CAMBRIDGE SYSTEMATICS

Best Practices for State MPO NHS and STP Programming

NCHRP Project 8-36 (058)

Final Report

prepared for

National Cooperative Highway Research Program

prepared by

Cambridge Systematics, Inc.

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final report

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Executive Summary

Findings and conclusions on programming NHS and STP funds have been drawn from four basic sources:

1. Literature that focuses predominantly on the overall programming process and mechanics, with limited references to individual Federal programs;

2. Perspectives from stakeholders involved in the state and regional planning and programming processes;

3. Web-based and other documents that describe programming policies and procedures used in individual state departments of transportation (DOT) and metropolitan planning organizations (MPO); and

4. Interviews with senior staff members of selected state DOTs and MPOs on approaches used in programming NHS and STP funds.

The Issue of "Best Practice"

"Best practices" in programming NHS and STP funds are difficult to define. A new and innovative approach in one area may be highly effective but not well-suited or acceptable in another because of prevailing governance traditions, policies, or decision-making processes. On the other hand, a procedure that has broad-based application might be presumed to be effective and considered a "best practice" by virtue of its widespread adoption. In a word, "best practice" is a highly relative concept, particularly in the world of governance and public resource management.

The research team has sought to describe the critical aspects of the programming process for selected agencies with a specific emphasis on how NHS and STP funds are moved through the programming process. From these examples, ideas, approaches, and procedures have been noted that appear to foster effective decisions about transportation investment, generally, and the investment of NHS and STP funding specifically. While there is danger in referring to any or all as "best practices," many of the approaches noted appear to be worthy of consideration in agencies where they may not be currently in use.

Details about the observations below can be found in Sections 3.0 and 4.0 of the report.

What the Literature Reveals

Data gathered and published annually by the Federal Highway Administration (FHWA) reveals that: a) increased attention is being paid to urban versus rural system needs from both the NHS and STP programs, 2000 to 2004; b) STP funding, in particular, has shifted toward system preservation; and c) broader use was being made of NHS and STP funds.

- Nationally, Federal funds represented less than 20 percent of total government disbursements – Federal, state, and local – for highway investment in 2003, and one-third the amount invested by the states, in the aggregate. As a result, states try not to let the Federal funding "tail" wag the state program "dog"; i.e., care is given to focus the use of Federal funds in order to: 1) maximize their availability and related leverage; 2) maximize the state's flexibility in the use of state funds; and, 3) speed project delivery.

- Easily accessible documentation of planning and programming processes rarely reveals the specific flows of either NHS or STP funds to specific projects or even categories of investment. This data exists, but in the more detailed departmental or agency accounting systems used to track obligations and assure compliance with a range of program and fiduciary requirements.

- NHS funds continue, for the most part, to be committed to arterial roadway improvements, guided by the state, while STP funds are generally thought of largely as a resource to support local and regional priorities.

- Performance-based needs analysis and prioritization are common among most agencies interviewed for the project, although they vary in sophistication.

- Most state DOTs operate under a set of investment categories and/or system designations that reinforce strong state control over programming certain types of funds. "Capacity expansion" or investment in designated "systems of statewide significance" are increasingly common constructs that allow the states to maintain their focus on and lead role in programming decisions, particularly with NHS funds, among other "core" programs.

Tracking and distinguishing the separate, restricted use of individual program funds, especially in the FHWA "core" programs, may be less meaningful than in the past since broader project eligibility and greater flexibility mean that formerly discrete, independent programs are overlapping if not converging in fundamental ways, making it less meaningful to segregate the programmatic sources and their uses.

The final report of NCHRP Project 8-50, Factors that Strengthen the Planning-Programming Linkage, provides a more extensive description of current and evolving programming practices among state DOTS and selected MPOs.

What Stakeholders Believe

A variety of key stakeholders in planning and programming were interviewed to reveal additional perspectives on programming policies and procedures, generally, and the use of NHS and STP funds specifically. Among their observations were these:

- Not enough is known by the FHWA, and therefore, stakeholders, about where the considerable amounts of public funds in these two programs are being spent and on what types of activities. There is an impression that this information is somewhat inaccessible in departmental accounting systems.

- There is a persistent, shared sense that NHS funds are considered "highway" dollars, with investment decisions directed by the states; and, that STP funds are considered a regional resource with most major investments directed by MPOs and local project sponsors;

- There are strong, divergent opinions about whether current state DOT programming and fund allocation practices retain a pre-ISTEA "highway bias." Similar divergent opinions exist over whether the general flows of NHS and STP funds adequately reflect true "needs" or address the most pressing problems in a geographic sense (urban versus rural), or in terms of system ownership (state versus local).

- There is a lingering sense that NHS programming and funding decisions are being made somewhat "outside" the planning and programming process through vehicles such as legislated project authorizations, or earmarks, or project commitments from funds taken off the top to support state or departmental policies or special "emphasis areas."

- There is an emerging sense, particularly at the MPO level, that too few dollars appear to be flowing to address mounting congestion, the most intractable but common problem facing urbanized and urbanizing areas.

- Local city/county concerns lie less with how funding is balanced relative to system ownership and more with assuring that funds go to wherever problems are most severe.

- A sense exists that when NHS funds are programmed, the travel impacts on non-NHS segments are neither considered fully nor addressed effectively.

- There appears to be a continuing mismatch in the portion of funding that flows to urbanized areas where the majority of the traffic and the population reside.

- There is some fear that broadened highway project eligibility may reduce the likelihood of NHS or STP funds being flexed or programmed for nonhighway purposes, further disadvantaging urbanized areas where multimodal solutions to congestion are considered important.

- Managing cash flow is an increasingly important factor in programming Federal funds. The funding mix for individual projects may be influenced increasingly by cash management requirements and strategies since project eligibility has been broadened and funding flexibility instituted, blurring program distinctions.

- Too few funds, overall, are being suballocated to the regional and/or local level.

- Earmarking of projects at the Federal and state level disrupts efforts to address both "true" state and regional priorities.

■ What Is Occurring across Agencies

There are a number of broad features among the varied state DOT and regional programming processes that impact how, and how effectively, NHS and STP funding is utilized. Many of these are also the subject of discussion in the forthcoming report from NCHRP Project 8-50, Factors that Strengthen the Planning-Programming Linkage.

- **Treating Federal and state funding as a combined resource.** It has become a widespread practice to conduct the programming process without allocating and assigning funds from individual Federal programs to specific projects independently, or to do so as an accounting procedure somewhat separate from project prioritization and selection, i.e., to build STIPs and TIPs by looking at available Federal and state funds as a combined resource pool from which to best address needs and priorities. Deferring the specific assignment of program funds to specific projects as long as possible assures maximum flexibility and funding leverage. In some cases, the source of funds is shifted even during early stages of individual project implementation to assure needed flexibility. As individual project authorization and implementation activities proceed, decisions are made on what specific source(s) of funds should be committed to each based on several factors that include:

  - Committing the most "restricted" sources first;
  - Applying eligible funding to the most urgent needs in combinations that leverage increases funding and allow greatest flexibility in the use of all sources;
  - Seeking opportunities to reduce administrative burdens associated with Federal funds;
  - Taking steps to assure the most effective cash management; and
  - Supporting strategies that lead to more rapid project delivery schedules.

- **Limited MPO involvement in NHS programming**. Beyond often pro forma communication between MPOs and state DOTs, MPOs claim little involvement in the use of NHS funds and, in some cases, limited knowledge of state DOT NHS programming strategies, leaving STP funding as the focus of MPO responsibility among the two programs.

- **Rigorous MPO procedures for programming STP funds.** STP programming and allocation processes appear to be more detailed, rigorous, and well-documented among MPOs. One apparent reason is that levels of suballocated funding are relatively small while needs are large and widespread, necessitating a clear, understandable, rigorous procedure for project evaluation, selection and fund allocation.

- **Allowing subrecipients and project sponsors to "trade" funds.** Trading Federal funds, whose use is typically more restricted and cumbersome administratively, for state funds whose use is often far less regulated or restricted is thought to speed project implementation, potentially reducing project costs. When trading is done on a discounted basis (a dollar of Federal funds traded for less than a dollar of state funds), available resources are expanded and leveraged.

- **Recognizing that some portions of the state system are of greater importance than others as a focus for investment.** Designation of subsystems within the overall state highway network as being of "statewide significance" is occurring in many states, using various frameworks. Examples include California, Florida, Colorado, Minnesota, Pennsylvania, and Wisconsin. The apparent advantage lies in strengthening the rationale for differential investment in and varied performance targets (condition and operating performance) on various portions of the network, allowing available funds to go farther toward meeting goals and serving needs, and protecting the broader state interests, systems, services and facilities.

  An extension of this notion at the metropolitan scale is in limited use in several states (California, Minnesota, and Washington State), where "metropolitan system" designations and/or allocation of funds to the metro level are being used to the same effect.

- **Priority given to system preservation, reinforced by the application of management systems and data-driven, performance-based planning and programming processes.** There is widespread formal and informal recognition of system preservation as a priority, particularly at the state level. The increasingly widespread use and documentation of management systems and performance measures and targets provides a powerful rationale for prioritization and allocation of funds among competing needs.

- **Use of "pools" of funding or amounts "taken off the top" of available Federal allocations.** Many state DOTs program "pools" of funds to either support state priorities, e.g., economic development initiatives, or in anticipation of small, urgent project needs that cannot individually be planned or anticipated, or that require rapid response without going through the STIP amendment process. Some are supported with combined state and Federal funds, others totally from state sources. These types of funds also provide states with added flexibility and greater responsiveness.

- **Development of intermediate length plans and programs.** Effective management of resources and system improvement has given rise to the formulation of various intermediate length plans and programs (10 to 12 years) so that the actual flow of funds and commitments to complex projects and activities can be seen in more realistic timeframes that cover the actual time often required for full project implementation.

- **Clear documentation of policies related to priority setting, programming, and fund allocation.** Both states and MPOs are providing more effective guidance to professional practitioners as well as to citizens and elected officials on how the programming process is carried out as a means of assuring better project proposals, as a way of making the process more transparent and to build consensus on a preferred course of action.

- **Expanding roles in priority-setting and programming for district and regional DOT staff and local stakeholders.** Balancing state and local interests in transportation investment is a constant issue, particularly where funding is not fully adequate to meet needs. Increasingly, states are initiating and supporting formal mechanisms for structured local involvement and leadership in arriving at investment priorities on the regional scale.

Noteworthy Practices

In addition to the general characteristics of the evolving programming process noted above. State DOTs and MPOs are directing the use of NHS and STP funds through a variety of noteworthy practices.

State DOTs

- **Limited use of NHS and STP funds for multimodal investment.** Multimodal use of NHS and STP program funds at the state level is limited, presumably because of the scope of real and perceived highway system needs exceeds available funding in most cases. Exceptions include:

  - ***California –*** Fifty percent of NHS funding is transferred to the STP program from which broader use an be made of funds;
  - ***Colorado –*** NHS funds are used to support "ancillary" investments such as bus stops and park-and-ride facilities;
  - ***Florida –*** After preservation targets are met from combined funds, 50 percent of the remaining funds are for capacity expansion ("mobility improvements") on the state's "Strategic Intermodal System" (SIS), which is multimodal in scope, and 15 percent is dedicated to transit; and

- ***Washington State –*** Between 10 and 40 percent of NHS funds typically are transferred to the STP program to facilitate preservation activities and a small portion of NHS funding is used to support the ferry boat system.

- **Sequencing the allocation of funds.** Allocation of funds in most of the states interviewed begins with policy-level determinations over the proportion of available funds for major categories of investment, e.g., preservation, operating improvements and capacity expansion. Preliminary allocations are then made to districts or regions along with data from management systems to guide regional priority setting. Allocation procedures vary and are the product of political accommodations over time supported by data at the state and regional levels. Among the processes are the following and related variants:

  - ***Legislated distributions***, e.g., California, where 25 percent of new STIP funding is retained for state investment decisions and 75 percent is allocated to counties for regional decision-making based on 75 percent population and 25 percent state highway miles; Florida, where funds are allocated to DOT Districts based on 50 percent population and 50 percent county-level gas tax receipts.
  - ***Negotiated, policy-based distributions***, e.g., Arizona, where 37 percent of funding is allocated to the Phoenix region, 13 percent to the Tucson region, and the remaining 50 percent among other counties.
  - ***Policy-based distributions based on a mix of needs data and system performance characteristics,*** e.g., Minnesota, where District allocations of Federal funds are based on bridge needs (20 percent), heavy commercial VMT (5 percent), average pavement needs (35 percent), three-year crash average (10 percent), Congested VMT (15 percent), transit (5 percent), and future VMT projections (10 percent).
  - ***Policy-based distributions for a portion of available funds***, e.g., Oregon, where "modernization" funds are allocated to regions by formula including vehicle registrations, truck ton-miles, VMT, population, gas tax revenues and needs from the Oregon Highway plan.

- **STP Enhancement Investments.** States interviewed described three basic approaches to STP Enhancement programming: statewide competitions managed by the state DOT; parallel state and regional priority-setting with states reserving 10 to 25 percent of the funds to state priorities; and state formula allocation of the full 10 percent of STP funds to regions or districts

MPOs

The continued dominant role of state DOTs in directing the use of NHS funds focuses MPO Federal programming authority on STP funds, including those amounts made available through state policy for regional Enhancement programming, as noted above.

- **Attention is paid to programming specific sources from the start of the TIP process.** MPO programming processes often feature solicitations for project proposals specifically for the use of STP (or CMAQ) funds. Most MPOs manage the programming and award of STP funds through an annual or biennial "solicitation" process among regional jurisdictions, guided by extensive documentation of the policies, processes, criteria, and forms to be used in making application.
- **Many MPOs develop policy-based allocations to broad categories of improvements.** These provide a framework that can often be tied back to the goals of long-range transportation plans and help assure that project priorities serve generally to support the plan. DRCOG in Denver, for instance, has developed a policy-based allocation of funding that guides programming and includes: Roadway capacity (62 percent); roadway reconstruction (19 percent); roadway operational improvement (16 percent) and studies (3 percent).
- **Most MPOs use a two-stage solicitation and evaluation process.** The first stage is a "screening" or "eligibility" process to assure that competing projects reflect regional plans, are adequately supported locally, and can proceed in a timely manner through implementation, including, importantly, an ability to draw down obligated funds in a timely manner. The second stage typically involves rigorous rating and ranking based on a variety of factors and criteria and weighting arrangements as indicated in Sections 3.0 and 4.0.

  Features specifically associated with the programming of NHS and STP funds by MPOs include:

  - The Capital Region Transportation Committee (CDTC) in ***Albany, New York*** has, with the concurrence of the NYDOT, been able to use a substantial portion of the funding available to the region (45 percent) to make improvements off the state system in recognition of where the most pressing regional problems lay.
  - The Puget Sound Regional Council (PSRC) in ***Seattle, Washington*** operates two parallel competitions for combined regional STP and CMAQ funding. The *Shared Regional Competition* uses approximately 43 percent of available funds for proposed projects that are on the designated Metropolitan Transportation System; the *Countywide Competition* awards approximately 57 percent of available funds.
  - The Denver Regional Council of Governments (DRCOG) in ***Denver, Colorado*** has limitations on projects proposed for the use of the region's STP funds, including: 1) a limit on the number of project proposals a jurisdiction can submit for Federal funding in any programming cycle based on a sliding scale of population and employment; and 2) a limit on Federal funding per project of $75,000 for nonconstruction projects and $200,000 for construction projects.
  - The Metropolitan Council of the Twin Cities (Met Council) in ***Minneapolis-St. Paul, Minnesota*** requires that STP project proposals have a "hard" local match and that Federal funds cannot be used for preliminary engineering, design, or right-of-way acquisition. Stand-alone projects for drainage, sound barriers, fences, or landscaping are not eligible in the STP category. However, these types of activities are eligible if they are a part or parts of a larger project which is eligible.

  - The North Central Texas Council of Governments (NCTCOG) in ***Dallas-Ft. Worth, Texas*** has developed three "Partnership Programs" each with a different focus and character, each of which provides a conduit for the flow of different Federal program funds, as described in Section 3.0;

- **STP Enhancement Investments.** MPOs interviewed described a number of approaches to the programming and award of STP Enhancement funds under their control:

  - The CDTC in Albany, New York reserves an extra $1 million in STP funds over and above the Enhancements programmed by NYDOT as a "Second Chance" Enhancement program to assure that local interests in eligible Enhancement activities are met;
  - The DRCOG in Denver, Colorado commits 95 percent of its Enhancement funding to bicycle and pedestrian projects as a matter of informal policy;
  - The SANDAG evaluates and programs funds for Enhancement project proposals within its broader Regional Smart Growth Program, which ensures that Enhancement funds are awarded in concert with larger regional plan and growth management goals.
  - The MTC in the San Francisco Bay area evaluates and programs funds for Enhancement project proposals within its broader Transportation for Livable Communities/Housing Incentive Program (TLC/HIP), which ensures that Enhancement funds are awarded in concert with larger regional plan and growth management goals.

Whether the approaches and procedures described above can literally be declared "best practices" affecting NHS and STP programming is an interpretation that can only be made by the reader who may be considering how these approaches compare with their own, and how arduous it might be to change current approaches. The interview process, however, generally reveals:

1. A reasonable level of satisfaction by interviewees with the procedures currently in place and described here; but also

2. Considerable continuing interest and effort being applied to advancing and improving on these approaches and procedures.

1.0 Introduction

Federal investment in the nation's highways, transit systems, and nonmotorized facilities has increased modestly in recent years and these increases are projected to continue over the next four years with reauthorization of the nation's highway and transit programs under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), signed into law in August 2005.

The new generation of Federal programs that has evolved from the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Transportation Equity Act for the 21st Century (TEA-21, in 1998), and now, SAFETEA-LU (2005), calls for an increasing focus on policy-related goals, including the effect of transportation investment on the economy and the environment. In addition, today's Federal programs provide a more direct emphasis on traditional core goals such as asset management and preservation, safety and security and, generally, on the operational performance of our multimodal surface transportation network.

SAFETEA-LU and its predecessors also have introduced new investment philosophies, including:

- Increased emphasis on the multimodal nature of the network and the need for mutually reinforcing if not integrated modal investment strategies;
- Greatly expanded flexibility in how funds can be used; and
- Greater authority given to states and local recipients in the use of that flexibility.

Availability of these new features has given rise to occasional studies on how these features are being used and to what effect. Tabulations and analyses are periodically conducted on the extent to which program funds have been "flexed" across the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) programs and modes, and the processes and mechanisms that have been used at the state- and regional-levels to arrive at decisions to "flex" funds.

In some cases, individual programs themselves have been evaluated with various levels of rigor.[1] In the case of the National Highway System (NHS) Program and the Surface Transportation Program (STP), relatively little analysis has been done through two

[1] Examples include the FHWA's annual "*Summary of Activities*" under the Congestion Mitigation and Air Quality Improvement Program (CMAQ), the Transportation Research Board (TRB) Special Report 264, "*The Congestion Mitigation and Air Quality Improvement Program: Assessing 10 Years of Experience*" (2002), and the 2003 FHWA study, "*CMAQ: Advancing Mobility and Air Quality.*"

complete reauthorization-cycles on how these programs are being managed and how funds are flowing. The current project to look at the mechanisms by which NHS and STP funds are being programmed and allocated represents an attempt to:

1. Provide more depth to our understanding of how these funds are being programmed and what types of improvements are being funded on what portions of the system; and

2. What approaches are being taken to fund allocation in both the NHS and STP programs and which might hold the greatest promise for better meeting state and local needs as well as national goals.

1.1 Project Purpose

The specific purpose of the current project is to document what might be considered to be "best practices" in the allocation of funds and the selection of projects for NHS and STP investment. The effort also will document similarities and differences in how these decisions are made, both by state departments of transportation (DOT) and at the regional level by Metropolitan Planning Organizations (MPO).

1.2 Approach

The approach taken to the project involved three basic steps:

- Recent literature was reviewed across a wide range of related subjects. The breadth of the review has been dictated by: a) the limited information available on this specific topic within the traditional literature and sources (see Section 3.0 below); and b) the extraordinary amount of material that is available through web documents on programming and priority-setting processes and methods across the country. Appendix A contains a selected bibliography of key sources.

- In depth interviews have been completed with senior representatives of 12 state DOTs and 12 MPOs to uncover more precisely how NHS and STP funds flow to specific projects, portions of the highway system (and other modes), and the rules and procedures that guide NHS and STP programming decisions and fund allocation. Interviews were completed with the state DOTs and MPOs listed in Table 1.1 below. Appendix B lists the specific individuals that provided information and data to the project.

- A synthesis of findings is presented that describes major themes, unique practices, and key issues among candidate states and MPOs on the major procedures used in NHS and STP programming and fund allocation.

Table 1.1 State DOTs and MPOs Interviewed for the Project

Arizona DOT	Albany, NY (Capital District Transportation Committee – CDTC)
California DOT (Caltrans)	Denver, CO (Denver Regional COG – DRCOG)
Colorado DOT	Charlottesville, VA (Charlottesville-Albemarle MPO)
Florida DOT	Dallas-Ft. Worth, TX (North Central Texas COG – NCTCOG)
Minnesota DOT (Mn/DOT)	Las Vegas, NV (Regional Transportation Commission of So. Nevada – RTC)
Missouri DOT	Minneapolis-St. Paul (Metropolitan Council of the Twin Cities)
Montana DOT	Philadelphia, PA (Delaware Valley Regional. Planning Commission – DVRPC)
Oregon DOT	San Diego, CA (San Diego Association of Governments – SANDAG)
Pennsylvania DOT (PennDOT)	San Francisco, CA (Metropolitan Transportation Commission – MTC)
Vermont DOT	Tampa, FL (Hillsborough County MPO)
Washington DOT	
Wisconsin DOT	

1.3 Organization of the Report

The remainder of the Report is organized around the following sections and topics:

Section 2.0 summarizes findings from three perspectives, including aggregate national expenditure data maintained by the Federal Highway Administration (FHWA); themes from the broader literature on planning, prioritization, and programming; and the perspectives of various stakeholders on the programming process.

Section 3.0 provides an overview of key themes, unique features, and related issues emerging from NHS and STP programming among the state DOT and MPO interviewees. They illustrate both the mainstream characteristics of current NHS and STP programming and the more advanced processes and procedures in use.

Section 4.0 provides a more detailed summary in tabular form of how specific states and MPOs are managing particular facets of NHS and STP programming and fund allocation.

Section 5.0 highlights what may be considered "best practices" from among the experiences of interviewees.

The Appendices A, B, and C provide selected bibliographic material, a list of agency interviewees and a description of the characteristics of the NHS and STP programs, respectively.

2.0 Perspectives from Program Experience, the Literature, and Stakeholders

Three major sources have been used to distill broad issues and perspectives revolving around the programming of NHS and STP funds. First, data from the Federal Highway Administration covering recent years (2000 to 2005) has been reviewed to reveal broad spending NHS and STP patterns. Second, a review of the literature was undertaken. And third, interviews were conducted with representatives of various stakeholders to gain an understanding how these two programs serve varied needs.

The sections below summarize findings in these three areas.

2.1 Recent NHS and STP Expenditure Patterns

Enacted as part of ISTEA in 1991, these two "core" Federal programs have been changed only on the margins through two subsequent reauthorizations. Appendix A summarizes the major characteristics of the NHS and STP programs.

At the national level, the FHWA tracks the annual obligations of NHS and STP funds by type of improvement and functional class in both rural and urban areas. Tables 2.1 and 2.2 summarize NHS and STP obligations for 2000 and 2004, respectively, and are taken from the FHWA's annual *Highway Statistics* reports covering those years. The tables and full annual reports can be found on www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm.

From the FHWA tables, the research team rolled-up obligation figures for 2000 and 2004 for each program into four major categories:

- **New Capacity**, including new routes, relocation, reconstruction with increased capacity, major widening, and new bridge projects;
- **Preservation**, including reconstruction without new capacity, minor widening, restoration/rehabilitation, resurfacing, bridge replacement, major and minor rehabilitation, and special bridge projects;
- **Safety, TSM, and Environmental** project obligations; and
- **Other obligations** (including transit).

This roll-up of national aggregate data allows analysis of aggregate NHS and STP obligation patterns and trends for the nation as a whole. Data in the FHWA tables provides a number of interesting findings with respect to aggregate NHS and STP investments in each of the two years as well as shifts in obligation patterns between 2000 and 2004.

