BEYOND WISH LISTS: FINANCIAL PLANNING FOR TRANSPORTATION

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INTRODUCTION: THE NEED FOR FINANCIAL PLANNING

The nineties is a time of expanding options versus constrained resources and tough tradeoffs in surface transportation. In response, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Clean Air Act Amendments of 1990 (CAAA) are introducing major changes in planning and programming at both the MPO and State levels. Taken together, they are evolving towards a new planning and programming process, one which is objective-driven, performance-based, life-cycle oriented, management-intensive, and which produces a prioritized, scheduled improvement program developed in an iterative fashion on a multi-jurisdictional basis. If the legislation did not specifically require financial planning, it would still be needed to meet the demands of such a process.

But, until recently, "transportation financial planning" has been an oxymoron. Plans were little more than wish lists. Transportation Improvement Programs (TIPs) have typically included any good project—often with vague schedules, fuzzy priorities, and a total cost bearing little relation to available financial resources. Few states and fewer MPOs undertook systematic financial planning. Categorical programs and formula suballocation minimized the need for project evaluation. Financial strategies were confined to guessing future appropriations and identifying "gaps." Minimal attention was given to cash flow management, risk and uncertainty were ignored, and alternative financial resources remained unexplored.

Today a more "strategic" approach to financial planning is called for, one that confronts the reality of limited resources, examines alternative courses of action, and incorporates a systematic linkage between planning, programming and budgeting processes. Only then can rational allocation of scarce resources be assured and systematic expansion of the resource base justified.

The ISTEA provides the basic outline for such a financial planning process. Taken seriously, this response will require introducing a new financial discipline into planning and programming at both the State and metropolitan level including development of new methods and procedures. Furthermore, it will require some important changes in institutional relationships—improving cooperative decision-making to capitalize on the greater flexibility and new resource options which are promised. The key requirements of this new process will, at a minimum, include:

- more demonstrably justifiable resource allocation in the face of increased competition for limited funds—including explicit prioritization of projects;
- accommodation of mandated commitments to attaining and maintaining quantifiable standards in system conditions and performance, augmenting facilities concurrent with land use, and conforming with air quality standards;
- meeting legal requirements for time-certainty in project scheduling for both concurrency and conformity;
- introduction of asset management process requirements combining investment cost-effectiveness with budgetary and cash flow analysis in a life cycle cost perspective; and
- exploration of innovative financing to expand financial resources beyond conventional approaches through new sources of revenue, public and private.

These changes imply a new type of transportation planning and programming; they also put financial planning squarely in the center of a restructured planning/programming process.

The paper begins by citing the specific financial planning requirements of ISTEA. It suggests that the implications of these requirements must be understood within the broader context of transportation and environmental planning and programming as established by both ISTEA and CAAA, including the requirements for management systems and conformity determination. The need for concurrent land use and transportation planning to allow for financial assessments is also considered.

The paper then identifies the technical and policy issues that must be resolved as well as challenges associated with implementing a financial planning process. Finally, the paper concludes with an identification of the likely implications of financial planning for transportation planning and programming.

STATE AND MPO FINANCIAL PLANNING REQUIREMENTS AND GUIDANCE

The ISTEA Sections 1024, 1025, and 3012 provide the specific requirements for financial planning at the MPO and State levels. The initial guidance issued by The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) implementing the financial planning provisions of the legislation is limited and general in order to allow States and metropolitan areas as much flexibility as possible.

MPO Level

The ISTEA states that the **Long Range Plans (LRPs)** required of MPOs must have a 20-year horizon and reflect expected funding. They must include a financial plan that "demonstrates how the long-range plan can be implemented, [and] indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan..."

The FHWA/FTA guidance on the financial component of the Long Range Transportation Plan describes the essential components of such financial plans as follows:

- The financial plan should compare the annual revenue from existing and proposed funding sources that are dedicated to transportation uses to the annual costs of constructing, maintaining, and operating the transportation system over the period of the long-range plan.
- All cost and revenue projections should be based on the best available data and trends.
- The annual revenue by existing revenue source (at the local, State, and Federal level) dedicated to transportation projects should be calculated and any shortfalls identified.
- Proposed new revenues or revenue sources to cover shortfalls should be identified.
- Existing and proposed revenues should cover all forecasted capital, operating, and maintenance costs.

Furthermore, in addition to financial feasibility, the legislation encourages the identification of alternative and supplementary funding sources through its requirement that the plan recommend "any innovative financing techniques to finance needed projects and programs, including such techniques as value capture, tolls, and congestion pricing."

