

# BORDER ROAD IMPROVEMENT COALITION

**TIGER GRANT APPLICATION  
SEPTEMBER 15, 2009  
DOCKET NO. OST-2009-0115**

**BRIC Members:**

Cochise County, AZ  
Santa Cruz County, AZ  
Bisbee, AZ  
Douglas, AZ  
Sierra Vista, AZ  
Nogales, AZ

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Mexico

## **BORDER ROAD IMPROVEMENT COALITION (BRIC)**

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### **Applicant & Project Information**

The Border Road Improvement Coalition (BRIC) is cooperative governmental partnership formed in response to critical transportation infrastructure needs along the Southeastern Arizona-Mexico International Border. BRIC strives to address the unique transportation impacts of border-related issues such as interdiction of drug smuggling and illegal immigration, Homeland Security operations, and International Port of Entry traffic flows. Funding will also provide all-weather access and pedestrian enhancements to improve the safety and transportation choices for local residents. The lead applicant is Cochise County, AZ. Projects and funding will be administered through an Intergovernmental Agreement (IGA) process. The City Councils and Boards of Supervisors of each participating jurisdiction have approved resolutions supporting this effort. To view resolutions, see [www.cochise.az.gov/BRIC](http://www.cochise.az.gov/BRIC) or view the attachment to this electronic submission.

PROJECT TYPES: This application contains the following project types: local connector & bypass roads, pedestrian sidewalks & bicycle paths, road & pedestrian overpass bridges.

LOCATIONS: The projects are located in SE Arizona in the following areas: City of Bisbee, AZ, Cochise County, AZ, City of Douglas, AZ, City of Nogales, AZ, Santa Cruz County, AZ, and the City of Sierra Vista, AZ.

The cities of Sierra Vista and Nogales met the US Census Bureau's definition of an "Urbanized Cluster" (UC) in the 2000 US Census, and Sierra Vista now meets the "Urbanized Area" (AU) in 2008 US Census Bureau estimates. The remainder of the BRIC region (>90% by area) is classified as *Rural*.

CONGRESSIONAL DISTRICTS: The application covers projects in **AZ Congressional Districts 7 & 8**. All projects are within Cochise and Santa Cruz Counties in Arizona.

TOTAL GRANT FUNDS REQUEST BY THIS APPLICATION: **\$99,005,000**

**All projects in this grant request will adhere to the requirements of Subchapter IV of Chapter 31 of Title 40, United States Code (Federal Wage Rate Requirements). To view signed assurances, see [www.cochise.az.gov/BRIC](http://www.cochise.az.gov/BRIC) or view the attachment to this electronic submission.**

All information and supporting documentation for this proposal is available on the Cochise County website at: [cochise.az.gov/BRIC](http://cochise.az.gov/BRIC). Every effort has been made to document methodologies used for estimating quantitative data relied upon in this proposal. This proposal does not contain any information that is considered to be confidential and may be released in its entirety for public review.

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## Background

The BRIC region is located in SE Arizona bounded, by the Tohono-O'odham Indian Reservation to the West, the State of New Mexico to the East, Pima, Graham and Greenlee Counties of Arizona to the North and the state of Sonora, Mexico to the South. The existing International Border was formed as a result of the Gadsden Treaty of 1854 that transferred political control of the region from Mexico to the United States. With no significant body of water or topographical feature to delineate the new US boundary, relatives routinely crossed the border for family visits, to obtain work, or to purchase goods unavailable in their home county. Apaches from the Chiricahua Mountains routinely raided ranching settlements and drove livestock across the border in both directions, until an agreement was made between the two nations in 1882 to allow law enforcement agencies pursuit across the international boundary. The cities of Nogales, Sonora and Nogales, Arizona, (called *ambo Nogales*, ambos for "both") were founded simultaneously in 1882 and shared water and firefighting services.

In 1877, the US Army established Fort Huachuca, in Sierra Vista to respond to the threat of Chiricahua Apache raids in the area. The Fort housed the black cavalry regiments known as the "Buffalo Soldiers" in the late 1880s. Today, it is home to the US Army School of Intelligence, the 11<sup>th</sup> Military Intelligence Brigade and the U.S. Army Network Enterprise Technology Command (NETCOM)/9th Army Signal Command) and is one of the premier electronic surveillance and intelligence training sites in the nation, drawing military personnel from all service branches. The Fort is the top civilian employer in the BRIC area. [www.huachuca.army.mil](http://www.huachuca.army.mil)

The BRIC region is home to approximately 175,000 residents living in an area of 7,407 square miles. There is an extremely limited local tax base to fund road improvements, and most communities in the BRIC struggle to simply maintain existing travel ways. Large numbers of Border Patrol, Homeland Security, and International trade truckers use the road system as will as pedestrians and personal vehicle traffic from the International Ports of Entry. This TIGER grant application includes projects within every BRIC member's jurisdiction, creating an integrated network of automobile, trucking, and pedestrian network enhancements *within twenty-five (25) miles north of the Mexican border* that will serve to mitigate public safety, livability, all-weather access, sustainability and international border issues.

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## INTERNATIONAL & NATIONAL CHALLENGES

### US-Mexico International Border Security

#### *Drug Trafficking*

The BRIC region includes the US Border Patrol's Tucson Sector stations in Nogales, Douglas and Naco. This Sector is the *most active drug smuggling activity area* in the United States. In 2008, the Sector seized 50% of all marijuana confiscated in the US. In July 2009, the Tucson Sector reported confiscating one million pounds of marijuana in the first ten months of fiscal year '09, the largest quantity ever reported by a single

sector. The June 2009 President's Office of National Drug Control Policy report *National Southwest Border Counternarcotics Strategy* lists only one strategic goal:

*“Substantially reduce the flow of illicit drugs, drug proceeds, and associated instruments of violence across the Southwest border.”*

The report details the magnitude of the problem— 90% of all cocaine and more than half the marijuana, heroin, and methamphetamine entering the US arrive by land through the Southwestern US Ports of Entry. The majority of weapons and bulk currency derived from the drug trade enters Mexico from the US using these same transportation networks. The *Counternarcotics Strategy* will provide funding to send teams from the FBI and the DEA to the area to collaborate with existing National Guard, Border Patrol and ATF officers in the area, and to mobilize a law enforcement and prosecution team equipped to battle the growing drug trafficking problem. The interdiction of drugs, weapons and currency flowing over the border has become a worthy National priority as episodes of Cartel violence in Mexican border towns threaten to overflow into the US; however, the Federal funding priorities documented in the *Strategy* report do not include any funds for local jurisdictions to address impacts to locally-owned and maintained transportation infrastructure.

### *Illegal Immigration/Undocumented Alien (UDA) Border Crossings/Counterterrorism*

The BRIC region border with Mexico is approximately 126 miles long, protected by various forms of fencing. Significant gaps in the border fence remain at east of Douglas near the Eastern Cochise County border, and west of the Port at Nogales. In the late 1990s, increased security and improved fencing along the Mexican border with California and Texas resulted in an increase in undocumented alien (UDA) crossings from Mexico into Arizona. Recent Border Patrol initiatives have increased the number of agents and constructed additional fencing along the SE Arizona border, and illegal immigration overall has slowed; however the remoteness of the desert in much of the BRIC region tempts many UDAs to cross the border here. Some pay “Coyotes”, or human smugglers, to drive them across the border, others attempt the journey on foot. Once off the “drag roads”, which are smoothed routinely to reveal new tire tracks or footprints, UDAs often utilize the local roads in an effort to avoid State Highways and checkpoints.

