

MAJOR INFRASTRUCTURE PROJECTS IN MEXICO

A Resource Guide for U.S. Industry



Sponsored by the U.S. Trade and Development Agency



About This Report

This report has been developed to provide potential U.S. exporters with an overview of México's infrastructure sectors, the sector development plans in place through 2018, and to provide profiles of a sample of specific upcoming projects of potential interest.

This document represents just one section of a larger report developed and published by the U.S. Trade Development Agency. The full text is housed online in the U.S. Commercial Services' Market Research Library and can be accessed by visiting http://buyusainfo.net/docs/x_8012471.pdf. Please note that this document is an interim product. Further elaboration of transportation and telecommunications projects will be provided in the final version to be published later in 2014. This will include additional sections describing project opportunities in the energy and water sectors.

For More Information on These Opportunities

To learn more about the opportunities described in this report, locate the U.S. Export Assistance Center nearest you by visiting <http://www.export.gov/eac> and contact your local U.S. Commercial Service Trade Specialist for more information.

The U.S. Trade and Development Agency

The U.S. Trade and Development Agency (USTDA) helps companies create U.S. jobs through the export of U.S. goods and services for priority development projects in emerging economies. USTDA links U.S. businesses to export opportunities by funding project planning activities, pilot projects and reverse trade missions while creating sustainable infrastructure and economic growth in partner countries.

The U.S. Commercial Service — Your Global Business Partner

With its network of offices across the United States and in more than 80 countries, the U.S. Commercial Service of the U.S. Department of Commerce utilizes its global presence and international marketing expertise to help U.S. companies sell their products and services worldwide.

Authors

This report is being developed under contract to USTDA by the Seneca Group LLC, based in Washington, DC. Inquiries may be directed by telephone to +1 (202) 783-5861 or info@seneca-llc.com. Visit our website at: www.seneca-llc.com

Transportation – Mass Transit and ITS

The Secretaría de Comunicaciones y Transportes (SCT) is México's federal agency responsible for the country's transportation and communication systems. The SCT's mission is to develop and advance policies and programs in the transportation and communication sectors that contribute to the sustainable economic growth and social development needs of México. The SCT achieves this mission through area-specific administrative bodies. These administrative bodies are responsible for a given mode or group of modes of transportation, generally, and transportation statistics, information, and planning, specifically. These SCT units are covered in more detail in the background sections for each specific transportation mode.

Under the new administration the SCT has made it their priority to provide transport infrastructure that makes the movement of products, services, and people easier, in a fast, efficient, and low cost manner. Gerardo Ruiz Esparza was appointed by President Enrique Peña Nieto to serve as the Secretary of Transportation in 2012. The SCT was allocated \$107 billion (MXN) of México's 2014 budget, 50% higher than the previous year's allocation to the agency. SCT funding accounts for 12.3% of the total projects to be carried out in 2015.

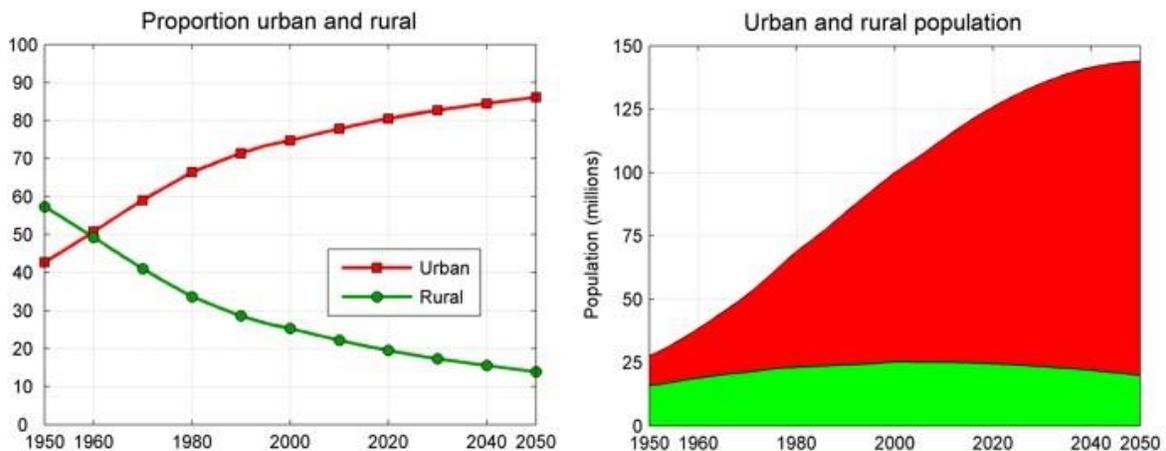
The administration's \$590 billion (USD) 2014 – 2018 National Infrastructure Program (PNI in Spanish) encompasses a wide variety of projects aimed at the development of an enhanced national network of roads, ports, airports, railways and telecommunications services and infrastructure. Many of the investments identified in the PNI will be funded from an array of sources including federal resources from the Fondo Nacional de Infraestructura (FONADIN, México's National Infrastructure Fund), the Banco Nacional de Obras y Servicios Públicos (BANOBRAS, the National Works and Public Services Bank), state and municipal sources, user fees, and Public Private Partnerships (PPPs). Multilateral institutions including the World Bank Group, the North American Development Bank (NADB), and the Inter-American Development Bank (IADB) continue to be active partners supporting development of transportation infrastructure in México through a range of financing instruments and technical assistance.

