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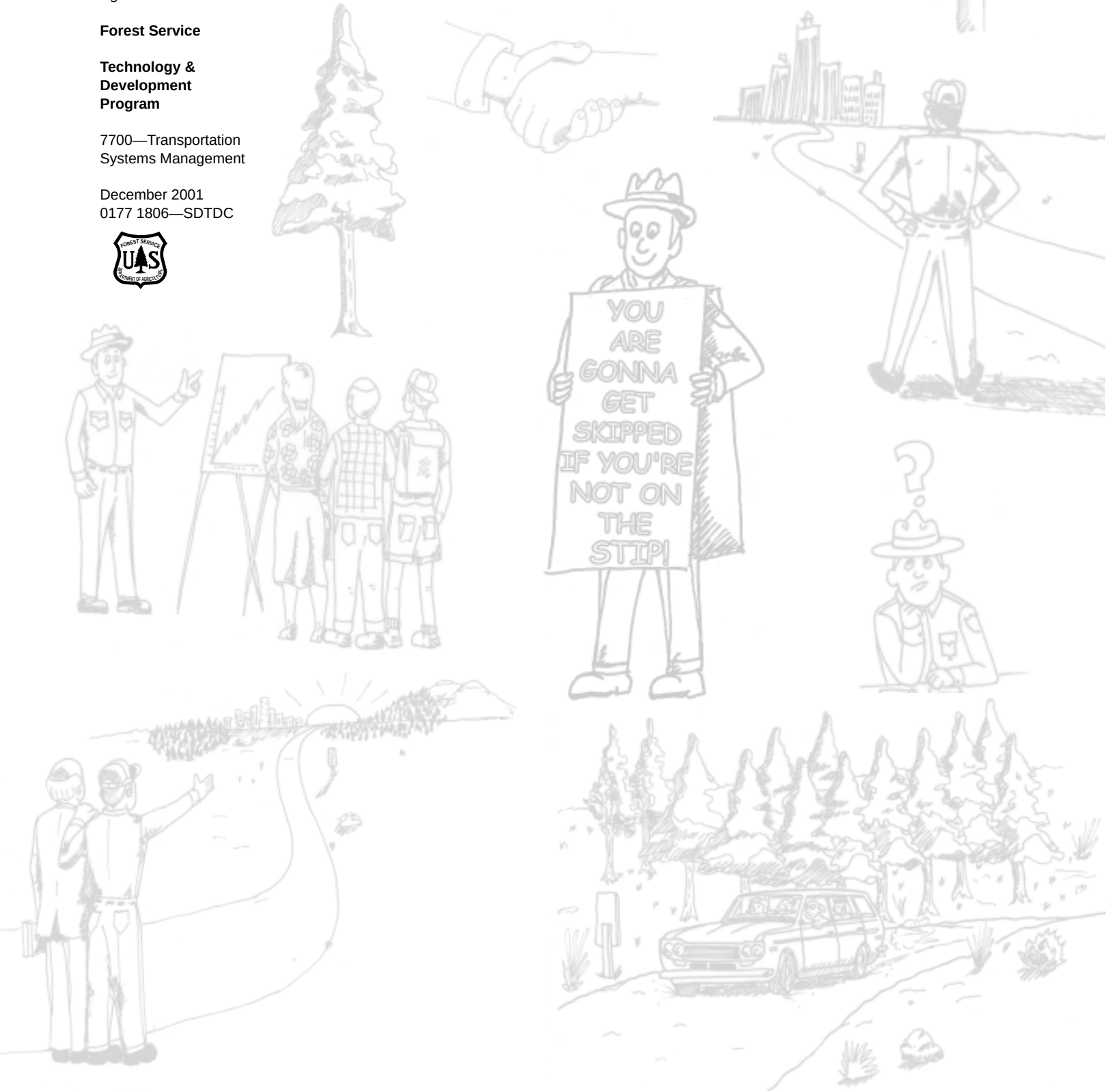
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Innovative Approaches to Transportation— A Guidebook



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Innovative Approaches to Transportation— A Guidebook



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Preface	1
Introduction—Why A New Approach to Transportation	3
Chapter 1—Forest Service Transportation Planning Process	
Transportation Opportunities for the National Forests and Grasslands	5
Transportation Planning—Caring for the Land and Serving People	5
Transportation Planning—Building a Seamless Network	11
Chapter 2—FHWA and FTA Funding Programs and the Transportation Planning Process	
The ABCs of Statewide and Metropolitan Transportation Planning	13
Statewide Transportation Planning	16
Metropolitan Transportation Planning	20
Chapter 3—Implementation Funding	
Transportation Program Funding Tables	27
Chapter 4—Project-Level Highway Issues and Opportunities	
Intermodal Transportation Linkages: TEA-21 Connects an Island	57
Chapter 5—Success Stories	
Tonto National Forest Interpretive Sites: Nominated for the Excellence in Highway Design Award	63
Kancamagus Scenic Byway: Changing Landscapes on the White Mountain National Forest	64
Lake Tahoe Basin Management Unit: Emerald Bay State Park Enhancement	65
Willamette and Deschutes National Forests: McKenzie-Santiam Pass National Scenic Byway	66
Dixie National Forest to Bryce Canyon National Park: Red Canyon Bicycle Trail and Heritage Center and Highway 12 Scenic Byway	67
The Columbia River Gorge National Scenic Area: Many Partners, Multiple Opportunities	68
Buffalo Bill Cody Scenic Byway: The Most Beautiful 52 Miles in America!	69
Edge of the Wilderness: Increasing Organizational Capacity	70
Arizona Department of Transportation: Funding Forest Service Experts	71

This document is a cooperative effort between the Federal Highway Administration's (FHWA) Federal Lands Highway and the United States Department of Agriculture (USDA) Forest Service. It outlines a strategy to better integrate transportation planning activities conducted by the States, local transportation officials, and the USDA Forest Service for federally funded projects that provide access to or within national forest land. At this writing, the Forest Service Roads Policy has not been approved and the FHWA Transportation Planning rulemaking process pertaining to the Forest Service has not been completed. However, this general strategy can aid in determining how and when to work with States, metropolitan planning organizations, Tribal Governments, local transportation officials, and other Federal agencies to identify and plan successful highway projects.

WHY A NEW APPROACH TO TRANSPORTATION?

The United States Department of Agriculture (USDA) Forest Service is comprised of 155 national forests and 20 national grasslands covering 193 million acres of the United States. Within these forest lands is a system of more than 380,000 miles of roads and over 133,000 miles of hiking, biking, motorized, and equestrian trails. Better transportation links are emerging between State and local transportation systems (including transit systems) and forest transportation systems to help people access national forests. As the connection between these systems becomes more seamless, this coordinated transportation network stimulates new national forest uses and activities for recreation, allows for more effective forest management, and enhances rural transportation infrastructure for surrounding private land. However, this increased use creates challenges for maintaining national forest resources such as wildlife, fish, plants, water quality, stream function, and environmental quality overall.

Seamless transportation systems and the national forests' commitment to building better relationships with States and other partners will help us to achieve our mission of effective land stewardship and public service. By working together throughout the transportation planning process, we can ensure that transportation systems are developed to better serve communities and forest visitors. In partnership with State DOTs and local transportation officials, a greater portion of the \$200+ billion available through Federal Highway Administration (FHWA) and Federal Transit Authority (FTA) surface transportation programs can be used to construct transportation projects

that are mutually beneficial. The FHWA and FTA funding is very flexible and can be used for many activities beyond just constructing roads including enhancing roadside areas, providing traveler services (e.g., construction of visitor centers), constructing trails, and improving environmental conditions alongside roads and trails.

However, most of this funding cannot be accessed directly by the Forest Service. To benefit from most of these FHWA and FTA funding programs, the Forest Service must partner with the State and local governments. The Forest Service must participate in the State's transportation planning process to ensure that projects that are important to the Forest Service are included in the State's project priority list (known as the State transportation improvement program or STIP).

This guidebook outlines the transportation planning process and serves as a primer on

- which activities are eligible for funding,
- where to find funding,
- actions required for Forest Service managers to access and benefit from these funds and programs,
- which agencies to partner with, and
- how to integrate Forest Service objectives with State and local objectives.



The guidebook is designed to assist Forest Service managers, staff, and partners in developing relationships and in maximizing participation in FHWA and FTA surface transportation programs currently funded through the Transportation Equity Act for the 21st Century (TEA-21). These programs will be funded in the future through the reauthorization of the surface transportation act. With the technical assistance available through the FHWA and the FTA, the Forest Service can help further regional and local community goals and help to fulfill the Forest Service mission.



TRANSPORTATION OPPORTUNITIES FOR THE NATIONAL FORESTS AND GRASSLANDS

The Forest Service can significantly improve access to the national forests and grasslands while reducing impacts to adjacent areas. Because we are part of a larger community of local, regional, and State interests, integrated transportation planning can offer new and innovative funding opportunities that benefit many groups and meet the following mutual objectives:

- Improving safety and user comfort
- Restoring watersheds
- Protecting wetlands
- Improving wildlife habitat connectivity
- Protecting threatened, endangered, and sensitive species and their habitats
- Improving accessibility
- Enhancing tourism
- Preserving and interpreting cultural and natural heritage sites
- Improving recreational trails
- Identifying, marketing, and enhancing scenic byways
- Addressing the causes of air pollution

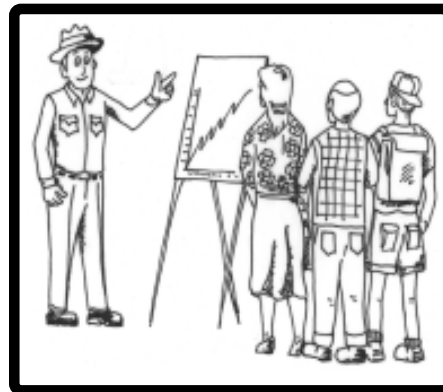
In addition, transit systems have the potential to expand national forest and grassland access for underserved populations and to improve environmental conditions of the forest. Careful transportation planning can enhance this potential.

TRANSPORTATION PLANNING—CARING FOR THE LAND AND SERVING PEOPLE

Planning transportation systems, and managing road and trail systems are identified in the Forest Service strategic plan as critical issues that require attention. Forest Service policy, practice, and procedures for transportation planning are derived from directives in the Forest Service Manual (FSM) and Forest Service Handbook (FSH).

Relevant sections include:

- FSM Section 1900 and FSH Section 1900 (directs forest planning)
- FSM Section 7700 and FSH Section 7700 (directs transportation planning, primarily for roads)
- FSM 2350 and FSH 2309.18 (directs planning for trail systems)



How Does Forest Service Transportation Planning Fit?

The Forest Service implements policies to develop transportation systems that will best serve current and anticipated

management objectives and will accommodate public use of National Forest System (NFS) land (FSM 1920). This is accomplished through transportation planning. Funding to accomplish the goals outlined in forest plans and other transportation planning initiatives is limited when having to rely solely on the appropriated funds available to the Forest Service. By supplementing Forest Service appropriations with TEA-21 funds, more of our plans goals can be met to improve transportation systems that provide access to and within the forests, and improve environmental conditions of resources impacted by the presence of roads and trails.

Forest plans should address the forest's transportation system needs and reflect Forest Service national and regional strategic plans. The forest plan should also define the future vision for the forest's transportation system.

1 FOREST SERVICE TRANSPORTATION PLANNING PROCESS

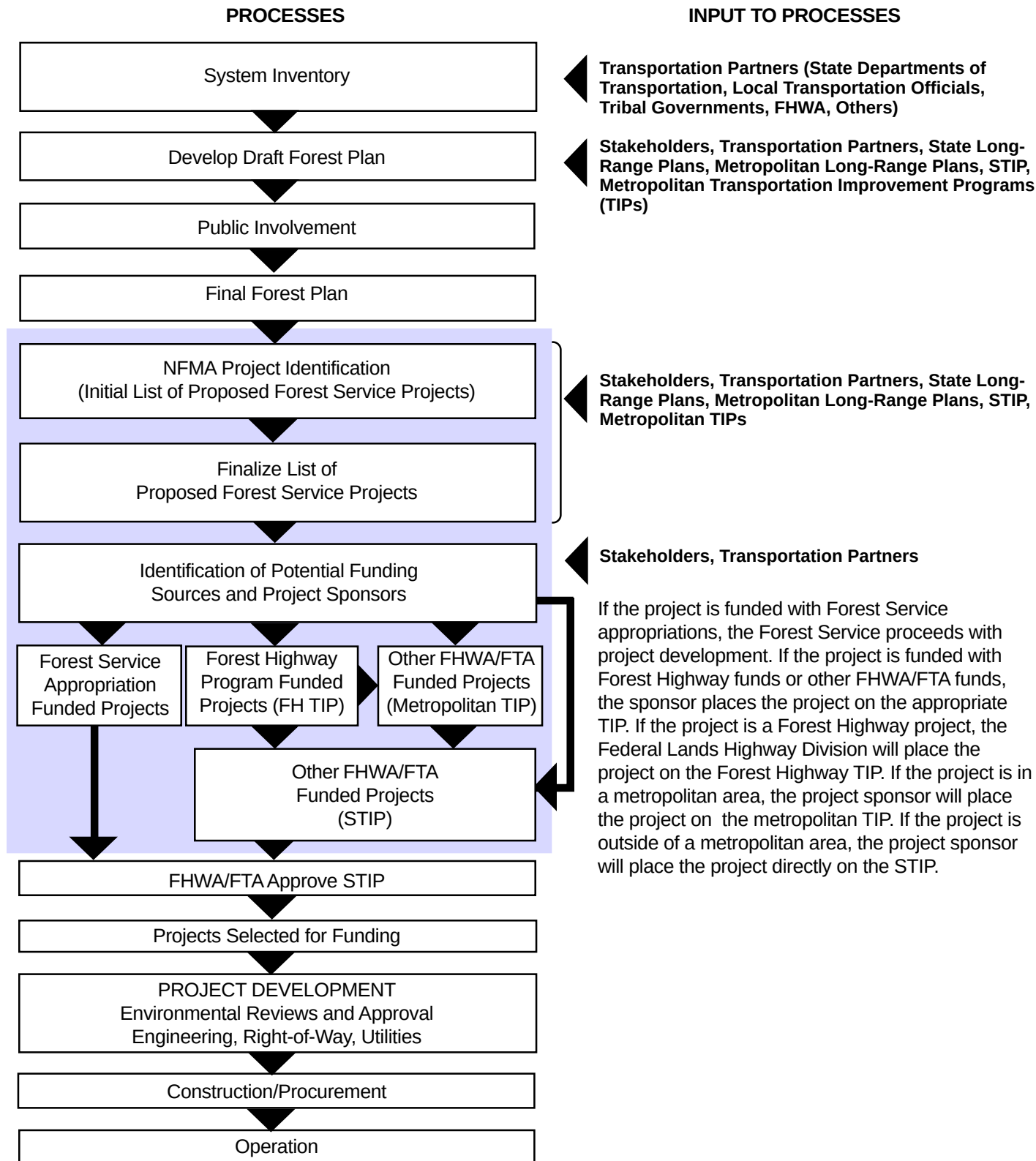


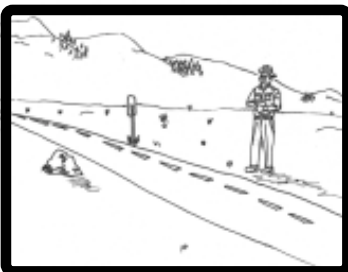
Figure 1—Forest Service planning process.

- National and regional strategic plans outline goals and objectives at the programmatic level, defining the vision and direction for transportation networks.
- The forest plan identifies critical transportation-related issues as they relate to forest management. All decisions at the forest level flow from the goals articulated in the forest plan. The plan should clearly define the desired future resource conditions and visitor experiences envisioned for the forest.

Partnering. A thorough transportation planning process includes partnering with State Department of Transportation (DOT) and local transportation officials, tribal governments, local communities, and other public and private groups. These groups should be brought into the transportation planning process at the beginning. It is important that partners goals and objectives are incorporated into the proposed improvements to the transportation system. By working with partners early in the process, better projects will be developed and supported by our partners and others affected by the transportation system.

Get Ready!

Transportation analysis at all levels should follow a sequential process (figure 1) that defines and addresses transportation needs in context with environmental, social, and financial considerations. The FSM 7700 and *Roads Analysis: Informing Decisions about Managing the National Forest Transportation System* (1999) outline a process in which each step addresses the objectives of forest plans, legislated mandates, policies and fiscal limitations, environmental regulations, and public needs.



System Inventory. The first step is to know where your forest transportation network is, its condition, and its users. Table 1 describes some tools available for the planning team and the

decisionmakers to obtain this data. Do not forget to invite your partners to assist with the inventory and analysis of the transportation system. Often State and local roads are the foundation of the transportation system within the forest boundary. Connections beyond the boundary are

also key components of the system. State and local transportation officials can describe their future plans for their transportation system, relevant issues related to the system, and provide data that may be useful to the Forest Service when we perform planning for our transportation network.



The Forest Plan. The forest plan will define a set of goals for the transportation system and may include a list of major proposed projects or opportunities. State and local transportation officials should be included from the beginning of forest planning and other transportation planning processes. They can provide information that will help in developing goals and projects to be pursued. The forest should also obtain transportation planning documents that have been developed by the State and local transportation officials when

the forest begins to revise the forest plan. The States all have long-range transportation plans that provide information on the long-range goals of the States transportation system. These plans may have proposed improvements to transportation facilities, including those that provide access to and within the forests. The States also have STIPs that include specific improvements to the transportation system that are to be implemented within the next three years. Other transportation planning and land use documents should also be obtained from local officials. It is also important to look for avenues to incorporate our partner's needs and objectives when developing the transportation component of the forest plan. This partnering should begin prior to the public involvement process. The finalized forest plan should be provided to transportation agencies and others who may be impacted by the plan's goals or projects.

Get Set!

NFMA Project Analysis. Using the roads analysis process described in table 1, further National Forest Management Act (NFMA) project analysis occurs after forest plan approval. The NFMA should establish an initial prioritized list of proposed projects that support forest plan goals. The forest should encourage partners and stakeholders to participate in this process.

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FOREST SERVICE TRANSPORTATION PLANNING PROCESS

Table 1—Transportation analysis tools.

