

CANAMEX CORRIDOR PLAN WORKING PAPER

**TASK V: TRANSPORTATION AND OTHER
FUNDING SOURCES**

Prepared for

THE CANAMEX CORRIDOR COALITION

Submitted by

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INTRODUCTION AND EXECUTIVE SUMMARY

The CANAMEX Corridor Plan includes five Plan Initiatives. These Plan Initiatives are a series of transportation and other types of strategies that will have a significant impact on the CANAMEX Corridor states, addressing issues from transportation infrastructure improvements and tourism development to bridging the digital divide.

These Plan Initiatives will serve many different user groups. The proposed projects enhance mobility for freight as well as for passengers, for residents as well as visitors, for urban as well as rural travel. The proposed projects can also be implemented incrementally as small to medium size projects, instead of one megaproject. These characteristics enhance not only the fundability of projects, but also the general public acceptance, as more than just one user group benefits.

Every state faces its own transportation funding issues. At this strategic planning stage, the development of a detailed financing plan is not possible. However, information on general funding and financing opportunities can provide insight into future financing strategies.

TRANSPORTATION FUNDING STRATEGIES

The primary transportation funding mechanisms stem from the Transportation Equity Act for the 21st Century (TEA-21), which builds on the previous Intermodal Surface Transportation Efficiency Act (ISTEA) initiatives, state fuel taxes and other user fees (including registration fees and tolls),

By Federal Fiscal Year (FFY) 2003, it is estimated that the CANAMEX states will receive on average an estimated \$277 million per year per state as a result of TEA-21 funding. The anticipated distribution ranges from a high of \$462 million for Arizona to a low of \$202 million for Nevada. What the next reauthorization will bring is unknown, but trends show increased funding with each reauthorization. Therefore, current FFY 2003 estimates are referenced as an indication of what at least could be expected on an annual basis.

The TEA-21 provisions of significant interest to CANAMEX Corridor ITS funding are:

- National Highway System (NHS);
- Surface Transportation Program (STP);
- ITS Program; and
- Congestion Mitigation and Air Quality Improvement Program (CMAQ).

Other programs within TEA-21 that can be used to fund CANAMEX activities include the Corridor and Border Program and the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA). TIFIA provides Federal credit assistance to major transportation investments of critical national importance, including expansion of multi-state highway trade corridors. Other funding mechanisms for transportation activities include state fuel taxes, state infrastructure banks (SIBs) and grant anticipation revenue vehicles (GARVEEs).

Even though the mechanisms for financing transportation improvements have increased and changed in the last decade, Federal funds remain the backbone of transportation financing. As such, an “innovative” approach to funding CANAMEX improvements is to maximize Federal funding opportunities.

The highway and ITS projects that are part of the CANAMEX improvements are eligible for Federal funds under many programs. Summaries of these programs and recent awards can be found on the FHWA web site (<http://www.fhwa.dot.gov/discretionary>).

A coordinated approach, considering the other transportation needs of each CANAMEX state, needs to be taken to determine what program to pursue for funding of CANAMEX projects. Incorporating the ITS components into highway projects will also facilitate funding opportunities. Therefore, a fundamental approach to funding CANAMEX transportation improvements must be coordination of projects and funding requests, both within and between CANAMEX states.

OTHER FUNDING SOURCES

In addition to funds available for the transportation and ITS improvements, there are also various Federal sources of funding available for other CANAMEX activities, including development of additional tourism products, alternative fuel vehicle infrastructure development and incentive programs, and rural access strategies.

Transportation Enhancement Activities

The TEA-21 program also provides for Transportation Enhancement (TE) activities as a sub-component of the Surface Transportation Program (STP), and could provide funds for several CANAMEX tourism development activities that require historic preservation. The focus of these activities is to improve the transportation experience in and through local communities. Examples of eligible activities include the following:

- Acquisition of scenic easements and scenic or historic sites
- Scenic or historic highway programs (including the provision of tourist and welcome center facilities);
- Landscaping and other scenic beautification;
- Historic preservation;
- Rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals);
- Establishment of transportation museums.

Transportation and Community and System Preservation (TCSP) Program

TCSP is a comprehensive initiative with funding to states, local governments and metropolitan planning organizations for discretionary grants to plan and implement strategies that:

- improve the efficiency of the transportation system;

- reduce environmental impacts of transportation
- reduce the need for costly future public infrastructure investments;
- ensure efficient access to jobs, services, and centers of trade; and
- examine private sector development patterns and investments that support these goals.

Alternative Fuel Funding Sources

One of the major challenges in implementing any alternative fuel vehicle program along the CANAMEX Corridor will be the development of fueling infrastructure and coordination of efforts. While most CANAMEX states have alternative fuel vehicle programs, the regulations and eligible fuel types differ from state to state. Furthermore, there are significant challenges to the development of alternative fuel vehicle fueling stations, the most significant of which is matching development with demand. From the customer's perspective, fueling infrastructure must exist before alternative fuel vehicle purchases are made. From the retailer's perspective, fueling infrastructure cannot be installed without some anticipation of near-term sales adequate enough to provide reasonable return on investment. The relatively high cost of fueling station design, purchase, installation, and maintenance only serves to compound this problem. A number of these costs might be reduced through experience and economies of scale resulting from increased demand for new stations. Furthermore, as fueling infrastructure technology improves, the cost of development is likely to be lowered.

However, an important priority for the CANAMEX Corridor states should be to coordinate alternative fuel vehicle efforts, particularly in the determination of which alternative fuels will be promoted through the states and particularly throughout the CANAMEX Corridor. Utilizing similar alternative fuel types can assist in removing economy of scale barriers for the development of fueling infrastructure.

There are Federal incentive programs for both the purchase or conversion of individual alternative fuel vehicles (AFVs) as well as for large infrastructure investments. The lead Federal agencies for AFV programs are the U.S. Department of Treasury (through the Internal Revenue Service), the U.S. Department of Energy (DOE), the U.S. Department of Transportation (DOT) and the U.S. Environmental Protection Agency (EPA). The CANAMEX Corridor Plan could educate companies about Federal incentive programs for fleets and individuals and utilize Federal resources to fund specific alternative fuel vehicle projects.

