



Enhancing America's Communities

A GUIDE TO TRANSPORTATION ENHANCEMENTS



National Transportation Enhancements Clearinghouse

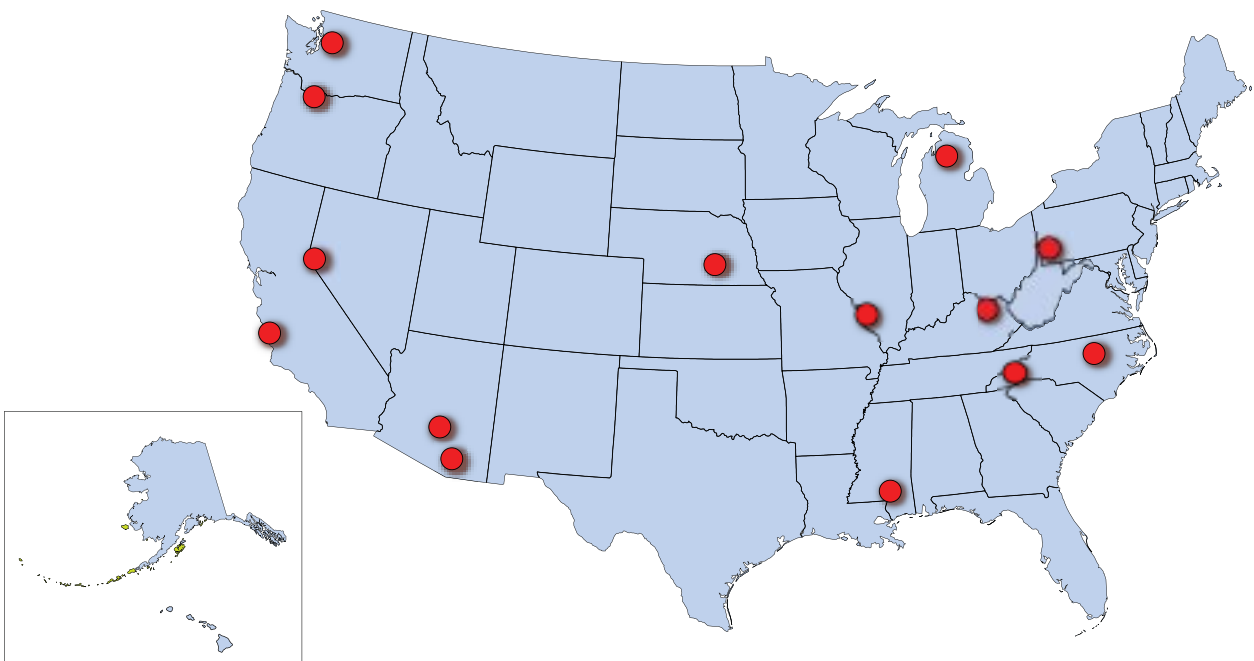
Contents

Enhancing America's Communities	1
12 Transportation Enhancements Activities	2
Typical Project Development Process	6

15 Case Studies

The Reedy Creek Greenway	10
Pedestrian Downtown Connection: Phase 1	12
Snohomish Riverfront Trail	14
Bike St. Louis: Phase 1	16
Hearst Ranch Scenic Acquisition	18
Memorial Point Overlook: From A Road Pull-Off to Scenic Destination	20
Barrio Anita Noise Walls, Artistic Treatments	22
Vista House	24
Historic Goddard Covered Bridge	26
The Grand Island Plum Street Station	28
The Longleaf Trace	30
Archaeological Planning and Research at the Allison-Deaver House	32
Manistee Lake: Highway Runoff Improvements	33
Pennsylvania Trolley Museum Trolley Display Building	34
TE Glossary and Web Resources	36

Case Studies Locations





Enhancing America's Communities

Enhancing America's Communities showcases 15 projects that illustrate the power of Transportation Enhancements to catalyze community revitalization and provide for an enhanced transportation experience.

The Congress included Transportation Enhancements (TE) in the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 to signal its intention to provide funding for a broad array of projects designed to maximize the potential of transportation to invigorate communities. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), enacted in 2005, represents a continuing commitment by Congress to focus on more than just the provision of "ribbons of concrete." With more than 20,000 projects on the ground around the country, transportation enhancements have proven that transportation projects can do more than efficiently move people. They can simultaneously improve local economies, enhance the environment, and create central community places.

This third edition of *Enhancing America's Communities* highlights a variety of transportation enhancement projects from around the country, showcasing the potential of TE to build strong places through targeted

transportation investments. In addition, these selected projects underscore the diversity of projects eligible under the TE program. This diversity allows communities great latitude in developing projects that meet the specific needs of local areas.

Enhancing America's Communities is divided into three sections. The first section provides historical background on the TE program with important statistical information on the scope and impact of Federal investments. This is followed by an articulation of the key stages of the TE application process, providing potential project sponsors with a detailed road map for navigating the TE process. Finally, the guide features 15 TE projects from around the country that highlight the important contributions TE projects make to improve local communities. While these projects can take many forms ranging from environmental mitigation of transportation facilities to the creation of bicycle and pedestrian amenities, each of the projects emphasizes the important catalyzing power of transportation enhancements to strengthen communities. These projects show that carefully targeted investments in the transportation infrastructure can produce both an efficient transportation system as well as stronger, healthier communities.

12

Transportation Enhancements Activities

The following list of the 12 Transportation Enhancement (TE) activities includes project examples that illustrate each activity authorized in law (23 U.S.C. 101(a)(35)). Although the Federal government provides guidance and ensures compliance, States are responsible for selecting projects. Contact your State TE coordinator to discuss specific eligibility practices in your State. The term Transportation Enhancement Activity means any of the following as they relate to surface transportation:

1 Pedestrian and Bicycle Facilities: New or reconstructed sidewalks, walkways, curb ramps, bike lane striping, paved shoulders, bike parking, bus racks, off-road trails, bike and pedestrian bridges and underpasses.

2 Safety and educational activities for pedestrians and bicyclists: Programs designed to encourage walking and bicycling by providing potential users with education and safety instruction through classes, pamphlets, and signs.

3 Acquisition of scenic easements and scenic or historic sites, including historic battlefields: Acquisition of scenic land easements, vistas, and landscapes, including historic battlefields; purchase of buildings in historic districts or historic properties.

4 Scenic or historic highway programs including tourist and welcome center facilities: Construction of turnouts, overlooks, visitor centers, and viewing areas, designation signs, and markers.

5 Landscaping and other scenic beautification: Street furniture, lighting, public art, and landscaping along street, highways, trails, waterfronts, and gateways.

6 Historic Preservation: Preservation of buildings and façades in historic districts; restoration and reuse of historic building for transportation-related purposes; access improvements to historic sites and buildings.

7 Rehabilitation and operation of historic transportation buildings, structures, or facilities: Restoration of historic railroad depots, bus stations, canals, canal towpaths, historic canal bridges, and lighthouses; rehabilitation of rail trestles, tunnels and bridges.

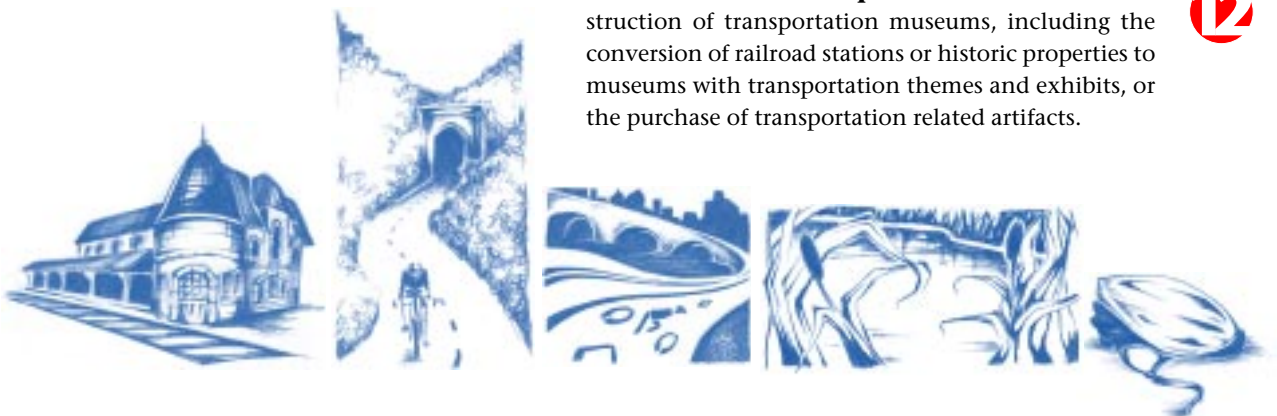
8 Preservation of abandoned railway corridors and the conversion and use of the corridors for pedestrian or bicycle trails: Acquiring railroad rights-of-way; planning, designing and constructing multi use trails; developing rail-with-trail projects; purchasing unused railroad property for reuse as trails.

9 Inventory, control, and removal of outdoor advertising: Billboard inventories or removal of non-conforming billboards.

10 Archaeological planning and research: Research, preservation planning and interpretation; developing interpretive signs, exhibits, guides, inventories, and surveys.

11 Environmental mitigation to address water pollution due to highway runoff or to reduce vehicle-caused wildlife mortality while maintaining habitat connectivity: Runoff pollution mitigation, soil erosion controls, detention and sediment basins, river cleanups, and wildlife crossings.

12 Establishment of transportation museums: Construction of transportation museums, including the conversion of railroad stations or historic properties to museums with transportation themes and exhibits, or the purchase of transportation related artifacts.



To be eligible for Federal aid, a project must:

- ① **be one of the 12 designated TE activities, and**
 - ② **relate to surface transportation.**
-

Transportation Enhancements: Building a Legacy for the Future



In 1991, the United States Congress created Transportation Enhancements (TE) to help shape a truly multi-modal transportation system that enhances transportation choices for Americans and visitors. The premise was simple: Transportation spending should focus on more than just roads. The country needed to invest in a more balanced, multi-modal approach to mobility and accessibility. The TE activities allow communities to develop projects that improve the quality of a community and enhance the travel experience for people traveling by all modes.

Since its inception, TE has provided funding for more than 20,000 projects nationwide, helping communities protect scenic vistas, create nonmotorized trails, develop walkable downtowns, and protect the environment. To help communities realize social, cultural, and environmental goals, every State must reserve at least 10 percent of its Surface Transportation Program funds for designated Transportation Enhancement activities.

Under the Intermodal Surface Transportation Act of 1991 (ISTEA), Congress made \$2.8 billion in TE funds available to States through the Federal Highway Administration (FHWA). In 1998, under the Transportation Equity Act for the 21st Century (TEA-21), Congress reaffirmed its commitment to enhancing communities by providing an additional \$3.6 billion through 2003. In 2003 and 2004 Congress extended TEA-21 in one year increments at the 2003 funding levels. With the August 10, 2005 enactment of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Congress again reiterated its commitment to TE by providing \$4 billion through 2009.

Communities derive a range of benefits from TE projects including economic stimulation, improved transportation, and community improvements. These types of benefits support the Federal Highway Administration's stated priority areas: safety, mobility, and environmental stewardship and streamlining. The TE activities are an important element in FHWA's strategy in all of these areas.

Transportation Enhancement projects also reflect the focus of the FHWA in encouraging States to create projects that are sensitive to the land-use context where they are built. TE funds are available to develop a variety

of project types and the usual small scale of these projects means that they fit well into large, small, rural, and urban communities.

Transportation Enhancement projects create more choices for travel by providing funding for sidewalk connections, bike lanes, and the conversion of abandoned railroad rights-of-way to trails. Communities may also use the program to revitalize local and regional economies by restoring historic buildings, renovating street-scapes, or providing transportation museums and visitor centers. Many use the program to acquire, restore, and preserve scenic or historic areas. The program is also used to aid in environmental stewardship and safety efforts by providing wildlife crossings and ensuring cleaner water with the treatment of stormwater run-off from roadways. As the number of TE projects continues to increase, it is clear that leaders, citizens, and local governments want more from their transportation systems.

In 1991, implementing the newly introduced TE activities presented a challenge to Federal, State, and local partners. Since then, the State programs have evolved with the legislative updates, the Federal guidelines have been clarified, and there is more information-sharing among State practitioners. The result is that the current TE program is well positioned for the future.

The spirit of innovation at the heart of TE allows States and localities to create projects crafted to meet their own local conditions. This guide, in its third edition, highlights this diversity through a series of project examples from around the country.

Benefits

Transportation Enhancements:

- support context-sensitive solutions to transportation problems,
- foster safety, accessibility and environmental preservation,
- boost local economies,
- improve the transportation experience by strengthening multi-modal systems,
- increase partnerships between State and local agencies, and
- strengthen the public role in local and State transportation planning.