Many roads maintained by jurisdictions in the BRIC region were constructed for light traffic, surfaced with DBST (Double Bituminous Surface Treatment). These roadways are now regularly traversed by heavy law enforcement agency vehicles, stressing construction materials beyond their intended limits and increasing repair, maintenance, and resurfacing expenditures that exceed the resources of local border communities.

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## **International Trade**

### *International Ports of Entry*

There are three Arizona International Ports of Entry (POEs) in the BRIC region – Nogales (with the Deconcini port for general traffic and Mariposa commercial cargo port),

Douglas, and Naco. Each Port is open 24 hours a day; seven days a week for pedestrian and personal vehicle traffic. The Nogales Deconcini Port is the busiest commercial port in Arizona; the Douglas port is second. Overly long wait times and associated congestion caused both the Douglas and Nogales Commercial Ports to announce expanded hours beginning in 2009 to handle commercial trucking cargo. Proposed expansion and improvements at the Douglas POE will exacerbate the demands on local roads due to their proximity to the International Port.

These ports provide a vital economic link between the US and Mexico, as exports from factories (maquiladoras) and produce farms in Mexico utilize these ports in their main trucking routes. During peak season, the Nogales POE accounts for as much as 35% of fresh produce deliveries into the US. The POEs are also essential links for tourism, providing US citizens in NM and AZ access to their closest ocean beaches in Rocky Point, Sonora, as well as for shopping for Mexican goods and handicrafts, and inexpensive medical and dental services.

Mexican citizens cross into the US at POEs to purchase goods unavailable to them south of the Border. Each of the Mexican sister cities of Nogales, and Naco, Sonora, and Agua Prieta (sister city of Douglas, AZ, pop. 110,000) Sonora have larger populations than their US counterparts, many of whom rely heavily on retail establishments in Bisbee, Douglas, and Sierra Vista, AZ for a majority of their retail purchases. Also, Mexican citizens employed legally in the US cross the International Border at these ports en route to work; others attempt to enter illegally to search for employment in Tucson, Phoenix, or beyond. The table below illustrates the variety and magnitude of traffic entering the BRIC region via its three POEs:

**Oct 2007-Sept 2008 Port of Entry Traffic by Port & Transportation Type**

	<b>Pedestrians</b>	<b>Commercial Trucks</b>	<b>Buses</b>	<b>Personal Occupancy Vehicles (POVs)</b>	<b>POV Passengers</b>
<b>DOUGLAS</b>	<b>1,201,647</b>	<b>24,667</b>	<b>2,644</b>	<b>1,721,716</b>	<b>3,959,948</b>
<b>NACO</b>	<b>95,820</b>	<b>2825</b>	<b>68</b>	<b>285,660</b>	<b>762,567</b>
<b>NOGALES</b>	<b>7,341,785</b>	<b>308,917</b>	<b>11,863</b>	<b>3,106,341</b>	<b>4,563,989</b>

SOURCE: OMR Data Warehouse

The impact on the BRIC area local road network from POE traffic is undeniable, and growing. The Naco Port of Entry is the only Arizona POE served by a local collector road instead of an Arizona state-maintained highway, and is dependent on local government resources to maintain a State of Good Repair. The Douglas and Nogales POEs straddle trans-border commercial districts in close proximity to the Ports with many pedestrian crossings; this is reflected in the table above. This application includes two pedestrian bridges in the City of Nogales, and pedestrian/bicycle enhancements to serve the Naco POE.

Connectivity problems related to border trade have two faces: Commercial traffic using local roads that were not designed for the current number or weight of cargo vehicles, and developing areas alongside Federal, State, and local access routes that do not have adequate local frontage roads or multi-modal transportation options to serve the local residents. This TIGER grant will fund projects near each Port that will greatly improve connectivity, safety and access for local residents and International travelers.

## **REGIONAL/LOCAL CHALLENGES**

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### **Incompatible Infrastructure**

The existing road network designers could not anticipate the increase in border-related enforcement traffic, International trade activities, tourism or the establishment of new residential communities. Also, residents of the much more populous Mexican sister cities travel the area roads regularly; however, regional jurisdictions are not given "credit" for these users and their impacts in HURF fund allocations. Existing available funding severely restricts projects to critical maintenance and patching. The projects in this application strive to begin resurfacing, widening, access and pedestrian/bicycle enhancements that are long overdue; many have partial design concepts advanced by the AZ DOT.

### **All-Weather Access/ Evacuation Routes**

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The BRIC project region is located in the Northern Chihuahuan Desert, a hot, arid region that experiences two distinct rainy seasons – the late summer "monsoons", characterized by thunderstorm cells that carry large amounts of rainfall in a short time frame and the winter rains that bring steady precipitation over the course of 1-3 days during January and February. Drainage issues due to significant intermittent flows and sheet flooding across roadways plague the area, periodically closing roadways, stranding residents, and preventing access to emergency service providers and Border security agencies. Storm water flows over roadway often reach dangerous levels, yet many drivers attempt to cross flooded washes each year in Arizona and are swept away in their vehicles. By incorporating drainage improvements to convey, at a minimum, a 25-year storm flow for each of the road surface projects contained in this proposal, essential all-weather access will be essentially achieved.

In the event of an emergency event requiring citizen evacuation, residents of Southern Cochise County are dependent on two State Highways (State Routes 80 and 90) as the main evacuation routes north to the Interstate Highway 10. If either of these routes is closed, accessibility to the other route is critical. Projects to resurface Moson Road and the Airport Road/Warren Bypass will enhance connectivity for the unincorporated area of the County, allowing drivers access to alternate routes heading north. In Sierra Vista, the most populous city in the BRIC area (pop. 43,000 - 2007 Census Bureau estimate) traffic signal and intersection improvements will allow for the orderly movement of citizens and military personnel from Fort Huachuca out of the city.

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## Multi-modal Transportation Options

The BRIC region has no subway or light passenger rail system; the only public transportation available is limited bus service in the incorporated cities. For residents and visitors without personal vehicles, safe options for bicycles and pedestrians are scarce. The cities of Nogales and Douglas have a large number of pedestrians moving through their commercial centers but there are no pedestrian overpasses and intersections are congested and dangerous.

In Nogales, the Union Pacific Railroad effectively cuts the city center in two, stranding pedestrians on one side of the road while waiting for trains to pass. Bicycle traffic in all of the port areas must use the road shoulder, which is inadequate in width and disintegrating in many areas. With an estimated 13% of all roadway fatalities involving pedestrians and bicyclists nationwide, and as many as 20% to 40% of fatalities in urbanized centers caused by lack of appropriate infrastructure, these improvements will save lives.

According to the National Center for Biking & Walking, more than 60% of all VMT are for trips of fewer than 5 miles that could be accomplished using non-motorized modes of transit. Federal Highway Administration studies show that a 5% increase in pedestrian enhancements results in a 6% decrease in vehicle miles traveled (VMT) for the same area. This application requests funding for projects that will offer safe solutions to multi-modal transportation challenges, thus increasing mobility, reducing VMT and congestion, as well as resultant polluting emissions.

## PROJECT DESCRIPTIONS

This section describes the individual projects that make up the Coalition project package. All projects will have a 20-year serviceable life for pavement and a 50-year serviceable life for structures. Every project will attain certification from the Arizona DOT and NEPA clearance, as needed. It is expected that all of the roadways identified in this proposal are either categorically excluded from the need for a NEPA analysis or will have a Finding of No Significant Impact. Construction projects will take into consideration impacts on migration and nesting patterns of protected bird and mammal species. Where applicable the condition of pavements are rated using the PASER rating system: [http://epdfiles.engr.wisc.edu/pdf\\_web\\_files/tic/manuals/Asphalt-PASERcontent\\_02.pdf](http://epdfiles.engr.wisc.edu/pdf_web_files/tic/manuals/Asphalt-PASERcontent_02.pdf)

Long term outcomes, individual job creation numbers for each project, and other relevant results are listed in tables following each project description. Project maps, budget worksheets and a Kaldor-Hicks Tableau Benefit-Cost Analysis were sent as attachments to the electronic submission of this application. Additional information including Letters of Endorsement, project photos, resolutions and supporting documentation is available at [www.cochise.az.gov/BRIC](http://www.cochise.az.gov/BRIC).