Rural Access and Digital Divide Funding Availability

Several Federal government agencies have been involved in issues related to the digital divide between urban and rural areas of the United States. The major agencies with funding available for local and statewide projects include the Department of Commerce, the Department of Agriculture, the Department of Education (primarily for school connectivity), the Department of Health and Human Services, and the Department of Justice (primarily addresses safety issues). While there are many grant programs available, there are very few, if any, funds available for the infrastructure required for rural access. However, states may be able to utilize existing programs, legislation, and public policy to provide incentives to the private sector for developing the infrastructure required to provide better telecommunications access to rural areas.

Other Funding Sources

Other funding sources include the multi-national North American Development Bank (NADB), which finances environmental projects related to potable water supply, wastewater treatment or municipal solid waste management along the U.S.-Mexico border. Additionally, there is a potential for public-private investment partnerships for tourism-based ITS technology. Private sector companies would potentially cover a portion or the entirety of the cost of installing and maintaining these systems in exchange for the privilege of posting information on the system, which can be considered a form of advertisement.

Section I

TRANSPORTATION FUNDING ISSUES

The *Task III: Economic Impact of Corridor Improvements* Working Paper outlined the need for both highway and ITS improvements, in addition to various transportation projects already planned (such as improvement to Nogales port of entry and the Hoover Dam Bypass). Both the highway and ITS projects will facilitate passenger as well as freight movements, will improve rural as well as urban travel conditions, will accommodate local Corridor as well as through movements, and will serve domestic and international traffic. There is the need for more capacity, better connections and improved communications. The highway and ITS projects serve these needs.

A key characteristic of the CANAMEX Corridor is its multiplicity. It serves many different user groups. The proposed projects enhance mobility for freight as well as for passengers, for urban as well as rural travel. The proposed projects can also be implemented incrementally as small to medium size projects, instead of one megaproject. These characteristics enhance not only the fundability of projects, but also the general public acceptance, as more than just one user group benefits.

Every state faces its own transportation funding issues. Maximizing potential Federal funding sources is something to consider at this strategic planning stage. As projects develop, there may be opportunities for public/private partnerships or innovative financing techniques. At this stage in the process, the development of a detailed financing plan is not possible. However, a review of how proposed projects would be viewed from the Federal level is timely and appropriate.

TEA-21 FUNDING

The Transportation Equity Act for the 21st Century (TEA-21) builds on the previous Intermodal Surface Transportation Efficiency Act (ISTEA) initiatives. The highway and ITS projects that are part of the CANAMEX improvements are eligible for Federal funds under many programs. Major discretionary programs include the Sections of 1118 and 1119 National Corridor Planning and Development and Coordinated Infrastructure Program (Corridor and Border Program), the Section 5208 ITS Integration Program and Sections 5209 and 5203 (b)(6) ITS Commercial Vehicle Infrastructure Deployment Program. Summaries of these programs and recent awards can be found on the FHWA web site (<http://www.fhwa.dot.gov/discretionary>).

State Apportionments

Before reviewing the special programs applicable to proposed CANAMEX transportation improvements, an overview of general Federal apportionments to CANAMEX states is presented. It must be noted, however, that although states receive funds that could be used for CANAMEX projects, individual state laws and policies may be more restrictive and some funds may already be committed for many years based on statewide needs and planning processes. Eligibility only does not guarantee availability.

Table I-1 indicates the annual apportionments by CANAMEX state for Title I (Federal Aid Highways) programs. Federal Fiscal Year (FFY) 1998 to FFY 2000 are actual values, while FFY 2001 to FFY 2003 are estimates. The values are after programmatic distribution of minimum guarantee funds and are exclusive of the 2 percent for statewide planning and research. The source is FHWA, report HABF-30, dated December 1, 1999.

**Table I-1
Federal-Aid Highway Apportionments by State**

Federal Fiscal Year	Program	Apportionments (Dollars in thousands)				
		Arizona	Nevada	Utah	Idaho	Montana
1998 (actual)	Interstate Maintenance	\$75,775	\$32,607	\$49,571	\$31,779	\$46,302
	National Highway System	\$81,481	\$39,209	\$34,384	\$42,382	\$61,519
	Surface Transportation Program	\$89,777	\$36,876	\$41,591	\$35,580	\$38,780
	Congestion Mitigation and Air Quality Improvement	\$25,077	\$9,759	\$8,432	\$7,278	\$7,367
	Other	\$78,197	\$44,505	\$42,086	\$57,054	\$69,265
	Total Tile I	\$350,307	\$162,956	\$176,064	\$174,073	\$223,233
1999 (actual)	Interstate Maintenance	\$93,409	\$40,068	\$56,687	\$37,759	\$55,421
	National Highway System	\$99,542	\$46,206	\$40,210	\$49,913	\$75,520
	Surface Transportation Program	\$111,459	\$45,858	\$48,410	\$42,576	\$47,397
	Congestion Mitigation and Air Quality Improvement	\$31,445	\$11,312	\$9,753	\$8,384	\$8,830
	Other	\$93,529	\$46,914	\$50,615	\$64,809	\$73,595
	Total Tile I	\$429,384	\$190,358	\$205,675	\$203,441	\$260,763
2000 (actual)	Interstate Maintenance	\$103,547	\$42,709	\$62,223	\$41,801	\$61,053
	National Highway System	\$110,298	\$50,382	\$44,912	\$54,855	\$82,831
	Surface Transportation Program	\$121,541	\$45,589	\$53,359	\$46,251	\$51,483
	Congestion Mitigation and Air Quality Improvement	\$35,504	\$13,036	\$10,787	\$8,971	\$9,633
	Other	\$96,919	\$52,860	\$57,731	\$66,866	\$75,242
	Total Tile I	\$467,809	\$204,576	\$229,012	\$218,744	\$280,242
2001 (estimate)	Interstate Maintenance	\$99,966	\$41,212	\$60,087	\$40,213	\$58,910
	National Highway System	\$106,454	\$48,602	\$43,358	\$52,756	\$79,901
	Surface Transportation Program	\$117,289	\$46,866	\$51,506	\$44,474	\$49,655
	Congestion Mitigation and Air Quality Improvement	\$34,272	\$12,577	\$10,415	\$8,629	\$9,294
	Other	\$96,101	\$49,317	\$56,926	\$66,280	\$74,259
	Total Tile I	\$454,082	\$198,574	\$222,292	\$212,352	\$272,019
2002 (estimate)	Interstate Maintenance	\$101,963	\$42,020	\$61,148	\$40,933	\$60,143
	National Highway System	\$108,556	\$49,544	\$44,112	\$53,689	\$81,554
	Surface Transportation Program	\$119,591	\$47,769	\$52,396	\$45,256	\$50,677
	Congestion Mitigation and Air Quality Improvement	\$34,942	\$12,818	\$10,594	\$8,780	\$9,484
	Other	\$97,350	\$50,061	\$58,115	\$67,619	\$75,145
	Total Tile I	\$462,402	\$202,212	\$226,365	\$216,277	\$277,003
2003 (estimate)	Interstate Maintenance	\$90,827	\$41,262	\$62,752	\$39,884	\$59,308
	National Highway System	\$109,108	\$50,431	\$44,249	\$54,064	\$80,093
	Surface Transportation Program	\$119,547	\$47,167	\$53,218	\$45,136	\$50,209
	Congestion Mitigation and Air Quality Improvement	\$32,589	\$12,182	\$10,530	\$9,011	\$9,309
	Other	\$110,334	\$51,171	\$55,617	\$68,183	\$78,086
	Total Tile I	\$462,405	\$202,213	\$226,366	\$216,278	\$277,005