Tool	Description
The Roads Analysis Process (RAP)	The RAP provides the foundation for transportation information in the forest plan. It is a comprehensive tool for evaluating road systems and road management strategies. An interdisciplinary team assesses the extent and current condition of the roads system as compared to the desired condition. The team considers road access related to ecosystem health and sustainability, commodity uses, recreation, social and cultural values, and administrative uses. Any formal changes in road use require a RAP. Roads analysis is intended to complement and integrate previous and ongoing analytical efforts—access and travel management plans, transportation plans, watershed analysis, NEPA analysis, and multiforest plans for conserving specific species, e.g., grizzly bears and lynx. Information gathered can also support many other planning efforts such as corridor plans for national scenic byway designation proposals.
Engineering Inventory and Planning	Forest engineering departments are responsible for many different inventories to monitor the location and condition of the transportation system. This information contributes to the formation of goals and objectives in forest plans.
Transportation Atlas	The transportation atlas consists of maps, inventories, plans, and associated information on the system of roads, trails, and airfields within the forest or other administrative unit.
Road inventory	The road inventory is a component of the transportation atlas. At the forest or multiforest scale, inventories supply information for broader assessments of road management needs. At the watershed or area scale, a comprehensive and complete inventory encompasses all classified, unclassified, and temporary roads.
Road Management Objectives (RMOs)	RMOs identify a management objective for each road in the NFS. An RMO is developed from the management area direction, access management objectives, or other resource management direction, standards, and guidelines.
Operation Criteria	These criteria determine how a road will be operated and maintained.
Road Maintenance Levels	These levels define the level of service that a road provides and the maintenance required.
Traffic Service Levels	These levels describe a road's significant characteristics and operating conditions.
Functional Classes	These classes describe how a road services land and resource management needs and the character of service provided.

Table 1—Transportation analysis tools (continued).

Tool	Description
Management Systems	Management systems provide information on the inventory, existing and future condition, and operational characteristics of transportation systems to assist planners and decisionmakers in identifying opportunities and developing transportation system improvement priorities.
Road Maintenance Management Systems	These systems assist transportation system managers in setting priorities; planning budgets; and scheduling, performing, monitoring, and evaluating maintenance of forest roads.
Safety Management Systems	These systems provide information to assist in reducing the number and severity of traffic crashes on a transportation system. Potential strategies for improving transportation system safety are identified, considered, implemented, and evaluated in all phases of planning, design, construction, maintenance, and operation.
Bridge Management Systems	These systems provide information to assist in ensuring that Forest Service bridges are safe and efficiently accommodate current and forecasted traffic.
Pavement Management Systems	These systems provide information to assist in implementing cost-effective pavement reconstruction, rehabilitation, and preventive maintenance programs.
Congestion Management Systems	These systems provide information to assist in monitoring transportation system performance and determining alternative strategies for alleviating congestion.
Traffic Counts	Traffic counts describe traffic volume per specified time frame (hour/day/year) or vehicle miles traveled.
Trails Inventory and Planning	Trails inventory is described in FSM 2350 and FSH 2309.18 (Trails Management Handbook). Trails, their use (motorized or nonmotorized), and their conditions are included in the transportation atlas. Trail planning is an integral part of recreation strategic planning and the transportation system.

1 FOREST SERVICE TRANSPORTATION PLANNING PROCESS



Finalize List of Proposed Forest Service Projects.

The next step is to work cooperatively with State and Federal agencies, tribal governments, counties, communities, and other stakeholders to refine the

initial list of prioritized projects that were identified through the NFMA process. A great deal of support can be generated through this early involvement. It is critical that the State and local departments of transportation be primary partners in this process. If they understand the needs and support the priorities, it improves the likelihood that these projects will be included in the STIP.

Identifying Potential Funding Sources and Project Sponsors.

After setting project priorities in partnership with other stakeholders, eligible projects must be categorized by potential funding sources, and project sponsors must be identified. Many of the projects can be funded with several FHWA and FTA surface transportation programs because the eligibility criteria often overlap. State DOTs, metropolitan planning organizations (MPOs), RPOs, other local transportation officials, the FHWA, the FTA, and other stakeholders can assist in determining potential funding sources. After reviewing the available sources of funding for each project, the funding sources that are most likely to be able to provide funding should be identified along with a project sponsor. For projects outside of metropolitan areas, the State, RPO or local transportation officials will likely be the project sponsor. For projects within metropolitan areas, the MPO or public transportation provider will likely be the project sponsor.

The final forest plan includes goals for the transportation system. The implementation of projects is a means for achieving the goals set forth in the forest plan. Not all of the projects that are required to achieve the goals will be included in any one STIP. It is likely that only a few projects will get onto any one STIP. Therefore, the process of developing a prioritized list of projects, and identifying project sponsors and funding is an ongoing process. Over a period of time, many of the Forest Service recommended projects are likely to be included on future STIP updates and the goals of the forest plan will be accomplished.

Project Funded by Forest Service Appropriations or FHWA/FTA Programs.

If the project is funded with Forest Service appropriations, the Forest Service proceeds with project development. If the project is funded with Forest Highway funds or other FHWA/FTA funds, the sponsor places the project on the appropriate transportation improvement program (TIP). If the project is a Forest Highway project, the Federal Lands Highway Division will place the project on the Forest Highway TIP. If the project is in a metropolitan area, the project sponsor will place the project on the metropolitan TIP. If the project is outside of a metropolitan area, the project sponsor will place the project directly on the STIP.

The Forest Highway program planning process is outlined in the following steps:

- Projects are identified for funding at each State's annual Forest Highway program meeting. A formal triparty partnership, consisting of the State, the Forest Service, and the FHWA Federal Lands Highway division office, is responsible for identifying the projects at the meeting.
- Identified projects are included on the proposed Forest Highway TIP (FH TIP) prepared by the local FHWA Federal Lands Highway division office.
- The local FHWA Federal Lands Highway division office (with concurrence from the State and Forest Service) approves the FH TIP. (Currently, no public involvement is required prior to approval. However, it may be required in the future.)
- After the FH TIP is approved, for projects in nonmetropolitan areas, it is transmitted by the FHWA to the State for inclusion in the STIP. No further action is required by the State. For projects located in metropolitan areas, the FHWA transmits the FH TIP to the MPO for inclusion in the metropolitan TIP. No further action is required by the MPO.

Project Selection. After the STIP has been approved (see chapter 3), the project can be selected, and the project development process begins.

Because of the competitive nature of transportation project funding, coalitions of support are crucial to obtaining funds for projects that serve forests and forest

communities. The Forest Service can be a very attractive partner with its various sources of funding and in-kind support (i.e., right-of-way, engineering, or environmental services) that can be used as matching funds. Many small communities and organizations lack the workforce or the financial ability to meet the matching requirements of many of the FHWA and FTA programs. Projects with multiagency support and strong local backing generally rank higher, increasing the chance of being approved for funding by the State DOT. Leveraging funding from a variety of sources will greatly improve the likelihood of the project being selected for funding (placed on the STIP).

Involving the Public.

Public involvement

- occurs at all phases of transportation and project planning [e.g., forest plan updates, NFMA processes, National Environmental Policy Act (NEPA) process],
- broadens the understanding of all interested groups and citizens for a specific program or project,
- solicits ideas for solutions to transportation problems, and
- leads to long-term relationships that help ensure consensus by the Forest Service, the public, and local communities.



Public involvement is important because:

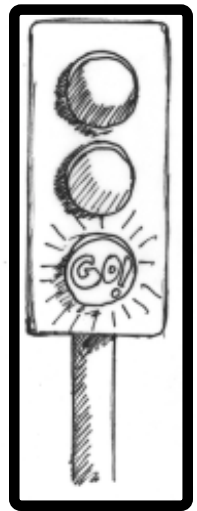
- Public input, with consensus from interested parties, will result in a better project and fewer delays in the project development process.
- Public lands belong to the public; they have the right to participate in decisions.

Public involvement is expensive, but poorly designed public involvement is even more expensive in terms of project delays and community dissent.

Go!

Project Development. Transportation planning ends when the project has been included on the approved STIP. The next phase, the project development process, includes:

- Project planning
- Preparing project-level NEPA and biological-opinion documents
- Developing a preliminary design
- Preparing the plans, specifications, and cost estimate package for project construction bids



The project development process involves decisions on the location, design, and operation and maintenance of transportation services and systems. Project level environmental impacts and mitigation measure including vegetation management, fire risk management, wildlife and fish crossings, and watershed restoration activities are addressed at this time.

A common mistake has been to apply for and to accept highway program funding, but to be unprepared to complete the project, and/or operate and maintain the project after its completion. Competing priorities may result in inadequate staffing to accomplish the project. Sufficient staffing resources are required for the design, on-the-ground work, administrative assistance, maintenance, and the determination of sources for matching funds. Partners can, and often do, assume responsibility for operating or maintaining a project or service after they are implemented.

TRANSPORTATION PLANNING—BUILDING A SEAMLESS NETWORK

Multiple governmental jurisdictions have responsibilities for the transportation systems within national forests and grasslands. Transportation networks are seamless only when these networks are managed holistically. It is critical that national forest transportation planning efforts be integrated with those of the States, other Federal agencies, Tribal governments, counties, and communities to improve the effectiveness of the entire system.

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FOREST SERVICE TRANSPORTATION PLANNING PROCESS

Local communities and the Federal lands that border them are intricately linked. National forests adjacent to communities contribute significantly to the economy, cultural identity, and quality of life in these communities. National forests provide scenic beauty and recreational opportunities and help nourish ecological values, benefiting local communities and nearby metropolitan areas. As members of the greater community, national forest transportation planners and other managers need to work with area leaders to create transportation, land use, and economic development strategies that preserve natural resources while supporting local economic and other community objectives. Here is a good example of how Utah and Wyoming used transportation planning partnerships.

Successful Expectations for Transportation Planning Partnerships in Utah

When Dale Peterson of the Utah DOT asked if a partnership incorporating the National Park Service and the Utah DOT would also benefit the Forest Service, the Utah Forest Supervisors and Bob Harmon, Region 4 Transportation Engineer, jumped at the opportunity. The partnership plan included a review of what was working and what was not between the Utah DOT and the Forest Service. “Sometimes we could affirm that things were going very well. We identified a need for a new memorandum of understanding (MOU) with a more contemporary reflection of what we do,” said Mary Wagner, Forest Supervisor on the Dixie National Forest.

The MOU partnership charter defines several ways to help the agencies work together. One is to meet, at least annually, to address agency needs. The MOU emphasizes early involvement in everything from project proposals and development to maintenance. The task team for the MOU revision determined that the most effective coordination occurred at the forest and Utah DOT regional levels, although statewide coordination was effective when needed. The task team developed a simple directory for the forests and Utah DOT, listing contacts for the design, construction, operations and maintenance, and planning of transportation systems.

The partnership between the Forest Service and Utah DOT continues to grow and strengthen. An example of this continued cooperation, the Utah DOT invited the Forest Service to participate in their “Context Sensitive Design” futuring exercise to improve their transportation planning process and DOT operations. A more integrated NEPA effort by the State, involving the Forest Service and other stakeholders in the development of alternatives, is envisioned.

Has this relationship resulted in a better transportation system for our stakeholders and partners? Innovative projects such as the Red Canyon Bicycle Trail (chapter 5) are evidence that agency partnerships coupled with local community involvement can succeed. For further information about this partnership contact the Region 4 transportation engineer at (801) 625-5224 or the Dixie National Forest at (435) 865-3700.



FHWA and FTA surface transportation programs can provide significant funding for implementing transportation improvement projects that assist the Forest Service in achieving their mission. Understanding and actively participating in the statewide and metropolitan transportation process is required for the Forest Service to benefit from these funds because

most of the funding is provided to the State DOTs, local transportation officials, and public transportation providers for their distribution. These organizations determine the projects to be funded by the FHWA/FTA programs through the statewide and metropolitan transportation planning processes.

By participating in the statewide and metropolitan planning processes, the Forest Service can benefit from FHWA and FTA funding programs in two ways:

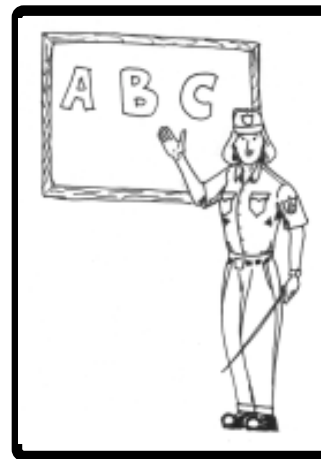
- Direct funding can be provided for Forest Service transportation projects.
- Partners can construct projects that are beneficial to the Forest Service.

There are many FHWA and FTA programs that provide funding for a wide variety of surface transportation projects. In addition to simply funding the construction or reconstruction of roads, many of these programs can provide funds for activities that go beyond road construction (see chapter 3, table 5 for a list of activities). This chapter describes how the Forest Service can participate in the statewide and metropolitan transportation planning processes.

The FHWA and FTA programs are funded through surface transportation reauthorization acts. Surface transportation reauthorization acts include provisions that contain specific funding levels for each individual FHWA and FTA program. A new surface transportation reauthorization act is signed into law when the previous one expires. The current act, TEA-21, was signed into law on June 9, 1998, and expires on September 30, 2003. TEA-21 authorizes about \$200 billion for the surface

transportation programs in Title 23 U.S.C. (Highways, administered by the FHWA), and Title 49 U.S.C. (Mass Transportation, administered by the FTA). Titles 23 and 49 require that all projects funded under those titles be included in formal, mandated transportation planning processes.

Chapter 3 summarizes the eligible activities and program requirements for the FHWA and FTA funding programs.



THE ABCs OF STATEWIDE AND METROPOLITAN TRANSPORTATION PLANNING

The primary goal of transportation planning is to encourage and promote the safe and efficient management, operation and development of surface transportation systems that will serve the mobility needs of people and freight, and foster

economic growth and development while minimizing transportation-related environmental impacts. Obtaining funding is one way to accomplish the primary goal of transportation planning because it gives you the ability to implement your future vision for the transportation system. The transportation planning process considers all modes of transportation and is continuous, cooperative and comprehensive.

The transportation planning process produces two key products:

- Long-range transportation plans
 - Contain the long-range vision for the transportation system.
- Transportation improvement programs (TIPs)
 - Contain a priority list of proposed FHWA/FTA funded projects and strategies for the upcoming three years (minimum) that are consistent with the long-range plan.

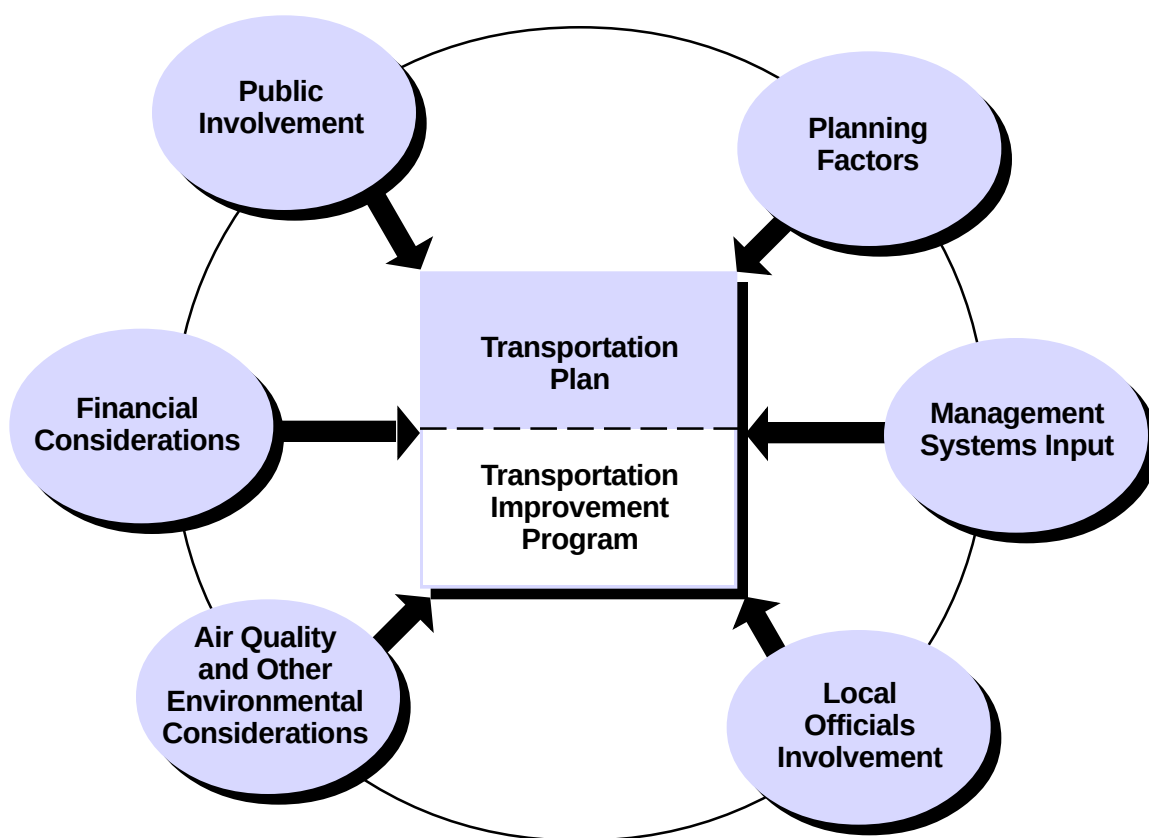


Figure 2—Major components of transportation planning.

