

Nogales Mariposa US Port of Entry  
Environmental Assessment

United States General Services Administration

Draft Environmental Assessment  
Nogales, Arizona

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The US General Services Administration proposes to renovate the existing facilities at the Nogales Mariposa US Port of Entry, which is a full-service border station used for the inspection of commercial vehicles, privately owned vehicles, and pedestrians entering and leaving the US.

September 27, 2007

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## **List of Acronyms and Abbreviations**

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ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
APNPL	Arizona Protected Native Plant Law
CAA	Clean Air Act
CANAMEX	Canada to Mexico Trade Corridor
CBP	Customs and Border Protection
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CLOMR	Conditional Letter of Map Revision
Corps	US Army Corps of Engineers
dB	Decibel
dBA	A-weighted decibel
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FBFM	Flood Boundary and Floodway Map
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GSA	US General Services Administration
IBWC	International Boundary and Water Commission
ICE	Immigration and Customs Enforcement
Leq	Steady state sound level
LLNB	Lesser long-nosed bat
LOMR	Letter of Map Revision
LUSTs	Leaking Underground Storage Tanks
MBTA	Migratory Bird Treaty Act
MP	Milepost

mph	Miles per hour
MVD	Motor Vehicle Department
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAP	Noise Abatement Policy
NEPA	National Environmental Policy Act
NESHAP	National Emission Standard for Hazardous Air Pollutants
NII	Non-Intrusive Inspection
NO <sub>2</sub>	Nitrogen Dioxide
PCN	Preconstruction Notice
PDS	Program Development Study
PM	Particulate Matter
POE	US Port of entry
POV	Privately-Owned Vehicle
RACM	Regulated Asbestos Containing Material
SENTRI	Secure Electronic Network for Travelers Rapid Inspection
SIP	State Implementation Plan
SR	State Route
US	United States
USDA	US Department of Agriculture
USFWS	US Fish and Wildlife Service
USTs	Underground Storage Tanks
VACIS	Vehicle and Cargo Inspection System
Waters	Waters of the US

## Best Management Practices

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- Upon completion of the Arizona Department of Transportation small area transportation study, the United States General Services Administration will reevaluate the impacts of the preferred alternative on local and regional traffic and provide the Department with supporting information for the Regional Transportation Plan (Sections 4.4 and 9.3).
- Vegetation protected by the Arizona Protected Native Plant Law would be affected by this project. Therefore, the United States General Services Administration would notify the Arizona Department of Agriculture at least 60 days prior to the start of construction so that the Department can determine the disposition of these plants (Table 5, page 38).
- None of drainages surrounding the project area would be disturbed until a determination has been made by the United States Army Corps of Engineers that the project may proceed under a Nationwide Permit (Clean Water Act, Section 4.10.1).
- Portions of the project area may be within the 100-year floodplain of a Critical Flood Control Basin. Local floodplain ordinances require that all commercial/industrial projects retain/detain water such that the level of runoff from the site in its developed condition does not exceed the level of runoff in the pre-developed condition. Developments within Critical Basins are also required to retain at least an extra 10 percent of the discharge created by the site. The Santa Cruz County Flood Control District has recently remapped the floodplain for this watershed. A preliminary set of plans, a hydrology/hydraulics report, and a Conditional Letter of Map Revision for the project would be submitted to the Santa Cruz County Flood Control District prior to final design and construction (Sections 4.10.2 and 5.1).
- The Santa Cruz County Flood Control District has a rainfall and stream level gauge in the vicinity of the project area immediately west of the culverts. A part of the State of Arizona's Flood Warning System, any work disturbing or moving this equipment would be coordinated with the Flood Control District and the Arizona Department of Water Resources (Section 5.1).
- The project lies within the limits of an area designated by the Environmental Protection Agency as the Upper Santa Cruz and Avra Basin Sole Source Aquifer. To help sustain

this aquifer the EPA prefers that developments within the limited area retain/detain as much surface water as possible to allow for its percolation into the aquifer below. A preliminary set of plans, a hydrology/hydraulics report, and a Conditional Letter of Map Revision for the project would be submitted to the EPA for comment prior to final design and construction (Section 4.11).

- Since the Proposed Action would involve demolition of existing structures, an Asbestos Hazard Emergency Response Act certified inspector would inspect all structures to be demolished. If Regulated Asbestos Containing Material is present in the structures, a work plan would be developed to remove, transport, and dispose of these materials.
- At least 10 days prior to demolition of any structure the Arizona Department of Environmental Quality National Emission Standard Hazardous Air Pollutant coordinator would be provided with a National Emission Standard Hazardous Air Pollutant notification form for each structure to be demolished.
- During final design, traffic control and trailblazing plans would be developed to warn drivers and pedestrians of the construction activities and ensure safe travel through the area.
- During final design, construction sequencing plans would be developed that break roadway improvement activities into as many stages as necessary to continue smooth border operations and maintain pedestrian, commercial, and non-commercial traffic flow within the project area.

## **1.0 Introduction**

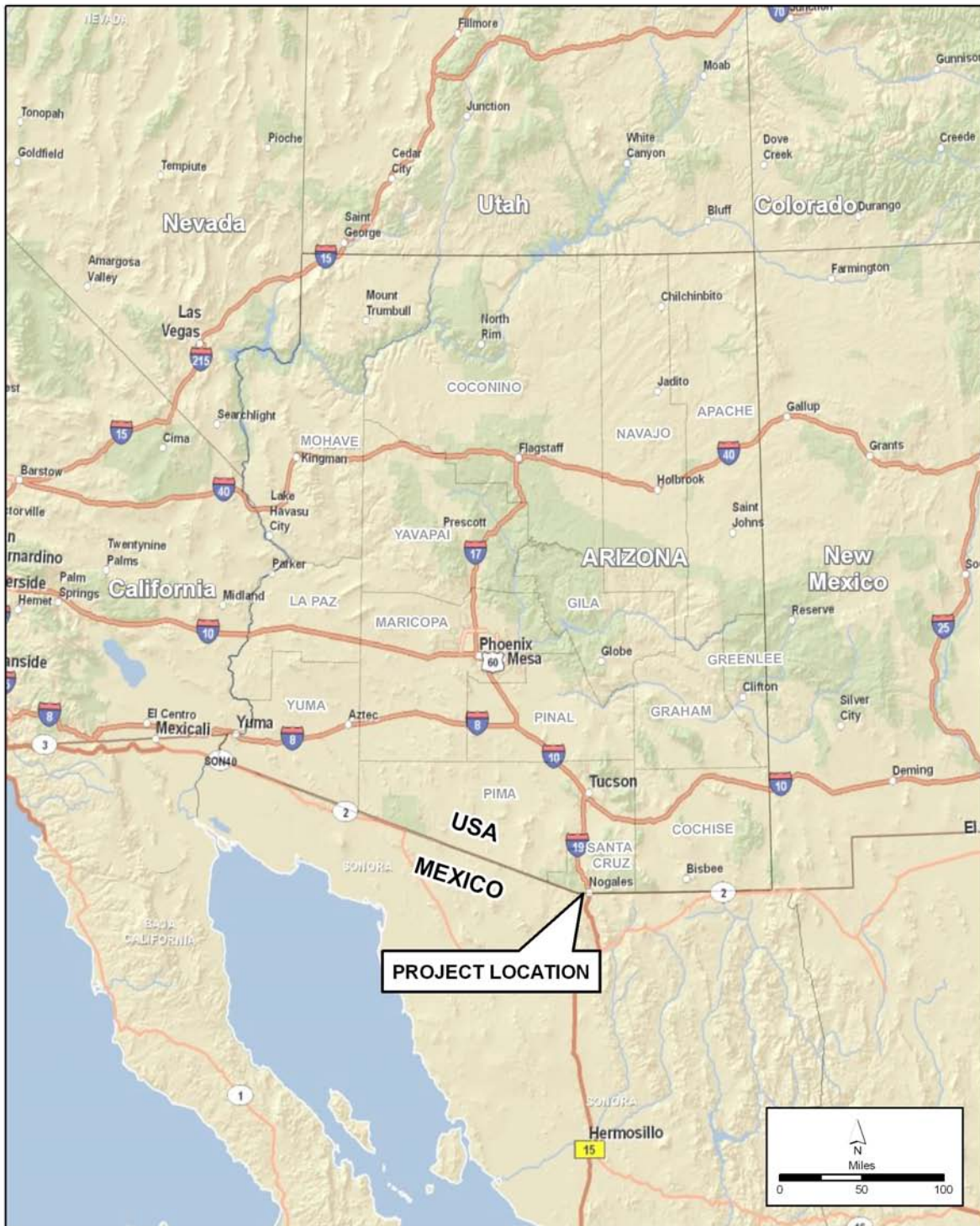
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### **1.1 Explanation of an Environmental Assessment**

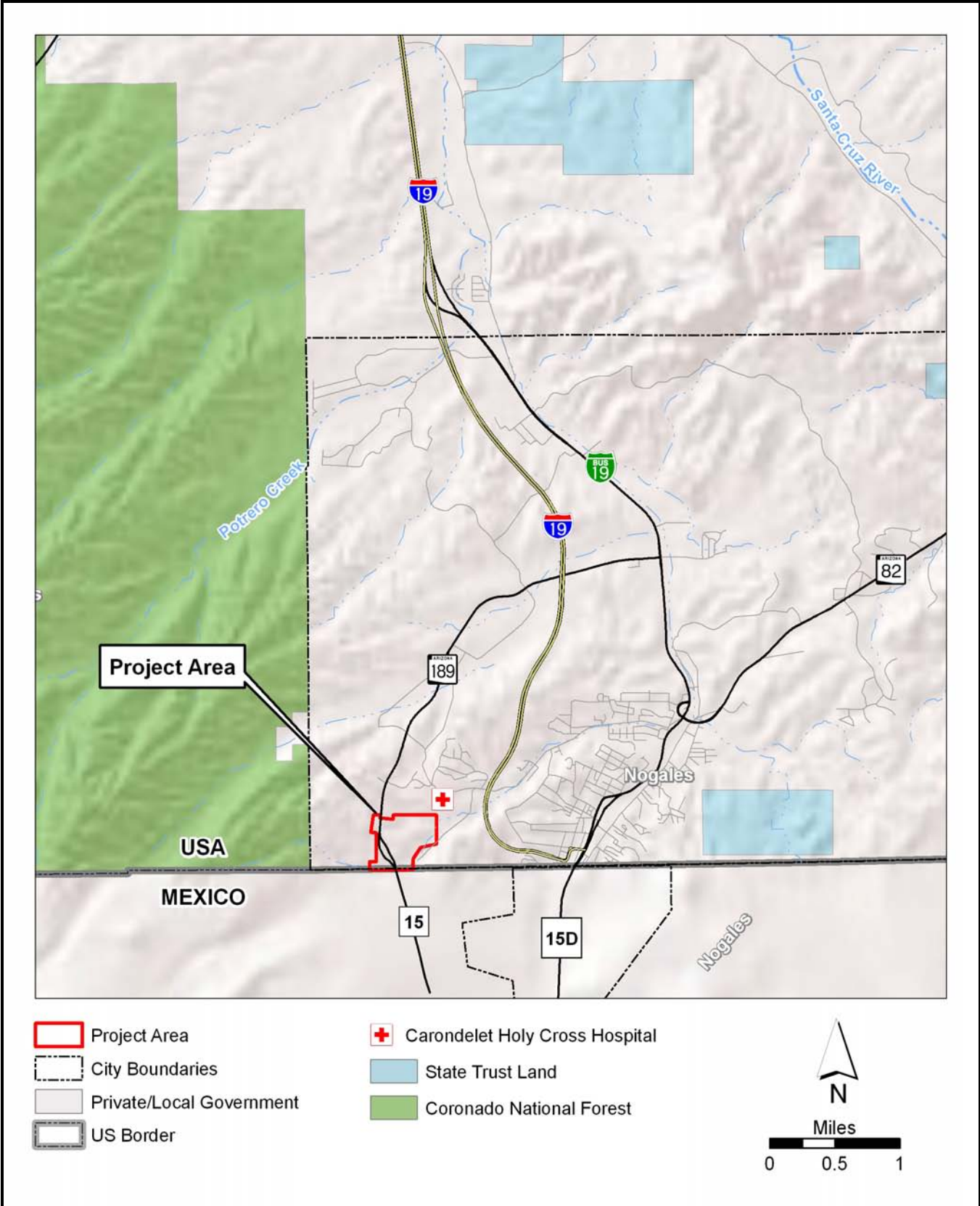
This Environmental Assessment (EA) is being prepared to comply with the National Environmental Policy Act (NEPA) of 1969 and the policies of the United States (US) General Services Administration (GSA), as the lead federal agency. The EA process provides steps and procedures to evaluate the potential social, economic, and environmental impacts of a Proposed Action while providing an opportunity for public and local, state, or other federal agencies to provide input and/or comment through scoping, public information meetings, and/or a public hearing. These social, economic, and environmental considerations are evaluated and measured, as defined in the Council on Environmental Quality's (CEQ) regulations, by their magnitude of impacts. In addition, the EA also provides GSA a detailed analysis to examine and consider the level of impacts on any sensitive social, economic, and environmental resource and assist in their decision-making process.