**BISBEE, AZ**

***Naco Highway***

Naco Highway, located in the City of Bisbee and unincorporated Cochise County Naco is the only Arizona Port served by a local, rather than State or Federal roadway. Although not a designated Commercial Cargo Port, small commercial and service businesses enter from the Rio Sonora region to the South and travel the Naco Highway to reach the retail districts of Bisbee and often continue west on SR 92 towards Sierra Vista, AZ. Naco Sonora, a town of approximately 25,000, has very limited commercial activity and most citizens cross into Bisbee for shopping, entertainment, and employment opportunities.

The proposed project will resurface the roadway alignment from the Naco POE to State Highway 92, located in the City of Bisbee and Cochise County. The improvements will provide pedestrian sidewalks and bike lanes (neither exist presently), road widening and resurfacing. The highway connects the 24-hour POE at Naco with the city of Bisbee directly, and provides access to Sierra Vista and Interstate 10 beyond. I-10 is the only interstate in Cochise County and is the main commercial route to Tucson, Phoenix, and the West Coast of the US. The length of roadway to be improved with this project is 5.3 miles. The scope of work includes resurfacing with a 4" cold in-place recycled asphalt base, and 2" hot topping layer. This two-lane local connector road will be widened from approximately 16' to 24', and a bicycle lane and sidewalks will be installed on one side.

<b>Long Term Outcomes – Naco Highway</b>	
<i>State of Good Repair</i>	By resurfacing the deteriorated two-lane connector road that connects Naco POE with State Highway, as well as adding enhancements for non-motorized modes of transportation, the road will be better able to handle the existing traffic load. Currently the Naco Highway shows surface cracking, crumbling at shoulder, and has no bicycle or pedestrian lanes. The width is substandard at approximately 16-18 feet. The road surface is rough, with cracking and failed patches evident and has a rating of 3 (Poor) using the PASER (Pavement Surface Evaluation and Rating) manual. City of Bisbee and Cochise County sections are already included in both jurisdictions maintenance plans and will be maintained in good repair for the life of the structures. This project, if funded, will be included in the SEAGO (South Eastern AZ Government Organization) Transportation Improvement Plan.
<i>Economic Competitiveness</i>	Naco Highway is an important connector between International Port of Entry at Naco and the AZ State Highway system, ensuring continued competitiveness as an International and local trade route, and will improve access to local businesses.
<i>Livability</i>	Enhancements include sidewalks and bicycle lanes to provide transportation options; neither exist at present time. This will increase safe

	access for those without personal vehicles including the elderly, children, economically disadvantaged, and blind citizens. The project will also give citizens additional opportunities for physical activity, resulting in better health.
<i>Sustainability</i>	An estimated reduction in VMT assuming a 10% increase in bicycle/pedestrian travelers would result in decreased Green house gas emissions, increased affordability of transit and options for non-drivers to have mobility and access to goods and services. An associated emissions reduction of 16251 tons CO <sub>2</sub> is expected if, 66% of existing material is reused with cold in-place recycling.
<i>Job Creation</i>	Direct job creation from construction of project: 29 Induced job creation due to economic growth and competitiveness: 16

***Airport Road/Warren Bypass***

Traffic heading east towards Douglas, Safford and Wilcox accesses SR 80 east via a route referred to as the Airport Road/Warren By-pass. Airport Road, a local connector, provides access through the Warren District of Bisbee and State Route 80. This project includes widening, striping, sidewalks and bicycle lanes for both segments. The southern end of the road provides an alternate route via Purdy Lane to reach the commercial center of Warren, The northern terminus meets the Bisbee city limits where it becomes Arizona Street N-S, a .63 mile resurfacing and enhancement project currently under design and funded by the FHWA. As Arizona Street continues northbound the section east of Cole Avenue it becomes the Warren Bypass, providing direct access to SR 80, the major route from Bisbee to Douglas and on towards New Mexico. From SR 80, travelers can also reach State Route 191 northbound to Wilcox, Safford and I-10. The length of roadway to be improved with this project is a total of 4.8 miles - 3.8 miles of Airport Road and 1.0 mile of the Warren Bypass. The scope of work includes resurfacing with a 4" cold in-place recycled asphalt base, and 2" hot topping layer. This two lane local connector road will be widened from 16' to 24 ft, and a 6" wide bicycle lane and sidewalks shall be installed on one side of the road way.

<b>Long Term Outcomes –Airport Road/Warren Bypass</b>	
<i>State of Good Repair</i>	This road is in very poor condition in many areas and in need of complete resurfacing. Patching and sealing are no longer adequate to address deterioration of the surface and shoulders. This road is used by Border Patrol vehicle and other heavy personal trucks that hasten deterioration. PASER visual rating of Airport Road is 3 (poor), Warren Bypass rates a 2 (very poor). The City of Bisbee is committed to maintaining the constructed project in good repair throughout its expected life of the structures with City roadway maintenance. This project, if funded, will be included in the SEAGO Transportation Improvement Plan.
<i>Economic Competitiveness</i>	This project will improve access to the businesses and tourist attractions in Bisbee, and stimulate needed development in the Historic Warren district.

	The projects will also improve circulation for international trade - Airport Road to the south provides an important alternate connector to Highway 80, the only direct road from Bisbee east to Douglas, AZ and Aqua Prieta, Sonora. Once the preferred residential community for upper-level employees of the Bisbee Phelps-Dodge copper mines, the Warren area is home to the Warren Ballpark, the oldest ballpark in the United States, and adjacent to the village of Old Bisbee, with a Smithsonian Mining Museum and artist colony that attracts over one twenty thousand tourists annually. The mines essentially closed in 1975; only a skeleton operational crew remains. Tourism is now the major industry in Bisbee, and these enhancements are vital to allow residents and visitors improved access to tourist destinations.
<i>Livability</i>	The Warren Bypass improvements will complete a FWA funded enhancement project in the commercial section of Warren, a town center that is depressed and in need of immediate repairs to the main circulation route. Enhancements include sidewalks and bicycle lanes to provide transportation options; neither exist at present time. This will increase safe access for those without personal vehicles including the elderly, children, economically disadvantaged, and blind citizens. Many area citizens do not own personal vehicles, and use the degraded, hazardous shoulder of these roads while walking or biking The project will also give citizens additional opportunities for physical activity, resulting in better health.
<i>Sustainability</i>	Estimated reduction in VMT due to enhancements: 12% Cold in-place recycling will be used to limit the amount of new material required for the project as well as reuse existing material at the site. Green house gas emissions reduction from the use of existing material is approximately 14718 tons CO <sub>2</sub> , assuming 66% recycled content.
<i>Job Creation</i>	Direct job creation from construction of project: 34 Induced job creation due to economic growth and competitiveness: 19

**DOUGLAS, AZ**

***Chino Road Extension***

The Chino Roadway extension and pavement preservation project will provide vehicular mobility within the Douglas, AZ corporate limits. The scope of work consists of construction of a one half-mile, fully urbanized three-lane section (6"base w/4" rubberized asphalt surface) including resurfacing, drainage improvements, striping and signage from the Douglas POE to the intersection of 5<sup>th</sup> Avenue and Chino Road. The project also includes rehabilitation and repaving of a 1 mile section of Chino Road from 5<sup>th</sup> Ave. to Palm Grove Wash, to accommodate heavy commercial traffic from the Port of Entry.