The ISTEA states that Metropolitan **Transportation Improvement Programs (TIPs)** must be consistent with the MPO's LRP and include all Federal-aid projects since inclusion in the TIP is a prerequisite to funding under Title 23 and the Federal Transit Act. However, a TIP, which may be the MPO's total capital improvement program for surface transportation, **can** include other non-Federal projects—and probably will—since the "3 C" planning and programming tradition in most metropolitan areas goes well beyond projects that receive Federal aid. The projects for which Federal funding is anticipated can be separately identified to meet Federal–aid requirements.

The TIP must identify a priority list of projects to be carried out in each 3-year period after initial adoption and can only include projects for which "funding can reasonably be anticipated to be available ... within the time period contemplated for completion of the project." The TIP must also recommend innovative financing with requirements similar to those for the LRP.

Guidance relating to the requirement that MPO TIPs be financially constrained has been limited to stating that "In order to demonstrate that funding can reasonably be expected to be available, the projects for each year should be grouped by the proposed funding categories."

State Level

The legislative requirements for **Statewide Transportation Plans (STPs)** are considerably less specific than those for MPO LRPs. The ISTEA does not explicitly call for a STP financial plan. Indeed, State planning is scoped at a very broad and general level, as not only intermodal and multimodal but also intersectoral, i.e., including both public and private transportation plans, covering a broad range of areas that impinge on or are impinged on by transportation matters both urban and rural.

The legislative requirements for consideration of finance at the **Statewide Transportation Improvement Program (STIP)** level are also very general. Quoting from ISTEA, the State TIP must include projects which are "consistent with the long-range plan developed ... for the State, which are consistent with the metropolitan transportation improvement program, and ... shall also reflect the priorities for programming and expenditures of funds, including transportation enhancements."

While no specific financial planning requirements are introduced in the legislation, there is parallel language to TIP requirements regarding the reasonably anticipated project funding, i.e., "The program shall include a project, or an identified phase of a project, only if full funding can reasonably be anticipated to be available for such project within the time period contemplated for completion of the project."

The FHWA/FTA guidance for statewide planning financial elements has been limited to commenting on the need for the States and MPOs to work together in development of the metropolitan area TIPs "to ensure that the TIPs reflect available federal and state funding ..." Since the State TIP must be consistent with the MPO TIPS, it is difficult to imagine how MPO-level financial planning is to take place in an organized manner—i.e., collectively constrained by State constraints—or proceed in a timely fashion, unless the State carries out a financial planning process that parallels the MPO process.

RELATIONSHIP TO LAND USE AND ENVIRONMENTAL PLANNING

Together, the CAAA and ISTEA imply for transportation planning and programming a three-way balancing act among congestion relief, air quality, and financial feasibility. The financial planning activities required by ISTEA must be coordinated with the requirements for system planning and air quality planning.

Conformity

To begin with, for non-attainment areas—currently 80 of the 125 largest urbanized areas over 200,000 population (Transportation Management Areas)—a time-specific conformity of the metropolitan LRP and TIP in non-attainment areas to the states overall State Improvement Program (SIP) for air quality is required. This scheduling commitment introduces concrete, future, financial commitments as a constraint in financial planning at both the State and MPO levels.

Secondly, the conformity determination on the metropolitan LRP and the TIP required by the CAAA must be based on all regionally significant projects not just those that are federally funded or approved (even though the conformity finding is with regard to the Federal projects only). This provision of the legislation also generates a need for a program of projects that goes beyond those that must be included in the TIP as a prerequisite for Federal aid. In fact, identification of all the surface transportation projects planned in a given period is an underlying, if unrequired, necessity to carrying out the financial planning requirements of ISTEA and the conformity determinations required by the CAAA.

Concurrency

This need for comprehensiveness is even more compelling in those States and MPOs where either congestion management planning or growth management programs are tying transportation improvements more closely to land development. Some states have recognized this connection between the supply of infrastructure and new land use development explicitly through legislation that requires "concurrency" between the new development and availability of transportation facilities required to accommodate the resulting new travel demand and traffic. This trend will require closer attention to the identification of needs and careful scheduling of surface transportation projects, as well as a determination of the fiscal resources—including new sources—needed to accommodate planned development.

KEY POLICY ISSUES

The legislation and guidance relating to State and MPO financial planning issued to date raise several key issues that need to be addressed.

Available Funding

Definition of funding "reasonably anticipated to be available" at the State and MPO level is central to a determination of the type of financial planning appropriate to ISTEA. There is no specificity in the legislation or in FHWA guidance. The report of the Senate Committee on Environment and Public Works on ISTEA contained the following clarification: "Historical funding levels, existing bonding authority, existing state and local tax revenues, allocation of federal funds under the Surface Transportation Program, and other relevant factors may be used in determining whether funding can be reasonably anticipated." The intent appears to encompass capacity, trends and commitments.