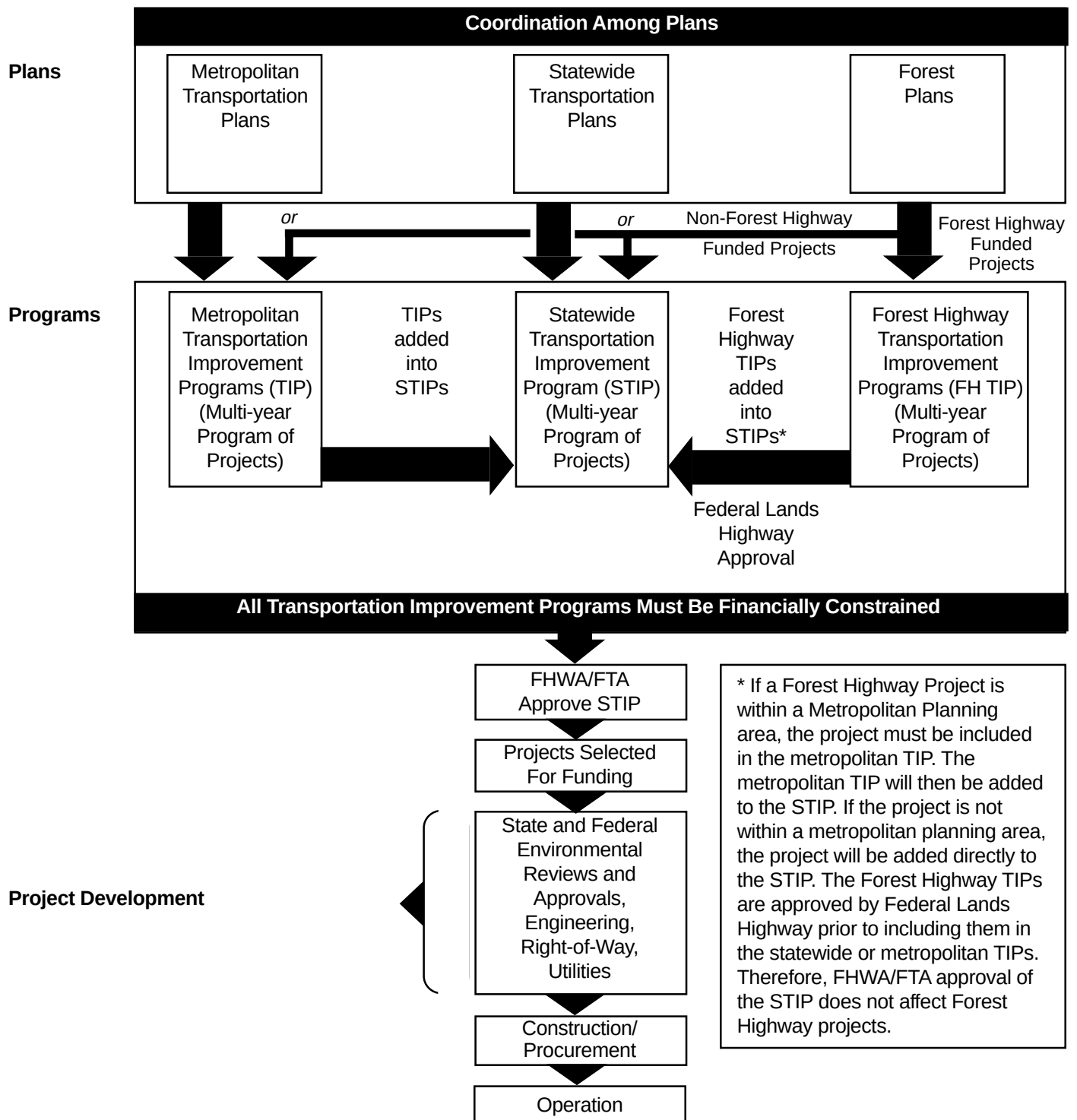


Figure 3—Coordination of transportation planning processes.

Major components contributing to the development of long-range transportation plans and TIPs are shown in figure 2. The result of the transportation planning process is an approved STIP. Projects that are included on the approved STIP have FHWA and FTA funding identified for their implementation.

STATEWIDE TRANSPORTATION PLANNING

Statewide planning is the foundation of all transportation planning. All other transportation planning, including Forest Service transportation planning is a subset of the overall transportation planning for a State. Figure 3 shows the coordination of the statewide, metropolitan, and Forest Service transportation planning processes. The process begins by developing transportation plans with long-range goals. Long-range goals from metropolitan and forest plans should be incorporated into the statewide plan. The next step in the process is to develop the STIP that identifies and prioritizes projects and strategies that support the long-range goals. Following FHWA and FTA approval of the STIP, the project is selected and the project development process begins which includes the NEPA process. Individual steps of this process will be discussed throughout the remainder of the chapter.

Summary of the statewide transportation planning process: Each State develops a long-range plan. Throughout the life of the long-range plan, the State develops STIPs that are in conformance with and meet the objectives of the plan. If a State has population centers of 50,000 or more, it is required to establish MPOs, which must develop metropolitan long-range plans and metropolitan TIPs of their own. This metropolitan planning process is a subset of the statewide planning process, as is the Forest Service transportation planning process.

Title 23 (sections 134 and 135) describes the requirements of the MPO and statewide transportation planning processes. Each State and MPO implements these requirements differently, so Forest Service personnel must work with individual States and MPOs to become familiar with their specific requirements.

State DOTs are responsible for the development of long-range plans and STIPs. Title 23 includes seven planning factors that must be considered throughout the planning process. The planning process must consider strategies and develop projects that will

- support the economic vitality of the United States, the States, and metropolitan areas;
- increase transportation system safety and security for motorized and nonmotorized trail users;
- increase the accessibility and mobility options available to people and for freight;
- protect and enhance the environment, promote energy conservation, and improve the quality of life;
- enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight;
- promote efficient system management and operation; and
- emphasize preservation of the existing transportation system.

These issues are also very important to the Forest Service and are considered throughout the Forest Service transportation planning process as well as the statewide process.

State Long-Range Transportation Plans

State long-range plans are required for the development and integrated management and operation of the intermodal transportation system of the State. These plans vary significantly from State to State. Some long-range plans include improvements for specific transportation facilities or transportation corridors. Other long-range plans are more policy-oriented. Each national forest office should have a copy of its State's long-range plan, available at the State DOT or local FHWA Federal-aid division office (located in the State capital). The FHWA Federal-aid division planner can facilitate contact with the appropriate State staff.

- **Timeframe:** A State long-range plan must have a minimum 20-year forecast period. (There are no requirements indicating how often the plan must be updated. Some States update long-range plans on a regular cycle; other States update them whenever necessary.)

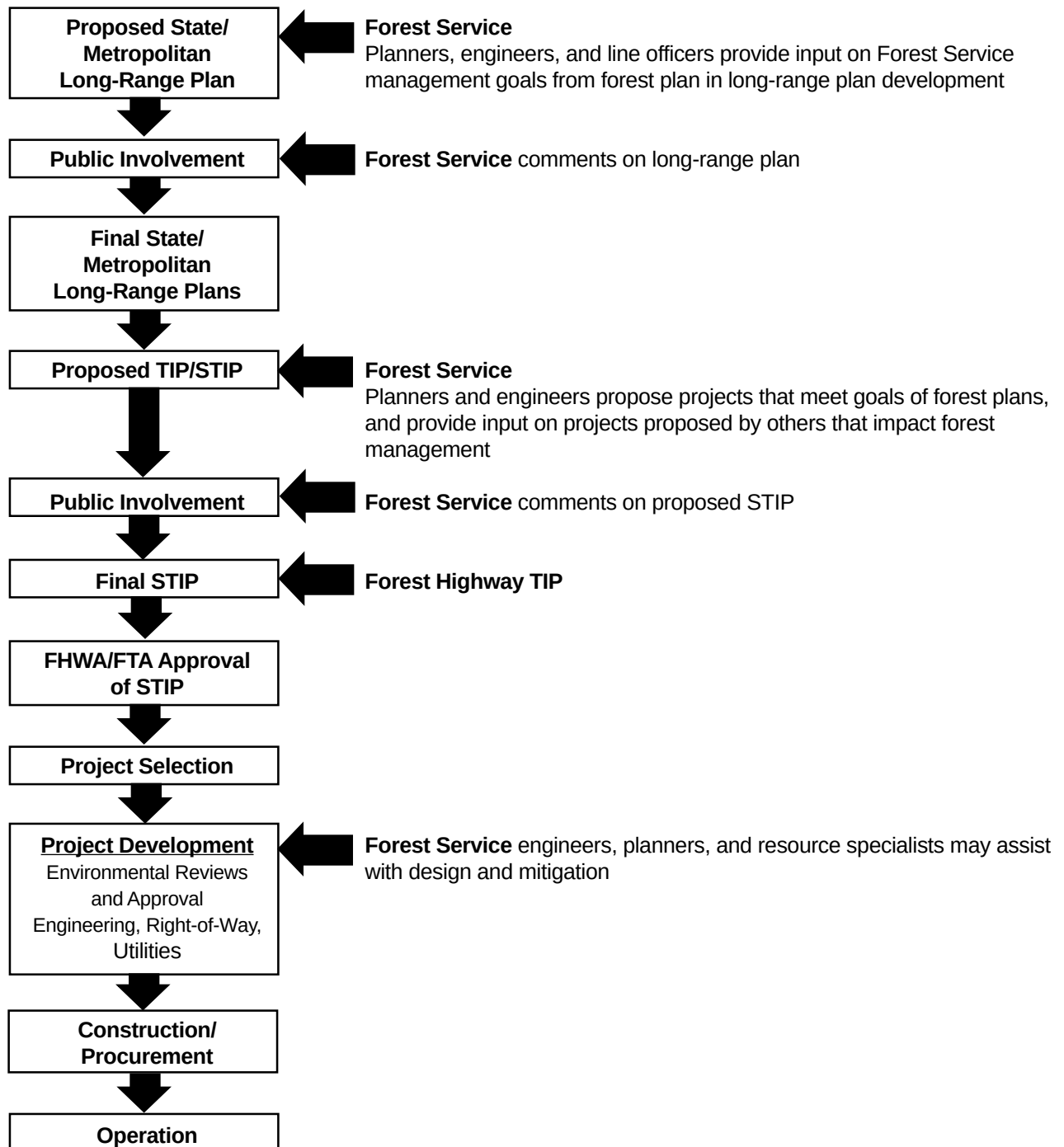


Figure 4—Forest Service involvement in the statewide and metropolitan planning process.

- **Organizations involved:** Title 23 requires the State to consider the concerns of the Forest Service when the Forest Service has jurisdiction over lands within the boundaries of the State. The States must provide the Forest Service the opportunity to comment on the proposed long-range plan.
 - In metropolitan areas, the State must develop the long-range plan in cooperation with MPOs.
 - In nonmetropolitan areas, the State must develop the long-range plan in consultation with affected local officials with responsibility for transportation. In some States, this may include rural planning organizations (RPOs).
 - In American Indian tribal areas, the State must develop the long-range plan in consultation with the Tribal Government and the Secretary of the Interior.
- **Public involvement:** The State must provide any citizen, public agency (i.e., Forest Service), or other interested party the opportunity to comment on the proposed long-range plan. Public involvement is integral and perhaps the most important part of the process.
- **Comments:** Comments are reviewed and incorporated as appropriate.
- **Environmental considerations:** Environmental issues that may be considered in the development of a State's long-range plan include:
 - Air quality
 - Wetlands
 - Habitats and recovery zones for threatened or endangered species
 - Ecological connectivity and broadscale linkages
 - Social and economic impacts
 - Water quality

Why Should the Forest Service be Involved in the Development of the State Long-Range Plan?

The statewide plan establishes the overall vision for the State's entire transportation system. State and locally owned transportation systems provide access to and within forests and connect to transportation systems under Forest Service jurisdiction. The vision for the long-range plan should include input from the Forest Service because the plan should include the Forest Services' vision for the transportation system.



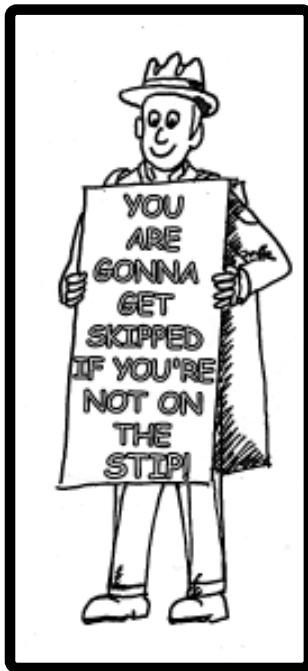
How Should the Forest Service be Involved in the Development of the State Long-Range Plan?

- Forests should request to be included on State, RPO, and other planning agency mailing lists. The State or local FHWA Federal-aid division office will know whether such a statewide transportation planning mailing list exists.
- The forest supervisor should make a formal request to the local FHWA Federal-aid division office, the State DOT, and RPO to include the Forest Service in the process for updating the long-range plan.
- If the plan is updated on an unscheduled basis, the forest should ask the FHWA Federal-aid division office and the State to inform them of when the State plans to update the plan.
- The Forest Service should participate in the development of the proposed plan, and provide input on the proposed plan during the public involvement process (figure 4).
 - If the plan includes specific facilities and corridors that will be improved in the future, the Forest Service should determine whether there are any facilities or corridors they would like to have included in the next State long-range plan.
 - If the plan is policy-oriented, the Forest Service should determine whether there are any modifications to existing policies or any new policies they would like to have included in the next State long-range plan.
- Recommended modifications to the proposed plan by the Forest Service should be based on the forest plan and Forest Service policy.

- When meeting with State or RPO representatives, the forest should bring its forest plan and use it as the reference document for comments.
- In general, each forest should provide its forest plan to the State when the forest plan is updated and when the State is updating its long-range plan.
- Forests are required to work in cooperation with the State when they are proposing the construction of a regionally significant project. These projects are sometimes included in the State long-range plan.

State Transportation Improvement Programs or STIPs

If a project is included in the STIP, FHWA and FTA funding has been identified for the project. If a project is not included in the STIP, FHWA and FTA funds cannot be used to fund the project.



STIPs include all FHWA- and FTA-funded surface transportation projects and other expenditures within the boundaries of a State and must be consistent with the long-range plan.

- MPO TIPs are included directly in the STIP or are referenced (see the Metropolitan Transportation Planning section).

- STIPs also include Forest Highways TIPs. [If a new public Forest Service roads (PFSR) program is established, these PFSR TIPs will also be included in the STIP.]

A map to the STIP process:

- **Organizations involved:** The State works with the MPOs, RPOs (if applicable), Federal land management agencies (FLMAs) (e.g., Forest Service), other planning agencies, and Tribal governments in developing a STIP.
- **Projects included:** The STIP includes FHWA and FTA funded projects, or project phases to be carried out within the next 3 years. Projects are only included if full funding is available within the time period identified in the STIP.
- **Timeframes for updates:** The STIP must be updated at least every 2 years. Some States update them annually. States allow STIPs to be amended at other times, and the amendments may remove, add, or modify projects to the STIP.
- **Public involvement:** The State must provide any citizen, public agency, or other interested party the opportunity to comment on the proposed STIP. Public involvement is integral and perhaps the most important part of the process.
- **Comments:** Comments are reviewed and incorporated as appropriate.
- **Approval process:** The STIP is finalized and sent to the FHWA and FTA for approval. The FHWA and FTA must approve the STIP at least every two years. (The FHWA and the FTA determine whether the planning process used in the STIP development is consistent with the FHWA transportation planning requirements. If Federal planning process requirements were followed, the STIP is approved.)
- **Project selection:** For the majority of FHWA and FTA funding programs, projects in nonmetropolitan areas are selected from approved STIPs by the State in cooperation with local officials of the affected agencies.

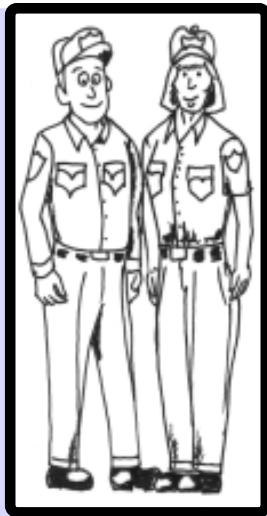
Why Should the Forest Service be Involved in the Development of the STIP?

A vast majority of the FHWA and FTA surface transportation program funding is provided directly to the State for their use and distribution. The Forest Service, in partnership with the State, RPOs, or other local organizations, is often successful in having the State sponsor a project recommended by the Forest Service. The project is then funded through the State and included on the STIP. Significant funding is available for these

programs, and many forests have benefited from these programs. By participating in the development of the STIP, the Forest Service is also able to review and provide input for State and local recommended projects that affect national forest lands.

How Should the Forest Service be Involved in the Development of the STIP?

- Each forest should obtain a copy of the current STIP.
- The forest should obtain information on the STIP development process for its State and the schedule for developing and amending the STIP. Most States have a document that describes the STIP development process including a timeline.
- The forest supervisor should make a formal request to the local FHWA Federal-aid division office, the State, and the RPO to include the Forest Service in the process for updating the STIP.
- The Forest Service should participate in the development of the proposed STIP and during the public involvement process (figure 4).
 - If the project(s) is a State or local recommended project that provides access to and within the national forest, the Forest Service should review the scope and description of the project(s). If the Forest Service would like the project scope and description modified on a project(s) to meet their needs, the Forest Service should meet with the project sponsor (State or local officials) to provide their input on the specific project(s).
 - If the forest identifies projects that can be funded from programs other than the Forest Highway program, forest personnel should contact the State or RPO to determine whether the State and local government(s) are willing to sponsor and provide funding for the projects. Prior to contacting the State or RPO, however, the Forest Service should identify all possible funding sources for the projects.



- If funding is made available for Forest Service recommended projects, the Forest Service should review the subsequent STIP (or amendment to the current STIP) to ensure that the projects have been included.

It is important that the forest be familiar with the various programs that could provide funding for a project. Chapter 3 describes most of the eligible activities for each program under Titles 23 and 49. By using the tables in chapter 3 and contacting the local FHWA Federal-aid division office, the Federal Lands Highway division office, or the FTA regional office, the forest should be able to identify potential funding sources for their projects.

The Forest Service should determine whether it can provide any funds for the project. The FHWA and FTA programs generally require a 20 percent non-Federal share, that is usually provided by the project sponsor, normally the State or a local government. Forest Service appropriated funds, Federal lands highway program (FLHP) funds and in-kind support (e.g., right-of-way, engineering, and environmental services) may be used as the non-Federal share on most projects. Chapter 3 describes under what circumstances FLHP and Forest Service funds can be used as the non-Federal share. The potential for the Forest Service to fund the non-Federal share makes the Forest Service an especially attractive partner.

METROPOLITAN TRANSPORTATION PLANNING

Metropolitan transportation planning is a subset of statewide transportation planning. Urban forests, or forests affected by the transportation system of an urban area need to be familiar with their local metropolitan planning organizations (MPOs). It is important to determine if your forest is within or near metropolitan planning area boundaries.