2.1.1 National Highway System Program Investment, 2000 to 2004

1. The proportion of NHS investment in both new capacity and preservation appears to have declined from 2000 to 2004, while the proportion in "other" projects increased significantly.
   - NHS investment in projects providing new capacity declined from 51 percent in 2000 to 45 percent in 2004;
   - NHS investment in preservation-related activities appears to have declined more sharply, from 41 percent in 2000 to 27 percent in 2004.
   - NHS investment in "other" projects (including transit) increased from one percent in 2000 to 23 percent in 2004.
2. NHS investment has appeared to shift somewhat from rural to urban projects.
   - In 2000, 56 percent of NHS investment was on urban roads; and
   - In 2004, the proportion of urban NHS investment grew to 62 percent.
3. The balance of *new capacity* investments and *preservation* investments on rural and urban roads seems to have remained stable from 2000 to 2004.
   - Data seem to indicate a consistent one-third/two-third split in both years for NHS investments in new capacity, urban, and rural; and
   - The proportion of NHS investments in preservation-related activities seems to have remained roughly even in urban and rural areas in 2000 and 2004 (46 percent and 54 percent in 2000; 48 percent and 52 percent in 2004).
4. In 2000, little NHS funding was going to "other" projects; in 2004 the proportion increased to nearly 25 percent.

Table 2.1 Obligation of NHS and STP Program Funds by Functional Class and Improvement Type
FY 2000

OCTOBER 2001 (THOUSANDS OF DOLLARS) TABLE FA-6

TYPE OF IMPROVEMENT	RURAL						URBAN						NOT CLASSIFIED 2/	TOTAL
	INTERSTATE	OTHER PRINCIPAL ARTERIALS	MINOR ARTERIALS	COLLECTORS	LOCAL	TOTAL	INTERSTATE	OTHER PRINCIPAL ARTERIALS	MINOR ARTERIALS	COLLECTORS	LOCAL	TOTAL		
NATIONAL HIGHWAY SYSTEM FUNDS														
New Route	4,353	224,594	608	7,995	8,142	245,692	57,069	254,712	5,519	13,960	(7)	331,253	-	576,945
Relocation	600	61,986	800	-	(177)	63,209	21,718	56,390	3,059	367	-	81,534	-	144,743
Reconstruction (Added Capacity)	58,491	181,543	3,805	8,323	-	252,162	266,343	408,997	9,225	14,840	98	699,503	-	951,665
Reconstruction (No Added Capacity)	79,765	139,352	1,729	3,139	2,472	226,457	44,102	302,638	1,622	12,245	-	360,607	-	587,064
Reconstruction (Pre-FY 1995 Adjustment) 3/	(270)	(299)	-	-	-	(569)	(741)	(472)	-	-	-	(1,213)	-	(1,782)
Major Widening	14,951	277,396	454	9,098	-	301,899	147,888	139,666	88	4,551	-	292,213	-	594,112
Minor Widening	(1,745)	10,929	129	(7)	3,350	12,656	24	49,817	3,358	-	-	53,199	-	65,855
Restoration & Rehabilitation	19,956	259,597	26,043	4,842	3,837	314,275	6,613	170,716	543	125	974	178,971	-	493,246
Resurfacing	35,816	327,187	11,547	893	1,221	376,664	19,719	111,131	9,619	11,205	14	151,688	-	528,352
New Bridge	548	47,860	1,018	26,002	-	75,428	34,002	139,983	13,882	4,475	-	192,342	-	267,770
Bridge Replacement	6,511	69,055	1,939	244	490	78,239	19,385	55,880	449	24	4,033	79,771	-	158,010
Major Bridge Rehabilitation	60,310	15,990	268	-	-	76,568	44,491	41,103	(14)	5,444	100	91,124	-	167,692
Minor Bridge Rehabilitation	3,814	6,802	-	455	-	11,071	(15,620)	4,303	-	269	(10)	(11,058)	-	13
Safety/Traffic/TSM	8,931	77,102	7,385	12,895	87	106,400	55,491	79,823	1,984	26,388	305	163,991	-	270,391
Environmentally related	1,068	20,805	3	4,117	-	25,993	9,460	24,201	4,665	4,392	-	42,718	-	68,711
Special Bridge Projects	-	4	77	350	-	431	-	7,602	-	-	-	7,602	-	8,033
Other 4/	(5,740)	30,207	2,046	4,836	140	31,489	(8,425)	18,805	600	11,280	428	22,688	-	54,177
Total NHS Funds	287,359	1,750,110	57,851	83,182	19,562	2,198,064	701,519	1,865,315	54,599	109,565	5,935	2,736,933	-	4,934,997
SURFACE TRANSPORTATION PROGRAM FUNDS														
New Route	2,395	103,978	15,671	41,634	4,963	168,641	13,704	195,972	66,200	81,705	26,459	384,040	5,329	558,010
Relocation	(3)	17,136	36,332	10,692	143	64,300	2,427	21,297	1,923	7,140	4,282	37,069	2,184	103,553
Reconstruction (Added Capacity)	5,195	95,065	75,182	26,015	8,760	210,217	115,931	196,237	107,241	44,812	15,434	479,655	217	690,089
Reconstruction (No Added Capacity)	(293)	23,101	97,695	88,022	5,857	214,382	13,349	186,316	143,996	87,215	31,599	462,475	(17,462)	659,395
Reconstruction (Pre-FY 1995 Adjustment) 3/	-	(993)	(2,685)	(140)	(26)	(3,844)	-	(97)	(222)	(1,330)	(285)	(1,934)	11	(5,767)
Major Widening	6,129	77,178	88,139	46,340	3,654	221,440	19,777	184,967	114,585	60,649	16,489	396,467	(49)	617,858
Minor Widening	-	41,690	47,744	40,188	3,822	133,444	612	46,694	45,072	31,450	12,008	135,836	(83)	269,197
Restoration & Rehabilitation	3,957	78,993	94,704	118,859	10,203	306,716	47,244	117,008	84,882	82,876	9,492	341,502	9,536	657,754
Resurfacing	6,529	121,400	193,935	231,491	15,096	568,451	8,047	245,471	121,927	47,068	16,038	438,551	1,452	1,008,454
New Bridge	237	4,337	4,042	8,558	(316)	16,858	15,603	62,522	7,718	10,908	2,300	99,051	651	116,560
Bridge Replacement	271	18,956	23,417	24,616	9,348	76,608	64,590	28,201	23,476	4,558	11,962	132,787	210	209,605
Major Bridge Rehabilitation	(40)	3,242	12,971	9,365	1,221	26,759	(3,481)	7,999	8,799	9,831	6,360	29,508	6	56,273
Minor Bridge Rehabilitation	(134)	1,519	3,195	1,122	470	6,172	(2,449)	4,403	1,252	2,385	1,938	7,529	3,998	17,699
Safety/Traffic/TSM	10,612	65,548	64,047	167,863	42,517	350,587	21,796	204,808	109,446	252,587	44,813	633,450	23,795	1,007,832
Environmentally related	4,125	13,052	7,238	105,536	8,532	138,483	6,330	23,569	15,429	78,827	17,811	141,966	5,731	286,180
Special Bridge Projects	190	329	408	4,261	713	5,901	166	5,074	2,135	8,145	5,032	20,552	-	26,453
Other 4/	735	1,935	2,090	26,617	1,682	33,059	1,181	2,057	2,803	27,221	2,014	35,276	7,558	75,893
Total STP Funds	39,905	666,466	764,125	951,039	116,639	2,538,174	324,827	1,532,498	856,662	836,047	223,746	3,773,780	43,084	6,355,038

1/ The data reported in this table are from the Fiscal Management Information System. Due to rounding, the data may not agree with the summary of obligations contained in report M79 prepared by the Office of Fiscal Services. Negative numbers indicate adjustments to projects.
2/ Projects not identified as urban or rural.
3/ Prior to 1995, Reconstruction was not split into separate items for added capacity and nc added capacity. When Pre-FY 1995 projects are reopened, the improvement type has been recoded, causing negative adjustments to "Pre-FY 1995 Reconstruction" and positive adjustments to the new Reconstruction items.
4/ Includes projects not otherwise included in the remaining improvements types, such as transit.

Source: U.S. Dot, Federal Highway Administration, *Highway Statistics, 2001, Table FA-6,* Washington D.C., 2001.

Table 2.2 Obligation of NHS and STP Program Funds by Functional Class and Improvement Type
FY 2004

(THOUSANDS OF DOLLARS) TABLE FA-6

TYPE OF IMPROVEMENT	RURAL							URBAN							NOT CLASSIFIED 2/	TOTAL
	INTERSTATE	OTHER PRINCIPAL ARTERIALS	MINOR ARTERIALS	COLLECTORS	LOCAL	OTHER	TOTAL	INTERSTATE	OTHER PRINCIPAL ARTERIALS	MINOR ARTERIALS	COLLECTORS	LOCAL	OTHER	TOTAL		
NATIONAL HIGHWAY SYSTEM FUNDS																
New Route	30,553	302,042	-	1,545	(10)	-	334,130	98,428	352,220	25,236	11,429	(1,631)	1,647	487,329	-	821,459
Relocation	(2,570)	33,484	-	693	-	-	31,607	6,716	5,242	(17)	(147)	-	-	11,794	-	43,401
Reconstruction (Added Capacity)	131,925	512,043	32,491	22,806	-	-	699,265	654,294	647,019	19,033	10,745	298	261	1,331,650	(21,164)	2,009,751
Reconstruction (No Added Capacity)	78,418	244,467	11,558	14,201	3,407	8,325	360,376	190,056	206,320	2,539	(766)	(5,902)	15,916	408,163	(35)	768,504
Reconstruction (Pre-FY 1995 Adjustment) 3/	(5,648)	(624)	-	-	-	-	(6,272)	(2,364)	(11,563)	-	-	-	-	(13,927)	-	(20,199)
Restoration & Rehabilitation	14,858	178,137	1,959	4,039	-	(1,514)	197,479	27,340	101,420	2,761	4,114	(180)	3,087	138,542	(3,846)	332,175
Resurfacing	3,393	256,462	10,570	23,028	368	9	293,830	11,154	116,609	780	7,769	-	706	137,018	(2,191)	428,657
Bridge-New Construction	11,772	64,838	4,284	2,381	451	-	83,726	51,845	108,172	(243)	1,117	(1,436)	-	159,455	(78)	243,103
Bridge Replacement	44,034	63,244	2,444	412	2,134	-	112,268	117,845	118,713	4,606	306	181	3,307	244,758	-	357,026
Bridge Rehabilitation (Added Capacity)	(107,318)	(1,218)	-	285	-	-	(108,251)	108,152	(7,831)	-	-	-	-	100,321	-	(7,930)
Bridge Rehabilitation (No Added Capacity)	12,589	36,965	-	(113)	-	(17)	49,424	35,973	54,177	405	30	-	(26)	90,559	-	139,983
Safety/Traffic/TSM	11,888	75,598	344	3,136	25	(441)	90,550	77,468	65,346	622	4,087	197	3,586	151,306	(5,386)	236,470
Environmentally related	(419)	5,487	-	136	-	1	5,205	15,264	48,969	-	-	-	1,026	65,259	-	70,464
Special Bridge Projects	267	7,573	598	(167)	-	-	8,271	21,917	37,002	-	-	(269)	-	58,650	2,034	68,955
Other 4/	89,751	374,877	13,870	19,252	92	14,783	512,625	478,093	584,502	17,285	55,761	(860)	25,167	1,159,948	74,060	1,746,633
Total NHS Funds	313,493	2,153,375	78,118	91,634	6,467	21,146	2,664,233	1,891,981	2,426,317	73,007	94,445	(9,602)	54,677	4,530,825	43,394	7,238,452
SURFACE TRANSPORTATION PROGRAM FUNDS																
New Route	5,337	81,661	40,465	62,445	1,603	199	191,710	11,497	233,526	43,751	36,960	4,360	13,941	344,035	227	535,972
Relocation	1,168	12,120	5,617	2,276	625	-	21,806	(60)	4,696	1,446	(125)	-	766	6,723	-	28,529
Reconstruction (Added Capacity)	2,543	123,879	119,332	30,647	1,379	1,656	279,436	100,346	205,578	262,457	60,037	17,897	10,216	656,531	1,167	937,134
Reconstruction (No Added Capacity)	4,092	92,211	205,922	181,589	3,054	2,160	489,028	116,667	206,540	178,847	107,745	31,590	5,695	647,104	(3,609)	1,132,523
Reconstruction (Pre-FY 1995 Adjustment) 3/	-	(6)	(5,161)	(3,621)	(171)	-	(8,959)	-	(2,304)	(10,854)	(1,621)	(1,860)	-	(16,639)	-	(25,598)
Restoration & Rehabilitation	18,586	60,584	74,455	89,469	7,041	471	250,606	3,915	94,954	55,618	31,514	(1,788)	23,097	207,310	20,440	478,356
Resurfacing	9,893	74,907	234,710	258,806	2,665	17,022	598,003	2,033	128,569	119,482	81,516	1,843	4,592	338,035	2,343	938,381
Bridge-New Construction	6	12,841	2,377	9,320	1,446	-	25,990	(182)	23,515	8,622	29,746	1,154	1,748	64,603	-	90,593
Bridge Replacement	-	5,974	16,637	13,918	134	2,259	38,922	(1,505)	27,284	10,838	(5,341)	3,137	-	34,213	-	73,135
Bridge Rehabilitation (Added Capacity)	(1,015)	(5,884)	31,385	(1,231)	(17)	-	23,238	(5,508)	(13,446)	(150)	(2,745)	(2,762)	-	(24,611)	-	(1,373)
Bridge Rehabilitation (No Added Capacity)	2,850	7,462	9,337	8,413	699	(3)	28,758	14,720	38,004	14,293	5,178	6,133	-	78,328	(187)	106,899
Safety/Traffic/TSM	10,243	64,647	60,282	56,401	50,245	34,712	276,530	53,531	110,364	78,576	64,045	37,042	31,567	375,127	45,043	696,700
Environmentally related	-	983	667	115	193	548	2,486	4,672	5,298	2,989	(1,797)	125	29	11,316	825	14,627
Special Bridge Projects	720	6,663	4,793	678	(88)	2,500	15,266	3,327	3,889	2,859	(256)	2,445	1,957	14,211	8,344	37,821
Other 4/	13,841	135,480	272,148	153,776	40,885	179,296	795,426	32,991	476,071	313,462	33,092	94,824	375,980	1,326,430	238,126	2,359,982
Total STP Funds	68,264	673,502	1,072,966	863,001	109,693	240,820	3,028,246	336,464	1,542,538	1,082,038	437,938	194,140	469,598	4,062,716	312,719	7,403,681

1/ The data reported in this table are from the Fiscal Management Information System. Due to rounding, the data may not agree with the summary of obligations contained in report M79 prepared by the Office of Fiscal Services. Negative numbers indicate adjustments to projects.

2/ Projects not identified as urban or rural.

3/ Prior to 1995, Reconstruction was not split into separate items for added capacity and no added capacity. When Pre-FY 1995 projects are reopened, the improvement type has been recoded, causing negative adjustments to "Pre-FY 1995 Reconstruction" and positive adjustments to the new Reconstruction items.

4/ Includes projects not otherwise included in the remaining improvements types, such as transit.

Source: U.S. DOT Federal Highway Administration, *Highway Statistics, 2004, Table FA-6*, Washington D.C., 2005.

2.1.2 Surface Transportation Program Investment, 2000 to 2004

1. The proportion of investment in new capacity appears to have decreased, and the proportion obligated to preservation-related activities has increased from 2000 to 2004.
   - The proportion of STP funds going to new capacity declined from one-third to one–quarter from 2000 to 2004, but has remained targeted on urban roads; and
   - The proportion of STP funds going to preservation-related activities increased from 38 percent to 46 percent from 2000 to 2004, with a slight shift to rural roads (just more than one-half in 2004) from urban roads (just more than one-half in 2000).
2. STP investments on urban versus rural roads appears to have held relatively stable from 2000 to 2004 at approximately 60 percent urban and 40 percent rural.
   - Of STP obligations for new capacity, two-thirds were targeted to urban roads in both 2000 and 2004; and
   - Of STP obligations for preservation-related activities, there has been a slight shift to rural roads.
3. The proportion of STP obligations going to "other" projects has risen dramatically from 2000 to 2004, from one percent to 30 percent.
   - At 1 percent on both rural and urban roads in 2000, the proportion is 26 percent and 32 percent, respectively, in 2004.

The aggregate data suggests broadly that: a) the attention being paid to urban system needs from both programs increased over the time period; b) STP funding, in particular, showed a shift toward system preservation; and c) broader use was being made of funds from both programs with the increases in obligations to the "other" category of improvements.

2.2 Issues and Themes in the Literature

Management of NHS and STP funds has been discussed and debated since the enactment of ISTEA. The discussions continue to revolve around questions of balance in how funds from these two core programs are made available and how they are used.

At the core of the continuing discussion about the balance of highway and nonhighway investment and priority are three interwoven perspectives:

1. **A belief that because the two programs historically are authorized within the "highway" title of the Federal legislation, the funds available are "highway" funds for highway purposes.** This view survives despite the clear movement toward broader eligibility, increased flexibility, and the emergence of multimodal policy and planning as a basis for investment decisions.

2. **The widely shared belief that funds for preservation and maintenance of the existing highway system have been and remain inadequate to maintain current conditions on the system, much less improve travel conditions over the long-term.** This belief provides a rationale for many that funding within the Federal highway program must continue to be directed solely to the highway network until reasonable targets for condition can be met and sustained.

3. **A belief that, despite statutory and policy directives to the contrary, NHS and STP programming continues to be driven by a persistent "highway bias" in state and regional planning and programming procedures.** This view is arises from a continuing belief in some quarters that NHS and STP investment remains focused on highways, with disproportionate amounts directed to rural portions of the network while congestion and related problems are increasingly concentrated in urbanized areas where much of the system is owned and maintained by county and municipal jurisdictions.[2]

Although the research team has not found any specific analyses in the literature addressing the programming or allocation of NHS or STP funds, the literature going back to enactment of ISTEA as well as current literature, contains repeated references to these still competing sentiments.[3]

Actual highway spending data since the enactment of ISTEA provide another perspective. The biennial report to Congress by the U.S. DOT, on the condition and performance of our highway and transit systems, provides documentation that despite a persistent funding gap, the physical conditions on the nation's highway network have improved.[4] This is in large part attributed to the shift toward greater investment in system preservation, as documented in the FHWA data as noted above and in Appendix C.

The findings of U.S. DOT's the 2004 Condition and Performance Report to Congress, however, support aspects of each of the perspectives noted above. Data from 2004 obligations indicates:

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[2] Campf, Donald H., "*The ISTEA and the NHS: One Step Forward, Two Steps Back?*" STPP Monograph Number 1, Surface Transportation Policy Project, Washington, D.C., April 1994, and Canby, Anne et al., "*From the Margins to the Mainstream: A Guide to Transportation Opportunities in your Community,*" Surface Transportation Policy Project, Washington, D.C., January 2006.

[3] Ibid.

[4] Federal Highway Administration, "*Status of the Nation's Highways, Bridges and Transit: 2004 Conditions and Performance,*" U.D. Department of Transportation, Washington, D.C., 2004.

> "The percentage of highway mileage with 'acceptable' ride quality rose from 86.6 percent in 1997 to 87.4 percent in 2002, while the percentage of highway mileage with 'good' ride quality improved from 42.8 percent to 46.6 percent over the same period. The improvement has been concentrated on rural roads and higher-order roads in urban areas…"[5]
>
> "…the percentage of Interstate bridges classified as structurally deficient or functionally obsolete is lower than the comparable percentage for bridges on collectors or local roads."[6]

These observations are included less for the quantitative, factual detail than for the fact that they imply that differences remain, whether intentional or unintentional, in the extent to which broad-based needs are being addressed across the full highway network. A somewhat longer historical view (1995 to 2002) supports the notion that conditions on higher functional class facilities on the urban portion of the overall highway network, in fact, have been declining steadily.[7] The data suggests that, at the very least, better care is being given to many major rural roads than to major urban roads. It is unclear what role overt state-by-state programming and allocation policies and procedures play in this, if any.

The U.S. DOT Condition and Performance Reports also point to consistent declines in the operating performance of the highway network as congestion continues to spread more widely in both time and geography across urban areas. The reports, not surprisingly, point to the growing gaps in available funding as perhaps the major factor in the struggle to meet the nation's highway, bridge, and transit needs. As a result, tradeoffs are necessary; assuring that all needs cannot be met on all portions of the network to the same degree or standard. Since it is unlikely that funding will be available in the foreseeable future to achieve even somewhat conservative condition or performance targets across the board, tradeoffs at this higher level will continue to be required. ***Hidden in the programming and allocation of NHS, STP and other Federal funds at the state and regional levels are the bases, official and unofficial, for making these tradeoffs, current and past.***

While allocation of Federal highway funds across the network raises issues that have persisted, the funding flexibility provided by ISTEA, TEA-21 and SAFETEA-LU has fulfilled to some degree the policy thrust toward greater multimodalism in planning and programming as well as greater authority over allocation at the regional level.

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[5] Federal Highway Administration, "*Status of the Nation's Highways, Bridges and Transit: 2004 Conditions and Performance,*" U.D. Department of Transportation, Washington, D.C., 2004.

[6] www.fhwa.dot.gov/policy/2004cpr/hilights.htm.

[7] Conditions on Urban Interstates, Other Freeways and Expressways reportedly declined, 1999 to 2002, and condition on Urbanized Other Principal Arterials and Urban Minor Arterials have steadily declined from 1995 according to the 2004 Condition and Performance Report, Tables 3-14 and 3-15 (www.fhwa.dot.gov/policy/2004cpr/chap3b.htm).

- In 1993, the GAO reported that in Fiscal Year 1992, 97 percent of flexible highway funds were invested in traditional highway projects and that less than 3 percent ($319 million) was invested in transit or other eligible, nontraditional projects.[8]

- By 2003, the Federal Transit Administration (FTA) reported that nearly $8.5 billion was transferred between 1992 and 2002, and that after only three years of TEA-21, the amounts transferred exceeded amounts transferred under all of ISTEA by 56 percent.[9]

- However, fully 55 percent of the funds transferred or used for other than highway projects during the 10-year period (1992 to 2002) were from one program, CMAQ, with 35 percent from STP, and minimal amounts from the NHS.

- In 1992, only five states accounted for over 80 percent of the funds flexed. Over the 10-year period up 2002 fives states transferring the largest amounts accounted for an average of 60 percent of all funds flexed.

It might be concluded that there remains a persistent reluctance to make full use of the flexibility allowed since ISTEA was enacted.

Geographic Balance/Imbalance in Investment. The urban and rural geography of programming and funding allocation also has become a repeating theme. The Brookings Institution's Center on Urban and Metropolitan Policy in a recent series of papers noted that, "…metropolitan areas make decisions affecting only about 10 cents of every transportation dollar they generate, even though local governments within metropolitan areas own and maintain the vast majority of the transportation infrastructure."[10] One of the recommendations by the Brookings analysts was to give metropolitan areas more decision-making power, and to, "…require that state decisions be tied more closely to the demographic and market realities of metropolitan areas and the vision and priorities of metropolitan leaders."[11] The observations from Brookings in 2003 assert that, "many states continue to penalize metropolitan areas in the distribution of transportation funds" through four biases:

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[8] U.S. General Accounting Office, "*Transportation Infrastructure: Better Tools Needed for making Decisions on Using ISTEA Flexible Funds,*" GAO/RCED-94-25, Washington, D.C., October 1993.

[9] Federal Transit Administration, "*Trends in the Flexible Fund Program, Annual Status Report: Fiscal Year 2002,*" Washington, D.C.

[10] Katz, Bruce and Puentes, Robert, "*Transportation Reform for he Twenty-First Century: An Overview,*" in Taking the High Road: A Metropolitan Agenda for Transportation Reform. Ed. By Edward G. Rendell, The Brookings Institution, Washington, D.C., p.6.

[11] Ibid.