Sector Background

México's urban environments face critical transportation challenges.

- Rapid, continuing urbanization. México's urban population is over 78% and urbanization continues at a 1.2% rate. México City by itself is the tenth largest urban area by population in the world.
- A high and rising motorization rate. Motorization is increasing in Mexican cities at rapid 10% per annum pace.
- Disproportionate public funding patterns that favor automobile transportation (65% of funding in 2012) over more sustainable mass transit and non-motorized modes.
- Low density sprawling development patterns leading to long transit times.

- Inefficiently allocated land and street space, discouraging public transport.
- An urban transport environment dominated by small private operators and aging, limited capacity vehicles.
- Inadequate fuel specifications contributing to inefficiency and pollution. México's transport sector is highly carbon-intensive, accounting for 18% of greenhouse gas emissions generally, with concentrations as high as over 40% in cities.
- Rising public impacts including accidents, road maintenance costs, congestion, and noise pollution.
- A particular burden is imposed on poorer segments of society who face increasing transit times and high costs associated with urban transport.



United Nations Projections for Urban Population Growth in México through 2050

At the federal level, the **Secretariat of Social Development (SEDESOL)** is responsible for formulating the federal policies on urban development and transport. The **Secretariat of Communications and Transport (SCT)** is responsible for the development and maintenance of the federal railroad and highway network, sections of which often enter and traverse urbanizations. For many cities, the responsibility for transport matters such as short and medium range land use and planning is divided among agencies at the state and municipal level, or between different departments within individual agencies or even between different municipalities within the same metropolitan area. In order to increase coordination of mass transit policy at the federal level, the government has created a new **Secretariat of Agricultural, Territorial and Urban Development (SEDATU)**. SEDATU will serve to coordinate the support of other Secretariats, including SCT and SEMARNAT in the area of sustainable urban development.

The strategic objectives for the urban transport sector established in the SCT's official Program through 2018 include:

- Reduction of urban transport costs in terms of operating costs, tariffs, and lost time for users.

- Improved intermodal connections and promote integration of passenger transportation between modes.
- Reduce accidents within public transport systems, and by modal shift away from personal automobiles.
- Encouraging more rational use of personal automobiles.
- Promote the financing and development of mass transit systems including BRT, articulated buses, light rail, non-motorized transport, and metros.
- Reduce fuel consumption and generation of greenhouse gases (GHGs).
- Promote urban transport accessibility for the elderly, handicapped and parents with children.
- Promote accessibility to low cost, efficient transport for poorer populations.
- Promote the implementation of intelligent transportation systems.
- Promote the implementation of security and surveillance systems in public transport with a particular focus on the safety of women and children.

México's government has responded to the challenges faced with a multi-pronged approach to rationally develop and improve urban mass transit systems across the country. México created the **National Mass Transit Program (PROTRAM)** in 2009 within FONADIN to improve the efficiency of the sector and steer it towards a lower-carbon development path. PROTRAM offers grants to sub-national governments to cover up to 100% of studies and 50% of infrastructure costs for public transport projects that meet certain criteria. This is the first program in México that provides federal funding for urban public transit. All mass transit projects supported by PROTRAM have climate change considerations and have emission baselines. **The Center for Sustainable Transport México (CTS-México)** serves as the government's main advisor to PROTRAM. It has reviewed the technical and financial feasibility of 21 public transportation projects across the country and improved the quality of eight project designs in Guadalajara, México City, Chihuahua, Mexicali, Tijuana, Culiacan, Monterrey and Veracruz. By providing project evaluation guidelines and assistance, CTS- México not only improves individual project proposals, but also strengthens PROTRAM's institutional capacity to provide funds effectively in the future. Since PROTRAM only funds mass transit projects with private sector participation, the Mexican government has also requested support in its creation of a National **Urban Transport Transformation Program (UTTP)**, to complement PROTRAM. UTTP emphasizes complementary measures including support for non- motorized transport, such as bicycle and pedestrian projects. Together FONADIN's PROTRAM and UTTP are the core of the government strategy to transform México's urban transport to a lower carbon growth course.

The major components of this development and financing strategy include:

1. Urban Institutional Capacity Building
2. Development of Integrated Urban Mass Transit Systems
3. Project Management

The bulk of the original scope of \$2.6 billion in funding for these program activities was identified through FONADIN (28%), local government contributions (27%), and private participation (31%). The World Bank Group is providing the balance of 13% of funding. BANOBRAS serves as the coordinating institution for these activities and investments, performing the roles of procurement and financial management oversight, credit monitoring, and project evaluation.

México's quantified goal for mass transit development is to increase the number of major cities with dedicated mass transit systems from 22% to 47%. The following 34 cities are the urbanizations being measured, each with populations that presently exceed 500,000, or will by the year 2018.