### **1.2 Location**

The Nogales Mariposa US Port of Entry (POE) is located at the US/Mexico border between the City of Nogales, Arizona and the City of Nogales, Sonora, Mexico, approximately 65 miles south of Tucson, Arizona (Figure 1). The POE is a full-service facility inspecting primarily commercial vehicles, but also privately owned vehicles (POV) and pedestrians entering the US from Mexico. The POE is Arizona's main commercial crossing and is located on Arizona State Route 189 (SR 189) also know as Mariposa Road within the US and Mexican Federal Highway 15 within Mexico (Figure 2). The POE is linked to the US Interstate Highway System via Interstate 19 (I-19). The SR 189 connects to I-19 approximately 4 miles north of the POE.



**Figure 1. State Location Map.**



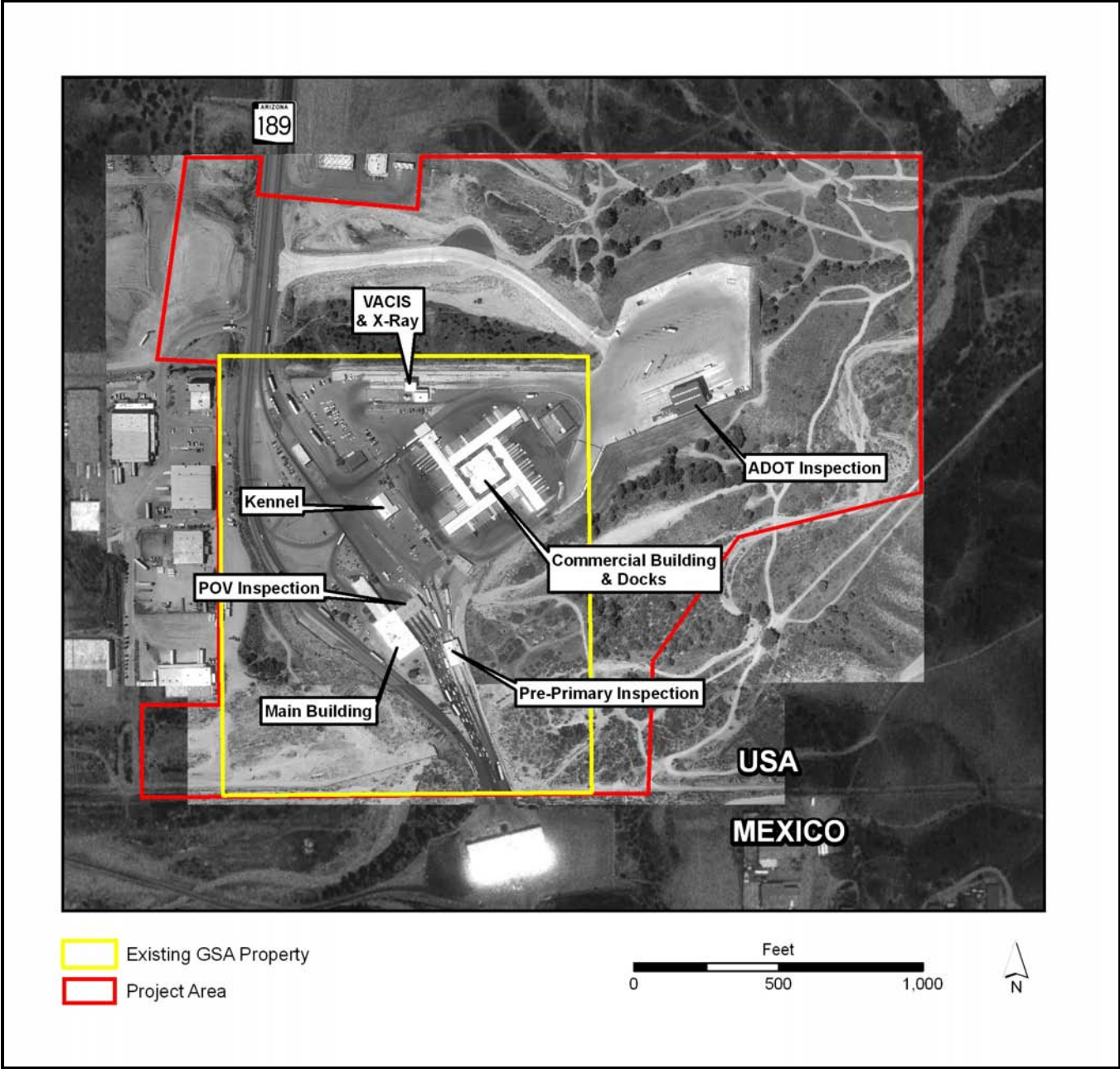
## **Figure 2. Vicinity Map.**

### **1.3 Background and Overview**

The POE was originally constructed in 1973 on a 43-acre parcel (Figure 3). The POE is one of the 10 busiest cargo ports along the entire US-Mexico border and as of 1995, is designated as a part of the Canada to Mexico Trade Corridor (CANAMEX). The City of Nogales was designated by the US Congress in the 1995 National Highway Systems Designation Act as a part of the CANAMEX trade corridor subsequent to the implementation of the North American Free Trade Agreement. The POE serves as the primary commercial truck route between the US and Mexico in the Nogales area. As defined by congress, the CANAMEX trade corridor segment within Arizona generally follows I-19 from Nogales to Tucson; I-10 from Tucson to Phoenix; and US Highway 93 from Phoenix to the Nevada border (Public Law 104-59, November 28, 1995). The CANAMEX corridor is a joint project between Arizona, Nevada, Idaho, Utah, and Montana with the primary objective of stimulating investment and economic growth and enhancing safety and efficiency within the corridor (CANAMEX, 2007). Although CANAMEX does include other components to the plan, the transportation element calls for the development of a continuous four-lane roadway from Mexico through the US and into Canada (CANAMEX, 2007)

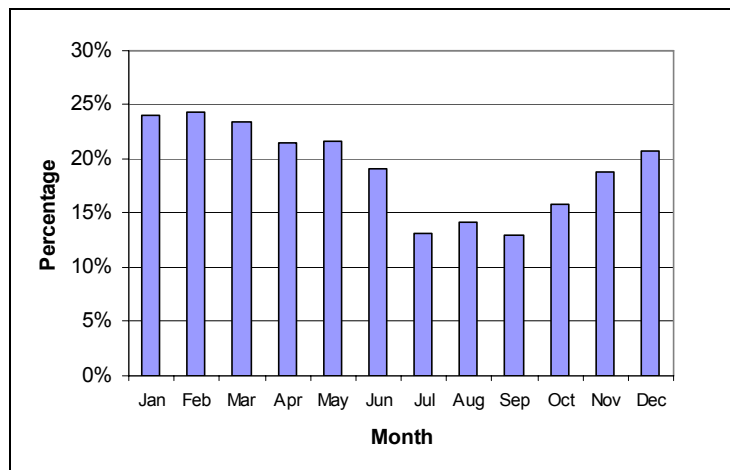
The original facility was designed with two primary entry points; one for commercial vehicles and one for POVs. Pedestrian entries were not planned as a part of the original design (GSA, 2005). The POE is open daily from 8:00 am to 10:00 pm to process pedestrian, commercial, and non-commercial traffic. Historically, the POE did not process commercial vehicles on Sunday; however, there is a temporary program to keep the commercial facility open seven days a week to service the high demand at this facility. Current state and federal agency inspection operations at the POE consist of the Arizona Department of Transportation (ADOT) Motor Vehicle Department (MVD), Customs and Border Protection (CBP), and Immigration and Customs Enforcement (ICE), US Department of Agriculture (USDA) and Food and Drug Administration (FDA). Both CBP and ICE are under the responsibility of the US Department of Homeland Security.





**Figure 3. Existing POE Configuration.**

Most of the commercial traffic going through the POE is winter produce grown in Mexico. The POE processes approximately 49 percent of the agricultural commodities entering the US along the southern border (GSA, 2005). At the peak of the growing season, January to March, (Figure 4), the POE processes as many as 1,400 trucks per day. Recently, Arizona expanded the CANAMEX gateway to include all Arizona border ports and identified the Arizona cities of Nogales, San Luis, and Douglas as the backbone of the northern trade route from Mexico. Planned improvements for San Luis and Douglas have received strong support from the Mexican government. There are several projects in varying stages of development that would accommodate increased traffic through these ports (GSA, 2005).



**Figure 4. Monthly Commercial Truck Traffic Percentages of Total Vehicular Traffic at the Nogales Mariposa US POE, 2006.**

While it may be difficult to predict where commercial trucks would enter the US, improvements and expansion at the POE would position the Nogales-Tucson-Phoenix corridor to remain the most-used and most-economically productive route (GSA, 2005). Current activities in Tucson, Benson, and Nogales, Arizona and the Mexican cities of Agua Prieta, Hermosillo, and Guaymas hold promise for substantial increases in future trade activity. Plans include highway and railway improvements, seaport expansion, private corporation development, and new intermodal freight-system designs. Many of these changes should effectively increase traffic at the POE.

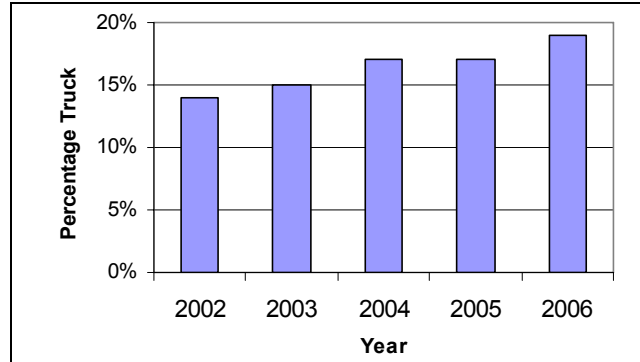
## 2.0 Project Purpose and Need

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### 2.1 Purpose and Need

The POE is an integral part of the international trade infrastructure between the US, Mexico, and Canada and the CANAMEX corridor. Since the POE was constructed in 1973, population in surrounding communities has grown, and immigration and trade policies have changed dramatically. While produce continues to be the leading import at the POE, recent Mexican efforts at stimulating developments in Sonora, Mexico, have facilitated upsurges in the maquiladora, software, and auto manufacturing industries, suggesting that Arizona's ports would continue to see substantial growth in traffic.

