Public-Private Partnerships Potential for Arizona-Mexico Border Infrastructure Projects

Final Report

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1.0 Introduction

This study of the Public-Private Partnership Potential for Arizona-Mexico Border Infrastructure Projects originated as an action item of the Transportation, Infrastructure, and Ports Committee of the Arizona-Mexico Commission. The purpose of this project is to evaluate and determine the feasibility of using public-private partnerships (P3s) to finance Arizona-Mexico border region infrastructure projects. The potential use of public-private partnerships is being explored due to traditional funding means being insufficient to finance the needed infrastructure improvements for the movement of people and freight through the Arizona-Mexico ports. This Final Report is based on the previously completed Technical Memorandums #1 through #4.

Technical Memorandum #1, Overview of Border Infrastructure Public-Private Partnerships, presented a review and summary of current border infrastructure public-private partnerships. The overview included the findings of a survey of public-private partnerships in existence at United States land ports of entry and their related connecting infrastructure, as well as those under development.

Technical Memorandum #2, Description of Freight Flows, provided detailed information of freight flow data from available sources on the flow of goods and freight that moves across the Arizona-Mexico border through Arizona's land ports of entry. The research identified the types of freight and its associated volumes, and the origin and destination of the freight at a macro level.

Technical Memorandum #3, Identification of Potential Public-Private Partnership Opportunities identified potential public-private partnerships that may exist at each of Arizona's land ports of entry and related connecting infrastructure. The opportunities for public-private partnerships may include those that enhance port operations, improve the movement of people and goods, and increase the attractiveness of these ports. Potential revenue sources are identified including precedents from other land port of entry projects.

Technical Memorandum #4, Implementation Issues and Potential Finance Techniques for Potential Public-Private Partnerships, identified issues associated with implementing public-private partnerships in the state of Arizona for border crossings. The decision to utilize a public-private partnership to deliver an infrastructure facility is a policy decision of the public sponsor. It incorporates many factors including defining the sponsor's objectives, a clear understanding of the commercial constraints of the particular facility, and available revenue sources.

1.1 Overview of the Arizona-Mexico Ports of Entry (POE)

Arizona has nine ports of entry located on its international border with Mexico. From west to east, the land ports of entries are as follows:

- San Luis I
- San Luis II
- Lukeville
- Sasabe
- Mariposa Port of Entry at Nogales
- DeConcini Port of Entry at Nogales
- Morley Gate Port of Entry at Nogales
- Naco
- Douglas

Each land port of entry is discussed briefly in the paragraphs that follow.

San Luis I Port of Entry

San Luis I Port of Entry

The existing San Luis port of entry was originally established in 1930 to provide trade access between Mexico and the United States. New facilities were constructed in 1984 and upgraded in 1991. This port of entry contains a commercial vehicle inspection station and related facilities, including an administrative building, six non-commercial and one commercial primary lane, twelve non-commercial secondary lanes, 14 secondary truck bay docks, two pedestrian processing lanes, and a security system. Border visitors use the port of entry for commercial and non-commercial access.

Regional road access to the existing port of entry is provided to the north by US Highway 95, a two-lane route running north through Yuma. At Yuma, US 95 connects with Interstate 8 and then continues north to Quartzsite where it connects with Interstate 10. Queuing at the existing commercial port of entry, as well as delay time, is significant. Long queues cause traffic to become congested on major roadways in the vicinity of the port of entry. These queues are caused by a number of factors related to the capacity and location of the existing port of entry facility. The facility is situated within the City of San Luis, which is growing in both population and commercial activity.

The main roads leading to the port of entry facility in San Luis are heavily traveled to access not only the port of entry, but other nearby services, such as the commercial centers of San Luis, Arizona, and San Luis Rio Colorado, Mexico. While it is desirable to be located near commercial centers and major access routes, the growing level of activity in the vicinity of the existing port facility creates traffic hazards on the mixed-use roads. Adding to this problem is the lack of capacity at the existing facility. With no room to expand, limited docking stations, and an inefficient design, the existing port is not able to process the increasing level of vehicles in a timely manner.

The mix of commercial and non-commercial vehicles creates traffic safety problems as trucks and cars are required to cross and weave with each other. Commercial trucks present visibility problems for non-commercial vehicles, and non-commercial vehicles often back up, congest, and cross paths designed for commercial traffic. As each of these vehicle types using the port increase in volume, more conflicts and safety hazards arise. Pedestrian use of the port of entry has increased as well in response to long vehicle queues. An increase in pedestrian traffic contributes to the growing safety problem. This port is considered to be one of the most dangerous ports for public safety along the U.S.-Mexico border with wait times in excess of three hours for pedestrians during the peak periods.

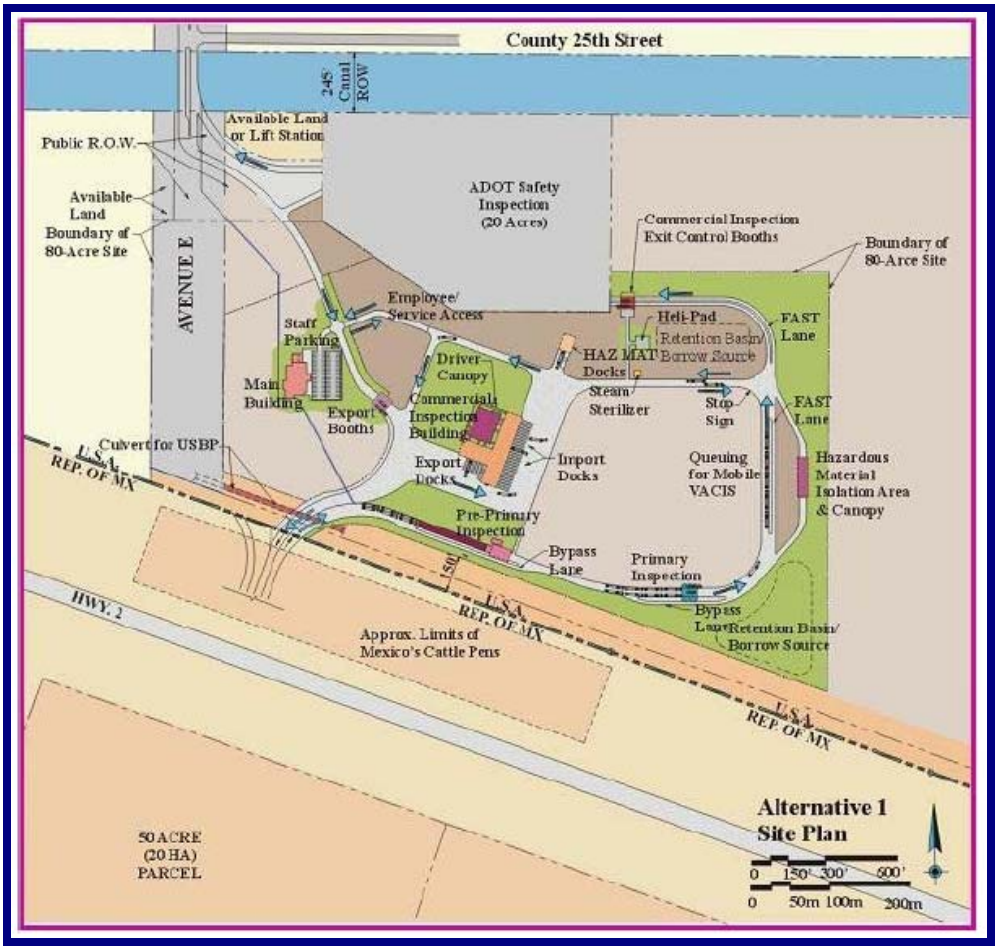
To mitigate traffic congestion, design and construction of a new port, San Luis II, is underway and is expected to be completed by late 2009. Once completed, San Luis II will become the commercial port of entry for the Yuma region, and commercial operations at San Luis I will come to an end. Also, following the completion of the new San Luis Port of Entry II, San Luis I on the U.S. side will undergo a renovation to its facilities and infrastructure to improve

pedestrian and privately owned vehicle traffic processing. The estimated cost of renovation is $73 million and the targeted completion date is 2014.

San Luis II Port of Entry

This new commercial "super" port is a simultaneous development on both the US and Mexico border. San Luis II is located five miles east of San Luis I, one of Arizona's busiest border crossing and entry points for cars and pedestrians. The new port will be equipped with:

- At full build-out, 10 commercial processing lanes for inspection, enforcement and commercial loading and unloading
- Free and Secure Trade (FAST) lanes, Customs-Trade Partnership Against Terrorism (C-TPAT) program, and other technologies to improve commercial truck throughput



New San Luis II Port of Entry Facility

Traffic congestion will be reduced significantly. The new port will more efficiently and effectively serve the thriving Maquiladora industry. The total cost of the project is estimated at $42 million for design and construction with a targeted completed date by the end of 2009. This will be the first new Port of Entry built on the U.S.-Mexico border in the last eight years.

In combination with the new port of entry, and new Area Service Highway (ASH) will be developed. This facility will be a four-lane, 26 mile, controlled-access roadway that will directly connect Mexico via the San Luis ports of entry with Interstate 8. The expressway will be a major facilitator in international commercial trade and provide direct, uncongested access to Interstate 8 for commercial truck traffic. The estimated date of completion is the end of 2009.

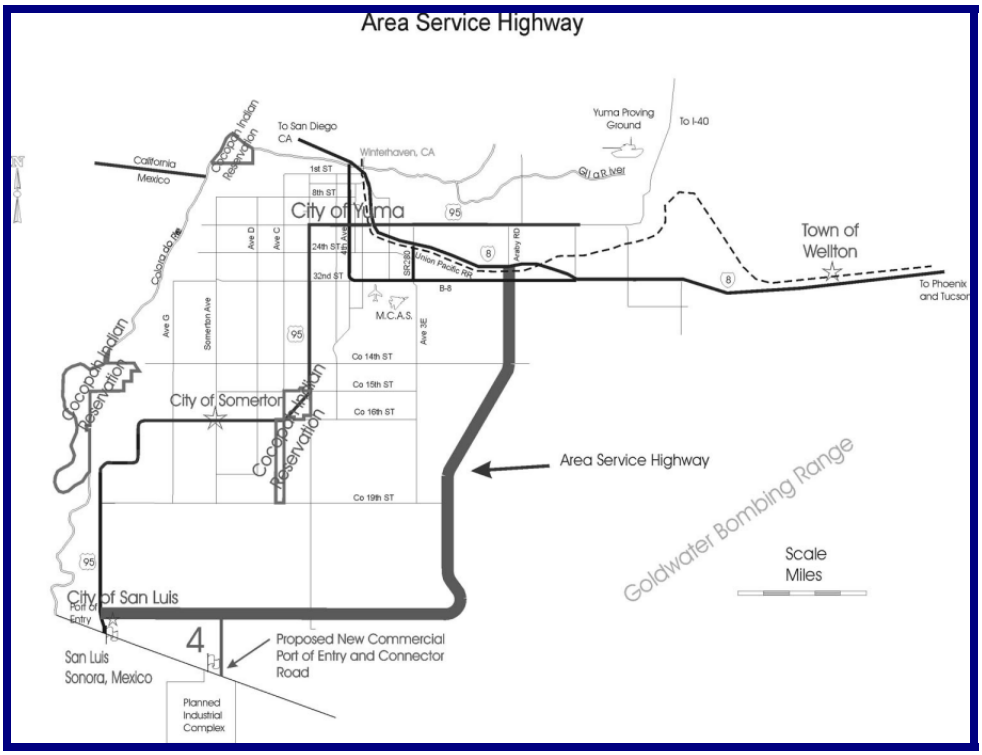


Exhibit 1A - Area Service Highway (RAVE) Vicinity Map

Lukeville Port of Entry

Lukeville is at the southern terminus of Arizona State Route 85 and is located entirely within Organ Pipe Cactus National Monument. The Lukeville Port of Entry experiences heavy volumes of traffic from tourists traveling both south and north through the port of entry. Puerto Peñasco, Mexico (Rocky Point) is 1 ½ hours south from Lukeville, Arizona, and is a popular destination for families and college students year round. This creates a large amount of vehicular traffic on the rural highway. The Lukeville port of entry is designed to handle local tourism traffic between Arizona and the beach resort of Puerto Peñasco. Peak vacation periods have resulted in wait times exceeding five hours, with some reports of wait times in excess of seven hours on holiday weekends.

Lukeville Port of Entry

Sasabe Port of Entry

The Sasabe Port of Entry is the smallest and least-trafficked port of entry in Arizona. It has been open since 1916, but has never become a heavily used port such as those in San Luis, Nogales and Douglas. The 23,237 cars that passed through the port in the first eight months of fiscal year 2008 represent a fraction of the 2.086 million that went through the Nogales ports of entry during the corresponding period of time. Sasabe is located in a remote, sparsely populated area, and there are no paved roads leading from the port into the interior of Mexico. This port of entry was dramatically improved and expanded in the early 1990's.

Sasabe Port of Entry

Nogales Ports of Entry

On a typical day, roughly 13,000 vehicles and 13,000 pedestrians enter the U.S. through the Nogales Ports of Entry. In 2001, there were 4,590,933 passenger vehicle crossings and 4,874,738 pedestrian crossings. This activity is divided between three border crossing locations that comprise the Nogales port of entry:

- Mariposa Port of Entry
- DeConcini Port of Entry
- Morley Gate

Mariposa Port of Entry

The Mariposa Port of Entry is located on Mariposa Road (SR 189) about one and one third miles west of the downtown Nogales. This port provides entry for passenger vehicles, pedestrians and commercial cargo. It is the port of entry at Nogales for commercial traffic. From the south, the crossing is served by the Corredor Fiscal, an approximate eight-mile tolled bypass around Nogales, Sonora connecting Mariposa Road with Mexican Highway 15. The roadway is a four lane toll road between Mexican Customs on the south end and the U.S.-Mexican border on the north end, with no access in between. On the U.S. side, access from the north is provided by Mariposa Road which is SR 189. This highway connects with Interstate 19 approximately three miles north of the border.

The Mariposa Port of Entry was originally intended to process 400 trucks per day. Mariposa is now one of the most overburdened ports of entry on the entire U.S.-Mexico border. Today, there are as many as 1,600 trucks per day crossing the border, many carrying fresh produce for the U.S. market. It is the main commercial processing location for Arizona and handles nearly one half of all agricultural commodities entering the US from Mexico. Seventy four percent of all trucks entering Arizona pass through the Mariposa Port. This translates into approximately 255,000 trucks per year. The number of privately owned vehicles passing through this port annually has ranged from 1.2 to 1.8 million in recent years. Mariposa is the gateway for over four billion pounds of fresh produce; 45% of the fresh produce consumed in the entire United States between October and May. The Mariposa port of entry is CANAMEX's principal gateway for international trade with over $22 billion in imports and exports. Mariposa currently crosses over 420,000 pedestrians annually despite not having any dedicated pedestrian facilities.

Mariposa Port of Entry

The traffic moving through the Mariposa Port of Entry primarily uses Arizona State Route 189 (Mariposa Road) to access Interstate 19 or Grand Avenue located on the east side of I-19. In addition to the Port traffic, considerable amounts of local traffic use SR189/Mariposa Road to access the Nogales High School, motels, restaurants, churches, single and multifamily residential units, and the many other businesses and employment centers that exist along this route. The route has congested areas and safety concerns that are exacerbated by the large amounts of truck traffic using the road mixing with local traffic.

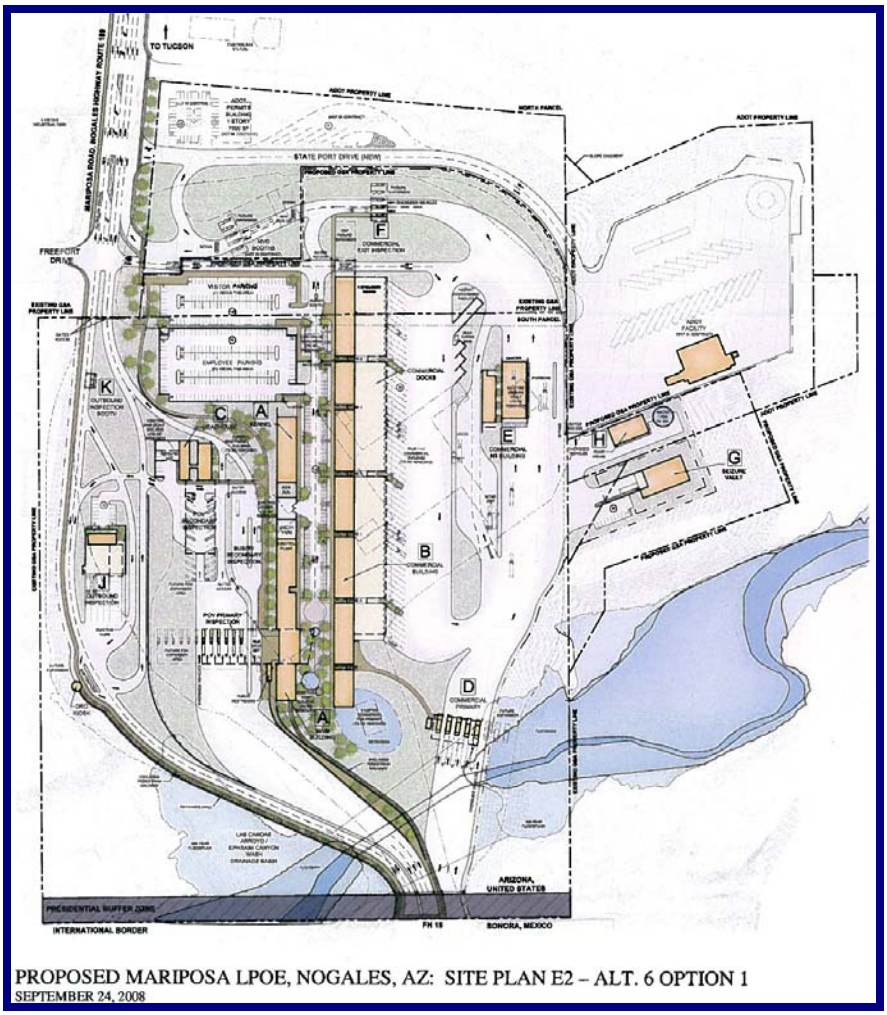


Exhibit 1B - Reconfigured Mariposa Port of Entry Funded for Construction

The Mariposa Port of Entry has experienced dramatic growth in traffic volumes. Increases in all modes of traffic have taxed the port facilities and the lines of trucks waiting to be processed at peak times can be measured in miles. A combination of many factors has led to the foregone conclusion that the Port is in need of expansion and upgrade. Consequently, the Mariposa Port of Entry is being expanded and reconfigured. This Reconfiguration Project will more than double the throughput capacity for inspection of both goods and people and will incorporate the latest in design and technology to create a state of the art facility. The project has been funded for construction with an anticipated completion date in 2014.

DeConcini Port of Entry

Grand Avenue in Nogales, Sonora, Mexico is at the northern terminus of the city's commercial district and Mexico Federal Highway 15, which originates south of Guadalajara. Federal Highway 15 is the main transportation corridor along the west coast of Mexico. Grand Avenue in Nogales, Arizona is the southern terminus of the city's commercial district and US Route B19, which connects the border crossing and downtown Nogales to I-19 at the north end of the city.

The vehicular crossing consists of eight gates for northbound vehicles and three lanes for southbound vehicles. Lane eight for northbound vehicles is used primarily by buses and recreational vehicles. The Grand Avenue pedestrian gates are located in the DeConcini Building to the west of the southbound vehicle lanes. The Grand Avenue crossing is open 24 hours, seven days a week.

A rail line runs along the east edge of Grand Avenue. The Ferromex and Union Pacific railroads connect at the border. This is Arizona's only rail crossing. Because of its location in the heart of downtown Nogales, it creates significant traffic congestion and presents a safety hazard for the ambos Nogales area. Solving traffic congestion and safety issues created by the rail crossing has been identified as top priorities for the local community.

The DeConcini Port of Entry was created more than 100 years ago and, since then, the crossing has boomed and the city on both sides of the border has grown to totally encircle this port of entry. With the latest expansion completed in 1994, this port continues to be the most congested border crossing.

Morley Gate

The eastern most crossing at Nogales is the Morley Gate, a pedestrian (only) crossing located at the end of Morley Avenue in the center of Nogales. Morley crossing is generally considered part of the DeConcini Port of Entry. There are two primary pedestrian lanes at the Morley Gate.

DeConcini Port of Entry and Morley Gate

Naco Port of Entry

The Naco Port of Entry resides within the unincorporated town of Naco, Arizona. The town is a small residential community with limited commercial activity and sits directly south of Bisbee, Arizona. The Naco Port of Entry was modernized in 1994. It currently has one lane for all southbound traffic. Northbound traffic lanes include one primary cargo lane with two cargo inspection docks, one primary privately owned vehicle lane, four secondary privately owned vehicle lanes, and two primary pedestrian lanes. Customs and Border Protection (CBP) does not anticipate needing any significant improvements to this facility in the foreseeable future. The land port of entry is reported to be meeting the needs of the local traffic and the small volumes of commercial traffic through this facility.

Naco Port of Entry

Douglas Port of Entry

The Douglas Port of Entry is the second largest commercial port in the state with over $1 billion in trade conducted every year. Economically, little has changed in the area over the last 20 years. At the Douglas Port of Entry, southbound truck traffic is forced to cut through the line of privately owned vehicles (POVs) in order to exit the U.S. compound and enter Mexican customs inspection, creating a serious safety situation. The port of entry lacks dedicated facilities for pedestrians and buses to access the primary inspection lanes. Improvements are planned for the Douglas Port of Entry to improve the operational characteristics.

Douglas Port of Entry

A proposed reconstruction of the Douglas Port of Entry will reconfigure the existing facility into a state-of-the-art facility. The schedule for the Douglas Land Port of Entry Expansion and Modernization Project is as follows:

- September 2007: U.S. General Services Administration completed the Port of Entry Expansion and Modernization Project Feasibility Study
- FY 2008: $1.3 million requested to make short-term improvements
- FY 2011: GSA will request approximately $7 million for design
- FY 2012: GSA will request approximately $60 million for construction
- 2016: Expansion and Modernization scheduled to be completed

To date, the proposed reconstruction awaits funding.

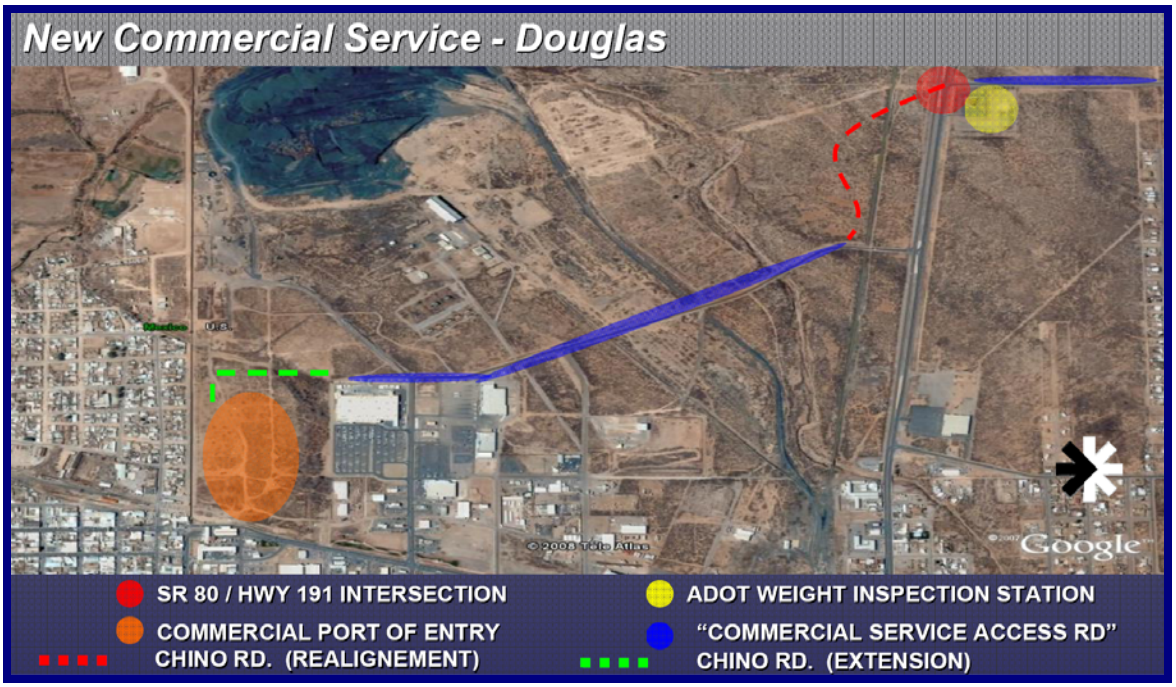


Exhibit 1C - Proposed Improvements in the Douglas Port of Entry Area
(source: Douglas International Port Authority)

A new strategically located Motor Carrier Safety Inspection Station will enhance safety and security by examining domestic and international commercial vehicles. Commercial vehicles entering the U.S. at the Douglas international crossing will be required to stop at the new State Inspection Station for registration and safety inspection processing as well as for size/weight and other checks to ensure compliance with laws concerning commercial motor vehicles and drivers. Commercial traffic will be diverted from downtown Douglas by routing vehicles from the federal Port of Entry facility to the Inspection Station via Chino Road. The new inspection facility will be operated by both state and federal motor carrier safety inspectors and linked electronically to the border crossing facility in Douglas. The project design has been completed and the construction phase has commenced.

1.2 What Are States Currently Doing at Border Crossings with Regards to Public-Private Partnerships?

The following paragraphs provide a brief discussion of what some key border states are currently doing at their border crossings. More detailed discussion is included in Section 5.

California: California does not have any existing public-private partnerships in place at its border ports of entry. However, California is in the process of exploring and implementing several interesting border and toll related projects that could provide implementation ideas for border crossings in Arizona. These include the proposed Public-Private Partnership at the new Otay Mesa East Port of Entry, which includes a toll road, cross-border conveyor belts for moving aggregate, and a potential cross-border air terminal passenger facility.

Texas: Twenty-three of the twenty-six existing highway connections to Texas ports of entry are tolled. Most of the Rio Grande River bridge crossings are owned by either the local city or county in which they are located. The tolls are placed on the bridge facilities and are generally used to finance costs related to the bridge or other local initiatives, but not to the ports of entry themselves. Although the bridge ownership varies, most of the actual ports of entry in Texas are owned by the US General Services Administration/Customs and Border Protection (GSA/CBP) agencies. When new ports of entry are developed or expanded, the bridge owner has donated the land for the port of entry, but does not typically fund its construction or operation.

New York: The state of New York currently has no public-private partnership enabling legislation; however, they do have a bridge commission and a bridge authority that are federally chartered to own and operate specific bridges bordering Canada and the United States and the immigration plazas.

Michigan: The state of Michigan currently does not have public-private partnership legislation. There are various types of ownership of Michigan border crossings ranging from privately owned, DOT owned, and proposed GSA owned. The state of Michigan proposes to build a new border crossing at the Detroit River International Bridge through the use of a public private partnership.

Washington: The state of Washington has recently signed an agreement with FHWA for the Federal Border Congestion Program which will allow them access to innovative financing and advanced ITS systems that will direct the public to border crossing facilities and provide accurate information on wait times. This agreement will also allow the DOT to examine what opportunities are currently available to them. WSDOT has instituted Free and Secure Trade (FAST) lanes which are currently underutilized. As a result of this, they have begun to look at using high occupancy toll (HOT) lanes with a congestion pricing program along with the FAST lanes.

2.0 Public-Private Partnership Survey of Border Officials

This section discusses the results of a survey of key personnel and experts with knowledge of the use of public-private partnerships, innovative finance, and new facility development related to border crossings. The purpose of the survey was to:

- Identify current public-private partnerships at United States land ports-of-entry and related connecting infrastructure, including those that are currently under development.
- Identify public-private partnership use by mode including road, rail, and pedestrian infrastructure, including both commercial and passenger vehicle ports.
- Identify current financial arrangements being used at ports of entry among public and private partners.
- Identify issues that needed to be addressed or that are being addressed in implementing public-private partnerships for border crossings.

To date, there have not been any public-private partnerships at any of the Arizona-Mexico ports of entry. However, there has been use of private investment in projects at existing border crossings.

- *Lukeville Port of Entry:* The Lukeville port of entry is designed to handle local tourism traffic between Arizona and the beach resort of Puerto Peñasco. Peak vacation periods have resulted in wait times exceeding five hours, with some reports of wait times in excess of seven hours on holiday weekends. Because the delays at the port of entry have caused negative impacts to the tourism industry at Puerto Peñasco, the ***Rocky Point Convention and Visitor's Bureau*** contributed $1 million in private sector money to match a $1.5 million allocation from the Arizona Department of Transportation for improvements to the port facilities. The combined monies are funding the design and construction of two additional primary inspection booths and traffic lanes at the Lukeville port of entry. Design is currently underway and the project is expected to be let in June 2009 with construction completed by late 2009. The project is expected to significantly reduce congestion and wait times for vehicles using the international border crossing at Lukeville.

- *San Luis Port of Entry:* To mitigate traffic congestion and the resulting safety issues at the San Luis Port of Entry, design and construction of a new port, San Luis II, is underway and is expected to be completed by late 2009. Once completed, San Luis II will become the commercial port of entry for the Yuma region, and commercial operations at San Luis I will come to an end. Also, following the completion of the new San Luis Port of Entry II, San Luis I on the U.S. side will undergo a renovation to its facilities and infrastructure to improve pedestrian and privately owned vehicle traffic processing. The estimated cost of the San Luis I Port of Entry renovation is $73 million and the targeted completion date is 2014. The San Luis II Port of Entry will be the first new Port

of Entry built on the U.S.-Mexico border in the last eight years. This project is an example of a public-private partnership in which the Greater Yuma Port Authority committed local resources including the acquisition and donation of the land needed to advance the project.

The focus of the survey conducted was with regards to public-private partnerships at border ports of entry outside of Arizona. Following the completion of the survey on ports of entry outside Arizona, the Study Team began to focus the analysis on potential use of public-private partnerships on projects at or surrounding Arizona's ports of entry and their associated implementation issues.

2.1 Survey Methodology

The Study Team conducted the survey during January, February, and March of 2009. The following key steps were involved in the survey effort.

1. *Initial Research:* The Study Team conducted initial research into existing and proposed border crossings, as well as the general use of public-private partnerships. The initial research included web searches for state data on enabling legislation and the use of public-private partnerships and identification of recent and proposed border projects. The research included compiling a list of known states with public-private partnership enabling legislation, and matching that with international border states.
2. *Developing a List of Initial Contacts:* The Study Team developed a list of initial contacts to discuss public-private partnerships and border crossings. This list included GSA, FHWA, State DOTs, and border agency contacts. The list of initial contacts was compiled as a result of known Study Team contacts, contacts received from staff and advisory committee members associated with the project, and the initial research.
3. *Development of Standard Questions:* The Study Team developed a list of standard questions for GSA and DOTs regarding public-private partnerships and border crossings. This was done to help ensure that basic consistent information was being collected from each survey participant. In addition to the standard questions, which were used to guide discussions, participants were asked project and location specific questions.
4. *Phone and E-mail Contacts:* The Study Team contacted survey targets by phone and e-mail. Interviews were conducted by phone while e-mail was used to setup appointment times and exchange follow-up data.
5. *Identification of Gaps and Follow-up Interviews:* As a result of the initial interviews, the Study Team was able to identify follow-up contacts to learn more about specific projects and available reports on projects for review. The Study Team followed-up on these additional contacts and project information as possible and as needed to build a broader picture of the use of public-private partnerships and other innovative finance methods at border crossings.

2.2 Discussion of Survey Gaps and Results

The Study Team was unable to secure information regarding public-private partnerships at border crossings in the states of New Hampshire and Maine as it was determined that both states have minimal issues at border crossings, do not toll crossings, and have no plans to expand their crossings within the near future.

The survey provided much of the basis for the discussions of enabling legislation for public-private partnerships in section 3 and existing and planned uses at border crossings across the nation in section 4.

3.0 Review of Key Border Initiatives and Innovative Finance Initiatives from FHWA

FHWA is currently engaged in several initiatives involving border coordination, port of entry expansion projects, and innovative finance. Two key initiatives are the U.S.-Mexico Joint Working Committee (JWC) on Transportation Planning and the Finance Team which has been preparing and presenting materials such as the *Financing Techniques Guide for Border Project Sponsors* presentations and workshops.

The JWC, of which ADOT and other southern border DOTs are full participants, has been meeting approximately twice a year to discuss current studies, programs and border crossing issues including innovative finance for crossing improvements. Documents and materials for the JWC are located on the FHWA website at **www.borderplanning.fhwa.gov**.

The JWC Finance Team is focused on developing techniques and materials for disseminating information on finance for border projects including innovative finance methods and public-private partnerships. They work with individual crossings on financial feasibility studies and financial plans. They have also given training and informational workshops in Texas for TxDOT for the Laredo and El Paso districts. ADOT is a good candidate for a future workshop.

4.0 Existing and Planned Use of Public-Private Partnerships and Private Sector Involvement at Border Crossings

The following sections discuss the use of public-private partnerships at border crossings across the United States. There has been minimal overall use of public-private partnerships at border crossings. Several innovative projects that may be informative and helpful for implementation of public-private partnerships and/or private sector involvement at Arizona's border crossings are highlighted. Projects on the horizon or currently being studied and/or implemented are also discussed below. As part of the survey, the Study Team also identified the use of toll facilities at or near border crossings and other ways border crossings have raised revenue in a means that could include the private sector. The southern border states are discussed first, followed by northern border states.