- Valle de México
- Guadalajara
- Monterrey
- Puebla-Tlaxcala
- Toluca
- Tijuana
- León
- Juárez
- La Laguna
- Querétaro
- San Luis Potosí
- Mérida
- Mexicali
- Aguascalientes
- Cuernavaca
- Acapulco
- Tampico
- Chihuahua
- Morelia
- Saltillo
- Veracruz
- Villahermosa
- Reynosa – Río Bravo
- Tuxtla Gutiérrez
- Cancún
- Xalapa
- Oaxaca
- Celaya
- Poza Rica
- Pachuca
- Puerto Vallarta
- Tepic
- Tlaxcala-Apizaco
- Matamoros

The PNI released in 2014 identifies over \$3 billion in total investment in specific mass transit projects or programs, while total investment projected for urban mass transit projects underway and in the pipeline is estimated at over \$6 billion by BANOBRAS, including the Toluca Passenger Train project. The mass transit projects included in the PNI are:

- **Expansion of the urban light rail system in Guadalajara (CG-004):** This project will expand one existing light rail line and construct a completely new third line. The total investment is projected at \$1.35 billion.
- **Establish a mass transit system in the eastern part of the state of México (CG-133):** This project extend line A of the Sistema de Transporte Colectivo (STC) from La Paz to Chalco de Diaz Covarrubias. With a projected total investment of \$839 million, this project will be carried out from 2015 to 2017.
- **Expansion of the Metrorrey Rail System and Ecovía BRT (CG-033):** This project involve construction of a new Line 3, and expansion of Line 4, of the Metrorrey rail system. The

Ecovía Project will implement a 30.1 kilometer BRT system with 39 stations, running between Lincoln in the northwest of the city and Valle Soleado east of the center city. The fleet of 80 initial buses will feature low-emissions engines, air conditioning, modern passenger information systems and farecards, and Wi-Fi. The total investment is projected at \$434 million.

- **Modernize the urban public transport in the Lagunera region (CG-116):** This project primarily involves development of a new 32.5 kilometer BRT corridor that will run from Lerdo, in the state of Durango, to Matamoros, in the state of Coahuila. The total investment is expected to be \$171 million.
- **Establishment of a BRT system in Tijuana (CG-123):** This new BRT system will cover a 25 kilometer main corridor and serve 34 stations with strong integration through station connectivity to 32 feeder routes. With an estimated investment of \$151 million, this project is to be carried out between 2015 and 2016.
- **Construction of a mass transit system in Merida (CG-238):** This project is expected to create total investment of \$137 million.
- **Modernization of the Atacomulco Bus Terminal (CG-174):** This project, located in the northwest of the state of México, will have a total projected investment of \$5.3 million.

As of this writing mass transit projects in execution included:

Project	State	PNI	CG	Total Investment (Rounded to Millions)
Metrorrey Line 3	Nuevo Leon	Yes	CG-033	\$
Expansion of Line 1 SITEUR Guadalajara	Jalisco	Yes	CG-004	103,000,000
BRT Monterrey ECOVIA 1	Nuevo Leon	Yes	CG-033	131,000,000
BRT Tijuana	Baja California	Yes	CG-123	136,000,000
BRT Chihuahua 1: North - South	Chihuahua			68,000,000
BRT Mexicali Express Line 1	Baja California			54,000,000
BRT Puebla 1: Chachapa - Tlaxcala	Puebla			112,000,000
BRT Acapulco - Cd. Renacimiento	Guerrero			142,000,000
BRT Chimalhuacán- Pantitlán	State of México			147,000,000
BRT Puebla 2 Norte-Sur (2 BRTS)	Puebla			155,000,000
BRT Pachuca Centro Téllez	Hidalgo			65,000,000
BRT Ecatepec Indios Verdes	State of México			154,000,000
TOTAL				\$ 1,641,000,000

BANOBRAS - PROTRAM Mass Transit Projects in Execution

The following 12 mass transit projects in preparation are identified by BANOBRAS:

Project	State	PNI	CG	Total Investment (Rounded to Millions)
---------	-------	-----	----	--

BRT ZM de la Laguna	Coahuila-Durango	Yes	CG-116	\$
BRT Mérida	Yucatan	Yes	CG-238	249,000,000
BRT Zacatecas	Zacatecas			95,000,000
BRT Oaxaca Primary Corridor	Oaxaca			83,000,000
BRT León Optibús Third Phase	Guanajuato			60,000,000
BRT Durango	Durango			87,000,000
BRT San Luis Potosí	San Luis Potosi			34,000,000
BRT Aguascalientes	Aguascalientes			137,000,000
Tren Chalco-La Paz (Metro)	State of México	Yes	CG-133	648,000,000
Línea 3 de Tren SITEUR Guadalajara	Jalisco	Yes	CG-004	1,350,000,000
Tren México-Toluca	State of México			2,943,000,000
Suburbano 1 Expansion to Huehuetoca	State of México			457,000,000
TOTAL				\$ 6,308,000,000

BANOBRAS - PROTRAM Mass Transit Projects in Pipeline

Project Contacts and Information

For more information on project opportunities in the roads and highways sector please locate the U.S. Export Assistance Center nearest you by visiting <http://www.export.gov/eac> and contact your local U.S. Commercial Service Trade Specialist.