As illustrated in Figure 5, the number of commercial trucks passing through the POE has increased steadily since 2002; it reached 289,590 trucks in 2006. Figure 5 shows annual percentages of commercial trucks to total vehicular traffic at the POE.

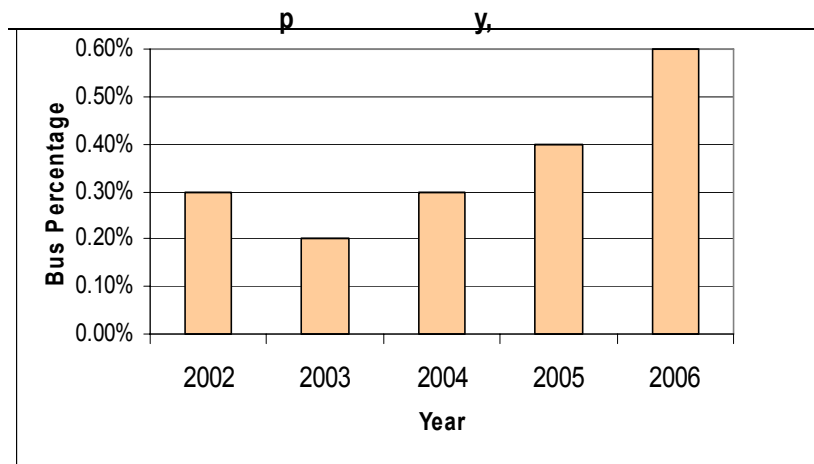


**Figure 5. Annual Commercial Truck Percentages of Total Vehicular Traffic at Nogales Mariposa US POE, 2002–2006.**

Present traffic has exceeded POE capacity, creating frequent traffic conflicts between commercial traffic, pedestrians, and POV traffic. Although pedestrian inspections were not planned as a part of the original design, pedestrian crossings have more than tripled since 2002, reaching 556,927 in 2006. The growth in pedestrian crossings has introduced a substantial safety hazard on the site due to the processing facility's location coupled with the increases in vehicular

traffic. Bottlenecks occur inside the POE, and large trucks queue on the Mexican side of the border waiting for both US and Mexican customs processing. Current POE facilities are operating with limited available space and impaired traffic movement. The facilities are overloaded and in need of repair, upgrade, and expansion.

Bus traffic at the POE has doubled since 2002 to 8,920 buses in 2006. Figure 6 shows annual percentages of buses to total vehicular traffic at the POE.



**Figure 6. Annual Bus Traffic Percentages of Total Vehicular Traffic at Nogales Mariposa US POE, 2002–2006.**

## **2.2 Future Port of Entry Traffic**

In 2005 the GSA utilized a traffic modeling program called Border Wizard to size the elements of the POE based on the 2025 forecasted volumes. The results indicated that in order to handle the future traffic, the POE facilities should be significantly expanded by constructing additional traffic lanes and renovating and/or reconstructing the existing POE facilities.

## **2.3 Conformance with Regulations, Land Use Plans, and Other Plans**

During the planning process and development of associated environmental documentation for new construction and renovation projects, the GSA considers all requirements (other than procedural requirements) of zoning laws, design guidelines, and other similar laws of the state and/or local government. This includes, but is not limited to, laws relating to landscaping, open space, building setbacks, maximum height of the building, historic preservation, and aesthetic

qualities of a building. The project design team would fully consider such laws and requirements in their planning and design documents.

Local officials would be provided 30 days for their review and comment in writing for each proposed design submission, with no time extensions. If comments are not received after the commenting period is over, it would be assumed that the agency agrees with the design and the GSA project manager would proceed with project execution (GSA, 2003).

The City of Nogales General Plan Update indicates the POE is located in an area whose land use is designated as a transportation corridor. The current zoning for the POE is undefined. The parcels surrounding the POE are zoned for light industrial and general commercial use.

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### 3.0 Alternatives

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The various alternatives plus the No Action Alternative are discussed below. Several options were developed for consideration. These were based on the functional requirements, a 15-year planning horizon, the limitations of the site, and cost.

#### Option 1

Option 1 explored how much traffic capacity can be added without significant changes to the site or buildings. This strategy included expanding the current building and leaving much of the traffic circulation pattern largely untouched. This alternative was the least costly and it is complementary to the site development master plan for either Option 2 or 3.

#### Option 2

Option 2 would reconstruct the POE to meet the projected traffic, the *US Land Port of Entry Design Guide* guidelines, and current practice at similar ports. The improvements to the POE would remain within the existing GSA property boundaries. By the end of construction all existing buildings, roads, pavement, and utilities would be demolished and replaced.

#### Option 3

Option 3 is essentially the same as Option 2 except it would improve POE circulation including distances and clearances for commercial vehicles beyond what is suggested in the *US Land Port of Entry Design Guide*.

### 3.1 **Alternatives Considered and Eliminated From Further Consideration**

Options 1 and 2 were eliminated from further consideration because they did not provide enough space to accommodate the clearances necessary for inspecting an increasing number of commercial vehicles. The additional room required for turning movements, however, would necessitate encroachment upon the ADOT land to the north.

Building at another location (other than the existing site) was also eliminated from further consideration. Because a port of entry must be located on the international border at a site

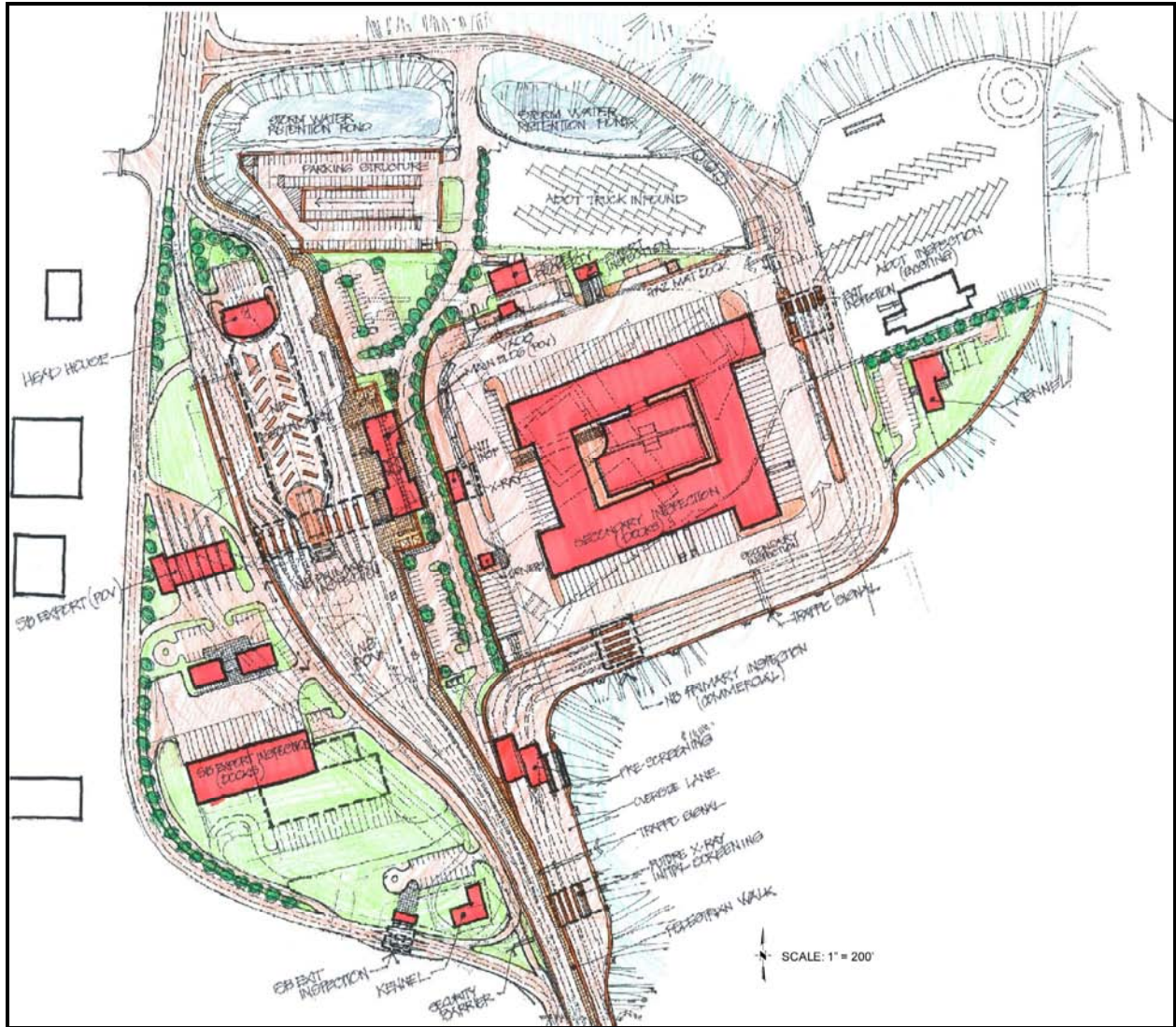
mutually acceptable to the United States and the Republic of Mexico, it was not reasonable to consider other alternative locations.

Three alternative means for achieving Option 3 were developed. Although Alternatives 1 and 2 would meet capacity needs, they were both eliminated from further consideration as described below.

### **3.1.1 Alternative 1**

Alternative 1 attempted to address a major construction cost issue associated with burying an existing utility corridor and importing an enormous amount of fill for the slope stabilization required to install a loop road around the adjacent ADOT facility. The POE is situated on a man-made plateau with perimeter edges that drop approximately 50 feet to the south, east and north of the site. Alternative 1 eliminated the need and expense of the majority of the loop road and also avoided burying the existing utility corridor. However, it was determined later that the internal crossing proposed in Alternative 1, between the commercial inspection docks and the ADOT facility, would create traffic problems and limit future expansion possibilities; therefore, Alternative 1 was eliminated from further consideration.





**Figure 7. Alternative 1.**



As noted in Figure 8, because the POE's current location is on a plateau approximately 50-feet above the surrounding ground level, the construction of a loop road around the POE would involve substantial amounts of fill material. The amount of fill material and earthwork required would substantially increase the cost of the project and, therefore, it too has been eliminated from further consideration.

### **3.2 Alternatives Considered in Detail**

Two alternatives were considered in further detail, the Preferred Alternative (Alternative 3) and the No Action Alternative. The Preferred Alternative is based on previously described functional requirements and a 15-year planning horizon. Because a port of entry must be located on the international border at a location mutually acceptable to the Republic of Mexico, it was not reasonable to consider other alternatives.