<b>Long Term Outcomes –Chino Road Extension</b>	
<i>State of Good Repair</i>	The Chino Road project provides essential access from the existing Douglas International POE to the Douglas cattle pens, and the State and Federal Highway system. Relocation of the Port of Entry commercial vehicular traffic flow from the heart of Douglas' City Center is a crucial aspect of this plan. The roads are inadequate for this class of traffic and create numerous livability issues for residents, detailed below. The City of Douglas is committed to maintaining the constructed project in good repair throughout its expected life within the City roadway maintenance budget. This project, if funded, will be included in the SEAGO Transportation Improvement Plan.
<i>Economic Competitiveness</i>	The project will maximize the competitive advantage of the City of Douglas and the State of Arizona's geographic location by developing a strong corridor for international commerce with Mexico. The total trade value of exports through the Douglas POE is over a half-billion dollars annually. This amount is expected to grow as planned expansions are constructed to serve commercial traffic that routinely chooses the Douglas POE due to shorter wait times and greater proximity to destinations east of Arizona. Additionally, the retail district of Douglas will experience economic benefits from improved walkability and safety for shoppers when the truck corridor is relocated.
<i>Livability</i>	Public safety will be greatly enhanced, as hazardous materials will no longer be transported through local retail and residential districts by rerouting commercial POE traffic out of the heart of the City. Currently the central residential and retail districts of Douglas experience noise, vibration, air quality and safety impacts of large commercial trucking activity in their neighborhoods. Road safety features such as improved geometrics and surfacing will reduce accident rates for commercial truckers and residents in the city center.
<i>Sustainability</i>	This project will result in efficient traffic flow and reduced idling/wait times for trucks as they are processed through the POE. Additionally, reductions in the air pollution commercial trucking contributes to the EPA designated Douglas Particulate Matter (PM-10) non-attainment area is expected with appropriate road surfacing and reduced idling times.
<i>Job Creation</i>	Direct job creation from construction of project: 19 Induced job creation due to economic growth and competitiveness: 11

**15<sup>th</sup> Street to G Avenue to Airport Road**

The scope of work consists of preservation of 2.6 roadway miles, striping and signage improvements. In addition, the construction of transit bus bays, replacement of curbing and installation of sidewalks.

The proposed improvements are critically essential to provide vehicular mobility and safe pedestrian pathways, specifically those used by children to access many public facilities including schools, parks, churches, and a sporting event stadium located along this corridor. Mobility and access from the western part to the eastern part of the City will be provided and roadway improvements and multi-modal infrastructure constructed where it is inadequate to meet current or future needs, or simply nonexistent. In addition, the construction of this roadway will provide improved vehicular access for border enforcement and national security efforts currently underway by the Department of Homeland Security.

<b>Long Term Outcomes –15<sup>th</sup> Street to G Avenue to Airport Road</b>	
<i>State of Good Repair</i>	This inadequate roadway is in marginal condition and lacks critical infrastructure such as drainage improvements, curbs, and pedestrian amenities. The project will rehabilitate the travelway and provide sidewalks for children that use the road shoulder to reach 10 schools and recreational facilities. The City of Douglas is committed to maintaining the constructed project in good repair throughout its expected life utilizing the City roadway maintenance budget, if funded, will be included in the SEAGO Transportation Improvement Plan.
<i>Economic Competitiveness</i>	The City of Douglas' competitiveness as a regional retail district and desirable residential location is challenged by the lack of improvements to the community, particularly bus transit service limitations and drainage issues plaguing this corridor. Douglas lacks a direct east-west route with multi-modal transportation enhancements, hampering access to a variety of public buildings and businesses. As local Border Patrol forces project increases in employment (229 officers were added this year to the Tucson sector, a trend that is expected to continue), residents seeking transportation options, accessibility to retail districts and schools will migrate away from Douglas to other communities.
<i>Livability</i>	Increasing safety for children using the shoulders of this road for pedestrian and bicycle travel is the most important aspect of this project. More than ten schools, parks, stadiums and churches are located on this route, and basic safety infrastructure is lacking or woefully inadequate. The project will also mitigate noise pollution by using rubberized asphalt paving. Effects of noise pollution include sleep disruption, poor work performance, increased bodily responses to stress and difficulty hearing surrounding vehicles, leading to increased rates of pedestrian accidents (World Health Organization).
<i>Sustainability</i>	By allowing safe, non-motorized transit, a reduction in vehicle miles traveled with associated reduction in greenhouse gases is an expected outcome. Reduced idling times during school drop-off and pick-up hours will also contribute emissions reduction. This project will use cold in-place recycled materials for base construction with a reduction in associated emissions of green house gases of 7973 tons CO <sub>2</sub> .
<i>Job Creation</i>	The construction of this project will require the employment of skilled civil,

	<p>structural, environmental, and geotechnical engineers for the engineering design of this project as well for construction engineering support. In addition, the project will require approximately thirty skilled construction workers from laborers to heavy equipment operator and superintendents to execute the construction of this project.</p> <p>This project will have a substantial impact to the local economy thereby providing a substantial economic stimulus to the local economy as these engineers and construction workers will be required to purchase several consumable supplies that can be purchased locally.</p> <ul style="list-style-type: none"> <li>• Direct job creation from construction of project: 21</li> <li>• Induced job creation due to economic growth and competitiveness: 21</li> </ul>
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### ***Airport Road from International Road to 15<sup>th</sup> Street***

The project will provide 0.7 miles of fully urbanized two-lane roadway section with a new paved surface, drainage improvements, striping and signage improvements from International Street to the Intersection of 10<sup>th</sup> Street and Airport Road and the widening and pavement preservation of 0.3 roadway miles along Airport Road from 10<sup>th</sup> Street to 15<sup>th</sup> Street. The proposed improvements are critically essential to provide vehicular mobility and all weather access from the International border to the local and state highway systems.

<b>Long Term Outcomes –Airport Road from Int’l Road to 15<sup>th</sup> Street</b>	
<i>State of Good Repair</i>	This roadway links the Douglas International POE with the City of Douglas and highway system beyond. It is in marginal condition and lacks improvements such as drainage culverts, curbs, sidewalks and rubberized asphalt paving to mitigate noise pollution from heavy traffic. The City of Douglas is committed to maintaining the constructed project in good repair throughout its expected life within the City roadway maintenance budget. If funded, will be included in the SEAGO Transportation Improvement Plan.
<i>Economic Competitiveness</i>	Douglas is the Eastern Pillar of the CANAMEX Trade Corridor. The Janos Highway originates just across the border in Mexico, and is the shortest paved route between the cities of Mexico City and Guadalajara to the Western United States. The significance of this International Port to the economic health of the local, state and national economies is well described in the sections above. Basic enhancements such as this project are crucial to the continued efficient operation of the Port and economic development of the City and BRIC region.
<i>Livability</i>	Rubberized pavement will reduce associated noise pollution between tires and the road surface as much by 50% ( <i>Wessex Institute</i> ), decreasing the negative health and performance effects on residents living and working nearby. Sidewalks will provide better access to those residents that lack personal motorized vehicles, and increase pedestrian safety. The road is also an important travelway for Homeland Security personnel.
<i>Sustainability</i>	

	<p>The addition of curbing will limit sediment transport into storm water conveyance systems, decreasing water pollutants entering the Douglas Wastewater Treatment Plant. Also, residents will have options for using non-motorized vehicles and access to better bus transit turnouts that will decrease total VMT and reduce associated emissions.</p> <p>Cold in-place recycling will be used to limit the amount of new material required for the project as well as reuse existing material at the site. Green house gas emissions reduction from the use of existing material is approximately 2146 tons CO<sub>2</sub></p>
<i>Job Creation</i>	<ul style="list-style-type: none"> <li>• Direct job creation from construction of project: 4</li> <li>• Induced job creation due to economic growth and competitiveness: 2.4</li> </ul>

**COCHISE COUNTY, AZ**

***Davis Road***

Davis Road project will resurface a 22.4 mile Rural Major Collector connecting the City of Tombstone, AZ and the unincorporated area of McNeal at State Highway 191 in Cochise County. Davis Road connects two State Highways (90 & 92) and functions essentially as a segment of the state highway system; commercial trucking traffic leaving the Douglas-Aqua Prieta Port heading north takes 191 to Davis Road westbound as the major trucking route, to avoid the steep grades of SR 80 in the Bisbee area. Davis Road is a flat, rolling, Cochise County Rural Major Collector Road connecting the town of McNeal with Tombstone to the west. Segments of Davis Road frequently flood during precipitation events causing innumerable closings.