You may also reach out to:

Project Sponsor	U.S. Trade & Development	U.S. Commercial Service
Sr. C.P. Pablo Suarez Coello Director General Secretariat for Communications and Transportation General Directorate for Multimodal and Rail Transportation Tel. +52 (55) 5011-6476 pablo.suarez@sct.gob.mx	Mr. Keith Eischeid Country Manager for México and Central America Tel. +1-703-875-4357 KEischeid@ustda.gov	Please locate the U.S. Export Assistance Center nearest you http://www.export.gov/eac and contact your local U.S. Commercial Service Trade Specialist for more information.

Expansion of the Guadalajara Light Rail System

	Project Type	Mass Transit (Light Rail)
	State(s):	Jalisco
	Projected	\$1.3 billion
	Timeline:	2014 - 2018
	Project Sponsor(s):	SCT

Project Background and Scope

Guadalajara is the second most populous city in México with over 1.5 million inhabitants in the city proper. The Guadalajara Metropolitan Area includes the municipalities of Zapopan, Tlaquepaque, Tonolá, El Salto and Tlajomulco de Zuñiga, with a total population of over 4.2 million persons.

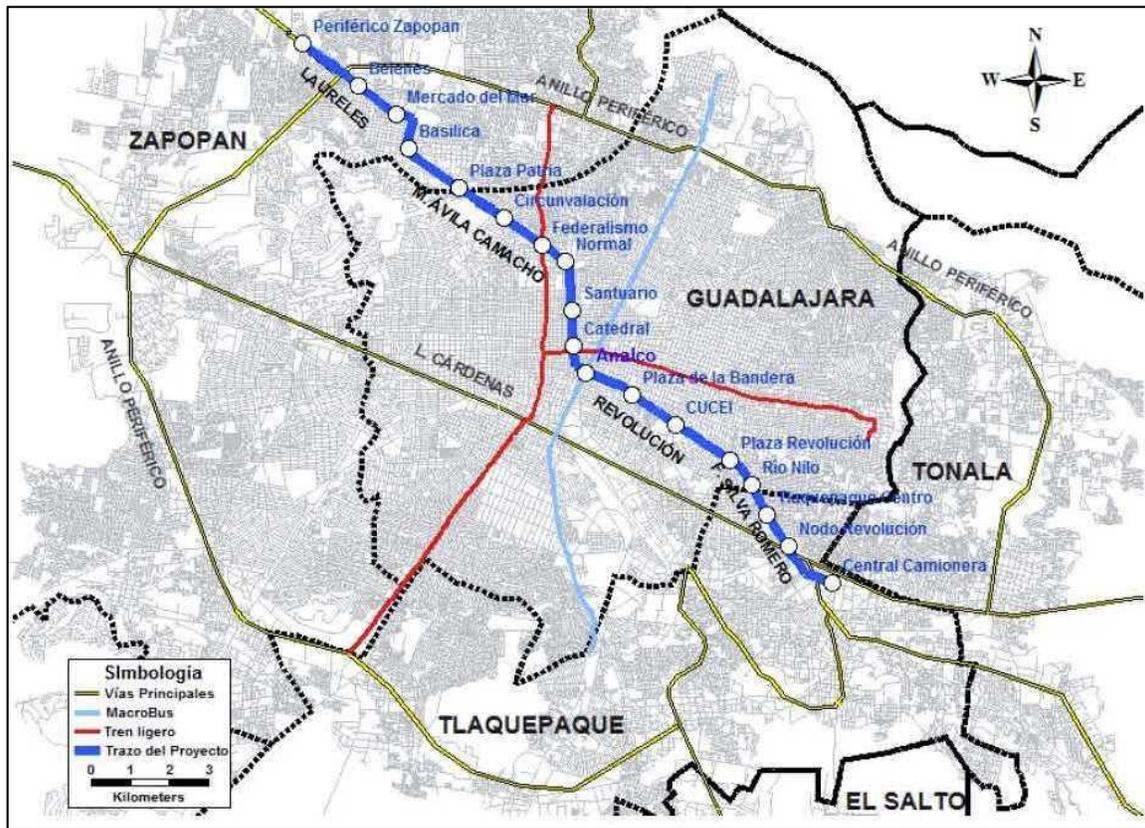
The Guadalajara Light Rail System (SITEUR) was inaugurated in 1989 with the construction of the first line with nineteen stations, running 15.5 kilometers from the stations Periférico Norte south to Periférico Sur. 6.6 kilometers of this alignment are underground. Line 2 was inaugurated in 1994 running 8.8 kilometers from station Juárez (interchange with Line 1) east to station Tetlán. The present fleet consists of 48 articulated electric multiple units receiving power via overhead catenary. The original suppliers for equipment and systems included Mitsubishi, Siemens and Bombardier. Today SITEUR transports more than 240,000 passengers per day, making it the 9th largest system by ridership in Latin America.