4.1 Texas

Texas has implemented and is in the process of implementing several public-private partnership type arrangements. Texas has several toll facilities throughout the state, including at border crossings. Unlike other southern border states, Texas border crossings involve river crossings with toll bridges, many of which are owned and operated by local units of government. Texas currently has 26 international border crossings. Several other new ports of entry are being considered with one under construction.

Texas has public-private partnership enabling legislation through the use of Comprehensive Development Agreements (CDAs) which include a competitive selection process for allowing private development and/or investment in transportation projects. TxDOT, the Texas Turnpike Authority, Regional Mobility Authorities, and Regional Toll Authorities can all use CDAs to enact public-private partnerships. To date, there are no existing or proposed CDAs for specific border crossing projects. Although there are not border crossing specific public-private partnerships, there is private sector involvement in several border crossings, particularly rail crossings.

Of the twenty-six existing ports of entry in Texas, twenty-three are tolled. Most of the bridge crossings are owned by either the local city or county in which they are located. Three are privately owned (B&M Bridge at Brownsville, Progreso-Nuevo Progreso, and Starr-Camargo). The tolls are placed on the bridge facilities and are generally used to finance costs related to the bridge or other local initiatives, and not for the ports of entry themselves. Although the bridge ownership varies, most of the actual ports of entry in Texas are owned by GSA/CBP. When new ports of entry are developed or expanded, the bridge owner has donated the land for the port of entry but does not typically fund its construction or operation.

In 2008, TxDOT commissioned a *Border Crossing Travel Time Study* for all of the Texas Border Crossings. This study investigated crossing issues and improvements proposed for each of the

border crossings including a high level estimate of costs of improvements. Among the finance options suggested by the study was that the local bridge owners with toll revenue could be asked to contribute to and/or fund the improvements needed outside their facilities through either a percentage of revenue or a flat fee. These recommendations have not been implemented.

Revenue reports available from a few of the toll bridges in Texas provide a sample of the potential revenue available at tolled ports of entry. Typical toll rates are $0.50 to $0.60 for pedestrians, $2.00 to $2.50 for cars, and $7 to $22 per truck depending on the number of axles. At the Pharr International Bridge, revenues of approximately $8 million per year are earned on approximately 1.6 million cars and 450,000 truck crossings (2007-2008). At the International Bridge System (three bridges in Cameron), approximately $16 million per year is earned on just under seven million total crossings including approximately 4.5 million cars/motorcycles, 1.9 million pedestrians, and 250,000 trucks/buses. The private B&M Express Bridge sells banner advertising (4 by 12 feet) at $300 to $400 per month each based on the length of contract. No total revenue report is available for banner advertising.

In Texas, the private sector is involved in several rail border crossing facilities. In Cameron County, the Union Pacific Railroad, B&M Bridge Company, and two Mexican rail companies have been involved in a rail relocation/bypass plan including $3.5 to $4.5 million in rail company funds. Webb County has been working with Laredo, Texas on the development of a new rail bridge and has applied for a presidential permit. Private sector involvement in this project is uncertain as Kansas City Southern does not agree with the proposed location for the new bridge and prepared an alternative feasibility study recommending another site.

4.2 New Mexico

New Mexico does not have any existing or planned usage of innovative finance techniques at its ports of entry. New Mexico also does not have specific enabling legislation to allow for public-private partnerships. Limited use of design-build type public-private partnership partnerships has been allowed in New Mexico on a case by case basis. The use of public-private partnerships was investigated as part of the Corridors of the Future application for the I-10 corridor, which is connected to the Santa Theresa Port of Entry. This arrangement concluded that a public-private partnership setup would not fit most of the needs of the corridor. The current ports all function effectively. All three New Mexico ports of entry are owned by GSA or Customs and Border Protection.

Only one port of entry in New Mexico has a duty free store (Columbus-Las Palomas). There is no contractual relationship between the duty free store and the port of entry. New Mexico does not have toll facilities and does not have toll enabling legislation. A toll feasibility study completed for New Mexico's ports of entry concluded that, based on the number of crossings, tolls would not provide revenue to meet future needs.

New Mexico DOT is part of a cross-border working group conducting a rail feasibility study near the Santa Theresa Port of Entry that is going to look at a possible public-private partnership for border crossing rail improvements. Northern Pacific and Burlington Northern Santa Fe railroads are both involved in this group. This group is just getting underway and has not generated plans or proposals yet.

4.3 California

California does not have any existing public-private partnerships in place at its border ports of entry, nor are there any definite plans for implementation of a public-private partnership at a port of entry. However, California is in the process of exploring and implementing several border and toll related projects that could provide implementation ideas for border crossings in Arizona.

The existing border ports of entry in California are all owned by federal agencies (GSA or CBP) other than the Andrade Port of Entry, which is on tribal land governed by the Quechen Tribe. The Andrade Port of Entry is primarily a pedestrian port of entry serving immediate cross border tourism on Quechen lands. The Tribe does have revenue generating facilities associated with the crossing including a parking lot, RV parks, and a small market.

There are no existing toll facilities at any California port of entry. The nearest toll facility to a port of entry is SR-125, located approximately 1.5 miles from the existing Otay Mesa Port of Entry. The San Ysidro Port of Entry is the only one with a specific duty free store, and this is not directly affiliated with the port of entry. The duty free store has open street access instead of a direct connection with the port of entry. There are other commercial uses also located adjacent to some of the ports of entry, but they are not affiliated with the ports of entry and do not make any type of lease payments.

California does have experience with public-private partnership implementation. To date, all toll and public-private partnership projects have been individually approved through legislative action. A bill signed in 2006 allowed for two new public-private partnership type leases to the private sector for commercial goods movement in each area of northern and southern California, but no projects were undertaken. On February 20, 2009, California's governor signed bill SB 4 allowing for unlimited public-private partnership projects until 2016. The bill specifically allows toll revenue concessions, but may also be used to implement other forms of public-private partnerships. A fully implemented and well known example is the SR-125 toll facility that was built and operated by a private concessionaire. The toll on SR-125 adjusts based on usage; not based on specific congestion at any given time.

California considered a public-private partnership for its proposed Otay Mesa East Port of Entry project. Otay Mesa East would be a new port of entry located approximately 1.5 miles east of the existing Otay Mesa Port of Entry. Although CalTrans, the San Diego Association of Governments (SANDAG), and their many partners considered and studied a possible public-

private partnership, the project has ended up as a *public-public* partnership as a result of approval action taken by the California legislature. The original private involvement in the public-private partnership was a financial investment, not a port operations role. With the proposed public-public partnership, SANDAG will now act as the concessionaire. The new port of entry will be federally owned, built to GSA specifications, and then turned over to GSA. Even though Otay Mesa East will not be a public-private partnership, it still includes innovative use of toll financing at a port of entry that, if successfully implemented, could become a model for other ports of entry.

The new Otay Mesa East Port of Entry will include a toll highway leading to the border on either side. Each side of the border will feature approximately 2.5 miles of toll road. The goal of the project is to provide a border crossing that can function as an express type crossing that minimizes the amount of time spent in queues waiting for inspection. Thus, the toll lanes leading to the port of entry will be used to manage congestion in the port of entry, likely with variable tolls depending on the level of congestion. Higher tolls would be charged during periods of high congestion, likely diverting traffic to the existing free crossing at Otay Mesa. Congestion pricing will serve to keep the Otay Mesa East Port of Entry functioning with acceptable wait times. A key part of its implementation will be balancing the benefit derived from using the new port of entry in terms of time savings compared to the existing free port of entry and considering the amount level of the toll. The proposal has considered using some of the toll revenue to support additional staffing by Customs and Border Protection at key times, although any final agreements on this have not been reached at this time.

The new Otay Mesa East Port of Entry is expected to be operational by 2014, with construction beginning by 2012. The Mexican government is hoping for quicker implementation. A Tier 1 Environmental study has been completed for the overall project with the Tier 2 Environmental studies for the toll road and port of entry due by September 2009. No decision has been made as to whether the new port of entry will be completed in a design-build or traditional design-bid-build format. In 2006, SANDAG completed a revenue study of the potential for toll revenue at the new crossing. Using a congestion pricing scheme of $1 to $7 for cars and $23 to $47 for commercial trucks, the study found that there is a greater than 90 percent chance revenues would cover the approximately $295 million in construction costs and $400,000 in annual operating costs.

Another innovative project for border crossing in California is the proposed Cross Border Air Passenger Terminal Facility at the Tijuana Airport. This proposal considers the construction of a terminal on the United States side of the border along with a port of entry and a pedestrian facility to allow United States' passengers greater access to flights using the Tijuana Airport which is located immediately adjacent to the border. A market study was completed in 2008 that indicated a market of up to 6.4 million annual passengers may use such a facility by 2030. A follow-up feasibility study has yet to be completed, and the potential of using fees to pay for construction and operation of such a facility has not been evaluated.

California currently has one operational conveyor belt that carries aggregate across the border at Calexico-Mexicali. This belt opened in 2007 and represents private sector involvement in a specialized border crossing application as the conveyor belt is owned and operated by Aggregate Products, Inc. A second conveyor belt of this type is proposed near Otay Mesa by Mesa Austin Industries.

4.4 New York

The state of New York currently has no public-private partnership enabling legislation; however, they do have a bridge commission and a bridge authority that are federally chartered to own and operate specific bridges bordering Canada and the United States and the immigration plazas.

Niagara Falls Bridge Commission

The Niagara Falls Bridge Commission (NFBC) was established to finance, construct and operate the Rainbow Bridge. The NFBC is federally chartered to conduct international commercial financial transactions and issue federal tax-exempt bonds. The Commission also operates the Whirlpool Rapids (Lower) and Lewiston-Queenston Bridges. The NFBC has built and maintains all facilities on the Customs and Immigration Plaza on both the Canada and United States sides of the border. The NFBC receives revenue to maintain facilities and continue to provide services through collecting various user fees. These user fees include tolls collected on the United States side only and private-sector tenant leases. Tenant leases include Customs and Border Protection, the duty free store, and commercial brokers operating on the property. Fast food restaurants and currency exchange establishments provide an agreed upon percentage of sales to the NFBC. Upon the retirement of the Bridge Revenue Bonds, the bridges will be transferred to the state of New York and the Province of Ontario.

Peace Bridge Authority

The Peace Bridge Authority (PBA) is a public entity and acts as landlord for Customs and Immigration on both the Canada and United States side of the border at Fort Erie, Ontario and Buffalo, New York. Sources of revenue include the toll bridge, rental and fee income from U.S Bureau of Customs and Border Protection and Government Services Canada. Both the United States and Canada duty free stores operate on property owned by the PBA and provide lease payments to the Authority. PBA also receives lease payments from communication conduits spanning the Peace Bridge.

PBA has the power to acquire, hold and dispose of real and personal property for its corporate purposes. PBA is authorized under its legislation to establish and collect tolls and charges as are necessary to produce sufficient revenues to meet its expenses of maintenance and operation, to pay the principal of and interest on bonds of the PBA, and to fulfill the terms of any agreement

made with the holders of the bonds until such bonds and the interest can be paid and distributed.

When all bonds are paid or discharged, title to the property and assets of the PBA will be transferred to the state of New York or within Canada. PBA is vested until July 1, 2020, or until all of the bonds issued by PBA have been fully paid or discharged.

4.5 Michigan

The state of Michigan currently does not have public-private partnership legislation. There are various types of ownership of Michigan border crossings ranging from privately owned, DOT owned, and proposed GSA owned. The state of Michigan also proposes to build a new border crossing through the use of public-private partnership funding.

Ambassador Bridge

The Ambassador Bridge is a privately owned and operated border crossing located in Detroit, Michigan and Windsor, Ontario. The Ambassador Bridge is owned by the Detroit International Bridge Company on the United States side and the Canadian Transit Company on the Canada side. The Michigan DOT owns all roadways on the United States side leading up to the plaza property line. The duty free store on the United States side is fully owned by the Detroit International Bridge Company and the Windsor duty free store is operated in partnership by the Canadian Transit Company and the University of Windsor. Tolls are collected on both the Canada and United States side of the bridge, and customs and immigration provides lease payments to the respective companies.

Blue Water Bridge

The Michigan DOT owns and operates the United States portion of the Blue Water Bridge and the facility falls under the Metro Region Maintenance Division of the Bureau of Highway Technical Services. The Blue Water Bridge is a tolled facility and provides services such as brokers, duty free shopping, and currency exchange. Facilities are leased from MDOT and there are no plans to engage in public-private partnerships for the new plaza.

The Detroit River International Crossing

The Detroit River International Crossing (DRIC) is a new border crossing system that is estimated to cost $1.8 billion for the United States portion of the bridge, the United States plaza, and a new interchange with I-75. The interchange will be paid for with 80 percent federal and 20 percent state funds. The plaza will be the responsibility of the GSA. The preferred delivery mechanism for the bridge is a public-private partnership in the form of a long-term concession agreement that will seek to maximize private sector participation and financing. The bridge is expected to be financially self-sustaining from a reasonable toll charge to its users. All United

States environmental approvals were received as of January 14, 2009. The project is moving towards the design and property acquisition phases. It is expected that construction will begin on some components of the project in 2010, with the project open to traffic during 2015.

Rail Tunnel Investigations

The St. Clair Tunnel Proposal looked at whether the use of the 1980s tunnel as a commercial vehicle crossing would be a feasible and practical option to expand border crossing capacity on the Ontario – Michigan border by reopening the single tube tunnel as a single-lane border crossing facility. The project was proposed to be financed by private sector investors. The St. Clair Tunnel Proposal was determined to not be feasible as this duplicate border crossing did not significantly improve border crossing capacity and would not negate the need for the public sector investments currently underway at the Blue Water Bridge.

4.6 Minnesota

MNDOT has not done any privatization in regards to border facilities. MNDOT's role has been limited primarily to discussions with Customs/GSA regarding facility upgrades, traffic, and maintenance practices. There are no GSA or inspection agency leases paid to the state. GSA facility upgrades are planned to some plazas. However, limited truck volumes reduce the need for major facilities at Minnesota international borders. There are currently no private enterprises such as commercial truck stop type activities located at non-border facilities such as public rest areas. However, there are ongoing discussions of allowing these operations to take place, although to date nothing has occurred. ITS partnerships have probably been the most successful to date.

4.7 New England (Vermont)

Vermont currently does not have public-private partnership enabling legislation and has no short-term plans to implement public-private partnership enabling legislation. They have partnered on federally driven transportation projects providing highway components. They also participate in matching rail funding through a 1/3 - 1/3 - 1/3 state infrastructure bank program. Plaza facilities on the Vermont borders are federally owned or located on leased land. Recently, the Derby Line Port of Entry was renovated. This project was earmarked for $6 million. There are no tolls at any of the Vermont/Quebec border crossings.

4.8 Western States (North Dakota, Montana)

North Dakota

North Dakota has 18 border crossings, more than any other northern state. There is currently no enabling legislation for public-private partnerships in North Dakota, although they have participated in some public-private partnership projects using rail funds to extend rail facilities.

Border crossings are not tolled, and all border crossing are owned by GSA or CBP. Located on the plazas are customs brokers and duty free shops. In 1999, the Emerson/Pembina border crossing study was completed. This study is expected to be reexamined for upcoming plaza improvements within the next six months.

Montana

In 2004 a joint border facility opened housing both Canada and United States federal authorities. The state of Montana does engage in toll facilities at border crossings.

4.9 Washington State

The state of Washington has public-private partnership enabling legislation. Currently there are no public-private partnerships in place at border crossings, and all border crossings in Washington are federally owned. Washington has recently signed an agreement with FHWA for the Federal Border Congestion Program which will allow them access to innovative financing and enable implementation of advanced ITS systems that will lead the public to border crossing facilities and provide accurate information to them on wait times. This agreement will also allow the DOT to examine what opportunities are currently available to them. WSDOT has instituted FAST lanes, although they are underutilized. As a result of this, they have begun to look at using HOT lanes along with the FAST lanes through a congestion pricing program.

WSDOT will be looking at available avenues of public-private partnership operations in the future for transportation projects. A Study for Joint Development opportunities for public-private partnerships was recently completed. This study looked at the potential for innovative financing and partnerships at Washington State Ferries Terminal sites.

Plaza expansion projects include the "remodeling" of the Lynden/Aldergrove crossing at SR 539/Highway 13. Additionally, GSA is doing some work at the Sumas/Huntingdon crossing at SR 9/Highway 11. A successful public-private partnership using tolling within Washington is the Tacoma Narrows Bridge in Pierce County on SR 16.

4.10 Alaska

The authority to enter into public-private partnerships is restricted to the state DOT or state turnpike authority and only allows for the Knik Arm Bridge and Toll Authority to enter into public-private partnerships. The Knik Arm Bridge is located in Anchorage and is not associated with a border crossing. There are no public-private partnerships at border crossings, and no plans for expansion of border crossings.

5.0 Identified Implementation Issues for Public-Private Partnerships at Border Crossings

As a result of the information obtained during the survey, the Study Team was able to identify several key implementation issues for the use of public-private partnerships at border crossings. In later sections of this document, these issues will be discussed in more detail with regard to specific implementation of public-private partnerships at Arizona border crossings. The following is a summary of key issues identified.

5.1 Cooperation Among Agencies and Stakeholders

The Study Team heard about the importance of agency and stakeholder cooperation from various officials during the public-private partnership and border project discussions. Phrases like 'bringing stakeholders along', 'having everyone on board', and 'people moving in the same direction' were common. Because border projects commonly involve many different agencies from two countries at the federal, state, and local levels, projects can easily become delayed for years if coordination is not thorough and inclusive. On the proposed Otay Mesa East project, there are 14 agencies regularly being coordinated with including the use of bi-monthly, or more frequent, meetings. Introducing one or more private sector concessionaires into the process will not reduce the need to have constant dialogue with the stakeholder agencies involved.

5.2 Oversight

Several states, including California, give legislative and/or transportation commission oversight into public-private partnership agreements, including potential agreements for border crossings. While oversight of the public-private partnership arrangements is needed, if the political will for public-private partnership implementation does not exist for a specific project, attempts to move towards a public-private partnership may be futile. In addition to stakeholder approvals, legislative and public willingness to support a public-private partnership at a border crossing need to be considered early on in the examination of the feasibility of using a public-private partnership for a project.

5.3 Revenue

Successful public-private partnership implementation will require an adequate revenue source to interest private sector participants in the project, while ensuring the public interests in the project are protected. Potential border related revenue sources identified during the survey were:

- tolls or other user fees,
- parking fees,
- retail operations adjacent to the border (duty free or other), and
- advertising.

A couple of key issues in determining the viability of potential revenue sources are (1) the ability to collect the revenue and (2) whether there is enough revenue to cover the long-term capital and potentially the maintenance/operation costs of the port of entry. Potential toll revenue is revenue is reduced at a border crossing if another port of entry close by has no tolls. In considering Otay Mesa East, the officials involved recognize the need to balance the value provided by the congestion managed crossing using variable toll rates since the existing crossing is less than two miles away. For crossings in urban areas, it is more difficult to set up a revenue generating relationship with retail operations unless some means can be identified to provide the retail outlet special access to and from the crossing. Selling of advertising may provide a small source of revenue, but is unlikely to be adequate to pay for long-term capital costs.

5.4 Toll Collection

The survey identified specific issues with toll collection and ports of entry. These include:

- Customs and Border Protection cannot collect tolls. The tolls need to be collected at a location adjacent to the inspection facilities and outside of the secure portions of the port of entry. For locations with bridges such as in Texas, the bridge is tolled; not the port of entry. Similarly with the Otay Mesa East project, tolls are proposed on roads leading to the port of entry; not the port of entry itself. The toll collection also requires separate infrastructure with potential queues involved unless all electronic (cashless) collection is used. In a highly urban setting on a non-river crossing, finding a facility to effectively toll may be difficult.
- Who collects the toll and how is revenue transferred? There are potential efficiencies in collecting tolls on traffic flowing in only one direction, assuming a relatively even flow exists in both directions. However, this requires bi-national revenue sharing and transfer arrangements.
- Enforcement. Customs and Border Protection cannot send United States citizens back to Mexico for non-payment of tolls. The ability to restrict crossing the border for non-payment of tolls on a connecting facility is not the same as toll collection enforcement on other toll facilities.

5.5 Security

The survey did not identify any specific security issues associated with potential public-private partnership implementation so long as the federal land for the port of entry is kept secure and away from the commercial operations. The implementation issue is how to execute a revenue-generating public-private partnership arrangement for a port of entry while maintaining the separation of secure inspection functions. Public perception issues regarding private facilities and border crossings would also need to be considered and addressed.

5.6 Facility Ownership and Operation

GSA is strongly targeting their ownership of all ports of entry on the southern border. Several exceptions exist on the northern border, including for projects in the development stage. On the southern border, there are very few border crossings where the port of entry itself (as opposed to adjacent roads and bridges) is not owned by GSA. GSA is working to phase out non-GSA ownership at two crossings in Texas. Generally, GSA expects to have full ownership of land donated for a new port of entry. In the case of Otay Mesa East, GSA expects to receive ownership of the new port of entry once it is constructed. This is a potential issue for the use of public-private partnerships at border crossings as typical design-build-operate concession models would not work.

6.0 Cross Border Commodity Movements between Arizona and Mexico

This section of the report recaps the freight flow analysis from the *Arizona Multimodal Freight Analysis Study* and also adds additional insight derived from a new dataset which will assist in valuing the commodities that pass through the ports of entry.

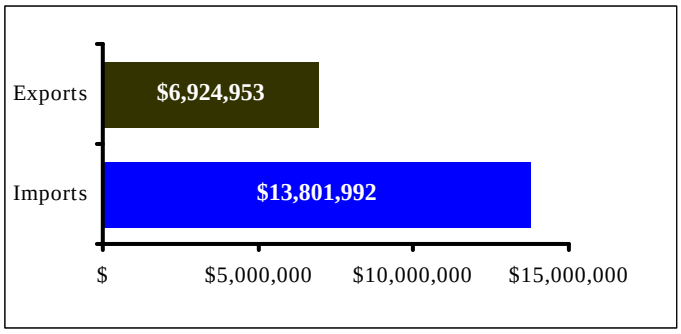
6.1 Data Sources and Approach

Two information sources were used for this report: (1) Global Insights Inc.'s TRANSEARCH® commodity movement database for 2005, augmented by (2) the Bureau of Transportation Statistics' (BTS) Transborder Freight Data Report for 2007.

6.2 Value of Exports and Imports through Arizona's Ports-of-Entry

Export and import values for 2007 between the US and Mexico that moved only through Arizona's ports of entry are shown in **Exhibit 2**. Export value of $6.92 billion represents goods that originated in all US states that are destined to all Mexican states (southbound flows). Import value of $13.80 billion represents goods that originated in all Mexican states destined to all US states (northbound flows). The value of imports were nearly double the value of exports.

Exhibit 2: 2007 Exports and Imports through Arizona's Ports of Entry
(value in 1,000s)



Source: WSA Analysis of 2007 Bureau of Transportation Statistics

The amounts above are for Arizona ports of entry and do not include values for exports or imports of goods moving between Arizona-Mexico that could have passed through ports of entry in California, New Mexico, or Texas.

6.3 Exports to Mexico

US Exports to Mexico that Move through Arizona's Ports of Entry

In 2007, exports valued at approximately $6.93 billion destined for Mexico moved through Arizona's seven port of entry locations. Export values represented in **Exhibit 3** originated in all US states, not just in Arizona. **Exhibit 3** shows the distribution of the export values through the

different ports of entry by transportation mode. Nogales handled the largest value of exports with $4.83 billion moved by truck and $1.11 billion moved by rail. The "Other" category represents flows that may have moved by air, pipeline, and other means, or could possibly reflect erroneous data inputs.

Exhibit 3: 2007 Value of US Exports by Mode to Mexico through Arizona's Ports of Entry
(value in 1,000s)

Exports to Mexico By Mode	Border Crossing At Arizona Ports of Entry (POEs)							Export Total
	San Luis	Lukeville	Sasabe	Nogales Mariposa	Nogales DeConcini	Naco	Douglas	
Truck Value	$426,568	$10,527	$592	$4,827,451		$53,294	$400,093	$5,718,524
Truck Percentage	6.2%	0.2%	0.0%	69.7%		0.8%	5.8%	82.6%
Rail Value	$13				$1,112,048		$5	$1,112,065
Rail Percentage	0.0%				16.1%		0.0%	16.1%
Other Value	$212	$501		$92,281		$185	$1,186	$94,364
Other Percentage	0.0%	0.0%		1.3%		0.0%	0.0%	1.4%
Total Export Value	$426,792	$11,028	$592	$4,919,732	$1,112,048	$53,479	$401,283	$6,924,953
POE's % of Total	6.2%	0.2%	0.0%	71.0%	16.1%	0.8%	5.8%	100.0%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

The vast majority of exports moved through Nogales. Exhibit 3 shows Nogales handled over 87% of the value of the exports, San Luis handled 6.2% and Douglas handled 5.8%. Approximately 83% of the goods crossed through the Arizona's ports of entry by truck and 16% were carried by rail. Rail activity was reported only through the Nogales-DeConcini Land Port of Entry.

Exports from US States

The top 10 states receiving imported goods from Mexico through Arizona's ports of entry are shown in **Exhibit 4**. The top 10 states generated nearly $6.45 billion of exports and represented over 93% of the total value shown in **Exhibit 3**. The majority of exports originated in the State of Arizona, followed by Michigan and California. Although more distant states may not represent opportunities for Public-Private Partnership initiatives, it is important to understand that the value and volumes of the traffic they generate will pass through Arizona's ports of entry.

In 2007, Arizona's exports to Mexico were $4.38 billion (**Exhibit 4**, top row, Origin State Total). This amount represented approximately 68% of the $6.45 billion for the top 10 exporting states and over 63% of the $6.92 billion US total. The values of the various commodities exported by Arizona are covered in detail in **Exhibit 10**.

Exhibit 4: 2007 Value of US Exports to Mexico from Top 10 US Exporting States
(value in 1,000s)

Export's Top 10 Origin US States	Border Crossing At Arizona Ports of Entry (POEs)						Origin State Total
	San Luis	Lukeville	Sasabe	Nogales	Naco	Douglas	
Arizona	$225,744	$7,857	$290	$3,814,777	$26,306	$306,053	$4,381,028
Michigan	$223			$1,024,066	$2,634	$48	$1,026,972
California	$131,102	$302	$302	$214,918	$1,705	$4,360	$352,688
Texas	$24,425			$109,416	$6,485	$20,644	$160,970
Illinois	$989			$107,095	$549	$1,016	$109,648
Washington	$24,358			$59,040	$4,895	$518	$88,811
Indiana				$88,674	$13	$77	$88,764
North Carolina	$1,553	$2,545		$77,828	$696	$178	$82,800
Wisconsin	$823			$76,427	$475	$687	$78,411
Iowa	$16			$78,190	$90	$36	$78,331
Value For Top 10 States	$409,234	$10,704	$592	$5,650,430	$43,848	$333,616	$6,448,424
Percent Of Top's 10 Total	6.3%	0.2%	0.0%	87.6%	0.7%	5.2%	

Value Of Total Exports (Exhibit 3)	$426,792	$11,028	$592	$6,031,780	$53,479	$401,283	$6,924,953
Top 10's Percent of Total	95.9%	97.1%	100.0%	93.7%	82.0%	83.1%	93.1%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

Values of 2007 US exports received by Mexican states that crossed through Arizona's ports of entry are shown in **Exhibit 5**. Due to its proximity to Arizona, the State of Sonora received the most exports, valued at $5.43 billion, or 78% of the $6.92 billion total. When Sonora* is combined with Sinaloa* and Jalisco*, the two states adjacent to Sonora and Arizona, the total value of exports is $5.89 billion or 85%. These three Mexican States represent a significant trading cluster for Arizona.

Baja California received exports from Arizona valued at only $52 million, or 0.7% of the total. Two other Mexican States, the District Federal and State of Mexico, are a somewhat larger trade cluster that received exports valued at $491 million, or 7% of the total. However their distance from Arizona may reduce their interest in local or regional Public-Private Partnership initiatives.

Exhibit 5: 2007 Value of US Exports to Mexican Destination States (value in 1,000s)

Export's Destination To Mexican States	Border Crossing At Arizona Ports of Entry (POEs)						Destination State Total
	San Luis	Lukeville	Sasabe	Nogales	Naco	Douglas	
Sonora *	$275,281	$7,666	$311	$4,757,212	$42,336	$349,943	$5,432,749
District Federal	$8,722			$226,452	$6,163	$8,399	$249,736
Sinaloa *	$2,179	$207		$240,354	$10	$460	$243,210
State of Mexico	$25,015			$209,413	$821	$6,620	$241,870
Jalisco *	$60,218	$221		$160,919	$134	$451	$221,943
Nuevo Leon	$856			$83,144	$1,427	$16,910	$102,336
Durango	$115			$100,799	$273	$8	$101,194
Coahuila	$31	$22		$68,191	$283	$12,469	$80,996
Guanajuato	$507			$54,933	$14	$424	$55,878
Baja California	$41,360	$2,212	$281	$8,633	$38	$471	$52,994
State Unknown	$1,378	$602		$46,472	$455	$2,665	$51,573
Queretaro				$23,995	$46	$3	$24,044
Tamaulipas	$5,324			$13,502	$165	$617	$19,608
Chihuahua	$3,098			$12,227	$825	$1,228	$17,379
Yucatan				$3,315			$3,315
San Luis Potosi				$2,693	$184	$32	$2,908
Michoacan	$864	$38		$1,837		$95	$2,833
Quintana Roo	$1,656			$369		$21	$2,045
Nayarit	$43	$4		$1,530		$5	$1,582
Puebla	$109			$1,004	$41	$3	$1,155
Export Total	$426,792	$11,028	$592	$6,031,780	$53,479	$401,283	$6,924,953
Percent of Total	6.2%	0.2%	0.0%	87.1%	0.8%	5.8%	

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

6.4 Export Growth

Potential export growth is used to identify the size of future markets to indicate where Public-Private Partnership initiatives may be most successfully directed.

Value of Exports from Arizona Counties to Mexico

The value of exports to Mexico that originated in each Arizona County is shown in **Exhibit 6**. The base year is 2005. Forecasts are shown for 2010, 2020 and 2030. The counties are sorted in descending order on 2005 values. The 2010 forecast shows statewide growth will be approximately 5%. The forecast indicates export goods will grow by 31% in 2020 over 2010, and by 27% in 2030 over 2020.

BTS's Transborder Freight Report indicated the 2007 export value for Arizona was $4.38 billion (shown in **Exhibit 4**, top row, Origin State Total). When integrated with TRANSEARCH export amounts, the BTS amount reasonably fits between Arizona's 2005 historic amount of $4.23

billion and the 2010 forecast amount of $4.43 billion. The 2005 and 2010 amounts are shown in the bottom row in **Exhibit 6**.

County level forecasts detail absolute values and percentage of change. Maricopa County's 2005 exports to Mexico were $2.77 billion; a 65% share of the State's total. They are forecast to grow to a 68% share by 2030. Pima and Pinal County's exports both had an export share at 7.2% in 2005, increasing to 7.3% in 2030. Cochise County's export share in 2005 was at 2.7%, decreasing to 2.4% in 2030. Yuma County's 0.9% export share did not change between 2005 and 2030. Santa Cruz County's 0.2% export share did not change between 2005 and 2030.

Exhibit 6: Growth in Export Value from Arizona Counties to All Mexican States
(value in $1,000s)

Arizona Origin Counties	2005	2010		2020		2030	
	Value	Value	Percent Change	Value	Percent Change	Value	Percent Change
Maricopa	$2,767,770	$2,921,525	6%	$3,895,491	33%	$5,019,369	29%
Greenlee	$468,290	$440,051	-6%	$542,538	23%	$648,152	19%
Pima	$303,894	$331,714	9%	$431,945	30%	$542,800	26%
Mohave	$183,457	$203,695	11%	$247,778	22%	$291,959	18%
Yavapai	$132,506	$140,294	6%	$187,853	34%	$243,330	30%
Cochise	$115,378	$125,677	9%	$150,798	20%	$178,070	18%
Pinal	$89,764	$90,294	1%	$117,335	30%	$147,591	26%
Yuma	$38,782	$41,250	6%	$55,782	35%	$72,205	29%
Coconino	$31,717	$32,146	1%	$41,563	29%	$52,073	25%
Navajo	$31,265	$35,738	14%	$46,534	30%	$58,258	25%
Apache	$24,575	$29,541	20%	$41,594	41%	$55,526	33%
Gila	$17,416	$16,751	-4%	$21,334	27%	$26,230	23%
Graham	$14,483	$14,550	0%	$19,014	31%	$24,097	27%
Santa Cruz	$10,751	$12,530	17%	$16,377	31%	$20,670	26%
La Paz	$4	$4	1%	$5	18%	$6	10%
Arizona Total	$4,230,050	$4,435,760	5%	$5,815,942	31%	$7,380,335	27%

Source: WSA Analysis of 2005 TRANSEARCH

See **Appendix C** for a list of all export commodity type values.

Tonnage of Exports from Arizona Counties to Mexico

Tonnage of exports to Mexico that originated in Arizona's Counties is shown in **Exhibit 7**. Maricopa, Pima, Pinal, and Yuma are each forecasted to grow at least 30% during the decade from 2010 to 2020, and by a similar amount going out to 2030. Specific tonnage by commodity is detailed in **Exhibit 10**. This economic expansion will create business opportunities that could expand employment in sectors such as transportation, warehousing and supply chain management.