By FFY 2003, it is estimated that the CANAMEX states will receive on average an estimated \$277 million per year per state. The anticipated distribution ranges from a high of \$462 million for Arizona to a low of \$202 million for Nevada.

What the next reauthorization will bring is unknown, but trends show increased funding with each reauthorization. Therefore, current FFY 2003 estimates are referenced as an indication of what at least could be expected on an annual basis.

The National Highway System (NHS) is the primary funding source for corridor improvements. The CANAMEX states will receive on average \$67 million each by FFY 2003 from this program.

Corridor and Border Program

Of the \$36.7 billion authorized nationwide for transportation in FFY 2000, \$28.9 billion is in Title I, the highway capital program. Of the \$28.9 billion, the National Corridor Planning and Development and Coordinated Border Infrastructure Program (Corridor and Border Program) was authorized \$140 million. The same amount is authorized for FFY 2001 through 2003.

In FFY 1999 CANAMEX states received \$6.8 million from the Corridor and Border Program. In FFY 2000, \$4.4 million was awarded to projects in CANAMEX states. The amount awarded in FFY 2001 was \$3.6 million.

Project selection criteria listed in the Corridor and Border Program description include:

- 1. The extent to which the annual volume of commercial vehicle traffic at the border stations or ports of entry of each state: has increased since the date of enactment of the North American Free Trade Agreement (NAFTA); and is expected to increase in the future.*
- 2. The extent to which commercial vehicle traffic in each state has increased since the date of enactment of the NAFTA; and is projected to increase in the future.*
- 3. The extent to which international truck-borne commodities move through each state.*
- 4. The reduction in commercial and other travel time through a major international gateway or affected port of entry expected as a result of the proposed project including the level of traffic delays at at-grade highway crossings of major rail lines in trade corridors.*
- 5. The extent of leveraging of Federal funds provided under this subsection, including: use of innovative financing; combination with funding provided under other sections of the TEA-21 and Title 23 U.S.C.; and combination with other sources of Federal, state, local or private funding including state, local and private matching funds.*
- 6. The value of the cargo carried by commercial vehicle traffic; to the extent that the value of the cargo and congestion impose economic costs on the nation's economy.*

7. *Encourage or facilitate major multi-state or regional mobility and economic growth and development in areas underserved by existing highway infrastructure.*

Eligible projects under the Corridor Program include: *“feasibility studies; comprehensive corridor planning and design activities; location and routing studies; multi-state and intrastate coordination for corridors; and environmental review or construction after review by the Secretary of a development and management plan for the Corridor or useable section of the Corridor (hence called "Corridor Plan").”* Under the Border Program the following activities are eligible: *“improvements to existing transportation and supporting infrastructure that facilitate cross border vehicle and cargo movements; construction of highways and related safety and safety enforcement facilities that will facilitate vehicle and cargo movements related to international trade; operational improvements, including improvements relating to electronic data interchange and use of telecommunications, to expedite cross border vehicle and cargo movement; modifications to regulatory procedures to expedite cross border vehicle and cargo movements; international coordination of planning, programming, and border operation with Canada and Mexico relating to expediting cross border vehicle and cargo movements; and activities of Federal inspection agencies.”*

Intelligent Transportation Systems (ITS)

ITS projects are eligible under the National Highway Systems (NHS), Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ) provisions of TEA-21. It is suggested that for NHS eligibility purposes, ITS improvements be integrated with conventional roadway improvements or reconstruction, rather than developed as a “stand alone” project. This would be possible with the proposed CANAMEX Corridor highway improvements, especially those in urban areas. Like for NHS, STP ITS projects may either compete with “conventional” transportation improvements or be combined. It is suggested that this funding source be utilized for major routes in the area not in the NHS as well as for NHS routes.

Major funding sources for ITS projects are the Section 5208 ITS Integration Program and Sections 5209 and 5203 (b)(6) Commercial Vehicle ITS Infrastructure Deployment Program. The ITS program encompasses two basic areas of application:

- Standards, Research, Operational Tests, and Development; and
- ITS Deployment.

Over the TEA-21 period, \$603 million will be provided for the first category, with \$679 million provided for the second category. This is roughly \$100 million per year for research-oriented activities and \$113 million annually for ITS deployment. In addition, \$275 million in earmarked projects over six years has been allocated as part of “high-priority” programs.

The research-oriented funding will involve applications utilizing new technologies or standards. These include commercial vehicle and location referencing standards activities, as well as the implementation of the National Transportation Communications and ITS Protocol

(NTCIP), a family of center-to-roadside and center-to-center communications standards focusing mainly on traffic and incident management activities.

In general, ITS deployment funding is oriented toward central system components rather than ITS-related roadside infrastructure. The primary exception is for rural areas, where funding may also include system installation. Deployment incentives do not permit more than \$2 million for projects for a “single rural area” nor more than \$35 million per state. The program rules stipulate that nearly 10% of ITS deployment funding be allocated to rural areas.

Specific Commercial Vehicle ITS infrastructure deployment funds have been allocated for the Gary-Chicago-Milwaukee (GCM) Corridor in the Midwest and the I-95 Corridor (northeast US), totaling \$7 million annually. Another \$1.5 million annually is set aside for Hazardous Materials Monitoring Systems.