Population growth for the area exceeds 1.5%. As the core of the city has shifted to more intense commercial uses, residential population has moved to the periphery, increasing demand for transportation. Motorization rates have more than doubled since 2000, to over 1.2 million automobiles. Major city corridors have witnessed a steady decline in average speed as congestion has increased, and negative impacts including road maintenance costs, pollution and accidents are a growing problem.

To address these problems the federal and local governments are planning a significant expansion of the SITEUR system which includes a completely new line.

The new Line 3 of SITEUR will extend from the station Periférico Zapopan in the northwest of the urban area, running 21 kilometers southeast to station Central Camionera in Tlaquepaque. This primarily double-track rail line will be at ground level on the outer extensions, on an elevated viaduct for 15.65 kilometers on either side of the city core, and underground for 3.1 kilometers within the core.

18 stations will be constructed as part of this project, 13 surface stations and 5 underground, with platform lengths of 75 meters capable of servicing consists of 3 EMUs. The infrastructure will include yards and maintenance workshops.



Guadalajara Light Rail System Line 3

Planned rolling stock will be bi-directional EMU's with a length of 29.56 meters, width of 2.65 meters, height of 3.57 meters and maximum pantograph reach of between 3.868 and 6.268 meters. The trains should have a capacity for 500 passengers each, with seating for 100. Power will be provided by 600V DC overhead catenary and the vehicle top service speed will be 70 kilometers per hour.



Guadalajara SITEUR Line 3 Station Concept

Planned rolling stock will be bi-directional EMU's with a length of 29.56 meters, width of 2.65 meters, height of 3.57 meters and maximum pantograph reach of between 3.868 and 6.268 meters. The trains should have a capacity for 500 passengers each, with seating for 100. Power will be provided by 600VDC overhead catenary and the vehicle top service speed will be 70 kilometers per hour.

The system will require at least 6 substations for conversion of external AC power to DC for rolling stock operation. At least 22 substations will be built for electrical power provision for operations of the passenger stations, the ventilation system, and the maintenance facility.

Systems to be procured include a high-speed digital data network, integrated ticketing, centralized control and digital trunked radio. Centralized customer service center and a passenger information system will be part of the project, including multimedia message screens in all stations.

Project Status and Implementation Timeline

This project is in advanced planning stages with procurement expected to begin in 2014. Construction is expected to span four years.

Project Cost, Financing and Procurement

Based on the current federal presentation, the project budget is as follows:

Source	Federal	State	Private
Amount	1,081,680,771	144,685,115	122,590,081
Total	\$1,348,955,966		

Guadalajara Light Rail Line 3 Sources of Funds

Year	1	2	3	4
Amount	274,377,855	464,175,236	496,026,186	114,376,689
Total	\$1,348,955,966			

Guadalajara Light Rail Line 3 Projected Spending by Project Year

*The project cost includes the following component breakouts. These are approximate, sourced from a late 2013 technical study at which time the project was budgeted at \$1.16 billion.

Category	Item	Cost (Rounded, Millions)	Category Total
System Civil Works	Workshops and Yards	\$33,000,000	\$747,000,000
	Underground Stations	\$147,000,000	
	Tunnel Track	\$154,000,000	
	Transitions/Trenches	\$12,000,000	
	Elevated Track	\$173,000,000	
	Elevated Stations	\$225,000,000	

	At-Grade Track	\$3,000,000	
Complementary Works	Plaza Basílica Pedestrian Tunnels	\$12,000,000	\$34,000,000
	Other	\$3,000,000	
	Intermodal Center	\$19,000,000	
Electromechanical	Signalization	\$55,000,000	\$235,000,000
	Information Systems	\$19,000,000	
	Electrification	\$119,000,000	
	Communications	\$42,000,000	
Management	Project Management	\$6,000,000	\$6,000,000
Land	Right of Way Acquisition	\$34,000,000	\$34,000,000
Rolling Stock	Electric Multiple Units	\$106,000,000	\$106,000,000
Grand Total*			\$1,162,000,000

Guadalajara Light Rail Line 3 Budget Breakdown

U.S. Export Opportunities

Export opportunities for U.S. firms are diverse. Track and infrastructure components are an area where U.S. firms actively export goods to México. Communications and information systems, or components and subsystems of these items, are another potential market. The rolling stock will be provided by non-U.S. headquartered companies. Many of these companies have vehicle manufacturing facilities in the United States that could conceivably produce the EMU's for shipment to México. Opportunities would also exist for U.S. companies to serve as suppliers to these vendors for components or sub-systems.

Project Contacts and Information

For more information on project opportunities in the roads and highways sector please locate the U.S. Export Assistance Center nearest you by visiting <http://www.export.gov/eac> and contact your local U.S. Commercial Service Trade Specialist.

You may also reach out to:

Project Sponsor	U.S. Trade & Development	U.S. Commercial Service
Sr. C.P. Pablo Suarez Coello Director General Secretariat for Communications and Transportation General Directorate for Multimodal and Rail Transportation Tel. +52 (55) 5011-6476 pablo.suarez@sct.gob.mx	Mr. Keith Eischeid Country Manager for México and Central America Tel. +1-703-875-4357 KEischeid@ustda.gov	Please locate the U.S. Export Assistance Center nearest you http://www.export.gov/eac and contact your local U.S. Commercial Service Trade Specialist for more information.