- To receive FHWA and FTA surface transportation program funds, all States are required to designate MPOs for each area of the State with a population of more than 50,000 individuals. These are federally recognized organizations that must follow specific transportation planning requirements.
- Some States require the establishment of nonmetropolitan, planning organizations. The organizations are called RPOs in some States; other States have different names for them. Some States do not have established RPOs. The RPOs assist with local plans and goals.
- Nonurban forests in States with established RPOs may have to work with the RPOs during the development of the State long-range plans and STIPs, but coordination with the State remains important. Nonurban forests in States that do not have RPOs work directly with the State and local transportation officials during the development of the long-range plans and STIPs.
- State DOTs or local FHWA division offices know which States have RPOs.
- MPOs, in cooperation with the State and public transit operators, must develop metropolitan long-range transportation plans and metropolitan TIPs. This planning process is a *subset of the overall statewide transportation planning*.
- As in the statewide planning process, Title 23 requires that the same seven planning factors be considered during the metropolitan planning process. Refer to the discussion on statewide transportation planning.

The Metropolitan Long-Range Plan

The metropolitan long-range plan must identify transportation facilities that function as part of an integrated transportation system. The plan must include a financial plan that demonstrates how the long-range plan can be implemented; an assessment of the capital investments necessary to ensure their preservation and must make the most efficient use of the existing transportation system; and proposed transportation enhancement activities.

In nonattainment and maintenance areas (air quality)¹, the metropolitan long-range plan must also include descriptions of the design concepts and scope of work for proposed transportation facility improvement projects for FHWA- and FTA-funded nonexempt projects and non-Federal regionally significant projects. The plans must be detailed enough for conformity determinations to be made. If a forest is in a nonattainment or maintenance area, the forest will have to provide the design concept and scope of work for nonexempt Forest Service transportation projects (most Forest Service projects are exempt) to the MPO to be included in the conformity analysis.

The format of metropolitan long-range plans varies significantly from State to State. However, all metropolitan long-range plans include specific transportation facilities or transportation corridors they intend to improve in the future. Each forest affected by an MPO's transportation network, should have a copy of the metropolitan long-range plan. To obtain a metropolitan long-range plan, contact the local FHWA Federal-aid division office or the MPO.

The metropolitan long-range planning process includes the following:

- **Organizations involved:** The MPO, in cooperation with the State and public transit operators, develops the metropolitan long-range plan. The MPO may consult with Tribal Governments, FLMA's (e.g., Forest Service), and others during the development of the proposed plan prior to the public involvement process.
- **Funding:** A metropolitan long-range plan must include a financial plan and financing strategies.
- **Timeframe:** A metropolitan long-range plan must have a minimum 20-year forecast period.
- **Updates:** The MPO must initiate the process of updating its long-range plan to meet the 3- or 5-year required update cycle. (The plan must be updated every 3 years in nonattainment and maintenance areas and at least every 5 years in attainment areas.)

¹ Air quality and other environmental considerations: Under the Clean Air Act, transportation plans, TIPs, and projects must conform to the State Air Quality Implementation Plan (SIP). Conformity ensures that transportation activities do not worsen air quality or interfere with the area meeting air quality standards.

- **Air quality issues:** The MPO must demonstrate through the transportation conformity process, that the transportation projects will have emissions impacts that are consistent with those contained in the SIP. The MPO must coordinate the development of the long-range plan with the State and local air-quality agencies, the U.S. Environmental Protection Agency (EPA), and other stakeholders.
- **Public involvement:** The MPO must provide any citizen, public agency (e.g., Forest Service), or other interested party the opportunity to comment on the proposed long-range transportation plan.
- **Comments:** Comments are reviewed and incorporated as appropriate.
- **Approval:** The long-range plan is finalized and approved by the MPO. The plans do not have to be approved by the FHWA or FTA, but the approved plans must be provided to each of these agencies.

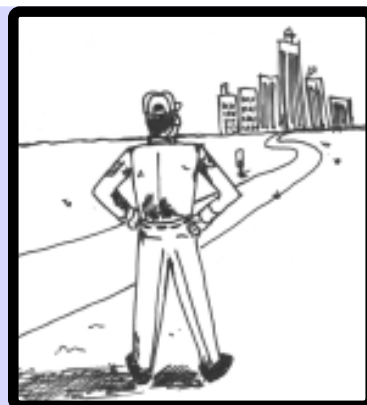
Metropolitan and statewide planning processes are similar *except* that congestion management systems are required for Transportation Management Areas (TMAs) (urbanized areas with populations greater than 200,000). If all or a portion of a forest's transportation system is within the boundaries of a TMA, that portion of the forest's transportation system may need to be included in the congestion management system of the TMA.

Why Should the Forest Service be Involved in the Development of a Metropolitan Long-Range Plan?

The metropolitan long-range plan establishes the overall vision for the metropolitan area's transportation system. This system provides access to and within urban forests and connects to the transportation systems under the jurisdiction of the Forest Service. The vision in the long-range plan should include input from the forests, especially because urban forests often have heavy recreational use that generates a lot of traffic on the metropolitan transportation system. The metropolitan long-range plan should include the forest's vision of the transportation system. There may be opportunities to request that transit system goals include forest destinations. Also, if a forest is in a nonattainment or maintenance area, its transportation system is included in the conformity analysis.

How Should the Forest Service be Involved in the Development of a Metropolitan Long-Range Plan?

- If the MPO has a mailing list, each forest should request to be included on the mailing list. The local FHWA division office or the MPO will know whether a formal metropolitan transportation planning mailing list exists.
- The forest supervisor should make a formal request to the local FHWA division office and the MPO to include the Forest Service in the process for updating the long-range plan.
- The Forest Service should review the current long-range plan to become familiar with it. Recommendations for modifications to the plan should be based on the forest plan.
- When meeting with representatives of the MPO, the forest should bring its forest plan and use it as the reference document for comments. In general, each forest within the boundaries of an MPO should provide its forest plan and a list of proposed projects to the MPO when the MPO is updating its long-range plan. Forests are required to coordinate with the MPO when they are proposing the construction of a regionally significant project, so it can be included in the metropolitan long-range plan.
- In nonattainment and maintenance areas for air quality, the Forest Service should participate in the interagency consultation process for the planning and conformity processes.



Metropolitan TIPs

If a project is included in the metropolitan TIP, FHWA and FTA funding has been identified for the project. If a project is not included in the TIP, FHWA and FTA funds cannot be used to fund the project.

Metropolitan TIPs include all FHWA- and FTA-funded surface transportation projects and other expenditures within the metropolitan planning area boundary.

Metropolitan TIPs include Forest Highway projects. The projects in the TIP must be consistent with the long-range plan.

- **Updates:** The TIP must be updated at least every 2 years. Some MPOs update them annually. The MPOs also allow for the TIPs to be amended at other times, and the amendments may remove, add, or modify projects on the TIP.
- **Organizations involved:** The MPO must cooperate with the State and affected public transit operators in the development of the TIP.
- **Projects included:** The TIP includes projects, or identified phases of projects to be carried out over the next 3 years. Projects are only included if full funding is available within the time period identified in the TIP. The TIP must include a financial plan that demonstrates both how the TIP can be implemented and resources that are expected to be available for its completion.
- **Public involvement:** The MPO, in cooperation with the State and affected public transit operators, must provide any citizen, public agency (e.g., the Forest Service), or other interested party the opportunity to comment on the proposed TIP.
- **Approval:** The Governor of the State and the MPO must approve the TIP and the conformity that is determined if they are in a nonattainment or maintenance area.

Why Should the Forest Service be Involved in the Development of the Metropolitan TIP?

A significant amount of FHWA and FTA program funds are provided to the MPOs for their use. The MPOs, in cooperation with the State and public transit operators, select projects to include on the metropolitan TIP. Projects selected for funding by an MPO can benefit Forest Service projects and management goals. If the Forest Service partners with the MPO, other local organizations, or a public transportation provider, a Forest Service project can be sponsored by the MPO and included on the metropolitan TIP. By participating in the development of the TIP, the Forest Service is also able to review and provide input for MPO and others' recommended projects that affect national forest lands.

How Should the Forest Service be Involved in the Development of the TIP?

- Each forest should obtain a copy of the current TIP.
- The forest should obtain information on the TIP development process for the MPO and the schedule for developing and amending the TIP. Most MPOs have a document that describes the TIP development process including a timeline.
- The forest supervisor should make a formal request to the local FHWA Federal office and the MPO to include the Forest Service in the process for updating the TIP.
- The Forest Service should participate in the development of the proposed TIP and during the public involvement process (figure 4).
 - If the project(s) is a State or local recommended project that provides access to and within the national forest, the Forest Service should review the scope and description of the project(s). If the Forest Service would like the project scope and description modified on a project(s) to meet their needs, the Forest Service should meet with the project sponsor (MPO or public transit operators) to provide their input on the specific project(s).
 - If the forest has identified projects that can be funded through programs other than the Forest Highway program, they should contact the MPO to determine whether the MPO is willing to provide funding for the projects. The Forest Service should determine the various programs that could fund specific projects.
- If funding is made available for Forest Service recommended projects, the Forest Service should review the subsequent TIP to ensure that the projects have been included.

It is important that the forest be familiar with the various programs that could provide funding for a project. Chapter 3 describes most of the eligible activities for each program under Titles 23 and 49. By using the tables in chapter 3 and contacting the local FHWA Federal-aid division office, the Federal Lands Highway division office, or the FTA regional office, the forest should be able to identify potential funding sources for their projects.



The Forest Service should determine whether it can provide any funds for the project. The FHWA and FTA programs generally require a 20 percent non-Federal share. This is usually provided by the project sponsor, normally the State or a local government. Forest Service appropriated funds, FLHP funds, and in-kind support (e.g., right-of-way, engineering, and environmental services) may be used as the non-Federal share on most projects. The potential for the Forest Service to provide the non-Federal share makes the Forest Service an especially attractive partner.



Now that we have looked at both the Forest Service and the statewide transportation planning processes, let's look at the specific funding programs that can help address the needs defined during the planning process. But first, note that:

TEA-21 funding may only be used for transportation-related projects on public roads (i.e., roads that are under the jurisdiction of, and maintained by, a public authority and open to public travel). Projects on Forest Service administrative roads are not eligible. However, using TEA-21 funds for public roads frees up other Forest Service funding for administrative national forest roads and for addressing other nonroad-related issues.

The numerous FHWA and FTA programs with potential for funding projects that are beneficial to the Forest Service are detailed in tables 3 through 5. The FLHP Public Land Highways program, the National Scenic Byways program, the Recreation Trails program, and the Transportation Enhancement program are described briefly below, as the Forest Service has successfully funded many projects through these programs.



Federal Lands Highway Program; Public Lands Highway—Forest Highway Program

It is a big advantage if a project is eligible under the Forest Highway program (table 3), because the Forest Service is not competing for funding with the State and local governments. Each State with a national forest, has a designated system of forest highways, most of which are under State or local jurisdiction. The annual project funding level in each State is

established by a formula.

Federal Lands Highway Program, Public Lands Highway—Discretionary (PLH-D) Program

If a transportation project provides access to or is within or adjacent to a forest, the project is eligible for FLHP- PLH-D funding (table 3). The Forest Service must submit candidate PLH-D projects to its local State DOT. If the project is selected, the forest may be able to enter into an agreement with the State to receive the funds directly from the FHWA.



Surface Transportation Program—Transportation Enhancement Set-Aside.

The Surface Transportation program (STP)—Transportation Enhancement Set-Aside is a flexible funding source that funds many activities in the area

affected by a transportation project (table 4).

Transportation-related activities designed to strengthen the cultural, esthetic, and environmental aspects of the Nation's intermodal transportation system are eligible. Many examples of eligible activities are identified in tables 4 and 5. Each State has a transportation enhancement (TE) coordinator who provides application procedures. Information is available on the TE clearinghouse website at: <http://www.enhancements.org/>



National Scenic Byways Program.

The scenic byways program funds projects that enhance and preserve the intrinsic qualities and visitor services along State and federally designated scenic byways (table 4). Each State has a

scenic byways coordinator who approves applications and submits them to FHWA for consideration. The State scenic byways coordinator can provide application procedures. Information is available on the America's Byways website: www.byways.org.



Recreational Trails Program. The Recreational Trails program provides funds to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses (table 4). Each State

has a trails coordinator who is responsible for allocating funding and providing application procedures and deadlines.

A Potpourri of Recreational Trails Program Success Stories

Here are a few examples of TEA-21 funding used to care for the land and serve people on national forests across the country.



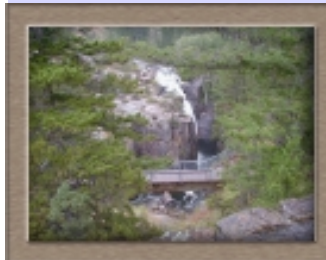
Hoosier National Forest, IN: Horseback riders, mountain bikers, and hikers have benefited from the Spring Valley trail off

Indiana State Highway 37, which was funded primarily by the Recreational Trails program and fee demo revenues. "Hopefully, this will prove to be a relatively painless way to get some trail construction dollars. In this case, there would be no way this trail would be built without the grant," Les Wadzinski noted.

National Forests Nationwide: Watchable Wildlife is a program designed to enhance wildlife viewing opportunities for the public. All States with national forests have participated in highlighting their trails or highways with watchable wildlife sites, and their respective State DOTs have assisted with funding the guides that list each site. Because these sites are already nationally advertised, they are excellent candidates for the TEA-21 transportation enhancement program.

George Washington and Jefferson National Forests, VA: Bob McKinney of the Mount Rogers National Recreation Area says, "I'm quite a fan of the Recreational Trails fund. This pot of money gives out smaller grants (averaging \$50,000 in Virginia), but the rules are far more flexible and the money is available for trails and projects that are strictly recreational," as opposed to some of the other TEA-21 funding options. Bob should know, because he has successfully tapped this source of funds over the years for about a million dollars. He has used this funding for building and renovating trails, constructing interpretive sites, and renovating landscapes.

Lewis and Clark National Forest, MT: Dick Schwecke helped the Montana Trail Vehicle Riders Association obtain a grant from the National Recreational Trails Program (N RTP) for an educational display called "On the Right Trail." He helped the association design and build the \$13,000 display. Dick used revenues from the State gas tax and N RTP funds to staff a booth at the State and county fairs. "I have used the display in about 10 sport shows as a background for contacting the public and talking about the ethical use of trails by both motorized and nonmotorized recreationists," he reported.



Mark Twain National Forest, MO: TEA-21 Recreational Trails funds were used to enhance the Sutton Bluff all-terrain vehicle/motorcycle trail system. The Midwest Trail Riders

Association added \$1,000 in labor and supplies to the TEA-21's \$5,000, and the Forest Service provided \$4,000. This year, the forest received another \$45,000 from TEA-21 funds that will be matched with their \$18,000 to purchase a trail maintenance machine. "This ongoing partnership has gone a long way toward keeping the trail system in good shape," said Nancy Freakes, Recreation Manager on the Mark Twain National Forest.

Chattahoochee National Forest, GA: The Chattahoochee National Forest received a \$150,000 TEA-21 grant (from the NRTP) for a mountain bike and horse trail system. Improvements will include 4 parking areas, a primitive horse camp, and about 40 miles of trail.

Inyo and Humboldt-Toiyabe National Forests, CA: Independence, CA, now has an accessible interpretive trail and brochures that link Independence Creek to the town park and museum. The lead agency, the Inyo National Forest, worked with Death Valley National Park, Devil's Postpile National Monument, Sequoia/Kings Canyon National Park, Yosemite



National Park, numerous chambers of commerce, and the California Department of Transportation

(Caltrans) to develop 110 interpretive signs along 240 miles of Highway 395. Melissa Totheroh of the Inyo National Forest said, "There's a huge feeling of community pride and cohesiveness in the eastside communities, and tangible products to touch and see."



Bighorn National Forest, WY: The Bighorn Scenic Byway leads travelers through 3-billion-year-old rock to the Shell Falls Visitor Site. The forest worked with the Rocky Mountain Nature Association to develop a site plan that includes a national designated trail and interpretive signs explaining the ancient geology of the deep canyon, bighorn sheep biology, and water conservation. The short paved trail is just one example of a coordinated effort with the Wyoming DOT using TEA-21 and Forest Service capital investment program funds to help solve traffic flow, accessibility, and pedestrian safety issues.

TRANSPORTATION PROGRAM FUNDING TABLES

The following tables detail the FHWA and FTA transportation programs available through TEA-21, including program titles, eligible activities, and funding levels. Information outlining programs that can provide leverage or match funding is included.

- Table 2 summarizes the differences between:
 - Federal Lands Highway programs
 - other FHWA Federal-aid and FTA programs
- Tables 3 and 4 show the activities eligible for funding, the mechanisms for distributing funds, and the non-Federal share requirements for each program.
- Table 5 provides examples of eligible activities of interest to the Forest Service fundable through select programs described in tables 3 and 4.

It should be noted that specific program requirements vary from State to State.

Additional information is available at www.fhwa.dot.gov, www.fta.dot.gov, www.byways.org, www.enhancements.org, and www.tea21.org.

Table 2—Differences between the funding programs shown in tables 3 and 4.

Program	FHWA's FLHP (table 3)	FHWA Federal-aid programs and FTA programs most applicable to the FLMAs (table 4)
Funding Recipient	Funding provided specifically for transportation systems providing access to and within Federal lands. Some of the programs provide funding directly for FLMA projects.	Most of the funding is provided to the States (generally to the State DOT) for distribution within their boundaries. Some of the funding is provided directly to public
Comments	Each program category has different requirements and restrictions.	To receive benefits from these funding programs, the FLMA must partner with the States, other local transportation officials, and/or transit operators.