- Federal law suballocates less than seven percent of highway funds directly to MPOs and even then, only to MPOs serving populations over 200,000;

- Some states allocate funds evenly across counties rather than in proportion to condition or performance-based measures of need;

- States own large amounts of the road system in rural areas with an attendant desire to assure that roads under their ownership receive adequate funding through processes they control; and

- The Brookings Institution's conclusion? "…implementation of the new Federal statutes has been seriously flawed – and in basic ways unresponsive to metropolitan needs."[12]

Modal Balance/Imbalance in Investments. Concerns about modal imbalance in the investment and allocation of Federal funds also has survived to the present from the enactment of ISTEA in 1991, despite the billions in "highway" funds that have been flexed to support transit projects. The Surface Transportation Policy Project (STPP) estimates that, "…at least 60 percent of each highway dollar can be used for any project eligible under the law. In some cases, more than three of four highway dollars could be shifted to public transit investment."[13]

Again, current literature does not treat the specific allocation features of NHS and STP programs in any detail. These observations above are not intended to stir debate over the merits of evolving Federal programs, policies or their execution. ***What the perspectives noted above do suggest, however, is that larger "allocation" issues and policy questions are still swirling about and deserve continued examination at the same time project-oriented programming and allocation techniques continue to evolve within individual state and MPOs.***

2.3 Stakeholder Perspectives

The issues summarized above also are echoed in current the sentiments of various stakeholder organizations. As an additional check on issues surrounding programming and allocation of NHS and STP funds, the research team held conversations with representatives of a sampling of key stakeholder groups and organizations. The objective was to test the current strength of these and other sentiments about the management and delivery of

[12]Bailey, Linda and Puentes, Robert, *"Improving Metropolitan Decision-Making in Transportation: Greater Funding and Devolution for Accountability,"* Transportation Reform Series, Center on Urban and Metropolitan Policy, The Brookings Institution, Washington, D.C., October 2003, p. 10-11.

[13]Surface Transportation Policy Project, *"From the Margins to the mainstream: A Guide to Transportation Opportunities in Your Community,"* Washington, D.C., January 2006, p. 32.

Federal funds through the NHS and STP programs. Conversations about the use of NHS and STP funds at the state and local level were held with representatives of the following groups:

- American Association of State Highway and Transportation Officials (AASHTO);
- American Public Transportation Association (APTA); and
- Association of Metropolitan planning Organizations (AMPO);
- Federal Highway Administration (FHWA);
- Federal Transit Association (FTA);
- National Association of Counties (NACo); and
- The Surface Transportation Policy Project (STPP) as a surrogate for environmental and civic interests and other stakeholders in transportation investment decision-making.[14]

Among the issues and concerns expressed were the following:

- All acknowledge to some degree that there is a persistent, shared sense that NHS funds are considered "highway" dollars, with investment decisions directed by the states; and STP funds are considered a regional resource with most major investments directed by MPOs and local project sponsors;
- There is a lingering sense that NHS programming and funding decisions are being made somewhat "outside" the planning and programming process, a claim that can only be examined on an individual state-, local-, and project-level;
- All acknowledged a common sense that too few dollars appear to be flowing to address mounting congestion, the most intractable common problem focused in urbanized and urbanizing areas;
- Some concern was expressed that not enough is known by the FHWA, and therefore, stakeholders, about where the considerable amounts of public funds in these two programs are being spent and on what types of activities;
- Local city/county concerns lie less with the balance of funding relative to system ownership and more with assuring that funds go to wherever problems are most severe or to whatever roads are considered "most important" locally, regardless of functional class or ownership, i.e., that allocations actually address the most significant congestion and safety problems;

[14] Attempts were made to contact both the National League of Cities (NLC) and the U.S. Conference of Mayors as well but were unsuccessful.

- A sense exists that when NHS funds are programmed, the travel impacts on non-NHS segments are neither considered fully nor addressed effectively;

- There appears to be a continuing mismatch between funding flows to urban versus rural areas, in view of the fact that the majority of the network and the population reside in urban areas, while funding flows do not reflect fully this distinction;

- There is some fear that broadened highway project eligibility may reduce the likelihood of NHS or STP funds being flexed for nonhighway purposes, further disadvantaging urban areas where congestion problems continue to spread; and

- Too few funds, overall, are being suballocated to the regional and/or local level.

These aggregate national observations indicate that the issues surrounding programming and allocation of NHS and STP funds exist on two levels. In addition to understanding how state DOTs and MPOs select individual projects for funding, there are additional "allocation" issues at the national level that directly and indirectly influence local and regional prioritization, programming, and allocation philosophies, strategies, and mechanics:

- Do amounts being made available to individual states directly reflect needs?

- What influence do answers to this question have on the use of "flexibility" provisions in the NHS and STP programs?

- How do project selection and amounts obligated on the Federal-aid system align with ownership (and stewardship responsibility) across the overall network?

- How do we reconcile a national allocation system devoid of performance measures and criteria with an insistence and growing commitment locally and regionally to allocate funds based on system performance measures and targets?

In summary, it is clear that debate and discussion will and should continue on a national policy and program level among stakeholders into and through subsequent Federal reauthorization-cycles in an attempt to better target future programs, policies, and resources.

3.0 Overview – Programming and Allocation of NHS and STP Funds

The assessment of current and evolving NHS and STP programming and fund allocation procedures have been based on information assembled from three main sources:

- Interviews with senior-agency and program managers at selected state DOTs and MPOs, as noted in Table 1.1;
- Review of literature, particularly the growing amount of web-based information on the approaches being taken generally by states and MPOs to programming, prioritization, and allocation of available funds; and
- Closely related prior assignments carried out by the Research Team for the Transportation Research Board, the U.S. DOT, and various state DOTs.

The observations below present major themes emerging from NHS and STP programming as well as unique procedural aspects and related issues raised by state and local practitioners. It is important to note at the outset, however, that the approaches to NHS and STP programming and allocation throughout the country are evolving within a broader frame of reference characterized by the rise of performance-based, data-driven planning and programming techniques, and the increasing use of quantitative asset management tools in making investment tradeoffs across major categories and types of improvements. As a result, decision-making on programming and allocation of resources, generally, is moving toward more objective processes for programming the combined stream of available Federal and state of revenues, including NHS and STP funds.

3.1 Major Themes in NHS and STP Programming

In discussions with both state DOT and MPO representatives a number of common themes emerged from current practice in programming NHS and STP funds. Each is presented briefly below. Common to emerging practice are strategies and procedures designed to maximize the use of and leverage from all available funding, Federal, state, and local, while minimizing constraints that may associated with individual programs.

- ***There is a general comfort level with the requirements and administration of the current NHS and STP programs.*** The programs have been in force long enough and programming procedures have evolved to suit varying agency styles and traditions, allowing planning and implementing agencies to reach accommodations in how the respective resources are being used. There does not appear to be a great hue and cry to force wholesale statutory or policy change in processes and procedures that have evolved at the individual state and local level over three authorization cycles, although some irritations stemming from current and proposed Federal procedures are a continuing topic of discussion. There is, however, likely to be renewed debate on the use, allocation and overall levels of NHS and STP funds going into and through subsequent reauthorization cycles.

- ***Acceptance of NHS programming as the domain of state DOTs and STP programming as the domain of MPOs has solidified to one degree or another in most areas.*** There are varying degrees of collaboration between states and MPOs on the use of both funding sources, but most approaches seem rooted in this basic proposition. There is greater variation in how STP-Enhancement funds are programmed, ranging from processes managed centrally by state DOTs to processes managed entirely at the local and regional-level by MPOs and/or state DOT district offices.

- ***Few aspects of programming are unique only to the NHS or STP programs.*** What is unique and variable across the states and MPOs are larger aspects of their respective programming process within which these two sources of funds are committed, e.g., the role performance-based planning and management in prioritization, programming and resource allocation; the role of DOT regional and district offices in prioritization and programming generally; and, the formality with which local government and citizen representatives are organized to engage in local and regional project prioritization and programming decisions.

- ***The "color" of money matters less and less.*** The overwhelming tendency among both state DOTs and MPOs is to look at the combination of Federal and state funds as a single resource to be applied as artfully as possible to meet each state and region's particular needs and problems. The two programs are rarely, if ever, viewed at the outset of the programming process as separate, discrete pots of money to be separately and discretely programmed or allocated.

- ***Many projects use a mix of funding sources.*** Many states and MPOs regularly use a mix of program funds on projects as one strategy for: a) maximizing the use of all available funds; b) maximizing the leverage that can be achieved across sources and projects; and c) maximizing the volume of activity that can supported. This is particularly common on larger projects. On the other hand, there are examples at the state, regional, and local levels of careful targeting of Federal funds to reduce the burden associated with Federal grant processes within the overall investment program.

- ***NHS and STP funds typically are not programmed independently with project prioritization and selection.*** Far more often, particularly at the state DOT level, projects are evaluated, prioritized, and programmed without formal commitment of a specific program source. Increasingly, the assignment of a program funding source(s) to a project or activity is done at the end of the programming process (and in some instances finalized at the time of project lettings) and becomes more of an accounting-oriented "reconciliation" activity designed to maximize the use and leverage of all available state and Federal funds. Exceptions tend to be in program areas like safety and enhancements where eligibility requirements are most narrowly defined. These funds are often programmed and tracked separately from an early point in the programming process.

- ***Principles in programming available funds, regardless of program, increasingly reflect attention to highest priority needs and sound resource management strategies.*** Programming decisions attempt, first and foremost, to meet the most urgent needs, to assure continued support for projects in progress, to avoid fund lapses, and to fully use the most restricted sources earlier. Sources with greatest flexibility are often committed last to maximize flexibility, leverage, and level of activity.

- ***States frequently trade less restrictive state funds for Federal funds, often on a discounted basis.*** The effect is to lessen administrative and regulatory burdens on themselves and other project sponsors and implementing agencies to achieve faster implementation and lowed costs.

- ***Use of NHS funds for other than highway improvements appears rare***. This likely reflects two factors noted earlier: a) available funds already are inadequate to meet preservation needs on the highway networks; and b) a political and/or administrative accommodation that has emerged broadly allowing substantial nonhighway use of other flexible Federal "highway" funds, including CMAQ funds and STP funds where MPOs have more discretion, while NHS funding funds are focused on the highway network.

- ***States where Federal funds represent a relatively small proportion of the overall budget believe they have greater flexibility, more options in programming and greater leverage on other sources.*** For states where Federal funds are the dominant source, the reverse appears true. In a few states, requirements enacted through voter initiatives sometimes act to restrict the flexibility of Federal funds.

- ***Administration of STP Enhancement funding follows many models***. Some states retain full responsibility for centralized project evaluation; others allocate funding to regions or districts along with authority to prioritize and program projects. Still, others split the responsibility with some funding and authority delegated and some retained at the state level for centralized programming.

- ***MPO Long Range Transportation Plans (LRTP) typically contain a mix of policies and projects.*** The effect is that funding sources and commitments at the regional level often are a subject for consideration, at least preliminarily, at the plan stage, well before formal programming takes place, limiting flexibility to some degree. State LRTPs are more often policy documents not requiring or necessitating funding commitments until programming has to occur.

3.2 General Features of Selected State and Regional NHS and STP Programming

Programming and allocation of NHS and STP funds by states and MPOs can be described in two ways:

1. Through separate examination of the overall processes in place at each agency; or

2. Through comparison across agencies on common aspects, features, and activities in the programming process.

The Research Team believes that both approaches have merit and help to serve the objectives of the project. The material presented below provides a summary of the programming process for each state and regional agency that was interviewed, including their approaches to programming NHS and STP funds.

In Section 4.0 that follows, key aspects of NHS and STP programming procedures are presented in a comparative tabular format to facilitate comparisons across agencies.

3.2.1 Arizona DOT – ADOT

- ADOT splits its combined state and Federal resources generally by region first: 37 percent to Maricopa County (Phoenix); 13 percent to Pima County (Tucson) and 50 percent to the remaining 13 counties.

- Allocations to subprograms within each geographic region are done based largely on management systems and performance measures, e.g., pavement, bridge, safety, rockfall, etc.

- ADOT does not have explicit processes for independently programming either NHS or STP funds for capital projects. All state and Federal funds are grouped and appropriate assignment of sources to projects is done during preparation of draft construction reports. Adjustments in project sources may be made even through the first year of programming to maximize flexibility.

- Programming decisions are made in headquarters, first addressing funds ready to expire or funds with the greatest restrictions so that none are lost.

- No NHS or state flexible STP funds are programmed for nonhighway purposes and MPOs have little involvement in their programming. The exception is a small amount of STP funding provided to FTA Section 5311, small urban and rural transit recipients.

- ***For STP Metro/TMA suballocations,*** ADOT plays a passive role. Most of the funds continue to be used on the regional freeway system.

- ADOT does swap state funds for Federal STP Metro allocations with a 10 percent discount to lessen the Federal regulatory burden on MPOs.

- ***For STP allocation to areas of population under 5,000***, there is no specific DOT policy.

- ***For STP Enhancement funds,*** ADOT manages a statewide reimbursable program guided by joint project agreements with project sponsors. Project selection is done through MTOs, COGs, and a state Transportation Enhancements Review Committee.

3.2.2 California Department of Transportation – Caltrans

- An overall fund estimate is developed in the summer of odd years to determine how much total funding is available to Caltrans from all sources.

- The estimate is split into two major programs: the *State Transportation Improvement Program* (STIP) for major capital improvements and expansion; and the *State Highway and Operations Protection Program* (SHOPP) for maintenance and preservation.

- SHOPP is first priority for funds. State statute requires a preservation-first strategy. Many state funds cannot be used for SHOPP so most Federal funds are used for SHOPP. Over the last couple programming-cycles, maintenance and preservation needs have absorbed essentially all Federal funds. The SHOPP includes:

  – Thirty-six categories of projects, each with its own guidelines; and

  – SHOPP program managers work with the districts to determine which projects to fund.

- Remaining funds go to STIP projects:

  – Seventy-five percent goes to Regional Transportation Improvement Programs (RTIP), programmed at the regional level by MPOs;

  – Twenty-five percent goes to the State's Interregional Transportation Improvement Program (ITIP), programmed by Caltrans in accordance with the Interregional Transportation Plan (IRTP); and

  – When overlaps arise between ITIP and RTIP projects, Caltrans negotiates with the regions for use of some RTIP funds.

- Allocation of project budgets and costs to specific funding sources begins with estimates of total obligation authority and fund balances. Funds are applied to projects based on the status of the fund balance, using the most restrictive funds first. Attempts are made to balance Federal funds towards the end of the year so that Caltrans is not running a large balance in any one account.

- Caltrans typically transfers close to 50 percent of funds from NHS (and Interstate Maintenance) to STP. Typically these funds are used on the NHS, but STP funds are more flexible and can be applied to all types of projects.
- Funds are frequently used for nonhighway projects. The 50 percent that is transferred may go to nonhighway projects, but not necessarily.
- Districts submit fund requests for projects. Headquarters reviews the project and depending on the need and fund balances, identifies the specific program source to be used.
- Caltrans primarily is responsible for selecting the projects. Each project has to be part of a regional transportation plan (RTP), however, so there is a negotiation process with the regional agencies.
- Caltrans also has a general funding exchange program. Most areas of the State exchange Federal funds for state funds.
  - Not all areas are eligible to do so but those that are tend to make the exchanges. These agencies give up flexible STP funds for state funds.
- ***For STP Metro/TMA suballocations,*** the State plays no significant role in programming. Caltrans districts attempt to get regions to leverage funds, but the decisions ultimately lie with the regional planning agencies.
- ***For STP allocation to areas of population under 5,000,*** funds are used on state highway projects.
- ***For STP Enhancement funds,*** 25 percent is reserved for state as part of SHOPP through district project identification. Seventy-five percent is programmed through RTIP fund allocation in the regional programming process.

3.2.3 Colorado DOT – CDOT

- CDOT attempts to create an optimum balance of state and Federal funding sources across major categories of investment, then at the project level, to use the "highest" Federal source available.
- NHS and STP funds are not independently or separately allocated to project categories, geographic regions, or projects at the outset of the programming process. STIP entries only identify sources as Federal, state, or local. Enhancement and safety projects are tracked and programmed separately from the outset, however.
- Federal funds, including NHS and STP funds, are combined with state funds and allocated to CDOT regions through three steps:

  - The Colorado Transportation Commission sets funding levels for "Investment Categories" and "Program Areas";
  - Investment Category totals are allocated to CDOT regions to Statewide Programs (largely preservation), Strategic Projects (authorized by the State legislature) and a Regional Priorities Program (by formula); and
  - Project priorities are set in the regions through using management systems, local plans, and legislative allocations to Strategic Projects as authorized by the legislature.

- NHS funds are used almost exclusively for highways and ancillary improvements such as bus stops, park-and-ride facilities, etc.

- The CDOT focus/emphasis is on systems preservation, systemwide.

- ***For STP Metro/TMA suballocations,*** project priorities are set and programming done through regional evaluation processes, with a focus on addressing local and regional congestion problems.

- ***For STP Enhancement funds,*** allocations of the full 10 percent Enhancement amount are made to the CDOT regions by formula arrived at collaboratively (45 percent VMT, 40 percent lane-miles, 15 percent truck VMT). Project evaluation and selection is done in the regions.

3.2.4 Florida DOT – FDOT

- FDOT has a strong, long-standing strategic planning and programming framework established in statute as well as administrative guidance.

- FDOT planning and programming is highly decentralized within seven FDOT Districts that collaborate with local partners but exercise significant authority in planning, priority-setting, and programming.

- Federal funds make up approximately one-quarter of Florida DOT's capital program, allowing substantial flexibility in how Federal funds are used.

- NHS funds are used exclusively for capacity expansion on the State's "Strategic Intermodal System" (SIS) and non-SIS facilities on the Florida *Intra*state Highway System. Project selection is done on a statewide basis.

- The majority of funds available (Federal and state) are allocated to FDOT districts by statutory formula based 50 percent on population and 50 percent on county level gas tax receipts.

- Projects typically are funded using multiple sources and rarely from a single programmatic source. This promotes flexibility in development of FDOT's annual "*Program and Resource Plan.*"

- Preservation needs are derived from management systems. Preservation versus new capacity tradeoffs are set at the policy level with preservation funded to fully meet statutory performance objectives, including:

  - Eighty percent of pavement to "acceptable levels";
  - Ninety percent of bridges to "acceptable levels"; and
  - One-hundred percent of maintenance needs met.

- Remaining balance of funding is for "mobility improvements," i.e., capacity expansion. These funds flow for needs and priorities established at the statewide level, predominately on the State's Strategic Intermodal System (SIS).

- FDOT policy is to provide 75 percent of discretionary capacity funds to the SIS by 2015 from a previous level of 62 percent.

- Of the capacity expansion funding available, 50 percent must go to the SIS and Intrastate System by statute and 15 percent to transit by statute.

- An extensive set of plan, program, policy, budget, and guidance documents guide the FDOT process within a system that is highly decentralized. These include: the *20-Year Florida Long Range Transportation Plan*; the *10-year* Short Range Component; a 10-year Program and Resource Plan; a 10-year Finance Plan; and a Five Year Work Program (and Work Program Instructions) listing individual projects.

- ***For STP Metro/TMA suballocations,*** amounts to individual MPOs within one TMA are determined by FDOT Districts in collaboration with MPOs. MPOs establish their own prioritization processes and criteria for programming projects.

- ***For STP allocation to areas of population under 5,000,*** fund allocation to the Districts is determined by Rural State System Centerline Miles. Project are solicited, selected, and implemented by the FDOT Districts, in coordination with local government partners.

- ***For STP Enhancement funds,*** guidance on their use is provided by the FDOT Environmental Management Office. Approximately 10 percent of the Enhancement funding is retained for projects of statewide significance.

Project solicitation, selection, and implementation are the responsibility local partners overseen by the FDOT District offices. DOT guidance contains both suggested "eligibility" and "selection" criteria.

3.2.5 Minnesota DOT – Mn/DOT

- Federal funds make up approximately 30 percent of the Mn/DOT state trunk highway fund.

- Mn/DOT planning and programming is highly decentralized. Project prioritization and programming are done in the Mn/DOT Districts with the formal guidance of "Area Transportation Partnerships" (broadly representative groups of stakeholders) that prioritize projects and approve District programs.

- The underlying philosophy in the programming and funding allocation process is to use all available sources and flexibility provisions to support regional priorities rather than to program independently from each Federal program.

- Planning and programming is focused to a large degree on a statewide subsystem called the Interregional Corridor System (IRC). Performance targets vary by system/ portions of network.

- Estimated funding (Federal and state authorizations and estimated obligation authority) available in Minnesota is allocated to the Districts using "Target Formulas" that reflect needs and established performance targets that vary over different portions of the network. The currently adopted "Target Formulas" give slightly different weights to formula criteria for Federal and for state fund allocations as shown in the Table 3.1, below.

- The Mn/DOT STIP historically was a three-year program but will become a four-year program beginning in state fiscal year 2007 (July 1, 2007). Any updates to the District allocation formula apply beginning in the third year after adoption to minimize short-term variability in funding flows.

- In developing their programs for inclusion in the STIP, Districts indicate "possible funding sources" but otherwise are not involved in determining which program's funds are to be used for which projects. The Mn/DOT "project authorization" staff in the headquarters Office of Investment Management makes these determinations as individual projects are authorized based on a real-time, in-depth understanding of project eligibility requirements, available obligation authority, potential for fund lapses, the "best" source for a particular improvement and the variable nature of needs from one District to another.

- NHS funds are exclusively used for highway improvements but are inadequate for the purpose. Funds from other core Federal programs (e.g., bridge rehabilitation) have been transferred to meet NHS needs when they are not needed in the Districts.

Table 3.1 Mn/DOT Allocation Formula Factors and Weights
December 2006

Goal Area	Allocation Factor	Weight	
		Federal Funds	State Funds
Preservation (60 percent)			
	Average bridge needs (from management systems)	20%	20%
	Heavy commercial VMT	5%	5%
	Average pavement needs (from management systems)	35%	35%
Safety (10 percent)			
	Three year average of fatal/A Injury crashes	10%	10%
Mobility (30 percent)			
	Congested VMT	15%	20%
	Transit (from current plan)	5%	[a]
	Future VMT projections	10%	10%

Source: www.dot/state/mn (target formula).

[a] Transit eliminated because it is not an eligible use for state trunk highway funding.

- ***For STP Metro/TMA suballocations,*** TMAs receive estimates of two-year funding levels and conduct two-year cycles of solicitations for projects that are then evaluated rigorously to establish regional priorities (see Metropolitan Council description).

- ***For STP allocation to areas of population under 5,000***, project priorities that arise in the District/ATP process are identified by size of place/community to determine eligibility and absorb these STP funds.

- ***For STP Enhancement funds,*** regional targets for investment are established for the Mn/DOT Districts and the 10 percent Enhancement set-aside is included in the overall budget allocation to the Districts. Districts, through the ATP process, establish project priorities for Enhancement funding.

3.2.6 Missouri – MODOT

- MODOT operates under explicit legislatively enacted policy for programming the combination of state and Federal funds.

- From the total available, certain deductions are made (suballocated STP-Metro, legislative apportionments for other modes, economic and cost sharing initiatives, and debt service).

- Roughly half of the remaining funds ($430 million in 2004) go to "take care of the system" (TCOS), including pavement and bridge preservation, safety, and other programs, apportioned across the State based on "needs" from management systems.

- The remaining half ($435 million in 2004) are split across the State based on population, employment and VMT, with a portion ($100 million in 2004) for either TCOS or major projects and a portion ($335 million in 2004) for major projects.

- MODOT headquarters resource management staff reconciles funding sources, amounts, and projects after programming priorities are established to assure the best projects are selected.

- All NHS funds are used for highways.

- ***For STP Metro/TMA suballocations,*** MODOT plays no role in TMA programming but helps coordinate projects that connect to the State system.

- For cities the 40 to 50 cities 5,000 to 200,000, funds are made available on a population basis ($3.5 million in 2004). City officials select projects with MODOT District staff support.

- ***For STP allocation to areas of population under 5,000***, there is no specific policy or allocation. Funding commitments for projects passing through those areas are tracked so levels of investment on rural areas can be monitored and evaluated.

- ***For STP Enhancement funds,*** 25 percent is retained by MODOT for use on state routes for beautification, welcome centers, etc; 75 percent is allocated to Districts by population and project selection made from locally sponsored projects.

3.2.7 Montana DOT – MDT

- Federal funds make up the majority of Montana's capital program.

- NHS and STP funds are used exclusively for highways.

- Montana's Performance Programming Process (P3) uses performance targets that vary by system (Interstate, Non-Interstate, and State Primary). These systems are the focus of fund allocations rather then political jurisdictions or program source.