#### **3.2.1 No Action Alternative**

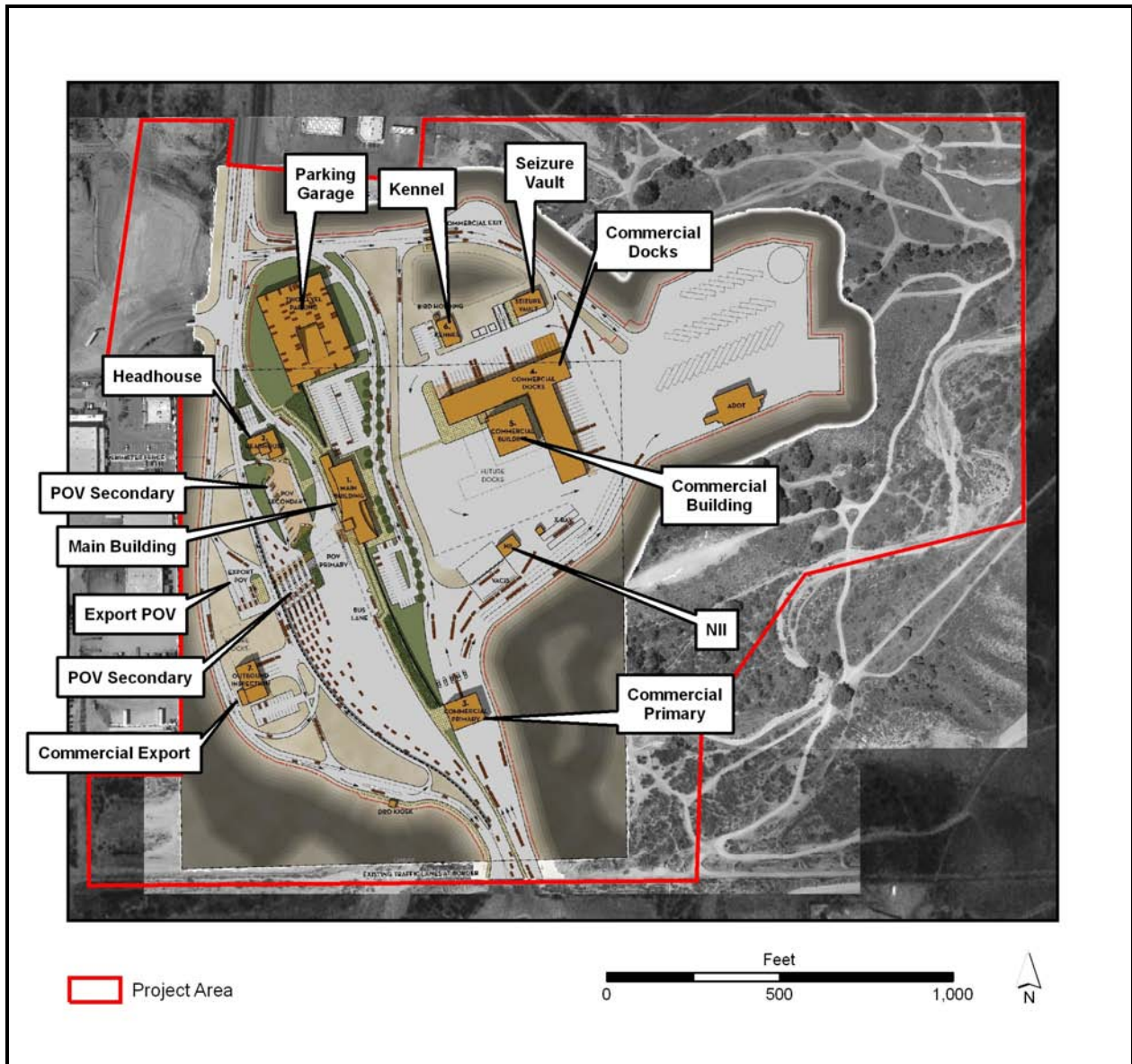
The No Action Alternative would leave the existing facility "as-is." This alternative proposes no major improvements to the POE. No costs would be associated with this alternative; however, the purpose and need would not be met. The No Action Alternative is the baseline condition used for comparison to the Proposed Action to determine the magnitude of impacts.

#### **3.2.2 Preferred Alternative (Alternative 3 – Proposed Action)**

Alternative 3 is a complete redesign and reconstruction of the site. It would be a new facility including site utilities. The design incorporates the need to meet capacity until the year 2025 and is expandable for future growth beyond 2025. It also provides access to the ADOT facility without creating the crossing hazard described in Alternative 1 or the necessity for the loop road described in Alternative 2. The elements of Alternative 3 would include (Figure 9):

- Construction of a new and expanded main building
- Construction of 7 POV primary inspection booths that could be expanded to 12
- Construction of 12 POV secondary inspection stations that could be expanded to 24
- Construction of a bus passenger processing area
- Construction of a bus inspection area

- Construction of a commercial primary canopy and catwalk with 5 lanes, of which 1 of the lanes is to be used for oversized/wide-load vehicles
- Construction of 5 commercial primary inspection super booths
- Construction of a new and expanded commercial building
- Construction of 56 new commercial docks of which 6 would be screened and comfort conditioned for the benefit of the agents inspecting commercial vehicles. The commercial docks will be expandable to 100 docks should traffic volumes warrant expansion
- Construction of an area for x-ray, and Vehicle and Cargo Inspection System (VACIS) locations
- Construction of a new seized property vault
- Construction of a relocated and expanded kennel
- Installation of a power generator for 100 percent back-up capacity plus future expansion capabilities which brings the power requirements to 125%
- Construction of an outbound facility for ICE and detention and removal operations including an area for bus disembarking, a secure kiosk for officers, a secure pedestrian walkway, and a bus return lane
- Construction of a hazardous materials dock and hazardous materials drive-in pit
- Construction of a new export dock including auto export facilities
- Construction of a 2-level parking garage
- Construction of new exit booths located at the existing State Port Drive
- Installation of perimeter fencing and electronic surveillance



**Figure 9. Preferred Alternative Improvements.**

**3.2.2.1 *POV Main Building, Primary and Secondary Inspections***

The main building is approximately 22,887 gross square feet (gsf) in area and would house CBP and GSA. These tenants would have a combination of shared and private spaces. The building would accommodate the pedestrian and administrative functions of the POE. Spaces would be separated into areas for administration, public waiting, document processing, pedestrian inspection (primary and secondary), bus passenger inspection (primary and secondary),

enforcement/detainment, staff services, and building services. The building could be either one or two stories in height.

Seven primary inspection booths for northbound traffic would be covered by a canopy. The easternmost lane would be dedicated as a bus lane that would continue along the western edge of the main building for disembarking/embarking of passengers. The remaining six lanes would be enhanced with the Secure Electronic Network for Travelers Rapid Inspection (SENTRI) system, an automated commuter lane system, with the intent to start SENTRI use with the westernmost lane and then expand to the easterly lanes as needed.

Twelve secondary lanes (24 POV capacity) and two stations would be placed under a canopy for northbound POV secondary inspection. The secondary inspections performed at the stations would be located behind the head house and separate from the other secondary inspection lanes. These inspection stations are not intended for public view and therefore would be shielded and/or screened. These secondary inspection stations are referred to as a “hard” secondary.

### ***3.2.2.2 Seized Property Building***

The seized property vault and offices would be approximately 4,628 gsf and would house only CBP functions. The building would provide separate spaces for the secure storage of contraband, drugs, administration, and processing. Expansion plans are being reviewed to build a 9,000 gsf seizure vault in Tucson. If constructed, a temporary holding seizure vault of approximately 4,500 gsf would still be built on the Mariposa site. Relocation of the seized property building would allow for improvements in commercial vehicle circulation within the secondary inspection area.

### ***3.2.2.3 Commercial Inspection***

Commercial inspection would be comprised of four major facilities: The commercial outbound inspection building, the commercial primary building, the commercial main building, and the commercial docks. Each is discussed below:

The outbound inspection building is approximately 10,584 gsf and will house CBP and US Department of Agriculture (USDA) functions. The square footage includes area for six canopied,

raised docks. The Feasibility Study indicated six docks to be located adjacent to the outbound inspection building. At the request of the commercial CBP staff, this study has shown space for an additional future build-out area for a total of 14 docks to approximate the number of docks that are presently being used at the existing commercial dock facility. The outbound inspection building would be separated into spaces for administration, laboratories, public waiting, document processing, support, staff services and building services.

The commercial primary building would be approximately 9,625 gsf and would house CBP functions. The building would be separated into spaces for staff services, four inspection lanes, an overhead catwalk and a small office space. Five superbooths would be tucked under the building canopy along the north section of the structures. These would be multi personnel booths that would accommodate three offices, one each from CBP, ADOT and the Federal Motor Carrier Safety Administration. The booths would be elevated to facilitate communications with the truck drivers. Four weigh-in-motion scales would be located just south of the present pre-screening building along with the automatic vehicle identification system.

The commercial main building would be approximately 33,803 gsf and would likely be two stories in height. It would house CBP, the USDA, and Food and Drug Administration (FDA) agencies. The building would be separated into spaces for administration, public waiting, document processing, enforcement and detention, support, staff services, and building services. Specialty areas are also provided for agricultural quarantine inspections.

The reconfiguration plan includes a total of 56 docks. Of these 56 docks, 6 will be screened to allow for inspection of suspicious containers out of the traveling public's view. These docks will be conditioned for the comfort of the inspecting agents and are not intended to refrigerate the shipments. The remainder of the docks would be covered with a canopy. The structure is approximately 61,954 gsf in area and would house CBP, FDA and USDA-Animal and Plant Health Inspection Service agencies. Spaces would be separated into raised docks, contractor administration, equipment storage, public waiting and personnel protective shelters.

#### **3.2.2.4      *Non-Intrusive Inspection Building***

The non-intrusive inspection (NII) building would be 4,659 gsf in area and would house only CBP staff. The building would provide spaces for both x-ray and VACIS control rooms, administration, document processing, support, staff services, and building services. A hazmat storage facility with a dock would be placed near the NII Building.

#### **3.2.2.5      *Kennel***

The proposed kennel would be approximately 7,110 gsf in area would hold 45 kennels. The building would include spaces for food storage and preparation, CBP offices, dog washing, laundry facilities and separated areas for the various training supplies. Adequate outdoor runs and shaded break areas for the dogs use would be placed adjacent to the kennel.



## **4.0 Affected Environment and Environmental Consequences**

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The following information describes the affected environment within the project area and presents the potential effects of the Proposed Action. Measures to avoid or minimize impacts have been identified and are summarized in the Mitigation Measures (pages ix and x).

### **4.1 Ownership, Jurisdiction, and Land Use**

For the purpose of this EA, land ownership is identified in terms of public or private. Jurisdiction implies the authority to regulate land use. Land adjacent to the project area within the US is under the jurisdiction of the City of Nogales. Land ownership consists of the GSA, ADOT, City of Nogales, and privately owned parcels.

The POE's site is a 43-acre parcel owned by GSA. A parcel owned by ADOT abuts the GSA property to the north and east. The ADOT property is a developed site that supports the State's vehicle inspection activities and includes access roads to and from the facility. A 60-foot-wide strip of land along the international border is maintained by the Department of the Interior with guidance from the International Boundary and Water Commission. In addition, there is a international cattle crossing located to the west of the POE site.

Property to the west of SR 189 is privately owned and developed as commercial property. Property immediately east of the POE is privately owned and undeveloped. The Carondelet Holy Cross Hospital is located at 1171 W. Target Range Road approximately 1,000 feet northeast of the project area.

The City of Nogales zoning map indicates that land to the west of SR 189 is zoned for light industrial use. Land adjacent to the east portion of the POE is zoned for general commercial and light industrial uses. Farther east of the area zoned for general commercial property is an area zoned for single-family residences on minimum-sized lots of 18,000 square feet.

The City of Nogales General Plan Update displays planned land use in the vicinity of the POE as a transportation corridor, industrial and business uses, commercial uses, and a hotel/regional shopping mall.

#### **4.1.1 Proposed Action**

The Proposed Action would require the acquisition of approximately 12.5 acres. This property would be acquired from ADOT which is currently undeveloped and zoned for light industrial and general commercial use. The acquisition of this parcel would not require the relocation of any residents or businesses. The area zoned for single-family residences is approximately 160 feet east of the project area and approximately 500 feet east of the proposed improvements. Therefore, there would be no substantial changes in land use or land jurisdiction.

#### **4.1.2 No Action**

The No Action Alternative would have no impact on land ownership, land use, or jurisdiction.