<b>Long Term Outcomes –Davis Road</b>	
<i>State of Good Repair</i>	<p>Davis Road requires resurfacing and drainage enhancements in order to service existing traffic volumes and commercial vehicles, mitigate flooding, and address existing deterioration of road shoulders and intersections. The existing surface is 22 years old, and was not designed to accommodate the commercial traffic it now experiences. Arch culverts are proposed to convey the 25-year storm flow beneath the roadway. If funded, will be included in the SEAGO Transportation Improvement Plan.</p>
<i>Economic Competitiveness</i>	<p>The commercial traffic noted relies on this connector as part of the most efficient route between the Douglas POE and I-10. The road is also used by commuters to reach employment centers in Bisbee (the Cochise County Seat), Douglas, Wilcox, as well as those that travel Interstate 10 to work. The most obvious threat to economic development posed by the condition of the road is the need to close the road due to flooding during significant rain events. Closings occur most often during the summer monsoons, which coincide with the peak produce market for exports from Mexico. The road is also used extensively by Border Patrol vehicles to reach remote areas of desert frequented by undocumented aliens.</p>
<i>Livability</i>	<p>Drainage improvements will allow residents to access their homes and places of employment reliably; the area is located within mapped FEMA 100-year</p>

	floodplains (Zone A) per the Flood Insurance Rate Maps (FIRM). Preliminary hydrological studies have been completed for some segments of Davis Road. Improved geometrics will improve public safety and reduce accidents.
<i>Sustainability</i>	Cold in-place recycling will be used to limit the amount of new material required for the project as well as reuse existing material at the site. Green house gas emissions reduction from the use of existing material is approximately 68686 tons CO <sub>2</sub> .
<i>Job Creation</i>	<ul style="list-style-type: none"> <li>• Direct job creation from construction of project: 184</li> <li>• Induced job creation due to economic growth and competitiveness: 103</li> </ul>

***Moson Road***

This project resurfacing, widening and drainage improvements to 6.8 miles of Moson Road, an essential local connector to the State Highway system route for over 15,000 residents living in the rapidly developing San Pedro River Valley. The road serves the only paved access route out of the valley, and would serve an essential role as an evacuation route if traffic were detoured from State Highway 92 or 90 in the event of an emergency.

<b>Long Term Outcomes – Moson Road</b>	
<i>State of Good Repair</i>	There are no design drawings for Moson Road, and the road is a former dirt road that was paved in the 1980s, without any engineering or design enhancements. The road floods routinely, stranding citizens and making emergency provider access extremely difficult. The road requires widening and a center turn lane to accommodate existing traffic flows. There are no bicycle lanes or sidewalks, and the DBST surface is deteriorated and breaking apart at the shoulders. PASER rating varies from 3 to 4 over the length of the roadway. Moson Road is on the adopted Sierra Vista Road Circulation Plan, and if funded, will be included in the SEAGO Improvement Plan.
<i>Economic Competitiveness</i>	The commercial traffic noted relies on this connector as part of the most efficient route between the Douglas POE and I-10. The road is also used by commuters to reach employment centers in Bisbee (the Cochise County Seat), Douglas, Wilcox, as well as those that travel Interstate 10 to work. The most obvious threat to economic development posed by the condition of the road is the need to close the road due to flooding during significant rain events. Closings occur most often during the summer monsoons, which coincide with the peak produce market for exports from Mexico. The road is also used extensively by Border Patrol vehicles to reach remote areas of desert frequented by undocumented aliens.
<i>Livability</i>	Drainage improvements will allow residents to access their homes and places of employment reliably; the area is located within mapped FEMA 100-year floodplains (Zone A) per the Flood Insurance Rate Maps (FIRM). Preliminary hydrological studies have been completed for some segments of Davis Road. Improved geometrics will improve public safety and reduce accidents.

<i>Sustainability</i>	Cold in-place recycling will be used to limit the amount of new material required for the project as well as reuse existing material at the site. Green house gas emissions reduction from the use of existing material is approximately 20851 tons CO <sub>2</sub>
<i>Job Creation</i>	<ul style="list-style-type: none"> <li>• Direct job creation from construction of project:137</li> <li>• Induced job creation due to economic growth &amp; competitiveness: 77.5</li> </ul>

### ***Geronimo Trail***

Geronimo Trail is the only dirt road in the BRIC application, beginning at the 8.95 mile stretch of native packed dirt from mile post 2.42 to 11.37 (2.42 miles east of Douglas city limits to San Bernardino Ranch Rd). The road is the main route for Border Security forces into the San Bernardino Valley. The route runs primarily parallel with the US-Mexican Border, into sparsely settled area with a gap in the border fence to the east near New Mexico. Increases in area illegal alien crossings and drug smuggling have made improvement of the Trail imperative. It is also the only road to the historic Slaughter Ranch that is one of Cochise County's most important cultural tourism sites; however, the ranch receives relatively few visitors due to the perceived danger of travel over the unimproved surface.

<b>Long Term Outcomes –Geronimo Trail</b>	
<i>State of Good Repair</i>	Geronimo Trail is an important border travelway offering the only access in to most of the far SE region of Cochise County. It is currently an unimproved surface with no drainage enhancements. Stretches of rough, washboard surface conditions hamper travel, causing excessive wear on vehicles, and creating large volumes of airborne dust. Funding will allow proper engineering and design, base construction with 4" select fill and 6" AB drainage improvements (2-36" cmfs, a large wash crossing hardened with AC, concrete curbs and 1,000' of exit channels per mile), and widening to 24'. If funded, will be included in the SEAGO Transportation Improvement Plan.
<i>Economic Competitiveness</i>	Geronimo Trail is allows area ranchers access to markets; however, its main importance is as an access for Border Patrol and Homeland Security forces that battle illegal immigration and drug trafficking. These activities have severe negative economic effect on the region and the Nation as a whole. Currently the Cochise County Health Department spends approximately 10% of its entire budget on treating illegal immigrants. The County also expends funds burying dozens of unidentified, undocumented aliens that perish in the harsh desert (61 burials in 2008). On a national basis, the cost for providing health services is \$7,290 per individual. The impacts of drug addiction on social service, law enforcement and public health providers is more difficult to track, as most of the smuggled goods find their way to larger cities throughout the US, however the 2009 Federal allocation towards drug enforcement is over <u>\$22 billion dollars</u> . (Whitehouse Office of National Drug Control Policy) These local and federal funds are diverted from social and health programs for residents,

	affecting the local economy and desirability of the region for prospective employers. Clearly, providing infrastructure to aid in apprehending drug traffickers at the point of entry is a very cost-effective investment for the region and the Nation.
<i>Livability</i>	Safety for area residents is the most obvious outcome of this project, for road safety reasons, but more importantly, for improved border security. Some public roads in the area (i.e., Skeleton Canyon Road to the east) have been gated and locked due to concerns for public safety in light possible violent encounters with drug traffickers. This elevates the factor of "Livability" from the pleasant to the critical. Additionally, the road's condition limits access to a major cultural tourism site, Slaughter Ranch. This site has not realized its potential as a cultural landmark, nor as a contributor to the local tourism economy, due primarily to the condition of Geronimo Trail.
<i>Sustainability</i>	Dust created by vehicle travel over the primitive road will be mitigated. As the road carries emergency and security personnel in numbers much greater than those expected given only the sparse population of the area, these impacts are exacerbated during high speed pursuits.
<i>Job Creation</i>	<ul style="list-style-type: none"> <li>• Direct job creation from construction of project: 31</li> <li>• Induced job creation due to economic growth &amp; competitiveness: 18</li> </ul>