Exhibit 7: Growth in Export Tonnage from Arizona Counties to All Mexican States

Arizona Origin Counties	2005	2010		2020		2030	
	Tonnage	Tonnage	Percent Change	Tonnage	Percent Change	Tonnage	Percent Change
Maricopa	2,004,661	2,172,253	8%	2,969,483	37%	3,878,851	31%
Cochise	699,843	781,937	12%	809,736	4%	883,243	9%
Pima	242,550	267,810	10%	355,917	33%	453,314	27%
Greenlee	214,667	201,459	-6%	239,959	19%	275,117	15%
Yavapai	108,837	120,266	11%	165,063	37%	218,479	32%
Mohave	58,925	66,465	13%	85,685	29%	106,667	24%
Pinal	58,454	61,182	5%	80,841	32%	103,097	28%
Navajo	45,205	50,301	11%	64,303	28%	78,732	22%
Apache	29,213	35,109	20%	49,406	41%	65,940	33%
Yuma	27,844	30,940	11%	43,394	40%	57,631	33%
Coconino	19,351	20,211	4%	26,949	33%	34,653	29%
Santa Cruz	10,666	11,519	8%	14,040	22%	16,352	16%
Graham	9,870	10,335	5%	13,846	34%	17,943	30%
Gila	8,267	8,194	-1%	10,607	29%	13,141	24%
La Paz	2	2	-1%	2	13%	2	6%
Arizona Total	3,538,353	3,837,983	8%	4,929,230	28%	6,203,161	26%

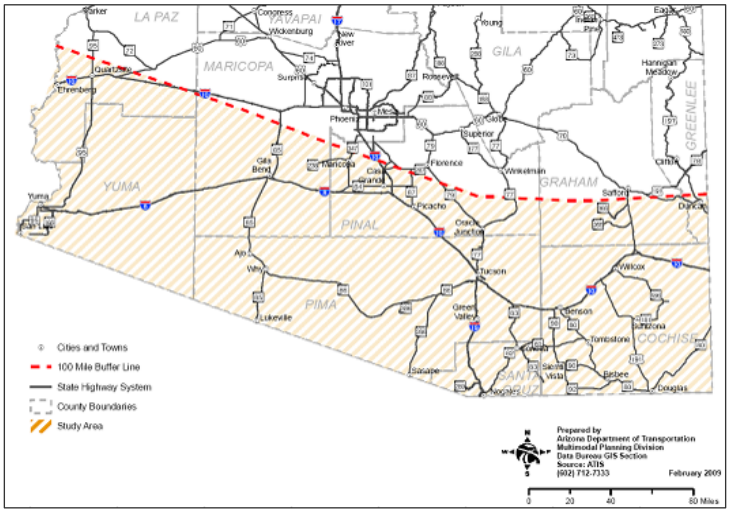
Source: WSA Analysis of 2005 TRANSEARCH

See **Appendix D** for a list of all export commodity type tonnages.

Arizona Border Counties and Mexican States in the Study Area

Goods Flow from Arizona's Border Counties to Adjacent Mexican States: The border region study area for this report which is shown in **Exhibit 8** includes Yuma, Pima, Santa Cruz, and Cochise Counties. They all lie along the Arizona-Mexico border. Maricopa and Pinal Counties, which are within the 100 mile boundary of the international border, are also included in the flow analysis because their large populations produce significant exports and attract a large amount of imports.

Exhibit 8: Arizona Counties in the Study Area



Three Mexican States, shown in **Exhibit 9**, were included in the analysis group: Sonora, Sinaloa, and Jalisco. These three states are labeled Adjacent Mexican States in this analysis because they lie along Mexican Highways 2 and 15, and the FerroMex Railroad line. The states form a commerce corridor from Guadalajara to Nogales and into Arizona via the border ports of entry. The three states receive approximately 89% of the value of the commodity flows that originate

in Arizona. The State of Sonora received over 83% of the Arizona commodity flows. The State of Nayarit which is also situated along this commerce corridor received less than 0.01% of the value of Arizona's exports and, therefore, was not included in the detailed analysis.

Exhibit 9: Mexican States in the Study

Top Commodities from Arizona's Border Counties to Adjacent Mexican States

The six Arizona counties in the study region generated over 86% of the value of the 2010 exports to Mexico. **Exhibit 10** shows 2010's top 5 commodity flow values from the Arizona Border Counties to the Adjacent Mexican States. In the table, for each Arizona County, the commodities are sorted in descending order by the value of the commodity. Ranked by value, the top commodities are:

- nonferrous metal basic shapes - 51%
- plastic matter or synthetic fibers - 21%
- farm machinery or equipment - 12%
- motor vehicles or equipment - 4%
- steel mill products - 3%

These top five commodities total 93% for the border county group, and over 60% of all commodity flow values from all of Arizona to all of Mexico. The top five of the counties have a relatively similar mix of export commodities. Only Santa Cruz has a unique mix of export commodities.

Exhibit 10: 2010 Value Forecast for Top 5 Export Commodities from Arizona Border Counties to Adjacent Mexican States (value in $1,000s)

Arizona Origin Counties	Commodity	Sonora	Jalisco	Sinaloa	Arizona County Total
Maricopa	Nonferrous Metal Basic Shapes	$1,101,992	$35,002	$1,282	$1,138,276
	Plastic Matter Or Synthetic Fibres	$429,483	$3,603	$5,763	$438,849
	Farm Machinery Or Equipment	$229,487	$24,466	$13,928	$267,881
	Motor Vehicles Or Equipment	$104,875	$1,651	$4,853	$111,379
	Steel Mill Products	$78,127	$51	$1,814	$79,992
Maricopa Total		$1,943,964	$64,773	$27,640	$2,036,377
Pima	Farm Machinery Or Equipment	$64,480	$6,055	$3,853	$74,388
	Nonferrous Metal Basic Shapes	$71,744			$71,744
	Plastic Matter Or Synthetic Fibres	$46,851	$382	$619	$47,851
	Paper	$31,560	$150	$5,375	$37,085
	Meat Or Poultry, Fresh Or Chilled	$3,978		$1,778	$5,755
Pima Total		$218,612	$6,587	$11,624	$236,823
Cochise	Farm Machinery Or Equipment	$25,106	$1,909	$1,444	$28,459
	Waste Or Scrap	$20,803		$352	$21,155
	Plastic Matter Or Synthetic Fibres	$16,381	$104	$216	$16,701
	Iron Ores	$16,398			$16,398
	Nonferrous Metal Basic Shapes	$7,808			$7,808
Cochise Total		$86,496	$2,013	$2,011	$90,520
Pinal	Nonferrous Metal Basic Shapes	$52,476			$52,476
	Plastic Matter Or Synthetic Fibres	$6,715	$40	$90	$6,845
	Paper	$5,025	$18	$852	$5,895
	Steel Mill Products	$3,734		$43	$3,778
	Nonferrous Primary Smelter Products	$3,715			$3,715
Pinal Total		$71,666	$58	$985	$72,709
Yuma	Nonferrous Metal Basic Shapes	$17,082			$17,082
	Plastic Matter Or Synthetic Fibres	$9,052	$57	$119	$9,228
	Farm Machinery Or Equipment	$3,015			$3,015
	Paper	$1,810	$6	$305	$2,120
	Steel Mill Products	$1,261			$1,261
Yuma Total		$32,219	$63	$424	$32,706
Santa Cruz	Leather Luggage Or Handbags	$3,475	$34	$156	$3,665
	Paper	$2,858	$10	$483	$3,351
	Narrow Fabrics	$1,654			$1,654
	Meat Or Poultry, Fresh Or Chilled	$357		$151	$507
	Field Crops	$252			$252
Santa Cruz Total		$8,596	$44	$789	$9,429
Mexico State Total		$2,361,553	$73,538	$43,473	$2,478,564

Source: WSA Analysis of 2005 TRANSEARCH data

Tonnage for 2010's top 5 commodity exports to the three Adjacent Mexican States from the Arizona Border Counties is shown in **Exhibit 11**. For each of the Arizona Counties, the commodities are sorted in descending order by tonnage of the commodities. Ranked by tonnage, overall for the six counties, the top commodities are:

- iron ores - 28%
- plastic matter or synthetic fibers - 23%
- field crops - 18%
- nonferrous metal basic shapes - 15%
- steel mill products and household or office furniture tied at - 6%

These top five commodities total almost 96% of this analysis group, and over 70% of all commodities tonnage from Arizona to all of Mexico.

Exhibit 11: 2010 Tonnage Forecast for Top 5 Export Commodities from Arizona Border Counties to Adjacent Mexican States

Arizona Origin Counties	Commodity	Sonora	Sinaloa	Jalisco	Arizona County Total
Maricopa	Plastic Matter Or Synthetic Fibres	478,599	6,422	4,015	489,037
	Field Crops	116,047	133,204	155,668	404,919
	Nonferrous Metal Basic Shapes	317,389	369	10,081	327,839
	Household Or Office Furniture	128,704	15,678	1,330	145,711
	Steel Mill Products	125,847	2,921	83	128,851
Maricopa Total		1,166,585	158,594	171,177	1,496,357
Cochise	Iron Ores	685,328			685,328
	Plastic Matter Or Synthetic Fibres	18,255	240	116	18,611
	Broken Stone Or Riprap	15,186	309	114	15,609
	Bituminous Coal Or Lignite	8,795	523		9,318
	Industrial Chemicals	3,665	3,734		7,399
Cochise Total		731,229	4,807	229	736,265
Pima	Plastic Matter Or Synthetic Fibres	52,209	690	426	53,324
	Paper	37,829	6,442	180	44,452
	Field Crops	26,872	8,293	1,150	36,315
	Nonferrous Metal Basic Shapes	20,663			20,663
	Farm Machinery Or Equipment	12,931	773	1,214	14,918
Pima Total		150,504	16,198	2,970	169,672
Pinal	Nonferrous Metal Basic Shapes	15,114			15,114
	Field Crops	4,018	3,165	458	7,641
	Plastic Mater Or Synthetic Fibres	7,483	100	45	7,628
	Paper	6,023	1,021	22	7,066
	Steel Mill Products	6,015	70		6,085
Pinal Total		38,653	4,356	525	43,534

Arizona Origin Counties	Commodity	Sonora	Sinaloa	Jalisco	Arizona County Total
Yuma	Plastic Matter Or Synthetic Fibres	10,088	133	63	10,284
	Nonferrous Metal Basic Shapes	4,920			4,920
	Field Crops	2,254	1,578	229	4,060
	Paper	2,169	365	7	2,542
	Steel Mill Products	2,032			2,032
Yuma Total		21,462	2,077	299	23,838
Santa Cruz	Paper	3,426	578	12	4,017
	Field Crops	2,130			2,130
	Meat Or Poultry, Fresh Or Chilled	387	163		550
	Narrow Fabrics	396			396
	Leather Luggage Or Handbags	327	15	3	345
Santa Cruz Total		6,666	756	15	7,437
Mexico State Total		2,115,099	186,788	175,214	2,477,102

Source: WSA Analysis of 2005 TRANSEARCH data

Truck and Rail Units Required For Export Traffic

The 2010 tonnage amounts are used to forecast the number of truck or rail units required to transport the commodities. A light weight commodity such as electronics or flowers will fill the cubic capacity of a truck trailer before the trailer's cargo weight limitation is reached (typically 40,000 to 45,000 pounds). This is termed "cubing-out". A heavy commodity such as batteries or grains when loaded into a trailer will exceed the trailer's cargo weight limitation and leave unused cubic volume capacity. This is termed "weighting-out".

The number of truck units required to transport the tonnages that move from Arizona's Border Counties to the Adjacent Mexican States is shown in **Exhibit 12**. Over 78,000 truck units are forecast for 2010 with almost 66,500 units, or 85%, originated in Maricopa County. **Exhibit 7** shows that export tonnage for Maricopa County is forecast to grow by 37% from 2010 to 2020 and by 31% from 2020 to 2030. That forecast would generate nearly 120,000 truck units originating in Maricopa County destined for Mexico. Pima County will generate approximately 7,000 truck units in 2010 destined to the three adjacent Mexican states and TRANSEARCH forecasts Pima County's volume to increase to almost 12,000 truck units by 2030.

Sonora is the destination in Mexico for the majority of truck units. There will be over 61,500 truck units destined to Sonora. Over 51,000 of those truck units will originate in Maricopa County and over 6,100 will originate in Pima County. Almost 26,000 of the truck units destined to Sonora will haul plastic or other synthetic commodities and nearly 11,000 will haul field crops and other food commodities.

Exhibit 12: 2010 Truck Unit Forecast for Top 5 Export Commodities from Arizona Border Counties to Adjacent Mexican States

Arizona Origin Counties	Commodity	Sonora	Sinaloa	Jalisco	Arizona County Total
Maricopa	Plastic Matter Or Synthetic Fibres	21,919	294	184	22,397
	Field Crops	3,249	5,957	7,268	16,474
	Nonferrous Metal Basic Shapes	12,338	14	392	12,744
	Household Or Office Furniture	8,718	1,062	90	9,870
	Steel Mill Products	4,892	114	3	5,009
Maricopa Total		51,117	7,441	7,937	66,495
Pima	Plastic Matter Or Synthetic Fibres	2,391	32	19	2,442
	Paper	1,578	269	8	1,854
	Field Crops	778	372	54	1,204
	Nonferrous Metal Basic Shapes	803			803
	Household Or Office Furniture	599	62		662
Pima Total		6,149	735	81	6,965
Pinal	Nonferrous Metal Basic Shapes	588			588
	Plastic Matter Or Synthetic Fibres	343	5	2	349
	Paper	251	43	1	295
	Field Crops	114	148	21	284
	Steel Mill Products	234	3		237
Pinal Total		1,529	198	24	1,752
Cochise	Plastic Matter Or Synthetic Fibres	836	11	5	852
	Broken Stone Or Riprap	499	10	4	513
	Field Crops	147	44	6	198
	Nonferrous Metal Basic Shapes	87			87
	Household Or Office Furniture	68			68
Cochise Total		1,638	66	15	1,719
Yuma	Plastic Matter Or Synthetic Fibres	462	6	3	471
	Nonferrous Metal Basic Shapes	191			191
	Field Crops	62	74	11	147
	Paper	90	15	0	106
	Household Or Office Furniture	93			93
Yuma Total		899	95	14	1,008
Santa Cruz	Paper	143	24	1	168
	Field Crops	63			63
	Meat Or Poultry, Fresh Or Chilled	17	7		24
	Leather Luggage Or Handbags	22	1	0	24
	Narrow Fabrics	19			19
Santa Cruz Total		263	32	1	296
Mexico State Total		61,596	8,567	8,072	78,236

Source: WSA Analysis of 2005 TRANSEARCH data

The number of rail units is forecast in a similar manner as truck units. The forecast for rail units needed to transport Arizona's export tonnage to Mexico is shown in **Exhibit 13**. Approximately 68% of the rail units needed to carry export tonnage will be used for field crops.

Exhibit 13: 2010 Rail Unit Forecast for Top Export Commodities from Arizona Border Counties to Adjacent Mexican States

Arizona Origin Counties	Commodity	Sonora	Sinaloa	Jalisco	Arizona County Total
Maricopa	Field Crops	469	61	5	535
	Grain Mill Products	88			88
	Motor Vehicles Or Equipment	75	2		77
	Sawmill Or Planing Mill Products	51			51
	Paper Or Building Board	38	3		40
Maricopa Total		720	66	5	792
Pima	Field Crops	103	3		107
	Grain Mill Products	15			15
	Paper Or Building Board	11	1		12
Pima Total		130	4		134
Cochise	Waste Or Scrap	92	2		94
	Field Crops	19			19
	Grain Mill Products	2			2
Cochise Total		113	2		115
Pinal	Field Crops	16			16
	Grain Mill Products	4			4
Pinal Total		20			20
Yuma	Field Crops	9			9
	Grain Mill Products	1			1
Yuma Total		11			11
Santa Cruz	Field Crops	8			8
	Grain Mill Products	1			1
Santa Cruz Total		9			9
Mexico State Total		1,002	72	5	1,080

Source: WSA Analysis of 2005 TRANSEARCH data

Export Commodity Values through Ports of Entry

The value of export commodities from all US States destined for all Mexican States moving through Arizona's ports of entry is shown in **Exhibit 14**. These commodities were filtered out of the BTS Transborder Freight Report that uses The North American Industry Classification System (NAICS). The TRANSEARCH 2005 database used the Standard Transportation Commodity Code (STCC). Although the two commodity description codes are similar, there is not an exact match for all commodities. Thus, **Exhibit 14** is used for a magnitude of scale comparison for all commodities that pass through Arizona's ports of entry.

Exhibit 14: 2007 Value of Top 10 Commodities Exported to Mexico through Arizona's Ports of Entry (value in $1,000s)

Top 10 Export Commodities To All Mexican States	Border Crossing At Arizona Ports of Entry (POEs)						Commodity Total
	San Luis	Lukeville	Sasabe	Nogales	Naco	Douglas	
Electrical machinery and equip	$80,395	$93	$229	$1,673,111	$4,501	$71,795	$1,830,125
Vehicles, other than railway	$27,628	$421		$893,257	$1,694	$51,292	$974,292
Nuclear reactors, boilers, machines	$46,870	$6,579	$23	$805,561	$23,571	$44,566	$927,169
Plastics and articles thereof	$44,305	$249	$43	$472,252	$1,651	$28,605	$547,106
Paper Products	$15,669	$14	$36	$203,146	$497	$11,788	$231,151
Edible fruit and nuts	$79,961			$125,472		$563	$205,995
Articles of iron or steel	$15,461	$117	$4	$146,759	$2,288	$15,658	$180,287
Iron and steel	$2,177		$45	$155,083	$1,531	$11,656	$170,492
Optical, photographic, instruments	$1,525	$45	$102	$152,685	$186	$11,147	$165,690
Ores, slag and ash				$90,678	$294	$43,269	$134,240
Value of Top 10 Export Commodities	$313,992	$7,518	$482	$4,718,004	$36,212	$290,339	$5,366,547
POE's Percent of Total	5.9%	0.1%	0.0%	87.9%	0.7%	5.4%	

Value Of Total Exports (Exhibit 3)	$426,792	$11,028	$592	$6,031,780	$53,479	$401,283	$6,924,953
Top 10's % Of Total Exports	73.6%	68.2%	81.4%	78.2%	67.7%	72.4%	77.5%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

See **Appendix E** for a list of all export commodities through Arizona's ports of entry.

6.5 Imports from Mexico

US Imports from Mexico that Move through Arizona's Ports of Entry

In 2007, US imports from all Mexican States that moved through Arizona's seven ports of entry were valued at $13.80 billion. Import values shown in **Exhibit 15** indicate by mode of transportation their distribution through the different ports of entry. Nogales handled the largest value of imports with $8.42 billion moved by truck and $3.72 billion moved by rail. The "Other" category represents flows that may have moved by air, pipeline, and other means or could possibly reflect erroneous data inputs.

Exhibit 15: Value of Imports from Mexico by Mode through Arizona's Ports of Entry
(value in 1,000s)

Imports to Mexico By Mode	Border Crossing At Arizona Ports of Entry (POEs)						Export Total
	San Luis	Lukeville	Nogales Mariposa	Nogales DeConcini	Naco	Douglas	
Truck Value Truck Percentage	$704,950 5.1%	$485 0.0%	$8,425,247 61.0%		$68,261 0.5%	$885,133 6.4%	$10,084,076 73.1%
Rail Value Rail Percentage				$3,716,990 26.9%			$3,716,990 26.9%
Other Value Other Percentage			$925 0.0%				$925 0.0%
Total Import Value	$704,950	$485	$8,426,172	$3,716,990	$68,261	$885,133	$13,801,992
POE's % of Total	5.1%	0.0%	61.0%	26.9%	0.5%	6.4%	100.0%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

The vast majority of the imports moved through Nogales. **Exhibit 15** shows Nogales handled 88% of the value of the imports, San Luis handled 5.1%, and Douglas handled 6.4%. Approximately 73% of the goods crossed through Arizona's ports of entry via truck and 27% were carried by rail. The only rail activity reported was through the Nogales-DeConcini Port of Entry.

Imports to US States

The top 10 states receiving imports from Mexico through Arizona's ports of entry are shown in **Exhibit 16**. These top 10 states generated nearly $12.66 billion of exports and represented over 92% of the $13.80 billion total value shown in **Exhibit 15**. The majority of the imports were destined for the State of Arizona, followed by Michigan and California.

In 2007, Arizona's imports from Mexico were $4.70 billion (top row, **Exhibit 16**, Origin State Total). Arizona represented approximately 37% of the $12.66 billion for the top 10 importing states and over 34% of the $13.80 billion import total for the US. Goods from Mexico to other US states represent 66% of the total value of the imports. Over 54% of the goods imported from Mexico through Arizona's ports of entry enter the national highway grid and head toward the Midwest and other eastern states. Additional information on commodity flows passing through Arizona can be found in ADOT's *Arizona Multimodal Freight Analysis Study*, Technical Memorandum #1.

The San Luis II Port of Entry will soon attract a portion of the imports that now pass through the Nogales Ports of Entry. A new highway, expected to open in 2010, will parallel the Sonora coastline connecting Guaymas to San Luis Rio Colorado due south of Yuma, AZ. Trucks that now use Mexico Highway 15 to carry freight from/through Guaymas to the border crossing at Nogales and then use I-19, I-10 and I-8 to deliver freight in western Arizona, California or Nevada will be able to use the new, shorter and safer alternative route. The 5.2% share that San Luis currently handles will increase as drivers adopt the new route.

The values of the various commodities imported from Mexico are detailed in **Exhibit 19**.

Exhibit 16: Value of Imports from Mexico through Arizona's Ports of Entry to the Top 10 US Destination States (value in 1,000s)

Import's To Top 10 US Destination States	Border Crossing At Arizona Ports of Entry (POEs)					Destination State Total
	San Luis	Lukeville	Nogales	Naco	Douglas	
Arizona	$54,119	$149	$4,170,267	$24,230	$454,725	$4,703,491
Michigan			$3,513,016	$626		$3,513,642
California	$224,591		$957,180	$8	$5,700	$1,187,480
Illinois			$777,227	$17	$10,024	$787,268
Pennsylvania	$2,990		$618,868	$3,058	$5,956	$630,871
Texas	$2,425	$306	$447,799	$62	$108,794	$559,386
New York			$282,199	$30,121	$148,657	$460,977
Massachusetts	$378,353		$29,982			$408,334
Wisconsin			$215,685			$215,685
Connecticut	$801		$140,306	$5,524	$44,094	$190,725
Value For Top 10 States	$663,279	$455	$11,152,529	$63,646	$777,952	$12,657,861
Percent Of Top's 10 Total	5.2%	0.0%	88.1%	0.5%	6.1%	

Value Of Total Imports (Exhibit 15)	$704,950	$485	$12,143,162	$68,261	$885,133	$13,801,992
Top 10's Percent of Total	94.1%	93.8%	91.8%	93.2%	87.9%	91.7%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

6.6 Import Growth

Value of Imports to Arizona from All Mexican States

The value of commodities that were imported from all of the Mexican States to all Arizona Counties is shown in **Exhibit 17**. The Mexico States are sorted on descending value of Arizona's imports. Forecasts for 2010, 2020 and 2030 show there will be significant increases in the value of commerce originating in Mexico destined for Arizona.

In **Exhibit 16** above, BTS's Transborder Freight Report indicated the 2007 import value for Arizona was $4.70 billion (top row, Destination State Total). When compared to TRANSEARCH amounts, the BTS amount fits between Arizona's 2005 historic amount of $3.77 billion and the 2010 forecast amount of $4.99 billion. The 2005 and 2010 amounts are shown in the bottom row in **Exhibit 17**.

Forecasts at the Mexican State level show the absolute values and percentage of change. The value of 2005 imports received by Arizona Counties from Sonora was $944 million, a 25% share of total Mexican imports. Sonora's value is forecast to grow to 27% by 2020, and to 30% by 2030. Clearly, Sonora will increasingly become the major source of commodities imported by

Arizona. Import share from Nuevo Leon to Arizona was at 11.8% in 2005 and decreasing to 10.4% in 2030. Import share from Jalisco to Arizona was at 4.9% in 2005 decreasing to 4.8% in 2030. Import share from Sinaloa to Arizona was at 3.4% in 2005 increasing to 4.9% in 2030.

The value of 2005 imports received by Arizona from Baja California Norte and Baja California Sur was only $40.2 million, or approximately 1% of Mexico's total to Arizona. An unknown percentage of those imports may have crossed the border at Mexicali to California and used US highways to reach Arizona, further reducing the amount Baja's total that crossed through the port of entry at San Luis.

Exhibit 17: Import Value Growth from All Mexican States to Arizona Counties
(value in 1,000s)

Mexico Origin State	2005	2010		2020		2030	
	Value	Value	Percent Change	Value	Percent Change	Value	Percent Change
Sonora	$943,571	$1,286,474	36%	$1,920,182	49%	$2,540,582	32%
Nuevo Leon	$442,321	$571,531	29%	$773,956	35%	$895,067	16%
Mexico	$361,890	$478,123	32%	$661,938	38%	$804,307	22%
Veracruz	$323,051	$422,166	31%	$572,639	36%	$675,338	18%
Coahuila	$249,489	$326,254	31%	$440,266	35%	$509,762	16%
Federal	$238,690	$314,434	32%	$430,808	37%	$517,071	20%
Jalisco	$183,992	$243,261	32%	$336,048	38%	$408,082	21%
Sinaloa	$129,276	$171,300	33%	$241,208	41%	$298,976	24%
Guanajuato	$86,631	$113,705	31%	$155,054	36%	$185,774	20%
Puebla	$81,923	$108,752	33%	$147,329	35%	$174,718	19%
San Luis Potosi	$77,918	$102,401	31%	$137,293	34%	$158,277	15%
Chihuahua	$74,133	$97,740	32%	$134,272	37%	$162,205	21%
Michoacan	$71,335	$93,340	31%	$125,862	35%	$147,721	17%
Hidalgo	$68,478	$90,254	32%	$123,312	37%	$148,205	20%
Oaxaca	$56,979	$74,357	30%	$100,820	36%	$119,966	19%
Tamaulipas	$47,689	$62,701	31%	$86,066	37%	$104,370	21%
Baja North	$35,905	$47,861	33%	$66,871	40%	$82,602	24%
Colima	$33,937	$44,294	31%	$60,182	36%	$71,690	19%
Chiapas	$33,353	$43,495	30%	$58,901	35%	$70,284	19%
Nayarit	$29,133	$38,258	31%	$52,553	37%	$63,481	21%
Morelos	$28,337	$37,181	31%	$50,707	36%	$62,609	23%
Durango	$27,705	$36,040	30%	$48,065	33%	$56,137	17%
Queretaro	$27,221	$36,485	34%	$50,483	38%	$61,075	21%
Tabasco	$24,272	$31,673	30%	$43,071	36%	$51,686	20%
Tlaxcala	$20,032	$26,175	31%	$35,407	35%	$41,690	18%
Yucatan	$18,632	$24,385	31%	$33,096	36%	$39,449	19%
Guerrero	$17,098	$22,183	30%	$29,894	35%	$35,477	19%
Zacatecas	$16,031	$20,280	27%	$26,822	32%	$31,597	18%
Quintana Roo	$12,221	$15,917	30%	$21,555	35%	$25,567	19%
Baja South	$4,313	$5,709	32%	$8,008	40%	$9,920	24%
Campeche	$2,643	$3,431	30%	$4,601	34%	$5,457	19%
Mexico Total	$3,768,201	$4,990,158	32%	$6,977,270	40%	$8,559,144	23%

Source: WSA Analysis of 2005 TRANSEARCH data

See **Appendix F** for a list of all import commodity type values.

Tonnage of Imports to Arizona from All Mexican States

The tonnage of imports from all Mexican States received by Arizona's Counties is shown in **Exhibit 18**. For all Mexican States, 2005 tonnage to Arizona was 2.42 million tons. By 2020 total tonnage is forecast to grow by 39%, and from 2020 to 2030 it is forecast to grow another 22%.

Import tonnage to Arizona Counties from Sonora 2005 tonnage is 25% of Mexico's total. It is forecast to grow 48% in 2020 over 2010, and grow another 30% in 2030 over 2020. Specific tonnage by commodity is detailed in **Exhibit 18**.

Exhibit 18: Import Tonnage Growth from All Mexican States to Arizona Counties

Mexico Origin State	2005	2010		2020		2030	
	Tonnage	Tonnage	Percent Change	Tonnage	Percent Change	Tonnage	Percent Change
Sonora	613,304	818,779	34%	1,209,141	48%	1,574,569	30%
Nuevo Leon	322,458	418,339	30%	564,849	35%	651,421	15%
Mexico	248,616	327,063	32%	450,418	38%	542,691	20%
Federal	191,627	248,467	30%	339,475	37%	403,088	19%
Veracruz	182,451	238,551	31%	323,554	36%	381,665	18%
Coahuila	141,306	184,801	31%	249,364	35%	288,694	16%
Jalisco	116,917	153,739	31%	211,909	38%	255,958	21%
Sinaloa	85,057	110,722	30%	155,441	40%	190,660	23%
Guanajuato	50,905	66,777	31%	91,015	36%	109,048	20%
Chihuahua	47,578	62,630	32%	85,693	37%	102,849	20%
Puebla	46,191	61,334	33%	83,105	35%	98,574	19%
Michoacan	44,708	58,531	31%	78,860	35%	92,311	17%
San Luis Potosi	44,224	58,105	31%	77,868	34%	89,737	15%
Hidalgo	38,481	50,725	32%	69,297	37%	83,279	20%
Oaxaca	32,000	41,771	31%	56,635	36%	67,391	19%
Tamaulipas	28,257	37,055	31%	50,846	37%	61,771	21%
Baja North	21,678	28,766	33%	40,126	39%	49,389	23%
Chiapas	19,169	24,982	30%	33,831	35%	40,429	20%
Colima	19,031	24,849	31%	33,763	36%	40,220	19%
Nayarit	16,373	21,506	31%	29,535	37%	35,672	21%
Queretaro	16,258	21,774	34%	30,116	38%	37,410	24%
Morelos	15,855	20,813	31%	28,383	36%	34,183	20%
Durango	15,601	20,301	30%	27,067	33%	31,610	17%
Tabasco	14,075	18,341	30%	24,951	36%	30,043	20%
Yucatan	11,331	14,848	31%	20,141	36%	23,955	19%
Tlaxcala	11,235	14,689	31%	19,869	35%	23,395	18%
Guerrero	9,656	12,531	30%	16,879	35%	20,025	19%
Zacatecas	9,205	11,611	26%	15,303	32%	17,985	18%
Quintana Roo	6,862	8,943	30%	12,111	35%	14,364	19%
Baja South	2,456	3,250	32%	4,560	40%	5,653	24%
Campeche	1,501	1,951	30%	2,616	34%	3,104	19%
Mexico Total	2,424,364	3,186,544	31%	4,436,722	39%	5,401,145	22%

Source: WSA Analysis of 2005 TRANSEARCH data

See **Appendix G** for a list of all import commodity type tonnages.

Top Commodities to Arizona's Border Counties from Adjacent Mexican States

The 2010 import value to Arizona's Border Counties from the three Adjacent Mexican States is $1.70 billion or 34.1% of 2010's $4.99 billion of total import value destined to Arizona's Border Counties shown in the bottom row in **Exhibit 17**. The total for the three states is forecast to grow to $2.49 billion, or 35.8%, in 2020, and $3.25 billion, or 37.9%, in 2030.