- Programming is based on "Funding Plans" approved by the Montana Transportation Commission following Federal reauthorizations. The Plans are developed from existing funding levels for two five-year increments using projected future funding levels and current and projected conditions and performance goals.

- Approximately 70 percent of available funds flow to the State's three "core" programs: Interstate, Non-Interstate NHS (arterials), and State Primary System.

- The State allocates funds based on current and projected performance and related targets.
  - Performance goals/targets vary by system, with higher goals for higher system elements; and
  - Performance goals/targets are set to assure consistent progress across DOT Districts.
- Funds are allocated to systems, districts, and types of improvements based on measured performance and projections of performance with adjustments made yearly through iterative analyses.
- Districts submit prioritized project nominations that must be consistent with the performance-based allocation.
- Emphasis in allocation is shifting toward rehabilitation and away from reconstruction activities as more funding has been needed to pursue condition-related performance goals/targets.
- Montana has no TMAs. As a result, all STP funds are flexible after Enhancements are funded. STP funds support two "state statutory" programs: one for Urban and one for secondary roads with several smaller programs supported within these two, e.g., Urban Preservation funding allocated to areas over 5,000 based on population; upward adjustments made for "High Growth Areas" and an "equity bonus."
- ***For STP Enhancement funds*** allocations are made to 112 local agencies and organizations based on population. Local officials and stakeholders establish priorities, match Federal funds, and implement projects with state oversight.

3.2.8 Oregon – ODOT

- The Oregon STIP is organized around 16 major program categories that are a mix of traditional DOT activities and current programmatic funding sources.
- Ninety percent of the State's investment goes to pavement preservation, bridge replacement and rehabilitation, modernization, safety, and operations improvements.
- By Oregon Transportation Commission policy, Modernization funding (aside from significant statutorily dedicated funds for Modernization) are limited to the "minimum required."
- Prioritization, programming, and allocation of NHS and STP funds are done largely without independent, parallel procedures for each specific Federal program, i.e., emphasis is placed on assigning resources to the highest priority projects.
- The overall programming process operates through these steps:

- The Highway Finance Section prepares revenue forecasts of all available funds (state and Federal without regard to program) for each year in the four-year STIP period;
- Forecast amounts are applied to Oregon Highway Plan (OHP) investment scenarios to arrive at resource-based performance goals for Preservation, Bridge, Operations, Safety, Modernization, and Special Projects;
- Funding levels are allocated to regions for Preservation, Bridge, and Safety based on management system analysis;
- Modernization funds are allocated to regions by formula based on county-level data on: vehicle registrations, truck ton-miles, VMT, population, gas sales tax revenues, and infrastructure needs from the OHP;
- Preliminary target allocations of funds from this control total are made to ODOT regions using a variety of factors based largely on ODOT management systems, system extent, and systems use;
- ODOT uses management systems to prioritize many types of projects;
- "Modernization" (capacity expansion) project priorities are established in the regions by MPOs and Area Commissions on Transportation (ACT) using similar but independent processes and criteria, including ODOT's *Project Eligibility Criteria and Prioritization Factors* approved by the Oregon Transportation Commission (OTC) for the STIP cycle:
  - Demonstration of consistency with regional comprehensive plans and Transportation Systems plans;
  - Demonstration of consistency with the Oregon Highway Plan policy on major Improvements that gives priority to preservation and operational improvements over capacity expansion;
  - Documentation of project readiness; and
  - Demonstrations of support for other policies in the OHP.
- The characteristics of and justifications for proposed projects are described, e.g., whether they are on the NHS;
- Funding requirements from proposed priority projects are matched against estimated funding availability year-by-year for the region and adjustments are made to reconcile priorities and required funding with projected funding levels; and
- Headquarters assesses how funding for projects will be "charged against" respective sources in finalizing the STIP for OTC approval.

- NHS funding is generally used only for highway projects with little or no funding of transit or transfers to other programs. NHS projects are selected by the State.
- Programming of STP-funded projects, including STP funds for small urban and rural places, follows the same general process, i.e., no independent process is employed.

STP funds are combined with other state and Federal funds to establish regional targets with local priorities established and reconciled with available funding levels.

- ***For STP Enhancement funds,*** ODOT competes with all other eligible recipients for funds. Projects must be of a minimum size ($200,000) and compete statewide for selection by a committee based on criteria:
  - Improvement to the quality of the travel experience (25 points);
  - Technical merit (20 points);
  - Support (financial, community) (20 points);
  - Importance (urgency, uniqueness, benefit) (20 points); and
  - Special emphasis criteria (15 points).

3.2.9 Pennsylvania Department of Transportation – PennDOT

- State highway and Federal highway funds are combined in the PennDOT Budget for highways and bridges.
- A statutory formula allocates a portion of state funds to counties for maintenance and operations.
- From combined state and Federal funds PennDOT annually takes funding "off the top" for a "Spike" contingency Program (20 percent); transit ($25 million); and statewide line items ($25 million) before allocation to regions.
- The balance of projected state and Federal funding budget is for capital projects and is allocated to program areas and geographic subareas (urban and rural) through a series of policies and formulas known as "Financial Guidance" based on population (30 percent), lane-miles (30 percent), VMT (30 percent), and a maintenance/condition factor from management systems (10 percent).
  - Within urban regions, funds are further suballocated by lane-miles and VMT; and
  - Within rural regions, funds are suballocated by lane-miles.
- There is no overt separation or allocation of NHS or STP funding as part of this process.
- The product of the allocation process and regional project prioritization is the PennDOT "12-Year Transportation Program," of which the first four years constitute the STIP.
- The processes and factors in the Financial Guidance allocation process are reviewed annually by a permanent Financial Guidance Working Group made up of PennDOT and "partners," including MPOs, regional planning agencies and other stakeholder organizations.

- As project commitments are proposed, decisions are made about the specific source of funds to be used so as to maximize the benefit from approved projects and investments.

- As a matter of policy, PennDOT attempts to assure that 75 to 80 percent of the available capital funds are supporting maintenance, operations, and preservation of the existing system with the remainder for capacity expansion and related improvements.

- Major program categories funded by the Financial Guidance process include:

  – Highways;

  – Bridges;

  – CMAQ Improvements;

  – Rail/Highway grade crossings;

  – Enhancements;

  – STP Urban programs; and

  – Other.

- Each MPO has its own program structure, categories, and prioritization procedures.

- In the most recent revision to PennDOT's Financial Guidance, a new separate program area – Interstate Fund – was set up for interstate maintenance supported with all Federal IM funding plus some NHS and Federal Bridge funds. The programming and allocation of the Interstate Fund is centrally controlled with priorities established through PennDOT's management systems.

- ***For STP Enhancement funds,*** 20 percent is retained by PennDOT for Secretary's discretion. The reminder is allocated to PennDOT regions based 80 percent on population 20 percent on area.

3.2.10 Vermont Agency of Transportation – VTrans

- All programming decisions are made in headquarters with funding assignment done separately from project selection.

- With no TMAs, most investment is in system preservation in rural portions of the State.

- There are no explicit, separate policies or procedures for programming NHS funds. No NHS funds currently are being spent on nonhighway modes.

- Projects in most funding/asset categories are ranked within the category, e.g., paving, structures, park-and-ride, aviation, etc. Regional planning organizations account for roughly 20 percent of the ranking points based on local goals. Vtrans uses management systems to complete the rankings.

- ***For STP Metro/TMA suballocations,*** only Burlington has an MPO (under 200,000) so there are no TMA suballocations although they receive some pass-through funds.

- ***For STP allocation to areas of population under 5,000***, there is no explicit allocation approach because of the large number of areas under 5,000 and no TMAs. STP funds are used on the paving program, most of which is in areas under 5,000.

- ***For STP Enhancement funds,*** Vermont has a thorough Enhancement program written into state law. It utilizes the full 10 percent allocation and has a formal process for municipalities and nonprofits to apply for funds. Project selections made by a statutorily established committee using established, weighted criteria. Municipalities and nonprofits are solicited propose projects and compete in 12 categories.

3.2.11 Washington State Department of Transportation – WSDOT

- The State of Washington recently enacted a package of new revenues that are tied to specific capital projects, limiting DOT flexibility in applying funds from specific sources.

- WSDOT programs on a statewide basis but does not program NHS or STP funds independently from other Federal sources.

- The current biennium Federal funding split includes: $300 million for preservation; $90 million for Federal aid safety; and $14 million for environmental retrofit.

- Management systems are used to frame investment strategies, statewide. Headquarters and regions identify projects. Once identified, headquarters assigns funding from specific sources.

- NHS funds are programmed by WSDOT and are used for highways, with $7 to $15 million out of $100 million a year flexed to ferry projects. NHS funds are not programmed for other nonhighway uses.

- Ten to forty percent of NHS and 50 percent of IM funds are transferred to STP for preservation.

- ***For STP Metro/TMA suballocations*** in three regions (Seattle, Spokane and Vancouver), WSDOT has little direct involvement in programming. Remaining STP funds are programmed in accord with direction from the Governor's office to freight strategies and legislatively mandated projects.

- ***For STP allocation to areas of population under 5,000***, funds are distributed by population. WSDOT staff supports regional transportation planning organizations in prioritization and oversight.

- ***STP Enhancement funds*** are split for statewide project selection (20 percent) and regional project selection (80 percent).

3.2.12 Wisconsin Department of Transportation – WisDOT

- Federal funds make up approximately 46 percent of the WisDOT highway capital budget.

- WisDOT planning and programming is substantially performance-based with funding from available sources and programs assigned in the latter stages of STIP development.

- The WisDOT capital program for state owned highways has three major components

  – Major Highway Development ("Majors"):

    - Includes all major capacity expansion on the state system (11,753 miles), with the exception of capacity expansion work on the Southeast Wisconsin Freeway System (270 miles). Many of the projects focus on the "Corridors 2030 Backbone System" (1,550 miles);
    - From a corridor perspective, projects are identified and evaluated by WisDOT through Central Office and Region efforts with recommendations made by a staff level Majors Peer Review Group; and
    - Criteria include 13 measures in five goal areas with varied weights:
      - Economic impact/benefit (40 percent);
      - Traffic Flow (20 percent);
      - Safety (20 percent);
      - Environmental impact (10 percent); and
      - Community impact (10 percent).

  – State Highway Rehabilitation (SHR):

    - Candidate proposals are developed by Regions, local and regional governments and sponsors, evaluated using WisDOT models and management systems, and evaluated in the field. Projects are programmed in the Central Office for the Corridors 2030 Backbone System and in the Regions for other portions of the state system.

  - Southeast Wisconsin Freeway Rehabilitation:

    - Candidate proposals are developed by the Southeast Region, local and regional governments and sponsors, evaluated using WisDOT models and management systems, evaluated in the field, and programmed in the Region.

- Needs and revenue estimates from all sources are developed on an 8 to 10 year basis with an estimated allocation to Regions for SHR programming.

- Specific Federal and other fund types are assigned to projects by staff in the Bureau of State Highway Programs.

- ***For STP suballocations,*** WisDOT allocates funds for urbanized areas 50 to 200,000 by population.

- ***For STP allocation to areas of population under 5,000***, funding is allocated to counties, which establish project priorities. The allocation is done based on:

  - Sixty percent centerline mileage; and
  - Forty percent rural vehicle registration.

  Investment is focused on major collectors and higher functional classes although minor arterial improvements are eligible. Funding is for use only outside urban area boundaries.

- ***STP Enhancement funds*** are administered centrally by WisDOT as a competitive program.

  - Construction projects must be $100,000 minimum; and
  - Planning and design is eligible up to $25,000 in Federal funds.

  Sponsors submit candidate projects to MPOs or WisDOT Regions for review, prioritization based on WisDOT guidelines.

  Candidates in priority order are reviewed by a state Committee and recommendations made to the WisDOT Secretary. WisDOT also allocates a small amount of NHS funding (3.5 percent) to regions for competition. Regions trade it back for STP funds for greater flexibility.

3.2.13 Capital District Transportation Committee – CDTC Albany, New York

- The CDTC is the MPO for the Albany-Schenectady-Troy metro area, a four county region with eight cities and two urbanized areas (Albany, New York and Saratoga Springs, New York).

- The overall CDTC planning and programming process has produced tangible progress in recent years in advancing the goals of the *New Visions* long-range plan through its priority-setting and programming processes.

- CDTC builds a rolling five-year TIP but creates a seven-year budget to assure that funding flows will be identified and adequate to complete programmed projects and/or allow for slippage. Many projects use a mix of funding sources to maximize flexibility in addressing needs.

- NYDOT makes target budget allocations to 11 regions from all sources by formula. NYDOT is attempting to formulate a process for defining and allocating funds to a broader "layer" of statewide interests/priorities "above" the regional allocation process.

- NHS and STP funds are combined on varied types of projects on facilities owned by varied jurisdictions. The intention is to focus little concern over the "color" of money, i.e., funding source. The effort is focused on constructing a program around needs. (During some TIP updates, this effort is hampered when only certain funding categories (such as NHS or CMAQ) have resources to program. In such cases, funding eligibility does affect the mix of projects selected for addition to the TIP).

- NHS funding as well as STP metro and other STP categories are viewed as a resource to help move the region toward long-range plan goals. The State participates in an open, plan-oriented project solicitation and evaluation process for NHS as well as all STP projects in the CDTC region. As a result, the State is accommodating on projects/needs off the state system; the objective is to make the process "jurisdiction-blind," e.g., 45 percent of Federal highway funds in the region are spent off the state system.

- CDTC leads a negotiation within the region over how available funds are to be used among the region's jurisdictions and in concert with the long-range plan. The process involves:

  – An order-of-magnitude estimate of funds available to support *new projects* in the TIP;

  – When extensive funds are available across all or most fund sources, a general solicitation of projects is made without regard to fund source or project type. When only limited funds are available (for example, from only one or two fund sources), a focused solicitation is made for only those projects that meet fund source eligibility, e.g., NHS eligible improvements, CMAQ, etc. (Funds for new projects are not always available.); and

  – Project requests are solicited from all eligible parties, i.e., broadly, and grouped in several major budget categories as outlined in the long-range plan:

    - Bridges;
    - Pavement;
    - Transit support;

- Safety;
- Community compatibility/economic development;
- Technology (ITS)/operations;
- Mobility and congestion relief; and
- Bicycle and pedestrian.

– Project evaluation is extensive, rigorous, sophisticated, using quantitative and qualitative criteria along with extensive project fact sheets:

- Screening criteria:
  - Consistency with TEA-21 (SAFETEA-LU) and CDTC, local plans;
  - Provision of local matching funds;
  - Defined scope and timing;
  - Meeting an identified need; and
  - Federal-aid eligibility.
- Merit Evaluation Criteria include:
  - Round one (new projects grouped by category and must pass two of three "filters"):
    - Cost-benefit ratio (projects in the top one-half survive to be ranked; five measures: safety, travel-time, energy/user benefit-cost, life-cycle, other);
    - Functional classification (NHS or PA projects "pass"); and
    - Priority network score (projects on bike/pedestrian, goods movement, access management priority, transit priority ITS networks).
  - Round two (consideration of projects that do not qualify well in round one); and
  - Round three (consideration of projects following public review, comment).

- Some funding is reserved in "set-asides" to implement various programs over the course of the TIP without requiring formal TIP amendments. These include a "spot improvement program" for small-scale bike and pedestrian actions; a "corridor management initiative" for transit-oriented development studies, and an "ITS set-aside" to encourage signal upgrades off the State system.

- TIP spending by category is compared with budget goals contained in the long-range plan, a process that is constantly "correcting," e.g., 50 percent of funds go to project categories that were previously under-funded in the TIP, relative to plan goals.

- ***STP Enhancement funds*** are not suballocated to regions by NYDOT; the resulting funding amounts would be too small to be effective. Minimum project cost is $100,000.

  The State establishes project selection process and criteria that are customized by MPOs in consultation with DOT regional offices and include:

  – An "eligibility" determination; and

  – Evaluation/prioritization based on the following criteria and detailed definitions:

    - Enhancement of regional/local environment;
    - Enhancement of transportation plans, projects;
    - Relationship to/support of other plans;
    - Size of matching share, assurance of availability;
    - Direct user, immediate area and environmental benefits;
    - Innovative, creative, or mix of activities; and
    - Support for master planning in Recognized Areas of Special Significance.

- MPOs solicit projects on behalf of the State in multiyear (two- to four-year rounds or roughly two solicitation cycles per authorization period).

- MPO/regional priorities are submitted to a state multi-agency advisory committee for approval. MPO and regional priorities are typically respected in the committee's selection of projects, but the State reserves the right to pick from "down the list" to assure get balance between project types and geographic spread.

- CDTC has set aside one-million dollars in STP funding in recent years to support a "second chance" Enhancement program.

3.2.14 Charlottesville-Albermarle MPO Charlottesville, Virginia

- Charlottesville is not a TMA (over 200,000) so gets no CMAQ and no direct STP funds.

- General summary of Charlottesville-Albemarle MPO programming process.

  – Virginia DOT retains substantial control over the programming process.

    - VDOT does a first cut and state STIP and sends it to the MPOs for endorsement and adoption; and
    - Some MPOs take a stronger role in the process, including Charlottesville-Albemarle MPO. Charlottesville-Albemarle MPO has an extensive public participation process and develops more detailed project descriptions. In some

cases, Charlottesville-Albemarle MPO has been in strong disagreement with VDOT and forced changes to the state TIP.

  - Charlottesville-Albemarle MPO begins the annual TIP review process before it gets a list from VDOT;
  - VDOT provides its list, which Charlottesville-Albemarle MPO converts into a user friendly document for their public involvement process; and
  - Based on the response from public events, Charlottesville-Albemarle MPO makes recommendations for changes and adopts a revised list.

- Funding allocation and assignment to projects is done by VDOT. Charlottesville-Albemarle MPO does not have a role in this process.

  - VDOT does not use the Federal system designations (i.e., NHS), but instead uses its own system of primary and secondary roads. So, Charlottesville-Albemarle MPO never sees NHS or other sources as separate categories, but instead only sees the VDOT designations.
  - Charlottesville is given primary and secondary pots of money by VDOT and considers projects within these.

- About $200,000 was flexed about three years ago to transit operations. This was 5 percent at the time, but is about 10 percent now (total pot has declined from 4 million to 2 million because of revenue issues).

- Virginia has a revenue crisis – state legislature is unwilling to provide substantial funding. By 2009, Virginia will be unable to meet Federal match requirements. Virginia has a low gas tax that has not been increased.

3.2.15 North Central Texas Council of Governments – NCTCOG Dallas – Ft. Worth, Texas

- The NCTCOG encompasses 16 counties and 230 member jurisdictions (including Dallas and Ft. Worth).

- The MPO region encompasses 5 of the 16 counties and portions of 4 more, as well as 2 TxDOT Districts. It is one of 24 MPOs in the State.

- A Regional Transportation Commission (RTC) with 39 members (33 elected officials and 6 providers) serves as the MPO Policy Board for Federal planning and programming purposes.

- The RTC is responsible for programming STP – "Metropolitan Mobility" funds (STP-MM), allocated TMA share, and CMAQ funds. TxDOT retains responsibility for programming remaining Federal funds in the categories in Table 3.2, below, with varied levels of collaboration with the MPOs.

Table 3.2 NCTCOG Program Categories

Preventive Maintenance and Rehabilitation	Safety
Metro Area Corridor Projects[a]	Transportation Enhancements
Urban Area Corridor Projects	Miscellaneous Projects
Strategic Connectivity Corridor Projects	District Discretionary Projects
Structural Replacement and Rehabilitation	Strategic Priority Projects [a]

[a] NHS funds are generally focused on Metro Corridor Projects which are identified collaboratively by NCTCOG and the two TxDOT Districts.

- TxDOT prepares a 10-year Unified Transportation Program (UTP), including construct authority for the first four years (2007 to 2010) and develop authority for the out years.
- Metro Corridor funds are allocated to the district level based on a "target formula":
  - **32.63 percent –** VMT (on and off system);
  - **22.35 percent –** Population;
  - **17.04 percent –** On-system lane-miles;
  - **14.22 percent –** Truck VMT;
  - **7.04 percent –** Population below poverty level; and
  - **6.72 percent –** Fatal/incapacitating crashes.
- In the case of STP-MM and CMAQ funds, the MPO programs and coordinates with TxDOT who adds projects to the STIP to the aggregate dollar levels in the UTP. At the time of project letting, programmed amounts are reconciled with project agreements and funds are obligated by TxDOT to the work program by source,
- Regional investments were most recently made through the use of three "Partnership Programs":
  - **PP1 – Freeways, Tollways, Permanent HOV, Managed Lanes**
    - Programming is done as a coordinated effort between the MPO and the TxDOT Districts.
  - **PP2 – Transit and Interim HOV**
    - Funding is allocated to East and West areas (69 percent/31 percent), reflecting population, VMT and employment factors; and
    - Priority-setting and programming is done collaboratively between the MPO and the three regional transit agencies.

- **PP3 – Local Government and Air Quality**
  - PP3 is the conduit for **STP-MM** and **CMAQ** funds directed to subprograms:
    - Arterial Street Program;
    - Local Air Quality Program (bike/pedestrian, traffic signals, park-and-ride lots);
    - Freeway Interchange/Bottleneck Program;
    - Arterial Intersection/Bottleneck Program;
    - HOV Lanes;
    - ITS Systems;
    - Transit (Partnership 2 Program);
    - Sustainable Development Projects/Programs; and
    - Cost Overrun/Emergency/New projects ("contingency") Program.

RTC decides fund allocation to each PP3 program based on historic levels and policy on up or down adjustments

Solicitations are done every couple years within the region. The selection process evolves year-to-year, mixings subjective "strategic" judgment, and "technical" criteria in evaluation of projects within each subprogram.

- TxDOT controls NHS apportionment levels with most funds going to Metro Area Corridor Projects.
  - Metro Corridor programming is decided collaboratively with the MPO.
- STP-MM funds (and CMAQ funds) from SAFETEA-LU are programmed through Partnership Programs 2 and 3, above.
- ***STP Enhancement programming*** is a TxDOT responsibility with an increasing MPO role. MPOs evaluate and rank TE project candidates subject to RTC policy guidance (including "preferred/not preferred" uses that serve to strengthen transportation relevance of proposed projects). The TTC selects projects from ranked lists.

3.2.16 Denver Regional Council of Governments – DRCOG Denver, Colorado

- The DRCOG TIP covers six years.
  - Years one to three are committed projects.
  - Years four to six only contain projects from years one to three needing funds in years four to six.

- DRCOG has little involvement in programming NHS funds *(see CDOT notes)*. CDOT directs the use of NHS funds. They are combined with state funds at the state level for use in one of three major state program categories making it hard to track discrete NHS funding flows to projects until later stages of the CDOT programming process. Categories are:
  - "Strategic Projects" (major capacity expansion projects authorized in state statute and budgeted independently);
  - "Statewide Programs" (maintenance, resurfacing, bridge, operations, safety, etc.); and
  - "Regional Priorities Program" (other projects of priority in the regions as determined by CDOT through the State mandated cooperative Project Priority Planning Process (4P).
- DRCOG participates generally in CDOT process but not with authority to prioritize or allocate NHS funding at a project level.
- Most NHS funding appears to flow in combination with state funds to "Strategic Projects" which are capacity expansion projects.
- DRCOG has an explicit, detailed policy for prioritizing projects for programming and STP Metro and Enhancement fund allocation, *Policy on Transportation Improvement Program (TIP) Preparation: Procedures for Preparing the 2007-2012 TIP, Adopted January 18, 2006.* The Policy is reviewed and updated as necessary with every two-year TIP cycle.
- Prioritization and programming STP funds is a rigorous, arithmetic process of ranking projects within DRCOG project categories as indicated in Table 3.3, below.
- The "target" percentages of STP funds to categories are established by an ad hoc DRCOG Committee and approved by the DRCOG Board as a matter of policy, with revisions, if necessary, from targets in the prior TIP cycle.
- Project proposals are accepted from regional project sponsors and documented according to DRCOG guidelines:
  - **Limit on Requests –** DRCOG limits the number of new funding requests based on a sliding population/employment scale ranging from no more than two requests per cycle to not more than eight per cycle; and
  - **Minimum Project Size –** Projects for Federal funding must be at least $75,000 (nonconstruction) and $200,000 (construction).