BRT Zona Metropolitana de la Laguna

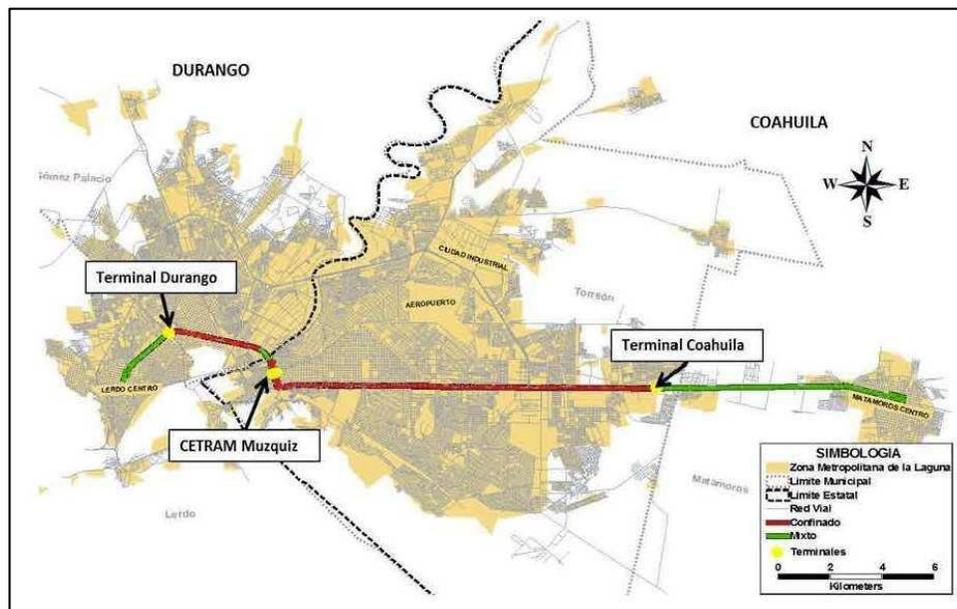
	Project Type	Mass Transit
	State(s):	Coahuila and Durango
	Projected	\$165 million
	Timeline:	2014 - 2015
	Project Sponsor(s):	SCT

Project Background and Scope

The Metropolitan Zone of La Laguna is formed by four cities: Torreón and Matamoros in Coahuila state and Gómez Palacio and Lerdo in Durango state. More than 1.2 million people live in this urbanization, it is the ninth largest metropolitan region in the country.

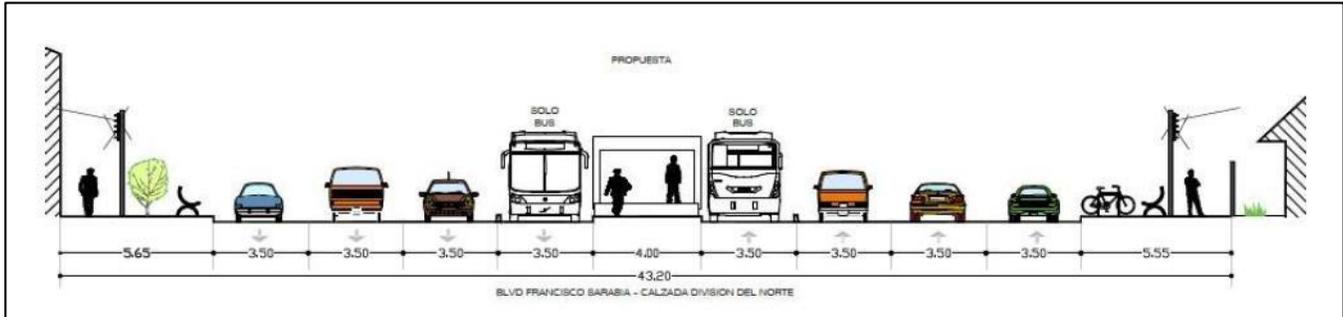
Infrastructure and Rolling Stock

This project will include all the infrastructure, equipment and systems necessary to initiate the bus rapid transit (BRT) service along a first major corridor. This 32.5 kilometer corridor will run from Lerdo, in the state of Durango, to Matamoros, in the state of Coahuila. There will be 34 intermediate stations. Of these, 26 stations will be 5 meters wide, and 8 will be 2.5 meters wide. There will be three major terminals. Terminal Durango will be 10,850 square meters and Terminal Coahuila which will be 11,093 square meters. 30,000 square meters of bus parking will be provided at Terminal Coahuila. The Muzquiz Intermodal Center will cover 6,262 square meters and serve to link the BRT to trunk and feeder transportation connections. Between Terminals Coahuila and Durango operations will occur in dedicated BRT lanes, with mixed traffic operations occurring on the corridor segments beyond the two terminals.



Map of the La Laguna BRT Corridor Project

This corridor is meant to serve as a base for future expansion of the BRT system along additional alignments, as well as to leverage and coordinate the offerings of the other multimodal transportation providers in the region. The ticketing system will be designed to integrate the BRT with future line expansion as well as other transportation service providers.