Life of an Enhancement Dollar

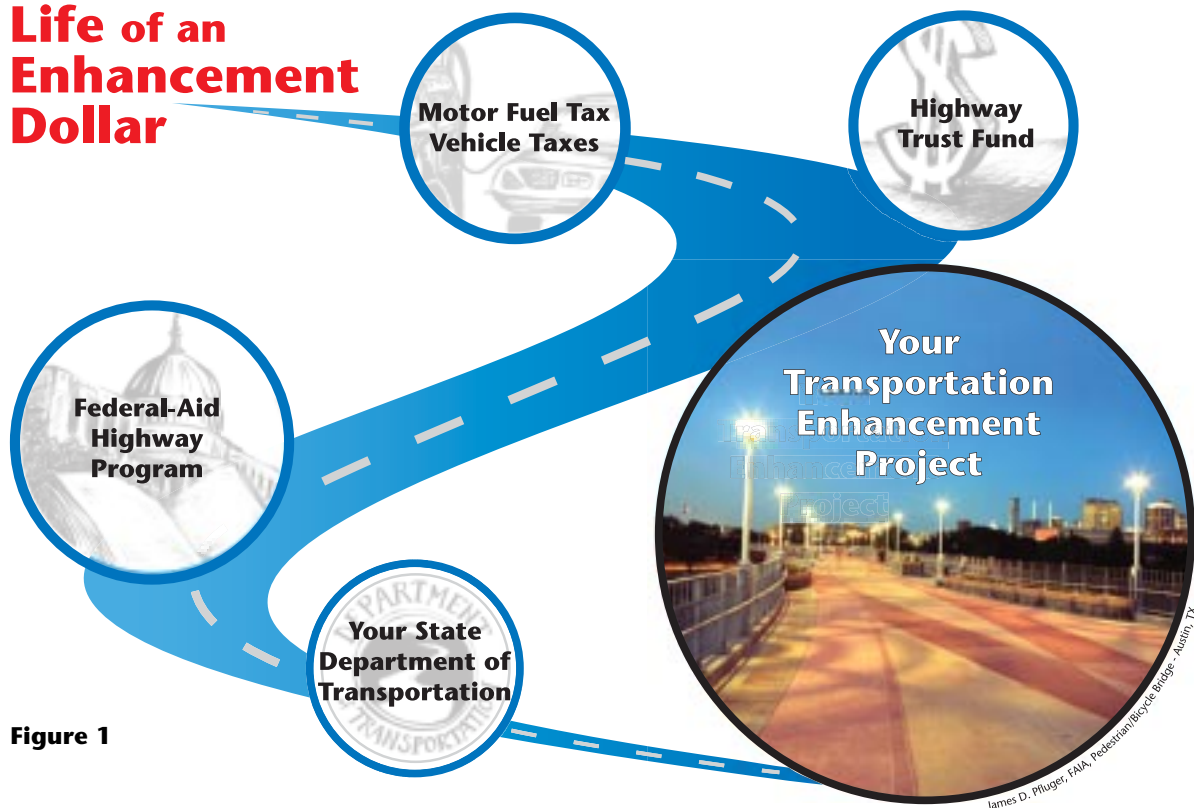


Figure 1

LINKING FEDERAL FUNDS TO COMMUNITY GOALS



Through 2009, the Federal government will provide approximately \$803 million in TE funds for use by State transportation agencies each year. These agencies are required to set aside these funds for TE activities. In all 50 States, TE programs rely on communities and local governments to propose projects that improve local quality of life. Community members help generate ideas and opportunities for the use of these funds. State transportation agencies select from these proposals according to local, regional, and State planning and funding priorities. Applicants for selected projects become project sponsors and work with TE coordinators through the appropriate State and Federal transportation agencies until projects are completed.

Funding for TE comes from a portion of the funds paid into the Highway Trust Fund which includes money from the Federal gasoline tax. About 15 cents of every dollar spent on gasoline taxes flows into the Highway Trust Fund (see Figure 1, The Life of an Enhancements Dollar). The Highway Trust Fund also receives revenue from diesel fuel, gasohol, and truck user taxes. Money from this fund goes to the States as “Federal aid” for highway programs. One of these programs is the Surface Transportation Program (STP), which allows States to use highway funds for bicycle, pedestrian and transit projects. Specifically it requires that 10 percent of the STP funds be set aside for TE eligible projects.

To strengthen and encourage partnerships between State and regional agencies and increase the public role in transportation planning, Congress deliberately left the details of TE programs to the States. FHWA, the agency responsible for interpreting surface transportation legislation, has issued TE guidance. Since the program was created in 1992, there has been experimentation, information exchanges, and learning. The Federal government has strongly encouraged State agencies to work closely with project sponsors—often local governments working with community groups who want to build TE projects. The challenges of balancing roles among Federal, State, and local partners are very real. Yet as the case studies show, the opportunities for community enhancement are tremendous and the benefits significant.

Contacts

Your State TE Coordinator is responsible for providing guidance on the specific policies and procedures for your State.

THE FHWA DIVISION OFFICE in your State is responsible for administering the TE provisions of Federal law and providing guidance to the State coordinators.

To find contact information for TE coordinators in your State, visit www.enhancements.org.

Questions

Here are some useful questions to ask your State TE coordinator. Dial **1-888-388-NTEC** or visit **www.enhancements.org** for contact information.

- How well does my project fit one or more of the TE activities?
- Does this project relate to the surface transportation system?
- Do you have a copy of the application guidelines?
- What are the deadlines?
- Do you offer any TE workshops or seminars?
- What is the total State budget available for the next TE funding cycle?
- Does our State use any of the innovative financing measures?
- Do you have a copy of the regional and State transportation improvement plans?
- Does our State have an advisory committee?
- Who are the members?
- Do you have examples of successful TE applications from previous cycles?

MATCHING YOUR PROJECT WITH TRANSPORTATION ENHANCEMENT ACTIVITIES



Start your TE process by matching your project with at least one of the 12 Transportation Enhancements activities authorized in surface transportation legislation (23 U.S.C. 101(a)(35))

Projects often combine multiple transportation enhancement activities, strengthen local partnerships through fundraising, support multiple objectives, and increase local and regional transportation access. The Transportation Enhancement projects described in this publication illustrate these multiple goals. For example, the Bike St. Louis project increased miles of bike lanes in St. Louis, Missouri (page 17), rolled out an in school bicycle education campaign, and a bike map of the city that is used by cyclists, tourists, and motorists alike. The Hearst Ranch scenic acquisition in California (page 18) not only protects the Highway 1 viewshed but also helped leverage the protection of an additional 80,000 acres of ranchland. The Restoration of the Goddard Bridge in Goddard, Kentucky (page 26) is preserving a part of transportation history while it provided an opportunity for a community to recognize its heritage and spur tourism.

Meeting Federal Requirements for Eligibility

To sponsor a TE project in your community, you must adhere to Federal and State rules for using Federal-aid funds. The Federal government provides States with interpretive guidance and ensures their compliance with relevant Federal laws. A list of important resources concerning the eligibility rules is provided on the inside back cover of this guide.

As with other Federal-aid funding, the Federal government typically reimburses 80 percent of project costs (higher in States with a large percentage of Federal Lands). The project sponsor—a State, a local government or a nongovernmental organization—pays the balance. A TE project must provide public access and be related to surface transportation. It may be a “stand-alone” project, such as the Barrio Anita noise wall in Tucson, Arizona (page 22), or it may be part of a larger project such as the Vista House in Oregon (page 24). TE funds are available for all phases of eligible projects: planning, design, property acquisition, preliminary engineering, construction, and management. Preference for funding different phases can vary from State to State. TE funds may not be used for routine maintenance or standard environmental mitigation.



WATER STREET, NORWALK, CONN.

Typical Project Development Process

TE PROJECTS HAVE SEVERAL STAGES requiring time, effort, and coordination. Depending on your project, these steps may be simple or complex and take more or less time. Transportation Enhancements, like other Federal-aid projects, must comply with laws developed to protect human, environmental, and cultural resources. FHWA has developed streamlining measures to simplify these requirements, given the small-scale, environment-friendly and community-based nature of TE projects. Familiarize yourself with Federal streamlining measures and encourage your State to use as many measures as possible in developing your TE project. This section outlines major milestones of project development (see Figure 2). Bullets show when and what streamlining measures may be used to simplify the process. This is a typical example and specific procedures will vary from State to State and from project to project. While you can obtain a comprehensive packet of all FHWA guidance and streamlining information from NTEC, it is essential that you discuss specifics, including expected duration for each step, with your State TE coordinator.

1 Confirm project parameters. Once the State has approved your project for funding, you will discuss a project agreement with State personnel. The project budget and application—the basis for the project agreement—reflect the total level of Federal funding. At this time you may refine the scope of work, plan to select a consultant, and discuss compliance provisions. This is also the right time to request successful examples of procurement and bid documents and to identify and discuss all the measures to streamline project development your State allows.

2 Sign an agreement. You establish a formal working relationship with your State agency when you sign a project agreement. As the sponsor, you agree to develop the project as described in the scope of work according to State and Federal regulations and procedures. Find out how your State gives authorization(s) to proceed.

3 Choose a project manager. This person often coordinates the agency, sponsor(s) and consultants and facilitates the process to clarify a project's feasibility, costs, compliance and contracting. Depending on the State, the manager may be a consultant or a local or State government employee.

4 Obtain environmental clearance. If you plan to spend TE funds on construction, the project may face several environmental reviews. The level of review depends on the environmental impacts and the streamlining measures your agency uses. Project sponsors are responsible for initiating the reviews and supplying information to appropriate agencies. Agencies may approve your checklist and documentation, or they may visit the site, conduct tests or request more documentation.

Environmental clearances may include:

- Nationwide Programmatic Agreement. This agreement helps agencies and sponsors expedite impact reviews and processing to satisfy Historic Preservation Act Section 106 requirements.
- Applying Section 4(f). This guidance lets States determine whether or not rigorous reviews required in Section 4(f) provisions apply to TE projects.
- NEPA Requirements. TE projects that do not have significant environmental impacts are “categorically excluded” from Federally mandated environmental review.

Project Selected

1 Scope of Work, Cost Estimates

2 Contract between Agency and Sponsor

3 Choose Project Manager

■ Sponsor Action

■ Agency Action

Figure 2

6

4 Provide Environmental Clearance

5 Planning and Review Impact Design and Develop Plans

6 Create ROW Plans and Acquire Property

7 Submit Design, Procurement, Bid and Construction Paperwork

8 Obtain Approval of Bids

5 Plan and design the project. The process of completing an environmental document will affect the project design. The sponsor may assess resource impacts, hold public meetings on project planning and design, and ensure the final design plan complies with State and Federal codes.

6 Obtain clearance of rights-of-way. TE projects must provide public access, and sponsors must hold the rights to the real estate for the project by deed, lease, easement, license, agreement, or resolution. The right-of-way process may include the purchase of land or right-of-way and utility clearance. If you plan to acquire the property, you must not make an offer to the property owner until after you have received your environmental clearance and conducted a Federally-approved appraisal.

Considerations for property acquisition:

- Voluntary transactions under the Uniform Act. If the property owner is willing to sell, the purchase of property can be simplified.
- Organizations exempt from Uniform Act requirements. Conservation organizations may use simplified requirements if they obtain environmental clearance before making an offer to purchase a property or do not act on behalf of the State.

7 Submit paperwork for design, procurement, bid and construction. Guidelines for construction and non-construction projects may differ. Assemble and submit your environmental clearance, final plans, permits, design certification and appropriate clearances. Although standards vary from State to State, you will need the agency's approval before you break ground. In general, agencies cannot increase sponsor funding, so your cost estimates must be accurate. Think about lower-cost alternatives and include these as "bid alternates."

8 Invite bids for projects. Procedures for procurement and bid invitations may vary with the project scope, cost and the State. If all your bids come in high, you may have to re-bid.

Bid considerations include:

- Contracting and bidding under the Common Rule. If TE projects are outside the highway right-of-way, States may use their own State procurement practices.
- Applying Davis-Bacon prevailing wage requirements. For TE projects costing less than \$2,000 or not linked to Federal-aid highway right-of-way, States

may bypass prevailing wage payments. This allows agencies to use staff, volunteers, or youth conservation or service corps.

- Ensure opportunities for Disadvantaged Business Enterprises (DBE).

9 Select a contractor. After you have received bids, ask your TE coordinator for agreement to award the contract, then sign a contract. The sponsor may perform this work or contract it out. Some States encourage or even require contractors to be on a State list of "pre-qualified" consultants who understand Federal-aid requirements.

10 Invoice for completed work and receive reimbursement. During all phases, the sponsor must keep detailed records to claim reimbursement. In some States, the agency provides front-end financing for a project, including the sponsor's non-Federal match. Typically, as contractors complete work and submit the bills, the State agency reimburses at the percentage stated in the agreement.