### **4.2 Social and Economic Resources**

The project is located within Nogales, Arizona, which has a population of approximately 21,830. Nogales is the county seat of Santa Cruz County, which has a population of 44,055. Nogales, Arizona borders the city of Nogales, Sonora, Mexico and is Arizona's largest international border town. Table 1 shows that Santa Cruz County has experienced population growth at a faster rate than the city of Nogales, Arizona. The total change for Nogales' population over the five-year period was just under 1,000 persons.

<b>Table 1. Population Growth Trends.</b>						
<b>Area</b>	<b>Annual Population Estimates from 2000 and 2005</b>					
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Santa Cruz County	38,381	39,325	39,840	40,800	42,410	44,055
% change		2.5%	1.3%	2.4%	3.9%	3.9%
% change 00-05						14.8%
Nogales, Arizona	20,856	20,990	21,110	21,190	21,590	21,830
% change		0.6%	0.6%	0.4%	1.9%	1.1%
% change 00-05						4.7%
Sources: July 1 Population Estimates for 2001–2005, prepared by Population Statistics Unit, Research Administration, Department of Economic Security; 2000 Census; McClure Consulting LLC.						

#### **4.2.1 Economic Structure**

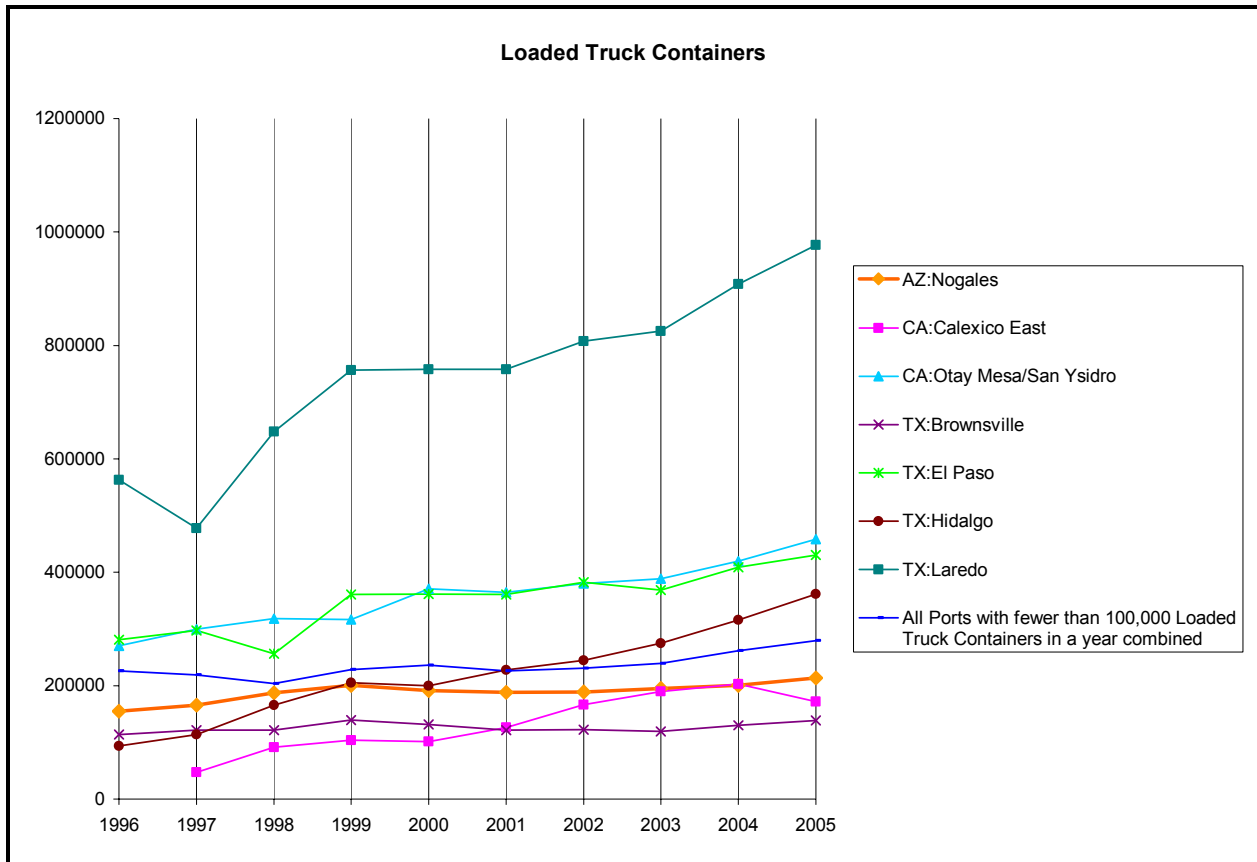
Employment patterns for Santa Cruz County for 2001 to 2005 are shown on Table 2. The table shows that the estimated employed labor force has increased by 900 workers since 2001, or 6.6 percent. The largest percentage gains occurred in other private-service providing industries and trade, transportation and utilities, in that order. Compared to the entire state, Santa Cruz County has a disproportionate number of workers in the trade, transportation, and utilities industries, which is to be expected in a border-crossing hub. The disparity has increased somewhat over the four-year period. As an illustration of the strength of the transportation sector, there are 30 customs brokers listed in Nogales, Arizona directories, and approximately 25 other warehouse operations.

<b>Table 2. Employment Trends.</b>					
<b>Santa Cruz County</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Total Civilian Labor Force	14,975	15,150	15,500	15,475	15,975
Total Employment	13,650	13,600	13,975	13,975	14,550
Unemployment Rate	8.8%	10.2%	9.8%	9.7%	8.9%
Total Non-Farm	12,175	12,000	12,225	12,275	13,100
Total Private	9,050	8,775	8,950	8,950	9,800
Trade, Transportation and Utilities	4,525	4,525	4,750	4,775	5,325
Other Private Service	2,925	2,900	2,950	3,225	3,550
Federal Government	1,100	1,125	1,125	1,150	1,200
State and Local Government	2,025	2,100	2,175	2,150	2,100
<b>Santa Cruz County</b>	<b>% of Total Non-Farm</b>				
Total Non-Farm	100%	100%	100%	100%	100%
Total Private	74%	73%	73%	73%	75%
Trade, Transportation and Utilities	37%	38%	39%	39%	41%
Other Private Service	24%	24%	24%	26%	27%
Federal Government	9%	9%	9%	9%	9%
State and Local Government	17%	18%	18%	18%	16%
<b>Arizona</b>	<b>% of Total Non-Farm</b>				
Total Non-Farm	100.0%	100.0%	100.0%	100.0%	100.0%
Total Private	83.3%	82.8%	82.9%	83.2%	83.9%
Trade, Transportation and Utilities	19.5%	19.5%	19.4%	19.4%	19.4%
Other Private Service	46.9%	47.2%	47.8%	48.0%	48.2%
Federal Government	2.1%	2.2%	2.2%	2.1%	2.1%
State and Local Government	14.5%	15.1%	14.9%	14.6%	14.0%
Source: AZ Workforce Informer; McClure Consulting, LLC					

#### **4.2.2 Discussions with Industry Representatives**

According to local industry representatives, the ports are the “economic engine” of Nogales, and are a defining element of the community’s competitiveness and overall economic well-being. The events of September 11, 2001, further constrained already overburdened existing port facilities, especially at the POE during periods of peak produce shipment, so the expansion becomes even more critical to accommodating the high demand for border crossings. The community has already lost some competitive position, due to other ports expanding and/or shippers looking for alternative routes that are less congested. During the peak season, customs brokerage businesses experience “on a daily basis” the frustration of knowing there are trucks that could and need to be accommodated at their place of business, yet they cannot make the crossing in a timely fashion due to the constraints at the POE.

Among all US-Mexico ports, five have experienced greater increases in crossings by loaded truck containers than Nogales: Laredo, Otay Mesa, El Paso, Hidalgo, and Calexico East (in order of largest to smallest number of crossings), as illustrated on Figure 10. This figure clearly indicates that Nogales has been competitively disadvantaged, compared to most other ports, for at least the last 10 years.



**Figure 10. Crossings of Loaded Truck Containers, US-Mexico Ports.**

### 4.2.3 Proposed Action

The Proposed Action would improve the flow of commercial vehicles through the POE facility. This would allow more produce to cross the border and reach brokerages quicker. Area businesses associated with trade and transportation would benefit from the increased capacity at the POE. Therefore, the Proposed Action would have a beneficial impact to social and economic resources.

### 4.2.4 No Action

The Nogales area would continue to experience economic disadvantages when compared to other ports of entry. Wait times for produce-carrying vehicles to cross the border would increase, reducing the quality of the goods being transported. Transporters would continue to route trucks to other ports to avoid the delays at the POE.

### **4.3 Title VI/Environmental Justice**

*Title VI of the Civil Rights Act of 1964* and related statutes assure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, or disability. Executive Order 12898 on environmental justice, dated February 11, 1994, directs that programs, policies, and activities not have a disproportionately high and adverse human health or environmental effect on minority and low-income populations.

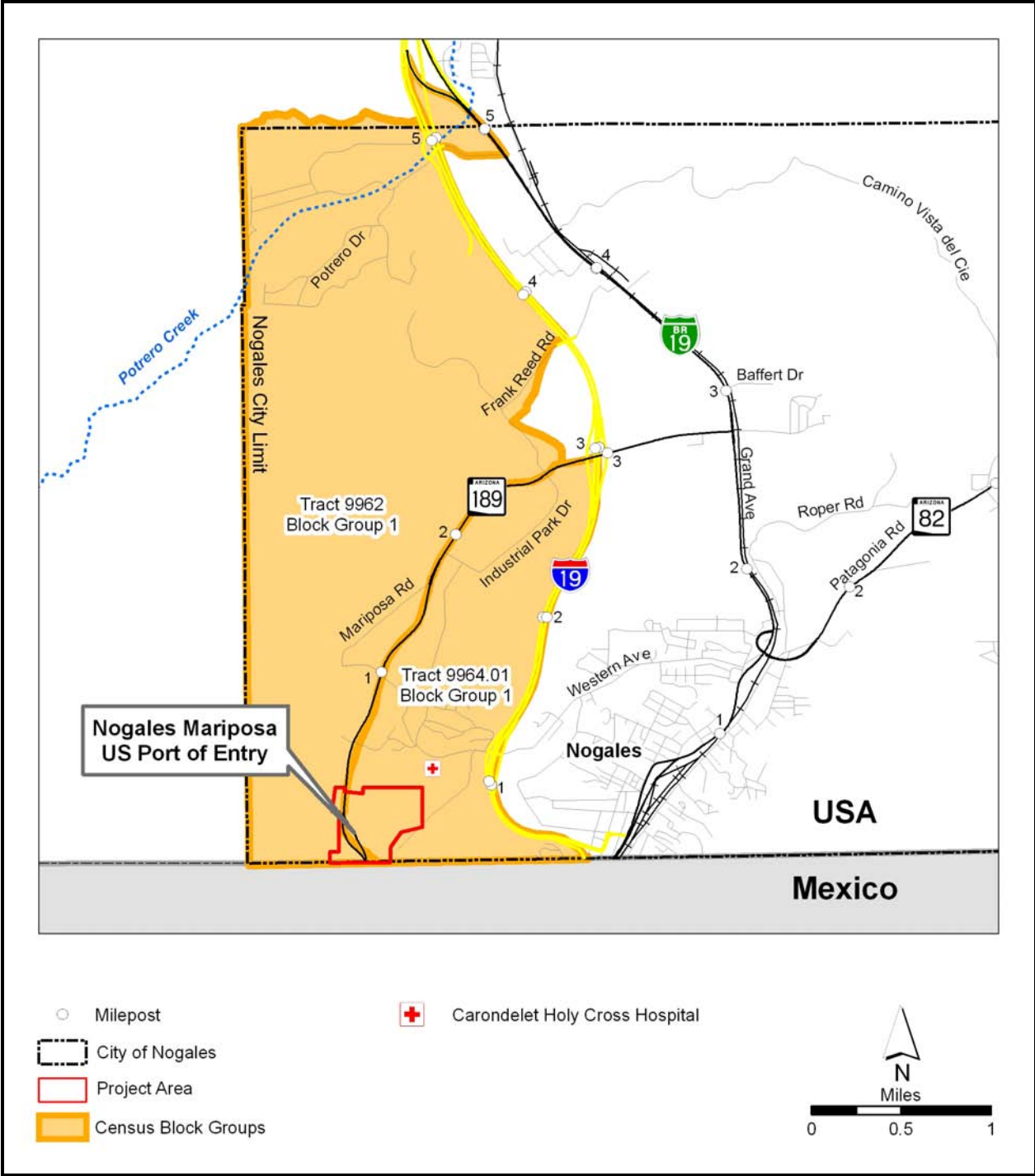
Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed on February 11, 1994, reinforces the provisions set forth from Title VI of the Civil Rights Act of 1964 and provides additional guidance on identifying and addressing disproportionately high or adverse effects on minority and low-income populations as well as disabled individuals, women as head of household, and elderly populations. Specifically, those programs, policies, or benefits should ensure that they prevent discriminatory effects including: discriminating against or excluding individuals or populations from participation, denying benefits of a Proposed Action/activity, or otherwise adversely affecting the human health or environment of these populations.