Table 3—Federal Lands Highway Program.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Federal Lands Highway Program (FLHP)							
Public Lands Highways—Forest Highway (FH) Program	The FH program is the primary funding source provided by the United States Department of Transportation (U.S. DOT) for the forest highway network serving the National Forest System (NFS). FH funds may be used to fund projects on designated forest highways. Forest highways are public roads that provide access to or within the NFS. There is a designated network of forest highways. Forest highways are primarily State/local-government owned and maintained. Few are owned and maintained by the Forest Service. The FH program is a portion of the PLH program. Sixty-six percent of the total PLH funds are set aside for the FH program. The planning and programming of projects are performed through triagency (FHWA, State, and Forest Service) agreements in each State.	Year 2002 \$162.4 million Year 2003 \$162.4 million	FH program funds may be used to fund transportation planning, research, engineering, and construction or reconstruction of any type of transportation project eligible for assistance under Title 23 on forest highways. These include, but are not limited to, roadway, bridge, transit, and pedestrian and bicycle facilities. FH program funds can be used as the non-Federal share for projects that are part of the National Highway System program, Congestion Mitigation and Air Quality Improvement program, Surface Transportation program, or Interstate Maintenance program. FH program funds can be used as the non-Federal share for national scenic byways activities.	FH funds are allocated to the Federal Lands Highway division offices by Forest Service region and by the State area for the States that contain national forest lands. Funds may be loaned and borrowed between States	Federal share is 100 percent.		Planning, Capital

Table 3—Federal Lands Highway Program.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Federal Lands Highway Program (FLHP)							
Public Lands Highways—Discretionary (PLH-D) Program	The PLH-D program is a discretionary funding program within the PLH program. Thirty-four percent of the total PLH funds are set aside for select discretionary projects. The FHWA administers the PLH-D program.	Year 2002 \$83.6 million Year 2003 \$83.6 million	PLH-D program funds may be used for any type of transportation project-eligible for assistance under Title 23. Projects include, but are not limited to, reconstruction of existing roads, preliminary engineering and design, intelligent transportation studies (ITS), planning studies, safety, and visitor center enhancements.	The FHWA issues annual calls for PLH-D projects. States submit project applications to the FHWA. Projects are selected for PLH-D funding by the FHWA from those candidate projects submitted by the States. Funds for selected projects are provided directly to the State transportation departments. Through agreement with the State, FLMAs may receive the PLH-D funds directly from the FHWA if projects they submit through the State are selected for PLH-D funding. The projects are selected on the basis of need as determined by the FHWA. Preference is given to those projects that are significantly impacted by Federal land and resource management activities. Preference is also given to projects that are proposed by States that contain at least 3 percent of the total public lands in the Nation.	Federal share is 100 percent.	The PLH-D program may provide funds for projects on Federal lands; however, there is significant competition for these funds. Project applications must be submitted by the FLMAs to the State in which the project is located.	Planning, Capital

Table 3—Federal Lands Highway Program.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Federal Lands Highway Program (FLHP)							
Park Roads and Parkways (PRP) Program	The PRP program is the primary funding source provided by the U.S. DOT for the transportation network serving the national park system. The PRP program may fund projects on public roads, including park roads and parkways. Park roads are public roads that are located within, or provide access to, an area in the national park system with title and maintenance responsibilities vested in the United States; parkways are authorized by Congress on lands to which title is vested in the United States. The program is jointly administered by the FHWA and the National Park Service (NPS).	Year 2002 \$165 million Year 2003 \$165 million	PRP program funds may be used to fund transportation planning, research, engineering, and construction or reconstruction of any type of transportation project eligible for assistance under Title 23 that is within, adjacent to, or provides access to the national park system. These include, but are not limited to, roadway, bridge, transit, ITS, and pedestrian and bicycle facilities. PRP program funds may be used as the non-Federal share for National Highway System Congestion Mitigation and Air Quality Improvement, Surface Transportation, and Interstate Maintenance projects. PRP program funds may be used as the non-Federal share for national scenic byways activities.	PRP program funds are distributed within the NPS in accordance with the 1983 FHWA/NPS interagency agreement and the FLHP PRP Revised Funding Allocation and Project Prioritization Criteria document. PRP program funding is composed of three categories. Each of these categories receives a specific amount of funding as agreed to by the FHWA and the NPS. Category I: 3R and 4R projects. The funding is distributed by formula to each region. Category II: Congressionally mandated projects. The funding is provided for specific projects. Category III: Alternative transportation systems planning and implementation. The funding is distributed through an annual call for projects. The Choosing By Advantage process is used to select projects.	Federal share is 100 percent.	PRP program roadway and bridge improvement/replacement projects are primarily undertaken on park roads and parkways. PRP program roadway and bridge improvement/replacement projects, however, may be undertaken on other public roads, including State/locally owned and maintained roadways. Through policy developed by the FHWA and the NPS, pedestrian and bicycle facilities are only funded when associated with roadway improvement projects.	Planning, Capital

Table 3—Federal Lands Highway Program.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Federal Lands Highway Program (FLHP)							
Indian Reservation Roads (IRR) Program	The IRR program is the primary funding source provided by the FHWA for the IRR system. IRR program funds may be used to fund projects on IRRs. Indian reservation roads are public roads that are located within or provide access to American Indian reservations, lands, or communities, or to villages of Alaska natives. There is a designated network of IRRs. Approximately 50 percent of them are State and locally owned. The other 50 percent are Bureau of Indian Affairs (BIA) owned. The FHWA and the BIA jointly administer the program.	Year 2002 \$275 million Year 2003 \$275 million	IRR program funds may be used to fund transportation planning, research, engineering, and construction or reconstruction of any type of transportation project eligible for assistance under Title 23 that provides access to or within American Indian reservations, lands, or communities, or to native Alaska villages. These include, but are not limited to, roadway, bridge, transit, and pedestrian and bicycle facilities. IRR program funds may be used as the non-Federal share for projects that are part of the National Highway System Congestion Mitigation and Air Quality Improvement, Surface Transportation, or Interstate Maintenance programs. IRR program funds may be used as the non-Federal share for national scenic byways activities.	A majority of the IRR funds are distributed to the 12 BIA regions using a relative needs formula. Of the amounts authorized, \$13 million are reserved for projects to replace, rehabilitate, seismically retrofit, paint, apply environmentally acceptable anti-icing or deicing compositions, or install scour countermeasures for deficient American Indian reservation road bridges, including multiple-pipe culverts.	Federal share is 100 percent.		Planning, Capital

Table 3—Federal Lands Highway Program.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Federal Lands Highway Program (FLHP)							
Refuge Roads (RR) Program	The RR program is the primary funding source provided by the U.S. DOT for the transportation network serving the national wildlife refuge system. RR funds may be used to fund projects on refuge roads. Refuge roads are public roads that provide access to or within a unit of the national wildlife refuge system and for which title and maintenance responsibility is vested in the U.S. Government. The RR program was a new FLHP category in TEA-21. The FHWA and the U.S. Fish and Wildlife Service (USFWS) jointly administer the program.	Year 2002 \$20 million Year 2003 \$20 million	RR program funds may be used for maintaining and improving refuge roads and bridges. RR program funds may be used for maintaining and improving adjacent vehicular parking areas, pedestrian walkways, and bicycle pathways, and for constructing and reconstructing roadside rest areas, including sanitary and water facilities that are located in and adjacent to wildlife refuges. RR program funds may be used for administrative costs associated with these efforts.	Funds are distributed according to need. Project selection is coordinated between the FHWA and the USFWS.	Federal share is 100 percent.		Planning, Maintenance

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Surface Transportation Program (STP)	The STP provides flexible funding that may be used by States and localities for projects on any Federal-aid highway (FAH). STP funds are provided to State DOTs. TE is a subcategory of the STP program. Ten percent of the STP program funding is set aside for TE activities, such as safety programs funding the elimination of hazards of railway-highway crossings and other hazardous locations on any public road.	Year 2002 \$5,795 million Year 2003 \$5,905 million	STP funds may be used for the following activities: 1. Highway projects on the FAH system including rural arterials, rural major collectors, urban arterials, and urban collectors; bridge projects on all public roads; transit capital projects; and public bus terminals and facilities. 2. Programs to reduce extreme cold starts. 3. Environmental restoration and pollution abatement projects. 4. Natural habitat mitigation. 5. Modifications of existing public sidewalks to comply with the Americans with Disabilities Act. 6. Infrastructure-based ITS capital improvements. 7. Certain bicycle, pedestrian, and parking facility projects. 8. Certain other transportation-related projects	STP funds are distributed to the States using the following formula: 25 percent based on total lane miles of FAH in the State as a percentage of total FAH lane miles in the United States, 40 percent based on total vehicle miles traveled (VMT) on lanes of FAH in the State as a percentage of total VMT on FAH in the United States, and 35 percent based on estimated tax payments attributable to highway users in the State paid into the Highway Trust Fund as a percentage of total payments. Projects are selected through the statewide and metropolitan transportation planning processes.	STP projects are funded with an 80-percent Federal share and with a required 20-percent non-Federal share. When STP funds are used for interstate projects, the Federal share can reach 90 percent. For certain projects that cross Federal lands, the Federal share can be 100 percent. FLHP- and FLMA-appropriated funds may be used as the non-Federal share for STP-funded activities.	The ability to use FLHP- and FLMA-appropriated funds as the non-Federal share provides opportunities to build strong partnerships between the FLMAs and State/local governments. Project funding is very competitive.	Planning, Capital, Maintenance

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Surface Transportation Program—Transportation Enhancements (TE) Set Aside (suballocation of STP funds)	TE activities are transportation-related activities designed to strengthen the cultural, esthetic, and environmental aspects of the Nation's intermodal transportation system. TE program funds are provided to State DOTs.	Ten percent of STP set-asides plus other mandated projects.	TE activities must relate to surface transportation. Activities include, but are not limited to: 1. The provision of safety and educational activities for pedestrians and bicyclists 2. Scenic or historic highway programs (including provision for tourist and welcome centers) 3. The establishment of transportation museums 4. Environmental mitigation to address water pollution due to highway runoff or to reduce vehicle-caused wildlife mortality while maintaining habitat connectivity 5. Archeological planning and research 6. Landscaping and other scenic beautification, historic preservation, rehabilitation, and operation of historic transportation buildings, structures, or facilities	TE funds are administered through a process established by each State. Typically, funds are programmed through the statewide or metropolitan transportation planning process.	TE activities are funded with an 80-percent Federal share and a required 20-percent non-Federal share. FLHP- and FLMA-appropriated funds may be used as the non-Federal share for TE-funded activities.	Because of the esthetic and environmental emphasis of the program, FLMAs, in partnership with State and/or local governments, often have projects that qualify for TE funds. Project funding is very competitive because of the wide range of projects that are eligible.	Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Highway Bridge Replacement and Rehabilitation Program (HBRRP)	The HBRRP provides funds to assist the States in their programs to replace or rehabilitate deficient highway bridges and to seismic retrofit bridges located on any public road. HBRRP funds are provided to State DOTs.	Year 2002 \$3,552 million Year 2003 \$3,619 million	HBRRP funds may be used for the following activities: 1. Replace or rehabilitate (restore structural integrity or correct major safety defect) highway bridges over waterways, other topographical barriers, other highways, or railroads when the States and the Secretary of Transportation find that a bridge is significantly important and is unsafe because of structural deficiencies, physical deterioration, or functional obsolescence. 2. Application of anti-icing/de-icing compositions 3. Installation of scour countermeasures 4. Paint 5. Seismic retrofit 6. Actions to preserve the historic integrity of historic bridges (see Title 23 U.S.C. Section 144 (o) for details).	HBRRP funds are distributed to the States by formula based on the square footage of deficient Federal-aid system and off-system bridges in each State. Projects are selected through the statewide and metropolitan transportation planning process.	HBRRP projects are funded with an 80-percent Federal share and with a required 20-percent non-Federal share.		Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Surface Transportation Program — Safety Set-Aside (suballocation of STP funds)	Safety set-aside projects include the elimination of hazardous locations on public roads and the elimination of hazards associated with railway-highway crossings. Funds are available for expenditure on any public road or surface transportation facility, including bicycle or pedestrian pathway or trail, and on any traffic-calming measures. Safety set-aside funds are provided to State DOTs.	Ten percent of STP funds are apportioned to each State.	The STP Safety Set-Aside funds activities to resolve safety problems at hazardous roadway locations and sections, including roadside obstacles and unmarked or poorly marked roads, which may constitute a danger to motorists, pedestrians, and bicyclists. The safety set-aside also funds safety improvements to reduce the number of fatalities, injuries, and crashes at public railway-highway grade crossings.	Safety set-aside funds are administered through a process established by each State. Funds are typically programmed through the statewide or metropolitan transportation planning process.	Safety set-aside activities are funded with an 80 percent Federal share and a required 20-percent non-Federal share. FLHP- and FLMA-appropriated funds may be used as the non-Federal share for safety set-aside funded activities.		Planning, Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Congestion Mitigation and Air Quality Improvement (CMAQ) Program	The CMAQ program funds projects and programs that reduce transportation-related emissions in air quality nonattainment and maintenance areas. CMAQ program funds are provided to State DOTs.	Year 2002 \$1,407 million Year 2003 \$1,434 million	Projects include, but are not limited to, public transit investments, ITS projects, and nonmotorized transportation projects, such as the development of bicycle and pedestrian trails. Other eligible projects are extreme low-temperature cold-start programs and the Magnetic Levitation Transportation Technology Deployment program.	Funds are distributed to States based on population and severity of pollution with weighting factors for ozone and CO maintenance areas, CO nonattainment areas, and ozone submarginal areas. TEA-21 expands funding to PM10 nonattainment and maintenance areas and areas designated as nonattainment under the revised 1997 air quality standards. Projects are selected through the statewide or metropolitan transportation planning process.	CMAQ projects are funded with an 80- percent Federal share and a required 20- percent non-Federal share. For projects that cross Federal lands, the Federal share can reach 100 percent. FLHP- and FLMA- appropriated funds may be used as the non-Federal share of the CMAQ projects.	The CMAQ program has limited applicability to Federal lands because of the air quality standards requirements. The urban forests in Regions 5 and 6 have air quality problems. The CMAQ program is a good potential source for urban area sites but funding is very competitive. FLMAs must partner with State or local governments to obtain funding.	Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
National Scenic Byways (NSB) Program	The NSB program provides for the designation by the Secretary of Transportation of roads that have outstanding scenic, historic, cultural, natural, recreational, and archeological qualities as All-American Roads (AAR) or NSB. The program also provides discretionary grants for scenic byways projects on an AAR, an NSB, or a State-designated scenic byway for planning, designing, and developing State scenic byways programs. The FHWA administers the NSB program.	Year 2002 \$25.5 million Year 2003 \$26.5 million	Eligible activities include: 1. Activities related to planning, designing, or developing a State scenic byways program 2. Developing and implementing a corridor management plan 3. Safety improvements 4. Constructing facilities for pedestrians and bicyclists 5. Improving access for the purpose of recreation 6. Protecting resources adjacent to a scenic byway 7. Developing and providing tourist information 8. Developing and implementing a scenic byway marketing program	FHWA issues periodic calls for NSB projects. States submit grant applications to the FHWA. Projects are selected for NSB funding by the FHWA from candidate projects submitted by the States. Funds for selected projects are provided directly to the State transportation departments. Through agreement with the State, FLMAs may receive the NSB funds directly from the FHWA if applications they submit through the State are selected for NSB funding. A higher priority for funding is given to: 1. Projects on routes designated as either an AAR or an NSB, 2. Projects that would make routes eligible for designation as either an AAR or an NSB, and 3. Projects associated with developing State scenic byways programs.	NSB projects are funded with an 80-percent Federal share and require a 20-percent non-Federal share. FLMAs can provide the non-Federal share for projects on Federal or American Indian lands using FLHP- and/or FLMA-appropriated funds.	As of 2001, about one-half of the NSBs and AARs have some national forest land involvement. Approximately 25 percent of the NSBs and AARs are more than 50 percent national forest land. Grant applications must be submitted by the FLMAs to the State in which the project is located. Funding is limited and competitive.	Planning, Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Interstate Maintenance Program (IM)	The IM program provides funding for improving most routes of the interstate system. IM program funds are provided to State DOTs.	Year 2002 \$4,140 million Year 2003 \$4,218 million	IM funds may be used for resurfacing, restoring, rehabilitating, and reconstructing (4R) routes on the interstate system. Secretarial agreement is required for use on toll roads. The addition of single occupancy vehicle lanes is not eligible. Up to 50 percent of apportionments may be transferred to National Highway System (NHS), STP, CMAQ, and/or bridge programs.	IM funds are distributed to the States using the following formula: 33.3 percent based on total interstate lane miles in State as a percentage of lane miles in all States, 33.3 percent based on total VMT on interstates in each State as a percentage of VMT in all States, and 33.3 percent based on each State's contribution to Highway Account of Highway Trust Fund (HTF) attributable to commercial vehicles as a percentage of total contributions by all States. The Secretary of Transportation annually sets aside \$100 million for discretionary obligations. Projects are selected through the Statewide and metropolitan transportation planning process.	IM projects are funded with a 90-percent Federal share and a required 10-percent non-Federal share in most cases. FLHP- and FLMA-appropriated funds may be used as the non-Federal share on IM projects.	Generally, IM funds are not applicable for FLMA projects, unless an interstate is within an FLMA site. FLMAs must partner with State or local governments to obtain limited, competitive funding.	Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
National Highway System Program (NHS)	The NHS program funds improvements to rural and urban roads that are part of the NHS, including the interstate system and connections to intermodal terminals. NHS program funds may be used for transit improvements in NHS corridors under certain circumstances. NHS program funds are provided to State DOTs.	Year 2002 \$4,968 million Year 2003 \$5,061 million	In addition to roadway and transit improvements, the following activities are eligible for NHS program funding: 1. Natural habitat mitigation. 2. Publicly owned bus terminals. 3. ITS capital improvements. Up to 50 percent of the NHS program funds may be transferred to IM, STP, CMAQ, and/or Bridge programs. Up to 100 percent of the NHS program funds may be transferred to an STP.	NHS funds are distributed to the States using the following formula: 25 percent based on total lane miles of principal arterials (excluding the interstate system) in each State as a percentage of total such principal arterial lane miles in all States, 35 percent based on total VMT on lanes of principal arterials (excluding the interstate system) in each State as a percentage of total VMT on lanes of such principal arterials in all States, 30 percent based on diesel fuel used on all highways in each State as a percentage of diesel fuel used on all highways in all States, and 10 percent based on total lane miles of principal arterials in each State divided by the total population in each State as a percentage of such ratio for all States. Funds are set aside from authorized amounts for the Alaska Highway and the territories. Projects are selected through the statewide and metropolitan transportation planning process.	NHS projects are funded with an 80-percent Federal share and a required 20-percent non-Federal share in most cases. FLHP- and FLMA-appropriated funds may be used as the non-Federal share on NHS projects.	NHS funds have limited applicability for FLMA projects, unless a road that is part of the NHS is within an FLMA site or is owned by an FLMA. FLMAs must partner with State or local governments to obtain limited, competitive funding.	Planning, Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FHWA							
Recreational Trails Program	The Recreational Trails program provides funds to develop and maintain recreational trails for motorized and nonmotorized trail users. Recreational Trails program funds are provided directly to the States.	Year 2002 \$50 million Year 2003 \$50 million	Recreational Trails program eligible activities include: 1. Maintaining, restoring and constructing existing and new recreational trails (with restrictions on new trails on Federal land) 2. Developing and rehabilitating trailside and trailhead facilities and trail linkages 3. Purchasing and leasing recreational trail construction and maintenance equipment 4. Acquiring easements or property for recreational trails or recreational trail corridors 5. State administrative costs related to program administration (up to 7 percent) 6. Operating educational programs to promote safety and environmental protection as those objectives relate to the use of recreational trails (up to 5 percent)	Recreational Trails program funds are apportioned to the States by the following formula: 50 percent equally among all eligible States and 50 percent in proportion to the amount of off-road recreational fuel use (such as by snowmobiles, all-terrain vehicles, off-road motorcycles, and off-road light trucks). States must meet minimum funding shares among motorized, nonmotorized, and diverse trail use as follows: 40 percent minimum for diverse trail use, 30 percent minimum for motorized recreation, and 30 percent minimum for nonmotorized recreation.	Generally, recreational trail projects are funded with an 80-percent Federal share and a 20-percent non-Federal share. If a Federal agency sponsors a project, it may provide additional Federal funds up to a total of 95 percent. FLMA-appropriated funds may supply the additional Federal funds. FLHP funds may not be used to provide the additional Federal funds. Funds from Federal programs, other than U.S. DOT, may be used for the non-Federal share.	Recreational Trails program funds are applicable to FLMA recreational trail projects. FLMAs must partner with State or local governments to obtain limited, competitive funding.	Planning, Capital, Maintenance