Advance payment may be an option. If your State establishes a process with FHWA, it can secure payment in advance rather than reimburse you after you have paid the non-Federal match. The State must limit funds to amounts needed for prompt payment. Expect to follow a payment schedule.

11 Obtain construction certificate. Your last invoice and report should include a certification to verify the project has been constructed as designed and approved according to State and Federal guidelines and requirements. This certification should follow construction but occur before the final invoices are processed.

12 Record-keeping and audit. The audit requirements depend on the total Federal funding. Be sure to keep good records, identifying the source and application of project funds. Only direct project costs are eligible. The State may require the sponsor organization's financial statements and may request a certified independent audit.

13 Celebrate your project. Publicly thank all the decision makers for their support. Ribbon-cutting ceremonies with the media present can help foster continued support for your project. Give elected officials the opportunity to bask in the publicity of a popular community project.

9 Select Contractor(s)

10 Submit Invoices for Reimbursement

11 Final Invoice and Construction Certificate

12 Record Keeping and Audit

13 Celebrate Your Project

RELATING YOUR PROJECT TO TRANSPORTATION



Developing TE projects with a strong relationship to transportation is essential. The provision in title 23 reads, “The term ‘transportation enhancement activity’ means, with respect to any project or the area to be served by the project, any of the following activities as the activities relate to surface transportation:” (see page 2 for summarized definitions and examples of eligible activities). A proposed TE project must demonstrate a relationship to surface transportation. This relationship must be clearly stated and supported in the project application.

The law also refers to a transportation project or the area served by a transportation project. If a highway project is involved, the TE activity may have a direct relationship to that project. For example, if the pollution caused by stormwater runoff from an existing highway contaminates an adjacent water resource, and a TE application includes a proposal to mitigate the pollution, then a clear relationship to the surface transportation system exists.

Your project has a better chance if it:

- exceeds non-Federal requirements,
- demonstrates strong local support,
- combines Transportation Enhancement activities,
- demonstrates compatibility with existing plans,
- meets a need or provides a benefit, and
- sets a realistic schedule and cost estimate.

Given the nature of the list of eligible activities, a proposed TE activity does not have to be associated with a specific highway project to be eligible for funding. Case study examples which illustrate this point include the rehabilitation of historic train structures such as the Grand Island depot (page 28), the provision of a bicycle or pedestrian path such as the Snohomish Riverfront Trail (page 14) or the expansion of a transportation museum, such as the Pennsylvania Trolley Museum (page 34). In other words, the phrase “with respect to any project” may be helpful in establishing a transportation relationship, but is not the only way to establish that relationship.

Proximity to a highway facility alone is not sufficient to establish a relationship to surface transportation. For example, a historical hotel that is adjacent to a particular highway facility may not be eligible for TE funds simply because of its location. Other factors related to this specific case would have to be taken into consideration and a relationship to surface transportation established. Conversely, a historic structure should not be disqualified from consideration because it is not adjacent to a particular Federal-aid highway.

Additional discussion, beyond proximity, is needed in the TE project proposal to establish the relationship to surface transportation. If you have questions about eligibility, discuss them with your State TE coordinator. Where additional questions arise, closer coordination with the FHWA division office in your State may be helpful. Your project does not have to provide a past or current transportation function to qualify as an eligible TE activity. For example, a scenic or historical site may have a relationship to transportation but may not function as a transportation facility. The function of the proposed facility can be a factor, but the absence of that factor should not automatically preclude consideration for possible funding.



STREETSCAPE ALONG BROADWAY IN BAYONNE, N.J.

SETTING YOUR SIGHTS ABOVE AND BEYOND



Transportation Enhancement funds may not be used for maintenance, routine highway improvements, or required environmental mitigation. Ask your State TE coordinator if there are special or additional laws or criteria in your State. As the case studies illustrate, TE requires creativity and innovation in planning, design, and partnership development. Look to the case studies for ideas of how States have gone above and beyond the requirements. The Vista House in Oregon (page 24) involved partnerships among six organizations. In North Carolina, sponsors of the Reedy Creek Greenway (page 10) combined building a bicycle and pedestrian facility with scenic beautification by creating effective public art along the new trail.

TE IS A FEDERAL-AID REIMBURSEMENT PROGRAM

The TE program is a Federal-aid reimbursement program, not an advanced grant program. Generally, the Federal government pays 80 percent of a TE project cost (higher in States with a large percentage of Federal Lands). That amount is called the Federal award. The project sponsor usually pays the balance; that amount is called the non-Federal match. Usually, the project sponsor pays the associated project costs and submits a reimbursement request to the State transportation agency, which submits it to FHWA. Reimbursable project costs vary from State to State but usually include:

- project feasibility, planning and engineering plans,
- environmental reviews,
- land acquisition, and
- construction.

Federal law allows States to accept donations of right-of-way, funds, materials, or services (including from private sources or local governments) for any Federal-aid highway program project.

Federal law also has specific provisions for TE activities. FHWA may advance funds to the State for TE activities, limited to amounts necessary for prompt payments for project costs. Federal law also allows innovative financing for TE projects. States must maintain their required non-Federal share on a program-wide basis, but, subject to that requirement, States may:

- allow funds and the value of contributions from other Federal agencies to be credited toward the non-Federal share.
- calculate the non-Federal share for a project on a project, multiple-project, or program basis;
- therefore, the State may allow an individual project's Federal share to be up to 100 percent.

The US DOT encourages States to enter into contracts or cooperative agreements with youth conservation corps programs to participate in TE projects. This allows the TE program to meet more community needs by encouraging job training for youth and young adults.



RESTORED TIDAL WETLAND AT SILVER SANDS STATE PARK IN MILFORD, CONN.

These innovations serve as reminders that Federal aid is becoming more flexible at both State and Federal levels. Talk with your TE coordinator if you want to use these options. States employ these streamlined cost-sharing techniques at their discretion; perhaps State staff would be willing to try something new for your project.

Checklist for putting it all together

Be sure to include all elements of the application the State requests.

- ✓ Provide a clear statement demonstrating the transportation link.
- ✓ Describe how your project relates to the appropriate TE category.
- ✓ Define a scope of work and include preliminary studies, and land acquisition or construction.
- ✓ Include a workplan with a timeline.
- ✓ Include a budget for the scope of work.
- ✓ Identify the source of the matching funds with a letter verifying their availability.
- ✓ Explain how the community would benefit from the project.
- ✓ If the State requires, include letters of support, minutes from public meetings, and newspaper clips about the project.
- ✓ If available, include photographs of the site, preliminary sketches or plans.
- ✓ Include a plan for project maintenance.



TE IN DEMAND

In North Carolina TE demand is 4.9 times the amount awarded.

In 2004, the State TE office, which directly awards about 30% of the available funds, received 186 complete applications requesting \$53 million. It awarded \$10.8 million to 75 projects.



The Reedy Creek Greenway

Raleigh, North Carolina

The Reedy Creek Greenway shows how environmentally sensitive design, creative partnerships to create public art, and strong public participation can be brought together to create a Transportation Enhancements funded trail that the whole community can embrace. From the iconic spiral sculpture that overlooks the trail at the North Carolina Museum of Art, the 5.3-mile bicycle-pedestrian trail connects a number of other key destinations including college campuses, office buildings, an educational environmental center, and additional nature trails at Umstead State Park. The result of such thoughtful planning is an aesthetic, functional trail that is widely used by the public and is an integral part of the area's nonmotorized transportation system. The project also shows how TE funds can be used with other available funds to help construct this type of project.

Integrating the Community and the Environment

The needs of city residents were a priority in planning the Reedy Creek Greenway. Trail designers studied the community. They connected college campuses safely with downtown, museums, and other desired end points. The trail design also integrated the needs of one of the area's largest employers to help increase bicycle commuting. Each day, 4,000 employees commute to the SAS Institute office building, the world's largest privately held software company, adjacent to the greenway and the busy Reedy Creek Road. To serve

these employees and others in the area, the Reedy Creek Greenway was developed to link to these key employee concentrations. This allows workers to bicycle or walk to their office safely instead of driving. SAS Institute constructed a connection to its building accessible from both the road and the greenway. To keep the trail pleasant and safe despite its proximity to the high speed roadway, trail planners placed a landscaped buffer between the greenway and the road. Traffic on the road was calmed with the installation of a beautified median. Careful planning also limited the number of road crossings by placing the greenway along a protected forest preserve.

The Reedy Creek Greenway is an environmentally sound facility. One challenge was to maintain the integrity of the adjacent woodland preserve, Schenk Forest. The Reedy Creek Greenway partners worked with the forest facility to ensure that both the new road and the greenway system would follow the existing roadway corridor to help mitigate possible environmental pressure on the forest research facility. The agreement ensured that no land or trees were removed from Schenk Forest. This design resulted in a minimal physical footprint for the trail and roadway corridor while at the same time helping to provide safe passage for pedestrians and bicyclists. Neighboring landowners, including the SAS Institute, North Carolina State University, and Umstead State Park welcomed this solution.

Art on the Trail

One of the unique partnerships created during the development of the Reedy Creek Greenway was with the North Carolina Museum of Art. The museum is a major destination on the trail. It is here that artist Thomas Sayre installed *Gyre*, three rings sculpted out of earth-cast concrete and iron oxide. This outdoor sculpture's strong presence signifies the creative spirit that the institution brings to the community and helps to give the trail a unique identity. The artist's work truly creates a destination along the trail that invites people to take a break and experience a walk through the sculpted castings. With the museum only steps away, the art also acts to invite trail users to visit the museum.

Artful design played a role throughout the trail. Beyond the stretch at the North Carolina Museum of Art, trail designers took inspiration from the architecture of local college campuses and existing buildings in the city to portray a sense of connectivity along the trail. Patterned fieldstone adorns the neighborhood's buildings and walkways. To provide visual continuity along the trail, this stone masonry was simulated along the greenway in several areas: on a major bridge, at road crossings, and on a retaining wall.

An Important Transportation Purpose

An essential element to the trail is the 660-foot bicycle-pedestrian bridge over the high volume I-440 Beltway. This overpass is vital to the nonmotorized transportation system in Raleigh because it crosses a major eight lane highway.



The appeal and safety of the facility encourages increased use of the greenway by connecting two college student bodies with local shops, cafes and other area destinations.

While TE funds were an integral part of funding this project, other Federal funding mechanisms are available for similar projects. Communities can use general National Highway System funds to help augment TE funds. In addition, Congestion Mitigation Air Quality (CMAQ) funds can also be used because of the air quality benefits associated nonmotorized transportation facilities.

The Reedy Creek Greenway shows how public art, innovative financing, and strong public participation can be used to create a community-oriented trail that meets the transportation needs of a community while simultaneously acting to help build strong community places. This project shows how strong planning and creative thinking can help create an outstanding community amenity.

PROJECT DETAILS

Federal Award: \$4.01 million
Non-Federal Match: \$1.66 million
Total Cost: \$5.67 million
Year: 3 awards — 1999, 2003, 2004

PROJECT CONTACTS

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TE IN DEMAND

In Arizona the TE demand is 2.8 times the amount awarded.

In 2006, 72 applications requested \$31 million in local project TE funding. \$11 million was awarded to 24 projects.



Pedestrian Downtown Connection Phase 1

Mesa, Arizona

The Mesa downtown pedestrian connection helps reconnect important community destinations by creating a new, connected pedestrian system. This Transportation Enhancement funded project replaces an unappealing back alley with a two-block-long pedestrian connection that both improves pedestrian accessibility and rejuvenates the adjacent streetscape. Funded with the help of a \$481,503 TE award, this project forms the core of a placemaking plan and is the basis for an area-wide expansion of streetscape improvements which will help create a strong community center for Mesa.

The Need for Improvement

Prior to the project, the area was not an inviting pedestrian zone due to the lack of delineated, accessible, and connected pathways. Further, the area did not include appropriate shading which is a vital element in creating Arizona pedestrian areas. Despite these urban design deficiencies, the area's high concentration of municipal buildings attracted large numbers of people who needed to traverse this difficult zone. To help address these concerns, the City of Mesa decided improvements to this vital pathway could be an important element in rejuvenating the area.

Project scope

The project involved several key elements designed to improve connections between major area destinations. Key elements included:

- Install accessible pedestrian pathways and concrete curbing
- Install landscaping and irrigation
- Reconfigure the existing parking lots
- Install light fixtures, street furniture, and directional signs
- Add traffic calming curbs
- Improve gutters.