The 2010 top 5 commodity flow values from Sonora, Sinaloa and Jalisco to the Arizona Border Counties are shown in **Exhibit 19**. For each Mexican State, the commodities are sorted in descending order by value of commodity. Ranked by value, overall for the three states, the top commodities imported to Arizona's Border Counties are:

- engines or turbines - $899 million or 19%
- fresh vegetables - $224 million or 4.8%
- nonferrous primary smelter products - $51 million or 1.1%

Exhibit 19: 2010 Value Forecast for Top 5 Import Commodities from Adjacent Mexican States to Arizona Border Counties (value in 1,000s)

Mexico Origin State	Commodity	Maricopa	Pima	Yuma	Pinal	Santa Cruz	Cochise	Mexico State Total
Sonora	Engines Or Turbines	$774,347	$32,799	$12,587	$1,359	$6,662	$492	$828,248
	Nonferrous Primary Smelter Products	$31,498	$1,724	$736	$1,083		$622	$35,663
	Fresh Vegetables	$29,267	$1,694	$1,060	$1,855	$255	$1,167	$35,298
	Plastic Matter Or Synthetic Fibres	$21,967	$4,418	$4,709	$701	$322	$550	$32,668
	Men's Or Boys Clothing	$29,846	$1,476		$184	$104	$328	$31,939
Sonora Total		$886,926	$42,112	$19,092	$5,183	$7,343	$3,161	$963,816
Jalisco	Fresh Vegetables	$85,343	$5,238	$3,271	$4,916	$864	$2,787	$102,419
	Nonferrous Metal Basic Shapes	$28,538	$1,327	$725	$1,090	$167	$610	$32,458
	Engines Or Turbines	$24,819	$818	$300		$171		$26,109
	Motor Vehicles Or Equipment	$11,963	$593	$325	$485		$276	$13,642
	Nonferrous Primary Smelter Products	$8,433	$71	$71	$71		$71	$8,718
Jalisco Total		$159,097	$8,047	$4,692	$6,563	$1,203	$3,744	$183,345
Sinaloa	Fresh Vegetables	$71,899	$4,403	$2,757	$4,093	$713	$2,348	$86,213
	Engines Or Turbines	$38,100	$1,315	$492		$278		$40,186
	Nonferrous Primary Smelter Products	$6,160	$101		$82			$6,344
	Livestock Or Livestock Prod	$3,320	$159	$101	$148	$25	$85	$3,837
	Concrete, Gypsum, Or Plaster	$1,601	$99	$45	$67		$40	$1,852
Sinaloa Total		$121,080	$6,077	$3,394	$4,390	$1,017	$2,472	$138,431
Three Mexican State Total		$1,167,102	$56,236	$27,178	$16,136	$9,563	$9,377	$1,285,592

Source: WSA Analysis of 2005 TRANSEARCH data

Tonnage for 2010's top 5 commodity imports from the three adjacent Mexican States to Arizona's Border Counties is shown in **Exhibit 20**. For each of the Mexican States, the

commodities are sorted in descending order by tonnage of the commodities. Ranked by tonnage, overall for the three states, the top commodities are:

- engines or turbines 502,069 tons or 15.8%
- fresh vegetables 125,654 tons or 3.9%
- nonferrous primary smelter products 121,462 tons or 3.8%

Exhibit 20: 2010 Tonnage Forecast for Top 5 Export Commodities from Adjacent Mexican States to Arizona Border Counties

Mexico Origin State	Commodity	Maricopa	Pima	Yuma	Pinal	Cochise	Santa Cruz	Mexico State Total
Sonora	Engines Or Turbines	434,813	18,364	7,048	764	278	3,595	464,862
	Nonferrous Primary Smelter Products	81,462	4,775	2,427	3,569	2,052		94,284
	Fresh Vegetables	16,495	949	581	1,039	654	144	19,862
	Plastic Matter Or Synthetic Fibres	12,351	2,474	2,636	394	309	182	18,346
	Misc Furniture Or Fixtures	11,120	3,039	2,732	407	259	366	17,922
Sonora Total		556,241	29,602	15,424	6,172	3,552	4,287	615,277
Jalisco	Fresh Vegetables	47,907	2,923	1,832	2,743	1,561	466	57,432
	Nonferrous Metal Basic Shapes	22,682	1,094	610	902	517	95	25,898
	Engines Or Turbines	13,908	460	169			97	14,635
	Nonferrous Primary Smelter Products	10,331	40	40	40	40		10,492
	Motor Vehicles Or Equipment	7,484	334	184	274	156		8,432
Jalisco Total		102,314	4,852	2,835	3,959	2,274	657	116,890
Sinaloa	Fresh Vegetables	40,365	2,458	1,544	2,292	1,315	385	48,359
	Engines Or Turbines	21,397	739	278			157	22,572
	Nonferrous Primary Smelter Products	15,588	605		492			16,685
	Livestock Or Livestock Prod	1,909	92	58	85	49	15	2,208
	Concrete, Gypsum, Or Plaster	901	56	25	38	22		1,043
Sinaloa Total		80,161	3,951	1,905	2,908	1,386	557	90,868
Three Mexican States Total		738,715	38,404	20,164	13,039	7,211	5,501	823,035

Source: WSA Analysis of 2005 TRANSEARCH data

Truck and Rail Units Required For Import Traffic

The number of truck units required to transport the tonnages from the three Adjacent Mexican States to Arizona's Border Counties is shown in **Exhibit 21**. In 2010, for the three Adjacent Mexican States to Arizona Counties, 46,300 truck units will be required in 2010. Using tonnage forecast growth rates from **Exhibit 18** of 39% in 2020 and 22% in 2030, this truck unit forecast could rise to approximately 76,000 by 2030. Sonora alone will originate almost 37,200 truck units that will terminate in Arizona Counties. The number of truck units destined to Arizona Counties from Sonora could rise to over 70,000 by 2030.

Maricopa County is the destination for the majority of truck units. There will be over 42,000 truck units destined to Maricopa. Almost 31,000 will haul engines or turbines and approximately 4,900 will haul fresh vegetables.

Exhibit 21: 2010 Truck Unit Forecast for Top 5 Export Commodities from Adjacent Mexican States to Arizona Border Counties

Mexico Origin State	Commodity	Maricopa	Pima	Yuma	Santa Cruz	Pinal	Cochise	Mexico State Total
Sonora	Engines Or Turbines	30,959	1,310	503	55	257	20	33,103
	Misc Furniture Or Fixtures	753	206	185	28	25	18	1,214
	Men's Or Boys Clothing	1,033	51		6	4	11	1,106
	Fresh Vegetables	773	44	27	49	7	31	931
	Plastic Matter Or Synthetic Fibres	566	113	121	18	8	14	840
Sonora Total		34,084	1,725	836	155	300	94	37,194
Jalisco	Fresh Vegetables	2,244	137	86	128	22	73	2,691
	Engines Or Turbines	992	33	12		7		1,044
	Nonferrous Metal Basic Shapes	542	28	15	23	4	13	624
	Motor Vehicles Or Equipment	447	23	13	19		11	512
	Livestock Or Livestock Prod	128	6	4	6	1	3	148
Jalisco Total		4,354	226	129	176	33	100	5,018
Sinaloa	Fresh Vegetables	1,891	115	72	107	18	62	2,266
	Engines Or Turbines	1,527	53	20		11		1,611
	Livestock Or Livestock Prod	81	4	2	4	1	2	93
	Misc Furniture Or Fixtures	44	8	8				60
	Concrete, Gypsum, Or Plaster	49	3	1	2		1	56
Sinaloa Total		3,591	183	104	113	30	65	4,085
Grand Total		42,028	2,135	1,069	444	363	258	46,297

Source: WSA Analysis of 2005 TRANSEARCH data

The forecast for rail units required to transport import tonnage destined to Arizona's Counties from the three Mexican Adjacent States is shown in **Exhibit 22**. Approximately 78% of the rail units required to carry export tonnage will be used for nonferrous primary smelter products and 8.5% for nonferrous metal basic shapes.

Exhibit 22: 2010 Rail Unit Forecast for Top Import Commodities to Arizona Border Counties from Adjacent Mexican States

Mexico Origin State	Commodity	Maricopa	Pima	Yuma	Santa Cruz	Pinal	Cochise	Mexico State Total
Sonora	Nonferrous Primary Smelter Products	985	58	43	29	25		1,140
	Paving Or Roofing Materials	40	29	5	4	4	1	83
	Nonferrous Metal Basic Shapes	56	2	2				60
	Engines Or Turbines	14						14
	Motor Vehicles Or Equipment	3						3
Sonora Total		1,098	88	50	33	29	1	1,300
Jalisco	Nonferrous Metal Basic Shapes	138	6	5	4	3		156
	Nonferrous Primary Smelter Products	85						85
	Motor Vehicles Or Equipment	48						48
	Misc Food Preparations	11	1	1				12
	Industrial Chemicals	11						11
Jalisco Total		293	7	6	4	3		312
Sinaloa	Nonferrous Primary Smelter Products	188	7	6				202
	Paving Or Roofing Materials	4	1					5
	Misc Food Preparations	4						4
	Motor Vehicles Or Equipment	2						2
Sinaloa Total		198	9	6				213
Grand Total		1,589	104	62	37	32	1	1,825

Source: WSA Analysis of 2005 TRANSEARCH data

Import Commodity Values through Ports of Entry

The value of the top 10 import commodities from all of the Mexican States destined to all US States moving through Arizona's ports of entry is shown in **Exhibit 23**. These commodities were filtered out of the BTS Transborder Freight Report which uses the NAICS Code compared to the STCC that is used in the TRANSEARCH 2005 database. Although the two codes sets are similar in description there is not an exact match for all of the commodities. Thus, **Exhibit 23** is used more for a magnitude of scale based on all of the commodities that pass through the ports of entry. There is clear indication that Nogales is primary port of entry for handling vehicle parts, electrical machinery and food products from Mexico. Douglas Port of Entry handles copper products, vehicle parts and machinery. San Luis Port of Entry handles electrical machinery and edible fruits and nuts.

Exhibit 23: Value of Top 10 Commodities Imported from Mexico through Arizona's Ports of Entry (value in 1,000s)

Top 10 Import Commodities From All Mexican States	Border Crossing At Arizona Ports of Entry (POEs)					Commodity Total
	San Luis	Lukeville	Nogales	Naco	Douglas	
Vehicles, other than railway	$12,091		$3,496,610	$3	$103,576	$3,612,279
Electrical machinery and equip	$374,669		$3,021,574	$6,328	$101,227	$3,503,798
Edible vegetables, roots, tubers	$78,863		$1,546,758		$166	$1,625,787
Nuclear reactors, boilers, machines	$10,989		$944,016	$17,936	$19,731	$992,672
Edible fruit and nuts	$103,294		$598,336		$743	$702,374
Copper and articles thereof	$2		$191,475	$37,082	$333,991	$562,551
Optical, photographic, instruments			$393,105	$5	$2,326	$395,436
Special classification provisions	$11,961	$136	$344,101	$4,669	$25,988	$386,855
Fish and crustaceans, others	$1,638		$312,502			$314,140
Misc articles of base metal	$1,012		$144,131		$9,349	$154,492
Value of Top 10 Import Commodities	$594,519	$136	$10,992,609	$66,023	$597,096	$12,250,383
POE's Percent of Total	4.9%	0.0%	89.7%	0.5%	4.9%	

Value Of Total Imports (Exhibit 15)	$704,950	$485	$12,143,162	$68,261	$885,133	$13,801,992
Top 10's % Of Total Imports	84.3%	28.0%	90.5%	96.7%	67.5%	88.8%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

See **Appendix H** for a list of all import commodities through Arizona's ports of entry.

7.0 Public-Private Partnerships Background

Public-private partnerships are contractual agreements formed between a public agency (federal, state, or local) and a private sector entity that allows for greater private sector participation in the delivery, operation, and financing of infrastructure projects. Public-private partnerships can include projects where significant design, construction, financial, and operational risk is transferred from the public sector to the private sector. Through these types of arrangements, inherent project risks are borne by that party best suited to control and manage those risks. A public sponsor's responsibility during a public-private partnership project includes:

- Conducting upfront due diligence on potential projects
- Defining public objectives
- Selecting the appropriate public-private partnership model
- Conducting a fair procurement process
- Negotiating a well structured public-private partnership agreement
- Ensuring compliance with the public-private partnership agreement over its term

Some of the benefits of public-private partnerships for state and local governments include:

- Public-private partnerships are an effective way of financing, managing and operating roads and other infrastructure facilities while minimizing taxpayer costs and risks.
- Governments across the country and around the world are seeking ways to finance needed infrastructure projects and trying to deliver better services to taxpayers.
- Public-private partnerships maximize the strengths of both the public and private sectors, offering taxpayers more efficiency, accountability, and cost and time-savings.
- Public-private partnerships can be used to build roads and other infrastructure projects that may have been delayed or shelved altogether due to fiscal constraints.

Public-private partnerships are very flexible delivery systems that can be structured to meet the objectives of the sponsoring public agency. Public-private partnership structures can cover an entire spectrum of risk transfer. On one end of the spectrum is a fully self-funding concession agreement where the private sector takes all development, design, construction, revenue, finance, and operations risk. The other end of the spectrum is a design-build contract where the public sector retains all project risks and simply transfers design and construction risk.

In evaluating the appropriateness of a specific public-private partnership structure for a given project, the public agency's goals and objectives must be clearly defined. These goals and objectives may differ from project to project. Examples of potential objectives that a public sector sponsor may have for a project include:

- Provide unfunded infrastructure
- Leverage scarce resources
- Minimize an agency's investment
- Expedite project delivery
- Provide for long term operation and maintenance
- Generate revenue to fund other needs
- Foster economic development

The objectives that a private entity has in entering into a public-private partnership arrangement are based on the viewpoint that public-private partnerships are essentially business ventures. Ventures where, within the context of the public-private partnership agreement, the private entity is attempting to maximize a return on investment, while minimizing and/or managing its risks. The view of risks, and required returns for those risks, vary significantly among private parties and across projects. As a result, specific public-private partnership projects must compete with other investment opportunities available to a private party, and with other public-private partnership projects offering differing perceived risk and return formulas. The perception of these factors vary substantially among private entities participating in the public-private partnership markets and are often significantly influenced by business objectives and strategies that are only tangentially related to a specific project.

While the various elements of a specific public-private partnership project may vary from project to project, there is considerable evidence that the following seven factors are critical to a successful public-private partnership undertaking:

1. *Legal Framework:* The legal framework establishes the basic structure under which a public sponsor can undertake a public-private partnership project. This framework needs to establish procurement authority and contractual guidelines that provides guidance to both public sponsors and private participants. In addition, a clear legal framework will help engender a transparent process that is critical to achieving stakeholder and public acceptance.
2. *Public Sponsor:* A public agency planning to undertake a public-private partnership project needs to be able to commit the resources necessary to manage the public-private partnership process. Whether these resources are internal or external, successful public-private partnership projects requires a team of experienced people who develop a clear understanding of a public sponsor's objectives, structure a procurement to achieve those objectives, and then subsequently negotiate an agreement that clearly sets forth the business deal. The public sponsor also needs to be able to provide ongoing monitoring and oversight of the private partner's performance to ensure compliance with the terms of the agreement.

3. *Agreement:* Ultimately, public-private partnership projects are a business arrangement between a public sponsor and a private entity. Public-private partnership projects can cover a span of time stretching out over as much as 99 years. It is very important to have an agreement that is both comprehensive enough to reflect the nature of the business arrangement upon which the project was awarded, yet remain flexible enough to address changing situations over the term of the agreement.
4. *Reliable Revenue Stream:* The private partner has to have the ability to reasonably rely upon the revenue stream used to support the project. Whether this revenue stream is from tolls or from other sources, the risk of those revenues will be reflected in how the private sector prices a project. The greater the perceived risk of the reliability of the revenue stream, the greater the risk premium that will be needed by the private sector to invest in and undertake the project.
5. *Stakeholder Support:* For a public-private partnership project to be successful, it needs to have the acceptance of major stakeholders. These stakeholders include elected officials, public agency decision makers, major users of the facility, and other affected and interested parties. Given the emerging nature and complexity of public-private partnerships, this often requires an educational outreach effort to explain the pros and cons of public-private partnerships, explain the public sponsor's reasons for undertaking a public-private partnership project, and to explain the anticipated public-private partnership structure.
6. *Private Sector Partner:* Public-private partnerships create long term business relationships. Consequently, the "lowest bid" is not always the best choice for selecting a public-private partnership partner. The "best value" in a partner is critical in a long-term relationship that is central to a successful partnership. A candidate's experience in the specific area of partnerships being considered is an important factor in identifying the right partner. It must be a real partnership, with shared burdens and shared rewards, for both the public and private participants.
7. *Consultant Team:* Public-private partnerships are extremely complex transactions that involve technical, financial and legal expertise. Few public agencies have this expertise in house. Public sponsors who have successfully delivered public-private partnership projects have usually relied on qualified firms specializing in these areas of public-private partnerships for advice and counsel.

7.1 Types of Public-Private Partnerships

Public-private partnerships can be structured to deliver a wide range of infrastructure projects. Properly designed public-private partnerships are a means to efficiently allocate risks and returns between the public sector and the private sector. Some of the typical types of infrastructure projects include the following:

- Roadways, Bridges and Tunnels

- Water/Wastewater Facilities
- Buildings
  - Correctional Facilities
  - Schools
  - Courthouses
  - Office Buildings
  - Maintenance Facilities
- Ports of Entry
- Airports
- Intelligent Transportation Systems (ITS)
- Parking Facilities
- Railroad Lines

Though specific objectives vary significantly by project, there are generally four basic objectives for a public agency to enter into a public-private partnership:

- Maximize the ability of public sponsors to leverage existing federal and/or state revenue sources
- More effectively use existing public funds
- Move projects into construction more quickly than under traditional financing mechanisms
- Make possible major infrastructure investments that might not otherwise receive financing

In the US there are four basic public-private partnership models which have been utilized: design/build/finance, design/build/operate/maintain, design/build/finance/operate/maintain, and a concession. Each of these models is discussed below.

Design/Build/Finance

DBF public-private partnerships allow the public sponsor to pay for infrastructure over a term which extends beyond the facilities construction period. Under this model the private partner finances the construction based on a promise by the public sponsor to make a series of payments. DBF projects are often utilized for governmental buildings, where the financing is secured by a lease or rent payment.

DBFs allow public infrastructure projects to be expedited and not wait for all of the funds to be accumulated. Public agencies traditionally utilize bond offering to accomplish the same objective. However, payments pledged under a DBF are typically subject to prior appropriations and do not have the same financial reporting implications as a bond offering.

Design/Build/Operate/Maintain

Typically these are D/B contracts here the D/B contractor retain the responsibility to operate and maintain the facility. The public sponsor retains all revenue and financing risks.

DBOMs typically are used in two scenarios: when the specific infrastructure requirement is specialized and requires operational and or maintenance expertise which is not otherwise available to the public sponsor; or where it is felt that outsourcing the operations and maintenance will result in a better facility by incorporating life cycle costs in the design of the facility.

Design/Build/Finance/Operate/Maintain

DBFOMs are also referred to as availability payments. DBFOMs are similar to DBOMs except that the private partner is responsible for financing a stream of revenue pledged by the public partner. Under an availability payment structure, the private partners compensation is based on the performance, or availability, of the facility. Under this structure the public partner retains control of the revenue stream.

DBFOM projects are gaining increasing popularity for new toll projects which have significant startup risks and require public sector support or guarantees in order to make them commercially viable. Under this model the public partner retains revenue risk, but also receives the benefit of increases in future revenue streams. Like DBOMs, DBFOMs incorporate life cycle costs into the design of project by linking compensation to performance or availability.

Concession

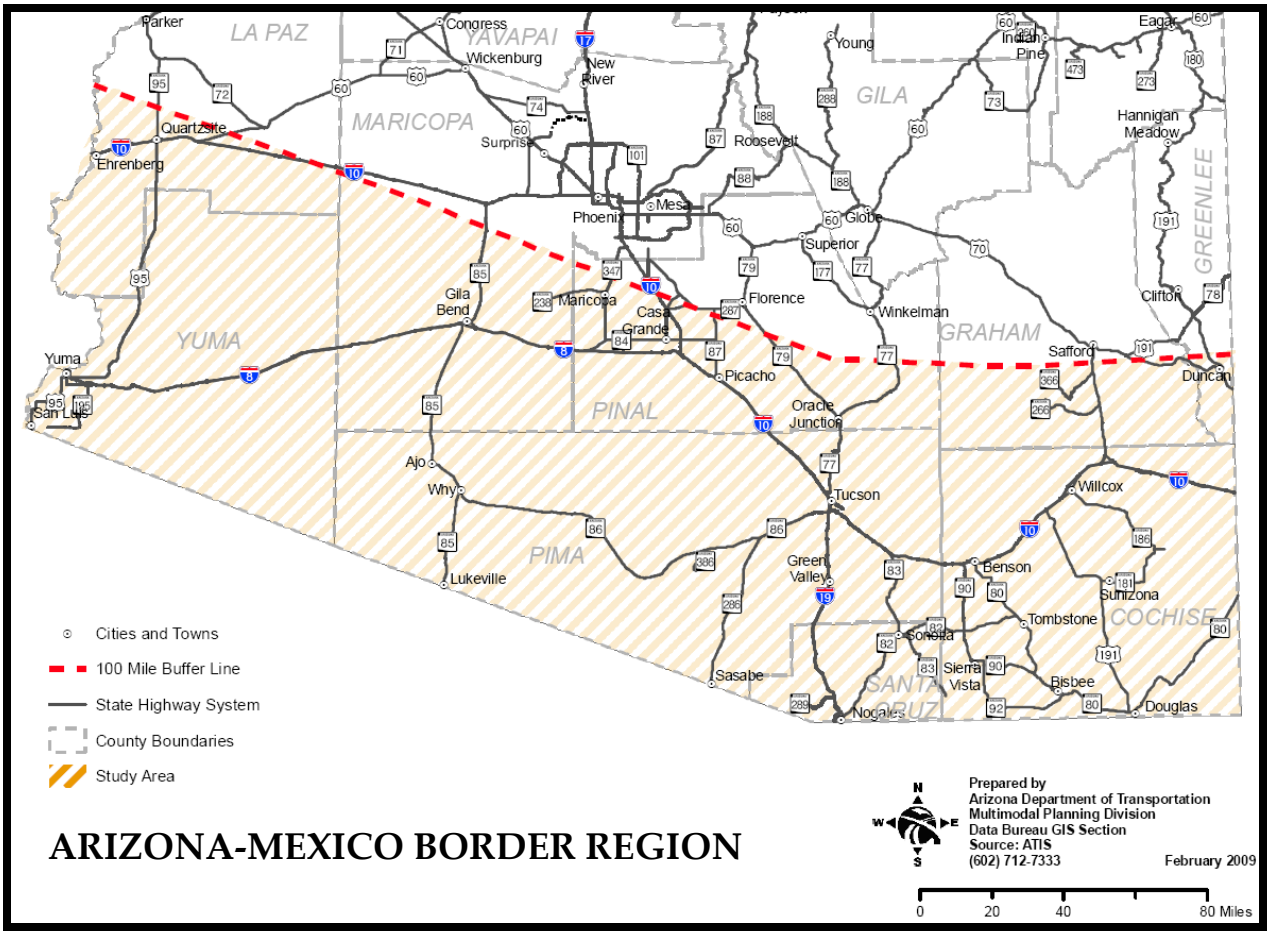
Pure concessions transfer all design, construction, financing, and operational risks from the public sponsor to the private partner. The fees that constitute the revenue source are set by contract. Increases or decreases in these revenues impact the private partner's compensation.

Concessions can be used for any revenue producing facility such as toll roads or parking facilities. Pure concessions usually work best for established facilities with predictable revenue streams. Such facilities often result in significant upfront payments for the right to the concession, though more recent concessions incorporate some form of revenue sharing. For new facilities, the revenue stream is less predictable and therefore is viewed as more risky. In order to make such projects commercially viable, some form of support or enhancement is required of the public partner. Depending upon the level of public support a DBFOM may be a preferred alternative.

8.0 Potential Public-Private Partnership Opportunities

This section sets forth and describes projects located within the Arizona international border region (see map on next page) that may hold some potential in which public-private partnerships could be applied. These infrastructure projects were identified by study stakeholders and members of the study's Technical Advisory Committee and the project study team. The projects are grouped and discussed by geographic location, are associated with the region's port of entry, and arranged generally from west to east.

This project listing does not in any way imply that public-private partnerships would be applicable or feasible to any given project. That type of economic and revenue forecasting effort is beyond the limited scope of this study.



Sections 9-12 delve into the issues that could arise in the application of public-private partnerships and makes a determination of the advantages and disadvantages of various financing techniques.

8.1 Methodology for Identifying Potential Public-Private Partnership Opportunities

The Study Team used a combination of local knowledge, national examples, and firm expertise to accumulate a list of potential public-private partnership opportunities in the Arizona-Mexico border region. To identify potential projects, the study team interviewed key stakeholders in the border areas including ADOT district engineers and representatives from local metropolitan planning organizations, councils of governments, and port authorities. These interviews provided insight and understanding of projects that are of importance to the international ports of entry and the nearby local communities. The methodology employed included the following:

1. *Developing a list of initial contacts:* The Technical Advisory Committee is comprised of many local stakeholders who were used as a basis of contact for the interviews. Specifically, representatives from the following organizations were interviewed: ADOT Yuma District Engineer, ADOT Safford District Engineer, Yuma Metropolitan Planning Organization (YMPO), Pima Association of Governments (PAG), SouthEastern Arizona Governments Organization (SEAGO), Greater Yuma Port Authority, Greater Nogales and Santa Cruz County Port Authority, and Douglas International Port Authority.
2. *Phone and E-mail Contacts:* The study team contacted survey targets by phone and e-mail. Interviews were conducted by phone, while e-mail was used to set up appointment times and exchange follow-up data.
3. *Stakeholder led conversations:* These stakeholder discussions were held with the purpose of allowing the stakeholders to identify projects in their area that may have some potential for public-private partnership usage. Most of the stakeholder identified projects were roadway related in nature.
4. *Identification of Gaps and Follow-up Interviews:* As a result of the initial interviews, the study team was able to identify follow-up contacts to learn more about specific projects and available reports on projects for review. The study team followed-up on these additional contacts and reviewed the applicable project information to build a broader picture of the possible use of public-private partnerships and other innovative finance methods at border crossings.

8.2 Traffic through Arizona's Ports of Entry

Revenue streams for transportation infrastructure are often tied to or based on the amount of traffic using the facility. Traffic and revenue forecasting for a toll road or a managed lane is a very complex undertaking, however, it is logical that the more traffic using a facility, the greater the revenue potential from a particular facility. Traffic volume is one measure of public-private partnership feasibility.

Another measure of public-private partnership feasibility is based on the nature and type of that traffic; i.e. commercial traffic v. privately owned vehicles. Commercial traffic usually pays a

higher toll than passenger cars. Therefore, for a given traffic volume using a tolled facility, the potential revenue will be greater when commercial vehicle numbers are a larger percentage of overall traffic.

Similarly, higher traffic volumes tend to lead to increased congestion. This leads to not only increased queuing times, but can also result in increased traffic on neighboring streets, increased accident rates, and deterioration in air quality.

The table below shows the traffic volume by user type for each of the Arizona ports of entry:

Current Annual Traffic at the Arizona Port of Entries

Northbound Traffic Entering the United States for the most recent year October 2007 thru September 2008 - Source: CBP

Arizona Port of Entry	Commercial Trucks	Buses	Combined Trucks+Buses	POVs	Pedestrians
Douglas	24,667	2,644	27,311	1,721,716	1,201,647
Lukeville	448	1,512	1,960	421,324	121,780
Naco	2,825	68	2,893	285,660	95,820
Nogales DeConcini	0	2,917	2,917	2,138,282	6,858,675
Nogales Mariposa	308,917	8,946	317,863	968,059	483,113
San Luis	43,967	60	44,027	2,371,215	2,631,555
Sasabe	369	0	369	31,778	1,282

Identified projects related to each Arizona land port of entry are set forth and briefly discussed in the following sections.

8.3 San Luis

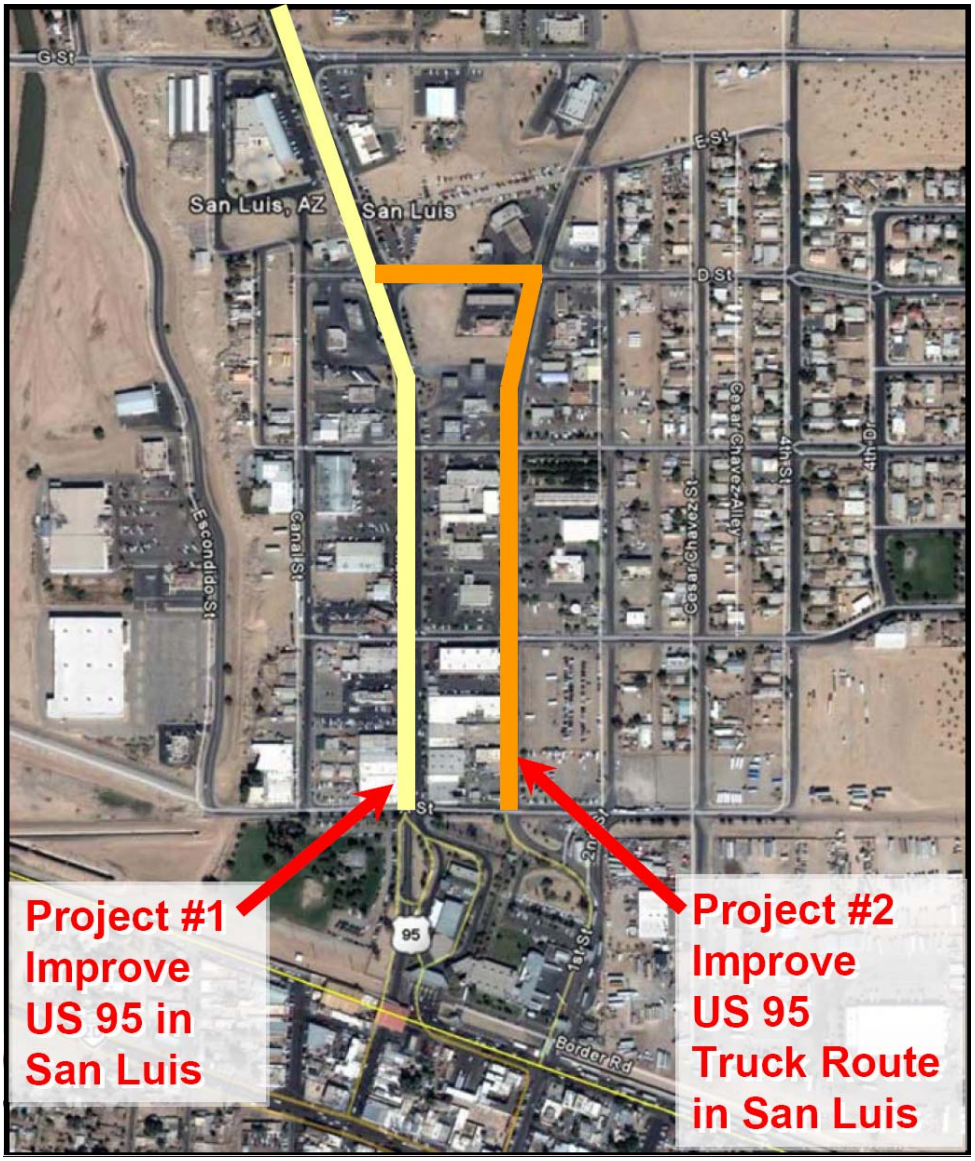
The completion and opening of the new commercial port of entry east of the existing San Luis Port of Entry is going to have a significant impact on the traffic flows through San Luis. There have been six potential public-private partnership projects identified associated with the San Luis Port of Entry region. The appropriateness of each of these projects as a potential public-private partnership needs to be reevaluated after the new port of entry is opened. This reevaluation may result in rethinking the appropriateness of these projects. It may also identify additional projects that may be needed or that may replace some of the projects currently identified as potential public-private partnership projects.

8.3.1 San Luis I Port of Entry

A full description of the San Luis I Port of Entry can be found in Section 1.1 of this report. Following is a list of identified projects for this port of entry.

Needed Project #1: Improvements to US 95 connecting to San Luis I

With the doubling of privately owned vehicle lanes, a prior evaluation has determined that existing route US 95 will need significant improvements. Currently, the highway has two outbound or northbound lanes to carry the traffic from the six existing privately owned vehicle lanes through the port. The exit from the port of entry is already congested during peak times. However, once this facility expands to 12 privately owned vehicle lanes moving through the port, the doubled traffic volumes will significantly impact the existing US 95 facilities. Capacity and operational improvements are needed to accommodate the projected future traffic volumes. These improvements can include additional lanes, better roadway and intersection geometrics, access control in the vicinity of the port of entry, and enhanced traffic control throughout the area.



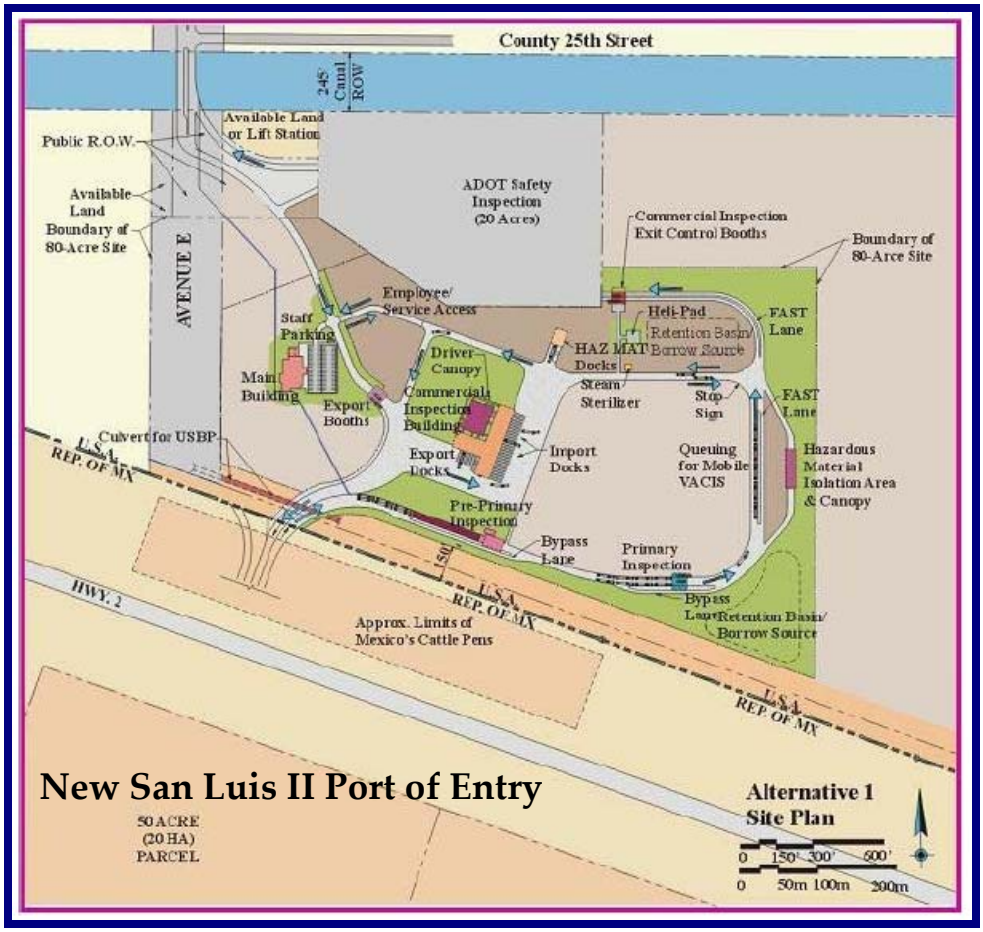
Needed Project #2: Improvements to US 95 Truck Route

In the same vein as the previously discussed improvements to US 95, the nearby US 95 truck route is also in need of similar improvements. The truck route parallels US 95 for approximately one-half mile before turning due west to join with US 95. The route currently allows commercial vehicles to go through inspections and rejoin other traffic north of the port. The US 95 Truck Route is a four-lane facility with two outbound or northbound lanes. With the reconfiguration of the existing port of entry and the movement of commercial truck traffic to the proposed San Luis II Port of Entry, this crossing will likely become the special lanes for bus, high occupancy vehicles, recreational vehicles, emergency vehicles, and participants in the SENTRI program. This route will need improvements to keep pace with the expanded port of entry traffic.