A minority person can be defined as an individual who is racially classified as African American, Asian American, Native American or Alaskan Native, or anyone who classifies himself or herself as “other” race. Hispanics are also considered minorities regardless of their racial affiliation. Elderly refers to individuals who are older than 60 years of age. Low-income is defined as a person 18 years or older whose income is below the poverty level estimated from the current census. Disabled individuals are persons aged greater than 16 who are non-institutionalized and have a work disability, mobility disability or self-care disability. “Female Head of Household” is a family household where there is a female with no spouse present, regardless of whether she has any children less than 18 years of age and/or living alone or not living alone. The study area data are compared and contrasted with the data for all of Santa Cruz County and the local municipalities in order to assess whether minority, elderly, low-income, disabled, or female head of households populations are disproportionately represented in or near the study area.

The demographic composition of the study area was calculated using the *US Department of Commerce, Bureau of the Census 2000, Census of Population and Housing Statistics*. Census tracts are small, relatively permanent statistical subdivisions of a county for tallying census information and do not cross county boundaries. They are delineated with the intention of being maintained over a long period to allow statistical comparisons from census to census. The size of census tracts varies depending on the population density of the area. Census tracts are comprised of smaller geographic subdivisions, called block groups, which aid in increasing the resolution of demographic information. Each census tract contains a minimum of one block group and may have a maximum of nine block groups. Although the use of block group information improves the resolution of the demographic information, the block groups comprise a much larger geographic area than the project area; therefore, the block group information represents a larger population than the population of the project area. The study area traverses the following Census Tract, Block Groups (Figure 11):

- 9962, Block Group 1
- 9964.01, Block Group 1





**Figure 11. Census Block Group Location Map.**

### 4.3.1 Race and Ethnicity Populations

According to the US Bureau of Census 2000 data, the combined block groups have high population percentages identified as Hispanic, which represents approximately 89 percent of the 3,049 individuals recorded within the two block groups. This percentage is consistent with the census data recorded for Santa Cruz County (80.9%) and the city of Nogales (93.6%) (Table 3).

The next highest population in the combined block groups is identified as “white,” which represents 81.6 percent of the 3,049 individuals recorded within the two block groups. No other substantial populations, meaning those populations greater than 50 percent of a population, are located within the combined block groups (Table 3). *The summation between percentages of the racial categories and the Hispanic or Latino category may equal more than 100 percent of the total population. This is due to the fact that Hispanic and Latino is an ethnicity (not a race) and some respondents that identify themselves in a racial category may also be of Hispanic decent and consider themselves under both criteria.*

**Table 3. 2000 Population and Racial Demographics.**

Area	Total Population	White Alone		Black or African American Alone		American Indian and Alaska Native Alone		Asian Alone		Native Hawaiian and Other Pacific Islander Alone		Some Other Race Alone		Two or More Races		Hispanic or Latino	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Block Group 1, Census Tract 9962	1,520	1,239	81.5	0	0.0	0	0.0	0	0.0	0	0.0	270	17.8	11	0.7	1,291	84.9
Block Group 1, Census Tract 9964.01	1,529	1,249	81.7	0	0.0	0	0.0	0	0.0	0	0.0	149	9.7	131	8.6	1,426	93.3
All Block Groups	3,049	2,488	81.6	0	0.0	0	0.0	0	0.0	0	0.0	419	13.7	142	4.7	2,717	89.1
Santa Cruz County	38,381	28,990	75.5	122	0.3	248	0.6	311	0.8	8	0.0	7,751	20.2	951	2.5	31,041	80.9
Nogales	20,856	13,036	62.5	34	0.2	144	0.7	83	0.4	0	0.0	4,078	19.6	481	2.3	19,522	93.6

### 4.3.2 Environmental Justice Populations

The elderly population, age 60 years and over, in the block groups varies from 9.9 percent to 11.8 percent. The percentage of elderly for the combined block groups is 10.9 percent, which is consistent with the surrounding community of Santa Cruz County (14.7%) and the city of Nogales (14.1%) (Table 4).

Area	Total Population	Age 60 Years and Over		Below Poverty Level		Disabled		Female head of Household	
		#	%	#	%	#	%	#	%
Block Group 1, Census Tract 9962	1,520	151	9.9	144	9.5	167	11.0	98	6.4
Block Group 1, Census Tract 9964.01	1,529	181	11.8	225	14.7	553	36.2	113	7.4
All Block Groups	3,049	332	10.9	369	12.1	720	23.6	211	6.9
Santa Cruz County	38,381	5,633	14.7	5,523	14.4	6,270	16.3	3,518	9.2
Nogales	20,856	2,946	14.1	4,049	19.4	3,643	17.5	2,122	10.2

The low-income population, identified as a person 18 years or older whose income is below the poverty level from the current census varies from 9.5 percent to 14.7 percent. The percentage of low-income persons for the combined block groups is approximately 12.1 percent (Table 4). The percentage of low-income persons is consistent with the surrounding community of Santa Cruz County (14.4%) and the city of Nogales (19.4%)

The disabled population, characterized as individuals over the age of 16 who are non-institutionalized and have a work disability, mobility disability or self-care disability, varies from 11.0 percent to 36.2 percent; the percentage of disabled for the combined block groups is approximately 23.6 percent. This percentage is higher than the percentage of Santa Cruz County (16.3%) and the city of Nogales (17.5%). There are portions of the project area (Census Tract

9964.01, Block Group 1) that suggest a distinct population of disabled persons may exist within the study vicinity (Table 4).

The percentage of households with a female head of household, a family household where there is a female with no spouse present regardless of whether she has any children less than 18 years of age and living alone or not living alone, varies from 6.4 percent to 7.4 percent. The percentage of female heads of households for the combined block groups is approximately 6.9 percent. This percentage is lower than Santa Cruz County (9.2%) and the city of Nogales (10.2%) (Table 4).

#### **4.3.2.1 Proposed Action**

The proposed improvements would not require the acquisition of any residences or businesses. As a result, the Proposed Action would not require the displacement of any residents or businesses; therefore, the Proposed Action would not impact any Title VI or minority populations. Conversely, the improvements could produce additional jobs for area residents with a percentage of these jobs being potentially occupied by Title VI or minority populations.

There are no isolated tract/block groups within or near to the POE that contain populations of the above protected populations that are substantially greater than the overall community. Impacts to these populations would not be disproportionate. Therefore, there would be no substantial impacts to protected populations as a result of the Proposed Action.

#### **4.3.2.2 No Action**

The No Action Alternative would have no direct impact on any protected minority or Title VI population. However, if commercial traffic due to inefficient operations at the POE would utilize alternate ports to enter the US, some losses of brokerage jobs could occur. It is possible this loss of jobs could impact employees belonging to Title VI populations or minority populations.

### **4.3.3 Executive Order 13045, Protection of Children**

Executive Order 13045 requires each federal agency to “identify and assess environmental health risks and safety risks that may disproportionately affect children” and “shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.”

#### **4.3.3.1 Proposed Action**

There are no schools, daycare facilities, parks, or residences in the project vicinity. There are no areas or features that would typically attract children. The proposed improvements would provide improved facilities and access control for pedestrians and bus occupants. These improvements would decrease the potential for vehicle-pedestrian conflicts which could include children. The Proposed Action would have no impact on environmental health risks to children. The on-site project manager would ensure that access to the construction site is controlled and that children would not be admitted to this area. The area currently zoned for single-family residential use to the east of the project area is undeveloped. If this area develops in the future with residences, the potential for children to recreate in and around the POE could be a concern. The Proposed Action would fully secure the POE through perimeter fencing and electronic surveillance, which would prevent children from accessing the POE facility. Therefore, there would be no substantial impacts to children as a result of the Proposed Action.

#### **4.3.3.2 No Action**

The No Action Alternative would have no impact on environmental health risks to children. Because there would be no improvements to the pedestrian environment at the POE under the No Action Alternative, the potential for vehicle-pedestrian conflicts would remain. Currently, there is no perimeter fencing surrounding the entire existing GSA property. However, there is fencing around developed inspection areas. If the area to the east develops with residences, excluding children from the GSA property would be a concern.

#### **4.4 Transportation**

Mexican Federal Highway 15 and SR 189 provide regional access to the existing port. The SR 189 is a five-lane undivided highway, locally signed as Mariposa Road. It has posted speed limits varying between 40 and 50 mph and connects with I-19 approximately 4 miles north of the international border. In the vicinity of the study area, I-19 is a four-lane divided highway with a posted speed limit of 75 mph. This north-south freeway connects the cities of Nogales and Tucson, and serves as one of the three truck routes of the CANAMEX corridor in Arizona.

There are four existing signalized intersections on SR 189 within the study area (between the border and the I-19 traffic interchange), i.e., Mariposa Ranch Road at milepost (MP) 1.73, Industrial Park Drive at MP 2.67, and the traffic interchange with I-19 (southbound ramps at MP 2.92 and northbound ramps at MP 3.03). Additionally, there are several paved and unpaved stop-sign-controlled intersections on SR 189. The major intersections are Target Range Road at MP 1.13 and Industrial Park Drive at MP 1.92.

An analysis of existing and future No Action traffic conditions is located in Appendix 9.3. Detailed traffic analyses of the Proposed Action would be completed during the design phase when updated traffic data becomes available.

##### **4.4.1 Proposed Action**

Under the Proposed Action, improvements at the POE would include measures to increase traffic capacity by adding through lanes, improving the efficiency of inspection facilities, and routing trucks and/or POV's to these inspection facilities to minimize conflicts or additional traffic backups within the POE. During construction, operations at the POE could be temporarily impacted if appropriate construction sequencing or other mitigation measures were not taken. Construction sequencing plans would separate roadway improvement activities into as many stages as necessary to continue smooth border operations and maintain pedestrian, commercial and non-commercial traffic flow within the project area. Traffic control plans should include

temporary signing and marking plans to warn drivers and pedestrians of the construction activities and to ensure safe travel through the area.

Upon implementation of the Proposed Action, traffic delays within the POE and the potential for pedestrian and vehicle conflicts would be reduced, and the flow of traffic through the POE would be improved. Therefore, the impacts to transportation facilities as a result of the Proposed Action would be beneficial.