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FTA							
Urbanized Area Formula Grants (Sec. 5307)	This program provides transit capital and planning assistance to urbanized areas with populations greater than 50,000. Operating assistance is also available to areas under 200,000.	Authorized: Year 2002 \$3,371 million Year 2003 \$3,596 million Guaranteed: Year 2002 \$3,221 million Year 2003 \$3,446 million	Sec. 5307 funds may be used for capital transit investments in land, technology, engineering, design, etc., for constructing or improving mass transit infrastructure and operations. Transit operating assistance to cover costs incurred in operating a transit program, including preventive maintenance for urbanized areas with populations greater than 200,000 and operating and maintenance funds for urbanized areas with populations less than 200,000. Projects that enhance mass transit use, such as bus shelters, landscaping, street furniture, and historic preservation.	Funds are allocated to areas with a population of less than 200,000 based on population and population density. Funds are allocated to designated recipients in areas with populations greater than 200,000 based on population, population density, and transit data. Designated recipients are public bodies that have the legal authority to receive and disperse Federal funds. The program provides operating assistance only to urbanized areas with a population of less than 200,000. One percent is set aside for transit enhancement projects in urbanized areas with populations greater than 200,000. Capital expenses definition includes preventive maintenance for areas with populations	Typically an 80-percent Federal share with a required 20-percent non-Federal share. A 90-percent Federal share with a required 10-percent non-Federal match for cost of vehicle-related equipment to comply with the Clean Air Act Amendments or Americans with Disabilities Act. A 95 percent Federal share with a 5 percent non-Federal share for transit enhancement projects providing bicycle access to mass transit. Another exception to the 80-percent Federal share is when flexible funds for certain FHWA programs are being used.	Most applicable to Federal lands located in urbanized areas with populations of less than 200,000 such as national monuments and national historic parks and sites. Must coordinate with the designated recipient. FLMAs need to work with grantees to identify routes and services that benefit their sites. Modification of existing routes and services may be considered to service FLMA sites.	Planning, Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FTA							
Capital Investment Grants and Loans (Sec. 5309)	This program (formerly Discretionary Grants) provides transit capital assistance for new fixed guideway systems and extensions to existing systems (new starts), fixed guideway modernization, and bus and bus-related facilities. Not a likely source of funding for the FLMAs.	Year 2002 \$2,841million Year 2003 \$3,036 million	New starts include fixed guideway systems and the development of transit corridors and markets to support eventual construction of fixed guideway systems. Fixed guideway modernization is applied to maintaining existing rails, trolley buses, aerial tramways, inclined planes, cable cars, people movers, ferryboats, motorbus operations, and high-occupancy-vehicle lanes. Bus expenditures are available for new bus fleets and service expansion and other related facilities and services.	Funds are distributed as follows: 40 percent to fixed guideway modernization, 40 percent to new starts, 20 percent to buses. New starts and bus funds are discretionary. Apportionment for fixed guideway modernization formula uses systemwide mileage based on the data used to apportion the funding in FY 1998. At least 5.5 percent of the bus portion must go to nonurbanized areas.	Typically an 80- percent Federal share with a required 20- percent non-Federal share. A 90- percent Federal share with a required 10- percent non-Federal match for cost of vehicle-related equipment to comply with the Clean Air Act Amendments or the Americans with Disabilities Act.	Sec. 5309 may be applicable to Federal lands trying to expand transit service and shuttle bus fleets. Sec. 5309 is not a likely source of funding for most FLMAs, due to competing needs of recipients. The best opportunities for FLMAs are from the modification or extension of existing urban or rural transit routes	Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FTA							
Clean Fuels Formula Grant Program	This program assists transit operators in purchasing low-emissions buses and related equipment, constructing alternative-fuel fueling facilities, and modifying garage facilities to accommodate clean-fuel vehicles, and assists in the utilization of biodiesel fuel. This program is not a likely source of major funding for the FLMA's.	Year 2002 \$200 million Year 2003 \$200 million	Eligible projects include purchasing clean-fuel buses; constructing, modifying and/or leasing associated facilities; and repowering or retrofitting existing buses. Eligible technologies include compressed natural gas, liquefied natural gas, biodiesel fuel, batteries, alcohol-based fuel, hybrid electric, fuel cells, or other zero-emissions technology.	The program provides funding only to grantees that apply and use a formula based on population, fleet size, bus passenger miles, and severity of air quality nonattainment. Establishes a cap on grants to any one recipient of \$15 million for areas with a population of less than 1 million and \$25 million for areas with a population of 1 million or more.	An 80-percent Federal share with a required 20-percent State/local match.	A potential source of funding for small Federal lands projects involving shuttle buses. A relatively small total funding budget is a primary constraint, so funding of major projects is unlikely. No funds were appropriated for FY 1999 or 2000.	Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FTA							
Formula Program for Other than Urbanized Areas (Sec. 5311)	This program provides transit capital and operating assistance through the States to nonurbanized areas for populations of less than 50,000. Primarily used to fund transit authorities in rural areas.	Authorized and guaranteed: Year 2002 \$224.9 million Year 2003 \$240.6 million	Eligible grant recipients include public and private nonprofit organizations. Capital and operating costs of public transit service in rural and small urban areas. Support for rural intercity bus services is also eligible.	Funding is allocated to States by a formula based on nonurbanized population. States are responsible for distributing funds equitably within the State.	An 80-percent Federal share and a 20-percent non-Federal share for capital and project administration. A 50-percent Federal share for operating costs and a 90-percent Federal share for incremental costs of complying with the Clean Air Act Amendments or the Americans with Disabilities Act.	Grants are made by the State to local or regional public and private nonprofit agencies for rural transit service. Coordination with gateway communities is essential. Most large FLMA sites are in nonurbanized areas. Partnerships between FLMA sites and transit agencies have been successful in establishing service to FLMA sites, including Hot Springs and Great Smoky Mountains National Parks. Funding is limited.	Planning (limited), Capital, Operating

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
Formula Grants and Loans for Elderly Individuals and Individuals with Disabilities (Sec. 5310)	This program provides transit capital assistance through the States to organizations that provide specialized transportation services to elderly persons and persons with disabilities.	Authorized and guaranteed: Year 2002 \$84.7 million Year 2003 \$90.7 million	Eligible expenses include vehicle acquisitions, purchased services, and administrative support.	Funding is allocated to States by a formula based on elderly and disabled populations.	Typically an 80-percent Federal share for capital and purchased services with a required 20-percent non-Federal share. A 90-percent Federal share with a required 10-percent non-Federal match for incremental costs of complying with the Clean Air Act Amendments or the Americans with Disabilities Act.	Not a likely source of funding, but could be applicable to sites that attract elderly travel groups.	Capital, Maintenance

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FTA							
Job Access and Reverse Commute Grants	This program provides competitive grants to local governments and nonprofit organizations to develop transportation services to connect welfare recipients and low-income persons to employment and support services.	Authorized: 2002 \$150M 2003 \$150M Guaranteed: 2002 \$125M 2003 \$150M	A coordinated transportation/human service planning mechanism is required to develop job access programs. The reverse commute program provides services to suburban employment centers from other areas.	Grant awards are based on: 1. Percentage of the population that are welfare recipients 2. Need for additional services 3. Coordination with and use of existing transportation providers 4. Coordination with State welfare agencies implementing the Temporary Assistance for Needy Families program 5. Use of innovative approaches	A 50-percent Federal share with a 50-percent required non-Federal match.	This program is probably not applicable for most FLMAs, although as an employer, FLMAs could participate in a local project. Some FLMA sites have identified ATS as a means of addressing labor shortages caused by isolation from population centers.	Planning, Capital

Table 4—FHWA and FTA programs with potential for funding Federal lands projects.

Program	Overview	Authorized Funding	Eligible Activities	Fund Distributions	Match	Comments	Planning, Capital, Operation and Maintenance
FTA							
Rural Transportation Accessibility Incentive Program	This new program will assist in financing the incremental capital and training costs associated with implementing DOT's final rule on accessibility requirements for over-the-road-buses (OTRB).	Year 2002 \$6.95 million Year 2003 \$6.95 million	Eligible expenditures include capital costs associated with making OTRBs wheelchair accessible and training.	Grants are awarded based on: 1. Identified need for service 2. Acquisition of required equipment ahead of required timeframes 3. Financial capacity 4. Service impacts in rural areas and for low-income individuals. A 50-percent Federal share with a 50-percent required non-Federal match, except in FY 2000, the Federal share is 90 percent for intercity fixed-route providers.	A 50-percent Federal share with a 50-percent required non-Federal match, except in FY 2000, the Federal share is 90 percent for intercity fixed-route providers.	Probably not applicable	Capital

Table 5—Select funding opportunities in Title 23 U.S.C.

OPPORTUNITIES	PROGRAMS				
	Sec. 133 Surface Transportation Program (Including Transportation Enhancements Set-Asides)	Sec. 144 Highway Bridge Replacement and Rehabilitation Program	Sec. 204 FLHP Forest Highway and Public Lands Highway— Discretionary	Sec. 162 National Scenic Byways Program	Sec. 206 Recreational Trails Program

TE – These activities can be funded from the Transportation Enhancements Set-Aside within the Sec. 133 Surface Transportation Program.

X – These activities can be funded from the program shown in the column heading.

Abandoned railway corridor preservation (including the conversion and use for pedestrian or bicycle trails)	TE		X		
Archeological planning and research	TE		X		
Bicycle and pedestrian facilities	TE		X	X	X
Bridge repair and replacement	X	X	X		
Cultural and historic resource protection			X	X	
Easement acquisition for recreational trails and recreational trail corridors			X		X
Environmental mitigation to address water pollution due to highway runoff or to reduce vehicle-caused wildlife mortality while maintaining habitat connectivity	TE		X		
Environmental protection educational programs related to the use of recreational trails			X		X
Environmental restoration and pollution abatement projects to address water pollution or environmental degradation caused or contributed to by transportation facilities	X		X		
Historic preservation, rehabilitation, and operation of historic transportation buildings/ structures/facilities	TE		X		

Table 5—Select funding opportunities in Title 23 U.S.C.

OPPORTUNITIES	PROGRAMS				
	Sec. 133 Surface Transportation Program (Including Transportation Enhancements Set-Asides)	Sec. 144 Highway Bridge Replacement and Rehabilitation Program	Sec. 204 FLHP Forest Highway and Public Lands Highway— Discretionary	Sec. 162 National Scenic Byways Program	Sec. 206 Recreational Trails Program

TE – These activities can be funded from the Transportation Enhancements Set-Aside within the Sec. 133 Surface Transportation Program.

X – These activities can be funded from the program shown in the column heading.

Historic site acquisition	TE		X	X	
Intelligent transportation systems infrastructure	X		X		
Interpretive facilities/signs			X	X	
Landscape/scenic beautification	TE		X	X	
Management systems	X		X		
Natural habitat mitigation efforts related to projects funded under Title 23	X		X		
Outdoor advertising control and removal	TE		X	X	
Parking areas/facilities			X	X	X
Public facilities (tourist and welcome centers)	TE		X	X	
Roadside rest areas			X	X	
Safety and educational activities for pedestrians and bicyclists	TE		X		X
Safety improvements	X	X	X	X	X
Scenic and historic highway programs	TE		X		
Scenic easement and scenic site acquisition	TE		X	X	
State scenic byways program— planning, design, and development			X	X	

Table 5—Select funding opportunities in Title 23 U.S.C.

OPPORTUNITIES	PROGRAMS				
	Sec. 133 Surface Transportation Program (Including Transportation Enhancements Set-Asides)	Sec. 144 Highway Bridge Replacement and Rehabilitation Program	Sec. 204 FLHP Forest Highway and Public Lands Highway— Discretionary	Sec. 162 National Scenic Byways Program	Sec. 206 Recreational Trails Program

TE – These activities can be funded from the Transportation Enhancements Set-Aside within the Sec. 133 Surface Transportation Program.

X – These activities can be funded from the program shown in the column heading.

Tourist information			X	X	
Tourist-oriented signs			X	X	
Trail construction and reconstruction			X		X
Trail facilities/trailheads			X		X
Trail maintenance					X
Transit facilities	X		X		
Wetlands mitigation efforts related to project funded under Title 23	X		X		
Wildlife, habitat, and ecosystems—mitigation of damage caused by a transportation project funded under Title 23	X		X		
Wildlife crossings—mitigation of wildlife crossing hazards	X		X		
Approximate TEA-21 authorization level (in millions)	5,000	3,500	249	25	50

Non-TEA-21 Funding

Some potential non-TEA-21 revenue sources and financing tools are summarized in tables 6 and 7. These are nontraditional sources of funding and financing tools for leveraging or matching other funding sources. Additional detail is available in the *"Federal Lands Alternative Transportation Systems Study"* (2001).

Table 6—Sample non-TEA-21 revenue sources.

Sample Revenue Sources	Comment	Example
User fees	A fee charged to a user of a facility to cover or defray the cost of providing the facility or a specific service (e.g., tolls, fares, parking fees, license fees, and use permits).	The Recreational Fee Demonstration Program permits participating Federal lands sites to retain 80 percent of fees charged for internal use. (Fees primarily used to address deferred maintenance requirements.)
Private sponsorships	Generally used as a means to raise funding for recreational and quasi-public purposes. Range from large corporate sponsorships to individual contributions.	May be attached to a specific facility [e.g., sports stadium, a major event (e.g., the Olympic Games)], or to support the ongoing work of special purpose organizations (e.g., the Nature Conservancy).
State and local funds	Generally include sales tax surcharges on tourist-related expenditures (e.g., hotels, restaurants, rental cars, and tickets to events).	Have been used to fund transit system projects.
Fund raising and contributions	Local businesses sometimes contribute where they see a direct benefit. "Friends" groups and support organizations contribute substantial sums of money to many of the major Federal lands sites.	These contributions have also been used for transit projects, e.g., the Acadia National Park Island Explorer transit system is routed directly to the door of hotels and motels that provide a contribution to the system.
State Infrastructure Banks (SIB)	Thirty-four states have been authorized to set up infrastructure investment funds to make loans and provide assistance to surface transportation projects. ¹ The program gives States the capacity to use their transportation investment more efficiently and significantly leverage Federal resources by attracting non-Federal public and private investment. ² States have greater flexibility because they are allowed to pursue other types of project assistance in addition to the traditional reimbursable grant.	

¹ TEA-21 authorizes SIBs in four additional States (California, Florida, Missouri, and Rhode Island).

² FHWA fact sheet for the State Infrastructure Bank Program and Statewide Transportation Planning Under ISTEA: A New Framework for Decisionmaking, U.S. DOT, FHWA, and FTA.

Table 7—Sample financing tools for maximizing the benefits of additional revenue sources in table 6.

Financing Tool	Definition
Public-Private Partnerships	Agreement between a public entity and a private organization that provides for coordinated actions to plan, finance, construct, operate, and maintain a transportation facility or system. Responsibility for raising capital and project risk is shared. This enables the public to reduce the direct cost of the facility to the Government and encourage private investment. Examples include franchises and concessions. The Presidio Trust is an innovative public-private partnership: It is an executive agency of the U.S. Government but its financial plan calls for self-sufficiency through lease revenues by 2013. The Presidio, a historic military fort, is part of the Golden Gate National Recreation Area. The financial management program outlines how revenues generated from the rehabilitation and rental of its buildings will fund environmental and infrastructure improvements. It contains many historically significant structures and the Trust plans to renovate and lease the buildings to the private sector. By 2013, revenues will be large enough to no longer require additional Federal funding. One potential use of the revenues is to assist in funding transit projects.
Bonds	Debt instruments issued for periods of more than 1 year to raise capital by borrowing. The Federal government, States, cities, corporations, and other institutions sell bonds. A bond is a promise to repay the principal plus interest on a specified date (maturity). Bond principal and interest payments can be met from dedicated revenues (i.e., user fees) or general tax revenues.
Certificates of participation (COP)	Financing instrument in which an investor buys shares of lease revenues of an agreement made by a municipal or governmental entity, rather than purchasing a bond secured by those revenues. Used when a State faces limits on its ability to increase taxes or issue other forms of debt (such as California's Proposition 13 limits). This instrument is used in the public transit industry to purchase equipment.
Leasing	Contract under which an owner of property or asset allows another party to use the property or asset for a specified period of time in exchange for payment of rent or use fees. Lease may or may not include a purchase option under which the lessee can apply lease payments toward the purchase price of the property or asset being used. Leasing can be beneficial because it reduces the up-front cost of major capital purchases and allows payments to be spread out over an asset's useful life or planned period of use. It also allows for the use of capital assets for a limited period of time without having to acquire them outright.
Federal credit	TEA-21 authorized a new Federal credit program, known as the Transportation Infrastructure Finance and Innovation Act (TIFIA), to support large, nationally significant transportation projects. It provides direct loans, loan guarantees, and standby lines of credit for projects costing over \$100 million. Program provides secondary or subordinate capital, repaid from dedicated project revenue streams, for up to one-third of the project costs. TIFIA assistance is available to State DOTs, local governments, transit agencies, special authorities, special districts, railroads, and private companies or consortia seeking to finance, design, construct, and operate a major surface transportation project. Program does not lend directly to other Federal agencies (i.e., outside the Department of Transportation), but may have applicability to projects sponsored or undertaken by eligible organizations. Borrowers can negotiate more favorable terms (e.g., longer payback periods) than from private capital markets. Applications for TIFIA assistance will be solicited at least once a year during the authorization period of TEA-21.
Grants	State DOTs often create grants from specific Federal and State funding programs and for projects designed to meet specific objectives. State lottery funding provides a good example. There is no standard grant application process. Some programs require a brief application form; others require a comprehensive proposal. Regardless of the specifics of the application process, forests and their partners seeking grant funds should read the application form carefully to ensure that all required information is provided. Omitting a phone number or exceeding the required page limit may seem

Table 7—Sample financing tools for maximizing the benefits of additional revenue sources in table 6—continued

Financing Tool	Definition
	trivial but could lead to the dismissal of the application. Many grant applications require detailed information to ensure that grant money will result in a project that can be implemented, e.g., evidence of local support for the project may be required. Your forest's grants and agreements specialists can more than pay their own way through successful grant applications.