**NOGALES, AZ**

***Pedestrian Overpass Bridges over the Union Pacific Railroad***

The Union Pacific Railroad (UP R/R) line runs south from Tucson, located north of the Santa Cruz County, and continues through Nogales into Mexico. Nogales currently has the only rail crossing of the international border in Arizona. The City currently experiences 6 to 12 trains per day. The rail line bisects the town in the north-south direction causing significant traffic back-up, in the Nogales downtown area where local streets have "at-grade" crossings. There is currently *no route for pedestrians* to safely move across the railroad tracks when trains are present, essentially trapping people on one side or the other for extended periods of time.

In addition to the Union Pacific Railroad, Grand Avenue/SR 19B is the main access road traversing north-south through town, providing direct access to the DeConcini Port of Entry, to downtown Nogales, and to side streets branching off to the rest of the City. Grand Avenue is a 4-lane urban arterial in some sections, and divides into a 2-lane, one-way roadway for several blocks near the international border.

The DeConcini Port of Entry is used by over 2 million personal owned vehicles, nearly 3,000 buses, and approximately 7 million pedestrians each year. This is the most heavily used port of entry in Arizona. It is located in downtown Nogales adjacent to the rail line crossing of the international border. There are two strategic locations in the City of Nogales downtown area for a pedestrian bridge overpass crossing the Union Pacific Railroad: The first is near Crawford Street, with the highest pedestrian volumes. It is proximal to the downtown shopping district, Nogales historic district, and the US-

Mexican border, accommodating approximately 1500 pedestrians per hour on Saturdays. The existing pedestrian bridge crossing inside the border crossing facility is only open certain hours of the day, and is limited to those crossing the International Border. The Crawford Street pedestrian bridge overpass would be located approximately 1/8-mile north of the border and is much closer to the shopping district destinations.

The second location for a pedestrian bridge overpass is at Court Street, approximately 1/2-mile from the border. It would serve the Nogales Court House and commercial areas with approximately 500 pedestrians per hour on a Saturday.

<b>Long Term Outcomes –Nogales Pedestrian Bridges</b>	
<i>State of Good Repair</i>	The proposed project will include improvements to the surrounding area that upgrade ADA accessibility in the area including sidewalks and connections to existing transportation facilities. It will provide enhanced pedestrian access and facilities, and related amenities such as ramps, shade structures, and gazebos for waiting areas. The structures will be aesthetically pleasing and compatible with their environs. The City of Nogales is committed to keeping the facilities in good repair for the life of the structures and related facilities. If funded, will be included in the SEAGO Transportation Improvement Plan.
<i>Economic Competitiveness</i>	The Hispanic population accounts for 85% of the total western Santa Cruz County population. The 2000 Census SF3 data identifies the populations living at various levels of poverty, based on income. Using a low income population definition of those persons with income less than 1.5 times the Federal poverty level income, 42% of the western Santa Cruz County population is classified as low income, most of which are located in the City of Nogales. The City of Nogales experiences great need for job preservation and economic stimulation with increased availability of access to employment and retail locations when trains travel through town cutting off delay. Business opportunities and access to jobs are enhanced for the significant low income population in Nogales, many of whom rely on walking to jobs and shopping. In addition, Nogales is a significant shopping and employment destination for people from Sonora, Mexico. The project will ensure that economic trade continues even when trains are operating on the railroad lines.
<i>Livability</i>	Overpass bridges are imperative to make non-motorized transportation options a reality in the vicinity of the RR tracks. Walking and bicycling expand mobility for non-drivers, reduce vehicular demands on the street system, reduce negative impacts on the environment from noise and air pollution, and promotes physical activity through healthy exercise. The removal of pedestrian versus train conflicts will be a significant safety improvement. All crossings of the UP R/R are at-grade except for the overpass inside the border immigration facility. There are few sidewalks and no designated bikeways. The proposed project will include infrastructure improvements to aid ADA accessibility and pedestrians and bicyclists will have grade-separated overpasses of the railroad tracks allowing safe crossing of the rail line during regular train operations - six to twelve trains per day - traveling through Nogales.
<i>Sustainability</i>	

	<p>The proposed project will reduce the City's carbon footprint and providing walking and bicycling alternatives to motorized vehicular modes. Comments from numerous stakeholders collected through the Unified Nogales Santa Cruz County Transportation Plan process (March 2009), demonstrated a high level interest in improved facilities for pedestrians and bicyclists including the safe crossing of the railroad tracks and Grand Avenue. Stakeholders particularly identified the need for:</p> <ul style="list-style-type: none"> <li>• Pedestrian bridges for safe railroad crossings,</li> <li>• Walking and bicycling connections to schools,</li> <li>• Better pedestrian facilities (sidewalks and crosswalks) in downtown Nogales, particularly to connect the US-Mexico ports of entry to retail establishments and business located along Grand Avenue and within the Central Business District of Nogales.</li> </ul> <p>It is expected that reduced idling times for vehicles waiting for pedestrians to cross will result in a significant decrease in CO2 emissions.</p>
<i>Job Creation</i>	<ul style="list-style-type: none"> <li>• Direct job creation from construction of project: 70</li> <li>• Induced job creation due to economic growth &amp; competitiveness: 39</li> </ul>

**SANTA CRUZ COUNTY, AZ**

***Palo Parado Road & Bridge***

The vast majority of International trade-related traffic that passes into Arizona through the Nogales, AZ POE uses Interstate Highway 19 northbound towards Tucson, and depending on destination, accesses I-8 to the San Diego area, or I-10 West towards Phoenix and Los Angeles. Segments of I-19 region north the Nogales Port experienced significant residential and commercial growth in the last decade, yet crossings near Rio Rico over I-19 and the Union Pacific Railroad traverse private lands that were formerly agricultural and routinely flood; gaps in the I-19 frontage road cause detours increasing emergency response times and vehicle miles traveled.

This project will provide an all weather connector road and bridge from Interstate 19 to Pendleton Drive across the Santa Cruz River, and the Union Pacific Railroad. The nearest all weather crossings for this area are the Tubac Bridge, approximately seven miles north, and the Rio Rico Bridge nearly five miles to the south. Santa Cruz County has completed a Corridor Study for this area, prepared a Design Concept Report selecting the preferred alignment for this connector road, and completed a Preliminary Jurisdictional Delineation. The County is currently involved in discussions with the Arizona Department of Transportation and the Union Pacific Railroad on issues pertaining to the railroad crossing.