#### **4.4.2 No Action**

Under the No Action Alternative, the POE would continue to experience traffic delays caused by inspection facilities being located too close together, poor traffic flow between inspection facilities, and pedestrian conflicts. These conditions would worsen with time if no improvements are made and commercial traffic continues to increase. Continued traffic congestion and/or overall operational deficiencies could jeopardize the future of the POE making it undesirable for commercial truck use and tourists.

#### **4.5 Biological Resources**

The biological resources study area consists of the current POE facilities, a portion of SR 189, and the adjacent undeveloped lands. Biological resources information was collected during a pedestrian survey of the entire estimated project area on November 9, 2006. During the pedestrian survey, photographs were taken, vegetation was recorded, and the likelihood for special status species occurrence was assessed based on habitat characteristics. Additional background information on the project area was obtained from aerial photographs, topographic maps, Geographic Information System data, various natural history/biological texts, unpublished technical documents, *Federal Register* documents, and state and federal agency coordination and websites.

The POE is located within the Ephraim Canyon Drainage Basin in an area that is transitional between the Semi-desert Grassland and Madrean Evergreen Woodland Biotic Communities. Terrain in the project vicinity consists of rolling hills, with elevations ranging from approximately 3,950 to 4,050 feet above mean sea level. Geologic formations consist of Tertiary



sedimentary rock, and soils that are thermic semiarid soils of the Caralampi-Hathaway Association. These soils are very gravelly soils formed in old alluvium derived from igneous and sedimentary rock. There are no perennial sources of water within or near the project limits; however, several ephemeral drainages dissect the project area. Aside from some commercial development adjacent to the western boundary of the project limits, lands in the project vicinity to the west within the Coronado National Forest and to the southwest in Mexico are mostly undeveloped natural open space. Lands to the north, east, and southeast consist of commercial and residential development, with some parcels of natural undeveloped open space.

Of the 43-acre POE property, approximately 35.3 acres are currently developed. The original topography of the POE site was rolling hills and arroyos; however, construction of the existing POE required cut and fill of approximately 50% of the total developed area to level terrain for structures. The remaining areas are undeveloped, though they have been disturbed by construction of the current POE facilities and numerous roads and trails.

#### **4.5.1 Vegetation**

Vegetation in developed areas of the site consists mostly of various landscaping ornamentals, including fan palm and bougainvillea. Vegetation in the surrounding undeveloped areas includes a ground cover of various grasses; weedy species such as amaranth, Russian thistle, and devil's claw; shrubs such as desertbroom, canyon ragweed, seepwillow, and catclaw acacia; trees such as mesquite and oak; succulents such as sotol and Palmer agave; and some cacti, including Mammillaria, prickly pear, beehive, and compass barrel.

#### **4.5.2 Wildlife**

No mammals or reptiles were observed during the November 9, 2006 survey. Mammals and reptiles that may be present include, but are not limited to; pocket mice, squirrels, woodrats, coyotes, whiptail lizards, skinks, and spiny lizards. Birds commonly seen in the area include jays, ravens, acorn woodpeckers, western bluebirds, various sparrows, Hutton's vireos, red-tailed hawks, and turkey vultures. No bird nests, or signs of nesting activity, were observed during the site visit.

### 4.5.3 Special Status Species

Table 5 is the special status species list for the project area, and includes the US Fish and Wildlife Service (USFWS) list of federally threatened, endangered, proposed, candidate, and conservation agreement species potentially occurring in Santa Cruz County, Arizona; as well as other special status species identified by the Arizona Game and Fish Department as occurring within 3 miles of the project vicinity. Table 5 also includes a brief assessment of each species' likelihood of occurrence in the project area based on the species' range/distribution and habitat requirements. Only the shaded species are reasonably expected to occur in the project area.

<b>Table 5. Special Status Species List for Project Area.</b>			
<b>Species Name</b>	<b>Status<sup>1</sup></b>	<b>Habitat Requirements/Range</b>	<b>Possibility of Occurrence in the Project Area</b>
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	ESA LT	Large trees or cliffs near reservoirs, rivers, and streams with abundant prey at various elevations.	Very low. No suitable habitat. No large trees or cliffs near a water source.
California Brown pelican ( <i>Pelecanus occidentalis californicus</i> )	ESA LE	Transient to lower Colorado River and large open bodies of water at various elevations.	Very low. No suitable habitat. No water sources.
Canelo Hills ladies-tresses ( <i>Spiranthes delitescens</i> )	ESA LE	Finely grained, highly organic, saturated soils of cienegas at approximately 5,000 feet.	None. No suitable habitat. No cienegas with saturated soil.
Chiricahua leopard frog ( <i>Rana chiricahuensis</i> )	ESA LT	Streams, rivers, backwaters, ponds, and stock tanks that are mostly free from introduced fish, crayfish, and bullfrogs from 3,300 to 8,900 feet.	None. No suitable habitat. No water sources .
Desert pupfish ( <i>Cyprinodon macularius</i> )	ESA LE	Shallow springs, small streams, and marshes below 5,000 feet. Tolerates saline and warm water.	None. No suitable habitat. No water sources.
Gila chub ( <i>Gila intermedia</i> )	ESA LE	Pools, springs, cienegas, and streams from 2,000 to 3,500 feet.	None. No suitable habitat. No water sources .
Gila topminnow ( <i>Poeciliopsis occidentalis occidentalis</i> )	ESA LE	Vegetated shallows of small streams, springs, and cienegas below 4,500 feet	None. No suitable habitat. No water sources.
Huachuca water umbel ( <i>Lilaeopsis schaffneriana</i> ssp <i>recurva</i> )	ESA LE	Cienegas, perennial low gradient streams, and wetlands from 3,500 to 6,500 feet.	None. No suitable habitat. No water sources.
Jaguar ( <i>Panthera onca</i> )	ESA LE	From Sonoran Desertscrub to Subalpine Conifer Forest between 1,600 and 9,800 feet. Individual jaguars occasionally range into Arizona from Mexico.	Very low. No suitable habitat due to development and high levels of human activity in project area.

**Table 5. Special Status Species List for Project Area (continued).**

Species Name	Status <sup>1</sup>	Habitat Requirements/Range	Possibility of Occurrence in the Project Area
Lesser long-nosed bat ( <i>Leptonycteris curasoae yerbabuena</i> )	ESA LE	From Desertscrub to oak transition areas with agave and columnar cacti below 8,000 feet.	Medium. Suitable habitat within the species range occurs within the project area. The project area does not contain potential day roost sites, but does contain agave, a known lesser long-nosed bat food plant.
Mexican spotted owl ( <i>Strix occidentalis lucida</i> )	ESA LT	Canyons and dense forests with multi-layered foliage structure statewide from 4,100 to 9,000 feet.	Very low. No suitable habitat. No canyons or dense forests. Out of elevation range .
Northern aplomado falcon ( <i>Falco femoralis septentrionalis</i> )	ESA LE	Open grassland and savannahs from 3,500-9,000 feet in Cochise, Graham, and Greenlee Counties and extreme eastern Santa Cruz County.	Very low. No suitable habitat. No open grasslands or savannahs. Out of species range (project occurs in western Santa Cruz County).
Ocelot ( <i>Leopardus [=felis] pardalis</i> )	ESA LE	Humid tropical and sub-tropical forests, savannahs, and semi-arid thornscrub below 8,000 feet. Individual ocelots are thought to occasionally range into Arizona from Mexico.	Very low. No suitable habitat due to development and high levels of human activity in project area.
Pima pineapple cactus ( <i>Coryphantha scheeri</i> var. <i>robustispina</i> )	ESA LE	Sonoran Desertscrub or Semi-desert Grassland in alluvial valleys or on hillsides with <10% slope in rocky to sandy or silty soils from 2,300 to 5,000 feet.	Medium. Suitable habitat within the species range occurs within the project limits; however, much of the project area is previously disturbed or on slopes > 10%.
Sonora chub ( <i>Gila ditaenia</i> )	ESA LT	Perennial and intermittent small to moderate streams with boulders and cliffs at approximately 3,900 feet.	None. No suitable habitat. No water sources.
Sonora tiger salamander ( <i>Ambystoma tigrinum stebbinsi</i> )	ESA LE	Stock tanks and impounded cienegas in San Rafael Valley and Huachuca Mountains from 4,000 to 6,300 feet.	None. No suitable habitat. No water sources.
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	ESA LE	Dense riparian vegetation near a permanent or semi permanent source of water or saturated soil below 8,500 feet.	Very low. No suitable habitat. No dense riparian vegetation .
Huachuca springsnail ( <i>Pyrgulopsis thompsoni</i> )	ESA C	Aquatic areas, small springs with vegetation and slow to moderate flow from 4,500 to 7,200 feet.	None. No suitable habitat. No water sources.
Stephan's riffle beetle ( <i>Heterelmis stephani</i> )	ESA C	Free-flowing springs and seeps, commonly referred to as rheocrenes from 5,100 to 6,600 feet.	None. No suitable habitat. No water sources. Out of elevation range.
Yellow-billed cuckoo ( <i>Coccyzus americanus</i> )	ESA C	Large blocks of dense riparian vegetation (Cottonwood, willow, or tamarisk galleries) below 6,500 feet.	Very low. No suitable habitat. No dense riparian vegetation

**Table 5. Special Status Species List for Project Area (continued).**

Species Name	Status <sup>1</sup>	Habitat Requirements/Range	Possibility of Occurrence in the Project Area
Santa Cruz Beehive Cactus ( <i>Coryphantha recurvata</i> )	USFS S HS	Alluvial soils of valleys and foothills in desert grassland and oak woodland from 3,500 and 5,500 feet.	Medium. Suitable habitat within the species range occurs within the project limits.
Yellow-nosed Cotton Rat ( <i>Sigmodon ochrognathus</i> )	ESA SC	Grassy, dry, rocky slopes often up to 40% in Madrean Evergreen Woodland and Semi-desert Grassland with grasses, beargrass, agave, or yuccas, and montane meadows within ponderosa pine and Douglas fir forests from 3,000 to 8,500 feet.	Medium. Suitable habitat within the species range occurs within the project limits.
Various plant species, including, mesquite ( <i>Prosopis</i> spp.), sotol ( <i>Dasyllirion wheeleri</i> ), Palmer agave ( <i>Agave palmeri</i> ), Mammillaria cactus ( <i>Mammillaria heyderi</i> ), prickly pear ( <i>Opuntia</i> spp.), beehive cactus ( <i>Coryphantha vivipara</i> ), and barrel cactus ( <i>Ferocactus</i> )	APNPL	Various	Present. All of these plant species found in the project limits are afforded some protection under the Arizona Protected Native Plant Law.
Various bird species	MBTA	Various	Present. Most bird species occurring in the project limits are protected under the Migratory Bird Treaty Act.

<sup>1</sup> Status Definitions: ESA=Endangered Species Act, LE=Listed Endangered, LT=Listed Threatened, C=Candidate (*Source:* US Fish and Wildlife Service list of threatened, endangered, proposed, candidate, and conservation agreement species for Santa Cruz County, AZ. List Date: May 17, 2006 [<http://www.fws.gov/arizonaes/>]). USFS S=US Forest Service Sensitive Species. HS=Arizona Native Plant Law Highly Safeguarded Species. ESA SC=Endangered Species Act Species of Concern (Does not receive protection under the Endangered Species Act). APNPL=Arizona Protected Native Plant Law. MBTA=Migratory Bird Treaty Act.

#### 4.5.4 Proposed Action

Table 6 includes existing conditions and estimates of ground disturbance based on Alternative 3 plans (Figure 12).