Funding Experiences of Other Multi-State Corridors

Other multi-state corridor studies have successfully transitioned into subsequent planning stages with Federal funds. Three examples are the I-35, I-5 and I-69 trade corridors. Both the I-35 and I-5 projects have received several grant awards in FFY 1999, 2000 and 2001 for road and interchange design, ITS project implementation and/or study, environmental studies and initial planning studies. While the I-69 corridor is focusing on highway projects, the other two corridors are pursuing a combination of ITS and highway improvements. Table I-2 summarizes the Federal Corridor and Border Program funding history of these corridors.

**Table I-2
Corridor and Border Program Funding for Selected Multi-State Corridors**

Information	I-35	I-5	I-69 (Corridor 18)
Corridor Description	Texas to Minnesota; considering highway, ITS and other strategies States involved include Texas, Oklahoma, Kansas, Missouri, Iowa and Minnesota	California to Washington States involved include California, Oregon and Washington,	Texas to Michigan; considering mostly highway strategies States involved include Michigan, Illinois, Indiana, Kentucky, Tennessee, Mississippi, Arkansas, Louisiana and Texas
FY 2001 Grants	I-35 corridor expansion, Waco, Texas (\$1.1 million)	preliminary engineering and design for realignment of I-5 and I-805 in San Diego (CA - \$2.0 million) environmental study, design and ROW acquisition along SR 905 Freeway to Otay Mesa POE (CA - \$4.1 million) I-5 South Medford	environmental and location studies for future I-69 (multi-state - \$5 million) I-69, Louisiana (\$2.0 million) I-69 corridor, Texas (\$2.6 million)

Information	I-35	I-5	I-69 (Corridor 18)
		interchange and Delta Park, Oregon (\$0.9 million)	
FY 2000 Grants	<p>reconstruction of I-35/I-80 in Polk County north of Des Moines city limit (\$1.5 million)</p> <p>study of ITS/CV infrastructure along I-35, I-29, I-80 and I-94 corridors from Texas to ND, MN and MI (\$0.6 million)</p>	<p>deploy and evaluate an ITS/CV technology system at the Otay Mesa Border Crossing (\$1 million)</p> <p>environmental study, design and ROW acquisition along SR905 in San Diego Metropolitan Area (\$7.5 million)</p>	<p>environmental location and related studies for future I-69 from Canada to lower Rio Grande Valley (\$8 million)</p> <p>environmental study related to proposed I-69 extension from Indianapolis to Evansville (\$0.6 million)</p> <p>construction of future I-69 from US 61 to SR 301 from Odom Road to I-55 in Desoto & Tunica Counties and related work (\$1.3 million)</p> <p>survey and design work along future I-69 in Dyer and Obion Counties from Dyersburg to just south of Kentucky State Line (\$2.0 million)</p> <p>environmental study for Corridor 18 from northeast Texas to lower Rio Grande Valley (\$13.1 million)</p>
FY 1999 Grants	<p>reconstruction/widening of I-35 from west of State Route 415 to east of US 69 (\$3 million)</p> <p>deployment planning for ITS improvements for I-35/I-29 corridor from Mexico to Canada (\$0.8 million)</p> <p>reconstruction and addition of two lanes to I-35 from the South Canada Bridge to US 77 (\$3 million)</p>	<p>environmental review, detailed design and right-of-way acquisition for State Route 905 (\$7.4 million)</p> <p>multimodal trade corridor study of the I-5 corridor between Portland and Vancouver and vicinity from I-84 in Oregon to I-205 in Washington (\$2 million)</p>	<p>environmental studies for I-69 (\$10 million)</p> <p>planning, routing and location studies for High Priority Corridor 18 (a.k.a. future I-69) in southwest Indiana and nearby Kentucky (\$0.4 million)</p>

Information	I-35	I-5	I-69 (Corridor 18)
	<p>construction of freeway overpasses and connectors in Laredo and FM 3464 from I-35 to the new border crossing (\$6.2 million)</p> <p>construction and upgrading to eight lanes of I-35 in Comal County from Walnut Avenue to FM 725 (\$1.7 million)</p>		

CANAMEX Funding Approach

Implicit in the Corridor and Border Program selection criteria is multi-national and multi-state cooperation. A coordinated approach, considering the other transportation needs of each CANAMEX state, needs to be taken to determine what program to pursue for funding of CANAMEX projects. Some general suggestions include:

- Incorporation of ITS improvements into conventional roadway improvements or reconstruction, rather than as stand alone projects;
- Coordination of regional metropolitan needs along the Corridor; and
- Joint development of ITS projects by CANAMEX states;

The Corridor and Border Program has provided much-needed front-end planning monies as well as money to fund implementation. With the next reauthorization imminent, CANAMEX states should be aware that it is unlikely that current funding levels of the Corridor and Border Program will be adequate as corridors that have received planning money now transition into more costly implementation. To improve the Federal funding outlook, CANAMEX states can:

- Lobby the American Association of State Highway and Transportation Officials (AASHTO) to support continued funding of the Corridor and Border Program; and
- Submit an engineering project for funding through TEA-21.

Many high profile projects such as I-69 and I-35 are further along in the planning/implementation process. CANAMEX states would be in a more favorable funding position if investment in the CANAMEX Corridor was more advanced. Once a commitment is made to start funding implementation, it is more likely that funding will continue. Therefore, CANAMEX states should identify a suitable project for which to request implementation funds.

In the coming years the ITS funding outlook is likely to place even more emphasis on construction projects. Money for planning is likely to stay at current levels, but interest at the federal level and increases in funding are expected to focus on construction. ITS funding is typically earmarked funds, so it is important for CANAMEX states to have their congressional

delegations actively support funding requests. Hence, it would be prudent for the CANAMEX states to seek funds for the system architecture as soon as possible so that emphasis during the next reauthorization would be on implementation.

A sizeable local state/local match also improves ITS fundability. The match can be hard cash or a supporting ITS project that is being implemented without Federal funds.

TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION ACT (TIFIA)

In addition to traditional Federal assistance, the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) provides Federal credit assistance to major transportation investments of critical national importance, including expansion of multi-state highway trade corridors. The TIFIA credit program is designed to fill market gaps and leverage substantial private co-investment by providing supplemental and subordinate capital. There are secured loans, loan guarantees and standby lines of credit. The amount of Federal credit assistance cannot exceed 33 percent of total project costs.

An eligible project must cost at least \$100 million or 50 percent of the state's annual apportionment of Federal-aid funds, whichever is less. The minimum for an ITS project is \$30 million. The project also must be supported in whole or in part from user charges or other non-Federal dedicated funding sources and be included in the state's transportation plan. Authorization levels range from \$90 million in FFY 2000 to \$120 million in FFY 2003.

STATE FUEL TAXES

Another way to improve the probability and maximize the amount of Federal funds received is to have a significant local share contribution (more than the 10 percent state and 10 percent local normally required). This may require an increase in state revenues, the primary source for which is the gasoline tax.

User fees such as fuel taxes, registration fees and tolls represent approximately three-fourths of the revenue for financing the operation and construction of highway facilities. Motor fuel taxes are the largest single category of user fees (approximately two-thirds). In most, if not all, states the motor fuel tax revenues represent the greatest revenue source.

Although inflation and improved fuel efficiency have eroded the effectiveness of the motor fuel tax, it remains one of the most common revenue sources. Some states apply a sales tax to motor fuels; some states also have local fuel taxes. The only CANAMEX state to have other than the state gasoline tax is Nevada. There are mandatory county fuel taxes as well as optional county fuel taxes. As of January 1, 2000, the state plus local gasoline tax in each of the five CANAMEX states, along with its ranking nationally, was:

State	State Tax (Cents per Gallon)	Local Tax	National Ranking With Local Included
Arizona	18¢		40
Nevada*	17.65¢	6.35¢ mandatory 4¢ - 9¢ optional	1**
Utah	24.5¢		15
Idaho	25¢		14
Montana	27.8¢		8

*In addition to state tax, Nevada has mandatory county as well as optional county tax. Excluded is 0.75¢ for petroleum discharge clean-up and 0.055¢ for gasoline inspection fees

**Ranked No. 1 when 9¢ optional local tax is included

In January 2000 the national average for the state plus local gasoline tax was 22.2¢. Except for Arizona, all the CANAMEX states have gasoline tax rates above the national average.

Nationwide, citizens are challenging the need for increased taxes. The same holds true for gasoline tax increases. A comparison of state gasoline tax rates between 1997 and 2000 indicates that 16 states changed their rates – 9 increased rates and 7 decreased rates.

The revenue from fuel taxes is used to finance a multitude of projects, so increases in gasoline taxes may be needed for even other than CANAMEX projects. Therefore, increases in fuel taxes will not be a panacea for CANAMEX funding needs.

FINANCING AND IMPLEMENTATION STRATEGIES

In addition to the traditional user fees, other financing and implementation strategies are available, including state infrastructure banks (SIBs) and grant anticipation revenue vehicles (GARVEEs). Since the vast majority of the highway projects proposed are interstate widening projects, value capture techniques or tolls are not likely to be appropriate financing techniques.

SIBs are entities authorized to use Federal and state/local funds to make loans and credit enhancements to support highway and transit projects through a revolving loan fund. This is not a revenue source, just a mechanism for closing gaps in financing plans. Arizona and Utah have SIB legislation.

GARVEEs are debt financing instruments permitting the pledge of future Federal funds to repay investors. A state may use future obligations of Federal-aid funds to reimburse the retirement of principal and payment of interest, issuance, insurance and associated other costs for the sale of an eligible debt financing instrument. The use of a GARVEE bond enables states to assemble up-front capital without pledging or impacting the state's creditworthiness.

SUMMARY

Even though the mechanisms for financing transportation improvements have increased and changed in the last decade, Federal funds remain a substantial component of transportation financing. As such, an essential approach to funding CANAMEX improvements is to maximize Federal funding opportunities.

The highway and ITS projects that are part of the CANAMEX improvements are eligible for Federal funds under many programs. A coordinated approach, considering the other

transportation needs of each CANAMEX state, needs to be taken to determine what program to pursue for funding of CANAMEX projects. Incorporating the ITS components into highway projects will also facilitate funding opportunities. Therefore, a fundamental approach to funding CANAMEX transportation improvements must be coordination of projects and funding requests, both within and between CANAMEX states.

Section II OTHER FUNDING SOURCES

This section presents a summary of funding opportunities and issues for CANAMEX activities related to the development of tourism products, alternative fuel vehicle incentive programs and strategies, and rural access projects and strategies.

TRANSPORTATION ENHANCEMENT ACTIVITIES

A major part of the CANAMEX Corridor Plan is to develop additional and improve upon existing tourism products offered along the Corridor and to package these tourism products, potentially as part of a western heritage theme. The TEA-21 program also provides for Transportation Enhancement (TE) activities as a sub-component of the Surface Transportation Program (STP), and could provide funds for several CANAMEX tourism development activities that require historic preservation. The focus of these activities is to improve the transportation experience in and through local communities. Examples of eligible activities include the following:

- Acquisition of scenic easements and scenic or historic sites;
- Scenic or historic highway programs (including the provision of tourist and welcome center facilities);
- Landscaping and other scenic beautification;
- Historic preservation;
- Rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals);
- Establishment of transportation museums.

Most projects funded through transportation enhancement (TE) funding contain a mix of elements, such as a rest area that includes a historic site purchased and developed as an interpretive site illustrating local history. Most states, with the exception of Montana, are allowed to use TE funds for up to 100 percent of the cost of individual projects without a corresponding match.

Selected examples of TE projects in the CANAMEX states include:

- Pioneer Memorial Backway Signage project in Salt Lake County, Utah that included five interpretive plaques and four new panels to improve signage on this historic highway.
- Old Douglas County H.S. Cultural and Transportation Information Center in Douglas, Nevada that included a facility that will offer the only rest stop and picnic area and tourist attraction for travelers on US Highway 395.