Project versus Program Feasibility

Closely related to available funding is the issue of defining the appropriate basis for determination of financial reasonableness—the entire TIP, some portion of the TIP, or individual projects. The legislation is not specific on how this determination should be made, although the guidance on developing the MPO TIP does suggest that..."In order to demonstrate that funding can reasonably be expected to be available, the projects for each year should be grouped by the proposed funding categories." This guidance is consistent with the idea of making a determination of funding availability at the system level, (the TIP), rather than at the subsystem level, (some portion of the TIP). The previously cited Senate Committee report that states... "Nor must each project to have earmarked federal, state and local funds be identified in the TIP"...also implies a system-level approach.

A requirement for a determination of financial feasibility at the project level, some believe, would significantly impact on the ability of States and MPOs to implement their programs. Individual project determination of financial reasonableness might preclude the substitution of one highway project for another if the originally scheduled project were delayed for any of several reasons. A modest degree of overprogramming would reflect a realistic response to the reality of uncertainties in project development.

Allocation Process

How States use the flexibility provided by ISTEA to provide funding for sub-State jurisdictions may constitute another major "impedance" problem in moving ahead with ISTEA. Many States have relied on formulas and, frequently, "political" factors for sub-State allocation of resources. This approach is contrary to the spirit—if not the letter—of ISTEA and the FHWA guidance that has been developed. The requirement that the STIP and the TIPs conform with the long-range plans and the requirement to prioritize projects in TIPs will reduce the flexibility of key players by making explicit the current basis of resource allocation and exposing clearly the shortfalls in funding. Until states develop more explicit performance or efficiency-driven approaches to program development and resource allocation, based on long-range plans, this issue is likely to remain a focus of concern in both the federal/state and state/local planning dialogues.

Cooperation and Collaboration

Finally, there is the need for a cooperative (as distinct from a competitive) style—intrajurisdictionally, vertically and horizontally, and among modes and governmental entities.

Collaboration and reconciliation are needed to make the new planning/programming process work. Indeed, conformity with its Transportation Control Measure (TCM) emphasis and the multiple management systems that are part of ISTEA require state and local cooperation as a practical matter because the sources of funds for different components of the systems are at different jurisdictional levels. For example, funding for capital improvements may come from the State but a local government entity may be responsible for operations and maintenance. These programs cannot function without cooperation.

THE FINANCIAL PLANNING PROCESS

There are no existing complete "models" of the type of State and MPO financial planning implied by ISTEA, although a few jurisdictions—challenged by major and visible resource shortfalls have developed more comprehensive approaches. More typically, state and MPO planning activities have suffered from limited or unclear spans of control and lack of information about what funds will be available to implement plans. Of even greater significance is the current lack in the transportation planning arena of a meaningful relationship between metropolitan TIPs and plans, and between State and metropolitan planning and programming. As described above, ISTEA introduces new components and new relationships into the planning and programming. As part of the required process, FHWA/FTA guidance suggests a set of specific financial planning activities that are based on "rationalized best practice" from private sector conventions merged with ISTEA requirements. As indicated, the process is necessarily iterative, fitting the "demand" for investment (the proposed program) with the "supply" of resources (available applicable funds) in the short run and, in the long run, developing additional resource options. Both MPOs and States must conduct parallel financial planning activities with most of the same components. Close coordination is necessary since each supplies key inputs to the other.

Plan/Program Cost Estimation

The first step in the financial planning process is a preliminary estimate of costs for capital projects, operations and maintenance proposed in the plan and program. At the MPO level, TIP estimates may be at a greater level-of-detail than other components of the long-range plan. These costs must be merged to determine the multi-year time-stream of funding required. Implementation of TCMs and management systems may introduce long-term commitments to be factored into this process.

The six ISTEA management systems and the long-term/time-specific requirements of CAAA-related TCMs facing some non-attainment metropolitan areas imply a more strategic approach to transportation investment. Management systems will focus on the costs associated with operations and preservation which have not traditionally been a part of the transportation plan or program. Taken seriously, both systems introduce long-term commitments to system preservation or performance which may have legal or administrative priority over capital improvements.

Conformity commitments offer a special challenge, competing for resources with capital or operating improvements and requirements for pavement management or bridge management. These constraints—although developed at the metropolitan level—may operate to reduce the flexibility available to State legislatures, transportation boards, or commissions accustomed to greater discretion in resource allocation. This is an area where closer State/MPO coordination is clearly essential.