Table 3.3 DRCOG Project Categories and Allocation Targets
2008 to 2009

DRCOG Project Category	STP – Metro	STP – Enhancement	Allocation Targets 2008 to 2009	CMAQ
Roadway Capacity *Roadway Widening* *New Road* *New Interchange* *Interchange Reconstruction* *Bus/HOV/BRT*	X		61.6 percent	
Roadway Operational Improvements	X		16.4 percent	
Roadway Reconstruction	X		18.8 percent	
Rapid Transit				X
Transit Passenger Facilities				X
New Bus Service				X
Bicycle-Pedestrian Projects Other Enhancement Projects				X
Air Quality Improvement Projects				X
Studies	X		3.2 percent	
Congestion Management Programs/Pools *TDM Program* *RideArrangers Program* *Traffic Signal Systems Program* *Regional ITS Pool*				X
Enhancement Activities *(Bike, Pedestrian, Other)*		X	100.0 percent	

- New requests for STP funding are evaluated and ranked through a two-phased process that includes eligibility determinations and scoring and ranking.
  - "First Phase Selection" includes projects that account for 75 percent of available funds through the "project criteria" ranking process.
  - "Second Phase Selection" includes projects that meet "area criteria," including:
    - At least 50 of 100 points from project criteria ranking;
    - Equity among DRCOG member jurisdictions (defined by the ratio of 10-year Federal programmed funds and 2007 to 2012 funding compared to population (40 percent), VMT (40 percent), and sales tax revenue (20 percent);

- Potential cost savings from merging projects;
- Projects in Strategic Corridors;
- Project readiness for construction; and
- Projects in very small communities (under 10,000).

- Each "Project Category" has its own set of criteria with varying point scores available, as shown in Table 3.4, below. DRCOG provides descriptions to guide assignment of points.

Table 3.4 DRCOG Project Ranking Criteria and Point Values

	Project Type and Point Value				
Criteria	Roadway Capacity	Roadway Operational	Roadway Reconstruction	Bike-Pedestrian	Other Enhance
Current Congestion	0-12	0-15	-	-	-
Pavement Condition	-	-	0-20	-	-
Safety	0-5	0-7	0-5	0-12	-
Cost-Effectiveness	0-10	0-16	0-16	0-12	0-30
Usage	-	0-9	0-9	0-12	-
Condition of Major Structure	0-5		-	-	-
Long-Range Plan "Score"	0-15		-	-	-
Transportation Management System Features	0-5	0-5	0-5	-	-
Multimodal Connectivity features	0-10	0-7	0-7	0-18	-
Overmatch	0-12	0-12	0-12	0-12	0-12
Metro Vision Implementation/ Strategic Corridor Focus	0-12	0-12	0-12	0-12	0-12
Sponsor-related Metro Vision related actions	0-14	0-14	0-14	0-14	0-14
Long Range Plan Emphasis Corridors	-	0-3	-	0-4	-
Multiple Enhancements	-	-	-	0-4	-
Benefits *(historic, aesthetics, water impact)*	-	-	-	-	0-32
Possible Total	**100**	**100**	**100**	**100**	**100**

Source: Policy on Transportation Improvement Program (TIP) Preparation: *Procedures for preparing the 2007 to 2012 TIP*, January 18, 2006.

Note: Criteria and points for ranking "study" requests are generally similar.

- ***STP Enhancement funds*** are allocated by CDOT to the 6 CDOT engineering regions. CDOT allows DRCOG to select the projects in the CDOT regions.

  DRCOG commits 95 percent or more of STP Enhancement funding to bicycle and pedestrian projects, without a specific policy, ranked using the criteria indicated above.

3.2.17 Regional Transportation Commission of Southern Nevada – RTC Las Vegas, Nevada

- The RTC is the MPO serving Clark County, Nevada, including the City of Las Vegas and four other local governments. The MPO serves as the operator of the regional transit system. Continued rapid growth in the region has resulted in substantial increases in travel demand that have outstripped available Federal, state, and local revenues for the time being.

- At the state level, the designated NHS approximates the entire state highway system and the majority of travel demand occurs within the State's two urbanized areas, Las Vegas and Reno.

- The State's "interest/focus" is on network improvement, therefore, has been largely consistent with and overlapped with regional interests and priorities. A strong, collaborative working relationship currently exists between the MPO and the State.

- At present, the State DOT plays the dominant role in programming NHS and STP funds.

- The MPO also has authority over significant local funding sources drawn from a state-enabled local gas tax as well as a local sales tax. This arrangement has several significant impacts in overall programming, fund allocation, and project development:

  – It provides a source to undertake major projects without Federal aid, thereby streamlining the project design and delivery process. A 43-mile beltway was built solely with local funds; and

  – It requires that the MPO maintain a staff engineering capacity adequate to formally oversee local projects and maintain greater depth of knowledge about local projects and project development than is typical of MPOs, i.e., the RTC is, in effect, a quasi-operating agency and/or primary funding agency, not solely a planning agency.

- The State has relied on a substantial bonding program in recent years. Debt requirements on projects underway or currently programmed absorb nearly all the programmed Federal NHS and STP funding. As a result, there are few issues and little rigorous process in prioritizing and programming current funds to already committed projects.

- The MPO does not "see" or materially participate in any detailed state process/procedures by which programming decisions are made, but there is strong mutual agreement on priorities and programming (and few options) under current funding constraints.

- Conversely, the MPO currently does not conduct a rigorous, objective, analytical process of prioritization and programming of major highway improvements since the vast majority of available state and Federal funds are committed to retiring the bond debt on previously agreed upon priority projects.

- State STP funds also support a limited number of projects that have policy-oriented priority for state government.

- STP funds apportioned to the metro area are generally applied to the projects and priorities mutually agreed to by the State and MPO and are focused largely on the Interstate system and interchanges. This dynamic is driven more by collaborative negotiations that are rigorous analytical processes at present.

- ***STP Enhancement*** target levels for the MPO are set by the State. The MPO solicits, evaluates, and delivers a prioritized list of Enhancement project candidates to the State Transportation Board for approval and programming.

  The MPO prioritization is done through a combination of qualitative/subjective judgments and limited analytics.

3.2.18 Metropolitan Council of the Twin Cities Minneapolis – St. Paul, Minnesota

- The Met Council is the MPO for the seven county region, provides other regional planning functions, and has transit and waste treatment operating responsibilities.

- Met Council transportation programming is linked to a *Transportation Policy Plan* (TPP) which is updated every three to four years and includes modal system plans for the region. The TPP is designed to implement a broader *Regional Development Framework*.

- The Met Council operates on a two-year programming- and budget-cycle and has direct responsibility for soliciting, evaluating, prioritizing, and programming projects for Federal STP-Urban Guarantee, CMAQ, and Enhancement funding. The Twin Cities metro region is the only TMA in the State and the only area allocated STP-Urban Guarantee funds.

- Other Federal funds, including NHS funds, are allocated to Mn/DOT districts by a "target formula" for local programming, including NHS funds. The Council and the Mn/DOT Metro District work closely in programming the combined funds available to meet Council goals and policies.

- The emphasis in Mn/DOT is on making performance and needs-based investments. Regional investments are driven by local plan-based problems/needs. The type and source of funding used is variable within eligibility requirements to maximize flexibility and leverage. Assignment of specific sources to projects is done toward the end of the programming function as more of an accounting concern.

- Priority is given to preservation and management actions to meet performance targets. If there is additional money available, it flows to major projects which are identified in the TPP, is moved into a Ten Year Highway Work Plan, and then advanced into the TIP.

- Mn/DOT is responsible for programming NHS funds through the District and ATP process after allocation to the Districts.

- NHS funds are used exclusively for highway improvements but are inadequate for the purpose. Funds from other core Federal programs, e.g., bridge rehabilitation, have been transferred to meet NHS needs when they are not needed in the Districts.

- The Met Council solicits street and highway project requests for STP-Metro funding every two years in six categories:

  – "A" Minor Arterial "Relievers";
  – "A" Minor Arterial "Expanders";
  – "A" Minor Arterial "Connector";
  – "A" Minor Arterial "Augmenter";
  – Non-Freeway Principal Arterials; and
  – Bicycle/Walkways.

  Transit projects are solicited for CMAQ funding separately and evaluated under separate CMAQ criteria.

- STP-Urban Guarantee funding requires "hard" match from sponsoring agencies and cannot be used for PE, design, construction engineering, or ROW acquisition. Stand-alone projects for drainage, sound barriers, fences, or landscaping are not eligible in the STP category. However, these types of activities are eligible if they are a part or parts of a large project which is eligible.

- Full projects are programmed although only partial funding may be made available within the TIP cycle.

- STP-Urban Guarantee requests are evaluated in a two-step process involving "screening" or qualifying criteria and "prioritizing" criteria. The prioritizing criteria listed below are generally the same for each of the six project types though different point values are used for the different types of projects.

  - Relative importance of the route as a "Reliever" (100 points);
  - Deficiencies and solutions on the reliever and PA being relieved (425 points) *(crashes, access management, air quality, congestion)*;
  - Cost-effectiveness (275 points) *(crash, congestion, emissions reductions)*;
  - Development Framework implementation (300 points) *(employment/housing/ transportation integration, affordable housing, modal integration)*; and
  - Maturity of project concept (100 points).

- **STP Enhancement** funds are available for 12 qualifying Enhancement activities in three categories:
  - Scenic and environmental projects;
  - Bicycle and pedestrian projects; and
  - Historic and archeological projects.

- Separate qualifying and prioritizing criteria are used for evaluating proposed Enhancement projects in each category.
  - **Category Criteria (500 points)** (applied to all categories):
    - Urgency (150 points);
    - Readiness (75 points);
    - Impact (125 points);
    - Context (100 points); and
    - Relationship between categories (50 points).
  - **General Integrative Criteria (600 points):**
    - Relationship to intermodal/multimodal system (150 points);
    - Extent of public benefit (150 points);
    - Development Framework implementation (200 points); and
    - Maturity of project concept (100 points).

3.2.19 Delaware Valley Regional Planning Commission – DVRPC Philadelphia, Pennsylvania

- The DVRPC is the MPO for the nine county region around Philadelphia, Pennsylvania, including portions of New Jersey, and provides other regional planning functions.

- The DVRPC transportation planning and programming functions take place within the parallel state DOT processes of PennDOT and NJDOT, each of which have slightly different requirements and guidelines for management of planning and programming.

  – The PennDOT STIP is a four-year program updated on a two-year cycle; and

  – The NJDOT STIP is a three-year program updated annually.

- DVRPC programming decisions are approved by the Board following recommendations by the broadly representative Regional Transportation Committee (RTC) and comments from the Regional Citizens Committee (RCC).

- Prioritization and programming within the region generally take place without regard to the source of funding, with funding category assigned to programmed funds toward the end of the programming process to allow maximum flexibility in the use of available state and Federal funds.

- In Pennsylvania:

  – Allocation of state and Federal funding is dictated by "financial guidance" that is jointly updated by PennDOT and all its "planning partners," i.e., the MPOs and Regional Planning Organizations (RPO) across the State at the very beginning of the TIP/STIP update process. This guidance allocates funds for programming to each region based on various formulas. The guidance also allocates funds to a Statewide Interstate Management Program (IMP) and creates certain discretionary set-asides;

  – Funding is flexed to transit ($25 million annually) off the top of the Highway funds for distribution to the regions, as well as set aside for Economic Development ($25 million annually) and statewide line items (approximately $32 million annually);

  – Funds allocated to the Interstate Management Program include all Federal Interstate Maintenance (IM) funding and a portion of NHS and Bridge funding based on the miles and bridges represented by the Interstate facilities (using the formulas for Highway Funds and Bridge Funds, described below). The IMP funds are dedicated for exclusive use on the Interstate system for system preservation only and cannot be used for adding capacity. Project priorities are set by PennDOT, statewide, based on management systems and ongoing project delivery schedules. Interstate improvements are focused on preservation and needs based on the following criteria:

- Roadway Criteria:
  - District interstate management plans;
  - Field verification;
  - Safety issues/data;
  - "Criticality";
  - Interstate treatment matrix;
  - International ride index;
  - Cycle backlog (median pavement age); and
  - Traffic volumes.
- Bridge Criteria:
  - Rehabilitation/Replacement:
    - Structural deficiency;
    - Weak link;
    - Low vertical clearance;
    - Other factors; and
    - Preservation.
  - Preservation
    - Not structurally deficient;
    - Inspection indicates correctable with preservation;
    - Activity within upcoming roadway projects; and
    - Other.

– Highway Funds include all Federal NHS and nonurban STP funds, combined with all state highway funds. A set-aside of 20 percent, referred to as "Spike Funds," is for the discretionary distribution by the Secretary. The remaining 80 percent of the Highway Funds is allocated to the regions, with the funds that would be attributable to the Interstate mileage allocated to the IMP. The formula for allocation is:

- VMT (30 percent);
- Lane-miles (30 percent);
- Population (30 percent); and
- Maintenance needs (10 percent).

- Bridge Funds include all Federal Bridge funds combined with state Bridge funds. These combined funds are allocated to the regions, with the funds that would be attributable to the Interstate mileage allocated to the IMP. The formula for allocation is:
  - Deck Area of All Bridges > 20' (20 percent); and
  - Deck Area of Structurally Deficient Bridges > 20' (80 percent).
- STP Urban funds and CMAQ funds are allocated to the regions using the same Federal formulas that allocated the funds to Pennsylvania. Each region determines its own procedures for assigning these funds to eligible projects. DVRPC uses a structured prioritization process for CMAQ funds it programs for its Competitive CMAQ Program, while STP Urban funds are assigned to priority locally proposed projects;
- PennDOT retains 20 percent of STP Enhancement funds for statewide and multiregion projects and allocates the remaining 80 percent to the regions based on population (80 percent) and land area (20 percent);
- MPOs and RPOs set priorities in their individual TIPs in cooperation with their respective PennDOT District staff and central office liaison; and
- Commitment of specific funding sources is done at the end of the programming process by DVRPC to assure maximum flexibility and leverage. Most urgently needed and least flexible funding sources are committed first by DVRPC, e.g., Bridge and CMAQ; other projects typically use combined sources based on eligibility.

- In New Jersey:
  - State and Federal funds are usually not combined on a project. Rather, projects are typically 100 percent Federal or 100 percent state. Matching requirements are met by application of the "Toll Credit" match provision introduced in ISTEA;
  - There is no advance Financial Guidance which would allocate funds on a formula basis to the three MPOs for programming purposes. Rather, MPO funding levels in the resulting TIPs/STIP typically reflect MPO share of statewide population (after removal of statewide line items) achieved through a "gentleman's agreement";
  - Project priorities are jointly negotiated by the MPO and NJDOT; and
  - Assignment of funds to specific program sources is done by NJDOT at the statewide level, not at the MPO level.

3.2.20 San Diego Association of Governments – SANDAG San Diego, California

- SANDAG is a single county MPO. Planning occurs through the Regional Transportation Plan (RTP) which identifies all expected revenues, including the renewal of the TransNet local sales tax in 2004, as well as how all revenues are to be spent over broad categories of multimodal improvements, including:
  - Forty-year program that includes 42 projects;
  - Begin with most important;
  - **Priority 1 –** Finish projects in the original prior sales tax measure; and
  - **Priority 2 –** Start design and environmental analysis on two major corridors and completion of construction on two others.
- The former sales tax measure was to due expire in 2008 and funded one-third highway, one-third transit, and one-third local streets and roads.
- Significant funding is formula based, i.e., passed directly through to specific agencies such as transit or for local roads. These funds are used according to the operational plans of the various agencies.
- For highways, the Caltrans *State Highway Operation and Protection Program* (SHOPP) dictates how funding is spent.
- SANDAG plays a minor role in NHS programming for the SHOPP.
- STP/CMAQ/TEA funds get distributed to locals by formula and the locals decide how they are programmed and allocated.
- Combined CMAQ/STP programming is based on:
  - Eighty-five percent is dedicated for matching the sales tax program on a 50/50 basis (i.e., half from sales tax, half from either state or Federal sources);
  - The other 15 percent is for priorities selected by the SANDAG Board, typically smaller projects such as regional vanpool, ITS, and some support for transit projects and operating costs, regional arterials, and bikeways; and
  - STP-Metro goes mostly to highways and HOV lanes. More CMAQ is used on transit projects, vanpool, bikeways, and similar projects.
- STP funding is largely directed to:
  - Specified TransNet projects;
  - Mostly highway and HOV;

  - With some funding for sound walls and ITS; and
  - In the current program, some bikeway projects, ITS, sound walls, and one arterial are funded.

- The current TransNet measure is more corridor focused, with funding directed to:
  - Administrative (1 percent);
  - Bike/pedestrian projects (2 percent);
  - Major corridors (42 percent, including "managed lane projects," which support HOVs and transit);
  - New BRT/Rail Operations (8 percent for operations, not capital);
  - Transit system improvements (16.5 percent); and
  - Local systems (33 percent).

- SANDAG considers all funds at the same time and does not program a single Federal program at a time or reconsider priorities each time. They provide their board with all of the needs for each program at the same time. Given total available funds, what are the priorities for the region?

- ***STP Enhancement funds*** are awarded to projects solicited as part of SANDAG's larger Regional Smart Growth Program.

3.2.21 Metropolitan Transportation Commission – MTC San Francisco Bay Area, California

- MTC 20-year Regional Transportation Plan address three broad categories of needs:
  - Adequate maintenance (preservation of existing transit, highways, and roads; about 80 percent of total);
  - System efficiency (squeeze capacity out of existing systems, ITS, etc. (about 4 percent of total);
  - Strategic expansion (new capacity and policies) – (about 16 percent of total); and
  - All three categories address transit, highways, and local roads.

- The four-year TIP has a somewhat different distribution, but does not include all funding sources (excludes state TIP, which occurs on a different schedule).
  - Adequate maintenance (50 percent);
  - System efficiency (14 percent); and
  - Strategic expansion (36 percent).

- MTC is not involved in NHS project prioritization or selection.
- MTC programs STP/CMAQ together in cycles of two years – lump as Federal discretionary funds.
  - CMAQ must be spent for projects that improve air quality, but relatively flexible since multimodal projects are eligible;
  - State sets the timeframe for other Federal funds through the State Transportation Improvement Program, so they are programmed separately from STP and CMAQ; and
  - During TEA-21 and SAFETEA, MTC focused on broad program priorities during programming round. They did not require sponsors to develop CMAQ eligible or STP eligible projects separately. Fund sources were assigned later based on eligibility. Goal was to establish broad priorities, but allow sponsors to give their best projects.
- STP funds are primarily used for preservation, mostly transit rehabilitation and street and road improvements.
- STP funds are not mixed with state or local sources. State has gas tax revenues for streets and roads. That funding all goes to cities and counties for rehabilitation.
- The Regional Transportation Plan (RTP) identifies expected apportionments and assigns to priority projects/programs (local streets and roads, transit rehabilitation, other programs related to livable communities). These criteria are then used in programming.
- MTC has a Partnership Board (heads of transportation and transit agencies) to discuss priorities. The Board provides direction in crafting priorities for the RTP and in later programming policies as necessary.
- ***STP Enhancement funds*** are awarded through a regional grant competition as part of MTC's Transportation for Livable Communities/Housing Incentive Program.

3.2.22 Puget Sound Regional Council – PSRC Seattle, Washington

- PSRC covers a four-county region, including the City of Seattle.
- PSRC has a formal *Policy Framework for PSRC's Federal Funds* (February 23, 2006), refined every three years. The *Policy Framework* supports the current regional LRTP, "*Destination 2030.*" Support for "urban centers" and "connecting corridors" are major underlying themes of the plan and policy framework.

- WsDOT assigns major NHS funding to projects. PSRC has very little to do with NHS funding flows and does not monitor state NHS process closely.

- A small amount of NHS funding is allocated to regions for "regional competition" proportionate to amount of NHS mileage that locally is controlled in the region (approximately 3.5 percent; $1.8 million per year).

- Actual NHS funding is traded back to the State for STP funding, giving the region more flexibility (with caveat that NHS system will receive needed attention).

- PSRC has developed two independent but coordinated processes for recommending STP and CMAQ project selection and funding that have evolved since ISTEA, plus an independent Enhancements programming process *(see below).*

  – "Shared Regional Competition Process"; and

  – "Countywide Competition Process."

- The processes are run in multistakeholder "countywide forums."

- Criteria directly reflective of LRTP goals are applied for project selection on three-year cycles. The criteria and process *(see below)* are "tweaked" every cycle, as needed. The most recent change was an increase in point values to economic criteria which resulted in increases in preservation type projects.

- Project proposals are solicited from 80+ jurisdictions and other project sponsors. "Equity" among jurisdictions is a concern. It is PSRC policy to prioritize and allocate funds based on goal-oriented criteria, not on 'formula. Funding commitments are then monitored geographically.

- Consistency with PSRC-certified transportation element of local/county plans is a prerequisite for ranking consideration.

- STP and CMAQ funds are combined for project selection to increase flexibility. Estimates of available funding are made and some funding taken off the top (10 percent for nonmotorized transportation and a deduction for areas outside the AQ Maintenance Area).

- After take-downs there is an effective 43/57 split between Regional and countywide processes, including:

  – A two million dollar set aside for Regional Town Centers/Corridor Program (separate selection process/criteria);

  – Ten percent Non-Motorized program run through the countywide process; and

  – Countywide shares based on population.

- The "Shared Regional Competition" process includes:

- Eligibility: Projects on the "Metropolitan Transportation System";
- Five project maximum for regional funding from county forums;
- Project proposals are identified by type: "Urban Centers," "Manufacturing/ Industrial Centers," or "Connecting Corridors" projects;
- H-M-L rating is applied to available point values based on qualitative guidance, as shown in Table 3.5.

Table 3.5 PSRC Prioritizing Criteria and Point Values

Project Type Evaluation (Possible Points)	Criteria	Possible Points
Urban Center *(50 points)*	Impact on Urban Center	20
	Circulation Impact	15
	Urban Center Environment Support	15
Manufacturing/Industrial Centers *(50 points)*	Mobility and accessibility	50
Connecting Corridors *(50 points)*	Benefit to Center	20
	System Continuity	15
	Long-Term Benefit/Sustainability	15
All Proposed Projects	Project Readiness/Financial plan	30 (STP) 10 (CMAQ)
	Air Quality	20 (STP) 40 (CMAQ)

- "Countywide Competition" process includes:
  - Eligibility: Consistency with certified local plan;
  - Evaluation: Similar to above with point values varied locally;
  - Submissions ranked and scored by PSRC staff (one staff member for each criterion to assure consistency); and
  - All projects compete against each other.
- **STP Enhancement funds** support projects classified in one of four categories by sponsoring agency:
  - Non-Motorized Projects;
  - Scenic Resource Projects;

- Historic Resource Projects; or
- Environmental Projects.

PSRC evaluates and recommends to projects WSDOT based on evaluation criteria and point values (H-M-L rating based on guidelines applied to criteria and point totals in Table 3.6).

Table 3.6 PSRC Enhancement Rating Factors

Project Type Evaluation (Possible Points)	Criteria	Possible Points
Non-Motorized Projects	H-M-L from Guidelines	50
Scenic Resource Projects	H-M-L from Guidelines	50
Historic Resource Projects	H-M-L from Guidelines	50
Environmental projects	H-M-L from Guidelines	50
All projects	Support for centers, connecting corridors	15
	Project Readiness/Financial plan	20

3.2.23 Hillsborough County MPO Tampa, Florida

- The Hillsborough County MPO is one of three MPOs serving the Tampa, St. Petersburg, Clearwater Transportation Management Area (TMA).
- The Hillsborough County TIP is updated annually with an emphasis on review and determination of projects that are "ready to go."
- Long-range planning and programming is needs-based, i.e., is not done independently by the type of funding available through specific programs (NHS, STP):
  - Needs assessment and evaluation are done through use of the region's Tampa Bay Regional Planning Model and the State's Efficient Transportation Decision-Making Process (ETDM), used to screen candidate projects.
  - Ten performance measures that reflect 2025 Plan goals are assigned weights (in parentheses) and used to score and prioritize alternative project proposals:
    - Safety (16.5 percent);
    - Traffic congestion relief (15.7 percent);
    - Neighborhood impact (11.1 percent);

  - Natural environment (9.5 percent);
  - Existing facilities improvement (9.7 percent);
  - Emergency evacuation/access (7.2 percent);
  - Major activity center access (8.0 percent);
  - Regional connectivity (8.7 percent);
  - Historic/cultural/archeological preservation (6.6 percent); and
  - Goods movement (6.9 percent).