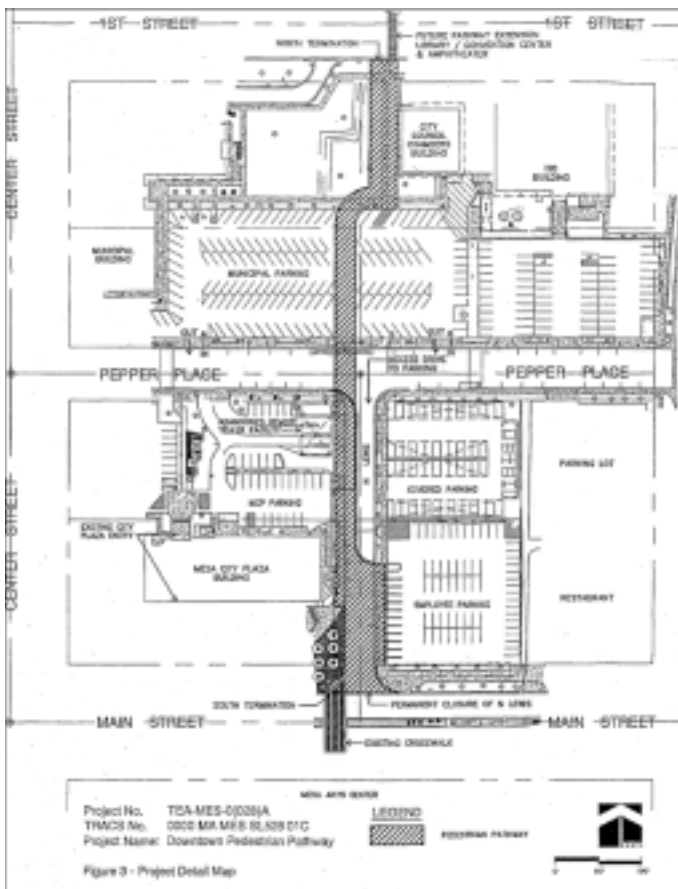
The completed project provides a clear pedestrian walkway through two congested blocks. One of the primary design elements of this walkway system is the use of artistic, stamped concrete that provides a clear and inviting route through the area. This



pavement treatment was used to create an uninterrupted pedestrian zone in front of the Mesa City Plaza Building. The new, designated walkway system replaces Lewis Street, allowing access through a reconfigured parking lot, where a 50-foot-wide section has been adapted for pedestrian use. Further, a traffic calming crosswalk has been installed to facilitate the crossing at Pepper Place. The completed project cost a total of \$562,351 with \$481,503 coming from the TE award. The remaining amount was provided locally.

Future Already Planned

Planned future phases of the pedestrian connector will extend the streetscape improvements north to connect the conference center, the library, hotel, and the college campus to the municipal core. These future improvements are already capitalizing on the rejuvenated place that the TE award helped to create. The Mesa downtown pedestrian connection has helped transform the sprawling parking lots on the backside of buildings into a public space that connects local destinations and creates a new community place in its own right.



PROJECT DETAILS

Federal Award: \$481,503
 Non-Federal Match: \$29,105
 Total Cost: \$510,608
 Year: 1998

PROJECT CONTACT

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 480.644.4254



TE IN DEMAND

In Washington TE demand is 3 times the amount awarded.

In 2006, 305 applications requesting \$128 million were considered. \$42 million was awarded to 148 projects.



Snohomish Riverfront Trail

Snohomish, Washington

The City of Snohomish, Washington, which lies adjacent to the Snohomish River, restored their riverfront trail with the help of Transportation Enhancement funds. The Snohomish riverfront area was revitalized through careful planning of this trail bordering the Snohomish National Historic District. Supported on steel pilings, the cast-in-place concrete path's entire 350-foot length overlooks the river and connects a new TE-funded visitor center to Klaha Ya Park and regional trail system beyond. It even uses the former Chicago Milwaukee & St. Paul Railway right-of-way that the City of Snohomish purchased in 1941. The Trail improves public access, eases pedestrian congestion, and offers an additional cycling route around the town. The new riverfront trail replaces one that followed the same route that was badly damaged in 1995.

The 1995 Flood that Started It All

In November 1995, floodwaters sluiced away 400 feet of riverbank in Snohomish, Washington, threatening the town's National Historic District. At the end of the emergency, the historic district remained, but the original riverfront trail was badly damaged. Emergency repairs were made with FEMA (Federal Emergency Management Agency) assistance, but these repairs did not fully restore the trail. A Riverfront Master Plan was completed in 1998 to craft a longer range vision for the area. The highest priority project identified by the plan

was rebuilding the riverfront trail. This project was a large undertaking for a small city (population 8,500). The project involved preserving endangered species habitat, bank stabilization, and maintaining historical resources.

Solid commitment by five successive city councils, a citizen task force, and city staff succeeded in assembling a matrix of funding partners for the various components of the Riverfront Master Plan. The critical section of the Master Plan, the trail, gained the heavy hitter it needed when the Puget Sound Regional Council awarded TE funding. This funding approval created a three-way business partnership between the Federal Highway Administration, Washington State Interagency Committee for Outdoor Recreation (Washington Wildlife and Recreation Program) and the City of Snohomish, combining transportation, park, and general fund sources.



The Solution

The steep waterfront location was a difficult place to build a trail, but no other route provided the same transportation, historical, scenic, and economic benefits. The structure is located above the Ordinary High Water Mark, but since part of the trail is below the design flood stage, the trail is designed to withstand flooding.

Geotechnical evaluation concluded that the steep riverbank was not stable enough for a retaining wall so the path was built using concrete piles. The pile-supported path achieved a more dramatic river overlook capitalizing on the existing 1900s era pile-supported railroad/riverfront pier. The city hired a landscape architecture firm which designed the curving, sloping layout of the trail. An engineering firm was hired to create a simple, elegant design for a low-maintenance, long-life, lightweight bridge. The design, fairly standard for highway bridges, was scaled down to a 10-foot wide trail.

Long-term, the cost effectiveness of this design will prove itself many times over. Made of concrete and galvanized steel, there is nothing to rust, nothing to rot, and no moving parts. Maintenance is designed to be minimal. The annual maintenance checklist includes general cleaning and, where needed, touch-up galvanizing and bolt tightening. The pile-supported structure maintains soil permeability and preserves a continuously vegetated slope between upland and river edge. This maximizes the area of wildlife habitat, maintains habitat connectivity along the shore, reduces human disruption of local wildlife nesting and sheltering activities, and improves the near-shore environment for migrating fish.

Construction of the trail was made unusually difficult because of the site location, the weather, and the environmental constraints surrounding the trail. There was very limited room to maneuver on this steep, narrow site. The bridge deck itself was located well above ground and, thus, minimally impacts the river which contains the endangered species of Chinook salmon and bull trout. In addition, 125-year-old structures adjacent to the site needed to be monitored and protected from damage by pile-driving activities. Clever design and construction techniques helped maintain the environment despite these challenging conditions.

Construction

The general contractor assembled each of the nine bridge spans offsite, and then lifted them into place by crane. Assembling spans and concrete formwork at ground level



improved worker safety, speed, and accuracy. By constructing forms off-site, the river was protected from contamination and disturbance to the bank was minimized during span assembly. Off-site, the assembly took a month, while on-site all nine bridge spans were bolted in place onto the pile caps in five days.

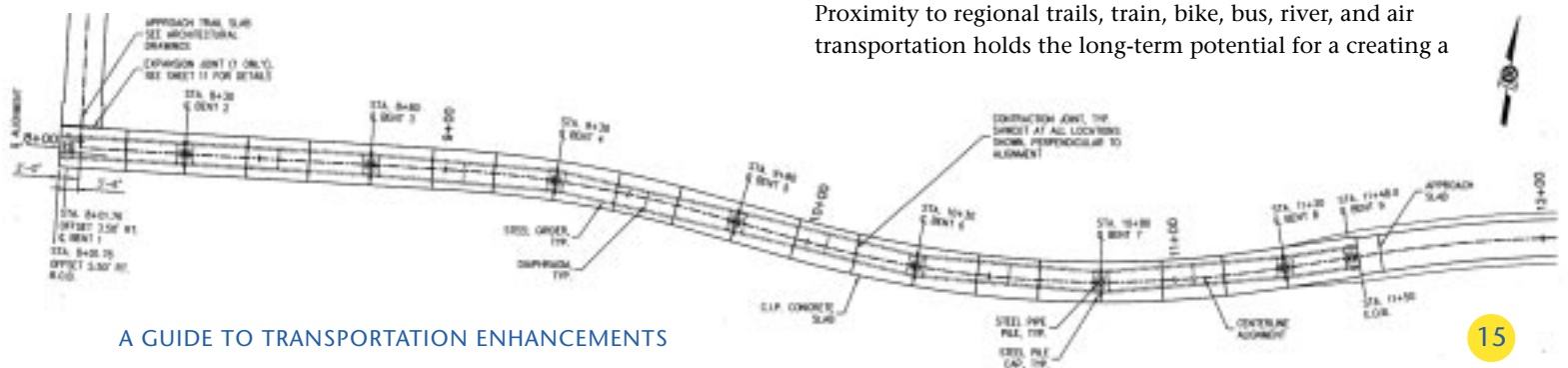
The construction phase made steady progress despite bad weather and a difficult site. A team approach by Washington State Department of Transportation staff, the engineering consultants, the project consultant, and the City of Snohomish led to prompt resolution of construction issues. Only one change order was needed, and the final contract price was \$10,000 below the \$824,970 bid amount. The project was dedicated to the public under blue skies on April 21, 2006.

The trail improves public access to shorelines, protects wildlife habitat, water quality and bank stability, and adds both recreation and economic value to the Snohomish National Historic District. It provides an accessible connection between the historic downtown and the river's edge. The trail unifies a series of small parks and street ends along the City's southern border into a single waterfront destination.

Relationship to Surface Transportation

Now that the previous steep and eroding riverbank path has been replaced with an accessible trail, safety and comfort has been improved for a wide range of users. Additionally bicyclists have a scenic alternative to First Street where they share the roadway with vehicles.

The Snohomish Riverfront Trail provides an important connection between the Seattle metropolitan area and a growing network of state and regional trails, including Snohomish County's 27-mile Centennial Trail. The trail linkage helps create a connected system of trails that facilitate bicycle commuting to the cities of Everett and Monroe. Proximity to regional trails, train, bike, bus, river, and air transportation holds the long-term potential for a creating a



true multi-modal community with improved air quality and traffic congestion relief. Results of a 1998 survey mailed to the City's 900 utility customers indicated that 60 percent of respondents expected to use the trail at least once or twice a week and 13 percent every day. Today, the trail is enjoyed by residents and visitors alike.

The trail's completion has sparked private investment in development projects to reorient the town to the river. This reinvestment is helping breathe new life into a treasured National Historic District. The Riverfront Trail and First Street's shops and restaurants are linked together with streetscape improvements that create a pleasant one-mile walking loop for a morning stroll or after dinner walk. One vacant lot is now under construction as a \$1.2 million mixed use project while other building owners are planning river-oriented remodeling. Vacancies are down, and sales receipts are up.

Addendum: The 2006 Flood

In the fall of 2006, Washington State saw record rainfall and with it, record flooding. In Snohomish, however, a repeat of the 1995 flood damage did not occur. While flood waters were within a mere inch of the 100 year flood line, the Riverfront trail survived the event with only minimal damage to one abutment and approach slab. The new pile supported bridge spans, some of which were completely covered by swift moving water, survived intact. While flood-



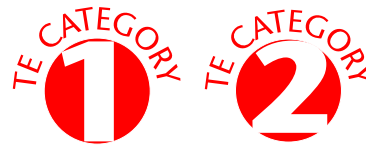
ing along the Snohomish River caused much damage to the shore, the TE funded trail remained intact with minimal damage. The trail shows how good planning and design can mitigate environmental problems and create a place that strengthens the community.

PROJECT DETAILS

Federal Award: \$967,467
 Non-Federal Match: \$150,992
 Total Cost: \$1,118,500
 Year: 1999

PROJECT CONTACT

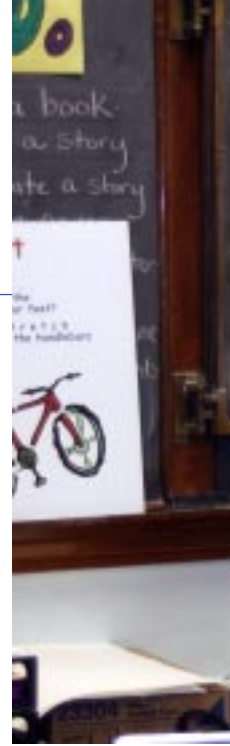
Ann Stanton
 Park Development
 City of Snohomish, Washington
 Stanton@ci.snohomish.wa.us • 360.568.3115



TE IN DEMAND

In Missouri TE demand is 3.2 times the amount awarded.

In 2006, the St. Louis TMA which directly awards 28% of the State's TE funds, received 34 application requesting \$29 million. \$9 million was awarded to 10 projects.