Resource Forecasts

The second step, which can be carried out concurrently with estimating investment needs, is forecasting potential revenue by funding source. Revenue forecasts will include anticipated funding from federal and state government as well as projected revenues from local taxes and fees and any private sources which may be introduced.

The increased funding flexibility offered by ISTEA—both programmatic and modal—will undoubtedly add more categories of resources to be considered simultaneously at both the State and local level. Forecasts will be needed for both the short-term horizon of the TIP and the 20-year planning period in the long-range plans. This information, needed for both the State and MPO planning and programming, must be a scheduled activity if major delays and uncertainties in the planning and programming process are to be avoided.

Adequacy Assessment

The third major activity is based on the results of the first two steps—identifying any funding shortfalls through a comparison of estimated costs for the proposed plan with estimated revenues. If projected long-term revenues fall short of the estimated cost of system development and operation, the State or metropolitan area has one of three options: modify the plan; develop new sources of revenue; or both. Since MPOs resources for several program areas will depend heavily on State-level decisionmaking, rationalizing this process is essential to smooth State/MPO financial planning. A clear schedule and definition of key information flow between the state and MPO planning process will be needed.

If projected long-term revenues are adequate to fund the proposed plan, the next step is the development of the TIPs and STIP. If the long-range plans show that resources are expected to be available for the entire systems as proposed but there is a short term drop in cash flow, it may be necessary to change the timing of projects in the TIPs and STIP. The essence of strategic financial planning is to complete the feedback between resource availability and the resource-constrained TIP representing the best use of funds in the short-run context with a parallel long-run linkage.

The output of the first iteration of the financial planning process and the decisions made on whether to reduce needs, increase revenues, or both, will then feed back into subsequent iterations each with a new set of cost estimates and revenue projections. Depending on the number of players in the process, the number of iterations needed to reach a consensus on needs and financing could be significant. This further illustrates the need for a carefully structured State\MPO cooperative approach.

Once a consensus is reached on the plan and the program, a final decision on resource allocation is the last step in the process.

Iteration

The tighter match between programs and plans and funding "reasonably expected to be available" required by ISTEA suggests the likelihood—if not the necessity—of an iterative financial planning process. Furthermore, the flexibility and reduced Federal-aid categories on the one hand and the implications of increased rigor in strategic allocation of resources for condition and performance objectives on the other, suggest the requirement for several cycles because of the need to match the project selection-based "demand" for financial resources with the "supply" that may be available from the revenue stream. For example, if after the cost of building, maintaining, and operating the projects prioritized through the planning process is calculated and the revenues are forecast, investment needs exceed forecast resources, either the list of planned projects needs to be modified or alternative options for funding the list of projects need to be identified.

The MPO-level financial planning requires input from the State and vice versa. Just as MPOs need an early indication of potential share of statewide funds and Federal apportionments, States will need an indication of resources generated at the local level such as transit fare box revenues or local option taxes.

KEY TECHNICAL ISSUES

In addition to the considerable challenge presented to institutional relations in developing effective financial planning, there are also technical problems regarding both the cost and revenue aspects.

Performance-Based Costs

Together ISTEA and the CAAA point towards the need to identify projects for funding that promise the most cost-effective use of the existing infrastructure, meet the performance standards for operations improvements, preservation, and congestion management, and make time-specific commitments to transportation investments which conform to the State air quality improvement plan. Estimating the life-cycle or performance-based cost implications of projects in this context introduces its own technical complexities, especially the need to estimate and combine capital with operating and maintenance costs. There is no clear consensus regarding how these costs should be defined and what elements should be included such as costs of policing or contributions by the private sector. Furthermore, these costs are borne by different government entities from funding sources that may or may not be dedicated to surface transportation.

Coping with Uncertainty

Revenue estimation also offers difficulties. Federal funds are impacted by unpredictable obligation ceilings and State funds by varying appropriations. State/local transfers are affected by legislated allocation schemes. Dedicated local sales taxes are subject to variations in the local economy. Inflation, diversion and earmarking are all part of the financial landscape with which resource estimation must cope.

The new flexibility offered by cross-modal and multimodal funding sources while presenting new options, will also be a source of uncertainty. Restrictions on use of funds differ depending on source and there are different procedural requirements for funding among the modes, i.e., transit projects have a pre-funding commitment requirement that does not exist for highways. These inconsistencies will need to be addressed before serious intermodal financial planning can be done.

Alternative Sources of Revenue

An important aspect of financial planning is a review of alternative or supplementary revenue sources especially in the context of a financial planning approach that may more explicitly focus on the shortfall between needed investment and available revenues. A brief review of recent trends in highway revenue provided by different sources provides some insights into what the likely sources of new revenue may be.