<b>Long Term Outcomes –Palo Parado Bridge &amp; Road</b>	
<i>State of Good Repair</i>	<p>The project will have a 50-year design life and will meet County engineering standards and other standards as required via Federal Aid guidelines. The structures will be aesthetically pleasing and compatible with their environs. Santa Cruz County is committed to keeping the facilities in good repair for the life of the</p>

	<p>structures and related facilities. The Santa Cruz County Flood Control District has matching funds in the amount of \$1.8 million dollars, which are limited by statute to be used towards the bridge and bank protection. If funded, will be included in the SEAGO Transportation Improvement Plan.</p>
<i>Livability</i>	<p>The 0.67 mile Palo Parado road would create connectivity for vehicles, pedestrians, bicyclists, and commercial vehicles from a major collector to an interstate highway. The Santa Cruz River flows perennially and vehicles ford the river in low flow conditions. During the rainy season, the river will swell to depths and velocities that are unacceptable for vehicles to cross and unfortunately some drivers still take the risk. During flood stage the Santa Cruz River flows about 40,000 cubic feet per second which is greater than the normal flow on the Colorado River through the Grand Canyon. Currently, most non-motorized modes of transportation are unable to make the crossing, decreasing mobility for non-drivers. This crossing is at the heart of the proposed Santa Cruz Valley National Heritage Area providing access for thousands of residents living east of the Santa Cruz River. This road will afford interstate highway access to many making it a regionally significant collector roadway, and provide trailhead access to the Juan Bautista de Anza National Historic Trail.</p>
<i>Sustainability</i>	<p>The Project will create a more efficient connection with the interstate, and an expected decrease in total vehicle miles traveled and idle times is expected. Sediment entering the Santa Cruz River from vehicles fording the waterway will be eliminated with the new crossing, protecting the health of the River.</p>
<i>Job Creation</i>	<ul style="list-style-type: none"> <li>• Direct job creation from construction of project: 63</li> <li>• Induced job creation due to economic growth and competitiveness: 35</li> </ul> <p>AZ DOT's 2002 Corridor Study states: " <i>The Palo Parado Road Improvement Project could stimulate further economic development within this area ... Palo Parado Road would be an up-to-date rural collector roadway providing safe and efficient movement of traffic through this growing area. It would allow for improved emergency vehicle response times and add valuable major roadway and interchange frontage which is attractive for retail and service industries.</i>"</p> <p>The improved roadway would also function to make thousands of existing lots more marketable with the safer access and would stimulate the building industry. Rio Rico Properties estimates that the marketability of lots will increase by two-fold with this improvement.</p>

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***West Frontage Road - Calabasas to Yavapai Dr***

West Frontage Road will be constructed to bridge a gap in the Frontage Road System that detours northbound traffic 2.25 miles to reach I-10. The new alignment would be an .82 mile, 2-lane rural roadway. This project has been identified in *Arizona DOT Frontage Road Study, the I-19 Corridor Study, and Unified Nogales Santa Cruz County Transportation Plan 2000*. A Design Concept Report has been conducted by Santa Cruz County and ADOT has advanced the concept to 30% Plans.

Presently, the Rio Rico Fire District experiences delayed response times due to the western detour to get to the interchange. This extension would save the District approximately 6 minutes per response by and eliminate 3 intersection crossings. The project includes paved shoulders, drainage improvements, signalized intersection and turn lanes.

<b>Long Term Outcomes –West Frontage Road - Calabasas to Yavapai Dr</b>	
<i>State of Good Repair</i>	The project will have a 50-year design life and will meet County engineering standards and other standards as required via Federal Aid guidelines. The structures will be aesthetically pleasing and compatible with their environs. Santa Cruz County is committed to keeping the facilities in good repair for the life of the structures and related facilities. If funded, will be included in the SEAGO Transportation Improvement Plan.
<i>Economic Competitiveness</i>	This project was identified as a "priority project" for ADOT in its 2008 I-19 Frontage Road Study. Additionally, the improved roadway would function to make thousands of existing lots more marketable with the improved access and would stimulate the building industry. An investment in this roadway will stimulate the economy with a new 130 lot subdivision and a new Town Center development, which will create 300 jobs by 2011. This project is unlikely to proceed in a timely manner if TIGER grant funding is not available.
<i>Livability</i>	The Project will create a more efficient connection with the County's arterial system, reducing commuter miles, increasing commerce, saving fuel, and reducing pollution. Drivers will spend less time commuting, and public health will benefit from more timely emergency services and less congestion.
<i>Sustainability</i>	The Project will create a more efficient connection with the interstate, cutting commute miles, increasing commerce, saving fuel, and reducing pollution. The current detour (2.25 mi) would be replaced by a .82 mile direct access, a savings of 1.43 miles each vehicle trip, with a CO2 reduction of 21450 lbs. for every 1000 vehicle trips. Once the new Town Center is built, this will save tons of CO2 from entering the atmosphere every day.
<i>Job Creation</i>	<ul style="list-style-type: none"> <li>• Direct job creation from construction of project: <b>34</b></li> <li>• Induced job creation due to economic growth &amp; competitiveness : 19</li> <li>• Jobs attributed to marketability of Rio Rico lots and subsequent 130 lot proposed subdivision.: <b>288</b></li> <li>• The new Town Center in 2011 will employ approximately <b>300</b> individuals.</li> </ul>

**SIERRA VISTA, AZ**

***Buffalo Soldier Trail/Highway 90 /Fry Boulevard Resurfacing***

These resurfacing projects check continued deterioration of principal and major arterial streets used extensively by civilian, business, international, Homeland Security and Fort Huachuca military traffic. Reconstructing these streets with rubberized asphalt will extend the useful of these streets and provide local, regional and international traffic with smoother, quieter, safer and more reliable transportation infrastructure.

<b><i>STREET</i></b>	<b><i>FROM</i></b>	<b><i>TO</i></b>	<b><i>MILES</i></b>
▪Buffalo Soldier Trail S.	East Gate	Seventh Street	1.83
▪Highway 90/92Fry Blvd.	Buffalo Soldier Tr.	State Hwy 90/92	2.86
▪Wilcox Dr.	Buffalo Soldier Tr.	Calle Portal	2.23
▪7th St.	State Highway 90	Buffalo Soldier Tr.	2.71
▪Charleston Rd.	State Highway 90	Colombo Drive	.51
▪Martin Luther King Dr.	State Highway 90	Coronado Dr	1.00
▪Avenida Cochise	Coronado Dr.	State Highway 92	2.04
▪Coronado Dr.	State Highway 90	Fry Blvd.	1.13
<b>TOTAL MILES</b>			<b>14.31</b>

**Long Term Outcomes – Buffalo Soldier Trail/Highway 90 /Fry Boulevard**

<i>State of Good Repair</i>	Surface cracking and road shoulder rutting is already evident in some areas of the roads listed. The continued deterioration of these roads will eventually require complete reconstruction at a higher cost and with an increase in material use. The project will meet City of Sierra Vista engineering standards and other standards as required via Federal Aid guidelines. Sierra Vista is committed to keeping the facilities in good repair for the life of the structures and related facilities. This project is a part of the City of Sierra Vista's 5 Year Capital Replacement Program and the SEAGO ARRA Capital Improvement Plan. Design for this project could be completed in 90 days.
<i>Economic Competitiveness</i>	These roads are the heart of the commercial and employment centers of Sierra Vista, and the many residents that are employed by Fort Huachuca (the #1 employer in the BRIC region). They are in dire need of resurfacing, widening, and striping to continue functioning as required. Fry Boulevard is the major retail commerce route for the City of Sierra Vista, with the main gate to Fort Huachuca at its terminus. This major collector provides access to over 40% of the businesses in the entire city. Buffalo Soldier Trail is a major bypass from State Highway 92 to Highway 90, as well as an alternate route out of Fort Huachuca to points south and east. The Highway 90 and 92 connections in this project also service commuters to the Fort, as well as those travelling north to I-10 and Tucson .