ASSISTANCE IS AVAILABLE FROM THE FHWA AND THE FTA

The FHWA and the FTA provide administrative and technical support to the Federal Land Management agencies in implementing surface transportation projects and strategies. Table 8 describes the FHWA's and the FTA's field structure where support can be obtained by the Forest Service.

Table 8—FHWA and FTA field structure.

Agency	Offices	Responsibility/Support Service
FHWA	4 resource centers	Support Federal-aid and FLH division offices
	52 Federal-aid division offices – 1 in each State Capital	Provide front-line Federal-aid program delivery assistance to partners and customers (primarily State DOTs) in highway transportation and safety services
	– Washington, DC – Puerto Rico	Provide assistance in the areas of planning and research, preliminary engineering, technology transfer, right-of-way, highway safety, civil rights, environmental concerns, and highway beautification
	3 Federal Lands Highway division offices: – Eastern (Sterling, VA) – Central (Lakewood, CO) – Western (Vancouver, WA)	Administer the FLHP in coordination with the FLH headquarters in Washington, DC (FLHP consists of the Park Roads and Parkways program, the Public Lands Highways program (PLH-Discretionary, and the Forest Highway program), the Refuge Roads program, and Indian Reservation Roads program
		Provide inclusive planning, environmental, engineering, and construction support services directly to the Federal Land Management Agencies. Responsible for promoting the development of new technology and for training engineers throughout FHWA.
FTA	10 regional offices 4 metropolitan offices	Provide front-line transit program delivery assistance to partners and customers. Assist in planning and research, technology transfer, safety, environment, engineering, and operations functions.





Now that we have examined the transportation planning process to understand how the Forest Service's land management planning processes fit into the overall process, let's take a brief look at the next step: the project development process (figure 1).

FHWA and FTA programs present opportunities well beyond the roadway itself. Opportunities to develop trails, transit systems, intermodal connections, and alternative modes of transportation are also available under the various surface transportation programs. Implementing projects funded through these programs can afford many opportunities to protect resources and improve recreation

Intermodal Transportation Linkages: TEA-21 Connects an Island

On Prince of Wales Island in southeast Alaska, TEA-21 funds are being used to link forest resources and communities with ferry terminals. The Tongass National Forest is working with the State of Alaska, local community groups, and the FHWA to upgrade 20 miles of gravel single-lane forest road to a paved double-lane road. Improving the Coffman Cove Road is part of the March 1999 Southeast Alaska Transportation Plan published by the Alaska Department of Transportation and Public Facilities. Paving the road will help reduce sedimentation in about 50 salmon, steelhead, and resident fish streams and improve water quality in 25 other streams. Barriers to fish passage across the road will be removed.



The Coffman Cove Road is the last link between the existing Alaska Marine Highway terminal in Hollis on Prince of Wales Island and the proposed Inter-Island Ferry Authority terminal in Coffman Cove. Increased recreation traffic from the new ferry terminal is an important element of economic development for the communities on the island. The Inter-Island Ferry Authority, a private ferry startup, will provide daily year-round service from Ketchikan and Wrangell to Prince of Wales Island. This project was identified by the Prince of

Wales community advisory council as their top transportation priority. For more information on this project, contact the transportation engineer at 907-586-7958.



An effective project development process encourages the review and improvement of standard operating procedures to ensure that management objectives are met. Transportation planning and project development offer a unique opportunity to create just such an effective tool. Table 9 describes various environmental and social issues and opportunities that can be addressed through the FHWA and FTA programs listed in tables 3, 4, and 5.



Table 9—Issues and opportunities..

Environmental Issues and Opportunities		
Opportunity Area	General Description	Examples
Air quality	Transportation plans require integration of air quality planning to meet EPA standards. Urban forests with air quality problems may reduce emissions by encouraging alternative forms of travel, such as mass transit, bicycles, and shuttles through FHWA and FTA funding.	Springdale, UT, a gateway community to Zion National Park, developed a transit system using FHWA funding to reduce emissions and solve traffic and congestion issues.
Ecosystem functions and processes	Highways usually affect areas on a larger scale than typical forest roads, e.g., wildlife habitat connectivity can be maintained for large, wary carnivores such as grizzly bears with small forest roads, but highways may be nearly complete barriers. National forests can help create an <i>ecological infrastructure</i> on a regional scale by connecting stepping-stones of habitat, such as State and local parks, with well-designed crossing structures on highways. Partnerships with Tribal, local, and State stakeholders are critical in developing a national ecological infrastructure that enables ecological functions and processes to occur seamlessly throughout the Nation.	The Florida DOT and the Forest Service are using national forests in Florida as keystone parcels, along with other public lands, in a multicounty effort to connect important ecological areas.
Fire	Highways support wildfire suppression and fuels management for transporting resources on arterial and collector roads. Highways provide a source of ignitions, but also an increased ability to manage fuels and wildfire. Highway width provides effective fuel breaks, particularly in wildland-urban interface situations. Fire frequency and severity can be affected by highway fuel breaks.	The Deschutes National Forest in Oregon, used an innovative solution in a high-risk fire situation. A stand of trees near Highway 20 was thinned using transportation enhancement funding. This reduced fire risk while increasing the scenic quality of the highway (chapter 5 provides more details about this project).
Fish and aquatic species	The amount of road in a watershed directly affects the available habitat of aquatic species. Highways adversely affect water quality and aquatic habitats by increasing drainage density and changing stream velocity and elevations. Culverts, common for stream crossings, can cause fragmentation for aquatic organisms. Full-span crossings are desirable for streams over 1.5 meters wide because they stay out of the stream channel and shade the stream less, while providing a greater amount of passage space for riparian-associated animals. The Surface Transportation program can assist with funding these expensive structures through the Transportation Enhancements program, the Highway Bridge Replacement and Rehabilitation program, and the Federal Lands Highway program. Our strengthened	



Table 9—Issues and opportunities (continued).

Environmental Issues and Opportunities		
Opportunity Area	General Description	Examples
	partnerships with State transportation agencies can help ensure that replacing stream-crossing structures accommodates fishery needs. This cooperative working relationship will ensure road stability and enhance the ability of the structures to permit migration of aquatic species.	
Physical factors	Highway stability is a key component for safety and minimizing costs. Unique landforms may attract visitors, but planners should ensure that a safe and stable road protects the unique features.	Many national forests, such as the Tonto, White Mountain, Lake Tahoe Basin, and the Uncompahgre have used FHWA funds to enhance highway safety while increasing visitor enjoyment through increased parking areas at vistas and accessible interpretive centers.
Range management	In many national forests and grasslands, livestock allowed to range freely across highways cause numerous vehicle accidents. Fences and crossing structures for livestock and wildlife may reduce animal/vehicle collisions.	The Shasta-Trinity National Forests, the College of the Siskiyous, and Caltrans partnered to fund several miles of deer fencing along Highway 97 in northern California. Although the fencing was designed primarily to reduce deer collisions, cattle collisions on the open range were also reduced, resulting in a 99 percent reduction in animal/vehicle collisions.
Terrestrial wildlife	Highways are barriers that reduce dispersal, migration, or other movements of wildlife. Motor vehicle collisions cause death or injury to birds, mammals, reptiles, and amphibians. Effective transportation planning can identify large-scale wildlife habitat linkages, while the project development process can identify structures that could be installed to allow wildlife to cross highways. These two steps must be integrated for optimal success, and cooperation between the Forest Service and transportation agencies helps ensure long-term success. FHWA provides funds through the transportation enhancements program for habitat mitigation and for construction of innovative crossing solutions.	The Ocala National Forest partnered with the Florida Fish and Wildlife Conservation Commission and the Florida DOT to use FHWA surface transportation program funds and license plate funds to research black bear and highway interactions. This partnership is yielding important information to manage bears and highways in Florida and also enables the Ocala National Forest to participate in local events such as the annual Black Bear Festival in Umatilla, FL.
Vegetation	Highways impact native plants by direct removal, erosion control efforts with non-native plants, and conversion of habitat in line-of-sight clearings. Deicing salts, pesticides, and fertilizers used to manage roadside vegetation can injure native plants,	On the Apalachicola National Forest, close-working relationships between the Forest Service and the Florida DOT allowed a right-of-way to be managed to enhance a small, endangered flower,

4 PROJECT-LEVEL HIGHWAY ISSUES AND OPPORTUNITIES



Table 9—Issues and opportunities (continued).

Environmental Issues and Opportunities		
Opportunity Area	General Description	Examples
	amphibians, and other aquatic species. Noxious weeds and exotic animals use line-of-sight clearings to expand their ranges. These effects often impact native plants and the animals that depend upon these plants for food and shelter. Native plant communities can be restored using Transportation Enhancements program funds. Transportation maintenance agencies are often effective partners for combating noxious weeds along highways and trails and for using appropriate non-chemical vegetation management in important amphibian and aquatic habitat.	Harper's Beauty. The revised mowing schedule permitted better fire management, a necessary component of the plant's ecology, and also provided a spectacular blooming display on the right-of-way that was easily accessible to plant enthusiasts.
Water resources	Information gained during watershed analysis should address how the road system is hydrologically connected to the stream and riparian systems. Water uses on the national forests may include diversions, impoundments, hydropower production and operation, and distribution systems. These water bodies and wetlands also provide essential habitat for numerous plants, wildlife, and aquatic species. Highways can interrupt water flow and cause dramatic changes in wetland functions and the ecological processes of plants and small animals such as frogs, salamanders, clams, and snails. Wetland mitigation can be funded through the Transportation Enhancements program or the Federal Lands Highway program.	On the Tonto National Forest, Highway 188 altered drainage patterns, causing a wet meadow to dry up. Highway realignment by the Forest Service and the Arizona DOT successfully restored the meadow by fixing the drainage and developing irrigation and monitoring systems.
Social Issues and Opportunities		
Opportunity Area	General Description	Examples
Accessibility	Under Forest Service policy, all facilities and programs developed by the Agency are to be universally accessible, without barriers. Therefore, all transportation projects will improve access for all people, including people with disabilities. These funding programs can be used for: improving access to recreation, modifying existing sidewalks, retrofitting over-the-road buses for accessibility, and developing accessible educational programs. The potential for increased access for all people is tremendous.	On the White Mountain National Forest Kancamagus Scenic Byway, TEA-21 funding has supported universally accessible roadside overlooks with adjacent pathways to picnic areas. Families with young children in strollers and people in wheelchairs can enjoy the area along with other visitors.
Civil Rights	FHWA and FTA programs provide opportunities to address civil rights issues that are Forest Service	FTA programs provide opportunities for job access and reverse-commute grants.



Table 9—Issues and opportunities (continued).

Social Issues and Opportunities		
Opportunity Area	General Description	Examples
	priorities. Establishing mass transit access to forest destinations may benefit visitors and potential employees with limited personal transportation options to more easily experience national forests and grasslands.	This provision may enable the Forest Service to increase diversity in our workforce by assisting residents of urban areas to commute to suburban or rural areas.
Cultural resources	FHWA and FTA programs funding can assist national forests with archeological plans and research, fund historic easements or acquisitions, preserve abandoned transportation corridors, or develop interpretive sites. Transit systems may resolve some cultural issues that highways create and should be investigated for appropriateness in urban forests.	The Uncompahgre National Forest partnered with Idarado Mining Company and used the Colorado State Historic Fund grant and TEA-21 funds to develop an interpretive wayside exhibit on geology and mining history.
Economic factors	Economic costs and benefits associated with highway construction and maintenance impact the development of the local economy. Both economic efficiency from a societal point of view and the cost of a highway for the transportation agency are important to project planning. The Forest Service has a unique role in weaving the environmental and social objectives outlined in the forest management plan into a highway project on or affecting NFS lands. Good working relationships with transportation agencies are critical to effective cost/benefit mitigation strategies important to the Forest Service. Transit systems fundable through FHWA and FTA programs can address a variety of needs that may result in sound economic sense in the long term if resource restoration, traffic congestion, and local business concerns are evaluated.	The surface transportation program funds can be used to provide innovative benefits to local economies. The Florida Fish and Wildlife Conservation Commission works with Ocala National Forest biologists to nominate, maintain, and improve bird watching sites listed in the Great Florida Birding Trail, a highway-based brochure and site tourist guide (funded with TE grants). Nationally, birding is big business, with retail sales generating more than \$477 million annually in Florida alone.
Infrastructure	Many arterial and collector roads in the national forests provide primary access to rural communities and major connections between State highways and county roads. The routes may be important to the economic survival of these communities by furnishing access for commercial traffic, mail delivery, school bus service, emergency vehicle response, farm-to-market shipments, and enhanced tourism. FHWA and FTA programs are potential funding opportunities for rural development, tourist resources, and bridge repair and replacement. Bridge replacement can correct many watershed-related issues initially caused by bridge construction and maintenance.	Girders on bridges can provide valuable bat habitat. Bat habitat enhancements are now standard, and virtually cost-free, on all bridges and box culverts on national forests in Arizona.



Table 9—Issues and opportunities (continued)

Social Issues and Opportunities		
Opportunity Area	General Description	Examples
Recreation	Many components of recreation are affected by transportation systems, both as a means for accessing recreation, and in many cases, as the recreation itself. Driving for pleasure is the number one recreational use of national forests. However, sometimes highways may adversely affect unroaded recreation. Improving highways may improve access, thereby increasing the use of unroaded and roaded recreation opportunities. Through the Recreation Trails and Enhancements programs, funding is also available to construct or maintain motorized, nonmotorized, and mixed-use trails.	The Mt. Rogers National Recreational Area successfully used hundreds of thousands of dollars of FHWA funds to restore bridges and trestles beneath the Virginia Creeper National Recreational Trail. This flexible Recreation Trails program has funded the purchase of a \$78,000 trail dozer and the construction of accessible fishing facilities and bicycle trails.
Scenic resources	Highways can affect the visual resources of national forests both to travelers on the highway and to visitors viewing them from afar. Landscape and scenic beautification projects funded through the FHWA are provided under several programs, including the Transportation Enhancement program and the scenic byways program. The scenic byways program allows partners to manage scenic resources in national forests, including financing scenic easements across private lands.	See chapter 5.

The stories highlighted in this chapter are just a sample of what can be accomplished using TEA-21 funds. By using the tools and funding opportunities provided in this guidebook, your forest can create their own success stories.

Tonto National Forest Interpretive Sites:

Nominated for the Excellence in Highway Design Award
The present-day Apache Trail began many centuries ago as an aboriginal highway through the Superstition Mountains in central Arizona. In the early 1900s, the U.S. Bureau of Reclamation financed a highway so that supplies could be hauled from Phoenix to build the Roosevelt Dam.

Currently, the Apache Trail Scenic Byway is the second most frequently driven scenic road in Arizona. The State of Arizona designated it as a historical road because it is a primary transportation route directly associated with Arizona's history and the tourist industry.

The Tonto National Forest design team and the Arizona Department of Transportation were partners in developing three interpretive sites that showcase several unique values of the scenic byway. The design team was nominated for a national Excellence in Highway Design award for these sites.

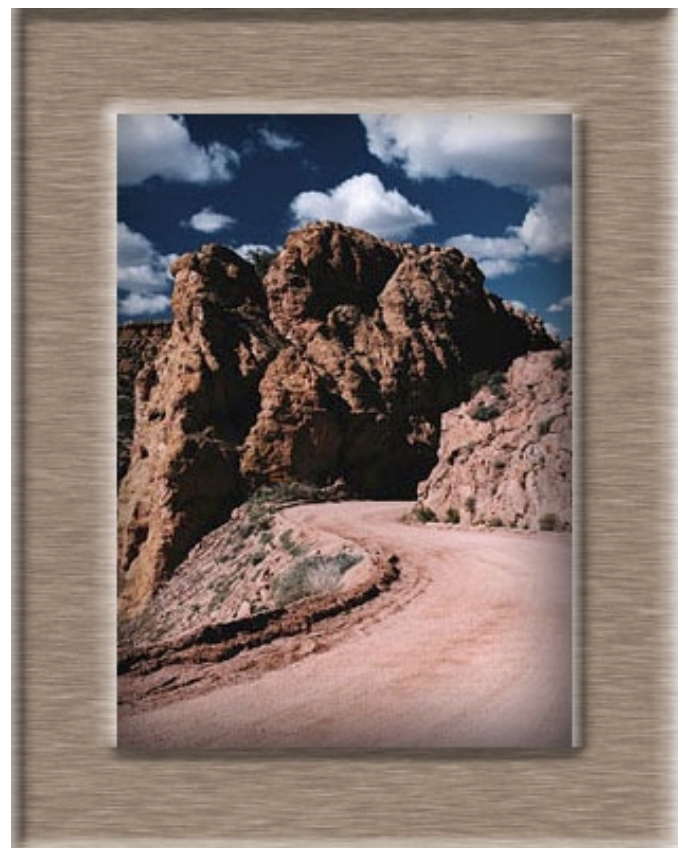
These interpretive sites along the Apache Trail Scenic Byway provide educational opportunities for thousands of visitors annually. All of the project materials were compatible with both the desert environment and the original materials used for constructing the dam and road. Low-maintenance, accessible, vandal-resistant materials enhanced functional efficiency and construction quality.