Bike St. Louis Phase 1

St. Louis, Missouri

The Bike St. Louis program shows how Transportation Enhancement funds can be used to create a comprehensive bicycle program for a community. Bike St. Louis' goals are to increase the public's participation in cycling by mainstreaming bicycle transportation. Key elements of their approach are the creation of safe and efficient bike routes and increased awareness of safe cycling throughout the region through educational outreach. Bike St. Louis acts as a coordinating force between local citizens, advocates, city politicians, city and county agencies, and the Great Rivers Greenway District (GRGD). TE funds have been used to make this possible.

A Comprehensive Plan

Bike St. Louis is the first comprehensive bike plan implemented in the City of St. Louis. First initiated in December 2002, the project was jumpstarted through a \$214,525 TE award in 2003. This award helped to install 20 miles of continuous on-road bicycle and pedestrian routes, providing linkages to important community facilities, regional public transportation, and other existing bicycle facilities. In addition to the development of new on-street facilities, the Bike St. Louis project initiated a bicycle safety program focused on in-school presentations, brochures to support the presentations, and bicycle route map that provides bicyclists with the rules of the road.



The Bike St. Louis program was initiated through a series of policy discussions on the possibilities of integrating different modes of transportation between St. Louis Alderman Reed and U.S. Congressman Russ Carnahan. These discussions focused on the example of European cities where multiple modes of transportation commingle safely. The representatives saw an opportunity for St. Louis to enhance the city residents' quality of life and improve upon the livability by enriching the multimodal opportunities within the city. It didn't take long before other representatives found that they shared Alderman Reed's vision for a bike-friendly city.

Putting the Project Together

To get the project started, Alderman Reed hired local project manager Julie Padberg-White. Additionally the GRGD enthusiastically partnered with the Alderman to provide help with its knowledge of regional projects and organizational relationships to ensure project success.

For six months beginning in May 2002, an open committee comprised of city and county residents, avid and novice bicyclists, local members of the St. Louis Regional Bicycle Federation and Trailnet, and city officials conducted a series of meetings to identify the routes for Phase 1 of Bike St. Louis. Meanwhile, GRGD contracted with a local graphic design firm, Kiku Obata and Company, to design route signs as well as a bike route map, for use by both local cyclists and tourists to find safe routes to neighborhoods and business centers.

Education Materials Rolled Out with Bicycle Routes

For the most part, the bicycle routes identified for Phase 1 of the project have not required the removal of parking or alterations to current traffic and parking patterns. The routes use striped lanes where there currently exists adequate space

that meets the MUTCD (Manual on Uniform Traffic Control Devices) bike lane standards. In other locations where there is insufficient space for a full bike lane, hybrid "sharrows" indicate a shared-use lane. These symbols signify to drivers that bicyclists can be expected to share the lane with cars. Where the street widths are even narrower, "share the road" signs augment Bike St. Louis' custom signs. The signs are interspersed throughout the routes to provide directional assistance to both pedestrian and bicycle users. The striping and signs will help reinforce the roadways dual use as a safe place for both cars and bicycles.

In addition to helping fund bike lane construction, the TE award has funded the safety and education component of the Bike St. Louis program to the tune of \$48,000. The education components include presentations to middle school groups and the development of the bike route map with rules of the road included. In addition, two brochures were created for school presentations. More than 30,000 maps have been printed and distributed. Plans call for a third printing of more than 50,000 maps.

Positive Response Assures Project 2nd Phase

Given the overwhelmingly positive response to the Bike St. Louis project, GRGD and the City of St. Louis have already embarked on phase two of the project. Phase 2, funded through a 2005 TE award for \$451,677, will see the addition of approximately 57 miles of additional on-road routes which will extend beyond the boundaries of St. Louis-proper into Clayton and Maplewood. The Bike St. Louis map, already well received, will be updated to include new bicycle facilities and important business centers. The safety program for phase two will be updated to include a public awareness campaign designed to improve knowledge of the rules of the road for both cyclists and drivers.

Bike St. Louis is helping to mainstream bicycle transportation by creating clear, well-signed cycling routes, including the public in the planning process for those routes, and educating the public about how to safely share the road with bicycles. The Bike St. Louis TE project resulted from concerted attention from city leaders who had the vision to push for a better solution. The success of the project has led the community to implement a second phase of the project which will help improve cycling conditions in St. Louis.



PROJECT DETAILS

Federal Award: \$214,525
 Non-Federal Match: \$53,632
 Total Cost: \$268,157
 Year: 2003

PROJECT CONTACTS

Julie Padberg-White
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 Great Rivers Greenway District
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TE IN DEMAND

In California TE demand is 8.5 times the amount awarded.

In 2006, Caltrans, which directly awards 25% of the available funds, received 90 eligible TE proposals totaling about \$110 million. \$13 million was awarded to 14 projects.



Hearst Ranch Scenic Acquisition

San Luis Obispo County, California

To maintain the stunning views of the Pacific Ocean for the public, Caltrans (California Department of Transportation) used Transportation Enhancement money to protect 1,445 acres of the Hearst Ranch along and west of the Pacific Coast Highway through the use of a scenic easement. The project leveraged a deal negotiated between the Hearst Corporation, Caltrans, and the American Land Conservancy to protect the majority of the Hearst Ranch from development. The Hearst Ranch Scenic Acquisition along Highway 1 in California shows how TE funds can be creatively used to protect environmentally sensitive land. This project almost did not happen because of a number of factors, not least of which was the size of the award needed, the scope of the project, and the complexity of the scenic and conservation easements.

The Scope of the Project

The Hearst Ranch is an 82,000-acre parcel. It straddles nearly 18 miles of Central California's Highway 1 immediately adjacent to the Pacific Ocean. The use of TE funds was the last element needed to leverage the protection from development of nearly all of the Hearst Ranch's 82,000 acres. This section of State Route 1 between San Luis Obispo City limits in the south and San Luis Obispo County's northern edge has been designated a State scenic highway since 1997. The highway received national recognition from the FHWA as an

All American Road in August 2003. This is the highest recognition bestowed by FHWA's National Scenic Byways Program.

These distinctions are government recognition of what is apparent to anyone who has driven this stretch of highway. Designation as a State scenic highway as well as FHWA's recognition helps to prioritize and identify the need to maintain these characteristics of the highway. That is, the undeveloped, breathtakingly gorgeous, sweeping views of both the Pacific Ocean and inland as the road curves up the coast.

What is a Scenic Easement and Why Acquire Them?

A scenic easement is a covenant placed on the property deed that restricts how the property can be used. According to Caltrans, "A land acquired for its scenic qualities must be maintained for its scenic qualities. Mechanisms must be in place to enforce significant scenic or historic values, and the project sponsor must agree to enforce mechanisms to preserve them. The owner of any property acquired must be willing to participate in a preservation covenant attached to the deed of the property. Such a covenant ensures that future work on the property will respect the scenic or historic integrity of the property."

Over the years the Hearst Corporation had put forth a number of proposals to develop their property along the coast. Objections from the environmental community as

well as from the California Coastal Commission prevented any of these developments from coming to fruition. As a direct result of these setbacks, the Hearst Corporation started discussions with the American Land Conservancy to put the entire ranch into a conservation easement as a way of reducing the cost of maintaining the land.

Further, Caltrans had more incentive to participate in the scenic easement acquisition than the laudable goal of preserving this scenic corridor for the public in perpetuity. Parts of the highway close to the shore are being impacted by wave-caused erosion. To protect the Highway from this erosion, Caltrans has been placing large rock slope protection into eroded areas; a practice that is frowned upon by the Coastal Commission. The solution is to realign Highway 1 away from the erosion.

The tricky part has been that the current Highway 1 alignment is a result of a road easement with the Hearst Corporation through the Ranch. When the last grandson of William Randolph Hearst dies, the corporation will cease to

application only addressed those areas within the existing road easement and the four additional areas. In evaluating the road segment with blinders to the ocean or inland views, Caltrans determined that the remaining views were not significant and, thus, not eligible for funding as a scenic easement acquisition. To be eligible the project would have to include the views of the coast and include the property between the highway and the coast.

It is these views that make the project attractive as a public enterprise. After the first application was not accepted, a subsequent application was submitted that included nearly all of the Hearst Ranch property between the ocean and the highway. This application with its renewed emphasis on access to the Pacific Ocean was deemed eligible for TE funding. This was the final piece needed for a much larger conservation easement for the rest of the Hearst Ranch that was being put together with the help of the American Land Conservancy. With the TE funding in place to protect the majority of land to the west between the ocean and the highway, the rest of the restrictive covenants protecting property to the east of the highway fell into place. In the end, all but about one thousand acres of the Hearst ranch is protected by a conservation or scenic easement restrictive covenant.

The TE award used to purchase the scenic easement is one of the largest anywhere in the nation and was carefully reviewed by both Caltrans and FHWA. Though the award was for \$21 million, it was estimated that the real value of the scenic easement on the 1,445 acres is \$55 million. The difference between the actual value and the cash payment, \$32 million, is effectively donated property from the Hearst Corporation and is counted toward the local match requirement. More importantly the donated value of the land is documented as part of the final report before FHWA gave approval for the TE award.

The 1,445 acres of the Hearst Ranch along, and west of, the Pacific Coast Highway is now protected from development with a scenic easement funded with Transportation Enhancement dollars. With the conclusion of the TE-funded project the Hearst Corporation, which had been waiting to conclude this scenic easement project with Caltrans, completed the conservation easement with the American Land Conservancy to put the rest of the ranch (80,500 acres) under a conservation easement. California now has increased the acreage of land in the State that is protected from development, preserved the scenic vistas that contribute to California's national and world image, and secured the right-of-way for the Pacific Coast Highway for the future.



Yellow hatching shows part of the 1,445 acres protected with TE funds

exist. All subsequent negotiations for realignment of the highway will then require Caltrans to negotiate with all the Hearst heirs.

As part of the agreement to acquire the scenic easement between the ocean and the highway, the Hearst Corporation granted the current highway right-of-way and four additional areas up to five hundred feet inland in fee simple to Caltrans. The additional areas will allow Caltrans to relocate the highway away from the eroding shoreline. The abandoned roadways will then be returned to native coastal vegetation and be covered by the scenic easement.

Scenic Easements Acquisition Must Still Be Related To Surface Transportation

This final agreement was arrived at through painstaking negotiation to help facilitate the use of TE as a source of funding. When Caltrans first received the application, the

PROJECT DETAILS

Federal Award: \$21 million
 Non-Federal Match: \$32 million
 Total Cost: \$53 million
 Year: 2004

PROJECT CONTACT

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 916.653.8077



TE IN DEMAND

In Nevada TE demand is 3.5 times the amount awarded.

During the 2006 and 2007 funding cycle 51 applications for \$53 million were received. \$15 million was awarded to 21 projects.



Memorial Point Overlook: From A Road Pull-Off to Scenic Destination

Incline Village, Nevada

Memorial Point Overlook's elevated balcony offers a spectacular view of the majestic Lake Tahoe area. This Transportation Enhancement (TE) funded rest area sits upon the East Shore Drive National Scenic Byway, nestled amid the majestic Sierra Nevada Mountains. The rest area now draws more than 3.5 million visitors a year to glimpse views of the mountains and lake from a spectacular treehouse-like viewing platform.

Back in 1998, before the rest area was revamped, the overlook facility consisted of a small barren parking lot adorned only with a chain link fence. In an effort to glimpse the breathtaking views, visitors would make their own paths down to the lakeshore and trample the native vegetation. The environment was suffering and the rest area was unsightly. The Nevada State Parks Division and the Nevada Department of Transportation realized they had to take action to protect this scenic natural resource. This mission presented the rest area designers with a challenge: How to encourage travelers to visit this national treasure without destroying the very environment they are beholding.

Sensitive Design for Environmental Management

Designers focused on the area's environmental concerns in creating plans for the rest area. To avoid removing trees and other vegetation, the restroom facilities were mounted on four concrete pillars, and tucked into an existing grove of large pine trees. The concrete was poured via a large crane from the parking lot, minimizing environmental damage on the densely vegetated slope. Designers also addressed the issue of visitors trampling the vegetation. Staircases made of environmentally sound native materials were imbedded into the slope, directing visitors along a designated path to access the lake. This helped prevent erosion on the steep slope. The top stairway platform was constructed to allow unrestricted views of the lake and its surroundings.

Visitors can also enjoy the view from the accessible observation deck of the restroom building. Its facilities were carefully planned so that its height would not tower over the existing tree line. A skylight on the building's roof provides natural light for the interior. The white roof on the skylight against the green roof of the structure mimics the snowcapped peaks of the surrounding mountains. The color of the building itself was chosen to blend in with the native vegetation. A vegetated island and two landscaped peninsulas enhance

the parking lot. Native shrubs, trees, and granite boulders were included in the landscape to blend with the existing natural surroundings. The additional greenery has softened the visual impact of the structure within the environment.