- Main Street Improvements in Billings, Montana that included new sidewalk installation to provide safe walking routes for commercial businesses

Examples of how TE funds have been used in other states include:

- In Greeneville, Tennessee, Federal TE funds were used to restore four historic railroad hotels and assisted with the overall revitalization of Greeneville’s historic Main Street;
- TE funds were used in Douglas, Georgia, to improve the streetscapes in the Douglas Downtown Historic District, including landscaping, installation of street furniture and pedestrian-scaled lighting that complemented the historic character of downtown, and the development of “pedestrian courts” on the corners of each block and at midblock locations.
- In Lawrence, Kansas, TE funds helped to complete the final phase of the interior renovation and exterior restoration of the Union Pacific Depot, an historic building. This project included a complete conversion of the building for public meeting space and a Visitor Information Center for the City of Lawrence.
- Mandan, North Dakota used TE funds to repair and restore the interior and exterior of the historic railroad building. The project converted the building to use as a Native American arts center, serving as a small-business incubator and shopping area featuring Native American artists and craftspeople.
- A consortium of six Virginia counties and the City of Petersburg, known as “Virginia’s Retreat,” utilized TE funds to create 20 pull-off sites along a 110-mile driving tour of Civil War history that follows the route of the Confederate Army’s retreat from defeat at Petersburg to Appomattox, Virginia (which ended the Civil War). The development of this driving tour allows visitors to and residents of Southern Virginia to learn more about the history of the area. At each of the stops, motorists can tune their car radios to a certain station to hear short descriptions of what happened at each site.

TRANSPORTATION AND COMMUNITY AND SYSTEM PRESERVATION (TCSP) PROGRAM

TCSP is a comprehensive initiative with funding to states, local governments and metropolitan planning organizations for discretionary grants to plan and implement strategies that:

- improve the efficiency of the transportation system;
- reduce environmental impacts of transportation
- reduce the need for costly future public infrastructure investments;
- ensure efficient access to jobs, services, and centers of trade; and
- examine private sector development patterns and investments that support these goals.

A total of \$120 million is authorized for FY’s 1999-2003. Example of TCSP projects in the CANAMEX states include:

- Regional Growing Smarter Implementation Plan in Arizona;
- Highway 41/Rathdrum Prairie Land Use Integration Study/Master Plan in Idaho;
- Statewide Rail Grade Separation Study and Environmental Review in Montana; and
- Utah-Colorado “Isolated Empire” Rail Connector Study in Utah.

Some projects receive earmarked funds, but many go through a highly competitive process. Community planning and economic development projects along the Corridor could be eligible for TCSP funds.

ALTERNATIVE FUEL FUNDING SOURCES

One of the major challenges in implementing any alternative fuel vehicle program along the CANAMEX Corridor will be the development of fueling infrastructure and coordination of efforts. While most CANAMEX states have alternative fuel vehicle programs, the regulations and eligible fuel types differ from state to state. Furthermore, there are significant challenges to the development of alternative fuel vehicle fueling stations, the most significant of which is matching development with demand. From the customer’s perspective, fueling infrastructure must exist before alternative fuel vehicle purchases are made. From the retailer’s perspective, fueling infrastructure cannot be installed without some anticipation of near-term sales adequate enough to provide reasonable return on investment. The relatively high cost of fueling station design, purchase, installation, and maintenance only serves to compound this problem. A number of these costs might be reduced through experience and economies of scale resulting from increased demand for new stations. Furthermore, as fueling infrastructure technology improves, the cost of development is likely to be lowered.

However, an important priority for the CANAMEX Corridor states should be to coordinate alternative fuel vehicle efforts, particularly in the determination of which alternative fuels will be promoted throughout the states and particularly throughout the CANAMEX Corridor. Promoting similar alternative fuel types can assist in with the removal of economy of scale barriers for the development of fueling infrastructure.

There are Federal incentive programs for both the purchase or conversion of individual alternative fuel vehicles (AFVs) as well as for large infrastructure investments. The lead Federal agencies for AFV programs are the U.S. Department of Treasury (through the Internal Revenue Service), the U.S. Department of Energy (DOE), the U.S. Department of Transportation (DOT) and the U.S. Environmental Protection Agency (EPA). The CANAMEX Corridor Coalition should consider coordinating efforts to educate the transportation industry about Federal incentive programs and can utilize Federal resources to fund specific alternative fuel vehicle projects.

U.S. Internal Revenue Service (IRS)

The IRS offers a Federal tax deduction for clean fuel vehicles and certain refueling properties. A tax deduction for the purchase of a new original equipment manufacturer (OEM)

qualified clean fuel vehicle, or for the conversion of a vehicle to use a clean-burning fuel, is provided under the Energy Policy Act of 1992. The amount of tax deductions for qualified clean fuel vehicles is based on the gross vehicle weight (GVW) and types of vehicles as follows:

- \$5,000 deduction for a truck or van with a GVW of 10,000-26,000 pounds;
- \$50,000 deduction for a truck or van with a GVW of more than 26,000 pounds;
- \$50,000 deduction for buses with a seating capacity of 20 or more adults; and
- \$2,000 deduction for all other vehicles, excluding off-road vehicles.

These tax deductions are available for business or personal vehicles. In addition, a tax deduction of up to \$100,000 per location is available for a qualified clean fuel refueling property.

U.S. Department of Energy

The U.S. DOE manages several programs related to alternative fuel vehicles. The following list summarizes these programs:

- In 1992, Congress passed the Energy Policy Act of 1992 (EPAAct) to accelerate the use of alternative fuels in the transportation sector. The EPAAct mandates Federal, state, and alternative fuel provider fleets to purchase alternative fuel vehicles.
- The Clean Cities Program coordinates voluntary efforts between locally based government and industry to accelerate the use of alternative fuels and to expand alternative fuel vehicle infrastructure.
- Congress created the State and Alternative Fuel Provider Fleets AFV Credits Program to encourage fleets or covered fleet operators to use AFVs early and aggressively. Credits are allocated to state fleet operators and covered Alternative Fuel Provider fleet operators when AFVs are acquired over and above the amount required, or earlier than expected.
- The State Energy Program is a funding vehicle for states to promote the conservation of energy, reduce the rate of energy demand, and reduce dependence on imported oil through the development and implementation of a comprehensive State Energy Program. This program is the result of a consolidation of two formula grant programs – the State Energy Conservation Program and the Institutional Conservation Program and includes provisions for competitively awarded financial assistance for a number of state-oriented special project activities including alternative fuels.
- Through the Urban Consortium Energy Task Force, the DOE has funded approximately 300 projects that demonstrate innovative energy technologies and management tools in cities and counties. Each year the task force requests proposals from urban jurisdictions including cities, counties, and recognized tribal governments. The focus is on funding projects that best define and demonstrate innovative and realistic technologies,

strategies, and methods that can facilitate urban America's efforts to become more energy efficient and environmentally responsible.