  – Parallel assessments are carried out for transit, bicycle, pedestrian, and disadvantaged.

- Additional policies also impact project funding commitments and programming, e.g., projects in the first three years of FDOT's Work Program are retained; operational expenditures for Bay Area Commuter Services and TDM measures are continued.

- The TIP must also list projects funded with local or private revenues, based on state statutory requirements.

- Funding for operations and maintenance as projected by MPO member jurisdictions is "taken off the top."

- FDOT Districts receive Federal funding allocations for NHS from the State and, in turn, cooperate with the MPOs to determine how those funds are used on the regional portion of the NHS system.

- A portion of Enhancement funding is retained by the State.

- Remaining funds are suballocated to the FDOT Districts and allocated to the MPOs with their cooperation.

- The MPO solicits STP project proposals and scores and ranks them H-M-L for:

  – Improving safety;
  – Addressing congestion;
  – System preservation;
  – Intermodal connectivity;
  – Impact on land use and mode shift;
  – Community support; and
  – Consistency with LRTP.

- STP Enhancement proposals are rated H-M-L for:

- Support for biker and pedestrian use;
- Scenic resource enhancement;
- Historic, cultural, and archeological resource enhancement;
- Environmental mitigation;
- Educational value;
- Scope of impact; and
- Consistency with the LRTP.

- The MPO recommends projects for funding based on a five-year trend estimate of funds available.

3.3 Related Issues

Interviewees were asked to reflect on any issues that tend to frustrate the programming process. Responses are noted below without attribution and include many issues commonly heard more broadly across the industry. Because both state DOTs and MPOs largely have accommodated themselves to the requirements and procedures governing funding flows from the NHS and STP programs, there are few issues specifically focused on the programs themselves, and more issues related to broader policy and aspects of the overall programming process.

3.3.1 Issues Raised by State DOTs

- Congressional earmarking has negative effects on programming and complicates the use of Federal funds. Flexibility is reduced by requiring funds to flow to specific projects in specific amounts. Earmarking reorders state and local priorities. And earmarking places demands on future funds to complete earmarked projects.

- Safety funding often flows through independent, parallel processes and partners on separate timetables, reducing coordination and integration of plans, projects, and the use of state and Federal funds.

- Safety funds are the most constrained, least flexible, source.

- The are too many separate "pots" of STP funds, requiring parallel processing under varying guidelines/regulations with multiple partners.

- Slow obligation of Federal funds by subrecipients, including TMAs (CMAQ, STP-Metro, and TE), creates confusion over obligation status and complicates tracking and accounting.

- Confusion currently exists in the use of new HSIP funds: 50 percent is eligible for transfer by law but FHWA appears to require use only on stand-alone projects, not safety aspects of other regular projects, i.e., a position that appears contrary to policy allowing flexibility and integration of actions.

- Mixing Federal and state funds is common and advantageous in many cases but brings cumbersome Federal process into play, creating an incentive to concentrate Federal funds as much as possible which may not be the most effective investment strategy.

- State funding (obligation) limits sometimes result in balances carried in Federal programs, raising FHWA objections.

- There is uncertainty about whether SAFETEA-LU regulations will require STIPs to program projects by funding source, a step that is perceived to reduce responsiveness and flexibility, and introduce more process, e.g., formal amendments to shift funds among sources.

- What agency assigns program funding to individual projects, and when, is a problem for some states when tradition dictates a local role. Assignment of funding sources locally can preempt state efforts to maximize flexibility.

- Flexing funds comes with additional administrative requirements/burdens.

- There some concerns about the number of funding codes required for Federal programs, especially the changes that occur every time there is an extension. FHWA treats each code like a separate project, but some states use multiple codes on a single project. For example, NHS may be used from SAFETEA-LU, from extensions to TEA-21 and from TEA-21 itself.

- Extra complications added because of transfers of funds from NHS to STP. For STP, this is even worse. STP funds are spread over 20 codes.

- An obligation becomes "inactive" if implementing agencies do not bill against it. Obligations range in length from one to three years. Because every fund code is considered a project, some codes can easily become inactive. If a state DOT is billing to a TEA-21 NHS code and not billing to a SAFETEA-LU NHS code that also is used on the project, the latter code appears inactive, even though the project is moving forward.

- Caltrans has 600 to 700 projects (not codes, actual projects) that each need be checked individually. With multiple codes per project, this becomes a significant and challenging task to make sure no codes appear inactive.

- Implementation of fiscal constraint in the latest NPRM seems to require states to identify Federal revenue sources by category. At the STIP stage, this information is not typically available; to do so will cause a lot more STIP amendments. Many states lump all the sources together because funds are not allocated that simply. It's difficult enough to estimate the future obligation authority.

- FHWA appears to be planning to enforce a section of the CFR that prevents states from switching funding sources once they have been obligated. This also would limit the flexibility of states – programming process needs to be able to make changes.

3.3.2 Issues Raised by MPOs

- Full MPO programming responsibility exercised on a regional scale is rarely realized, generally; CDTC in Albany, New York, is an exception and therefore, a potential source of "best practices," generally, in planning and programming.

- The MPO/regional priority-setting role must expand in the future and more objective, quantitative processes applied.

- Federal purchasing power is being steadily diminished. It is increasingly rare to be able to solicit new projects broadly because of commitments to existing projects.

- DOT and MPO schedules are often not well-synched.

- It is often difficult to adjust programming for projects whose costs exceed allocated/ programmed amounts.

- Communications shortcomings detailing DOT commitments in excess of MPO programmed levels makes it difficult to accurately track fund balances.

- Often, states limit or fix state sources so that MPOs have to cover added project costs from regional allocations, i.e., program funding constraints are applied by both sides without adequate collaboration.

- Some NHS mileage in the region is not on the state system. DOT prohibits NHS spending on off-system roads, requiring regional funding to be "diverted" to meet these needs.

- Rehabilitation needs in the metro region are not as well quantified as desired.

- Regional (MPO) and state (DOT) priorities may vary and sometimes conflict, e.g., states may focus on preservation while MPOs may focus on congestion relief and capacity expansion; DOTs may emphasize completion of major projects, and attempt to concentrate funding while MPOs desire to spread funding more widely in the region.

- Continued demand on available funds for debt service on existing projects will begin to starve the system of needed preservation and maintenance resources. New state revenues will have to be sought.

- As reliance on local funding increases, tolerance of Federal requirements and procedures is reduced, often making it difficult to adapt local processes and timetables that can satisfy Federal program requirements.

- State "target" formulas that allocate money on system size and use do not necessarily direct funds to needs or performance targets, creating an imbalance across districts that requires funding "pools" for priority major bridges, mobility and safety improvements. The pools must draw funds from sources other than district allocations.

- Recent (SAFETEA-LU) increases in funding to the metro region has created tension with the state, which would like some of the metro increase to be more broadly available, statewide.

- Financial constraints and AQ conformity appear to impose a much more rigorous test/limitation on MPO/regional programming than on state programming.

- STP-Metro allocations have been declining as a portion of total STP funding.

- Availability of NHS and STP-Metro funding is reduced significantly by Congressional earmarks.

- There is often a desire for greater clarity, transparency in DOT programming processes, procedures.

- There is a desire in MPOs for greater flexibility in using funds in "siloed" programs.

- Cost estimation and cost increases are a growing problem.

- Congressional earmarking has negative effects on programming and use of Federal funds. They reduce flexibility by requiring funds to flow to specific projects in specific amounts. They reorder state and local priorities, and place demands on future funds to complete earmarked projects.

4.0 NHS and STP Programming and Allocation Processes in Selected States and MPOs

The material that follows is organized and presented in a comparative, tabular format that focuses on how selected agencies among those interviewed address specific key aspects and features of the NHS and STP programming and allocation process. These range from basic characteristics of agencies' respective processes to the sometimes unique procedures affecting the flow of NHS and STP funding. The sections that follow address:

- STIP/TIP time coverage and update cycle;
- Major program categories;
- Basis for programming;
- Policy Focus for NHS and STP Funding;
- Factors in project evaluation: strategic versus quantitative;
- STP-Enhancement selection process; and
- Under 5,000 secondary road funding.

4.1 STIP/TIP Time Coverage and Update Cycle

There is some variation in the length of STIPs and TIPs among state DOTs and MPOs, ranging from 3 to 6 years. In the cases where programs span longer timeframes, there is typically a direct link to other program management documents, either annual or biennial budgets or intermediate length (10- to 12-year) plan documents. Updates are generally carried out annually or biennially. SAFETEA-LU now requires STIPs and TIPs approved after July 1, 2007 to be updated at least every four years and contain at least 4 years of projects.

Table 4.1 STIP/TIP Time Coverage and Update Cycle

Agency	STIP/TIP Period	Update Cycle
State DOTs		
Arizona	5 years	Annual
California	5 years	2 years
Colorado	6-year STIP (Year 1 = CDOT capital budget)	2 years
Florida	"Work Plan" = 5-year STIP	Annual
Minnesota	4 years	2 years
Missouri	5 years	Annual
Montana	3 years	3 years
Oregon	4 years	2 years
Pennsylvania	4 years (Years 1-4 of "12-Year Transportation Program")	Annual
Vermont	4 years	Annual
Washington	4 years (starting in 2007)	2 years
Wisconsin		
MPOs		
Albany – CTDC	5 years	Annual
Charlottesville	3 years	Annual
Dallas-Fort Worth – NCTCOG	3 years (expanding to 4)	2-3 years
Denver – DRCOG	6 years (Years 1-3 committed; 4-6 committed projects needing out year funding)	2 years
Las Vegas – RTC	3 years	
Minneapolis-St. Paul – Met Council	4 years	Annual
Philadelphia – DVRPC	4 years (Pennsylvania) 4 years (New Jersey)	2 years Annual
San Diego – SANDAG	5 years	2 years
San Francisco	4 years	2 years
Seattle – PSRC	4 years	Annual
Tampa	4 years	Annual

4.2 Major Program Categories

While programming by state DOTs and MPOs takes place under longstanding and continuously evolving Federal "Joint Planning Regulations," the structure of STIPs and TIPs has evolved very differently from state-to-state and from region-to-region. In part, the changing structure of programs and evolving program categories is a reflection of the changing scope and content of long-range plan goals. NCHRP Project 8-50, "*Factors that Support the Planning and Programming Linkage*" (currently unpublished), has explored this connection, noting the increased use of goal statements that reflect the broader, community-wide 'outcomes' desired from transportation investment, e.g., mobility, safety, economic vitality, environmental quality, community character as well as others. To some degree, this breadth of purpose is finding its way into programs as well as plans, yet programs – both STIPs and TIPs and the funds that support individual programmed projects – are organized around a complex mix of goals areas, measures of performance, project types, modes, and funding sources. Rarely are these categories of investments consistent from one state to another or from one MPO to another. The variations are inexplicable except to suggest that they represent incremental changes to program and investment categories that were developed early in the Federal 'joint planning' era and have been revised as goals, management systems, programs and management philosophies have evolved at the Federal level and within states and local areas over time.

Table 4.2 highlights the dizzying array of program structures within which current NHS and STP funding commitments ultimately are made. It should be noted, however, that at the STIP and TIP stage it is seldom that funds from these or other individual Federal programs are specifically assigned to specific. This step typically takes place as projects are readied for implementation, giving sponsoring agencies greater flexibility in how to apply both available state and Federal funds most responsively and effectively.

Table 4.2 Major Program Categories

Agency	Key Policy Categories/Goal Areas	Major Program Categories
State DOTs		
Arizona	Mobility and accessibility Economic competitiveness Resource conservation	Combination of funding sources, project types and types of actions
California	Sustainability Mobility Accessibility Collaboration Prosperous economy Quality environment Social equity	STIP: • Major projects • Interregional projects • Regional projects Operations/Preservation (SHOPP) 36 categories CMAQ Regional STP Local highway bridge Local safety Federal lands State-administered FTA Transportation Congestion Relief Program

Table 4.2 Major Program Categories (continued)

Agency	Key Policy Categories/Goal Areas	Major Program Categories
State DOTs (continued)		
Colorado	Safety System quality Mobility Program delivery	Statewide program Strategic projects Regional priorities program
Florida	Preservation and maintenance for safety and efficiency Economic competitiveness Organizational excellence	Routine maintenance Public transportation Bridge Interstate construction Nine "Special Programs/Funds": • Economic development • Applied research • Central office consultants • Environmental mitigation • State Infrastructure bank[a] • County transportation[a] • Strategic Intermodal System[a] • Transportation regional incentives • Local utility work Product support
Minnesota	10 policies in three areas: • Preservation • Safety • Mobility	Highway Assistance Program Transit Assistance Program Rail Service Assistance Program Port Development Assistance Program Airport Development Assistance Program Central Fund
Missouri	Safety and security Care of existing system Relieve congestion Broad access Efficient goods movement Economic competitiveness Protect environment and natural resources Enhance quality of communities	Take care of the system: • Interstate • Rest of the system • Safety Flexible funds Major projects, emerging needs
Montana	Roadway system performance Economic development Traveler safety Access management Land use planning Bicycle and pedestrian transportation Public transportation	Three Core programs: • Interstate • Non-interstate • State primary program STP Primary STP Secondary STP Urban
Oregon	Preservation Bridge Operations Safety Modernization Special Projects	Sixteen major program categories (mix of activities and funding sources)

[a] Account for 97 percent of Special Program Funds.

Table 4.2 Major Program Categories (continued)

Agency	Key Policy Categories/Goal Areas	Major Program Categories
State DOTs (continued)		
Pennsylvania	System preservation Management and productivity Economic development and quality of life Mobility Safety and security Resource development and management Customer focus	Mix of modes, funding sources, systems: • Highways • Bridges • CMAQ • Grade crossings • Enhancements • STP-Urban • Interstate fund • Other
Vermont	Maintain existing facilities Improve all modes Strengthen the economy	Finance and administration DMV Policy and planning Program development Transportation operations Forest, parks and recreation Bridge Roadway Paving Rail
Washington	Preservation Safety Economic vitality Mobility Environmental quality and health	Major projects: • New construction • Reconstruction • Major widening • Minor widening • Other enhancement • Resurfacing • Bridge replacement • Safety/traffic operations • Transit capital • Non-motor vehicle Operations and maintenance Not regionally significant/no environmental impact by funding program
Wisconsin	Economic impact/benefit Traffic flow Safety Environmental impact Community impact	Major highway development (expansion) State highway rehabilitation Southeast Wisconsin freeway system State highway maintenance and traffic operations Local aids and assistance programs

Table 4.2 Major Program Categories (continued)

Agency	Key Policy Categories/Goal Areas	Major Program Categories
MPOs		
Albany	Transportation service Resource requirements External effects Preserve and manage Develop the region's potential Link transportation, land use Plan and build for all modes	Pavement Bridges Transit support Safety Community compatibility/economic development Technology/operations Mobility/congestion relief Bicycle/pedestrian Set-aside/pooled funds (for quick action)
Charlottesville	Improve connections and regional travel Improve mobility within neighborhoods, towns, counties Make transportation choices that foster livable communities	Interstate Primary roads Urban roads Secondary roads Rail safety Transportation enhancement Public transit Operations and maintenance
Dallas-Fort Worth	Transportation (8 goals) Quality of life (9 goals) Financial (4 goals)	TxDOT: • Preventive maintenance/rehabilitation • Metro area corridor projects • Urban area corridor projects • Strategic connectivity corridor projects • Structural replacement, rehabilitation • Safety • Transportation enhancements • Miscellaneous projects • District discretionary projects • Strategic priority projects
Denver	Mobility choices Safe Environmentally sensitive Efficient Integrate transportation: • Social development • Economic development • Physical development • Land use	Policy/Historic Fund Allocations: • Road capacity (61.6% of STP-M) • Road operational improve. (16.4% STP-M) • Roadway construction (18.8% STP-M) • Rapid transit (CMAQ) • Transit passenger facilities (CMAQ) • New bus service (CMAQ) • Bicycle/pedestrian enhancement (100% TE) • AQ projects (CMAQ) • Studies (3.2% STP-M) • Congestion management 'Pools' (CMAQ)
Las Vegas	Improve air quality Fully integrated modal options Geographic system integration Adequate funding for maintenance, operations, expansion Enhanced public awareness Improved transit access Improved safety and security Greater freight efficiency	Highway element Transit element TDM element Bicycle/pedestrian element Congestion management system element

Table 4.2 Major Program Categories (continued)

Agency	Key Policy Categories/Goal Areas	Major Program Categories
MPOs (continued)		
Minneapolis-St. Paul	Investment priorities: • Preserve existing highway system • Manage the highway system for capacity and safety • Expand the highway system	STP-Metro (Urban) categories: • MA 'Relievers' • MA 'Expanders' • MA 'Connectors' • MA 'Augmenters' • Non-Freeway Pass • Bicycle/walkways TE categories: • Scenic and environmental • Bicycle and pedestrian • Historic and archeological
Philadelphia	Improve safety Reduce congestion Rebuild transportation infrastructure Enhance the environment Increase mobility Link transportation improvements to land use Ensure adequate funding	Highway and transit programs by county and transit operator Pennsylvania Subregion – Lists costs by 23 funding categories and FTA programs New Jersey Subregion – List costs by 18 funding categories and FTA program recipients
San Diego	Mobility Accessibility Reliability Efficiency Livability Sustainability Equity	Highway Transit Local street and road Other
San Francisco	Adequate maintenance System efficiency Strategic expansion	Clean air program Regional operations program Congestion management agency planning Local street/road rehabilitation Transit capital rehabilitation Transportation for livable communities/ Housing Incentive Program (TLC/HIP) Regional bicycle and pedestrian program
Seattle	System preservation Improving the existing system System expansion	Shared regional competition: • Projects on the metropolitan transportation • System (MTS) TS • Projects defined as "Urban Centers" • "Manufacturing/industry centers" or 'Connecting Corridors'
Tampa	Economic vitality Accessibility Mobility options, connectivity Integration Environment Energy Safety Quality of life Preservation Efficiency	Combinations of mode, improvement type, and funding source; variable across jurisdictions

4.3 Basis for Programming

In addition to the planning and programming guidance issued by the Federal government, states and regional agencies have adopted their own processes, procedures, and guidance for how available funds, including NHS and STP funds, are to be used. In a significant number of cases at the state level, programming and the allocation of funds is directed through specific statutory language that sometimes includes authorization for and appropriations to specific projects. In other cases, statutory language dictates the portion of available funding to be committed to broad categories of investment. In still other cases, state DOTs are relatively free to determine priorities and funding flows through administrative procedures. In virtually all cases, however, processes and procedures are developed and detailed guidance documents are created to support all administrative actions related to programming and the obligation of funds, both state and Federal.

In the case of MPOs, beyond the authority granted to them in relatively generic state statutes, their procedures for programming and allocating available funds are rooted in policy arrived at administratively among member jurisdictions whose legislative bodies may, in some cases, have to ratify policy and procedure.

Table 4.3 highlights some of the bases for programming and fund allocation among the selected state DOTs and MPOs interviewed for the project.

Table 4.3 Basis for Programming

Agency	Nature of Requirements	Key Guidance Documents
State DOTs		
Arizona	Statutory	Board policies Web documents on priority programming
California	Statutory	Caltrans Commission STIP Guidelines Ten-Year State Highway Operations Protection Plan (SHOPP) Interregional TIP (ITIP) Regional TIPs (RTIP)
Colorado	Substantial statutory framework for planning and programming Authority lies with the CT Commission	CDOT Operating Manual for MPO Transportation Planning 2006 Elected Officials Guide to CDOT
Florida	Strategic Plan and Program Framework Statutory Performance Objectives Capacity expansion levels	Five-Year Work Program Instructions
Minnesota	Statutory and Administrative	Mn/DOT District Long-Range Plan Guidance (2004) STIP Funding Guidance (2005)

Table 4.3 Basis for Programming (continued)

Agency	Nature of Requirements	Key Guidance Documents
State DOTs (continued)		
Missouri	Administrative	2004 Planning Framework Missouri DOT Funding Distribution
Montana	Statutory and Administrative	STIP 2006-2008
Oregon	Statutory and Administrative	2008-2011 STIP: STP Development Manual Oregon STIP: A Citizen's Primer
Pennsylvania	Statutory takedowns of state funds for maintenance and operations	Financial Guidance document
Washington	Statutory	Two-Year Capital Construction Program
Wisconsin	Statutory and Administrative	Wisconsin State Highway Plan 2020 Transportation Aids Cost Reporting Manual STP Guidelines
MPOs		
Albany	N/A	
Charlottesville	N/A	State selects projects; Local Interagency MOU
Dallas-Fort Worth	N/A	Partnership Program design documents
Denver	N/A	Policy on TIP Preparation: 2007-2012
Las Vegas	N/A	Multiple roles, authority under state enabling legislation and local revenue-raising authority
Minneapolis-St. Paul	N/A	Solicitation for Federal Transportation Project Funding (STP, CMAQ, TE)
Philadelphia	N/A	TIP – A Guide for Municipal Officials, Special Interest Groups and Citizens
San Diego		Sales tax and toll measures dictate some projects, programs
San Francisco	N/A	SAFETEA: Third Cycle STP/CMAQ Project Selection Criteria and Programming Policy Representing FY 2007-2008 and FY 2008-2009
Seattle	N/A	PSRC 2006 Project Recommendation and Selection Process Policy Framework for PSRCs Project Selection Process Policy Framework for PSRCs Federal Funds 2006 STP/CMAQ Regional Competition Call for Projects
Tampa	N/A	Hillsborough County Transportation Improvement Program 2006/2007-2010/2011

4.4 Policy Focus for NHS and STP Funding

In many instances, through declared policy or through less formal administrative mechanisms, state DOTs and MPOs have directed how NHS, STP, and other sources of Federal and state funds are to be used in support of various categories of system improvements.

The persistent lack of adequate funds to address the full range of needs, however, is in some cases, aggravating inherent conflicts between state and regional interests over how NHS and STP funding should be allocated and invested. Some of these conflicts were introduced and discussed in broad terms in Section 2.0.

One example is the heightened priority assigned to preservation of the existing system(s), particularly at the state level. States necessarily are sensitive to the condition and performance of the highway system since they typically own a substantial portion of the network, including the portions on which costs are highest and that carry the highest volumes of traffic. Conversely, regional agencies are responsible for planning and programming with no direct operating responsibility, and are directed by elected officials who are the owners of local streets and roads as well as the regional transportation policy-makers. These local and regional interests are becoming more focused on addressing congestion problems and system expansion.

Interviewees also revealed continuing if not mounting concern over the allocation of funds across rural and metropolitan potions of the highway network as well as across modes. This concern too is, in large part, a function of the state DOTs' ownership of a large statewide network and questions over what targets should be set for condition and operating performance across the system and what funding demands these targets create.

These tensions have been addressed in a number of different ways, through policy and funding allocation procedures that directly and indirectly involve the programming of NHS and STP funds. Table 4.4 provides a summary of some of the more specific policy approaches currently in place in a sample of the agencies interviewed. Underlying these policy statements is the fact that NHS programming remains under near complete state control and is, with rare exception, directed to the highway network.