A package sewer treatment plant and electrical utilities were installed to provide public restrooms with a well and water system. Designers placed the wastewater treatment plant underground beneath the parking lot and sidewalk to preserve the scenery. The placement beneath the sidewalk additionally allows for easy and safe access for maintenance.

To complete the transformation of the rest area, the chain link fence that once stood along the property was replaced with a steel picket fence with wood support posts. This aesthetic fence clearly guides visitors to the restroom facilities and the designated trails and staircases.

In addition to sensitive design elements, the project also includes a strong educational component to describe the environmental history of the area. The rest area was fitted with fiberglass informational kiosks off the parking area,

PROJECT DETAILS

Federal Award: \$793,958
Non-Federal Match: \$112,820
Total Cost: \$910,758
Year: 1995

PROJECT CONTACT

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along the observation deck, and along the trails leading to the lakeshore. These educational exhibits uncover the geologic history of the lake, describe the flora and fauna of the Tahoe Basin, and delve into the cultural history of the area.

Good Design Helps to Build a Welcoming Place

TE funds were creatively used to transform a barren parking bay into a model of environmentally sensitive roadside design. This transformation was carried out by carefully incorporating key environmental features of the site into an attractive setting that simultaneously meets the needs of travelers and respects the sensitive environmental setting. Elements of ecology, aesthetics, and education have preserved this view of the majestic Lake Tahoe region.





TE IN DEMAND

In Arizona the TE demand is 2.8 times the amount awarded.

In 2006, 72 applications requested \$31 million in local project TE funding. \$11 million was awarded to 24 projects.



Barrio Anita Noise Walls, Artistic Treatments

Tucson, Arizona

Transportation Enhancements (TE) can be a significant tool in helping to revitalize communities by creating places that local community members care for and respect. The use of public art to transform a barren wall along a road in Tucson into a vital community location shows the power of TE funds to engage the community and create new, revitalized community places. At the heart of this effort is the public participation aspect of the TE project that encouraged mural artist Josh Sarantitis and photographic artist William Wilson to engage community members to help identify a central symbol for the art. Community members could come up with no better symbol for their neighborhood than 100-year-old Josefa Carrillo, a local fixture renowned for her signature tortillas. Her image, rendered among other portraits painted upon the noise walls stretching along the western edge of Barrio Anita, emphasizes the community's resilient spirit. These community-oriented murals show how TE funds can be used to help both deal with transportation needs as well as help to create vital community places.

A Needed Transportation Facility

Barrio Anita's noise walls were first erected when the frontage roads of Interstate 10 were enlarged to accommodate the future widening of the roadway. At that time Interstate

10 separated Barrio Anita from the life and resources of other neighborhoods to the west. In 1999, the Barrio Anita Neighborhood Association (BANA) applied for a Transportation Enhancement award to enliven the noise walls. Artistic treatments would beautify the walls, and a small public park created around the north wall would provide a place where community residents could gather, relax, and view the artwork. \$471,000 in TE funds were awarded in January 2000 to bring this project to reality.

The Artist and the Community

Once the money was awarded, BANA had the challenging task of choosing an artist that the community would stand behind. The selected artist would have to effectively involve the public, and research the neighborhood to develop an acceptable design. Such public engagement is a crucial component of effective public art installations. Since the final art product will belong to the community, residents need to appreciate and believe in the artist's efforts. Successful public art needs to be embraced by those who live in the vicinity to help create a positive community image.

Under the guidance of the City of Tucson's Transportation Department (DOT), the Tucson Pima Arts Council was charged with helping BANA to select an artist. The process

began with the formation of a selection panel comprised of an official from the DOT, working artists (several of whom lived in the neighborhood), arts professionals, and other BANA members. The Tucson Pima Arts Council sent out a call to artists, organized the selection panel to review the submissions, and guided the panel in a process to select four finalists. These artists were then asked to present their ideas to the panel in-person, and talk about how they would work with the Barrio Anita neighborhood residents. The panel deliberated and made its final decision: the team of muralist Sarantitis and photographer Wilson would take charge of the art project.

The artists were extremely sensitive to the attitudes and concerns of the community, immersing themselves in the community as the first step to reaching a final design. The artists talked to community members to explore the community's past and present. They discovered the intricate cultural diversity of the neighborhood that includes Native-American, Mexican-American, Chinese-American, African-American, and Anglo-American residents. The team held workshops aimed principally at youth to teach the community how to produce successful photographic images. Several of these photos were incorporated into the design of the mural. In addition, the artists used historical photographic references, stories, and ideas contributed by the community. The artists wove these elements together to create a visual narrative of the past, present, and future of Barrio Anita. Portrayed on the walls are the portraits of a diverse cross-section of local community members that include a beloved mariachi band teacher, a prominent civil rights leader, a local Folklorico performer, and the local church's Monsignor. Additionally, the dry Rio Santa Cruz, the railroad tracks, and the neighborhood's historic school building all appear, revealing elements that have helped shape the neighborhood.

The murals were created with innovative materials, honoring the uniqueness of the subject matter and the neighborhood. Images on the wall were created with a variety of media including Venetian glass tile mosaic, relief sculpture, cast concrete, steel, and paint.

Art and Place

The Barrio Anita Noise Wall murals were created to become an integral part of the neighborhood. The art was embraced by the local community and helped to create a new community place. Designers incorporated elements into the space that served to invite residents to sit and enjoy the art as a part of their neighborhood. A small park adjacent to the north wall mural was designed to relate to the community's heritage and natural environment. Seating and tables are interspersed under a trellis, creating a pleasant park space that is inviting to the public.

TE funds are a great way to enhance a community's transportation facilities, showcasing both local artists and a renewed sense of community. Barrio Anita's public art and park project is an excellent example of a TE project effectively uses public participation to create a new and well-used place. Starting with a barren noise wall, the community became involved and used art to turn those walls into positive and beautiful space.

PROJECT DETAILS

Federal Award: \$471,500
Non-Federal Match: \$28,500
Total Cost: \$500,000
Year: 1999

PROJECT CONTACT

Robert Peterson
Planner, City of Tucson
520.791.4372





TE IN DEMAND

In Oregon demand is 4.8 times the amount awarded.

During the 2006 and 2007 funding cycle, 64 completed applications requesting \$53 million were considered. \$11 million was awarded to 14 projects.



Vista House

Columbia River Gorge, Oregon

The Vista House is much more than a simple National Scenic Byway rest area. Perched 733 feet above Oregon's majestic Columbia River, the magnificent structure acts as community landmark. The building has been restored through the cooperation of the Department of Transportation with numerous other stakeholders. The result provides an excellent example of how partnership-building can help improve Transportation Enhancement (TE) funded historical preservation projects.

This uniquely designed building now offers a beautiful and welcoming rest area along the Historic Columbia River Highway, an All American Road under the National Scenic Byways Program. The highway, including the Vista House, is a National Historic District and a National Landmark. More than 85 years old, the Vista House had been deteriorating because of Crown Point's fierce weather conditions, the footsteps of millions of visitors, and the inevitable effects of time. These factors led to a temporary closing of the facility for several years so that a full restoration could be accomplished. In July 2005, however, TE funds enabled the reopening of Vista House to the travelers of the Historic Columbia River Highway. This historic transportation structure rehabilitation shows how detailed historic restoration can breathe new life into older, majestic structures.

The History of Vista House

The Vista House was originally designed as a simple roadside structure. It was authorized with a scant budget of \$12,000 in 1916 by Multnomah County. Over the next two years, the price escalated to more than \$100,000 — more than \$1.5 million by today's dollars — as the building's design became more complex to fit its stunning surroundings. It was constructed at Crown Point, a spectacular promontory high above the Columbia River alongside the Historic Columbia River Highway. The noted Portland architect Edgar Lazarus designed the structure in the German Jugendstil style. The basalt-faced octagonal structure with marble interiors was also influenced by Samuel Lancaster, the consulting engineer for the Columbia River Highway. Lancaster envisioned the Vista House as "an observatory from which the view both up and down the Columbia could be viewed in silent communion with the infinite." The observatory would provide a memorial to "the trials and hardships of those who had come into the Oregon country" and "serve as a comfort station for the tourists and the travelers of America's greatest highway." Indeed, after its construction, Vista House at Crown Point became the most visited site on the scenic highway.

In the 1940s, Vista House faced its first major survival challenge at the very hands of those attempting to maintain it. Vista House was retaining moisture in its interior. Engineers of the time set out to make major changes to the structure

that would keep rain and moisture from entering the building. Vents were covered, the original ceramic tile was overlaid with a copper roof, and the attractive stained glass windows were replaced with double-pane clear glass. The glass skylights in the steps were covered with a new layer of concrete, creating a dark, uninviting space in the basement quarters. Unfortunately, these structural changes backfired by actually preventing any moisture from leaving the building. The original engineers had made allowances for the moisture and designed a system of vents to maintain circulation. With no way for the moisture or water to escape, the building began to deteriorate. The original masonry and plaster crumbled and the marble tiling began falling off the walls. It was just a matter of time before one of Oregon's most endearing icons was closed to the public.

By the 1990s, the iconic Vista House had deteriorated. As owners of the house, Oregon State Parks launched the effort to restore the beloved structure. Phase 1 of the restoration focused on the exterior of the building. It included a

Collaboration at Crown Point

Funds were needed for both phases of the restoration. TE funds awarded in 2001 served as a catalyst for further funding to this important effort. By 2003, more than \$4 million had been raised for the restoration through the combined efforts of public and private groups and agencies, including the Oregon Parks and Recreation Department, Oregon State Parks Trust, the Friends of Vista House, the Oregon Department of Transportation (ODOT) and the Western Federal Lands Highway Division (WFLHD) of the Federal Highway Administration (FHWA).

Of the multitude of partners and methods employed to garner funds for the building's repairs, one of the most innovative involved the use of a small, humble band-aid. Oregon State Parks initiated Band-aids for Vista House, in which volunteers sold band-aids emblazoned with the Vista House logo and the words "Save Vista House" for \$1 each. With more than a million visitors a year, the band-aid sales raised both awareness and funds that spurred the restoration of the historic Vista House.

The matching funds for most projects come from the community to meet the Federal requirement of a local match for the project. However another source for matching funds, one that helped Vista House, was to use Federal funds from other departments of the Federal government. FHWA allows funds received from other departments to count towards the match so long as the funds are from non-DOT Federal programs.

Since the Historic Columbia River Highway is not only a Scenic Byway and National Landmark, but also a designated Forest Highway, Forest Highway money was available for the project as well. The Forest Highway program is part of the Public Lands Highways Program. In Oregon, Forest Highway funds are managed by a tri-agency committee involving ODOT, U.S. Forest Service and WFLHD. Each year in Oregon, 10 percent of Forest Highway funds are set aside for enhancement projects. This typically adds up to about \$2 million a year. These particular funds are for projects that enhance the traveler's experience, provide information and signing, restore historical highway features, address roadside parking or other environmental concerns on

refurbishment of the green tiles of the dome roof. Planners accounted for the extreme weather conditions at Crown Point, including the heightened moisture and the extreme winds and ice storms.

In addition to exterior restoration, Phase One also included an interior restoration. The interior dome was painted to simulate the marble and bronze originally planned for the structure. Green opalized glass was featured among several windows. A hand-carved drinking fountain and eight gilded plaster Native American faces adorned the inside of the rotunda. In addition to the structure itself, educational exhibits were installed that explained the history of the building, the historic highway, and the local flora and fauna.



Forest Highways. The Forest Highway Enhancement Program for Oregon is not a mandated program, but one that was cooperatively adopted to address highway issues outside of normal highway improvements. The program has been in place since 1995 and so far has provided more than \$30 million for interpretive signing, Scenic Byway portals, thematic signing, corridor plans, historic restoration, trailhead parking, viewpoint parking, and fish passage in replacement of substandard culverts. ODOT and Oregon State Parks cooperatively proposed the Vista House Restoration to the tri-agency. Through the Forest Highway Program, the FHWA contributed \$610,000 for exterior restoration and preliminary engineering of the interior restoration of Vista House. In addition, \$545,000 in Transportation Enhancement funds, matched with \$473,000 for a total of \$1,018 million through the TE process was awarded to the Vista House.

The result of this collaboration of agencies and funds is a restored historic and educational structure that sits stoically above the Columbia River. Samuel Lancaster's original vision of an iconic viewing platform for the Oregon landscape has been reborn. Just as it did in 1918, the Vista House provides a place of beauty and rest during a voyage of discovery along the Historic Columbia River Highway.

PROJECT DETAILS

Federal Award: \$545,000
Non-Federal Match: \$473,000
Total Cost: \$1,018,000
Year: 2001

PROJECT CONTACT

Friends of Vista House
www.vistahouse.com
503.695.2230



TE IN DEMAND

In Kentucky TE demand is 8.6 times the amount awarded.