This route, and the parallel US 95 route, should be evaluated together to implement a network of improvements that could serve to improve traffic flow, circulation, capacity, and safety in this area of San Luis.

8.3.2 San Luis II Port of Entry

A full description of the San Luis II Port of Entry can be found in Section 1.1 of this report. This new port is a catalyst for industrial development including prospects for a new rail line and industrial parks. The industrial development factor makes the San Luis II Port of Entry a prime candidate for potential public-private partnership integration. Following is a list of these potential projects.

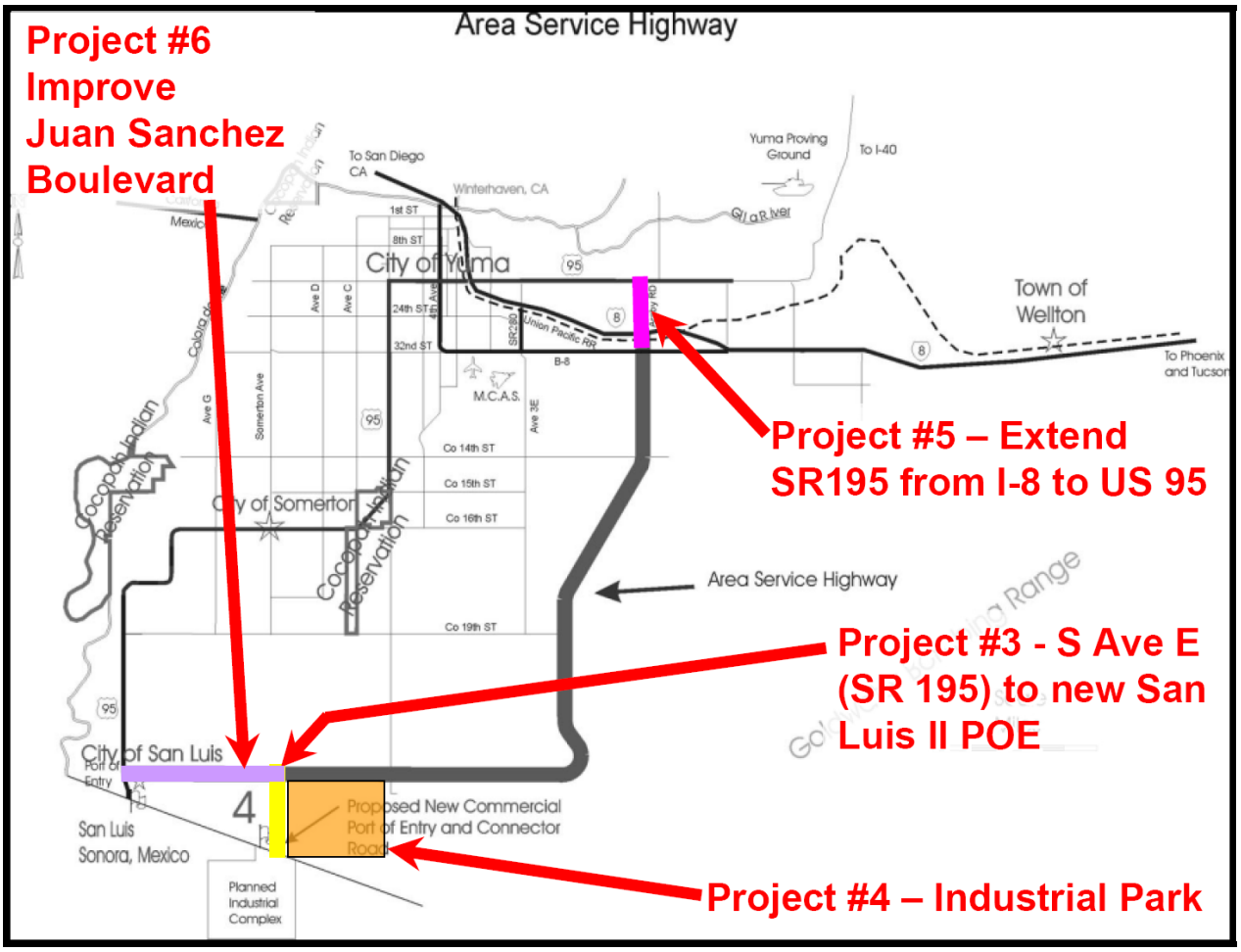


Needed Project #3: Improvements to South Avenue E

Avenue E which connects SR 195 to the site of the new port of entry, San Luis II. The road is currently two lanes (one in each direction) in this area. There is an anticipated need for widening of this road to add capacity when the new San Luis II Port of Entry becomes active based on all the volumes of commercial traffic that has been using San Luis I.

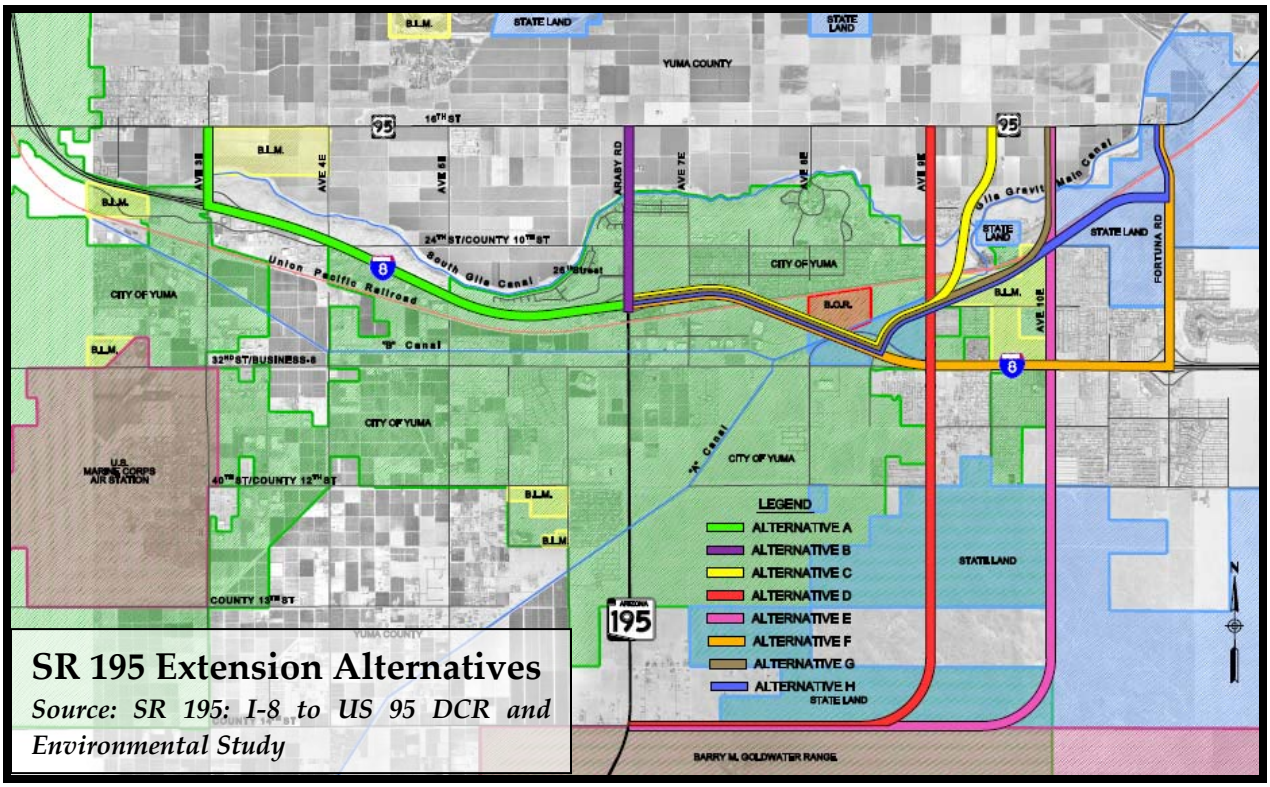
Needed Project #4: Proposed Industrial Park at the San Luis II Port of Entry

The Greater Yuma Port Authority currently owns property for the San Luis II Port of Entry as well as land adjacent to it. There are conceptual development plans for an industrial park to be built on the approximately 80 acres of excess land not needed for the port of entry. It is intended that the revenue from the lease and/or sale of this land will be used to pay off the bank loan taken out to acquire the entire tract.



Needed Project #5: Extension of SR 195 from Interstate 8 north to US 95

The extension of SR 195 from I-8 to US 95 has already moved into the design concept phase with the Arizona Department of Transportation. Currently, the Design Concept Report and Environmental Study are scheduled to be completed in summer 2009. The extension of SR 195 will complement the local and regional roadway network. Specifically, the proposed project would provide direct access from the San Luis II Port of Entry to US 95 which would further facilitate the movement of goods between the United States and Mexico. Locally, this extension will provide an additional arterial corridor to and from the city of Yuma and points to the north. The alternative alignments being considered are shown in the following exhibit.



Needed Project #6: Improvements and Expansion of Juan Sanchez Boulevard

This route connects US 95 west to Avenue B, with a portion of the road also being SR 195. The city-owned portion of the road has received a significant amount of traffic as a connecting road between two highways and is in need of expansion due to current traffic volumes. This area has primarily commercial and industrial use and would be a good candidate for expansion.

8.4 Lukeville

A full description of the Lukeville Port of Entry can be found in Section 1.1 of this report. In an effort to mitigate some of the current congestion at the port, Arizona, Sonora, and private sector investors are working on ways to fund short-term improvements to this port. The Puerto Peñasco tourism industry is donating forty percent ($1 million) of the improvement money needed for the port (estimated at $2.5 million) to decrease the wait times for their prospective visitors. The proposed expansion will add two additional booths to the Lukeville Port of Entry. The port expansion project is expected to begin in June 2009 culminating at the end of the year.

In addition, the Sonoran government and Mexican federal agencies are working on improvements to the Mexican inspection facilities and connecting road. Arizona is also working with the FHWA and ADOT to conduct a long-term plan to assess the need for additional future improvements at Lukeville and its connecting roadway.

No additional needed projects were identified associated with this port of entry.

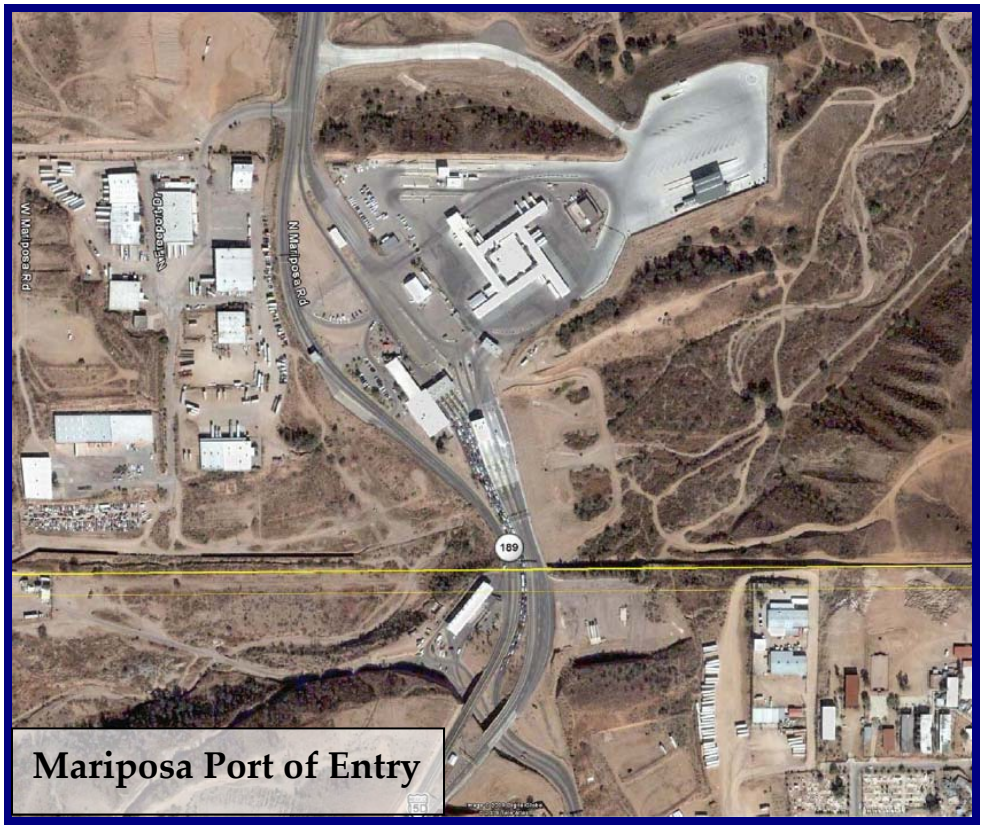
8.5 Sasabe

A full description of the Sasabe Port of Entry can be found in Section 1.1 of this report. The Sasabe Port of Entry was dramatically improved in the early 1990s from its nearly 60 year old facilities. This port serves primarily local traffic due to the limited roadway infrastructure connecting to the port on the Mexican side of the border. The Mexican federal government is working to complete paving on a northern Sonora highway that will be the first quality road in Mexico to lead to the Sasabe Port of Entry. When finished, the 33.5 mile, two-lane highway between El Sasabe and Saric would give travelers an alternate route to connect to northwest Sonora without having to go through Nogales or Lukeville, both of which record long wait times at peak times. Work has already begun on the connecting roadway, and the Mexican government anticipates completion by the end of 2010 at the earliest and some time in 2012 at the latest. The Mexican federal government's Office of the Secretary of Communication and Transportation state that they hope the improved roadways will attract more US tourism to the region. These improvements are not expected to measurably increase freight traffic as the new road is a more circuitous route than the freight route to and through the Mariposa Port of Entry at Nogales.

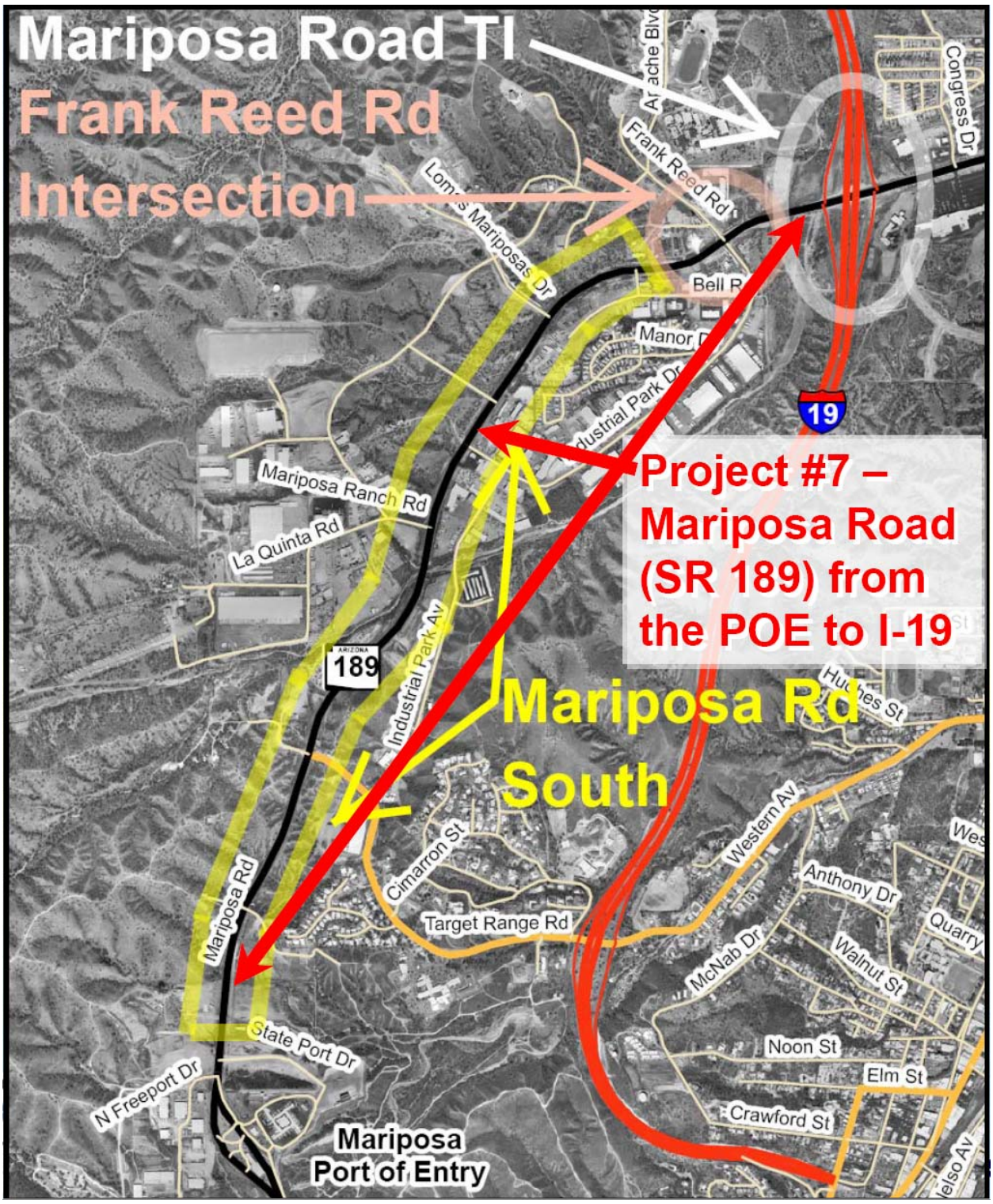
Currently, there are no additional needed projects identified as potential public-private partnership opportunities associated with the Sasabe Port of Entry.

8.6 Mariposa Port of Entry

A full description of the Mariposa Port of Entry can be found in Section 1.1 of this report. The Mariposa Port of Entry is currently open from 8 am to 6 pm for commercial vehicles and from 6 am to 10 pm for passenger vehicles, Monday through Saturday. However, CBP is considering opening the port to passenger vehicles 24/7 upon opening of the reconfigured port of entry.



Mariposa is Arizona's principal gateway for international trade. It was originally intended to process 400 trucks per day and now has as many as 1,600 truck crossings in a single day. The Mariposa Port of Entry alone accounts for the import of 45% of the fresh produce consumed in the entire United States between October and May. A port reconfiguration project is currently funded for construction and will help alleviate the congestion problems that have begun to plague the port in recent years. This reconfiguration will allow the port to handle its increased traffic volumes for all modes.



Needed Project #7: SR 189 (Mariposa Road) from the Mariposa Port of Entry to I-19

Mariposa Road connects the Mariposa Port of Entry to Interstate 19. This road is a state route and is currently a five lane facility with two lanes in each direction and a center turn lane. Traffic volumes on this road are significant and the route is currently congested, especially

during peak produce season. Currently 1.3 million vehicles pass through the Mariposa Port of Entry annually. While this number is fourth among Arizona's ports of entry, almost 80% of all commercial traffic that crosses the border goes through the Mariposa Port of Entry. This commercial traffic accounts for approximately 25% of all traffic through this port of entry.

The Mariposa Port of Entry has been funded for reconfiguration and is currently slated to be completed in 2014. However, the increased amount of traffic able to move through the reconfigured port will cause the current road to fail at the I-19 interchange area from west of the Frank Reed Road intersection east through the I-19 interchange to the Grand Avenue intersection.

The preceding figure shows the connector road as it stretches from the Mariposa Port of Entry to I-19 to the north.

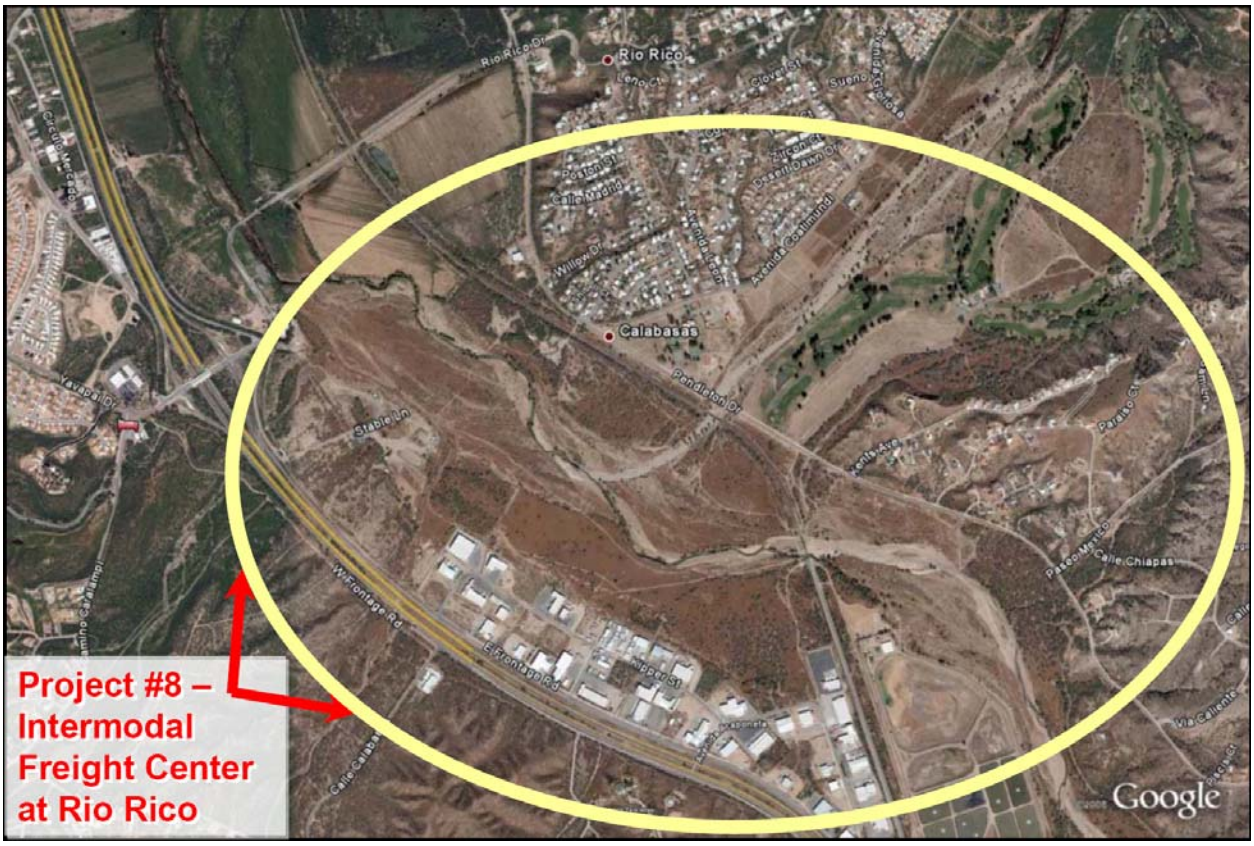
8.7 DeConcini/Morley Gate Port of Entry

A full description of both DeConcini Port of Entry and Morley Gate can be found in section 1.1 of this report. The Morley Gate crossing is located just to the east of the DeConcini Port of Entry and is generally considered part of the DeConcini Port of Entry.

Needed Project #8: Intermodal Freight Facility in Rio Rico

Currently, there is a small parallel rail line pull-out in Rio Rico for rail inspection purposes. This pull-out is located near the water treatment facility. An intermodal facility here would

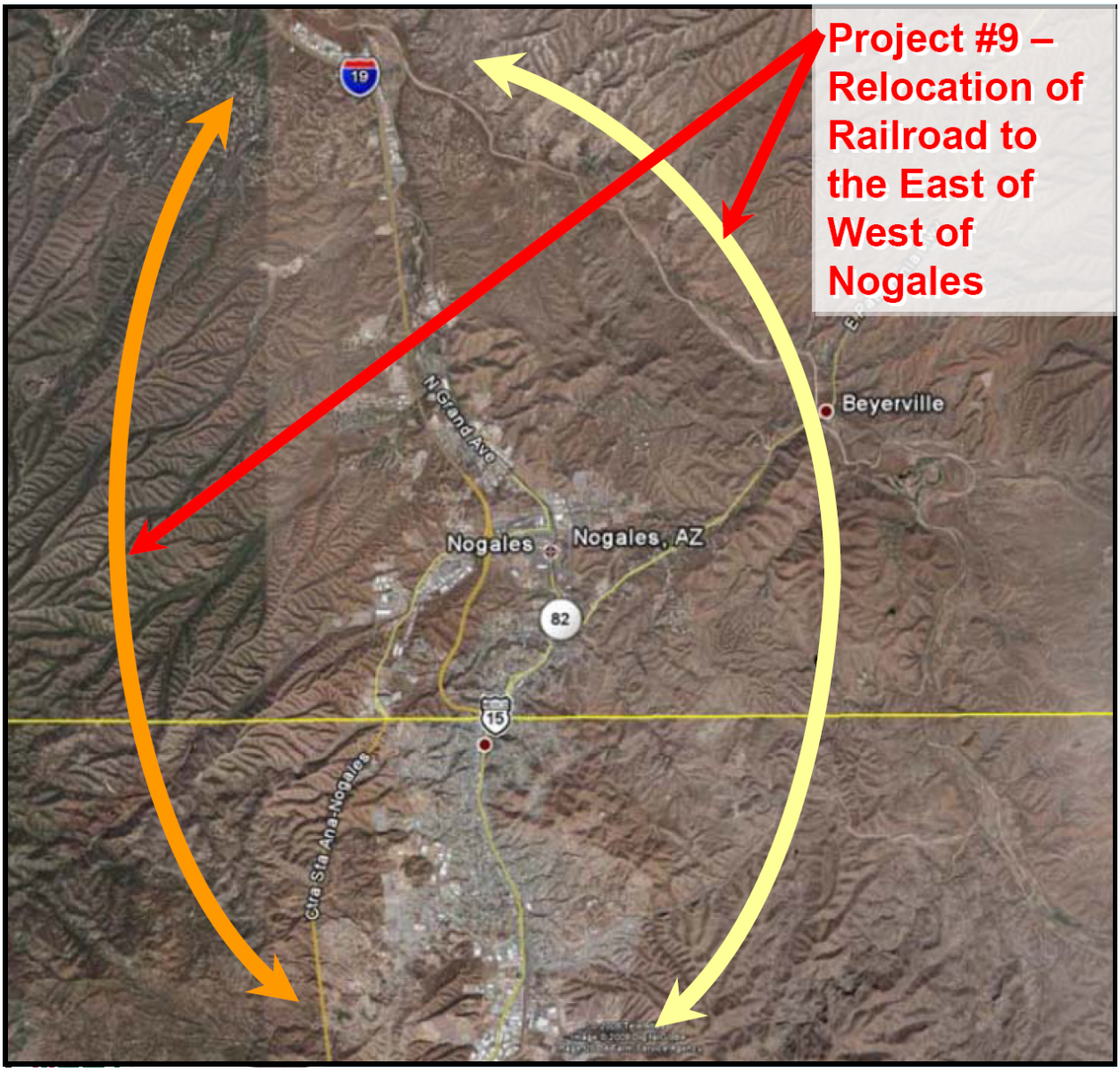
facilitate the movement of freight in the area and would be helpful to overall freight movement in the state. Currently, approximately 70 percent of the United States exports through Arizona ports go by truck through the Mariposa Port of Entry. Another 16 percent goes through DeConcini by rail for a total of over 85 percent of the state's exports going through the Nogales ports. An intermodal facility would allow more of the truck freight currently crossing the border to use the existing rail crossing to reduce the total number of trucks using the Mariposa Port of Entry. There have been several investors that have shown interest in this project, but there are no plans currently to develop this facility.



Needed Project #9: Relocation of Rail to the East or West of Nogales

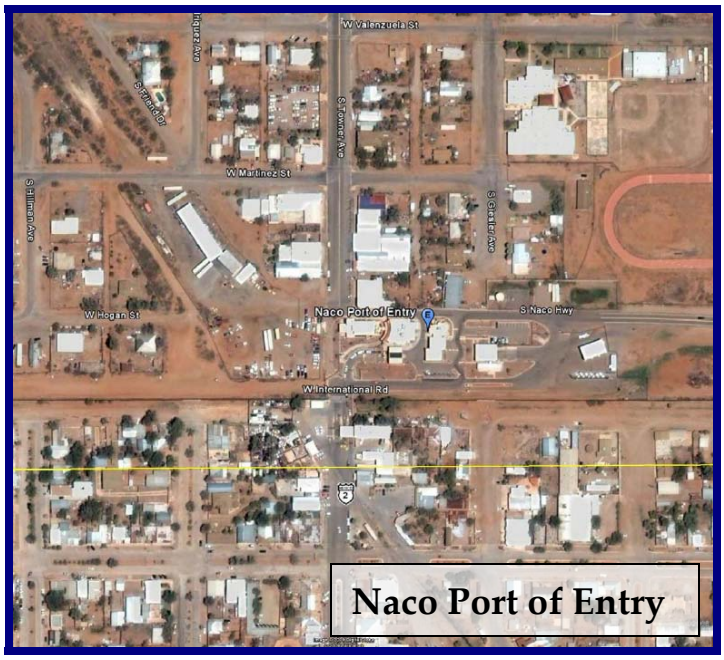
There have been many discussions of relocating the Union Pacific rail line that goes through downtown Nogales to a feasible location to the east or west of the downtown area. When trains are operating on this line, extreme congestion occurs in the downtown Nogales area with significant safety concerns. Relocation of the rail line would be beneficial to overall traffic circulation and safety in the Nogales area, and could reduce the number of vehicle/railroad crossing points along the rail line. The Union Pacific railroad company has expressed a willingness to move the line with outside funding. There is an open area to the east of Nogales, but it runs through a riparian area in the vicinity of the Santa Cruz River. There are also discussions of moving the rail line to the west near the Mariposa Port of Entry, but the line

would then need to cross I-19 to rejoin to the main Nogales Branch line. This route also has significant terrain challenges and associated environmental issues to contend with.



8.8 Naco

The Naco Port of Entry was improved most recently in 1994. CBP does not anticipate any further improvements to the actual port in the foreseeable future. Naco is currently meeting the local traffic demands as well as the small amount of commercial traffic that is serviced at this facility.

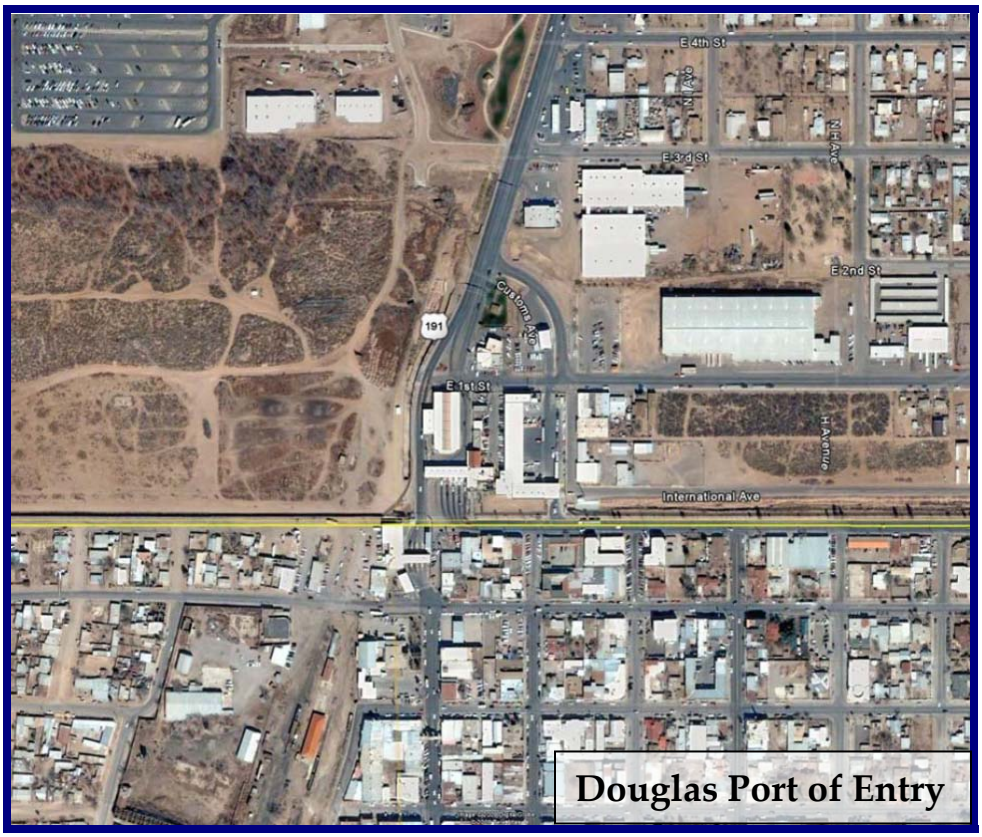


Needed Project #10: Naco Road Improvements

Currently, the Naco Port of Entry is not connected to the state highway system. Naco Road is a local street/road that provides the connection between the port of entry and SR 92. This road is owned and maintained by the county and the city. Naco is the only Arizona Port of Entry not accessed by a state route. The existing road would need to be upgraded to ADOT standards if it were to be included in the state system.