- Petroleum Violation Escrow (PVE) Account Oil overcharge funds became available as a result of oil company violations of the Federal oil pricing controls that were in place from 1973 through 1981. Several companies paid fines or funds settlements that have been made available to the states for use in energy efficiency programs. These funds may be used in one or more of three Federal energy-related grant programs, including the State Energy Program.

U.S. Department of Transportation

As described in Section I, the Transportation Equity Act for the 21st century (TEA-21) was recently enacted, and includes the Congestion Mitigation and Air Quality (CMAQ) Improvement Program. The primary purpose of the CMAQ program is to fund projects and programs in non-attainment and maintenance areas that reduce transportation-related emissions. While funding is not specifically designated for AFVs, funds provided through Section 3 (Discretionary and Formula Capital Program) this program may be used to purchase alternative fuel buses.

U.S. Environmental Protection Agency (EPA)

The Clean Air Act Amendments of 1990 (CAAA) created several initiatives to reinforce the reduction of mobile source pollutants. CAAA sets emissions standards for stationary and mobile sources. The CAAA establishes targets, standards, and procedures for reducing human and environmental exposure to a range of pollutants generated by industry and transportation.

The EPA also manages several other programs which could potentially be used for funding alternative fuel vehicle efforts as part of the CANAMEX Corridor Plan:

- The Clean Fuel Fleet Program (CFFP) is an initiative implemented by the EPA in response to the CAAA. The CFFP requires fleets in cities with significant air quality problems to incorporate vehicles that will meet clean fuel emissions standards.
- The Air Pollution Control Program, otherwise known as Section 105 grants, assists state and municipal agencies in planning, developing, establishing, improving, and maintaining adequate programs for prevention and control of air pollution or implementation of national air quality standards. States and municipalities may receive up to 60 percent of Federal funds to implement their plans.
- The Pollution Prevention Grants Program supports the establishment and expansion of state pollution prevention programs and addresses various sectors of concern, including transportation. Funds available under this grant program are awarded to support innovative pollution prevention programs that address the transfer of potentially harmful pollutants across all media – air, land, and water. State agencies are required to contribute at least 50 percent of the total cost of their projects.

Sample Projects

There have been many projects funded through these various funding sources. A few examples from the State Energy Program are provided below:

- The State of Colorado used DOE funding to construct and operate a propane fueling station network along the Front Range that included 25 new fueling locations. In addition to the new fueling stations, the network developed a comprehensive propane education program that targeted potential and actual purchasers of propane vehicles.
- In addition to the propane fueling station network, the State of Colorado utilized DOE funds to construct 30 ethanol refueling sites throughout the Front Range. In conjunction with construction of the refueling infrastructure, a comprehensive public outreach and educational effort was developed encourage fleets and the general public to use the E85 alternative fuel vehicles, and particularly, to use E85 as a form of alternative transportation fuel.
- Also in Colorado, the DOE funded the deployment of ten natural gas school buses in the Boulder Valley School District, University of Colorado and Denver Public Schools.
- In California, DOE funds were used to help support a project in sponsored by The Vons Companies, Inc. to develop a liquefied natural gas (LNG) station in Santa Fe Springs, California, a member of the Long Beach Clean Cities Program. The LNG fueling facility is part of the Interstate Clean Transportation Corridor, the nation's first economically sustainable alternative fuel corridor. Funds were also granted from the Mobile Source Air Pollution Reduction Review Committee (MSRC) for station development.
- In Oklahoma, DOE funds were used as part of the Will Rogers World Airport's five-year plan to convert a total of 20 light-duty, gasoline-powered, administrative and utility vehicles to compressed natural gas. The project provided for the first phase of this plan, which included the purchase and conversion of 12 new vehicles. The total project constitutes a 100% alternative fuel conversion of Will Rogers World Airport facility fleet vehicles.

RURAL ACCESS AND DIGITAL DIVIDE FUNDING

Several Federal government agencies have been involved in issues related to the digital divide between urban and rural areas of the United States. The major agencies with funding available for local and statewide projects include the Department of Commerce, the Department of Agriculture, the Department of Education (primarily for school connectivity), the Department of Health and Human Services, and the Department of Justice (primarily addresses safety issues). While there are many grant programs available, there are very few, if any, programs available to fund the infrastructure required for rural access. However, states may be able to utilize existing programs, legislation, and public policy to provide incentives to the private sector for developing the infrastructure required to provide better telecommunications access to rural areas. The major programs that fund projects addressing the digital divide are described in the section below.

Department of Commerce Technology Opportunities Program

The Department of Commerce's Technology Opportunities Program (TOP) promotes the widespread availability and use of advanced telecommunications technologies in the public and non-profit sectors. As part of the Department's National Telecommunications and Information Administration (NTIA), TOP gives grants for model projects demonstrating innovative uses of network technology. TOP evaluates and actively shares the lessons learned from these projects to ensure that benefits are broadly distributed across the country, especially in rural and underserved communities. Since 1994, TOP has made matching grants to state, local and tribal governments, health care providers, schools, libraries, police departments, and community-based non-profit organizations.

TOP projects demonstrate how networks support lifelong learning for all Americans, help public safety officials protect the public, assist in the delivery of health care and public health services, and foster communication, resource-sharing, and economic development within rural and urban communities. To date, TOP has awarded 456 grants, in all 50 states, the District of Columbia, and the U.S. Virgin Islands, totaling \$149.7 million and leveraging \$221 million in local matching funds. TOP projects are nationally significant demonstrations of how telecommunications and information technologies can be used to extend and improve the delivery of valuable services and opportunities to all Americans, especially the underserved. By serving as models that can be replicated in similar communities across the country, TOP projects extend their benefits far beyond the communities in which they take place, and provide economic and social benefits to the nation as a whole.