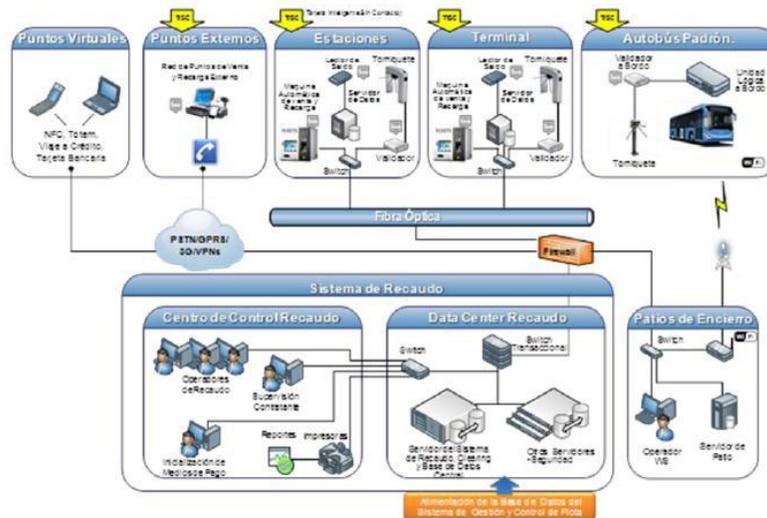
Laguna BRT Station Cross Section

The primary passenger vehicle for the BRT is specified as a bus 12 meters in length, with roughly 35 seats and capacity for 100 passengers, with three doors on the left and two on the right. Smaller buses - ten meters in length with capacity for 80 passengers, and 8.5 meters in length carrying 75 passengers - are envisioned as serving less dense feeder routes. A short bus for special services or low density connectors is envisioned as measuring 6 meters long and having capacity for 40 passengers. This fleet is expected to be diesel powered. This project expects to procure 184 of the 12 meter buses to initiate operations.

Information Systems

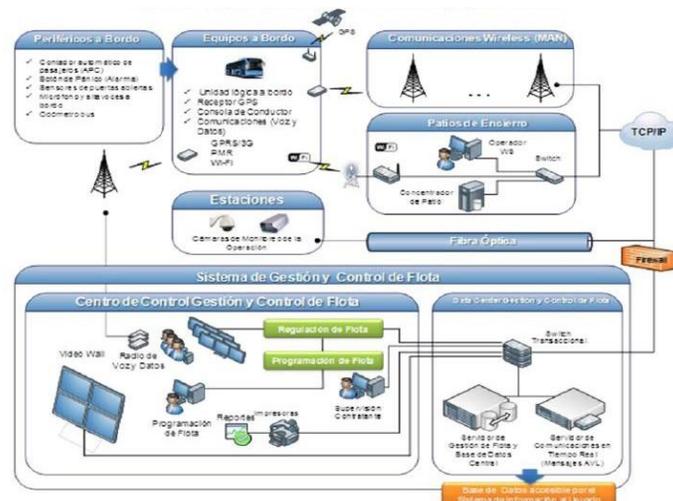
A key component of this BRT project will be investments to provide a state-of-the-art integrated intelligent transportation system providing safety, signaling, security, communications and control functions. There will be three major subsystems.

- **Ticketing System:** This system must enable the operator to control and manage all aspects of user payment; accounting; and system access, validation, and control. It will enable analysis, processing and reporting, including drilling down to individual transactions, throughout the system's operating cycle. This system will be based exclusively on smart cards for fare payment, at stations or aboard the buses, and feature equipment enabling unattended fare payment and card purchases. The system will have an analytics capability supporting operational and business planning of the service. The system selected must have a capability of accommodating future expansion of the BRT as well as integration of fare payments for connecting multimodal transportation services. It must be capable of dynamic adaptation of tariffs within programmable parameters. The system database must be based on an open and documented technology.



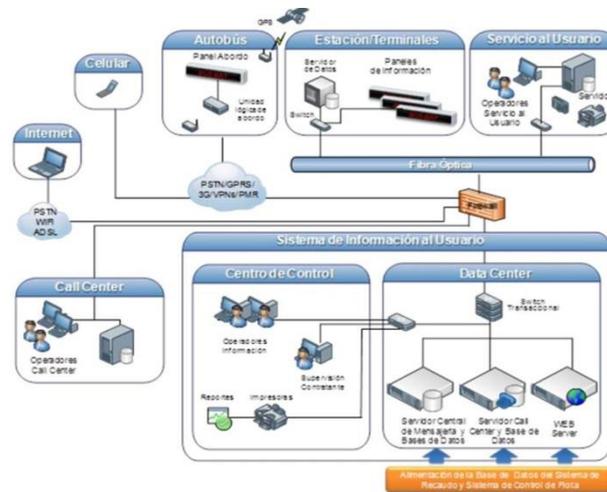
Laguna BRT Ticketing System Conceptual Diagram

- Fleet Management and Control System:** This system will enable the operator and sponsoring governments to monitor and manage the system operations dynamically in real time to respond to passenger demand requirements. Bus-based GPS components will transmit real-time data to the Control Center and enable visualization and regulation of the buses. There will be a Wi-Fi based automatic data interchange capacity between the buses and the facilities systems. Communications between the Control Center and the buses, between buses and to groups of nodes within the network will be required. There will be closed circuit surveillance cameras in the stations. Buses must be equipped with onboard systems incorporating functions to include: panic buttons; open door detection; loudspeaker and intercom; passenger information displays; and onboard fare payment systems. The Control Center segments will be designed with modern technologies to manage and disseminate information in times of crisis.