8.9 Douglas

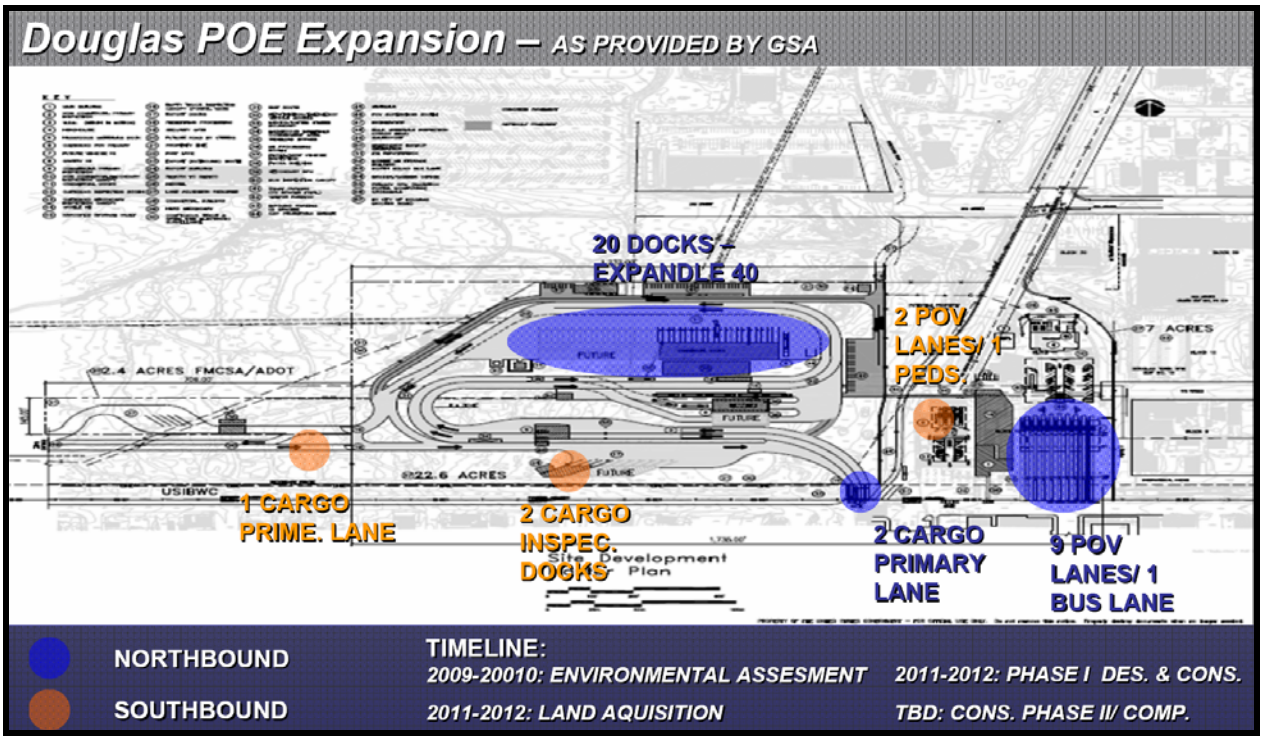
A full description of the Douglas Port of Entry can be found in Section 1.1 of this report.



Expanded and Reconfigured Douglas Port of Entry Project

The proposed reconstruction will reconfigure the existing port of entry into a state-of-the-art facility. One possible outcome, depending upon the design that is adopted, would be the separation of pedestrian and passenger vehicle traffic from commercial vehicle traffic. The schedule for the Douglas Land Port of Entry Expansion and Modernization Project is as follows:

- September 2007: U.S. General Services Administration completed the Port of Entry Expansion and Modernization Project Feasibility Study
- FY 2008: $1.3 million requested to make short-term improvements
- FY 2011: GSA will request approximately $7 million for design
- FY 2012: GSA will request approximately $60 million for construction
- 2016: Expansion and Modernization scheduled to be completed

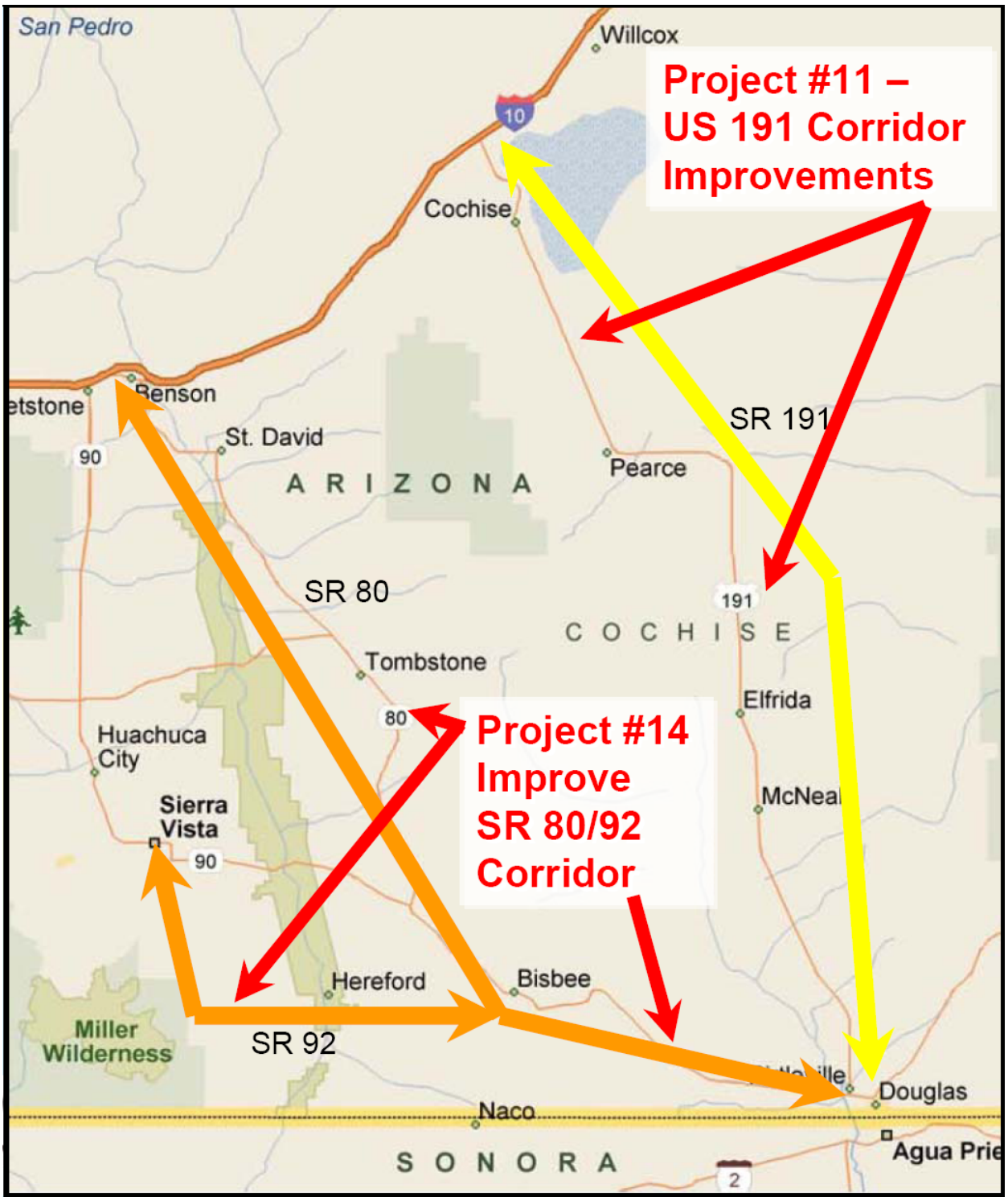


Needed Project #11: US 191 Corridor from Douglas to I-10

The US 191 corridor between Douglas and I-10 is currently a part of the ADOT system. The number of lanes on this road are insufficient for projected traffic flows. The road has a number of deficiencies including narrow shoulders, some at-grade channel crossings, and inadequate pavement design. In addition, small communities are directly served by the road and have numerous drives; all of which are not compatible with high truck volumes.

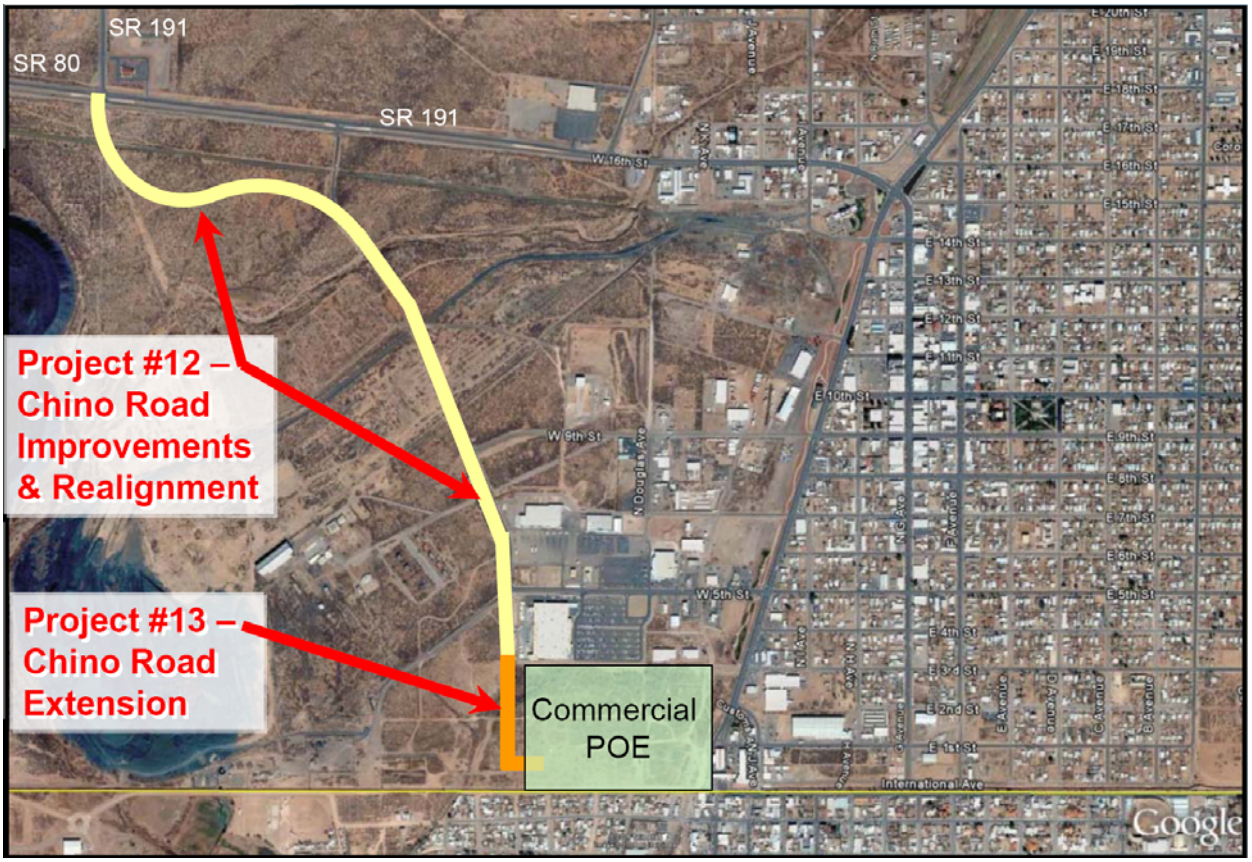
Needed Project #12: Chino Road Improvements & Realignment

The proposed Chino Road Realignment Project will improve access to and from the port on the U.S. side of the border. This project will extend 3rd Street in Douglas from Pan American Avenue to existing Chino Road, thus opening a route beginning just 600 feet from the Douglas-Agua Prieta Port of Entry Cargo Facility, for freight-carrying vehicles. From 3rd Street, Chino Road will be extended to 5th Street and continue north along the existing route to the Palm Grove Wash. From there, Chino Road will be realigned to meet up with the intersection of SR 80 and US 191. The project is in the design stage and the estimated cost is $1.8 million.



Chino Road is not currently a part of the state system. It is, however, a route that could replace the existing Pan American Highway route in Douglas for port of entry traffic. Local representatives believe that it would be a significant advantage to make Chino Road a part of

the state system and turn back US 191B to the City of Douglas. The improvements proposed would include upgrading the existing Chino Road to ADOT standards.



Needed Project #13: Chino Road Extension

GSA is looking into expanding the Douglas Port of Entry to the west of the existing port. This would tie in with an abandoned rail line on the Mexico side of the border. In response to this proposal, Sonora has plans to purchase this rail line and make it a new truck route to the port of entry. On the US side, all vehicles are currently using Pan American Street. However, the new port of entry reconfiguration would allow the existing route to serve only light vehicles, busses, and pedestrian traffic. The commercial traffic would move to the western side of the newly expanded port. Chino Road must then be extended to connect directly to the port at this western expansion area and allow for a complete commercial route originating on the abandoned rail line route in Mexico, continuing through the port of entry, following the extension of the improved Chino Road, and connecting to US 191 at SR 80. This project would need to be completed concurrently with the construction completion schedule for the expanded port of entry improvements since it would serve as the new exit for the port. All these improvements to Chino Road are pivotal to the free movement of traffic and freight in this area.

This extension is currently scheduled to receive funding in the fiscal year 2010 for engineering and environmental clearance through the SouthEastern Arizona Governments Organization

(SEAGO) transportation improvement program. It is currently anticipated that the City of Douglas will pursue the construction phase in fiscal year 2011 through the SEAGO transportation improvement program.

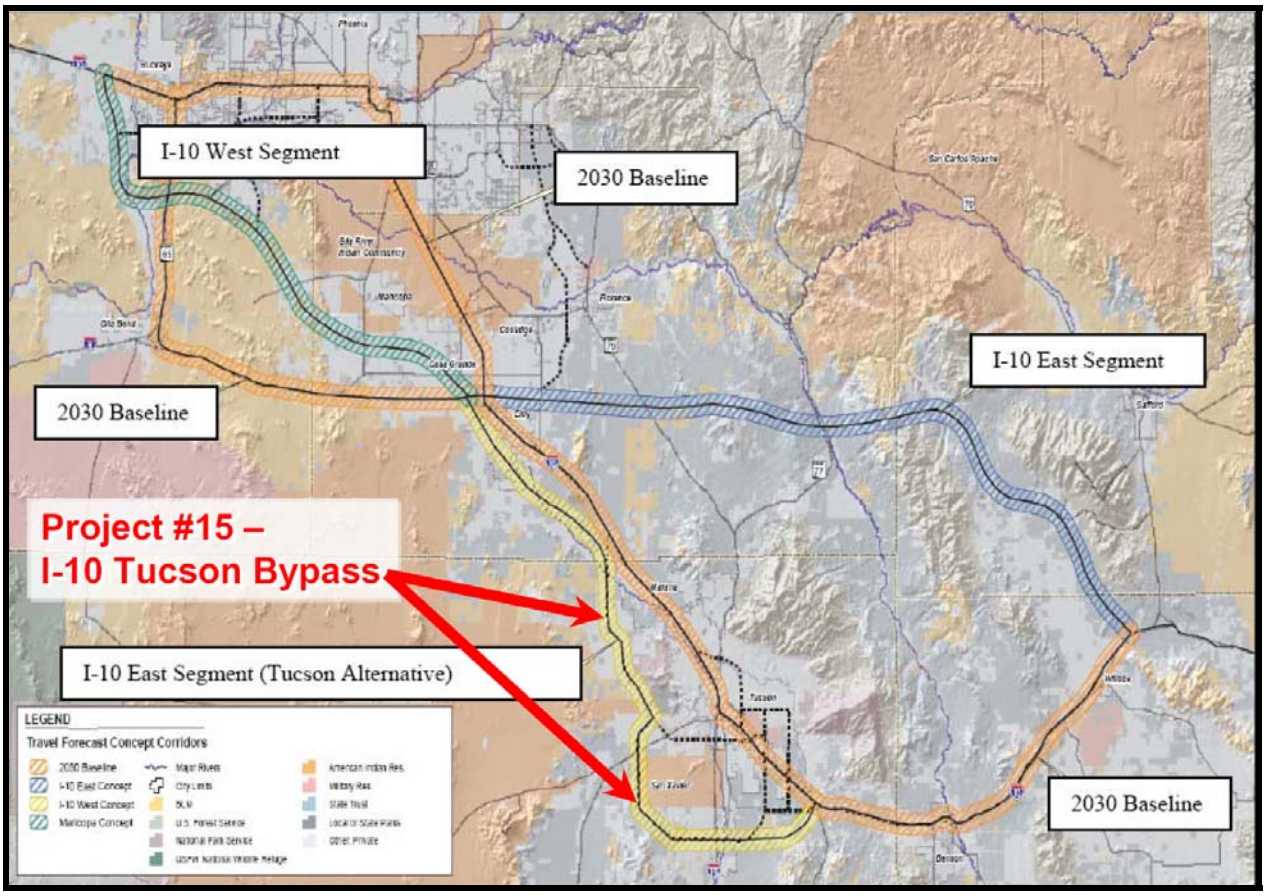
Needed Project #14: Alignment and Safety Improvements to SR 80 and SR 92

The SR 80 corridor from the Douglas Port of Entry to I-10 and the SR 92 corridor from Bisbee to Sierra Vista are both in need of general alignment and safety improvements along their lengths to effectively and safely carry the projected future traffic including expected cross border traffic flows. ADOT has primary responsibility for improvements and corridor upgrades, but it is not likely that a major overhaul of this roadway will make it onto the ADOT Transportation Improvement Program in the near future.

8.10 Pima County Projects

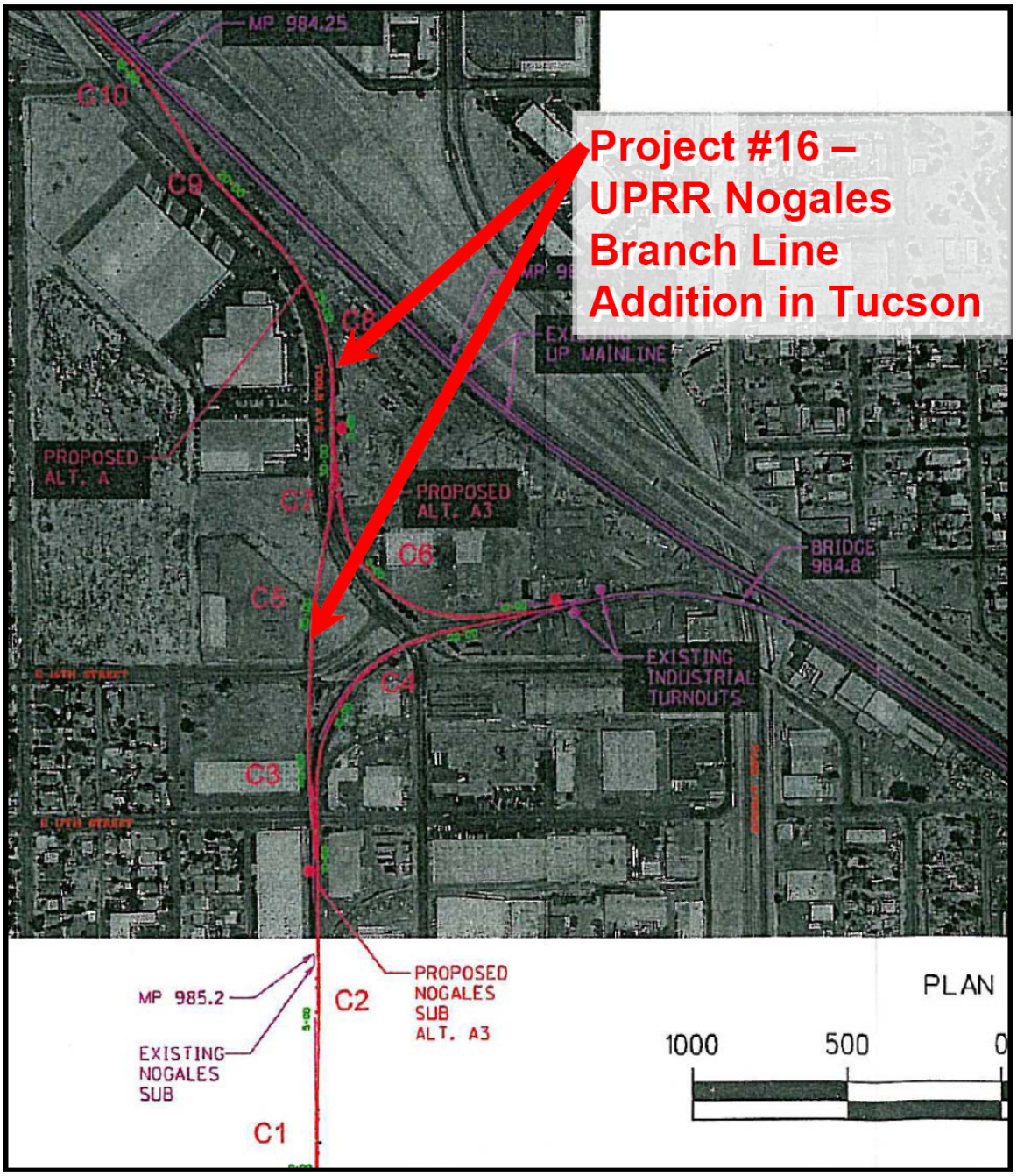
Needed Project #15: I-10 Tucson Bypass

A bypass route of Tucson for I-10 that would be routed to the west and south of Tucson has been proposed. This would allow an alternate route for I-10 through movements for east-west travel during peak traffic periods. The route would also allow north-south traffic between I-10 and I-19 without the need to travel through central Tucson for travelers and freight trucks who want to avoid Tucson traffic congestion. Interstate 19 terminates at Tucson. Several alignments for this route have been proposed including an alignment shown in the inland port plan, as well as a route further south shown in the Southeastern Arterial Study. This project has received a significant amount of public attention.



Needed Project #16: UP Nogales Branch Addition in Tucson

The Union Pacific Nogales Branch line currently runs from the Tucson Rail Yard to the US-Mexican border and continues into Mexico. The line runs along the west side of the rail yard and then curves east into the yard. The only way that a train can move north-south is to go into the Tucson yard. There are proposals to build the west leg of a "Y" (the downtown Wye) to provide the opportunity for the rail line to go west and continue on the main Union Pacific east/west line. This would provide for more direct flow to the Red Rock Rail Yard, which is further north of Tucson. A proposed alignment for this rail line routing is depicted in the *Fourth Avenue Underpass Study* and is shown below.


Project #16 – UPRR Nogales Branch Line Addition in Tucson
MP 984.25
C10
C9
C8
C7
C6
C5
C4
C3
C2
C1
PROPOSED ALT. A
PROPOSED ALT. A3
EXISTING INDUSTRIAL TURNOUTS
BRIDGE 984.8
MP 985.2
EXISTING NOGALES SUB
PROPOSED NOGALES SUB ALT. A3
PLAN
1000
500
0

9.0 Implementation Issues for Public-Private Partnerships at Arizona Border Crossings

The development of public-private partnership projects face many of the same implementation issues which are faced by other infrastructure projects. In addition to more typical issues, public-private partnership projects face a number of implementation issues absent from other infrastructure delivery methods. Given the emerging nature of the public-private partnership industry and the resulting inherent complexities of a public-private partnership project, public-private partnerships require significant commitment of resources. A public agency planning to undertake a public-private partnership project needs to be able to commit the resources necessary to manage the public-private partnership process.

9.1 Stakeholder and Public Acceptance

A public-private partnership project's success requires the acceptance of major stakeholders. These stakeholders include elected officials, public agency decision makers, major users of the facility, and other affected and interested parties. Public-private partnership projects often requires an educational outreach effort to explain the pros and cons of public-private partnerships, explain the public sponsor's reasons for undertaking a public-private partnership project, and to explain the anticipated public-private partnership structure. The introduction of a public-private partnership project related to border crossings complicates the issue further because of the perceived issue of private sector involvement and maintaining security at the border, which must be overcome in the eyes of political leadership and the public if public-private partnerships are going to be used to deliver infrastructure in close proximity to the Arizona-Mexico border.

9.2 Coordination

Implementation of public-private partnerships at Arizona border crossings will require significant interagency coordination, potentially more coordination than is required for implementation of public-private partnerships on non-border related transportation projects. Depending on how closely tied a given project is to the actual port of entry, coordination with United States Department of Homeland Security, United States General Services Administration, United States Department of State, and Mexican Officials may be required in addition to the more standard group of federal, state, local, and private sector partners.

Typical coordination partners in the type of projects under consideration could include:

Federal:

- Federal Highway Administration (for road projects)
- Federal Railroad Administration (for rail projects)

- United States Environmental Protection Agency (environmental oversight)
- United States Army Corps of Engineers (for projects involving impacts to Waters of the United States)
- United States Department of Interior (for projects involving impacts to federal lands and protected species)
- International Boundary and Water Commission

State:

- Arizona Department of Transportation
- Arizona Division of Emergency Management (emergency issues, floodplains)
- Arizona-Mexico Commission (border issues)
- Arizona Department of Homeland Security (security issues)
- Arizona Department of Environmental Quality (environmental issues)
- Other Arizona state agencies if project includes specific issues such as parks, historic sites, water issues, economic development etc.

Local:

- City/local community officials
- County officials
- Port Authorities
- Metropolitan Planning Organizations/Councils of Governments

The need to coordinate these agencies and interests is inherent for any infrastructure project along the Arizona-Mexican border. However, the lack of a common institutional framework for implementing public-private partnerships, both in Arizona and in the area of border crossings, creates additional coordination and communication needs as these various entities become educated about the public-private partnership process.

9.3 Experience

To date Arizona has limited experience with the development, procurement, and execution of infrastructure related public-private partnership projects. Enabling legislation for transportation public-private partnership projects was passed during the 2009 Legislative Session. Prior public-private partnerships in the State have been focused on non-transportation facilities for various public entities.

In addition, as discussed in Section 4, public-private partnerships are being investigated and considered for several border related projects nationally but there had been limited actual implementation of public-private partnerships at border crossings. As a result the pool of expertise for public-private partnerships at border crossings is limited.

ADOT can pursue several avenues to help mitigate these concerns including:

- Engaging firms with public-private partnership experience to assist in the development of public-private partnership programs, initiatives, procurements, and contracts.
- Procure experienced private sector partners for project implementation.
- Begin with implementing public-private partnerships for projects related to border crossings that are most typical of public-private partnership transportation projects such as new or improved road connections as opposed to port of entry specific improvements.

9.4 Operational Issues

There are several general operational issues that potentially need to be addressed during the implementation of public-private partnership projects at Arizona's ports of entry. These include:

- *Security and Maintaining Facilities Outside the Secure Area:* The introduction of new toll collection or commercial facilities at or near existing or new ports of entry may have to follow specific security protocols in their design and placement. In the discussion of public-private partnership implementation with federal officials in relation to other border crossings, no public-private partnership specific security issues were identified. However, based on their experience with other border crossing projects, the study team is aware of several security related issues to consider:
    - There will be a need for clear separation of secure inspection functions and non-secure functions near the port of entry. Commercial facilities related to the port of entry will need to be located either before or after inspection facilities, not intermixed.
    - The secure separation of facilities may need to include specific barriers and separation zones. The size and type of facility built adjacent to secure portions of the port of entry may be limited by security criteria.
    - Private sector partners providing construction or operations services related to the port of entry may be required to undergo security and background checks which could limit the labor pool and/or drive up the cost of that labor pool.

- *Toll Operations:* For projects that utilize tolls or user fees to support its financing, there are several operational issues which will need to be addressed.

- By federal policy, toll collection facilities cannot be placed within the secure area of the port of entry nor can federal agents be involved in the collection of tolls. As a result any toll facilities related to a border crossing need to be located on land adjacent to or near the border crossing. Depending upon the type of toll collections system implemented additional right of way will be required.
- Traffic crossing at the larger ports of entry have the potential for two inspections in each direction. These inspections often lead to queuing problems. The use of tolls could result in a third queue as traffic passes through a toll plaza.
- The majority of toll facilities has, or is, incorporating some form of electronic toll collection system. Such systems can greatly reduce the delays associated with cash collections. In addition, complete ETC systems significantly decreases the property needs associated with cash toll plazas. However, for the ports of entry a full ETC system may not be practical due to the potential for large numbers of infrequent users.
- The effective implementation of ETC is dependent upon the ability to enforce and collect tolls. Specific enforcement protocols will need to be established for traffic originating in both the US and Mexico.
- Toll facilities have a certain minimal level of costs associated with their operations. These costs are both capital costs and operational. As a general rule, smaller projects cannot support the added costs of implementing and operating the minimal systems required of a toll facility.
- In order to effectively toll a facility, access needs to be limited. An unlimited number of access points results in prohibitive collections costs, jeopardizes the revenue stream, and escalates enforcement. As a result facilities which serve substantial local or short movements are not candidates to be tolled.

9.5 Other Issues

- *Environmental:* Infrastructure projects developed pursuant to a public-private partnership are still subject to the same environmental requirements as similar projects developed as either purely public or private facilities. Final environmental clearances are typically required before a public-private partnership project can be financed. Depending on the size, complexity, and controversy of a public-private partnership project, the necessary environmental studies can take several years to complete and become very costly. In almost all cases the need to have the required environmental documentation is the requirement of the public sector. The status of a potential public-private partnership project's environmental review and the cost of any anticipated mitigation measures are often determining factors on whether, and when, to move a project forward as a public-private partnership.

- *Conversion of Existing Facilities:* To date, tolling of existing facilities has met with significant public opposition. With specific exceptions, federal policy limits the addition of tolls on already constructed roads on the interstate, national highway systems, and those receiving previous federal assistance. These restrictions are substantially mirrored in Arizona's recently passed public-private partnership legislation.
- *Limits on Advertising:* There are federal, state, and often local limits on the size, type, and nature of advertisements along transportation facilities and at federal ports of entry. To implement any sort of revenue generation program from the sale of advertising space including banners and/or billboards will require compliance and/or exceptions from these regulations.
- *Development Expenses:* Developing, procuring, negotiating, and overseeing a public-private partnership project requires specialized technical, legal, and financial expertise generally not available within public agencies. This expertise ensures that a fair and transparent transaction occurs which protects the public interest. As a result the upfront costs of a public-private partnership project can be significant. This upfront expense needs to be weighed against the cost of delivering the project under traditional public delivery methods and the benefit derived from the use of a public-private partnership.
- *Future Improvements:* Public-private partnerships are often structured to recognize the need for future capital maintenance requirements, changes in technology, and capacity improvements. Such improvements are generally not part of a design/build/finance public-private partnership, but are significant issues for fully funded concessions.

10.0 Traditional Funding Mechanisms

Most of today's infrastructure has been built utilizing a design, bid, build delivery mechanism. With this delivery approach the public sector remains responsible for design and construction risks in the form of cost overruns, funding and finance risks, and operational and maintenance risk. Toward the end of last century, there was an increasing acceptance and utilization of a design-build approach for project delivery, thus increasingly transferring design and construction risk to the private sector.

Under both of these delivery models, the public sector retained the responsibility for raising the necessary funding to pay for the capital costs necessary to delivery an infrastructure facility or support a financing to pay for these projects. A number of sources are utilized to provide the required funding for infrastructure projects. A brief over view of the main sources are discussed below.

These traditional funding sources can be used to support or enhance public-private partnership projects depending upon the specifics of a public-private partnership project and the public-private partnership model being utilized. The amount of public contribution or support for a project is often a critical factor in analyzing the appropriateness of a specific public-private partnership model. It is also important to understand the amount of required public funding support when selecting whether a public-private partnership procurement method should be used for a specific project.

10.1 Federal, State or Local Appropriation and Grant Funds

These funding sources include typical transportation funding programs along with potential one-time programs such as the stimulus funds provided by the American Recovery and Reinvestment (ARRA) funds.

Federal Funds: The federal funding sources related to transportation are predominantly those that are related to the Federal Highway Trust Fund and authorized via a transportation authorization act such as SAFETEA-LU, which expires in September of 2009. Discussions on a reauthorization bill are underway but the nature, priorities, and amounts of funding are uncertain. Arizona's federal transportation funding has ranged in the $600 to $650 million dollar per year range over the last few years, not including the approximately $600 million in ARRA funds in 2009. Federal transportation programs funded in Arizona include:

- Interstate Maintenance (IM) Funds
- National Highway System (NH) Funds
- Surface Transportation Program (STP) Funds
- Enhancement (TEA) Funds

- Highway Safety Improvement Program (HSIP) Funds
- Bridge Program (BR) Funds
- Congestion Management and Air Quality (CM) Funds
- Planning and Research (SPR) Funds
- Metropolitan Planning Funds
- Equity Bonus Funds
- Recreation Trail Funds
- Public Lands Highways Funds
- Coordinated Border Infrastructure Program
- Safe Routes to Schools Program Funds
- Federal Transit Agency Section 5310 and 5311 Funds

The largest funding pools are the Interstate Maintenance, National Highway System, and Surface Transportation Program Funds. While the Coordinated Border Infrastructure Program may sound like a strong potential source of funding for border related transportation improvements, Arizona only received $8.9 million from that fund in 2008. A significant share of the federal dollars is passed directly through ADOT to local governments or metropolitan planning organizations for use on local projects.