In 2006, 138 applications requesting about \$120 million were received. \$14 million was awarded to 61 projects.



Historic Goddard Covered Bridge

Goddard, Kentucky

Residents of Goddard, Kentucky, are justifiably proud of their historic, covered bridge. The Goddard Covered Bridge is listed on the National Register of Historic Places and is one of only four covered bridges left in Kentucky that remain open to traffic. To help preserve the history and transportation value of this important symbol of the town's identity, the Kentucky Transportation Cabinet (KyTC) developed an innovative model approach to historic preservation using Transportation Enhancement (TE) funds. This TE project is exceptional in its use of public involvement, partnerships, and informed preservation techniques.

Preserving the Past and Future of a Covered Bridge

The exact date of construction of Goddard's covered bridge is not known, but its lattice truss can be traced back to prominent American engineer Ithiel Town's 1820 patent design. It is the only Ithiel Town truss left in Kentucky. Since its original construction, the bridge has been renovated several times, once in 1910 and again in 1968.



Additionally, it was moved from its original site northward because of a road reconstruction project in 1932. Despite the upheaval, the bridge has survived due to the town's appreciation of it.

In 2002, TE funds were awarded so that the bridge could be renovated once again. The original plan incorporated a standard practice in the renovation of bridges in Kentucky, designed to create a neat and trim structure built almost entirely of new material. The original plans for the Goddard covered bridge restoration entailed similar techniques and required dismantling and rebuilding the bridge off-site. Eighty percent of the covered bridge was proposed to be replaced by new material, significantly weakening the historical character of the bridge.

This plan struck a dissonant chord within Goddard. Residents did not want to lose the unique historical essence of their covered bridge. In response to the public, the Buffalo Trace Covered Bridge Authority recruited two covered bridge experts to assess the situation. The KyTC paid for a third expert's opinion. The three experts presented their findings to the State, and convinced KyTC that the bridge should be preserved on-site to safeguard its unique Town truss system. Contrary to the initial plan, the experts were also adamant that much of the original wood could be saved.

Considering these new findings, KyTC approached the firm initially contracted to renovate the bridge. The firm agreed with KyTC's request to restore the bridge onsite

instead of dismantling and rebuilding it elsewhere. KyTC used two of the bridge experts as consultants on the project.

In this way, the fate of the Goddard Covered Bridge was immensely affected by the public's demands and regard for it. Over the next two years, public meetings were held regularly to check in with the community on the plans and status of the bridge's restoration. Through this process, and through the work of the bridge experts with the contractors, it was decided that the bridge would be fitted with a new metal roof and rebuilt stone abutments. Bolsters and bents were used to spread the load and shorten the load-bearing span of the bridge. Instead of completely replacing the wood within the lattice truss, the original timbers were "sistered." This meant the original planks were kept, and that new planks were installed only to provide support for the original lumber. As a result of overwhelming public opinion, the added timbers were treated to maintain the weathered look of the bridge.

Goddard Covered Bridge was officially reopened in August 2006, just in time for the annual Fleming County Covered Bridge Festival. This event attracts thousands of tourists from all over the country to Goddard each year bringing in \$50,000 to the community annually. The Goddard covered bridge plays a central role in the festivities and advertising. Its recognizable identity made the weathered and historical appearance of the bridge an important aspect of its restoration.

The innovative approach to preservation that took place in Goddard provides an important model that can be used in the restoration of covered bridges throughout the country. In addition to involving the public, the approach used in Goddard encouraged direct contact between the contractor and historical preservation engineers. This design-build partnership helps ensure that the historical integrity of bridge was maintained. The diversity of input and partnerships, including a strong public participation component, has helped to maintain the bridge's unique, historic character, ensuring that the bridge will continue to be a central element of the town's identity.



PROJECT DETAILS

Federal Award: \$573,952
Total Cost: \$1,154,752
Year: 2002

PROJECT CONTACT

Shane Tucker
Transportation Enhancement Project
Coordinator
Kentucky Transportation Cabinet
502.564.2060

Patrick Kennedy
Restoration Project Manager
Kentucky Heritage Council
502.564.7005



TE IN DEMAND

In Nebraska TE demand is 3 times the amount awarded.

In 2006, 62 applications requesting \$18 million were received. \$6 million was awarded to 20 projects.

The Grand Island Plum Street Station

Grand Island, Nebraska

Through the use of Transportation Enhancement (TE) funds, the historic Plum Street Station in Grand Island, Nebraska has become a catalyst for community revitalization. In the early 1900s, the depot served as a flourishing hub of Midwestern transportation. Both passengers and freight frequented this central point of arrival and departure. Almost a century later, despite the thriving bustle that once typified it, the depot faced almost certain destruction. The historic depot narrowly avoided demolition as community residents used TE funds to create a new, vibrant, vision for this important community symbol.

The Life of a Depot

The depot was built in 1911 to house the Chicago, Burlington and Quincy Railroads. Two main buildings were constructed: the passenger depot and the freight depot. These two buildings were connected by a porte cochere, or a covered driveway. The buildings featured brick exteriors with granite foundations and detailing.

For more than fifty years, the

depot served as a hub to the Central Platte River Valley. However, with declining railroad traffic and a new interstate system just eight miles away, train traffic ceased using the depot in the mid 1960s. The depot began its slow decline, eventually becoming an eyesore in the community. The neglected structure and surrounding landscape were targeted with graffiti. In August 1998, Burlington Northern Santa Fe (BNSF) - to which ownership of the depot had transferred - announced plans to demolish the building by the end of the year.

Rescuing a Historic Landmark

Recognizing the historical and cultural significance of the old depot, the Hall County Historical Society (HCHS) was quite alarmed to hear of its imminent destruction. They decided to intervene in order to rescue, renovate, and preserve the structure. The HCHS successfully negotiated the purchase of the property for \$30,000 just days before it was scheduled to be demolished. With a vision to create a space to be shared with the public,



AFTER

the HCHS began the remarkable effort to renovate this local historic structure.

In 1999, the Hall County Board of Supervisors, on behalf of the HCHS, applied for and received TE funds from the Nebraska Department of Roads (DOR). The funds were awarded to carry out the society's goal of restoring the depot for public use. Using an existing condition analysis of the depot, a renovation plan was created. A general contractor was hired to manage the renovation project in conjunction with a consultant with the State DOR. The consultant aided the project through the Federal and State TE guidelines.

The scope of work was divided into two components: the exterior rehabilitation of the buildings and platform, and the interior renovation of the depot, including the upgrade of the mechanical, plumbing, and electrical systems. The entire project cost \$450,000, with TE funds providing \$227,743. The HCHS voluntarily contributed \$222,257, a 50 percent match made possible through local fund-raising and private donations.

The renovated depot features varnished oak box-beamed ceilings, original windows, white glazed ceramic tile and

Hall meetings and small business trainings. There is no fee to reserve and use the space, but donations going toward maintenance of the depot are encouraged.

Depot Spurs Revitalization

The renovation of the Plum Street Station proved beneficial to the community indirectly as well. The depot's renewed presence spurred revitalization in the once-blighted neighborhood. Nearby the station, a gazebo and landscaped park replaced the site of an abandoned building. Houses now show off fresh coats of paint and back alleys are enjoying cleaner conditions. In 2002, the Grand Island Hall County Regional Planning Commission presented the Plum Street Station with its annual Community Beautification Award. The award was presented to recognize and show appreciation towards the depot's outstanding contribution to the community.

PROJECT DETAILS

Federal Award: \$227,743.00
Non-Federal Match: \$56,936
Total Cost: \$284,679
Year: 1999

PROJECT CONTACT

Fred Roser
Hall County Historical Society
308.384.2154



painted walls, and black-and-white checkerboard tile floors. These vintage components created an ideal home for the antique railroad memorabilia that the depot now displays. The depot also serves the community by housing a police substation and a community meeting area. The large, double doors on the east side of the building open to a brick courtyard, a welcoming space that allows public events to expand outdoors. Events are popular at the depot, including Town



TE IN DEMAND

In Mississippi, 18 projects received a total of \$3.2 million in 2005.



The Longleaf Trace

Hattiesburg to Prentiss, Mississippi

The Longleaf Trace National Recreation Trail has become an incredible asset to the southern Mississippi communities that border this 40 mile long rail-trail. Stretching from Southern Mississippi University in Hattiesburg to the small town of Prentiss to the northwest, the trail connects diverse neighborhoods and towns to the regional hub of Hattiesburg. This project shows how Transportation Enhancement (TE) funding can be used successfully to engage local communities to envision a project that enhances local business opportunities, offers a renewed connection to the area's landscape, and provides important transportation opportunities that connect small towns and the neighborhoods that surround them.

The Road to a Rail-Trail

In 1993, Canadian National Railroad announced its intentions to abandon the Illinois Central Gulf railway right-of-way from Hattiesburg to Prentiss, Mississippi. Initially, officials in the affected Mississippi counties of Forrest, Lamar, and Jefferson Davis opposed the abandonment. They anticipated that the unused corridor would result in a stagnation of the surrounding areas. However, they soon realized TE funds could help them purchase the right-of-way so that the corridor could be turned into a public multi-use trail. Suddenly, it seemed the abandonment could actually lead the local transportation system into a direction it had never

gone before: if a rail-trail were built, it could support a community-oriented, nonmotorized system among the three counties.

The counties began working toward their goal to build a trail. One of the first steps was establishing a foundation of public support. A local bike shop owner and avid cyclist helped garner trail support by creating a community group advocating for the trail. The group's unwavering support proved vital to the development of the trail. The group voiced the appeal of the trail to all levels of the community, and solicited financial support from individuals, businesses, and corporations. A unique aspect of planning for the trail included sponsorship opportunities for local businesses and groups. Mile markers, rest areas, and trestle bridges could be sponsored and small signs would be placed to honor these groups for their contribution to the Trace. This effort raised well over \$100,000 for the trail.

Armed with an abundance of corporate and individual support and sponsorship for the trail, the affected counties approached the Mississippi State Legislature. They asked for the approval of a proposed legislative act that would create an authority for rail-to-trails recreational districts in the State of Mississippi. The legislature granted this authority in 1994. This allowed for the formation of the Pearl & Leaf Rivers Rails-to-Trails Recreational District to oversee what would become the Longleaf Trace.

The District faced its first major challenge when the Mississippi Governor vetoed the necessary funds for the purchase of the railroad right-of-way. Although the District attempted to negotiate the purchase of the corridor, it soon became clear the needed funds would not be available in time to meet the purchase restraints set by the Canadian National Railroad. The district did not give up. They approached the Mississippi Department of Transportation (MDOT) to ask them to purchase the right-of-way. Understanding the benefits such a trail would provide the local transportation system, MDOT agreed.

After MDOT purchased the land, the Pearl & Leaf Rivers Rails-to-Trails Recreational District developed a master plan for the trail. The district then submitted an application for a TE award for trail construction. The funds allowed the District to hire engineers and architects to design and implement the first phase of the Master Plan. This phase was completed and opened for public use by September 2000. Thirty-nine miles of 10-foot wide smooth asphalt surface now meandered through Southeast Mississippi. Seven trestle bridges, six parking lots, and two trailhead stations were opened along its route.

During the construction of Phase I, Canadian National Railroad announced it was abandoning an additional two miles of right-of-way. MDOT and the Pearl & Leaf River Rails-to-Trails Recreational District agreed to share the cost of the purchase. TE funds were again awarded for this addition. Opened in 2003, the new section includes gateway facilities at the northern end of the trail in Prentiss and at the southern end at the University of Southern Mississippi. This southern gateway serves as the official welcome center of the Longleaf Trace. In addition, four trailhead stations opened along the trail to provide seating, restrooms, vending machines, and a spot of shade for the hot southern days.

Public Support Leads to Success

One major reason the Longleaf Trace is a successful rail-trail is that community support was integrated into planning and building the trail. Community outreach generated public input to benefit the trail. Local corporations contributed donations to make the trail a reality. The resulting pathway has connected and enhanced the neighborhoods along its route. The local economy thrived as visitors to the trail frequented area businesses. In addition, these improvements helped connect the diverse communities along the trail and built pride in the region.

The importance of the trail to the community was made clear after Hurricane Katrina ravaged much of the pathway in 2005. Hazards, debris, and more than 15,000 felled trees obstructed the course of the Trace. The entire 40 mile pathway was closed for several months. An outpouring of donations came in from all over the country to help clear the trail. In addition, the local convention and business bureau, representing area motels, hotels, and restaurants, valued the Trace so much that they donated necessary funds to apply for Federal assistance for its recovery. These efforts paid off as the Trace was reopened several months after the hurricane.

The economic, environmental and physical health, and the transportation needs of the neighborhoods located along the Longleaf Trace have been greatly enhanced by the presence of the trail. Residents and businesses alike fought to maintain the existence of the Trace, ensuring that it continue to serve as a lasting treasure for Southeast Mississippi.