The Needle Vista Interpretive Overlook introduces the motorist to the rich cultural and natural resources along the route. By locating the gateway on an abandoned administrative site along the scenic byway, an old eyesore was cleaned up and beautified. The facility designers took advantage of existing clearings, vegetation, and topography. Native vegetation was reestablished throughout the facility, and native flora and fauna can now be appreciated along a new, accessible nature trail.

Designers remedied a safety hazard at the Canyon Lake Vista along the Apache Trail. Numerous accidents were occurring because of limited visibility. Now drivers can make safe turns into the vista, and pedestrians stopping to capture images of the sweeping vista can linger safely to enjoy the experience.

Fish Creek Hill was an ideal showcase for designers to increase a visitor's appreciation of the area. Retaining walls faced with stone were constructed to mimic historic hand-laid stone walls along the Apache Trail. A new accessible trail leads out to a prominent butte. Signage interprets the history of the area, highlighting the construction of the Apache Trail down Fish Creek Hill and the difficulties encountered while constructing retaining walls and sheer rock cuts.

For more information, contact the Tonto National Forest at 602-225-5200.



Kancamagus Scenic Byway: Changing Landscapes on the White Mountain National Forest

The Kancamagus Scenic Byway is a 34-mile stretch of New Hampshire Route 112 and includes 28 miles of the White Mountain National Forest. This two-lane mountain road has a national reputation as one of the most magnificent drives in the northeastern United States. Panoramic views, colorful northern hardwood and spruce-fir forests, and picturesque country scenes draw urbanites to this area. The byway's theme, "changing landscapes," was chosen to reflect the changes in the landscape due to historic activities and management actions.

Seventeen universally designed visitor facilities are planned for the byway, including visitor centers at each entrance, three overlooks, the Albany Covered Bridge, and a footbridge at Lincoln Woods. Innovative aspects of the project include interpretive sites with accessible trails, the development of a children's guidebook, and a program center adjacent to a structure on the National Historic Register.

The project will be completed over several years, with a total investment of more than \$4.3 million. ISTEA and TEA-21 grants contributed to well over half of the phase I funds. Partners contributed nearly \$800,000 for phase I, and the Forest Service provided the balance from Capital Investment funds and fee demo revenues. During phases II and III, a wildlife viewing area and the second visitor center will be constructed. Brochures and an audio tour for the byway are being developed.

The Kancamagus Scenic Byway is an example of how the four major points in the national recreation agenda can be implemented. Project dollars are invested in a nationally designated facility. The project reflects the shared vision of its partners by allowing visitors to experience recreational opportunities with a unified theme of the Kancamagus Scenic Byway fully without overcoming land ownership or jurisdiction constraints.

For further information, contact the White Mountain National Forest at 603-528-8721.



Lake Tahoe Basin Management Unit: Emerald Bay State Park Enhancement

Lake Tahoe, nestled in the Sierra Nevada Mountains of California, is one of America's crown jewels. Emerald Bay is a popular overlook for viewing the aqua-colored lake at the base of breathtaking mountain peaks. Escalating recreational use in the area has elevated concerns for public safety and natural resource protection.



The Emerald Bay area is a National Natural Landmark, a National Historic District, and is adjacent to a California State scenic highway (Highway 89). The area has recently benefited from hard work and careful planning. In 1994, the California Department of Parks and Recreation, in cooperation with the Lake Tahoe Basin Management Unit of the Forest Service, began to address visitor congestion in the Emerald Bay and historic Vikingsholm area.

Since then, a number of improvements designed to increase safety, manage access, and reduce environmental impacts in the Vikingsholm historic area have been completed. This project was accomplished not merely by maximizing funding opportunities, but through the cooperation of various partners and their resources. California State Park staff, the California Conservation Corps work crews, volunteer organizations, and groups

such as the "Hard Rockers" pitched in to implement a multifaceted improvement plan. Improvements included constructing a historically accurate rock wall at the Vikingsholm parking lot, interpretive sites and trails, and expanded parking facilities. The project has received praise for its universal access design and for the creation of the National Outdoor Trail guidelines for accessibility.

Funding for this project came together like carefully completed marquetry. After initial funding, subsequent grant funds were used to match additional funding opportunities. Initial construction work began with FHWA funding and a Sierra State Parks Foundation grant totaling \$57,000. New bridge construction was then funded through a private donation of \$50,000. The California Department of Parks and Recreation provided \$50,000 to match a California State Environmental Enhancement and Mitigation (EEM) grant of \$170,000. A portion of this grant matched an additional Recreational Trails Program grant of \$79,000, matched to yet another grant of \$159,000 awarded through the next cycle of the California EEM program.

For further information, contact Lake Tahoe Basin Management at 530-573-2600.



Willamette and Deschutes National Forests: McKenzie-Santiam Pass National Scenic Byway

Creating a fuel break along Highway 20 on the Deschutes National Forest was the primary goal of thinning 20 miles of roadside tree stands. Highway 20 is part of the McKenzie-Santiam Pass National Scenic Byway and is a popular travel route that crosses the Cascade Mountains and connects the Willamette Valley with central Oregon. Following low-rainfall years, tree mortality along the highway reached as much as 80 percent.



The browning forest was evident to the public, and Forest Service managers were concerned about the fire hazard. On Santiam Pass, salvage timber sales helped thin stands with heavy tree mortality where trees had commercial value. On the east side of Santiam Pass outside the town of Sisters, OR, roadside stands were precommercially thinned with assistance from State corrections crews and funding from the Forest Highways program. One project goal was to enhance the scenic views and to maintain roadside esthetics. The response from the Sisters residents has been so favorable that additional roadside vegetative thinning is being considered.

The Willamette and Deschutes National Forests were among the first national forests in Region 6 to begin corridor planning in the early 1990s, with the hope of receiving National Scenic Byway designation. Their efforts and coordination with the Oregon DOT and FHWA have paid large dividends. In addition to creating fuel breaks and recreation enhancements, portals to the byway were developed at McKenzie River Ranger Station and at the town of Sisters. The land for the town portal was donated by a private development corporation (a \$250,000 value) and includes a nonstaffed kiosk and accessible flush restrooms. The town of Sisters has agreed to maintain this facility under an agreement with the Deschutes National Forest. TEA-21 Forest Highways funding was also critical in leveraging scarce Forest Service capital funding (Facilities Administrative and Operation funds) for the west portal project.

The Willamette and Deschutes National Forests continue to commit Forest Service funding and staff time to planning and implementing byway improvements. They are now planning resource restoration projects, including road runoff mitigation, road closures, and facilities for human waste.

For further information, contact the Willamette National Forest at 541-465-6521 or the Deschutes National Forest at 541-388-2715.



Dixie National Forest to Bryce Canyon National Park: Red Canyon Bicycle Trail and Heritage Center and Highway 12 Scenic Byway

Bicyclists love the red sandstone on Utah's Highway 12 with its towering "hoodoos," foretelling of those they will encounter in Bryce Canyon National Park. TE funds are supporting two projects that will greatly capitalize on the imposing views and visitor appeal, the Red Canyon Bicycle Trail and the Red Canyon Heritage Center.



The exceptionally beautiful scenery enthralls bicyclists, but the narrow highway is a safety risk. The Red Canyon Bicycle Trail is being built to reduce this hazard and to offer bikers a great recreational experience. The trail will be paved and separated from the highway, so both motorists and bicyclists can safely marvel at the surrounding vistas. Envisioned to ultimately extend 17 miles from Highway 89 to Bryce Canyon National Park, the first phase of the trail will be 5 1/2 miles. "One of the most fantastic things about the bicycle trail is that the people of Garfield County and the Utah DOT wanted the project and were cash-contributing partners," noted Mary Wagner, Forest Supervisor, Dixie National Forest. The majority of the \$1.7 million project was funded under the Transportation Enhancements program, with additional contributions from the Forest Service. "The local partners identified and shared the same need for the project, and working together allowed them to be involved in ways they could support it. That allowed the Federal family to provide support and expertise as needed. If it had been exclusively a Federal project from the beginning, it would not have the degree of community support we now enjoy."

About a quarter of a mile from the bicycle trail is the Red Canyon Visitor Center. Long identified as needing improvement, the existing facility has an excellent location, but few amenities. The new visitor's center will offer interpretive services to visitors and will provide water and comfort stations for bicyclists and motorists. The center will present a different perspective on the resources in the park vicinity while establishing an excellent portal to Bryce Canyon National Park and

Highway 12, a Utah State and USDA Forest Service scenic byway. A unique partnership with the Highway 89 Heritage Corridor Alliance will support the center's funding and services. In addition to traditional interpretive services, the center will showcase examples of local arts and crafts and highlight cultural events and historic opportunities throughout Utah. The Dixie Interpretive Association is also a contributing partner to the center's services.

In 1991, Highway 12 received funding for interpretive wayside exhibits, brochures, and visitor guides through the National Scenic Byways program. The partners included two State parks, Bryce Canyon National Park, the Bureau of Land Management, two area counties, and many local communities. The partners are currently working on an application for All-American Road status and are funding the corridor management plan necessary for designation nomination.



For further information, contact the Dixie National Forest at 435-865-3700.

The Columbia River Gorge National Scenic Area: Many Partners, Multiple Opportunities

Travel along roadways is a big part of how visitors and travelers experience the Columbia River Gorge National Scenic Area (CRGNSA) between Oregon and Washington. Millions of people travel on I-84 along the Columbia River annually. The Columbia River Historic Highway on the Oregon side and Washington's Highway 14 are within a 30-minute drive of the Portland metropolitan area. In both Oregon and Washington, a coordinated approach with multiple partners and jurisdictions has been critical to providing quality attractions.

The Columbia River Historic Highway in Oregon is one of the Nation's first highways designed and built to highlight scenic attractions. Today, portions of this All-American Road through the CRGNSA are open to both vehicles



and trail users, thanks to years of coordination. The National Park Service inventoried and assessed the historic highway's attributes, which the Oregon Department of Transportation and CRGNSA staff used to implement roadside and trail enhancements.

The Forest Service took the lead to plan, design, and develop placement standards for recreation site signs across cities, State parks, and national forests in the two States. Thirteen parties signed an MOU that documents the design and development of consistent site signing. Forest Highway funds were used for the design, fabrication, and placement of these signs. The FHWA was awarded the CRGNSA Stewardship Award for its support of this project.

Abandoned tunnels along a section of the historic highway were reconstructed using Public Lands Discretionary funds, a large private donation (\$500,000), and CRGNSA legislative funding. TEA-21 funded the reopening of railroad tunnels for trail use, trailhead enhancements, safety guardrails, and the opening of views along the Columbia River Historic Highway. The State Historical Society and the Historic Columbia River Advisory Committee reviewed the project proposals and project implementation. The Historic Preservation League of Oregon has been an advocate of the historic highway.

For further information, contact the Columbia River Gorge National Scenic Area at 541-308-1706.



Buffalo Bill Cody Scenic Byway: The Most Beautiful 52 Miles in America!

Theodore Roosevelt called what is now the Buffalo Bill Cody Scenic Byway in Wyoming “The most beautiful 52 miles in America.” U.S. Highway 14-16-20 follows the North Fork of the Shoshone River through the scenic Wapiti Valley, well known for its abundant wildlife, spectacular rock formations, and exceptional recreational appeal, to the east entrance of Yellowstone National Park. This area is the birthplace of the conservation movement with the Nation’s first national park, Yellowstone, and the first national forest, the Shoshone. Several endangered species reside here, as well as many common animals that grace the summer vacation albums of countless Americans.

In the 1980s, transportation planning began for widening the highway to accommodate the increasing flow of visitors into Yellowstone National Park. The Forest Service was involved early in the process with the Wyoming DOT to ensure that the character of the canyon and its natural ecosystem were maintained and to capitalize on recreational opportunities.



Construction on the scenic byway began in 1995 and impacted 8 campgrounds, 6 trailheads, 10 special-use lodges, 2 picnic grounds, and a firefighter memorial. Agencies and stakeholders insisted on well planned design features and mitigation measures to preserve key habitats of several species threatened by the widened highway. Mitigation included decommissioning a 20-unit campground and restoring its wetlands and riparian area to prime grizzly bear habitat. Project sponsors closed one campground because of its proximity to the widened highway and approved a new campground with added facilities on a new site. Retaining the existing curvilinear alignment, removing old highway scars and drill marks in rock, and simulating natural colors on manmade features improved the view. A paved picnic area, several interpretive pullouts, and amenities such as running water and accessible restrooms were added. Terrestrial and aquatic mitigation measures included riverside retaining walls, boulder placement, and plantings along streambanks. The State of Wyoming and adjacent landowners continue to negotiate conservation easements to mitigate wildlife habitat loss.

The Wyoming DOT was the lead agency in the NEPA process, while the Forest Service provided interdisciplinary specialists and engineers. The State of Wyoming was responsible for obtaining funding through the Highway Trust Fund for mitigation measures and from the National Scenic Byways fund for enhancement activities, securing over \$2 million in grants. Other important partners included Wyoming Game and Fish, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Northwest Wyoming Resource Council, and a citizen advisory committee. The Nature Conservancy played a key role in negotiating conservation easements.

Jim Fisher, project coordinator for the Shoshone National Forest, said, “My greatest satisfaction is in looking back and observing the higher level of environmental sensitivity that highway engineers and contractors now have. This resulted from the time our employees spent working with them to increase their awareness of some of these issues. Increased sensitivity has become part of their standard operating procedures.”

For further information, contact the Shoshone National Forest at 307-527-6241.

Edge of the Wilderness: Increasing Organizational Capacity

The Edge of the Wilderness National Scenic Byway captures a glimpse of the beauty, charm, and cultural treasures of the Minnesota north woods. Within the 47-mile stretch of Highway 38, visitors are awed by pristine lakes and the home of the largest population of bald eagles in the continental United States. A remarkable story lies behind the scenes.

In 1993, a local task force was formed to improve safety and road surfaces along Highway 38 between the small communities of Grand Rapids and Effie. Highway improvements primarily would benefit hikers and bicyclists. This simple vision led to the rural highway being designated in 1966 as one of the first 20 National Scenic Byways.

The Chippewa National Forest assisted in the early development of the necessary planning documents. The resulting interpretive planning document and corridor management plan are unified blueprints for implementing projects under the National Scenic Byways umbrella that encompass the needs and interests of several communities and agencies. The initial Forest Service involvement soon took on a life of its own, actively engaging community organizations in all aspects of the byway activities. The community has assumed primary byway leadership and ownership, and the Forest Service is one of many partners.

Participation in the Highway 38 leadership board reads like a local telephone book: almost everyone is included. The board includes the Minnesota Historical Society, lodging associations, business associations, the local Lion's Club, citizens at large, and government agencies such as the Minnesota DOT, Minnesota Department of Natural Resources, Arrowhead Regional Development

Commission, and the Forest Service. The Forest Service provides in-kind support through office space and time donated by specialists. The Chippewa National Forest has contributed interpretive and environmental education services.

The complexity of the Edge of the Wilderness project challenged participants to seek innovative approaches to funding. The diversity of partners increased the potential for funding and expanded the project scope.

Several FHWA scenic byways grants funded accessible rest stops and interpretive sites, Web site development, and a photo-library project with a local high school. The Forest Service's Economic Recovery Program, Itasca County Challenge economic development grants, and the Blandin Foundation were also funding sources. Grants for marketing contributed to advertising and public relations. TEA-21 Transportation Enhancements program funded byway markers, kiosks, and gateways at Grand Rapids, Marcell, and Effie. The Minnesota DOT paid for about \$7 million worth of road construction and improvement projects, such as widening roads for bicycling and building the new "Streetscape" and interpretive park in Bigfork. Similar improvements in surrounding communities will maintain the character and theme of the byway.

The Edge of the Wilderness project has resulted in unprecedented benefits to the byway communities. New lighting, curbs, sidewalks, decorative bridges, and interpretive parks are revitalizing community pride as each one creates its own design, while the byway theme links them together. As a partner in such communities, the Forest Service can 'plant the seeds' for success, and then step back and watch them grow.

Tim Johnson, the Edge of the Wilderness Community Coordinator said, "The biggest benefit is that the

ownership is community-based with citizens and volunteers, and they are more actively involved because of it!"

For further information, contact the Chippewa National Forest Partnership Coordinator at 218-327-4792.



Arizona Department of Transportation: Funding Forest Service Experts

The Tonto National Forest has an abundance of fragile desert resources close to the rapidly developing Phoenix area. These fragile resources made early Forest Service involvement in transportation and highway project planning critical to meeting Arizona DOT and Tonto National Forest's management objectives. At a 5-year planning meeting, the Tonto National Forest requested TEA-21 funding for Arizona DOT's \$200 million highway construction program. "Twice as much land area is being removed by highway projects as one of our proposed mines, so highways are important players in resource issues," said Terry Brennan, Professional Engineer, State highway implementation leader for the Tonto National Forest.

The 1998 MOU between the Forest Service and the FHWA authorizes the Forest Service to act "as agent for the FHWA" under certain circumstances. TEA-21 authorizes State DOTs to fund Federal resource agencies for their involvement in highway projects. Because of their large construction project, Arizona DOT funded six full-time Tonto National Forest employees, including engineers and resource specialists, to help with highway coordination and planning. The Tonto National Forest worked with the Arizona DOT to determine the level of NEPA analysis necessary for each project.

Has this relationship benefited the quality and timeliness of highway projects on the Tonto National Forest? "Absolutely," according to Terry Brennan. Archeological sites have been avoided or mitigated, wildlife crossing structures have been created, and even the gorgeous red rocks that brought fame to Arizona highways have been stained and planted with local vegetation to restore scenic resources along highway cuts. In 1998, reconstruction of the Beeline Highway, State Route 87, was awarded an Excellence in Highway Design. In 1999, the highway received the FHWA's Excellence in Wetlands and Other Ecosystems award.

Even better, the close working relationships with the Arizona DOT have resulted in much better planning for the 'Seven Dwarfs' of implementation not usually considered under NEPA, such as water for construction, equipment staging areas, and balance of materials.

Frequent coordination with the Arizona DOT benefits the State as well, because problems are solved before they become irreversible. Forest Service specialists are well informed about highway issues and procedures and are able to provide the Arizona DOT with expert assistance.

For further information, contact the Tonto National Forest at 602-225-5200.



Now it is up to you and your forest to discover innovative ways to improve partnerships and obtain funding to meet your forest's resource management goals and objectives while striving to achieve a seamless transportation system