State Funds: Arizona also has state transportation funding provided directly from state taxes on motor fuels, vehicle license taxes, and state lottery proceeds. Many of these funds are distributed directly to local units of government for use on local transportation projects. State transportation funding includes:

- Highway User Revenue Fund (HURF) - motor fuels and vehicle licenses
- Additional non HURF Vehicle License Tax Funds
- Local Transportation Assistance Funds (LTAF 1 and LTAF 2) - lottery funds
- Regional Area Road Fund (RARF) - Maricopa County only but administered by ADOT - transportation excise tax in Maricopa County only

The state also has programs allowing for bonding against these funds as discussed in some of the sections below.

Local Funds: Most of the local funds and grants for transportation are related to the federal and state funding discussed above. Local funding participation in Arizona Border Crossing related transportation improvements is more likely for crossings in urbanized areas and areas with

metropolitan planning organizations where there are greater amounts of federal and state transportations dollars flowing directly to the local community.

10.2 General Obligation Bonding

General Obligation Bonds are the most common form of debt issuance by state and local governments. These bonds require a pledge of the "full faith and credit" of the issuing jurisdiction. Principal and interest payments are made from general revenues of the issuing jurisdiction. General Obligation Bonds provide a low, tax-exempt rate of interest for the borrowers and create an opportunity to proceed with a project immediately once the bonds are approved.

Often states and local governments require voter approval of General Obligation Bonds or at a minimum legislative approval. Careful planning is required to analyze the condition of the community and their financial position in order for rating agencies to rate and ultimately place these bonds. Many communities have successfully linked major development and infrastructure project with a long-term bonding strategy, allowing them to complete important public projects that enhance the quality of life in the community and attract high quality private development as well.

10.3 Revenue Bonding

Revenue bonds are used for the construction of infrastructure projects when a revenue stream can be identified that could be pledged to repay the bonds in the future. Revenue bonds are limited liability instruments that are generally "off balance sheet" finance tools for local governments or authorities. The revenue stream may be anticipated grant or appropriation funding from another unit/level of government.

The Arizona State Transportation Board issues Highway User Revenue Bonds to accelerate the construction of highway construction projects throughout the state. The pledged revenue for the bonds is the HURF funds deposited in the State Highway Fund. The bonds are an obligation of the State Transportation Board and are not obligations of the State of Arizona.

Grant Anticipation Notes or GANs allow a governmental entity to borrow against future grants from another governmental entity. These are used when a grant is pledged over a series of fiscal years. Arizona currently issues Grant Anticipation Notes to expedite certain transportation project. GANs allow the state to pay the federal share of transportation projects in advance of the actual receipt of Federal highway funding. Local communities may participate by paying the cost of interest on the notes. In 2008, ADOT issued $68 million in GANs.

A Grant Anticipation Revenue Vehicle, or GARVEE Bonds, is typically issued by state governments to finance the construction of transportation projects. GARVEES are typically

repaid with apportionments from future federal highway transportation bills. Like GANs, GARVEEs allow projects which will be funded in future years to be constructed prior to the actual grants being funded. Unlike GANs which borrow against grants that have already been authorized by current federal transportation authorization bills, GARVEES borrow against future transportation bills which have not been authorized.

10.4 Special Local Taxation Districts or Taxes

Local governments have several special taxation tools at their disposal for use in funding transportation projects. The availability of specific local finance options for local border crossing projects will depend on the legislative and regulatory mandates for the local community with regards to these finance options. Potential local taxation measures and districts could include:

- *Special Districts:* A special district allows a local government to deliver specific public services within a defined boundary and assess a special tax to cover the cost of these services. Many special districts are created to serve a single purpose such a wastewater treatment but there are multi-function districts that provide a range of special services including transit, roadways, parking, streetscapes, and other services determined to be beneficial to the property within the district. Special districts are governed by state law and are generally established by property owners within the district.
- *Tax Increment Financing:* Tax increment financing allows a community to capture, for a specific period of time, the tax revenues generated from the increased value of properties within an established "TIF" district. The "TIF" allow communities to capture increased property taxes that result from development or redevelopment of an area. The increased revenue increment is used to repay the financing that funded the improvements creating the increased value within the district. Several Arizona communities use TIF districts after being grandfathered into the system, but they are not currently allowed in Arizona.
- *Dedicated Sales or Excise Taxes:* A dedicated tax is placed on the sale of goods and/or services within a jurisdiction or special district. This can be a tax on the sale of all goods, or is a targeted tax on specific goods or services, such as on hotel rooms. The proceeds from the tax are dedicated to pay for a specific improvement project, including transportation improvements. Implementation of this type of tax typically requires approval of the voters within the geographic boundaries subject to the tax. In Arizona, Maricopa County collects a ½ sales tax for the whole county which is dedicated to transportation although not to a specific project. The revenue for this task coordinated with the ADOT through the Regional Area Road Fund.
- *Dedicated Property Taxes:* Similar to a dedicated sales tax but in this case a dedicated property tax is placed on property within an entire community or district similar to a millage for other services. The proceeds from the tax are dedicated to pay for a specific improvement project, including transportation improvements. Implementation of this

type of tax also typically requires approval of the local or district voters that would be subject to the tax. Typically the tax has a sunset provision that ends the tax collection after a certain number of years.

10.5 Federal, State, Local or Private Sector Donations and Matches

The Federal-Aid Highway Program statutorily requires recipients of Federal assistance to contribute toward the total cost of any given project. In traditional Federal-aid financing, the State typically must provide matching State funds in order to receive Federal funds for a project. Historically, only cash contributed by State and local governments could satisfy the matching requirements. Currently donations can be made in cash, land, materials, and services can be counted toward the non-Federal match of Federal-aid projects. This flexible match provides new opportunities for private investors to participate in highway projects.

11.0 Non-Tax Revenue Sources

One of the advantages of public-private partnership projects is their perceived ability to expand the revenue streams which can be used to fund infrastructure projects. While public-private partnerships are often considered to be synonymous with toll projects, there are several public-private partnership models which shift substantial design, construction and operational risk to the private sector without relying upon tolls as a revenue source.

It should be noted that there are two general methods of applying tolls.

The traditional methodology is based on the usage of the facility. Under this approach a vehicle would pay the applicable toll regardless of the time of day or levels of congestion that existed at the facility. The applicable toll the becomes a function of the perceived time savings relative to alternative route – whether tolled or non-tolled. Tolls under this approach are either based on the length traveled (roadway) or passage through or over a facility (bridge or tunnel).

Recently, the concept of congestion pricing has been introduced into toll mechanisms. These mechanisms vary effective toll rates depending upon levels of congestion either on alternative routes and/or upon the specific tolled facility. The purpose of congestion pricing is to reduce the level of congestion on a facility by diverting traffic to alternative routes or to different less congested periods of the day. The planned Otay Mesa port of entry on the California-Mexico border is considering a congestion pricing toll approach.

Potential non-tax revenue sources include fees associated which are based upon the benefit associated with the specific facility. **Exhibit 24** on the following page lists potential revenue sources which can be used to support a public-private partnership project.

Due to various factors, including projected non-tax revenues, perceived revenue risks, and startup risk, public-private partnership projects often require some public contribution or support in order to be feasible. When evaluating the potential of an infrastructure project as a public-private partnership the specific projects ability to leverage public funds is a significant criteria which needs to be taken into account.

Exhibit 24: Fee Based Revenue Sources

Revenue Type	Description	Implementation Issues for Arizona Crossings
User Fees	Most common form of user fee for transportation projects are tolls. However user fees can be charged based on a number of factors: vehicle type, mode of transportation, number of axles or weight. These fees may also vary based on time of day and/or congestion levels.	• Location and method of collection of tolls. • Relatively low traffic volumes and revenue potential. • Toll sensitivity and traffic diversion resulting from tolls. • Public acceptance of tolling. • Lack of uniform standards and single clearing house.
Advertising Revenue	A fee charged to private companies for the placement of billboards, banners, or other advertising on/along border crossing related infrastructure.	• Limited size of revenue stream. • Location of advertisements and limits within the port of entry itself. • Limits on allowances of advertising along federal and state highways due to safety and aesthetic concerns
Lease Payments	Monthly annual rent or lease payments for commercial facilities located adjacent or in close proximity to ports of entry.	• Adequacy of revenue potential. • Competition from existing commercial facilities adjacent to Arizona ports of entry. • Lack of commercial opportunities at or near ports of entry.
port of entry Access Payments	Fees charged for access either to or from a port of entry which would enhance commercial viability. Examples include duty free stores, convenience stores, truck stops, currency exchanges, or other retail enterprises. Services could include custom brokers, shipping companies, warehousing facilities, and transfer services.	• Adequacy of revenue potential. • Competition from existing commercial facilities adjacent to Arizona ports of entry.

12.0 Public-Private Partnership Financial Tools

This section provides a brief discussion of public-private partnership financing tools which can be used for border crossing improvements in Arizona.

12.1 Transportation Infrastructure Finance and Innovation Act (TIFIA)

The TIFIA Program provides Federal credit assistance to large-scale projects of regional or national significance that might otherwise be delayed or not constructed at all because of risk, complexity, and/or cost. There are three forms of credit assistance available - secured (direct) loans, loan guarantees, and standby lines of credit for surface transportation projects of national or regional significance. These credit instruments may offer more flexible repayment terms and more favorable interest rates than would be available from other lenders. The fundamental goal of the TIFIA Credit Program is to leverage Federal funds by attracting substantial private and other non-Federal co investment in critical improvements to the nation's surface transportation system. In general, public or private entities seeking to finance, design, construct, own, or operate an eligible surface transportation project may apply for TIFIA assistance.

12.2 Private Activity Bonds

Private Activity Bonds are also called Section 142 bonds, referring to the section of the IRS code that creates the exemption to the general prohibition against the use of tax-exempt debt to fund projects that are deemed private business use and/or where the repayment of the debt either comes from or is secured by a private entity. The ability to utilize PABs for transportation projects was authorized in the current highway authorization bill, SAFETEA-LU. Prior to the passage of SAFETEA-LU, Section 142 contained 14 classes of exempt facilities: airports, docks and wharves, mass commuting facilities, water facilities, sewage facilities, solid waste disposal facilities, qualified residential rental projects, local electric or gas facilities, local heating or cooling facilities, qualified hazardous waste facilities, high-speed intercity rail projects, environmental enhancements of hydroelectric generating facilities, qualified public education project, and green projects. Transportation projects become the fifteenth exempt facility.

Transportation improvement projects that qualify for PAB financing include all surface transportation projects which are eligible for federal funding. Consequently, all requirements of Title 23 of the Federal Code apply.

12.3 Federal Section 129(a) Lending

Section 129(a) allows States to loan some of its Federal-aid funds to pay for projects with dedicated revenue streams. A State may directly lend apportioned Federal-aid funding to projects generating a toll or that have some other dedicated revenue such as excise taxes, sales taxes, property taxes, motor vehicle taxes and other beneficiary fees. The State must receive a pledge from the project sponsor to use those revenues to repay the loans.

Any Federal-aid highway project is a potential candidate for a Section 129(a) loan, so long as the project sponsor pledges revenues from a dedicated source for repayment of the loan. Loans can be in any amount, up to 80 percent of the project cost, provided that a State has sufficient obligation authority to fund the loan.

12.4 State Infrastructure Bank (HELP)

The State Infrastructure Bank Program was initiated as part of ISTEA. FHWA initially provided seed funding to state DOT's to provide an 80/20 matching funds that would provide for loans and credit enhancements for approved entities developing transportation projects. The Arizona version of this program is the Highway Expansion and Extension Loan Program (HELP) and provides loans and financial assistance for eligible highway projects in the state. The HELP fund is capitalized with federal and state dollars as well as State Transportation Board Funding Obligations, which provide capital for the loans. As borrowers repay principal and interest on loans, the HELP fund is replenished and monies can be re-loaned. In 2008, $10 million was loaned for two projects.

13.0 Project Specific Discussion

Section 8 lists fourteen potential public-private partnership projects located at Arizona's seven ports of entry and two projects in Pima County. Section 8 also indicated that the projects identified at three of these locations - Naco, Lukeville, and Sassabe - did not lend themselves to a consideration as potential public-private partnerships. Potential public-private partnership projects at each of the other ports of entry were identified in Section 8. The following sections will discuss the public-private partnership potential for each.

13.1 San Luis

The San Luis Port of Entry will soon consist of two border crossings, the original San Luis I and the newly built San Luis II.

San Luis I is currently slated for a major reconstruction and reconfiguration project. The current commercial and truck traffic using the existing port of entry will be routed to the new San Luis II Commercial Port of Entry located several miles to the east upon its completion. Currently, the port contains a commercial vehicle inspection station and related facilities. The reconfigured port will then process only pedestrians and passenger vehicles.

San Luis II is the first new port of entry built on the US-Mexico border in the past eight years and is scheduled to be completed in the latter half of 2009. This new commercial "super" port is an example of private involvement in a land port of entry project in Arizona. While it is not a "traditional" public-private partnership project, the Greater Yuma Port Authority committed local resources in the form of land purchase and donation to advance the port of entry project on an accelerated time frame. The new port of entry facilities will more than double the current throughput capacity of the San Luis I port for cargo, and included the potential to be expanded, if need be.

This new port is a catalyst for industrial development including prospects for a new rail line and industrial parks. The industrial development factor makes the San Luis II Port of Entry a prime candidate for potential public-private partnership integration.

The potential public-private partnership projects identified in connection with the San Luis Ports of Entry include:

- Project #1: Improvements to US 95 connecting to San Luis I
- Project #2: Improvements to US 95 Truck Route to San Luis I
- Project #3: Improvements to South Avenue E and SR 195 at San Luis II
- Project #4: Proposed Industrial Park at the San Luis II Port of Entry
- Project #5: Extension of SR 195 from Interstate 8 north to US 95
- Project #6: Improvements and Expansion of Juan Sanchez Boulevard

Most of the projects proposed for San Luis I and San Luis II have potential land use impacts. Improvements to US 95 (Project No.1) and US 95 Truck Route (Project #2) would occur in the urbanized area surrounding the San Luis I Port of Entry. Potential effects on businesses and other properties along these routes would include loss of land, parking, and potential for relocation depending on the nature of improvements. The projects proposed near San Luis II Port of Entry including improvements to South Avenue E and SR-195 (Project #3) and the extensions of SR-195 (Project #5), and Juan Sanchez Boulevard (Project #6) would also affect neighboring properties and land use.

Land has already been acquired for the industrial park (Project #4) but additional rights-of-way could potentially be needed for the other projects. If a public-private partnership is implemented for any of these projects, the public sponsor will need to acquire any necessary rights-of-way.

Several of the routes proposed for improvements serve substantial local traffic and local transportation needs in addition to border traffic. If improvements on these roads are focused primarily on the need to improve traffic flow to the border (whether part of a public-private partnership or not), local resistance may emerge. Improvement plans will need to balance border and local needs.

Concerns over potential security issues in implementing a border crossing public-private partnership with private sector involvement may arise among the public and several officials. The fact that private sector involvement on the proposed projects would have no impact on border security and inspections at the port of entry will need to be well communicated.

Projects #1, 2, 3, and 6 are surface streets that provide significant local access. The fact that these routes are currently free and that the ability to control access is limited, these projects are not candidates for toll funding. If the decision is made to move these projects forward as public-private partnerships then the use of a design/build/finance model may be appropriate. However, the annual funding for these improvements will need to be identified.

As Project #4 develops it should generate revenues from various leases and user fees. It should be anticipated that these revenues will pay for the development within the intermodal center. It should not be anticipated that any significant revenues will be generated to support other area projects.

Project #5 is too short, and with too many alternatives, to operate as toll road. If the decision is made to move this project forward as a public-private partnership then the use of a design/build/finance model may be appropriate. However, the annual funding to support Project #5 will need to be identified.

13.2 Nogales - Mariposa

The Mariposa Port of Entry is located approximately one and one-third miles to the west of downtown Nogales. This port serves passenger vehicles, pedestrians, and commercial cargo. The road leading to the Mariposa Port of Entry on the Mexican side is the Corredor Fiscal which is an 8-mile toll road bypass around Nogales, Sonora. The road terminates to the south at Mexico Highway 15 and has no access along the route, only at the endpoints. The Mariposa Port of Entry is currently open from 8 am to 6 pm for commercial vehicles and from 6 am to 10 pm for passenger vehicles, Monday through Saturday. However, CBP is considering opening the port to passenger vehicles 24/7 upon opening of the reconfigured port of entry.

Mariposa is Arizona's principal gateway for international trade. It was originally intended to process 400 trucks per day and now has as many as 1,600 truck crossings in a single day. The Mariposa Port of Entry alone accounts for the import of 45% of the fresh produce consumed in the entire United States between October and May. A port reconfiguration project is currently funded for construction and will help alleviate the congestion problems that have begun to plague the port in recent years. This reconfiguration will allow the port to handle its increased traffic volumes for all modes.

Of the fourteen projects located at or adjacent to Arizona's ports of entry, Project #7: SR 189 (Mariposa Road) from the Mariposa Port of Entry to I-19, has the greatest potential as a public-private partnership project. Approximately 3 miles long, there are a number of factors which lead to this conclusion:

- The majority of the trips on the project are through traffic with limited local trips.
- The expected cost of this project is in excess of $100 million. Though small for most public-private partnerships, this project is large enough that it should be able to support the development costs of a public-private partnership project.
- An 8-mile toll road, the Corredor Fiscal, already connects the Mariposa Port of Entry to Mexico Highway 15 south of Nogales, Sonora. Together these two roads would form a tolled bypass of both Nogales, Sonora and Nogales, Arizona.
- Diversion of existing traffic should be minimal given that the closest alternative commercial port of entry is over eighty miles due east, has longer connecting routes, and has a port of entry that may not be able to handle significant increases in commercial traffic.
- The existence of the Corredor Fiscal should lead to very reliable revenue projections since there is already a track record of tolled traffic patterns.
- The current port of entry expansion project is already funded.

Despite these advantages, Project #7 has some issues that will need to be addressed. These include:

- The Mariposa Port of Entry has not historically operated 24 hours a day for seven days a week. This limits the revenue potential for the project. It is unclear how the public-private partnership market will react to this limitation.
- The conversion of previously "free" roadway to a tolled facility could result in resistance from public officials, trucking associations, and members of the public.
- Concerns over potential security issues in implementing a public-private partnership with private sector involvement may arise among stakeholders.
- The existence of tolls on the US side of the border could create an additional queue as vehicles stop to pay the toll for the project. This can be mitigated to an extent if electronic toll collection (ETC) can be implemented. However, successful implementation will require international enforcement.

13.3 Nogales - DeConcini/Morley Gate

The DeConcini and Morley Gate Ports of Entry are located in the Central Business District of Nogales for both Nogales, Arizona and Nogales, Sonora. The DeConcini Port of Entry offers crossing for passenger vehicles, busses, recreational vehicles, pedestrians, and rail. This crossing is open 24 hours a day, seven days a week. This crossing is over 100 years old and is the most congested border crossing between Arizona and Mexico. The Morley Gate is a pedestrian only crossing located nearby at the end of Morley Avenue in Nogales. The crossing is located just to the east of the DeConcini Port of Entry and is generally considered part of the DeConcini Port of Entry.

The potential public-private partnership projects identified in connection with DeConcini/Morley Gate include:

- Project #8: Intermodal Freight Facility in Rio Rico at DeConcini/Morley Gate
- Project #9: Relocation of Rail to the East or West of Nogales

Both projects have potential environmental issues that the public sponsor will need to take the lead in addressing and obtaining needed environmental permits and clearances. Project #8 will need environmental clearances for whatever site is selected. Project No.9 has known environmental issues with both potential identified locations for the relocated rail. There is an open area to the east of Nogales, but it runs through a riparian area in the vicinity of the Santa Cruz River. A potential move to the west, near the Mariposa Port of Entry, has significant terrain challenges and associated environmental issues to contend with. Environmental documentation may be needed to evaluate alternatives and select a preferred alternative.

Site selection and land acquisition will be key implementation challenges for public-private partnership implementation of both Projects #8 and #9. For the intermodal facility in Rio Rico, a large site will need to be assembled and provided with utilities and other infrastructure. There may be an important public sector role in site assembly before private sector investment is attracted to the site. For the rail relocation in Project #9, both the rail company (Union Pacific) and public entity paying for part of the project will need to agree on an appropriate relocation site and acquire the needed land. Any public-private partnership arrangements would need to determine which entity will acquire the land for the project.

Project #8 is a development project, where the public benefits would come in the form of reduced truck congestion at the neighboring Mariposa Port of Entry and potential job and economic development benefits. The private sector sources of revenue would be related to leases associated with an intermodal facility and facility related service and freight charges levied by the rail company and/or intermodal facility operator. Public sector source of revenue to support the facility could come in the form of a land acquisition and donation, a special district with tax abatements, and grants dedicated to develop infrastructure including roads and utilities to support the facility.

Project #9 necessarily requires coordination with a private partner, the Union Pacific Railroad. Since the railroad would be the sole user of Project #9, its interests will need to be taken into account in addressing any relocation of the existing rail line. This single user would make it difficult for a third party to participate. Project #9 should be considered as a public-private partnership between the Union Pacific and a public sponsor or as a private sector partnership with a public sponsor providing support, but not entering into a partnership. Public sector contributions could come in the form of grant funds and in kind services or land.

The public benefit of the proposed projects is more indirect than other transportation improvements and a strong case for public participation will need to be made. These are projects that primarily involve indirect benefits in terms of reduced congestion, safety, and economic development for the public instead of delivering a new infrastructure facility.

13.4 Douglas

The Douglas Port of Entry is the second largest commercial port of entry in the state with over $1 billion in trade conducted every year. The Douglas Port of Entry serves both commercial and passenger vehicles at the same station. Commercially, approximately 78 trucks go through the port every day, according to data for the first seven months of 2007 (Bureau of Transportation Statistics, 2007). Very little seasonal variation exists with an annual average of 27,000 trucks since 2002. Nearly 100 percent of the freight imported and exported through the Douglas Port of Entry is done by truck. Commercial vehicles, including buses, freight trucks, and commercial trucks, enter into the docking and inspection area to the east of the passenger entry into the United States. Currently, southbound truck traffic is forced to cut through the line of privately owned vehicles (POVs) in order to exit the US compound and enter the Mexican customs

inspection, creating a serious safety situation and additional congestion in the port of entry area. The port lacks dedicated facilities for pedestrians and busses to access the primary inspection lanes as well.

The potential public-private partnership projects identified in connection with the Douglas Port of Entry include:

- Project #11: US 191 Corridor
- Project #12: Chino Road Improvements & Realignment
- Project #13: Chino Road Extension
- Project #14: Alignment and Safety Improvements to SR 80 and SR 92

Projects #11 and 14 are the main transportation facilities connecting the communities of southeastern Arizona. As such they do not lend themselves to development as toll roads. Potentially these corridors may be developed as a design/build/finance public-private partnership, but annual funding for these improvements will need to be identified.

Projects #13 is dependent upon the proposed port of entry expansion. Project #12, the road realignment and improvements would be beneficial with or without the new port development. However, Project #13 would not be appropriate without eventual completion of the new port facility. The viability and need for these two projects is predicated upon completion of an unfunded expansion and reconfiguration of the existing port of entry. At an estimated cost of $5 to $6 million it is questionable whether the project(s) can support the expense of developing a public-private partnership project. Should the decision be made to move these projects forward as public-private partnership projects then design/build/finance model may be appropriate. However, the annual funding for these improvements will need to be identified.

13.5 Pima County Projects

In addition to the fourteen projects located in close proximity to Arizona's seven ports of entry, two additional projects were identified which have potential implications for cross border traffic. One of these, Project #15: I-10 Tucson Bypass/ Pima County, is subject to a separate study. Any conclusions regarding the potential for this project should be deferred until this study is completed.

Project #16: UP Nogales Branch Addition proposed as a bypass around the Tucson Rail Yard. As with Project #9, this project necessarily requires coordination with a private partner, the Union Pacific Railroad. The railroads interests will need to be taken into account in addressing the potential for this project. This single user would make it difficult for a third party to participate. Project #16 should be considered as a public-private partnership between the Union Pacific and a public sponsor or as a private sector partnership with a public sponsor providing support, but not entering into a partnership. Public sector contributions could come in the form of grant funds and in kind services or land.

14.0 Conclusions

The purpose of this study is to explore the potential for utilizing public-private partnerships to deliver infrastructure serving the seven ports of entry along the Arizona-Mexico Border. As detailed in this report, the findings and conclusions of this study are based upon the following elements:

- A survey of how other border states are utilizing public-private partnerships to address their port of entry infrastructure needs
- A review of freight flows through the seven ports of entry
- The identification of potential implementation issues associated with public-private partnerships in general, and those specific to such projects at border crossings
- The identification of both traditional funding sources and potential revenue sources which could be used to support potential public-private partnerships at the seven Arizona ports of entry
- Discussion of possible public-private partnerships

Working with stakeholders and the Technical Advisory Committee, the Study Team identified sixteen projects to evaluate as potential public-private partnerships. While the Study Team feels that many, if not all, of the identified projects could be done as a public-private partnership where the risk of funding the project remains with the public sector sponsor, it is important to recognize that the lack of an institutional framework within Arizona for the implementation of a public-private partnership may dictate against the use of this mechanism for smaller projects.

Based on the work done by the Study Team, one specific project was identified as having the potential to be self-funding as a public-private partnership – the SR 189/Mariposa Road project connecting the Mariposa Port of Entry with I-19 in Nogales, Arizona. Should it be decided to move this project forward, the next steps would be to conduct a conceptual level evaluation of the project. The elements of this evaluation would include:

- Develop a planning level layout of the project as a toll road, including looking at potential ways to deal with local access
- Develop a toll operations plan
- Conduct a conceptual level traffic and revenue study
- Develop a planning level cost estimate for the project, including toll facilities
- Develop a planning level operational and maintenance plan
- Prepare a conceptual level public-private partnership feasibility study

This next step evaluation would include the identification and discussion of project specific implementation issues that would need to be addressed in order to develop SR 189/Mariposa Road as a public-private partnership.

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Appendix B –Standard Interview Questions

Question List for GSA

1. What border facilities are using public private financing?

2. Are there any privately owned retail commercial structures on existing plazas (food services, currency exchange, customs brokers)?

3. Is there any private ownership of the roads surrounding and leading up to any of the plazas?

4. Does GSA lease or otherwise pay for the use of any border facilities to a third party? If yes who are they leasing to and what are the annual costs?

5. What are the regulatory restrictions on private financing and management of border plazas?

6. What are the main security concerns with private involvement of plaza ownership?

7. Are special approvals required for Private Public Partnerships of border crossing plazas?

Appendix B - Continued

Question List for DOT's

1. Have you done any facility privatization in regards to border facilities?
2. Do plaza facilities also have toll facilities on site or on approach roads?
3. What are the annual collections in toll revenue and lease payments?
4. Is legislative approval required for specific projects?
5. Does the state have public private partnerships for anything other than roads, tunnels, or bridges? What? e.g. prisons, schools, timber management of public forest lands, port facilities, etc. Who is contact/agency for these facilities?
6. Are there any GSA or inspection agency leases paid to the state?
7. Are there any plaza expansion projects or new border crossings planned in the near future?
8. Are there any private enterprises currently located at non-border facilities in the state?
9. Have previous public private partnerships been successful?
10. What are the limitations of the enabling legislation in regards to border crossings and port facilities?

Appendix C: Value of Exports

C1: Value of Exports from State of Arizona to Mexico – Decreasing Sort by Export Value

Export Commodity Description	2005	2010		2020		2030	
	Value	Value	Percent Change	Value	Percent Change	Value	Percent Change
Nonferrous Metal Basic Shapes	$1,911,321	$1,789,077	-6%	$2,215,411	24%	$2,657,990	20%
Plastic Matter Or Synthetic Fibres	$468,861	$604,758	29%	$949,916	57%	$1,345,443	42%
Steel Mill Products	$152,277	$133,058	-13%	$150,416	13%	$162,343	8%
Paper	$145,499	$173,418	19%	$240,475	39%	$318,025	32%
Nonferrous Primary Smelter Products	$144,313	$144,239	0%	$204,543	42%	$278,431	36%
Motor Vehicles Or Equipment	$127,973	$148,120	16%	$212,977	44%	$289,223	36%
Field Crops	$76,711	$75,176	-2%	$87,760	17%	$92,095	5%
Cutlery, Hand Tools Or Hardware	$72,480	$84,651	17%	$119,862	42%	$165,468	38%
Meat Or Poultry, Fresh Or Chilled	$45,629	$55,633	22%	$73,088	31%	$88,604	21%
Household Or Office Furniture	$35,220	$49,105	39%	$97,134	98%	$175,705	81%
Paper Or Building Board	$33,493	$39,922	19%	$55,358	39%	$73,211	32%
Aircraft Or Parts	$32,209	$32,196	0%	$34,704	8%	$38,285	10%
Waste Or Scrap	$21,439	$22,495	5%	$23,907	6%	$24,029	1%
Misc Manufactured Products	$19,394	$28,244	46%	$54,159	92%	$97,098	79%
Grain Mill Products	$17,814	$14,473	-19%	$16,621	15%	$18,833	13%
Primary Forest Materials	$16,861	$16,256	-4%	$18,168	12%	$20,352	12%
Misc Finished Textile Goods	$11,568	$12,413	7%	$12,083	-3%	$10,840	-10%
Narrow Fabrics	$10,668	$14,007	31%	$20,970	50%	$30,129	44%
Periodicals	$8,107	$8,818	9%	$10,253	16%	$11,392	11%
Paving Or Roofing Materials	$7,778	$7,943	2%	$7,701	-3%	$7,567	-2%
Misc Chemical Products	$7,544	$9,346	24%	$14,194	52%	$20,315	43%
Knit Fabrics	$6,400	$8,412	31%	$12,594	50%	$18,095	44%
Toys, Amusement, Athletic Equipment	$6,112	$8,909	46%	$17,084	92%	$30,628	79%
Drugs	$5,490	$9,453	72%	$22,823	141%	$47,564	108%
Sawmill Or Planing Mill Products	$4,575	$4,174	-9%	$4,393	5%	$4,608	5%
Leather Luggage Or Handbags	$4,195	$5,097	21%	$6,835	34%	$8,691	27%
Structural Clay Products	$3,880	$4,844	25%	$8,182	69%	$13,864	69%
Glassware, Pressed Or Blown	$3,480	$5,382	55%	$12,492	132%	$27,391	119%
Man-made Or Silk Woven Fibre	$3,465	$4,550	31%	$6,812	50%	$9,787	44%
Office Or Art Materials	$2,829	$4,123	46%	$7,907	92%	$14,176	79%
Musical Instruments Or Parts	$2,206	$3,217	46%	$6,168	92%	$11,058	79%
Broken Stone Or Riprap	$2,046	$1,935	-5%	$1,770	-8%	$1,533	-13%
Photographic Equip Or Supplies	$1,929	$2,744	42%	$5,963	117%	$12,731	113%
Beverages Or Flavor Extracts	$1,534	$1,667	9%	$1,779	7%	$1,792	1%
Jewelry, Silverware, Etc.	$1,238	$1,805	46%	$3,462	92%	$6,206	79%
Watches, Clocks, Etc.	$520	$570	9%	$680	19%	$780	15%
Confectionery Or Related Prod	$400	$424	6%	$542	28%	$650	20%
Railroad Equipment	$386	$284	-26%	$305	7%	$309	1%
Fresh Vegetables	$277	$351	27%	$523	49%	$723	38%
Rubber Or Plastic Footwear	$137	$133	-3%	$125	-6%	$112	-11%
Caps, hats Or Millinery	$134	$144	7%	$140	-3%	$126	-10%

Export Commodity Description	2005	2010		2020		2030	
	Value	Value	Percent Change	Value	Percent Change	Value	Percent Change
Industrial Electrical Equipment	$63	$85	36%	$172	102%	$309	80%
Soap Or Other Detergents	$44	$54	23%	$90	67%	$150	67%
Wool Broad-woven Fabrics	$25	$33	31%	$49	50%	$71	44%
Miscellaneous Wood Products	$19	$18	-4%	$21	12%	$23	12%
Metal Stampings	$12	$14	12%	$19	42%	$26	38%
Misc Printed Matter	$5	$5	9%	$6	16%	$7	11%
Misc Fabricated Products	$3	$4	24%	$6	44%	$8	31%
Misc Electrical Machinery	$3	$4	48%	$9	98%	$16	82%
Commodity Total	$3,418,565	$3,531,783	3%	$4,740,655	34%	$6,136,812	29%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

Appendix D: Tonnage of Exports

D1: Tonnage of Exports from State of Arizona to Mexico – Decreasing Sort by Tonnage