Laguna BRT Operations Management System Conceptual Diagram

- Passenger Information System:** This system will enable the operator to provide users with useful and opportune information on the services offered, routes, schedules, tariffs, and special access features such as for the handicapped. Station displays will provide passengers with real time information on approaching buses and onboard systems will inform them of approaching stops. They system will integrate telephone and web based components to provide interactive passenger access to the ticketing and fare system, as well as to receive real time updates on operations.



Laguna BRT Passenger Information System Conceptual Diagram

Project Status and Implementation Timeline

At the time of this writing the major project planning studies had been completed. Discussions between local and federal project stakeholders were underway to finalize remaining details. Procurement is expected to occur before the end of 2014, with construction beginning in 2015 and operations commencing two years later.

Project Cost, Financing and Procurement

This project is expected to be constructed with a mix of funding, including private participation. The original plan saw funds distributed by sources over time as follows:

2014	36,629,420	24,123,087	-4,203,763	8,302,569
2015	28,269,164	43,954,900	-56,819,183	27,495,081
Total	164,898,583	68,077,987	-61,022,946	35,797,650

Lagunera Region BRT System Sources of Funds

This spending plan will shift into 2016 as the project is past the start date originally conceived in early planning. Within these amounts approximately \$22 million is planned to be spent on information, control, safety and communications systems. \$32.8 million will be spent on the initial fleet of 184 buses.

U.S. Export Opportunities

This project will present several opportunities for U.S. participation. U.S. companies could participate as investors or concession operating partners. The system will include procurement of four types of bus rolling stock. Information and communications systems are a key component of the BRT where there is potential for U.S. software and hardware provision. Competition from European suppliers for these opportunities will be strong.

Project Contacts and Information

For more information on project opportunities in the roads and highways sector please locate the U.S. Export Assistance Center nearest you by visiting <http://www.export.gov/eac> and contact your local U.S. Commercial Service Trade Specialist.

You may also reach out to:

Project Sponsor	U.S. Trade & Development	U.S. Commercial Service
Sr. C.P. Pablo Suarez Coello Director General Secretariat for Communications and Transportation General Directorate for Multimodal and Rail Transportation Tel. +52 (55) 5011-6476 pablo.suarez@sct.gob.mx	Mr. Keith Eischeid Country Manager for México and Central America Tel. +1-703-875-4357 KEischeid@ustda.gov	Please locate the U.S. Export Assistance Center nearest you http://www.export.gov/eac and contact your local U.S. Commercial Service Trade Specialist for more information.

USTDA Projects

Puebla ITS Technologies Feasibility Study

In 2012 USTDA performed a Definitional Mission to articulate a project eligible for federal grant financing to evaluate opportunities in the intelligent transportation systems sector in Puebla. The resulting plan for a feasibility study was scoped to evaluate the BRT system in Puebla as well as the identification of new ITS technologies that are likely to improve the BRT's operational efficiency, safety, and security. Some of the technologies that will be evaluated include (but not limited to), Computer Aided Dispatch Systems (CAD), Automatic Vehicle Location (AVL) Systems, Advanced Communication Systems (ACS) for BRT, Safety and Security systems (BRT), Integrated Fare Collection Systems, Passenger Information Systems, Automatic Passenger Counter Systems, Radio Communication Systems, Fleet Management and Maintenance Systems, Transit Signal Priority (TSP) Systems, Traffic Control Systems, on-board technologies such as on-board passenger displays, Automatic Voice Annunciation Systems (AVAS), on-board Video Monitoring (OVM), silent alarms, Mobile Data Computers (MDCs), built-in Mobile Data, Terminals (MDTs), Global Positioning Systems (GPS), Command and Control Centers for BRT operations and other ITS technologies related to BRT systems. This feasibility study is presently underway.

Jalisco ITS Definitional Mission

In response to a request from the Secretariat of Mobility of the state of Jalisco, USTDA commissioned a Definitional Mission to evaluate and recommend activities for USTDA funding consideration. The activities recommended by the selected Contractor should help to foster U.S. export opportunities by supporting the implementation of priority development projects that advance sustainable infrastructure and economic growth in México. DM will focus on evaluating several ITS project opportunities that have been proposed by the Secretariat of Mobility, including the modernization of the Secretariat's transportation control center, traffic control systems, incident and emergency response systems, automated fare collection systems, real-time passenger information systems, computer-aided dispatch, and automated location systems.

Project Contacts and Information

For more information on these USTDA sponsored projects, please direct inquiries to:

Mr. Keith Eischeid
USTDA Country Manager for México and Central America
Tel. +1-703-875-4357
KEischeid@ustda.gov