Table 4.4 Policy Focus for NHS and STP Funding

Agency	Statements of Funding Focus
State DOTs	
California	Priority to State Highway Operational Protection Program (SHOPP)
Colorado	Shifting from geographic to performance-based process, allocation
Florida	Preservation funding must meet statutory targets; Balance available for capacity expansion NHS for capacity projects on SIS, Florida Intrastate System

Table 4.4 Policy Focus for NHS and STP Funding (continued)

Agency	Statements of Funding Focus
State DOTs (continued)	
Minnesota	All available sources to support regional priorities based on performance measures and target system
Montana	Shifting to rehabilitation, and away from reconstruction
Oregon	Limit "Modernization" funding (capacity expansion) to minimum required
Pennsylvania	75-80% of available funds for maintenance, operations, preservation
Washington	Policy Principle: Infrastructure preservation and maintenance is the highest priority in funding transportation programs
Wisconsin	Priority to pavement and bridge preservation and safety
MPOs	
Albany	NHS, STP viewed as a single resource TIP spending is compared to LRTP budget goals; 50% of available funds go to categories previously underfunded, i.e., program is constantly 'correcting'
Charlottesville	N/A; programming done by VDOT
Dallas-Fort Worth	TxDOT focuses NHS funds on "Metro Area Corridor" projects in collaboration with MPO Suballocated funds(STP-MM, CMAQ programmed jointly by TxDOT Districts and MPOs Emphasis on preservation
Denver	Focus on congestion relief, capacity expansion (with CDOT focused on preservation)
Las Vegas	Debt service on prior bonding for currently committed expansion projects absorbs all current NHS, STP, and state funding
Minneapolis-St. Paul	Priority to preservation and management actions Separate processes for STP-Metro, CMAQ, TE funding
Philadelphia	Parallel but separate Pennsylvania and New Jersey processes Shifting from construction to improved performance (vis-à-vis congestion)
San Diego	STP as match for TransNet program actions
San Francisco	STP for preservation across modes; Little involvement in NHS programming
Seattle	Support for "Urban Centers" and "Connecting Corridors" are focus WsDOT assigns NHS funds to projects (small amount of NHS funding is allocated to regions, traded back for STP funds for flexibility) Combine STP and CMAQ to increase flexibility
Tampa	Balanced investment to meet regional needs

4.5 Factors in Project Evaluation: "Strategic" versus Quantitative

Despite the substantial movement toward databased quantitative project analysis and evaluation, project prioritization, programming, and fund allocation still, to a large degree, involves a combination of "strategic" or policy-based judgments and analytically based evaluations.

In the case of preservation and maintenance actions, increasingly sophisticated management systems allow competing needs and alternative improvements to be evaluated quantitatively to arrive at the 'best' set of improvements. However, even in this process, there are 'strategic' or policy decisions involved, including what condition or performance targets to use as the goal in evaluating projects and allocating funds.

The material in Table 4.5 attempts to summarize how these approaches are combined by varying agencies and what criteria and weights are used to arrive at priorities and funding allocations, regardless of what program is the source of funds.

Table 4.5 Factors in Project Evaluation: "Strategic" versus Quantitative

Agency	Approach	Factors
State DOTs		
Arizona		Mobility and economic competitiveness Connectivity Preservation Reliability Safety Accessibility Resource conservation
California	Combination strategic, analytic	Administrative funding off-the-top Then SHOPP (law requires preservation before expansion; (SHOPP has absorbed all Federal funds in recent cycles) Remaining goes to STIP (75% regional; 25% interregional) Eight criteria • Safety (4 measures) • Mobility (3 measures) • Access (1 measure) • Reliability (2 measures) • Productivity (9 measures) • Preservation (3 measures) • Return on Investment/Life • Cycle cost Formulas and quant analysis determine SHOPP projects

Table 4.5 Factors in Project Evaluation: "Strategic" versus Quantitative (continued)

Agency	Approach	Factors
State DOTs (continued		
Colorado Combined "Strategic" and Analytic	State/Federal allocation to Regions • Statewide Program from Mgmt Systems • "Strategic Projects" in statute • Regional Priorities Program from MPOs	Condition/Performance data Factors (H-M-L) • Public support • Congestion • Safety • Environment • System continuity • System preservation • Economic impact • Inter/multimodal • Ability to implement Legislation/statutory formula • 45% VMT • 40% lane-miles • 15% Truck VMT
Florida Analytic Performance-Based	State/Federal formula allocation to districts	50% population 50% gas tax receipts
Minnesota Analytic Performance-Based	"Target Formulas" based on need and performance to major goal areas	Federal allocation factors; Preservation (60%) • 20% Bridge needs • 5% Heavy Commercial VMT • 35% Pavement needs Safety (10%) • Three-Year average crash experience Mobility (30%) • 15% Congested VMT • 5% Transit (from Plan) • 10% Future VMT projections
Missouri	Combination Legislative apportionments, economic development, cost sharing, debt service taken off-the-top (estimated 15%)	TCOS distributed based on VMT, bridge deck, lane-miles, accident rates; Flex and major projects distributed on population, employment, VMT
Montana Analytic Performance-Based	"Performance Programming Process" Measures and targets	Pavement – Ride index Bridge – NBI conditions Safety – Correctable crash sites Congestion – Congestion index re: LOS
Oregon	Preservation/Bridge/Safety Modernization (capacity expansion)	Allocated from Management Systems Allocated to regions based on county data • Vehicle registration • Truck ton-miles • VMT • Population • Gas sales tax revenues • Needs

Table 4.5 Factors in Project Evaluation: "Strategic" versus Quantitative (continued)

Agency	Approach	Factors
State DOTs (continued		
Pennsylvania	Policy take-downs Formula allocation to regions	30% Population 30% Lane-miles 30% VMT 10% Land area
Vermont	Analytic	100-point scale • 20 points – regular input • 80 points – HQ input via management systems Criteria including "momentum" (how long has it been going) Almost all funds go to maintenance
Washington	Legislation set for some funds (gas tax increase) Analytic for balance	Strategies for each program area Detail depends on tools available, asset value PMs used to balance across areas
Wisconsin	"Majors" evaluated statewide Rehab on "Backbone" evaluated statewide	Plan goals, objectives Management systems
MPOs		
Albany	Quantitative and qualitative evaluations Screening and "Merit" criteria	C/B measures • Safety • Travel time • Energy/user-benefit • Life cycle • Other
Charlottesville	Strategic	Limited MPO control Dot selects projects through public involve and modeling
Dallas-Fort Worth	Non-suballocated funds (state and Federal) allocated to districts on formula: MPO resources to three "Partnership Programs": PP1 Freeways, Tollways, Permanent HOV, Managed Lanes STP P Transit and Interim HOV (Allocations to east/west areas on population, VMT, and employment)	32.63% VMT (on and off system) 22.35% Population 17.04% On-system lane-miles 14.22% Truck VMT 7.04% Population below poverty 6.72% Fatal/incapacitating crashes

Table 4.5 Factors in Project Evaluation: "Strategic" versus Quantitative (continued)

Agency	Approach	Factors
MPOs (continued		
Dallas-Fort Worth (continued)	PP3 Local Government and Air Quality funds (to subprograms based on historic levels with up/down adjustments): - Arterial Street Program - Local Air Quality Programs - Freeway interchange/ bottleneck program - Arterial interchange/ bottleneck program - HOV lanes - IT Systems - Transit (PP2) - Cost overrun/contingency	
Denver Analytic Performance-Based	STP-Metro Minimum project size ($200k construction) 100-point rating project category Criteria have varied values across project categories funded from STP-Metro	Criteria • Current congestion (0-10/15) • Pavement condition (1-20) • Safety (0-5/15) • Cost-effectiveness (0-10/30) • Usage (0-9/12) • Street condition (0-5) • LRTP score (0-15) • TSM features (0-5) • Multimodal connectivity (0-7/18) • Overmatch (0-12) • Strategic corridor focus (0-12) • Sponsor actions (0-14) • LR corridor Emphasis (0-3/4) • Multiple enhancements (0-4) • Community benefits-TE only (0-32)
Las Vegas	State dominant in NHS, STP programming State interest consistent with regions Significant local funding sources NHS and STP committed to debt service on bonds for current projects	No rigorous process in place; little to evaluate
Minneapolis-St. Paul	Separate quantitative rating processes for STP-Metro, CMAQ, and TE funding	STP-Metro criteria and points: • Relative importance of route (100/1,200) • Deficiencies and solutions (425/1,200) • Cost-effectiveness (275/1,200) • Regional development framework implementation (300/1,200) • Concept maturity (100/1,200)

Table 4.5 Factors in Project Evaluation: "Strategic" versus Quantitative (continued)

Agency	Approach	Factors
MPOs (continued		
Minneapolis-St. Paul (continued)	TE evaluation has two sets of criteria: • Categories criteria projects • General integrative criteria	TE criteria/points (Category): • Urgency (150/500) • Readiness (75/500) • Impact (125/500) • Context (100/500) • Category relationships (50/500) TE criteria/points (General): • Multimodal relationship (150/600) • Public benefit (150/600) • Development framework implementation (200/600) • Concept maturity (100/600)
Philadelphia	Major regional projects selected through qualitative evaluation and ranking on 14 criteria reflecting six LRTP goals, grouped by funding category NJDOT distribution of funds to MPOS is by population Project priorities are jointly negotiated by NJDOT and DVRPC Assignment of funds to specific programs in DVRPC portion of New Jersey is done by NJDOT	Safety: • High-accident location? • Reduce number/severity? Congestion: • Congested corridor? • TDM or SOV alternative? Preservation: • Maintain/improve existing? • Support existing Plan Center? Environment: • Outside conservation area? • Reduce SOV VMT or promote transit, alternatives? Mobility: • Serve dependent residents? • Provide non-auto options? • Link modes? Link transportation, LU: • In developed or future growth area? • Core city or developed area • Access to major rail, ports? • Access to major employ centers
San Diego	Strategic	Dictated by TransNet sales tax provisions
San Francisco	Strategic for (three) broad priorities Analytic for selecting individual projects	2030 RTP sets priorities by category and mode (maintenance, efficiency, expansion)

Table 4.5 Factors in Project Evaluation: "Strategic" versus Quantitative (continued)

Agency	Approach	Factors
MPOs (continued		

Seattle	Regional Project Evaluation Committee
	Defined H-M-L ratings and criteria
		Project types, factors, points
		Shared Regional Competition:
		• Urban Center (5)
		  - UC environmental support (20)
		  - UC impact (15)
		  - Circulation impact (15)
		• Manufacture/industry centers (50)
		  - Mobility/accessibility (50)
		• Connecting corridors (50)
		  - Benefit to center (20)
		  - System continuity (15)
		  - LR benefit/sustainability (15)
		For all projects:
		• Readiness/financial plan (30)
		• Air quality (20)
		Countywide competition:
		• As above, varied locally

Tampa	Solicitation and evaluation of STP project proposals	1-5 points across 10 weighted criteria by mode: **Highways:** • Safety 16.5% • Congestion relief 15.7% • Neighborhood impact 11.1% • Natural environment 9.5% • Existing facility improve 9.7% • Emergency access 7.2% • Activity center access 8.0% • Regional connectivity 8.7% • Historical/cultural/ archeological 6.6% • Goods movement 6.9% **Transit:** • Highest ridership corridors

4.6 STP-Enhancement Selection Process

The use of the 10 percent mandatory STP set-aside for Transportation Enhancements is handled in a variety of different ways. Some state DOTs retain responsibility to select and program Enhancement projects at the state level based on varying degrees of local input; others retain a portion of the set-aside for programming at the state level and allocate the rest to regions, statewide for priority-setting. Still others allocate all of the Enhancement set-aside for regional priority setting either by DOT district offices or by MPOs.

Table 4.6 STP-Enhancement Selection Process

Agency	State Role/Responsibility	Local Role/Responsibility
State DOTs		
Arizona	Solicitation and review through State Transportation Enhancement Review Committee (TERC)	Project initiation, advocacy with MPOs
California	25% reserved for SHOPP street enhancement and conservation lands Districts identify projects HQ reviews for eligibility, incorporate into STIP	75% to regional agencies for programming in RTIP
Colorado	Allocated to Regions 45% VMT/40% Lane-Mile/15% Truck VMT	Collaborative project selection
Florida	Guidance from HQ Criteria by project type 10% reservation for state priority Balance: statutory formula distribution	Collaborative project selection
Minnesota – Decentralized	Over regional funding targets, formula allocation established jointly, including TE funds	Establish priorities within region
Missouri	Statewide Competitive Portion 25% of funds retained by state for: • Beautification • Welcome centers	Local Competitive Portion 75% of funds to TMAs and MODOT Districts on population Local selection processes
Montana	Allocated to 112 local agencies/organizations by population	75% to Districts by population Projects submitted by local agencies
Oregon	Centralized selection committee Minimum size ($200k); 5 weighted criteria; Travel experience (25) Technical merit (20) Commercial and financial support (20) Importance (urgency, benefit) (20) Special emphasis criteria (15)	Proposals for state competition
Pennsylvania	20% set-aside for state priorities Balance allocated by formula to regions: 80% population; 20% area	MPOs and RPOs select projects
Vermont	State statute via Vtran	Sponsors file applications Committee with citizens selects
Washington	State Enhancement Advisory Committee Recommends projects WsDOT Sec approves 20% of statewide significant	80% regions suggest projects via local involvement
Wisconsin – Centralized	Centralized selection committee $100,000 minimum State guidelines for priorities	Proposals submitted District review, prioritization

Table 4.6 STP-Enhancement Selection Process (continued)

Agency	State Role/Responsibility	Local Role/Responsibility
MPOs		
Albany	State-driven process, 8 criteria, selection from regional priorities on 2- to 4-year cycles; Minimum project 4,100,000	Local priorities sent to NYDOT; CDTC allocates $1 million STP for regional projects not selected ("second chance" program)
Charlottesville		
Dallas-Fort Worth	TxDOT manages (MPO role increasing) State guidelines, selection TTC selects from ranked lists	MPO evaluates proposals; ranks as preferred/not preferred; Assumes 80% bicycle/pedestrian
Denver	STP-TE allocations to regions	Solicitation and project selection: • Cost-effectiveness (0-30) • Overmatch (0-12) • Strategic corridor (0-12) • Sponsor actions (0-14) • Community benefits (0-32) Policy: 95% to bicycle pedestrian
Las Vegas	Determines MPO target funding level Approves final project list	Solicits, evaluates, prioritizes through limited analytics, for state approval
Minneapolis-St. Paul	N/A	3 categories of projects: • Scenic and environmental • Bicycle and pedestrian • Historic and archeological Separate ranking in each category: • 5 "Category" criteria (with points/500) • 4 General criteria (with points/600)
Philadelphia	For Pennsylvania projects, state keeps, commits projects for 20% of funds; 80 allocated to regions by 80% population, 20% land area TE Advisory committee selects from regions' priorities NJDOT solicits and selects TE projects in New Jersey based on: • Transportation relationship • Readiness for construction • Maintenance commitment • Supplemental funds • User impact • Regional/community benefit • Elements of a larger plan • Timing and urgency • Economic/tourism benefits • Cultural/historic value • Community endorsements • One of 140 "Urban Aid" areas	Pennsylvania counties propose projects; Regional Transportation Committees review; MPOs approve New Jersey locals propose TE projects to NJDOT
San Diego	75% of funds allocated to regional agencies	SANDAG solicits, evaluates, awards TE projects as part of Regional Smart Growth Program

Table 4.6 STP-Enhancement Selection Process (continued)

Agency	State Role/Responsibility	Local Role/Responsibility
MPOs (continued)		
San Francisco	75% of funds allocated to regional agencies	MTC manages a regional grant competition for counties under its Transportation for Livable Communities/Housing Incentive Program (TLC/HIP)
Seattle	4 project categories: • Nonmotorized • Scenic resources • Historic resources • Environmental	H-M-L ratings by PSRC; recommend forwarded to WsDOT
Tampa	NHS programming	STP, enhancement priorities with districts: • Support pedestrian, bicycle trips • Enhance scenic resources • Enhance historic/culture/ archeological • Environ mitigation • Educational • Maximum enhancement impact • LRTP consistency

4.7 Under 5,000 Secondary Road Funding

TEA-21 and its extension(s) prior to passage of SAFETEA-LU in August 2005 provided states with the authority to obligate a limited level of STP funds to minor collector routes in areas under 5,000 population to compensate for the elimination of the Federal Aid Secondary funding. SAFETEA-LU did not continue this provision although an unsuccessful attempt was made to reintroduce it in a technical corrections bill in the last Congress. It is expected that a similar effort will be made to restore this provision in the current Congress.

Interviewees were asked what, if any, policies they have adopted to continue to support these needs.

Table 4.7 Under 5,000 Secondary Road Funding

Agency	Approach
State DOTs	
Arizona	No set process
California	Caltrans keeps funds for use on state highways; trades STP flexible funds
Florida	Formula allocation to Districts on centerline miles Establish priorities with local governments
Minnesota	District priorities identified by place; funds assigned to small program allotment
Missouri	DOT uses funds on projects that pass through small cities Locals select projects in areas 5,000-200,000; No local responsibility below 5,000 In 5,000-200,000, DOT keeps balance sheet for cities
Oregon	Funds combined in overall regional allocations; priorities assigned in regions
Pennsylvania	Funds combined in overall regional allocations; priorities assigned in regions

5.0 "Best Practices" in NHS and STP Programming

5.1 The "Best Practice" Dilemma

"Best practices" in programming NHS and STP funds are difficult to define, or may be defined with respect to a number of different desired outcomes that may conflict to a degree. For example, "best practices" certainly would be expected to direct available funds:

- To where the need is greatest in a general sense, e.g., to preservation, operations, or system expansion;
- To where the need is greatest in a specific sense, e.g., to particular corridors, areas, or facilities;
- To maximize the benefits weighed against the costs of proposed improvement(s);
- To assure responsiveness and reduce the time required to address a problem; and/or
- To a program that is broadly embraced by sponsoring, funding, and implementing agencies, including respective policy-makers and stakeholders, i.e., is accepted as fair and equitable as well as effective.

There are also other questions in the search for "best practices." Is a "best practice" one that has been adopted widely over time as a measure of its effectiveness? Or, is it a unique, new approach being used successfully on a limited basis in particular circumstances.

Examples of the former might include the advances being made in performance measurement and performance-based planning and programming. Examples of the latter might include the action in California to deliver the majority of resources, historically available to the State, to metropolitan regions for project prioritization and funding decisions.

The material that has been assembled from interviewees during the project clearly illustrates wide variation in approaches to programming generally, and to programming NHS and STP funds, specifically. It also points up that wide variations remain across states and metropolitan region in terms of planning and decision-making traditions, philosophies of governance, and statutory frameworks.

Finally, all of these factors remain in flux: policy and program direction changes at all levels of government; roles and responsibilities for investment decisions shift; demands for services and facilities are continually changing, as is political and community leadership; and the public temperament on revenue-raising and public investment changes.

Given these questions and conditions, the research team has sought to distill from information that has been developed a set of ideas, approaches, and processes that appear generally to be noteworthy with respect to the overarching notion of making better decisions about transportation investment from the NHS and STP programs that are critical to every state and metropolitan region of the country.

5.2 Observations on "Best Practices"

Noteworthy approaches and practices related to NHS and STP programming are highlighted below, drawn from the interview results presented in Section 3.0 and 4.0. They are organized in two sections, one dealing with state DOT practices, and one dealing with MPO practices.

Within each section, observations are made about:

- Approaches to the general programming process that impact how NHS and STP funds are used; and
- Approaches to the use of NHS and STP funds, specifically.

5.2.1 Noteworthy Practices among State DOTs

The continued dominant role of state DOTs in directing the use of NHS funds provides one of the major distinctions between state and metropolitan programming processes. Among other key distinctions is evidence at the state level of growing emphasis on preservation of the system, while metropolitan interests appear to place somewhat more emphasis on growing congestion and related capacity expansion opportunities.

Features of the General Programming Process

There are a number of broad features among the varied state DOT programming processes that impact how, and how effectively, NHS and STP funding is utilized. Many of these are the subject of discussion in the forthcoming report from NCHRP Project 8-50, "Factors that Strengthen the Planning-Programming Linkage."

- **Treating Federal and state funding as a combined resource.** It has become a widespread practice to conduct the programming process without allocating and assigning funds from individual Federal programs to specific projects independently,

or to do so as an accounting procedure somewhat separate from project prioritization and selection, i.e., to build STIPs and TIPs by looking at available Federal and state funds as a pool from which to best address needs and priorities. Deferring the assignment of program funds to specific projects to the final step needed for program development or even fund obligation provides maximum flexibility along the path to implementation. In some cases, the source of funds is shifted even during early stages of individual project implementation to achieve needed flexibility.

- **Assigning program funds to projects first from programs whose requirements are most restrictive.** By assigning the most restrictive program funding earlier, e.g., safety and enhancement funds, flexibility in the use of other program funds is preserved and enhanced.

- **Allowing subrecipients and project sponsors to "trade" funds.** Trading Federal funds, whose use is typically more restricted or regulated, for state funds has been shown to speed project implementation, potentially reducing project costs. When trading is done on a discounted basis (a dollar of Federal funds traded for less than a dollar of state funds), available resources are expanded and leveraged.

- **Maximizing the availability of state funding.** The need for added investment is widespread. Attempts to enact new sources seemingly are under constant discussion. Aside from the obvious need for additional non-Federal funding, it appears that flexibility in meeting needs is materially enhanced when the Federal portion of available funding is reduced, i.e., when states are less rather than more dependent on Federal funds.

- **Recognizing that portions of the state system are of greater importance than others as a focus for investment.** Designation of subsystems within the overall state highway network as being of "statewide significance" is occurring in many states, using various frameworks. The apparent advantage lies in strengthening the rationale for differential investment in and varied performance targets (condition and operating performance) on various portions of the network, allowing available funds to go farther toward meeting goals and serving needs, and protecting the broader state interests, systems, services, and facilities. NCHRP Project 8-50 identified a number of designated "systems of statewide significance" or programs targeted to subsystems, including:

  - California — Interregional Transportation Network
  - Florida — Strategic Intermodal System (SIS); Florida Interstate Highway System
  - Colorado — "Strategic Projects"; Corridor Vision initiative
  - Minnesota — Interregional Corridor System
  - Pennsylvania — Interstate Fund
  - Wisconsin — "Majors"; Corridors 2030 Backbone System

An extension of this notion at the metropolitan scale is under limited use in several states (California, Minnesota), where "metropolitan system" designations and/or allocation of funds to the metro level are being used to the same effect, and in Seattle where a Metropolitan Transportation System has been designated.

- **Priority given to system preservation, reinforced by the application of management systems, and data-driven performance-based planning and programming processes.** There is widespread formal and informal recognition of system preservation as a priority, particularly at the state level. The increasingly widespread use and documentation of management systems and performance measures and targets provides a powerful rationale for allocation of funds to this set of needs and actions.

- **Use of "pools" of funding or amounts "taken off the top" of available Federal allocations.** Many state DOTs programs "pool" funds to either support state priorities, e.g., economic development initiatives, or in anticipation of small, urgent project needs that are not planned or anticipated, or that require rapid response without going through the STIP amendment process. Some are supported with combined state and Federal funds, others totally from state sources. These types of funds also provide states with added flexibility and responsiveness.

- **Clear documentation of policies related to priority setting, programming, and fund allocation.** Inadequate levels of funding and heightened competition for funds within the transportation arena and across other public services requires that there be clear statements of policy and procedure about how available funds are to be used. At one level, policies governing how much of available funding should be committed to major categories of investment are being offered, e.g., preservation, operations, and capacity expansion; on another level, states are providing more effective guidance to professional practitioners as well as to citizens and elected officials on how the programming process is carried out as a means of easing the decision-making process and building consensus on a preferred course of action.

- **Expanding roles in priority-setting and programming for district and regional DOT staff and local stakeholders.** Balancing state and local interests in transportation investment is a constant issue, particularly where funding is not fully adequate to meet needs. Increasingly, states are initiating and supporting formal mechanisms for structured local involvement and leadership in arriving at investment priorities on the regional scale.

- **Development of intermediate length plans and programs.** Long-range transportation plans are increasingly taking the form of policy documents, especially at the state level, while 'programs' of projects are focused on 4-year cycles and even shorter budget (and political) cycles. Effective management of resources and system improvement has given rise to the formulation of various intermediate length plans and programs (10 to 12 years) so that the actual flow of funds and commitments to complex projects and activities can be seen in a more realistic timeframe that cover the periods often required for project completion.

Features in the Use of NHS and STP Funds

Features specifically associated with the programming of NHS and STP funds include:

- **Use of NHS and STP funds for multimodal investment.** Multimodal use of NHS and STP program funds at the state level is limited, presumably because of the scope of real and perceived highway system needs exceeds available funding in most cases.

  As a combined resources coupled with state funds, there are instances where multimodal use of NHS and STP funds is made possible and occurs on a limited scale:

  – California — Fifty percent of NHS funding is transferred to the STP program from which broader use can be made of funds.

  – Colorado — NHS funds are used to support 'ancillary' investments such as bus stops and park-and-ride facilities.

  – Florida — After preservation targets are met from combined funds, 50 percent of the remaining funds are for capacity expansion ("mobility improvements") on the State's "Strategic Intermodal System" (SIS), which is multimodal in scope, and 15 percent is dedicated to transit.

  – Washington — Between 10 and 40 percent of NHS funds typically are transferred to the STP program to facilitate preservation activities and a small portion of NHS funding is used to support the ferry boat system.