Federal grants for highways as a share of total highway funding have been declining offset by an increasing local share with the States retaining over a 50-percent share. The relative proportion of total funding coming from different revenue sources such as gas taxes, tolls, and sales taxes has remained fairly constant. However, absolute revenue from some sources, which started from a relatively low base, has increased dramatically since 1985 while others have declined. Revenues from local option sales taxes increased significantly during this period, while bond issue proceeds went down about 12 percent.

Conventional transit revenues exhibit similar shares by level of government and a strong trend towards local options to supplement State and Federal shares.

The trend towards increased reliance on user and benefit fees at the State and local government level has continued into the nineties with States passing enabling legislation that empowers local governments and transit authorities to use local land use control and taxation authority including benefit assessment districts, value capture, impact fees and other local tax measures.

The growth in toll revenues, which increased 35 percent from 1985 to 1990, should be reinforced by the new toll and public/private partnership provisions in ISTEA. The ISTEA allows federal and state aid to be mixed with toll revenues on the non-Interstate elements of the Federal-aid highway system and thereby substantially increase the applicability of toll financing. Other provisions of ISTEA allow States to enter into franchise agreements with private road investor/developers and develop loan agreements that can tap an additional source of investment capital.

Budget constraints, changes in the national or State economies and fiscal reform is altering the financial landscape and turning attention to "innovative" sources at both the State and local level. Transit funding has been particularly aggressive with options considered including private equity, capital leasing, asset mining, and short-term debt financing in addition to the traditional pay-as-you-go approach that characterizes conventional highway finance.

Needed Financial Tools

Taking the long-term perspective implied in developing plans and programs, financial plans must be based on a strategic approach that recognizes uncertainty and which allows States to determine in a systematic fashion the costs and benefits of various financial strategies. Options requiring systematic review may include match waivers, privatization, bond financing, sales tax options, revolving funds and others. There is considerable room for the adaptation of technical methods to deal with the problems and opportunities presented. Methods and techniques required include:

• *Forecasting*—As revenue sources widen, forecasting techniques will need to be developed for each of them including: project revenues forecasts, (e.g., tolls, impact fees, fare box revenue); forecasts of revenue from broad-based highway user taxes, (e.g., gas taxes, motor vehicle registration fees), and general taxes earmarked for transportation use, (e.g., sales taxes, income taxes). New, more accurate, and robust approaches are needed.

• *Risk Analysis*—To deal explicitly with the uncertainty associated with any forecasting—revenue, economic or traffic—techniques such as risk assessment have recently been developed which systematically account for the range and likelihood of variation in the factors that go into a forecast.

• *Cash Flow Modeling*—Modeling the flow of funds at the project level allows an agency to forecast both needed and available resources to insure optimum use of funds and control fund balances. The FTA has sponsored methods development in this area that have been used by transit authorities in financial planning.

• *Investment Optimization*—Where revenue sources include investment instruments such as bonds, systematic review of constraints and objectives can be undertaken to determine the impacts of changes in interest rates, coverages ratios or key policies on the ability to finance needed projects.

• *Gaming*—In order to examine the alternative use of available revenues in a systematic fashion, a series of techniques can be combined to test the implications of alternative assumptions regarding cash flow rates, tax base shifts, participation rates, impacts of inflation, receivables, scheduling issues, etc.

This listing of methodologies that are needed for financial planning gives some idea of the effort that is going to be required; efforts to develop the needed tools have just begun.

CONCLUSIONS

Transportation planning institutions at both the metropolitan and state level are under pressure to make major changes. The agenda is crowded as key participants struggle to cope with a wide range of new programs and requirements. Resource limitations, however, will continue to be at the center of the planning and programming process. Meeting the requirements—much less the opportunities—presented by ISTEA in planning and programming will be substantially impacted by the degree to which State and MPOs are able to develop more rigorous, robust and responsive financial planning techniques. The process described above raises a series of policy and technical issues that need to be addressed.

At the same time, financial planning will bring key participants more directly into the planning and programming process according to the "golden rule," whether cities, counties, MPOs, private sector, or interest groups. Furthermore, the expanded eligibilities and flexibility of ISTEA, and the broader range of interests directly affected will place the entire process under greater scrutiny. There are going to be new opportunities—if not necessities—for negotiation, for tradeoffs, compromise and deal-making.

The meshing of process and participation towards effective allocation of resources will not happen overnight. Successive approximations may be expected along with appropriate local variations. There will be considerable opportunity for professional contributions in developing the needed procedures, methods and techniques.