PROJECT DETAILS

Two Awards:

Phase 1 (Awarded 1995):

Federal Award: \$2,692,192

Matching Funds: \$124,624

MDOT Soft Match for ROW: \$550,000

Phase 2 (Awarded 1999):

Federal Award: \$1,926,546

Matching Funds: \$481,637

Total Cost of Phase 1 and 2: \$5,774,999

PROJECT CONTACT

Herlon D. Pierce

Trail Manager

Longleaf Trace

info@LongleafTrace.org • 601.450.5247

www.longleaftrace.org





TE IN DEMAND

In North Carolina TE demand is 4.9 times the amount awarded.

In 2004, the State TE office, which directly awards about 30% of the available funds, received 186 complete applications requesting \$53 million. It awarded \$10.8 million to 75 projects.



Archaeological Planning and Research at the Allison-Deaver House

Transylvania County, North Carolina

This project shows how a small Transportation Enhancement award leveraged volunteer resources to significantly increase the understanding of the early transportation system of the region. In the mountains of western North Carolina, TE funds were used to help trace the early transportation system in the area. In the process of this evaluation, community groups were engaged in raising awareness of this important historical legacy. The TE funds were designated for an archaeological investigation of early roads surrounding the Allison-Deaver House, the oldest surviving house in these mountains. This exceptional historical structure, listed on the National Register of Historic Places, sits adjacent to major 18th and 19th century roads: the old “Boylston” Highway and the old “Estatoe” trading path. The “Estatoe” trading path is a Native American trail that predates European settlement. It was critical to the development of western North Carolina in the 19th century. The TE-funded archaeological dig helped uncover this important transportation history, helping the people of North Carolina better understand the importance of this early trading route to the area’s growth.

The TE Process in Action

Transylvania County applied for and received TE funds for archaeological investigations designed to locate the early transportation system. The county received \$17,460 in funding (\$13,968 in Federal funds and \$3,492 in local matching funds). Wake Forest University’s Department of Public Archaeology was awarded this project, and students from the university set up camp and lived at the site alternately for several months. The project attracted significant local attention with

groups of school children visiting the site weekly to learn both about the history of early transportation in North Carolina and the mechanics of an archaeological dig. In addition, volunteers participated in activities such as artifact screening. Two professional archaeologists worked directly with all volunteers instructing and supervising in the proper methods for recovering and recording information.

The investigations at the Allison-Deaver House uncovered more than 3,000 artifacts and culture items, including prehistoric Native American as well as Anglo-American items. The Native American artifacts provided evidence that the ridge top site was occupied during the Archaic (4000–5000 B.C.) and Woodland (A.D. 200–900) periods.

Uncovering History and Engaging the Community

The archaeological investigations at the Allison-Deaver house are an important component in the study of the history of transportation in the difficult mountainous terrain of western North Carolina. The project was made meaningful by involving a maximum number of university students to participate. The investigations became a community effort by involving local volunteers and bringing in school groups to observe and participate in the undertaking.

PROJECT DETAILS

Federal Award: \$13,968
Non-Federal Match: \$3,492
Total Cost: \$17,460
Year: 2001

PROJECT CONTACT

Mr. Ken Robinson
Department of Public
Archaeology
Wake Forest University
336.758.5117

Manistee Lake: Highway Runoff Improvements

Manistee, Michigan



TE IN DEMAND

In Michigan, 75 projects received \$42 Million in 2006.

Environmental Mitigation and TE: Building a Sustainable Future

Manistee Lake, a premier fishing destination in Northern Michigan, has been degraded by many sources of environmental pollution including industrial contamination, sewer overflows, and soil erosion. A Transportation Enhancement (TE) award was used to correct the drainage system along highway US-31, preventing sediment and other pollutants from entering the lake. By investing in the drainage repair using TE funds, the community protects itself as a premier fishing destination.

Project Specifics

Completed in 2004, the Michigan Department of Transportation used a TE award to fund a project to mitigate the environmental impacts occurring to Manistee Lake from a nearby highway. Prior to the project, drainage from the highway discharged into Manistee Lake via storm sewers and an existing drainage channel. The runoff conveyed pollutants

gering Manistee Lake as a fishing destination.

The northern region of Michigan is known for its superior fishing opportunities. It is partly because of these opportunities that the region has attracted a considerable number of tourists. Manistee Lake, part of the Manistee River watershed that drains into Lake Michigan, is in the middle of this premier fishing region. The lake is currently considered to be adversely impacted by pollution with elevated levels of heavy metals, oils, and other pollutants. While local government, State, and Federal agencies are addressing the elevated contaminant levels in the lake, one part of the solution was to reduce the direct highway runoff drainage into the lake.

To treat one source of the lake's contamination problem, the Michigan Department of Transportation, along with the Manistee County Road Commission, used a TE award of \$252,000 to fund a stormwater treatment structure along Highway US-31 to treat the road runoff before it enters the lake. The structure contains a baffle system to separate oil from the water and a swirl chamber to retain sediment in its sump. The system is designed to remove 80 percent of the suspended solids during a 10 year storm event. This solution was chosen for this location because of worries from adjacent business over the appearance of traditional detention pond systems.

Maintaining a Sustainable Local Economy

In part, the TE project is helping to restore Manistee Lake as a premier fishing destination. This project directly benefits the community by removing large amounts of sediment and other contaminants from the highway drainage system that previously entered the lake. By removing pollution from the lake, the project is helping to restore both the environment of the region as well as maintaining the tourism and recreational resources that help the community thrive.



from the road to the lake. Further, runoff velocities within the channel resulted in eroded material being deposited into the lake. Pollutants from the road and sediment from the eroding drainage channel contributed to pollution that was endan-

PROJECT DETAILS

Federal Award \$252,000
Non-Federal Match: \$63,000
Total Cost: \$315,000

PROJECT CONTACT

Gary Karttunen
Development Engineer
MDOT
karttuneng@michigan.gov
231.775.3487



TE IN DEMAND

In Pennsylvania TE demand is 3.3 times the amount awarded

In 2004, 260 applications requesting \$118 million were considered. \$36 million was awarded to 127 projects.



Pennsylvania Trolley Museum Trolley Display Building

Washington, Pennsylvania

One of the significant eras of transportation in the United States was the Streetcar Era. Beginning roughly in the 1890s and peaking in the 1940s and 1950s, the streetcar, or trolley, provided a significant percentage of Americans with everyday transportation to go to work, to school, or to visit with family and friends. The Pennsylvania Trolley Museum (PTM) received a Transportation Enhancement (TE) award to help preserve and interpret the trolley era for those more accustomed to the automobile lifestyle. The museum does this through exhibits, a collection of more than 30 historical trolleys from around the State and the Nation, and through the operation of many of its historical trolleys for visitor tours.

Creating a Museum

In 2004, the PTM completed Phase 1 of three expansion projects. The first phase constructed a half mile of trolley track and a trolley turning loop that connects the Trolley Museum and the Trolley Era Heritage Complex. Since 2004, more than 40,000 visitors have been able to live history by riding historical trolleys over this working section of track at the museum.

While the main draw of the new complex is the opportunity to ride trolleys, the PTM also has numerous exhibits that help to provide historical context. In Phase 2 of expansion, the Trolley Museum recently completed a 25,000-square foot trolley display building which houses the museum's trolleys. To construct this new building, several challenges needed to be overcome. The proposed trolley house site was within the 100-year flood zone. To make the site suitable for the trolley house, the building needed to be raised above the flood zone and storm water management infrastructure needed to be installed. To accomplish this, a Transportation Enhancement award of \$475,000 was used to prepare the site for construction.

Protecting the Collection

Previous to the trolley display building, the antique trolleys were stored outdoors in a non-accessible site. The new trolley display building provides the much needed protection from the elements that historical, fragile trolleys need so that they can last for future generations. It also, of course, provides a year round, accessible location for the public to view the trolleys. Since opening in the spring of

2005, the guided tours of the trolley display building have fulfilled visitors' wishes to see the entire collection of trolleys and improved the preservation of this legacy for the future.

Education into the Future

The third phase of expansion is still in construction; however, \$400,000 have already been obligated towards necessary site preparation work for Phase 3. Planned for the site is a new, larger, visitor center that will provide additional space for classrooms, exhibits, archives, and a location to showcase specific trolleys.

Through the use of TE and other funding sources, the Pennsylvania Trolley Museum has created a living legacy that helps provide a window on the trolley era which both draws visitors to the community and helps to provide an important historical understanding of the use of trolleys for transportation within the State and the Nation.

PROJECT DETAILS

Federal Award: \$475,000
Non-Federal Match: \$95,000
Total Cost: \$475,000

PROJECT CONTACT

Scott R. Becker
Executive Director
Pennsylvania Trolley Museum
sbecker@pa-trolley.org
724.228.9256



Web Resources

National Transportation Enhancements Clearinghouse

For information on the Transportation Enhancements program, including contact information for State and Federal TE program managers, State bicycle and pedestrian coordinators, State historic preservation officers and recreational trails program managers. Over 50 publications available for download or e-mail order including the quarterly TE newsletter *Connections*. www.enhancements.org

Federal Highway Administration

For information on the Transportation Enhancements program, including definitions of allowable activities, Federal guidance and project eligibility guidelines. www.fhwa.dot.gov/environment/te

The Corps Network

Federal TE guidance encourages the use of youth conservation corps in the development of TE projects. This web site will connect you with Corps in your area. www.corpsnetwork.org

Rails-to-Trails Conservancy

For information on the preservation of unused railroad corridors and their conversion to trails. The site includes links to downloadable reports and various technical assistance briefs. www.railstotrails.org

National Trust for Historic Preservation

For information on various aspects of the historic preservation work that pertains to the use of TE funds. www.nationaltrust.org

Scenic America

For information pertaining to scenic easements and billboard removal. www.scenic.org

Pedestrian and Bicycle Information Center

Provides information about pedestrian and bicycle issues, including health and safety, engineering, advocacy, education, enforcement, access and mobility. www.pedbikeinfo.org

TE Glossary

Americans with Disabilities Act of 1990 (ADA) — Federal law that requires accessible public transportation services for persons with disabilities. ADA also pertains to facilities along highways, trails, sidewalks, and other public settings.

Categorical Exclusion (CE) — A technical exclusion for projects that do not result in significant environmental effects; such projects are not required to prepare environmental assessments or environmental impact statements.

Davis-Bacon Act — Federal law that requires the prevailing wage to be paid to all workers on Federal-aid highway projects that exceed \$2,000. This requirement does not apply to Transportation Enhancements projects not located within the right-of-way of Federal-aid highways.

Eligibility — The criteria established by the FHWA by which a project qualifies for Transportation Enhancements funding. In determining eligibility, the FHWA has stipulated that a project must be one or more of the 12 TE activities, and be related to surface transportation. States may have additional eligibility requirements.

Federal Share — The portion of the project cost funded by the Federal government. These Federal funds are normally matched with State and/or local government funds. The Federal share is 80 percent for most projects (higher in some western States).

In-Kind Contributions — Allowable (chargeable) costs of a project contributed by other government entities or private parties, and including donations of cash, real property, materials and (voluntary) contribution of professional services and labor.

Matching Funding (Non-Federal Funding Share) — The percentage of non-Federal funds required for almost all Federal-aid programs to match a Federal contribution. The standard ratio is a 20 percent match from State and local sources (lower in some western States).

National Environmental Policy Act (NEPA) — Federal law that requires every Federal agency to prepare a detailed report evaluating environmental impacts and alternatives to a proposed action.

National Historic Preservation Act of 1966 (NHPA), Section 106 — This section requires Federal agencies to consider the potential effects of a project on a property that is listed in, or eligible for, the National Register of Historic Places.

Right-of-Way (ROW) — A linear corridor of land such as used for transportation or other facilities such as highways, roads, streets, railroads, trails, light-rail, and utilities.

Section 4(f) of the U.S. Department of Transportation Act — Section 4(f) resources consist of publicly owned parks, recreation areas, wildlife and waterfowl refuges, and national, State or local historic sites. Section 4(f) land cannot be used for U.S. DOT-funded projects unless it is determined that no feasible and prudent alternative exists.

Soft Match — The value of activities outside the project scope but directly related to the project which are credited toward the non-Federal share of a project.

Sponsor — One or more individuals, partnerships, associations, private corporations or public authorities recommending a particular project and committed to its development, implementation, construction, maintenance, management and financing. In most States, a project sponsor must be a public entity with tax-bearing authority.

Surface Transportation — All elements of the intermodal transportation system including water transport. TE funds cannot be used for military or aviation related projects.

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as Amended — Federal law that provides procedural and other requirements in the acquisition of real property and provides for relocation payments and advisory assistance in the relocation of persons and businesses impacted by Federal or Federally-assisted projects.

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