- **Sequencing the allocation of funds.** Allocation of funds in most of the states interviewed follows a sequence in which policy-level determinations are made over the balance of funds to be made available for major categories of investment, e.g., preservation, operating improvements, and capacity expansion. In most instances these decisions are made based on historical investment patterns and approved by state transportation commissions, working with DOT staff. In some instances, however, control and authority over these decisions and even specific major project authorizations lies with state legislatures. When these estimates are made, planning level allocations typically are made to districts or regions and data made available from planning and management systems to guide regional priority setting. Resulting project or investment proposals are then reconciled or negotiated through the State.

  Allocation procedures vary and are the product of political accommodations over time supported by data at the state and regional levels. Among the processes are the following and related variants:

  – **Legislated distributions**, e.g., California, where 25 percent of new STIP funding is retained for state investment decisions and 75 percent is allocation to counties for regional decision-making based on 75 percent population and 25 percent state highway miles; Florida, where funds are allocated to DOT Districts based on 50 percent population and 50 percent county level gas tax receipts.

- **Negotiated, policy-based distributions**, e.g., Arizona, where 37 percent of funding is allocated to the Phoenix region, 13 percent to the Tucson region, and the remaining 50 percent among other counties.
- **Policy-based distributions based on a mix on needs data and system performance characteristics,** e.g., Minnesota, where District allocations of Federal funds are based on bridge needs (20 percent), heavy commercial VMT (5 percent), average pavement needs (35 percent), three-year crash average (10 percent), congested VMT (15 percent), transit (5 percent), and future VMT projections (10 percent). (State funding factor weights vary with greater weight given to congested VMT.)
- **Policy-based distributions for a portion of available funds**, e.g., Oregon, where "modernization" funds are allocated to regions by formula, including vehicle registrations, truck ton-miles, VMT, population, gas tax revenues, and needs from the Oregon Highway plan.

- **STP Enhancement Investments.** States interviewed described three basic approaches to STP Enhancement programming:
  - Several states administer the STP Enhancement program on a **statewide competitive basis.** Arizona's program operates through a reimbursable grant governed by Joint Project Agreements with project sponsors;
  - Most **states retain a small portion** of the required 10 percent STP Enhancement resource for state priorities (10 to 25 percent) and allocate the remainder to regions or districts for project solicitation and selection; and
  - Several **states allocate the full authority** for Enhancement project selection to regions or districts, either through the formulas or processes mentioned above or through separate formulas, e.g., Colorado which based Enhancement allocations on VMT (45 percent), lane-miles (40 percent), and truck VMT (15 percent).

5.2.2 Noteworthy Practices among MPOs

The continued dominant role of state DOTs in directing the use of NHS funds focuses MPO Federal highway programming authority to STP funds, including those amounts made available through state policy for regional Enhancement programming, as noted above.

Features of the General Programming Process

- **Greater attention is paid to individual program funding as a separate act.** MPO programming processes often feature solicitations for project proposals specifically for the use of STP (or CMAQ) funds. Most MPOs manage the programming and award of STP funds through an annual or biennial 'solicitation' process among regional jurisdictions, guided by extensive documentation of the policies, processes, criteria, and forms to be used in making application.

- **Many MPOs develop policy-based allocations to broad categories of improvements.** These provide a framework that can often be tied back to the goals of long-range transportation plans and help assure that project priorities serve generally to support the plan. DRCOG in Denver, for instance, has developed a policy-based allocation of funding that guides programming and includes: Roadway capacity (62 percent); roadway reconstruction (19 percent); roadway operational improvement (16 percent); and studies (3 percent).
- **Most MPOs use a two-stage solicitation and evaluation process.** The first stage is a 'screening' or 'eligibility' process to assure that competing projects reflect regional plans, are adequately supported locally, and can proceed in a timely manner through the project development process, including an ability to draw down obligated funds in a timely manner. The second stage typically involves rigorous rating and ranking based on a variety of factors and criteria and weighting arrangements as indicated in Sections 3.0 and 4.0.

Features in the Use of NHS and STP Funds

Features specifically associated with the programming of NHS and STP funds by MPOs include:

- **Varying levels of dialogue.** The level of dialogue that takes place between state DOTs and MPOs concerning the programming of NHS funds varies substantially. Most of the MPOs interviewed indicated they had little or no role in NHS programming in their region and were relatively accepting of the fact; several also indicated, however, that they were less than fully informed or knowledgeable about the state's process for programming NHS funds. There were, however, exceptions suggesting that regular and comprehensive dialogue between the state DOT and the MPO was taking place and was of obvious benefit to both in addressing effectively major regional issues.

- Among the more interesting policies and procedures were the following:

  - The Capital Region Transportation Committee (CDTC) in ***Albany, New York*** has, with agreement of the NYDOT, been able to use a substantial portion of the funding available to the region (45 percent) to make improvements off the state system in recognition of where the most pressing regional problems lay;
  - The Puget Sound Regional Council (PSRC) in ***Seattle, Washington*** operates two parallel competitions for combined regional STP and CMAQ funding. The Shared Regional Competition uses approximately 43 percent of available funds for proposed projects that are on the designated Metropolitan Transportation System, the Countywide Competition awards approximately 57 percent of available funds.
  - The Denver Regional Council of Governments (DRCOG) in ***Denver, Colorado*** has limitations on projects proposed for the use of the regions STP funds, including: 1) a limit on the number of project proposals a jurisdiction can submit for Federal funding in any cycle based on a sliding scale of population and employment; and 2) a limit Federal funding per project to $75,000 for nonconstruction projects and $200,000 for construction projects;

- The Metropolitan Council of the Twin Cities (Met Council) in ***Minneapolis-St. Paul, Minnesota*** requires that STP project proposals have a "hard" match and that Federal funds requested cannot be used for preliminary engineering, design, or right-of-way acquisition. Stand-alone projects for drainage, sound barriers, fences, or landscaping are not eligible in the STP category. However, these types of activities are eligible if they are a part or parts of a larger project which is eligible.
- The North Central Texas Council of Governments (NCTCOG) in ***Dallas-Ft. Worth, Texas*** has developed three "Partnership Programs" each with a different focus and character, each of which is a conduit for the flow of different Federal program funds, as described earlier in Section 3.0.

- **STP Enhancement Investments.** MPOs interviewed described a number of interesting approaches to the programming and award of STP Enhancement funds under their control:
  - The CDTC in Albany, New York reserves an extra $1 million in STP funds over and above the programming commitments made by NYDOT as a "Second Chance" Enhancement program to assure that local interests in eligible Enhancement activities are met;
  - The DRCOG in Denver, Colorado commits 95 percent of its Enhancement funding to bicycle and pedestrian projects as a matter of informal policy;
  - The SANDAG evaluates and programs funds for Enhancement project proposals within its broader Regional Smart Growth Program, which ensures that Enhancement funds are awarded in concert with larger regional plan and growth management goals; and
  - The MTC in the San Francisco Bay area evaluates and programs funds for Enhancement project proposals within its broader Transportation for Livable Communities/Housing Incentive Program (TLC/HIP), which ensures that Enhancement funds are awarded in concert with larger regional plan and growth management goals.

Whether the approaches and procedures described above can literally be declared "best practices" affecting NHS and STP programming is an interpretation that can only be made by the reader who may be considering how these approaches compare with their own, and how arduous it might be change current approaches and adopt any of those noted. The interview process, however, generally reveals: 1) a reasonable level of satisfaction by interviewees with the procedures currently in place and described here; but also, 2) considerable continuing interest and effort being applied to advancing and improving on these approaches and procedures.

Characteristics of the National Highway System Program (NHS) and the Surface Transportation Program (STP)

The evolution of the FHWA programs took a well-documented and dramatic turn with enactment of ISTEA. This transportation act and the two reauthorization bills that have followed redirected the Federal focus and resources in a number of ways, including a shift in emphasis:

- Away from construction of the Interstate system to multimodal investment and system preservation, performance, and operations;
- Toward use of transportation investment to produce outcomes that align more directly with broader community and national objectives (e.g., economic development and competitiveness, environmental quality, safety and security, etc.);
- Toward more inclusive and participatory planning and decision-making processes, including public-private partnerships;
- Toward broadened authority at the regional level for aspects of investment decision-making; and
- Away from independent flows of funds through narrow categorical programs toward broader program eligibility and more flexible use of funds within and among programs.

Within this evolving framework, there remain fundamental differences in how the two programs are managed. The most significant of these are: 1) the persistent dominant role of the states in directing the use and allocation of NHS funds on higher design highways largely on the Federal-aid system; and 2) the large role now played by MPOs in allocation of the portion of STP funds that by statute are suballocated to the Urbanized Area level by the states. These distinctions, coupled with the evolving and varied relationships between state DOTs and MPOs have led to significant differences in programming processes generally at the state and regional levels.

Both the NHS and STP were first authorized in ISTEA and are considered among the "core programs" of the FHWA.

- In the case of the NHS, ISTEA contained a mandate for designation of a 155,000-mile National Highway System, including the Interstate System, as well as a $27 million six-year authorization to support eligible improvements on the NHS.[15]

- In the case of the STP, ISTEA created a highly flexible source of funds to support multimodal improvements on a consolidated Federal-aid system that replaced the former Federal-aid Primary, Federal-aid Secondary, and Federal-aid Urban system designations. ISTEA authorized $23.9 billion over six years for STP investments.

These two Federal programs have been changed only on the margins through two subsequent reauthorizations, TEA-21 in 1998 and SAFETEA-LU in 2005. Multiyear authorization levels for both programs are noted in Table A.1. The focus of this project, however, will necessarily be on allocation processes and procedures used in the final years of TEA-21 for which data are available. Table A.2 indicates the FHWA's authorization and obligation levels for fiscal year (FY) 2003 and authorization levels for FY 2005.[16] Additional key features of each of the current programs are described in the sections below.

Table A.1 NHS and STP Authorization Levels
Billions

Program	ISTEA *(1992-1997)*[a]	TEA-21 *(1998-2003)*[b]	SAFETEA-LU *(2005-2009)*[c]
NHS	$27.0	$28.6	$30.5
STP	$23.9	$33.3	$32.6

Notes: [a] P.L. 102-240, Section 1003(a)(2) and (3).
[b] www.fhwa.gov/tea21/factsheets/nhs.htm; www.fhwa.gov/factsheets/stp.htm.
[c] www.fhwa.gov/safetealu/factsheets/nhs.htm; www.fhwa.gov/safetealu/factsheets/stp.htm.

[15]Section 1006(a) of the Intermodal Surface Transportation Efficiency Act of 1991, P.L. 102-240.

[16]U.S. Department of Transportation, Federal Highway Administration, Intermodal Surface Transportation Efficiency Act, *The National Highway System: The Backbone of America's Intermodal Transportation Network,* U.S. Department of Transportation, Washington, D.C., 1994.

Table A.2 NHS and STP Authorizations for FY 2004 and 2005 and FHWA Obligation Levels for FY 2004
Billions

Program	FY 2004 Authorizations[a]	Obligations[b]	FY 2005 Authorizations[c]
NHS	$5.647	$7.266	$5.911
STP	$6.612	$7.411	$6.680

Notes: [a] www.fhwa.gov/legsregs/directives/notices/n4510541a1.htm.
[b] Federal Highway Administration, *Highway Statistics 2004*, Table FA-4B, *Obligation of Federal Funds by the Federal Highway Administration During Fiscal Year 2004,* October 2005.
[c] www.fhwa.gov/safetealu/factsheets/nhs.htm; www.fhwa.gov/safetealu/factsheets/stp.htm.

The NHS Program

Designation of the NHS was a strategic response to the end of an era that saw completion of Interstate Highway System construction. The intent of Congress in mandating creation of the NHS was stated in this way:

> *"…to provide an interconnected system of principal arterial routes which will serve major population centers, international border crossings, ports, airports, public transportation facilities, and other intermodal transportation facilities and other major travel destinations; meet national defense requirements; and serve interstate and interregional travel." (P.L. 102-240, Section 1006(a))*

Based on Congressional direction, the NHS includes:

- The full Interstate System;
- Other Principal Arterials, both urban and rural, and highways providing access to major intermodal facilities (e.g., ports, airports, public transportation, railroad terminals);
- The Strategic Highway Network (STRAHNET) and major STRAHNET connectors important for essential movement of defense-related personnel, materiel, and equipment; and
- High-priority corridors identified in Section 1105(c) of ISTEA….[17]

[17] Ibid.

By law, the NHS was to be limited to 155,000 miles, plus or minus 15 percent. Current official mileage is 164,479 (2004).[18]

Eligible Investments and Activities

Eligible expenditures under the NHS program include:

1. Construction, reconstruction, resurfacing, restoration, and rehabilitation of the system.
2. Operational improvements.
3. Construction and/or operational improvements to a Federal-Aid Highway not on the NHS if:
   - The proposed project is in the same corridor and in proximity to a fully access-controlled highway designated for the NHS;
   - The improvement will improve the level of service on the fully access-controlled highways and regional travel; and
   - The improvement is more cost-effective than an improvement to the fully access-controlled highway.
4. Highway safety improvements.
5. Transportation planning.
6. Highway research and planning.
7. Highway-related technology transfer activities.
8. Capital and operating costs for traffic management and control facilities and programs.
9. Fringe and corridor parking facilities.
10. Carpool and vanpool projects.
11. Bicycle transportation and pedestrian walkways.
12. Development, establishment, and implementation of management systems.
13. Participation in natural habitat and wetland mitigation efforts (concurrently or in advance of construction.
14. Publicly owned intercity bus terminals.

[18] Includes 2,720 miles not open to traffic; www. fhwa.dot.gov/policy/ohim/hs04/pdf/hm30.pdf.

15. Infrastructure-based intelligent transportation systems (ITS) capital improvements.

16. A broader range of modal projects in American territories.[19]

Apportionment of NHS Funds to the States

NHS funds are apportioned to the states on a formula that is unchanged from TEA-21 and includes the following factors:

- Lane-miles of principal arterials (excluding Interstate) 25 percent
- Vehicle-miles traveled (VMT) on principal arterials 35 percent
- Diesel fuel used on the state's highways 30 percent
- Per capita principal arterial lane-miles 10 percent

Flexible Use of NHS Funds[20]

One of the most important features introduced in ISTEA involved the broadening of eligible expenditures under the NHS program and greater flexibility to use NHS funds for improvements other than highway projects. One of the basic questions to be explored in the next phase of the current study is to determine to what degree NHS funds have been used for these broader, multimodal purposes in addition to investing in our major roadways, and what decision-making procedures have been used to support programming of NHS funds to specific projects, activities, or portions of the network.

There are three broad categories of "flexibility" in the current Federal highway and transit programs:

- There is broader direct highway/transit eligibility within both highway and transit programs;
- Funds can be transferred among highway programs, including to programs that provide broader highway/transit eligibility; and
- Funds can be transferred between the FHWA and FTA to support each other's programs.

[19] U.S.C. Title 23, Chapter 1, Subchapter 1, Section 103.

[20] *Flexible Funding for Highways and Transit and Funding for Bicycle and Pedestrian Programs,* Memorandum to Regional, Division and MPO field staff from C. Burbank and B. Hynes-Cherin, February 6, 2006.

NHS funds provide ***direct eligibility*** for:

- Transit improvements within an NHS corridor;
- Planning;
- Fringe and corridor parking;
- Carpool and vanpool projects; and
- Public transportation management systems and publicly owned intracity and intercity bus terminals.

NHS funds can be ***transferred within highway programs*** in the following ways:

- Up to 50 percent can be transferred to STP, CMAQ, Interstate Maintenance, Highway Safety Improvement Program (HSIP), Recreational Trails Program (RTP), and the Highway Bridge Program (HBR) (100 percent may be transferred with approval of the U.S. DOT Secretary and sufficient opportunity for public comment);
- NHS funds may be ***transferred into the FTA's programs*** for FTA-supported projects, consistent with NHS eligibility.

In addition to the ability to flex funds out of the NHS program, most "core" highway programs can flex funds *into* the NHS.

The STP Program

Unlike NHS funds, STP funds are segmented into three different categories of use:

- A portion of STP funding is "suballocated" to urbanized areas with populations of more than 200,000, designated as "Transportation Management Areas" (TMA). Use of these "STP-Metro" funds is subject to planning and programming processes directed by the MPOs;
- A portion of STP funding is to be used to meet needs in small urban areas of the states (with populations of less than 5,000) under processes determined by each state; and
- The portion of STP funding that is not suballocated or protected for use in small areas remains available for the states to use for any eligible purpose.

Eligible Investments and Activities

Beginning with enactment of ISTEA in 1991, STP funds have been available to fund a wide range of multimodal projects and related activities, including:[21]

- Construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements for highways and bridges;
- Capital costs for transit projects;
- Carpool, fringe and corridor parking, bicycle and pedestrian projects;
- Highway and transit safety and hazard elimination projects;
- Highway and transit research and technology transfer activities;
- Capital and operating costs for traffic monitoring, management, and control facilities;
- Surface transportation planning programs;
- Transportation enhancement activities;
- Transportation Control Measures (TCM);
- Development and establishment of management systems; and
- Natural habitat and wetlands mitigation.

Enactment of SAFETEA-LU specified several new STP-eligible activities:[22]

- Advanced truck stop electrification systems;
- Targeted intersection improvements (safety and congestion);
- Environmental restoration and pollution abatement; and
- Noxious weed control and establishment of native species.

Apportionment of STP Funds

Prior to Federal apportionment of STP funds to the states, sums are set aside for several smaller programs for 2005 and 2006.[23] For 2005 and 2006, these sums total $25.8 million and $27.8 million, respectively, and are reduced to less than one-half that amount in the out years. Remaining STP funds are distributed to states based on the following factors:

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[21] U.S. Code, Title 23, Chapter 1, Subchapter I, Section 133.

[22] www.fhwa.dot.gov/safetealu/factsheets/stp.htm.

[23] These set asides include: Operation Lifesaver (2005-09); Rail-Highway Crossing Hazard Elimination (2005 only); for administration of On-the Job Training/Supportive Services (2005-06); and for administration of Disadvantaged Business Enterprise Training (2005-06).

- Total lane-miles of Federal-aid highways — 25 percent
- VMT on lanes of Federal-aid highways — 40 percent
- Estimated tax payments attributable to highway users in the states into the Highway Account of the Highway Trust Fund; i.e., "contributions." — 35 percent

Individual states are to receive no less than 0.5 percent on the apportioned funds.

ISTEA and TEA-21 required that 10 percent of apportioned funds be set aside to be used by states for Safety Improvements and 10 percent for Transportation Enhancements. The Safety set-aside was dropped from 2006 on in SAFETEA-LU, however, and replaced by a separate HSIP. In addition, SAFETEA-LU modified the Transportation Enhancement set-aside to require expenditure of the greater of 10 percent of the apportionment or the amount set aside in 2005.

Suballocation of STP Funds

STP funds are effectively divided into three "pots" with respect to their use across a state: a portion for Urbanized Areas with populations of more than 200,000 deemed TMAs with the remaining portion going to the states, with a specific amount for areas with populations of less than 5,000 (110 percent of what such areas received in Federal-Aid Secondary funds in 1991).

SAFETEA-LU has effectively increased the proportion of STP funds to be suballocated to urbanized areas. Under ISTEA and TEA-21, this amount was specified as 62.5 percent of the 80 percent of funds remaining after the 10 percent set asides for Safety and Enhancement. SAFETEA-LU applies the same 62.5 percent suballocation to the 90 percent of apportionments available following the continuing 10 percent Enhancement set-aside. Full obligation authority for STP funds is also to be suballocated. STP funds remaining after suballocation to urbanized areas are available for use in any area of the state, with the exception of funds to be directed to areas with populations of less than 5,000, as described above.

Flexible Use of STP Funds

In addition to providing direct eligibility for transit and other nonhighway investments, up to 50 percent of STP funds (other than those suballocated to Urbanized Areas) can be transferred to the NHS, CMAQ, HSIP, IM, RTP, and HBRRP programs. STP funds may also be transferred to the FTA to support eligible transit projects.

Table A.3 NHS and STP 2006 Apportionments and Suballocations

Agency	Allocations NHS (Millions)	STP-TMA	Total, Both Programs
State DOTs			
Arizona	$104.9	$106.2	$211.1
California	532.3	581.0	1,113.3
Colorado	95.7	92.0	187.7
Florida	262.7	287.5	550.2
Minnesota	103.0	127.8	230.8
Missouri	139.1	149.0	288.2
Montana	68.3	38.2	106.5
Oregon	81.7	79.1	160.8
Pennsylvania	181.8	207.3	389.1
Vermont	35.5	29.8	65.3
Washington	98.4	113.2	211.6
Wisconsin	124.0	124.0	248.0
MPOs			
Albany	N/A	4.2	
Charlotte	N/A	10.4	
Charlottesville	N/A	N/A	
Dallas-Ft. Worth	N/A	70.3	
Denver	N/A	25.4	
Las Vegas	N/A	19.0	19.0
Minneapolis-St. Paul	68.0	39.5	107.5
Philadelphia	N/A	39.2	
San Diego	N/A	27.6	
San Francisco	N/A	33.3	
Seattle	N/A	28.5	
Tampa	N/A	28.9	
Totals[a]	**$6.0 billion**	**$6.3 billion**	

Source: Federal Highway Administration Notice N 4510.604, April 12, 2006, Table 1, Table 11. www.fhwa.dot.gov/legsregs/directives/notices/n4510604a1.htm; web documents for individual agencies.

Note: Agency capital program figures taken from web documents, where available; not independently confirmed.

[a] Federal program totals are for full Federal programs, not only amounts listed for states and MPOs.

Selected Bibliography

Selected sources have been used to support the preliminary assessment of NHS and STP fund allocation practices highlighted above. Traditional, discrete source materials are listed below, listed below followed by a list of state DOTs and MPOs whose web sites were searched for specific data and information.

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■ Web Sites Searched

In addition to references included above, web sites for all state DOTs and MPOs were searched and relevant material was downloaded and reviewed to support the preceding observations.

Interview Participants

State DOT Interviewees

Arizona	Mr. Donald Mauller, Manager of Planning
California	Ms. Rachel Falsetti Mr. Fardad Falakfarsa
Colorado	Ms. Jennifer Finch, Director, Division of Transportation Development Ms. Heather Copp, Chief Financial Officer
Florida	Mr. Bob Romig, Director, Office of Policy Planning Mr. Richard Glaze, Consultant to FDOT
Minnesota	Mr. Bob Hofsted, Division of Program Management
Missouri	Mr. David Nichols, Director, Program Delivery Mr. Todd Grosvenor
Montana	Ms. Sandy Straehl, Director Rail, Transit and Planning Division
Oregon	Mr. Steve Leep, Manager, Program and Funding Services
Pennsylvania	Mr. Larry Shifflet, Director, Transportation Program Development Division
Vermont	Mr. Mel Adams, Director, Policy and Planning Mr. Matt Langham Mr. Marv Kingsbury
Washington	Mr. Aaron Butters, Strategic Planning and Programming Mr. Brian Smith
Wisconsin	Mr. Mark Wolfgram, Administrator, Division of Transportation Investment

MPO Interviewees

Albany, New York Capital District Transportation Committee (CDTC)	Mr. John Poorman Executive Director
Charlottesville, Virginia Charlottesville-Albemarle MPO	Mr. Harrison Rule
Dallas-Ft. Worth, Texas North Central Texas COG (NCTCOG)	Ms. Christie Jestis Principal Transportation Planner
Denver, Colorado Denver Regional COG (DRCOG)	Mr. George Scheuernstuhl Director Metro Vision Planning and Operations
Las Vegas, Nevada Regional Transportation Commission of South Nevada (RTC)	Mr. Martin James Planning and Programming
Minneapolis-St. Paul Metropolitan Council of the Twin Cities (Met Council)	Mr. Carl Ohrn Senior Transportation Planner
Philadelphia, Pennsylvania Delaware Valley Regional Planning Commission (DVRPC)	Mr. Charles Dougherty Director, Technical Services Division
San Diego, California San Diego Association of Governments (SANDAG)	Mr. Jose Nuncio Finance Department
San Francisco, California Metropolitan Transportation Commission (MTC)	Ms. Alix Bockelman Director, Programming and Allocations
Seattle, Washington Puget Sound Regional Council (PSRC)	Mr. Charlie Howard Director of Planning Ms. Karen Richter
Tampa, Florida Hillsborough County MPO	Ms. Beth Alden Transportation Planning and Programming