NTIA supports innovative and exemplary projects that can serve as models for using information infrastructure in the public and non-profit sectors and thereby contribute to the development of an advanced, nationwide network that will ultimately offer broadband communication services to all. The focus of TOP-supported projects is generally on reaching out to all members of a community and catalyzing partnerships to help reduce the digital divide. Because important networking efforts may also occur outside of the United States, TOP projects may benefit from linkages to international efforts. The four categories of eligible activities are as follows:

- **Community Networking and Services** - Projects in this area provide innovative approaches to strengthen communities, deliver services to people in need, and address the needs of special communities, such as seniors or individuals with disabilities. Community Networking and Services focuses on an array of projects that enable a broad range of community residents and organizations to communicate and share information; to improve the delivery of vital social and administrative services to individuals with a range of needs; to enhance economic and community development through the coordination, delivery, and redefinition of vital services; and to participate in civic activities. Examples of Community Networking and Services projects include community information systems that allow end users to draw upon an expanding variety of information resources and customize the output to meet specific goals; online mechanisms for social services delivery that allow multiple stakeholder organizations to link services, where appropriate, and thereby reduce overall administrative burdens on themselves and their clients; innovative access models that create mechanisms for

reaching out to populations whose access to information tools may have been limited, or prevented, by geographic barriers, economic distress, linguistic or acculturation problems, age, or simple distance; economic development models that use information technologies to promote self-sufficiency among individuals and families and or employ emerging technologies to capture and share demographic and/or environmental information to allow community groups and individuals to devise creative strategies for economic revitalization.

- Lifelong Learning and the Arts - Projects in this area seek to improve education and training for learners of all ages and provide cultural enrichment through the use of information infrastructure in both traditional and non-traditional settings. Projects usually use network-based technology to deliver training and instruction to lifelong learners in non-traditional settings such as homes, community centers, and workplaces. Examples of projects include those that explore creative partnerships among schools, libraries, museums, colleges, or universities to deliver network-based learning resources; projects linking workplaces and job-training sites to educational institutions; projects that enrich communities by delivering on-line informational, educational, and cultural services from public libraries, museums, and other cultural centers; and projects that allow users to collaborate in the creation of cultural works or participate actively in meaningful on-line learning exchanges.
- Health - Projects in this area involve the use of information infrastructure in the delivery of health care and public health services. Examples of Health projects include systems that improve the social and medical models of care to consumers in their place of residence; telemedicine systems that offer integrated approaches to extending and integrating medical and dental expertise to rural or underserved urban areas or non-traditional settings; projects designed to improve communication, collaboration and knowledge among and between health care providers and patients to empower consumers to participate jointly in their health care; projects to improve access and timeliness of care for those in emergency situations and explore various methods to extend services beyond the emergency room; projects that integrate technology to assess community needs and develop innovative health technology models of care delivery across the care continuum; projects that integrate triage mechanisms into improving care delivery for the uninsured, under insured, and low income populations; and networks or information services aimed at disease prevention and health promotion.
- Public Safety - Projects in this area seek to increase the effectiveness of law enforcement agencies, the court system, emergency, rescue, and fire departments, or other entities involved in providing safety services that respond to, prevent, or intervene in crises. Examples of Public Safety projects include projects that facilitate information exchange among public safety agencies located in single or multiple geographic areas to increase efficiency and share resources, including spectrum resources; projects that provide information in a timely manner to "first-response officials" and assist agencies in on-the-spot situation analysis; projects that advance the capabilities of public safety agencies to identify individuals involved in incidents; applications that reduce risks to responding units and the public; projects that help public safety agencies provide community outreach services; and projects that aim to increase the safety and security of children and reduce domestic violence.

Other Government Programs

There are also many Federal agencies who provide funding for telecommunications or technology ventures targeted towards specific areas such as education, healthcare, or public safety. The following provides examples of programs that could be relevant to CANAMEX projects:

- The U.S. Department of Education manages several technology-related programs, including an education technology program, a community technology center program, and the Star Schools Program. The Community Technology Center promotes programs that demonstrate the educational value of technology in urban, rural and economically distressed communities. The Star Schools Program supports telecommunication partnerships to provide telecommunication equipment and programming to underprivileged students, including those living in rural and urban areas.
- The Federal Communications Commission manages the Education Rate (E-Rate) program, which provides for schools and public libraries to be eligible for Universal Service support, or discounts for a wide range of telecommunications services. These services include Internet access and connections, basic installation of networks necessary to bring information to the school, the library, and classrooms.
- The National Institute of Health provides Information Access Grants for small and medium size health institutions and consortia in remote rural areas where outlying institutions can network with a larger site. The program provides funding for computer and communications equipment purchases.
- The Department of Agriculture manages several digital divide efforts including Rural Utilities Service (RUS), Distance Learning and Telemedicine, USDA computer donations, research on rural telecommunications, and a rural task force.
- The Department of Commerce, in addition to the TOP program, also provides economic development funds through the Economic Development Agency which might be appropriate for certain CANAMEX projects.
- The U.S. Department of Justice funds some telecommunications efforts through its Cybercrime program.

OTHER FUNDING SOURCES

Multi-National Funding Sources

Based on a review multi-national funding sources and their priorities, the only multi-national funding source that is applicable to the CANAMEX Corridor appears to be the North American Development Bank (NADB).

The NADB was created under the auspices of the North American Free Trade Agreement (NAFTA). It is an international financial institution established and capitalized in equal parts by the United States and Mexico for the purpose of financing environmental infrastructure projects. The NADB's mission is to serve as a binational partner and catalyst in communities along the U.S.-Mexico border in order to enhance the affordability, financing, long-term development and effective operation of infrastructure that promotes a clean, healthy

environment for the citizens of the region. All NADB-financed environmental projects must be certified by the Border Environment Cooperation Commission (BECC) and must be related to potable water supply, wastewater treatment or municipal solid waste management and be located within the border region, which is defined as the area within 100 kilometers (approximately 62 miles) north and south of the boundary between the United States and Mexico. Within the CANAMEX Corridor, such projects in the Nogales to Sahuarita stretch of I-19 would be eligible for NADB loans.

Public-Private Partnerships

There is a potential for public-private investment partnerships for tourism-based ITS technology. ITS technology, including rest stop kiosks and/or in-vehicle systems, can be used to present an integrated mix of public and private sector information along the CANAMEX Corridor, including national park information, road closures, nearby hotels with vacancies, and nearby restaurants. Private sector companies would potentially cover a portion or the entirety of the cost of installing and maintaining these systems in exchange for the privilege of posting information on the system, which can be considered a form of advertisement.