Export Commodity Description	2005	2010		2020		2030	
	Tonnage	Tonnage	Percent Change	Tonnage	Percent Change	Tonnage	Percent Change
Field Crops	626,035	613,545	-2%	716,248	17%	751,625	5%
Nonferrous Metal Basic Shapes	550,514	515,304	-6%	638,100	24%	765,575	20%
Plastic Matter Or Synthetic Fibres	522,283	673,666	29%	1,058,152	57%	1,498,746	42%
Steel Mill Products	245,170	214,229	-13%	242,175	13%	261,378	8%
Paper	174,263	207,706	19%	288,021	39%	380,904	32%
Household Or Office Furniture	126,697	176,658	39%	349,445	98%	632,109	81%
Nonferr Primary Smelter Products	50,161	50,135	0%	71,096	42%	96,779	36%
Meat Or Poultry, Fresh Or Chilled	49,437	60,277	22%	79,190	31%	96,000	21%
Paper Or Building Board	40,500	48,275	19%	66,941	39%	88,529	32%
Grain Mill Products	39,814	32,349	-19%	37,149	15%	42,094	13%
Broken Stone Or Riprap	17,858	16,909	-5%	15,472	-8%	13,401	-13%
Misc Chemical Products	17,302	21,435	24%	32,556	52%	46,593	43%
Motor Vehicles Or Equipment	15,296	17,704	16%	25,456	44%	34,569	36%
Cutlery, Hand Tools Or Hardware	12,707	14,841	17%	21,014	42%	29,009	38%
Paving Or Roofing Materials	12,169	12,426	2%	12,048	-3%	11,838	-2%
Primary Forest Materials	8,418	8,114	-4%	9,069	12%	10,159	12%
Waste Or Scrap	7,285	7,643	5%	8,124	6%	8,165	1%
Structural Clay Products	6,713	8,381	25%	14,156	69%	23,987	69%
Beverages Or Flavor Extracts	5,587	6,070	9%	6,480	7%	6,525	1%
Sawmill Or Planing Mill Products	4,587	4,186	-9%	4,405	5%	4,620	5%
Glassware, Pressed Or Blown	4,015	6,211	55%	14,417	132%	31,611	119%
Misc Manufactured Products	3,193	4,650	46%	8,916	92%	15,985	79%
Narrow Fabrics	2,554	3,354	31%	5,021	50%	7,214	44%
Man-made Or Silk Woven Fibre	2,288	3,004	31%	4,497	50%	6,461	44%
Misc Finished Textile Goods	1,931	2,072	7%	2,017	-3%	1,809	-10%
Knit Fabrics	1,805	2,373	31%	3,553	50%	5,105	44%
Miscellaneous Wood Products	1,261	1,216	-4%	1,360	12%	1,523	12%
Periodicals	995	1,082	9%	1,258	16%	1,398	11%
Toys, Amusement, Athletic Equipment	981	1,430	46%	2,742	92%	4,916	79%
Aircraft Or Parts	598	595	0%	642	8%	708	10%
Drugs	515	886	72%	2,139	141%	4,458	108%
Fresh Vegetables	470	597	27%	890	49%	1,229	38%
Leather Luggage Or Handbags	395	480	21%	643	34%	818	27%
Office Or Art Materials	287	419	46%	803	92%	1,440	79%
Musical Instruments Or Parts	227	331	46%	635	92%	1,138	79%
Confectionery Or Rel Prod	173	184	6%	235	28%	281	20%
Railroad Equipment	148	109	-26%	117	7%	118	1%
Photographic Equip Or Supplies	121	172	42%	374	117%	799	113%
Jewelry, Silverware, Etc.	109	159	46%	305	92%	547	79%
Watches, Clocks, Etc.	40	45	12%	54	19%	62	15%
Caps, hats Or Millinery	24	25	7%	25	-3%	22	-10%
Soap Or Other Detergents	14	16	20%	28	67%	46	67%

Export Commodity Description	2005	2010		2020		2030	
	Tonnage	Tonnage	Percent Change	Tonnage	Percent Change	Tonnage	Percent Change
Industrial Electrical Equipment	12	17	37%	34	102%	61	80%
Rubber Or Plastic Footwear	12	11	-3%	11	-6%	10	-11%
Wool Broad-woven Fabrics	8	10	31%	15	50%	22	44%
Metal Stampings	5	6	13%	8	42%	11	38%
Misc Printed Matter	2	2	9%	2	16%	2	11%
Misc Fabricated Products	1	1	24%	1	44%	2	31%
Misc Electrical Machinery	0	0	48%	1	98%	2	82%
Commodity Total	2,554,982	2,739,308	7%	3,746,039	37%	4,890,404	31%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

Appendix E: Value of Exports through Arizona's Ports of Entry

E1: Value of Exports through Arizona's Ports of Entry – Decreasing Commodity Value

Export Commodities To All Mexican States	Border Crossing At Arizona Ports of Entry (POEs)						Commodity Total
	San Luis	Lukeville	Sasabe	Nogales	Naco	Douglas	
Electrical machinery and equipment, televisions and sound recorders and reproducers	$80,395	$93	$229	$1,673,111	$4,501	$71,795	$1,830,125
Vehicles, other than railway or tramway rolling stock, and parts and accessories thereof	$27,628	$421		$893,257	$1,694	$51,292	$974,292
Nuclear reactors, boilers, machinery and mechanical appliances	$46,870	$6,579	$23	$805,561	$23,571	$44,566	$927,169
Plastics and articles thereof	$44,305	$249	$43	$472,252	$1,651	$28,605	$547,106
Paper and paperboard; Articles of paper pulp, of paper or of paperboard	$15,669	$14	$36	$203,146	$497	$11,788	$231,151
Edible fruit and nuts; Peel of citrus fruit or melons	$79,961			$125,472		$563	$205,995
Articles of iron or steel	$15,461	$117	$4	$146,759	$2,288	$15,658	$180,287
Iron and steel	$2,177		$45	$155,083	$1,531	$11,656	$170,492
Optical, photographic, cinematographic, measuring, checking, medical instruments	$1,525	$45	$102	$152,685	$186	$11,147	$165,690
Ores, slag and ash				$90,678	$294	$43,269	$134,240
Copper and articles thereof	$549	$164		$103,274	$48	$17,966	$122,000
Residues and waste from the food industries; Prepared animal feed	$272			$119,393	$8	$130	$119,803
Miscellaneous articles of base metal	$2,862	$6	$17	$112,628	$210	$2,048	$117,770
Meat and edible meat offal	$5,361			$100,176	$20	$414	$105,971
Rubber and articles thereof	$4,980	$69	$5	$83,943	$3,265	$10,007	$102,269
Oil seeds, Miscellaneous grains; Seeds and fruit;Straw and fodder	$3,760			$64,717	$27	$157	$68,662
Products of animal origin, not elsewhere	$89			$65,997		$120	$66,206
Aluminum and articles thereof	$2,943	$1,566		$49,624	$7	$7,022	$61,162
Cereals	$47			$57,680	$155	$8	$57,890
Mineral fuels, mineral oils and Bituminous substances; Mineral waxes	$158			$45,517	$1,584	$2,955	$50,215
Wadding, felt and nonwovens; Special yarns; Twine, cordage, ropes, cables	$179			$40,786	$300	$5,564	$46,829
Special classification provisions	$151	$188		$29,812	$3,395	$1,632	$35,178
Fertilizers	$6,555			$23,696		$4,138	$34,389

Export Commodities To All Mexican States	Border Crossing At Arizona Ports of Entry (POEs)						Commodity Total
	San Luis	Lukeville	Sasabe	Nogales	Naco	Douglas	
Edible vegetables and certain roots and tubers	$1,353			$30,940		$30	$32,323
Tanning, dyeing extracts, Tannins, Dyes, pigmentsr; Paints, varnishes, Putty and Inks	$2,101	$14		$25,742	$78	$417	$28,352
Products of the milling industry; Malt; Starches	$521			$25,916	$105	$38	$26,580
Tin and articles thereof	$22			$26,201			$26,223
Miscellaneous chemical products	$1,953		$5	$13,420	$1,871	$6,739	$23,987
Tools, implements, cutlery, spoons, forks, of base metal	$1,351	$133		$20,224	$443	$1,674	$23,825
Impregnated, coated, covered or laminated textile fabrics; for industrial use	$190			$16,856		$6,574	$23,619
Furniture; Bedding, mattress, cushions, stuffed furnishings; Lamps and lighting fittings, Illuminated signs	$1,272	$400		$20,131	$51	$846	$22,700
Inorganic chemicals; Organic or inorganic compounds of precious metals	$737			$13,709	$3,708	$2,301	$20,455
Essential oils and resinoids; Perfumery, cosmetic or toilet preparations	$206	$18	$18	$19,628			$19,870
Toys, games and sports equipment; Parts and accessories thereof	$13,006		$9	$1,880	$8	$3,027	$17,930
Articles of apparel and clothing accessories, knitted or crocheted	$10,938		$20	$3,981			$14,939
Preparations of vegetables, fruit, nuts, or other parts of plants	$841		$24	$14,026		$16	$14,906
Beverages, spirits and vinegar	$302	$126		$13,599		$48	$14,075
Printed books, newspapers, pictures, manuscripts, typescripts and plans	$3,525	$7		$9,577	$15	$344	$13,467
Ceramic products	$83	$26		$8,650		$4,399	$13,157
Woven fabrics; tuffed textile fabrics; lace; tapestries; trimmings; embroidery	$1,864		$4	$7,355	$10	$3,024	$12,256
Soap, washing preparations, lubricating preparations, candles, modeling pastes	$177			$11,722	$123	$138	$12,159
Other textile articles; needle craft sets; worn clothing and worn textile articles; rags	$2,200			$8,633		$1,292	$12,125
Man-made filaments	$964			$8,196	$10	$2,877	$12,047
Man-made staple fibers	$113			$10,344		$243	$10,700

Export Commodities To All Mexican States	Border Crossing At Arizona Ports of Entry (POEs)						Commodity Total
	San Luis	Lukeville	Sasabe	Nogales	Naco	Douglas	
Articles of stone, plaster, cement, asbestos, mica or similar materials	$215	$30		$3,731	$394	$5,904	$10,275
Knitted or crocheted fabrics	$4,392			$1,304	$6	$3,724	$9,426
Leather; saddlery, harness; travel goods, handbags, articles of animal gut	$867	$4		$8,534		$19	$9,423
Animal or vegetable fats and oils; Prepared edible fats; Animal or vegetable waxes	$325			$7,381	$25	$301	$8,031
Cotton	$3,830			$3,073		$688	$7,591
Miscellaneous manufactured articles	$714			$6,592		$51	$7,357
Pharmaceutical products	$7			$6,930			$6,937
Articles of apparel and clothing accessories, not knitted or crocheted	$6,114	$45		$705		$41	$6,906
Albuminoidal substances; Modified starches; Glues; Enzymes	$557			$5,801	$7	$458	$6,824
Glass and glassware	$937	$75		$5,332	$35	$31	$6,410
Miscellaneous edible preparations	$539			$5,507	$18	$102	$6,166
Organic chemicals	$517			$4,188	$214	$313	$5,233
Preparations of meat, of fish, or of crustaceans	$2,117			$2,661		$429	$5,207
Explosives; Pyrotechnic products; Matches; Pyrophoric alloys				$453		$4,722	$5,175
Dairy produce; Birds' eggs; Natural honey	$1,576			$2,936		$9	$4,522
Musical instruments; Parts and accessories of such articles	$3			$4,472			$4,475
Lead and articles thereof	$8			$1,873	$774	$875	$3,531
Nickel and articles thereof				$3,470	$21		$3,491
Sugars and sugar confectionery	$16			$3,208	$11	$70	$3,306
Pearls, precious-semiprevious stones, precious metals; metals clad with precious metal, imitation jewelry; coin	$82			$2,706		$351	$3,139
Aircraft, spacecraft, and parts thereof		$147		$2,863			$3,010
Live trees, other plants; Bulbs, roots and Cut flowers	$2,259			$744			$3,003
Carpets and other textile floor coverings	$109			$2,854	$3		$2,967
Live animals	$100			$1,587		$3	$1,690
Lac; Gums; Resins and other vegetable saps and extract	$63			$1,516	$3		$1,581

Export Commodities To All Mexican States	Border Crossing At Arizona Ports of Entry (POEs)						Commodity Total
	San Luis	Lukeville	Sasabe	Nogales	Naco	Douglas	
Preparations of cereals, flour, starch or milk; Bakers' wares	$285			$1,010		$4	$1,298
Other base metals; Cermets; Articles thereof				$1,039		$191	$1,230
Raw hides and skins (other than furskins) and leather	$934				$14		$948
Ships, boats, and floating structures	$128	$50		$735			$914
Zinc and articles thereof	$74	$6		$814		$18	$912
Footwear, gaiters and the like; Parts of such articles	$216			$548			$764
Locomotives, rolling stock, parts, track fixtures, Mechanical traffic signaling equipment	$338			$271	$7	$106	$723
Tobacco and manufactured tobacco substitutes	$4	$53		$621			$679
Cocoa and cocoa preparations	$53			$396	$211		$660
Salt; sulfur; earths and stone; plastering materials, lime and cement	$59	$3		$409	$82	$90	$643
Wool, fine or coarse animal hair; Horsehair yarn and woven fabric	$566			$5			$571
Manufactures of straw; basketware and wickerwork	$41					$491	$532
Clocks and watches and parts thereof	$14	$306		$146			$466
Articles made of feathers or of down; artificial flowers, articles of human hair	$62			$229		$7	$298
Fish and crustaceans	$123			$136			$260
Coffee, tea, mate and spices	$43			$161			$204
Headgear and parts thereof				$196			$196
Photographic or cinematographic goods	$41			$142		$10	$193
Furskins and artificial fur; manufactures thereof	$111					$6	$117
Vegetable plaiting materials; vegetable products				$112			$112
Arms and ammunition; parts and accessories thereof				$99			$99
Works of art, collectors' pieces and antiques	$52			$15		$10	$77
Umbrellas, sun umbrellas, walking sticks, seatsticks, whips, riding crops	$64			$3			$67
Other vegetable textile fibers; Paper yarn and woven fabrics of	$17			$50			$66

Export Commodities To All Mexican States	Border Crossing At Arizona Ports of Entry (POEs)						Commodity Total
	San Luis	Lukeville	Sasabe	Nogales	Naco	Douglas	
paper yarn							
Pulp of wood or of other fibrous material; waste and scrap of paper or paperboard				$15		$28	$43
Value of Top 10 Export Commodities	$414,188	$10,955	$583	$6,023,550	$53,479	$395,578	$6,898,333
POE's Percent of Total	6.0%	0.2%	0.0%	87.3%	0.8%	5.7%	100.0%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

Appendix F: Value of Imports

F1: Value of Imports from Mexico to State of Arizona – Descending Sort by Import Value

Import Commodity Description	2005	2010		2020		2030	
	Value	Value	Percent Change	Value	Percent Change	Value	Percent Change
Nonferrous Metal Basic Shapes	$1,036,872	$1,362,568	31%	$1,820,354	34%	$2,070,082	14%
Fresh Vegetables	$1,009,810	$1,317,729	30%	$1,789,285	36%	$2,128,526	19%
Engines Or Turbines	$718,697	$1,024,284	43%	$1,578,181	54%	$2,167,735	37%
Nonferrous Primary Smelter Products	$238,582	$278,263	17%	$384,170	38%	$437,111	14%
Motor Vehicle Or Equipment	$191,321	$263,589	38%	$358,259	36%	$454,780	27%
Waste Or Scrap	$164,971	$218,935	33%	$289,230	32%	$306,851	6%
Livestock Or Livestock Prod	$73,852	$96,135	30%	$128,716	34%	$154,550	20%
Plastic Matter Or Synthetic Fibres	$51,143	$50,065	-2%	$74,595	49%	$99,112	33%
Men's Or Boys Clothing	$36,886	$42,915	16%	$46,252	8%	$42,921	-7%
Miscellaneous Wood Products	$30,237	$38,762	28%	$48,338	25%	$51,010	6%
Concrete, Gypsum, Or Plaster	$30,107	$45,079	50%	$76,970	71%	$111,891	45%
Misc Furniture Or Fixtures	$29,534	$44,419	50%	$87,478	97%	$142,153	63%
Cutlery, Hand Tools Or Hardware	$13,487	$18,952	41%	$28,672	51%	$37,526	31%
Field Crops	$12,195	$14,244	17%	$17,519	23%	$19,075	9%
Iron Ores	$12,093	$12,219	1%	$12,600	3%	$12,066	-4%
Industrial Chemicals	$12,033	$14,284	19%	$19,222	35%	$24,741	29%
Structural Clay Products	$10,940	$16,127	47%	$27,535	71%	$40,028	45%
Meat Or Poultry, Fresh Or Chilled	$10,651	$13,582	28%	$18,772	38%	$23,276	24%
Abrasives, asbestos Products, Etc.	$9,701	$14,432	49%	$24,642	71%	$35,822	45%
Leather Luggage Or Handbags	$9,077	$10,650	17%	$12,401	16%	$13,197	6%
Misc Fabricated Metal Products	$8,547	$11,916	39%	$18,028	51%	$23,595	31%
Steel Mill Products	$7,161	$9,149	28%	$11,098	21%	$11,171	1%
Beverages Or Flavor Extracts	$6,696	$8,689	30%	$11,657	34%	$13,361	15%
Office Or Art Materials	$6,385	$10,287	61%	$22,257	116%	$43,682	96%
Grain Mill Products	$5,558	$15,084	171%	$17,180	14%	$18,053	5%
Rubber Or Plastic Footwear	$4,811	$5,552	15%	$6,310	14%	$6,631	5%
Misc Nonmetallic Minerals	$4,360	$4,931	13%	$5,556	13%	$5,325	-4%
Misc Textile Goods	$4,162	$4,929	18%	$5,788	17%	$6,364	10%
Canned Or Preserved Food	$3,769	$4,557	21%	$6,299	38%	$7,810	24%
Misc Food Preparations	$3,271	$4,346	33%	$6,460	49%	$8,372	30%
Paving Or Roofing Materials	$3,057	$2,869	-6%	$2,934	2%	$2,909	-1%
Soap Or Other Detergents	$2,948	$4,422	50%	$9,115	106%	$16,960	86%
Misc Primary Metal Products	$2,673	$3,513	31%	$4,693	34%	$5,337	14%
Misc Apparel Or Accessories	$2,181	$2,526	16%	$2,722	8%	$2,526	-7%
Glassware, Pressed Or Blown	$2,120	$3,144	48%	$4,773	52%	$6,304	32%
Paper	$1,981	$2,431	23%	$3,029	25%	$3,463	14%
Small Arms,30mm Or Less	$1,594	$2,122	33%	$3,093	46%	$4,087	32%
Toys, Amusement, Athletic Equipment	$1,527	$2,379	56%	$5,148	116%	$10,103	96%
Misc Finished Textile Goods	$1,165	$1,308	12%	$1,410	8%	$1,308	-7%
Railroad Equipment	$917	$631	-31%	$652	3%	$667	2%

Import Commodity Description	2005	2010		2020		2030	
	Value	Value	Percent Change	Value	Percent Change	Value	Percent Change
Measuring Or Controlling Equipment	$875	$1,159	32%	$1,943	68%	$3,160	63%
Pulp Or Pulp Mill Products	$471	$437	-7%	$437	0%	$437	0%
Drugs	$460	$790	72%	$2,330	195%	$6,591	183%
Cotton Broad-woven Fabrics	$341	$407	19%	$478	17%	$525	10%
Communication Equipment	$306	$463	51%	$1,107	139%	$2,384	115%
Misc Plastic Products	$147	$175	19%	$261	49%	$347	33%
Floor Coverings	$124	$137	11%	$161	17%	$177	10%
Dairy Products	$103	$114	10%	$157	38%	$195	24%
Misc Printed Matter	$97	$116	20%	$162	40%	$201	24%
Misc Chemical Products	$77	$66	-15%	$103	56%	$150	46%
Sawmill Or Planing Mill Products	$72	$79	10%	$91	15%	$87	-4%
Paints, Lacquers, Etc.	$67	$78	17%	$100	27%	$102	3%
Misc Manufactured Products	$64	$82	27%	$176	116%	$346	96%
Fabricated Structural Metal Products	$20	$20	3%	$31	51%	$40	31%
Confectionery Or Related Prod	$11	$11	3%	$15	32%	$17	15%
Gravel Or Sand	$9	$10	13%	$12	13%	$11	-4%
Misc Farm Products	$8	$5	-30%	$7	34%	$8	20%
Thread Or Yarn	$5	$5	-6%	$6	17%	$6	10%
Photographic Equip Or Supplies	$5	$4	-27%	$6	60%	$9	57%
Leather Goods, Nec	$2	$2	18%	$2	16%	$2	6%
Commodity Total	3,780,337	5,006,177	32%	6,998,976	40%	8,585,277	23%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

Appendix G: Tonnage of Imports

G1: Tonnage of Imports from Mexico to State of Arizona – Decreasing Sort by Tonnage

Import Commodity Description	2005	2010		2020		2030	
	Tonnage	Tonnage	Percent Change	Tonnage	Percent Change	Tonnage	Percent Change
Nonferrous Metal Basic Shapes	728,854	957,885	31%	1,279,707	34%	1,455,267	14%
Fresh Vegetables	565,967	738,856	31%	1,003,259	36%	1,193,472	19%
Engines Or Turbines	403,211	574,701	43%	885,480	54%	1,216,264	37%
Nonferrous Primary Smelter Products	258,939	302,039	17%	416,994	38%	474,458	14%
Motor Vehicles Or Equipment	116,798	160,948	38%	218,753	36%	277,689	27%
Waste Or Scrap	92,450	122,694	33%	162,088	32%	171,963	6%
Livestock Or Livestock Prod	42,395	55,235	30%	73,955	34%	88,798	20%
Plastic Matter Or Synthetic Fibres	28,662	28,067	-2%	41,819	49%	55,564	33%
Men's Or Boys Clothing	20,681	24,070	16%	25,943	8%	24,074	-7%
Industrial Chemicals	17,932	21,597	20%	29,063	35%	37,407	29%
Miscellaneous Wood Products	17,002	21,809	28%	27,197	25%	28,701	6%
Concrete, Gypsum, Or Plaster	16,875	25,296	50%	43,191	71%	62,787	45%
Misc Furniture Or Fixtures	16,545	24,894	50%	49,026	97%	79,667	63%
Paving Or Roofing Materials	8,312	7,800	-6%	7,976	2%	7,910	-1%
Iron Ores	7,693	7,773	1%	8,016	3%	7,676	-4%
Cutlery, Hand Tools Or Hardware	7,560	10,633	41%	16,086	51%	21,053	31%
Misc Primary Metal Products	7,268	9,553	31%	12,762	34%	14,513	14%
Field Crops	6,836	7,982	17%	9,818	23%	10,690	9%
Structural Clay Products	6,136	9,044	47%	15,443	71%	22,449	45%
Meat Or Poultry, Fresh Or Chilled	5,972	7,625	28%	10,539	38%	13,067	24%
Abrasives, asbestos Products, Etc.	5,437	8,089	49%	13,812	71%	20,078	45%
Misc Food Preparations	5,426	7,312	35%	10,870	49%	14,087	30%
Leather Luggage Or Handbags	5,089	5,976	17%	6,958	16%	7,405	6%
Misc Fabricated Metal Products	4,812	6,714	40%	10,158	51%	13,295	31%
Steel Mill Products	4,015	5,136	28%	6,230	21%	6,270	1%
Beverages Or Flavor Extracts	3,755	4,868	30%	6,531	34%	7,486	15%
Office Or Art Materials	3,580	5,771	61%	12,486	116%	24,506	96%
Grain Mill Products	3,220	8,734	171%	9,948	14%	10,454	5%
Rubber Or Plastic Footwear	2,699	3,115	15%	3,540	14%	3,720	5%
Misc Nonmetallic Minerals	2,445	2,766	13%	3,117	13%	2,987	-4%
Misc Textile Goods	2,334	2,769	19%	3,251	17%	3,575	10%
Canned Or Preserved Food	2,113	2,544	20%	3,516	38%	4,359	24%
Soap Or Other Detergents	1,654	2,476	50%	5,103	106%	9,496	86%
Paper	1,323	1,628	23%	2,028	25%	2,319	14%
Misc Apparel Or Accessories	1,223	1,418	16%	1,528	8%	1,418	-7%
Glassware, Pressed Or Blown	1,189	1,764	48%	2,678	52%	3,537	32%
Small Arms,30mm Or Less	894	1,190	33%	1,735	46%	2,293	32%
Toys, Amusement, Athletic Equipment	857	1,325	54%	2,866	116%	5,626	96%
Misc Finished Textile Goods	654	731	12%	788	8%	731	-7%
Railroad Equipment	515	355	-31%	366	3%	375	2%
Measuring Or Controlling Equipment	491	650	32%	1,090	68%	1,774	63%
Pulp Or Pulp Mill Products	264	245	-7%	245	0%	245	0%

Import Commodity Description	2005	2010		2020		2030	
	Tonnage	Tonnage	Percent Change	Tonnage	Percent Change	Tonnage	Percent Change
Drugs	259	444	71%	1,307	195%	3,699	183%
Cotton Broad-woven Fabrics	191	228	19%	268	17%	294	10%
Communication Equipment	172	260	51%	621	139%	1,336	115%
Misc Plastic Products	83	99	19%	148	49%	196	33%
Floor Coverings	70	77	10%	90	17%	99	10%
Dairy Products	59	64	9%	88	38%	109	24%
Misc Printed Matter	55	65	19%	91	40%	113	24%
Misc Chemical Products	43	37	-15%	58	56%	84	46%
Sawmill Or Planing Mill Products	40	44	10%	51	15%	49	-4%
Paints, Lacquers, Etc.	38	44	16%	56	27%	57	3%
Misc Manufactured Products	36	45	26%	98	116%	193	96%
Gravel Or Sand	25	28	13%	31	13%	30	-4%
Fabricated Structural Metal Products	17	20	18%	30	51%	39	31%
Confectionery Or Relate Prod	6	6	5%	8	32%	10	15%
Misc Farm Products	4	3	-30%	4	34%	5	20%
Thread Or Yarn	3	3	-6%	3	17%	3	10%
Photographic Equip Or Supplies	3	2	-27%	3	60%	5	57%
Leather Goods, Nec	1	1	18%	2	16%	2	6%
Commodity Total	2,431,181	3,195,544	31%	4,448,915	39%	5,415,825	22%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics

Appendix H: Value of Imports through Arizona's Ports of Entry

H1: Value of Imports through Arizona's Ports of Entry – Decreasing in Commodity Value

Import Commodities From All Mexican States	Border Crossing At Arizona Port of Entry (POEs)					Commodity Total
	San Luis	Lukeville	Nogales	Naco	Douglas	
Vehicles, other than railway or tramway rolling stock, and parts and accessories thereof	$12,091		$3,496,610	$3	$103,576	$3,612,279
Electrical machinery and equipment, televisions and sound recorders and reproducers	$374,669		$3,021,574	$6,328	$101,227	$3,503,798
Edible vegetables and certain roots and tubers	$78,863		$1,546,758		$166	$1,625,787
Nuclear reactors, boilers, machinery and mechanical appliances	$10,989		$944,016	$17,936	$19,731	$992,672
Edible fruit and nuts, peel of citrus fruit or melons	$103,294		$598,336		$743	$702,374
Copper and articles thereof	$2		$191,475	$37,082	$333,991	$562,551
Optical, photographic, cinematographic, measuring, checking, medical instruments			$393,105	$5	$2,326	$395,436
Special classification provisions	$11,961	$136	$344,101	$4,669	$25,988	$386,855
Fish and crustaceans	$1,638		$312,502			$314,140
Miscellaneous articles of base metal	$1,012		$144,131		$9,349	$154,492
Other textile articles; needle craft sets; worn clothing and worn textile articles; rags	$690		$111,203		$26,176	$138,070
Articles of apparel and clothing accessories, knitted or crocheted	$29,168		$94,877		$	$124,045
Live animals	$5,152		$60,566		$41,325	$107,044
Beverages, spirits and vinegar	$31		$101,257			$101,288
Plastics and articles thereof	$2,843		$56,452	$78	$35,958	$95,331
Pearls, precious-semiprevious stones, precious metals; metals clad with precious metal, imitation jewelry; coin			$37,696	$19	$54,368	$92,083
Furniture; bedding, mattress, cushions, stuffed furnishings; lamps and lighting fittings, Illuminated signs	$1,344	$3	$81,814	$1,514	$268	$84,944
Ores, slag and ash	$8		$2,266	$15	$77,559	$79,847
Tools, implements, cutlery, spoons, forks, of base metal			$76,020		$7	$76,026
Articles of apparel and clothing accessories, not knitted or crocheted	$19,575		$40,322		$2,964	$62,861
Aluminum and articles thereof	$44		$33,922		$15,572	$49,538

Import Commodities From All Mexican States	Border Crossing At Arizona Port of Entry (POEs)					Commodity Total
	San Luis	Lukeville	Nogales	Naco	Douglas	
Salt; sulfur; earths and stone; plastering materials, lime and cement	$41		$48,761		$78	$48,880
Articles of iron or steel	$8,843		$26,522	$48	$673	$36,087
Preparations of cereals, flour, starch or milk; Bakers' wares	$1,640		$32,017			$33,657
Preparations of meat, of fish, or of crustaceans	$14,429	$339	$15,903			$30,671
Toys, games and sports equipment; Parts and accessories thereof	$11,984		$13,668		$3,208	$28,861
Paper and paperboard; articles of paper pulp, of paper or of paperboard	$565		$27,071		$221	$27,857
Animal or vegetable fats and oils; Prepared edible fats; Animal or vegetable waxes			$25,924			$25,924
Preparations of vegetables, fruit, nuts, or other parts of plants	$812		$24,680			$25,492
Wood and articles of wood; Wood charcoal	$2,304		$7,349	$71	$14,825	$24,549
Knitted or crocheted fabrics	$9		$20,527		$3,286	$23,822
Tin and articles thereof			$19,788			$19,788
Cereals	$171		$17,664			$17,835
Miscellaneous manufactured articles	$9		$14,084		$549	$14,642
Leather; saddlery, harness; travel goods, handbags, articles of animal gut	$5,754		$8,704		$	$14,458
Residues and waste from the food industries; prepared animal feed			$14,050			$14,050
Essential oils and resinoids; Perfumery, cosmetic or toilet preparations	$143		$13,543			$13,686
Cotton	$2		$13,448			$13,451
Sugars and sugar confectionery	$30		$13,172			$13,202
Musical instruments; parts and accessories of such articles			$10,596			$10,596
Impregnated, coated, covered or laminated textile fabrics; for industrial use			$4,298		$4,467	$8,765
Ceramic products	$1,047		$6,605	$17	$249	$7,918
Inorganic chemicals; organic or inorganic compounds of precious metals	$16		$7,459	$424		$7,899
Oil seeds, miscellaneous grains; Seeds and fruit;Straw and fodder	$85		$7,492			$7,576
Articles of stone, plaster, cement, asbestos, mica or similar materials	$15		$3,778	$34	$3,270	$7,097

Import Commodities From All Mexican States	Border Crossing At Arizona Port of Entry (POEs)					Commodity Total
	San Luis	Lukeville	Nogales	Naco	Douglas	
Woven fabrics; tuffed textile fabrics; lace; tapestries; trimmings; embroidery	$1		$6,114		$206	$6,320
Miscellaneous chemical products	$48		$5,551	$2		$5,601
Meat and edible meat offal			$5,455			$5,455
Headgear and parts thereof	$12		$4,559		$157	$4,727
Footwear, gaiters and the like; parts of such articles	$44		$4,658		$4	$4,707
Iron and steel	$21		$3,755	$6	$100	$3,882
Locomotives, rolling stock, parts, track fixtures, mechanical traffic signaling equipment	$977		$2,299	$10		$3,286
Fertilizers			$3,265			$3,265
Nickel and articles thereof			$3,186			$3,186
Products of animal origin, not elsewhere			$3,169			$3,169
Printed books, newspapers, pictures, manuscripts, typescripts and plans	$142		$1,970			$2,112
Arms and ammunition; Parts and accessories thereof			$2,008			$2,008
Manufactures of straw; Basketware and wickerwork	$				$1,988	$1,989
Miscellaneous edible preparations	$210		$1,637		$53	$1,900
Rubber and articles thereof	$11	$7	$1,464		$1	$1,483
Man-made staple fibers	$2		$1,443			$1,445
Glass and glassware	$594		$736			$1,330
Vegetable plaiting materials; Vegetable products	$957		$8		$346	$1,310
Products of milling ; malt; starches	$292		$893		$6	$1,190
Aircraft, spacecraft, and parts thereof			$1,135			$1,135
Wadding, felt and nonwovens; Special yarns; Twine, cordage, ropes, cables	$4		$885		$1	$889
Coffee, tea, mate and spices	$90		$547			$637
Pulp of wood or of other fibrous material; waste and scrap of paper or paperboard	$5		$475		$115	$595
Carpets and other textile floor coverings			$566		$9	$575
Lead and articles thereof			$447			$447
Raw hides and skins (other than furskins) and leather	$158		$35			$192
Soap, washing preparations, lubricating preparations, candles, modeling pastes	$78		$104			$182

Import Commodities From All Mexican States	Border Crossing At Arizona Port of Entry (POEs)					Commodity Total
	San Luis	Lukeville	Nogales	Naco	Douglas	
Tanning, dye extracts, tannins, pigmentsr; paints, varnishes, putty and inks			$156			$156
Dairy produce; birds' eggs; Natural honey			$121			$121
Pharmaceutical products			$107		$2	$109
Works of art, collectors' pieces and antiques	$30		$56			$86
Man-made filaments			$81			$81
Other base metals; cermets; articles			$63			$63
Articles made of feathers or of down; artificial flowers; articles of human hair	$2		$21		$28	$51
Albuminoidal substances; modified starches; glues; enzymes			$47			$47
Live trees, other plants; bulbs, roots and cut flowers			$26			$26
Cocoa and cocoa preparations			$9			$9
Clocks and watches and parts thereof			$4			$4
Lac; gums; resins and other vegetable saps and extract			$2			$2
Value of Top 10 Export Commodities	$704,950	$485	$12,143,162	$68,261	$885,133	$13,801,992
POE's Percent of Total	5.1%	0.0%	88.0%	0.5%	6.4%	100.0%

Source: WSA Analysis of 2007 Bureau of Transportation Statistics