<i>Livability</i>	Rubberized pavement will reduce associated noise pollution between tires and the road surface as much by 50% ( <i>Wessex Institute</i> ), decreasing the negative health and performance effects on residents living and working nearby. Long-term maintenance costs are also reduced coupled with a smoother, longer lasting pavement surface.
<i>Sustainability</i>	Cold in-place recycling will be used to limit the amount of new material required for the road segment of the project and will reuse existing material at the site. Emissions reduction from the recycling of existing material is estimated at 73139 tons CO <sub>2</sub> .
<i>Job Creation</i>	<ul style="list-style-type: none"> <li>• Direct job creation from construction of project: <b>61</b></li> <li>• Indirect job creation due to economic growth &amp; competitiveness: 35</li> </ul>

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***Fry Boulevard Traffic Signal & Intersection Improvements***

Modernization of existing, inadequate traffic signals at five intersections along Fry Boulevard will improve traffic flow, decrease associated congestion and reduce accidents. Upgrading these intersections with video detection traffic systems will make the City of Sierra Vista's traffic signal infrastructure more reliable and cost effective. Video detection operates and "sees" vehicles better than conventional in-ground loop systems, is not affected by adverse weather such as rain or snow, and does not need replacement in the event of complete road reconstruction or damage to in ground loops. The following roads - Buffalo Soldier Trail, Carmichael Avenue, North Avenue, Lenzner Avenue, and 7<sup>th</sup> Street will be improved with new signals at their intersections with Fry Boulevard.

Additionally, enhancements at two antiquated intersections - 7<sup>th</sup> Street with Fry Blvd. and North Garden Ave with Fry Blvd. will be redesigned and constructed.

<b>Long Term Outcomes – Fry Boulevard Traffic Signal &amp; Intersection Improvements</b>	
<i>State of Good Repair</i>	This project will replace existing in-ground loop operated signals that are approximately 35 years old. This will greatly improve traffic flow and facilitate safe and efficient circulation into the retail and business districts on both sides of the roadway, as well as into Fort Huachuca's main gate at the terminus of Fry Blvd. The intersections at 7 <sup>th</sup> Street and North Garden Ave where they meet Fry Blvd. predate the large expansions of troops at Fort Huachuca, as well as the growth of the City of Sierra Vista, which has become the predominant retail and employment district in for approximately 75,000 residents that live within 20 miles of the city limits. This project is part of the City of Sierra Vista's 5-Year Capital Replacement Program and SEAGO's Capital Improvement Plan.
<i>Economic Competitiveness</i>	Fry Boulevard is the major retail commerce route for the City of Sierra Vista, providing access to over 40% of the city's total businesses and the main gate to Fort Huachuca.. It is imperative that reasonable, safe traffic flow be sustained in the area of the Mail Gate in order for the City to remain the

	preferred location for this important military outpost that contributes over 2.4 billion dollars to the regional economy.
<i>Livability</i>	Fry Blvd is the most congested road in Sierra Vista, carrying over 27,000 trips per day. The intersection on North Garden and Fry will be removed and replaced by a pedestrian signal to ease the flow of traffic traveling east and west onto Fort Huachuca. The intersection of 7 <sup>th</sup> and Fry Blvd. will be completely redesigned to include an upgrade of all electrical systems, signal heads, mast arms and poles. Design flaws will be removed to improve traffic flow and prevent accidents at both intersections and video detection systems will reduce idling times for drivers.
<i>Sustainability</i>	These projects are expected to reduce VMT in the area by at least 10%, and will allow users to safely walk between businesses and shops. Idling times and congestion will also be minimized, and associated green house gases should decline 20%. Cold in-place recycling will be used to limit the amount of new material required for the intersection improvement segment of the project and will reuse existing material at the site; however the distance to be paved is minimal.
<i>Job Creation</i>	<ul style="list-style-type: none"> <li>• Direct job creation from construction of project: <b>.87</b></li> <li>• Induced job creation due to economic growth &amp; competitiveness: <b>.5</b></li> </ul>

## **JOB CREATION**

**Using the requested funding amount of \$99,005,000 and the \$92,000 divisor as directed in ARRA job creation literature:**

- **the total number of jobs directly created = 689**
- **Indirect employment related to increased retail and business activity is estimated = 387**

The BRIC region has limited employment opportunities for residents. The construction industry has experienced a downturn as a result of the current recession, and few options exist for related employment in the area. Funding for these projects will provide immediate jobs to those hardest hit by the slowdown in the housing market – engineers, surveyors, laborers, and design professionals – and provide skills that are sustainable beyond "boom" markets.

All projects will require skilled civil, structural, environmental, and geotechnical engineers as well as skilled and unskilled construction workers such as laborers, heavy equipment operators and superintendents to execute construction. Additionally, BRIC members and contractors purchasing consumable supplies locally create another direct benefit to the local economy, stabilizing jobs in the area. The projects will allow the road crews of all the member governments to hire staff and increase skilled capacity; where in-house staffing is not practical for reasons of job size or specialized skill requirements, outside contractors will be hired through a competitive bid process. Overall administration of the BRIC grant will be handled by a dedicated office housed at the Cochise County complex in Bisbee and consisting of a project manager, office coordinator, and financial administrator. This staff will coordinate with all BRIC members

to ensure efficiencies of scale are exploited, especially with regard to materials and contracted work.

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## **Innovation**

Although the primary focus of this grant is to rehabilitate roads that are near failure, construct basic pedestrian enhancements, provide all weather access, and realign and improve geometrics, the Border Road Improvement Coalition is committed to using innovative technologies and efficient delivery whenever and wherever possible. Cold-In Place Recycling (CIR) will be used for all existing roads in the project, with the exception of Geronimo Trail, which is a currently native dirt surface. States that have used Cold In-Place Recycling estimate materials savings of 31% (FWSA) with some jurisdictions realizing savings as high as 45% (Kansas and Nevada DOTs), as well as reductions in emissions caused during the mining, manufacture and transport of new materials. This process will be used for nearly 50 miles of resurfacing, decreasing the energy required for the manufacture and transport of new materials, and reducing overall costs for new material. CIR has been noted to work especially well in warm, dry climates, so as the BRIC gains experience with this technique it will be possible to expand its' use to all appropriate surfacing projects in the region. Staff training will in these techniques will enhance job skills and employability.

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## **Partnership**

The BRIC partnership itself is an innovation - four city and two county governments joined together to solve the challenges presented by their proximity to an active, porous and at times dangerous International border with Mexico. The six Directors that head up the Highway, Floodplain, and Public Works Departments of the BRIC governments have over 150 years of combined experience with design, engineering and construction of transportation projects in the region. The BRIC coalition also partners with the Department of Homeland Security (especially the Border Patrol), Arizona Department of Transportation, Southeastern Arizona Government's Association (SEAGO), Fort Huachuca, Nogales Port Authority, Douglas Port Authority, and other regional stakeholders. To view support letters from these agencies and other interested parties see [www.cochise.az.gov/BRIC](http://www.cochise.az.gov/BRIC) or attachments to this application.

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## **Summary**

Many areas of the West struggle to maintain a rural heritage in the midst of increasing population growth and residential/commercial development; what sets the BRIC region is its unique location. Sitting on the "edge" of many contemporary issues – Homeland Security, counter- narcotics operations, International trade, military intelligence, tourism, environmental protection, and severe weather events – stretches local transportation infrastructure beyond its limits. By joining together, the local government entities of the BRIC bring onsite knowledge of conditions and crucial needs in the region. BRIC members have abundant expertise in appropriate methods and materials to address these issues in a timely, cost-effective and environmentally sustainable manner, while creating much needed jobs and economic development for the SE Arizona Border region.