and Regulation

The best practices identified in this report assist states and MPOs to comply with existing federal requirements. Many of these practices also facilitate the inevitable changes that must be made, especially to TIPs and STIPs. Below are listed some of what the scan team found to be especially important practices or strategies that, however modified or applied in a given state or MPO, may result in improved compliance with existing statutes and rules and management of transportation plans and programs. The most important of these include:

- Wherever transportation planning, programming, project cost estimating, and fiscal management are housed in a specific DOT, strong linkage and communication between cost estimating and revenue forecasting throughout the life of the program aids the seamless exchange of this critical information.
- Revenue and project cost estimation need strong central leadership in each DOT so that fiscal discipline is maintained.

- It is beneficial when revenue and cost estimation methodologies and guidelines are shared, and preferably developed jointly, with MPOs. It is also beneficial when MPOs have the necessary flexibility to respond to different revenue and cost factors in their own regions. Some degree of uniformity is helpful, but local circumstances should guide estimates.
- *Comprehensive program and project management systems, backed by strong executive leadership*, are important to control not only fiscal constraint, but also the overall quality of the delivered program. Control of project cost and scope volatility is valuable in avoiding continual changes to plans and programs.
- Communication with and outreach to the public and stakeholders regarding the realities of available revenues and the reasons for any necessary project amendments help maintain fiscal discipline and credibility for transportation programs with the authorizing entities and the public.
- States and MPOs can limit the administrative burden imposed by fiscal constraint requirements if they are allowed to utilize the flexibility provided in current law and regulation fully and work closely with their federal partners.
- Fiscal constraint objectives should not be allowed to turn TIPs, STIPs, and, in particular, long-range plans into accounting documents that unduly reflect a focus on only one of many important planning objectives.
- The application of YOE should be monitored and adjusted to ensure that inflation rates are not unnecessarily distorting future project costs, particularly in long-range plans. While a uniform inflation rate across a particular state might be simple, it might also be inappropriate for a specific region.

Preliminary Recommendations for Alternative Approaches to Fiscal Constraint and YOE That May Require Change to Current Law and Regulation

Based on the information this scan gathered, the scan team supports the need for transparency and accountability in aligning program costs, delivery times, and funding to support STIPs, TIPs, and long-range plans. The team also supports the implementation of STIPS, TIPS, and long-range plans as consistently as possible, with the original information shared with the public. All agree that the U.S. Department of Transportation (USDOT) has a legitimate and constructive interest in ensuring fiscal integrity, transparency, and accountability in the expenditure of federal funds. This scan also concludes that adaptation of some of the best practices described in this report will facilitate state and MPO compliance with existing law and regulation.

The team believes that there may be alternative means for achieving these same objectives that may be worthy of further examination, while also reinforcing the principle that plans and programs fundamentally serve as the key documents for demonstrating fiscal constraint. The following alternatives are worthy of further consideration; to be enacted, they may require

changes in statute and regulation. They may also address some of the fundamental concerns that have been expressed regarding current law and regulation. Some of these alternatives reinforce the importance of visionary and fiscally responsible transportation plans and programs that are responsive to transportation needs and preferred outcomes. These alternatives include:

- Removing the requirement that TIPs and STIPs be fiscally balanced by year. Many states believe that this provision is too inflexible for managing large and complex programs and that fiscal balance over the *duration of the program* is more reasonable and as valuable in achieving the objectives of fiscal constraint.
- Drawing upon the transportation community's growing national interest in encouraging greater use of *performance and systems management strategies (including effective use of performance measures)* for achieving fiscal constraint. These strategies would direct concerns to *outcomes rather than processes for achieving the objectives*. The federal role could be one of providing broad goals, best practices, and funding, leaving specific measures and targets to the states and MPOs. There are a wide variety of ways to carry out this approach, but a few might include:
  - Creating flexibility and incentives *commensurate with the ability of states and MPOs to demonstrate quality control on fiscal constraint*
  - Providing a framework for DOTs and, as appropriate, MPOs, to enhance their own *performance management* system that, among other objectives, demonstrates their ability to develop and maintain fiscally constrained plans and programs
  - Providing a framework for states to demonstrate that they have *management systems and strategies* to adequately operate and maintain the federal aid system, consistent with the funding levels provided
  - Allowing the states and MPOs to have the flexibility to rely upon an administrative process for managing plans and programs, so long as their performance management approach demonstrates reasonable fiscal accountability; a possible exception might be nonexempt project amendments in air quality nonattainment or maintenance areas
- Allowing *periodic* (e.g., quarterly or some other reasonable period) *demonstrations* of fiscal constraint instead of project-by-project demonstrations; this would not apply to changes affecting nonexempt projects in air quality nonattainment areas.
- Eliminating or limiting the YOE requirement while still requiring that DOTs and MPOs assess the potential risk that future revenues may not keep up with inflationary cost increases. Metropolitan plans, TIPs, and STIPs should be required to provide an assessment of these risks, perhaps even to suggest potential impacts under specific scenarios. However, they could, if so desired, express project costs in present value terms.
- Eliminating applying YOE to metropolitan plans, at the very least beyond year 10 of the

plan and requiring plans to address, at least with narrative, the risks of future inflation and revenue shortfalls.

Planned Implementation Activities

The scan team's approach to implementation of its findings and recommendations will be designed to inform AASHTO, the Transportation Research Board (TRB), state DOTs, and MPOs of the best practices that were identified in the study, including the major recommendations for effective ways to comply with current federal requirements.

In addition, through outreach to AASHTO's Standing Committee on Planning (SCOP), the team intends to provide its recommendations, especially those that may entail statutory and regulatory changes, so that they can be used to help shape transportation reauthorizing legislation due in late 2009. Some of these recommendations will require further study or research. Various forms of communication will be considered, including:

- Presentations to SCOP and perhaps AASHTO's Executive Committee, TRB, and the Association of Metropolitan Planning Organizations (AMPO)
- Presentations to FHWA and FTA
- Webinars for state DOT and MPO participants