<b>Table 6. Existing Ground Conditions and Estimated Ground Disturbance.</b>	
<b>Description</b>	<b>Approximate Area (Acres)*</b>
Project area	108.4
Developed ground within project limits (existing structures, pavement, etc.)	33.4
Undeveloped ground within project limits	75.0
Undeveloped ground permanently lost to new facilities (structures, pavement, etc.)	19.9
Undeveloped ground temporarily disturbed during construction (maximum)	55.1
<b>Total estimated ground disturbance to currently undeveloped ground surfaces</b>	<b>75.0</b>
*Estimated from "Alternative 3" in the April 2007 Program Development Study for Mariposa US Port of Entry, Nogales, Arizona (GSA 2007).	



**Figure 12. Estimated Ground Disturbance.**

#### **4.5.4.1 Vegetation**

The project could result in clearing and grubbing a maximum of 75 acres of vegetation. However, removal of vegetation would be minimized to the extent practicable.

#### **4.5.4.2 Wildlife**

Clearing and grading are likely to result in some displacement of small reptiles, mammals, and birds, and could injure or kill small reptiles and mammals if present during these activities. Species likely to be displaced, injured, or killed, such as pocket mice, spiny lizards, and jays are

common and widely distributed, and as a result, construction of this project would not appreciably impact the size or future viability of their populations. Because the project is non-linear, future facilities expansion is unlikely to alter existing wildlife movement patterns or result in substantial fragmentation of habitat.

#### **4.5.4.3      *Special Status Species***

Pursuant to Section 7 of the Endangered Species Act (ESA), GSA, as the lead federal agency, determined that the Proposed Action would not affect any proposed or designated critical habitat, though the project limits do contain suitable habitat for two species listed as endangered under the ESA—the lesser long-nosed bat (LLNB) and the Pima pineapple cactus. While no roost sites are present in the project area for LLNB, foraging habitat is present in the form of flowering agaves, which the LLNB feeds upon. Approximately 20 of these agave would be removed in the course of the POE facilities expansion. While this action does constitute a reduction in food supply for the LLNB, the decrease is so small in relation to the remaining available foraging habitat in the greater project vicinity that the bat is not likely to be adversely affected. Therefore, the Proposed Action may affect, but is not likely to adversely affect the LLNB. Habitat for the Pima pineapple cactus is also present in the project limits; however, most of the land has been disturbed in the past and has slopes greater than 10 percent, where the cactus typically does not grow. In addition, no Pima pineapple cacti were found during the pedestrian survey of the project limits. Therefore, the Proposed Action would not affect the Pima pineapple cactus. In a letter dated February 20, 2007, GSA has requested concurrence with these determinations through informal consultation procedures with the USFWS pursuant to Section 7 of the ESA. The USFWS concurred with these determinations on March 16, 2007.

Suitable habitat for two additional federally-listed special-status species is present. The Yellow-nosed cotton rat is a USFWS Species of Concern, a status designation that does not receive protection under the ESA. Construction activities would result in ground disturbance to as much as 75 acres of currently undeveloped land in the project limits, and any Yellow-nosed cotton rats present during construction activities could be displaced, injured, or killed. However, the Yellow-nosed cotton rat is widely distributed over southeastern Arizona, and the project area is unlikely to support a substantial population. Therefore, the project may impact individual

Yellow-nosed cotton rats, but is unlikely to result in a loss of viability for the species as a whole. The Santa Cruz beehive cactus is listed as Highly Safeguarded under the Arizona Protected Native Plant Law (APNPL), and is a US Forest Service Species of Concern. Because the project does not occur on US Forest Service lands, the US Forest Service designation does not apply to the project limits. However, during pedestrian surveys of the project limits, no Santa Cruz beehive cacti were found. Therefore, the project would not impact the Santa Cruz beehive cactus.

Various other plants protected by APNPL also occur within the project limits, including mesquite, sotol, Palmer agave, Mammillaria, beehive cactus, prickly pear, and barrel cactus. Because construction activities would result in ground disturbance to as much as 75 acres of currently undeveloped land, impacts to protected native plants are likely.

Several bird species protected by the Migratory Bird Treaty Act (MBTA) were observed during the pedestrian survey of the project limits, and many more are likely to utilize the habitat within the project limits at different times throughout the year. While no bird nests or signs of nesting activity were observed during the survey, suitable nesting habitat for some species protected by MBTA is present. If actively nesting birds are disturbed by construction activities, the project could result in “take” of migratory birds.

#### **4.5.5 No Action**

##### **4.5.5.1 *Vegetation***

The No Action Alternative would not have any impact on vegetation because it would not involve any ground-disturbing activities beyond those that have already occurred.

##### **4.5.5.2 *Wildlife***

The No Action Alternative would not have any impact on wildlife because it would not involve any ground-disturbing activities beyond those that have already occurred.

##### **4.5.5.3 *Special Status Species***

The No Action Alternative would not have any impact on Special Status Species because it would not involve any ground-disturbing activities beyond those that have already occurred.



#### **4.6 Cultural Resources**

According to the archaeological record, southern Arizona is one of the longest inhabited regions in Arizona. The Prehistoric occupation is divided into three periods: Paleoindian, Archaic, and Ceramic. The Paleoindian period (ca. 12,000–8000 B.C.) was characterized by small bands of nomadic hunter-gatherers pursuing large game such as mammoth, bison, and horse. In southern Arizona, this tradition manifests itself as large projectile points (Clovis points) and “kill sites.” A substantial number of Paleoindian sites are found within the region, many occurring 45–75 miles from the POE, particularly along the San Pedro River.

The Archaic period (ca. 8000 B.C.–A.D. 200) was born from a change in subsistence strategy. The nomadic groups began hunting smaller game, such as deer and rabbit, and began to rely more heavily on wild plant foods. This change is represented by small, stemmed and notched, projectile points and an increased number of ground stone artifacts. Throughout the progression of the Archaic period, the dependence on plant food gradually increased.

With the dawn of agriculture came the Ceramic period (ca. A.D. 200–1500). In southern Arizona, two cultures, the Hohokam and the Trincheras, existed contemporarily. The Hohokam were sedentary agriculturalists best known for their extensive canal systems, pottery, and architecture. The Hohokam sequence is divided into four periods: Pioneer, Colonial, Sedentary, and Classic. During the Pioneer period (ca. A.D. 200–750), the Hohokam lived in pithouses in small agricultural villages or hamlets in central and southern Arizona. Through time, the villages grew and architecture improved. It was during this Colonial period (ca. A.D. 750–900) that ceremonial ballcourts first appeared. During the Sedentary period (ca. A.D. 900–1150), the population increased, canals systems grew and became more complex, and platform mounds appeared. With the Classic period (A.D. 1150–1500) came a change in community structure and design. Compound walls were constructed around aboveground residential structures, and the ballcourt system was abandoned. Along with a decline in population, outside trade decreased. About A.D. 1450, the Hohokam culture collapsed.

Existing contemporarily to the Hohokam in northern Mexico and extreme southern Arizona was the Trincheras culture. Unfortunately, little is known about this culture. It is known that the

Trincheras occupying the lowlands lived in pithouses similar to those of the Hohokam and lived on the terraced slopes of volcanic hillsides. The terraces likely served several purposes: platforms for small structures, agricultural features for small gardens, and defensive structures. Sites, especially those of the late Prehistoric period, along the modern international border are characterized by elements of both Hohokam and Trincheras traditions.

The Historic period can be divided into three parts: Spanish, Mexican, and American. The Spanish period (A.D. 1539–1821) began when Fray Marcos de Niza passed through southern Arizona on his way to New Mexico and the fabled Seven Cities of Cibola. In 1540, Coronado likely passed through southeastern Arizona, although the exact route is still under debate. It was not until the 1690s that the Spanish began to systematically explore southern Arizona.

When the Spanish first entered southern Arizona, they encountered two groups: the Sobaipuri living along the San Pedro River and the Pima living along the Santa Cruz and Gila rivers. The Spanish military and clergy quickly began establishing a presence in the new territory. In 1687, Father Kino began establishing missions in northern Sonora and southern Arizona. By using presidios and missions to reorganize populations, the Spanish strengthened their hold on the indigenous populations. At the same time, the indigenous people were introduced to new crops and livestock and were afforded protection from the Apache. Two missions, Guevavi and Tumacacori, were established in 1691 close to present-day Nogales. The Spanish clergy continued to convert indigenous populations to Christianity and exploit their labor for mining, agriculture, and ranching in the area. This led to the Pima Revolt of 1751, which was eventually suppressed.

The Mexican War of Independence ended with the establishment of a republic in 1821. The Mexican period (A.D. 1821–1854) was established and Spanish soldiers abandoned the presidios and the number of Apache raids increased. In 1827, all foreign missionaries were expunged from Mexico, and most of the missions were abandoned. The Apache continued to control the area, forcing people into concentrated central communities like Tucson and Nogales and isolating southern Arizona population, which began aligning itself with the expanding interests of the US.

Despite Mexico's retention of southern Arizona after the Mexican-American War (1845–1848), the US acquired the region in the 1854 Gadsden Purchase.

Because of the Gadsden Purchase, southern Arizona was incorporated into the Territory of New Mexico and the American period (1854–present) began. The US viewed the area as key in the establishment of a transcontinental railroad, linking California with the rest of the country. In 1861, with the onset of the Civil War, the military essentially vacated the area. Apache raids dramatically increased during this time. Many of the ranches and mining claims were abandoned as people sought safety in Tucson and Mexico. The fortified ranch of Pete Kitchen, located just north of Nogales, was the only civilian establishment to remain occupied during this time. In 1863, Arizona was established as a Territory. At the close of the Civil War, US forces returned to the region and began a new campaign against the Apache. With the introduction of the railroad in the 1880s, the population of Arizona rapidly grew and included Mormon, Mexican, African-American, and Asian settlers as well as European immigrants. Gradually, the Apache threat diminished and finally ended in 1886, when Geronimo surrendered to General Nelson Miles. Following the conclusion of the Apache Wars, many of the military posts in Arizona were closed.

However, in 1910, a new threat emerged as the result of a Mexican rebellion. As a response to this threat, soldiers were garrisoned in communities along the border, especially around Nogales. In 1912, Arizona was granted statehood. On March 9, 1916, Pancho Villa and others raided Columbus, New Mexico. This provoked an immediate response from the US. With the onset of World War I, many of the troops were recalled and sent to Europe and Villa was never captured. No further attacks were made against the US.

The cultural resources study area encompassed 112 acres, which included acreage, owned by the GSA, ADOT, and private landowners. The GSA and ADOT properties were previously surveyed (Breen, 2004; Schaafsma, 1999; Stone and Lonardo, 2006); no historic properties were discovered. Survey of the surrounding privately owned land, into which the facility may need to expand, also did not find any historic properties (Gordon, 2007).

#### **4.6.1 Proposed Action**

The Proposed Action would have no impact on historic properties.

#### **4.6.2 No Action**

The No Action Alternative would have no impact on historic properties.

#### **4.7 Air Quality Analysis**

The Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS), for specific pollutants determined to be of concern with respect to the health and welfare of the general public. The EPA defines ambient air quality in 40 Code of Federal Regulations (CFR) 50 as “that portion of the atmosphere, external to buildings, to which the general public has access.” Ambient air quality standards are intended to protect public health and welfare and are classified as either “primary” or “secondary” standards. Primary standards define levels of air quality necessary to protect the public health. National secondary ambient air quality standards define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. The major pollutants of concern, or criteria pollutants, are carbon monoxide, sulfur dioxide, nitrogen dioxide, ozone, suspended particulate matter less than 10 microns, and lead. The NAAQS represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect the public health and welfare. Short-term standards (1-, 8-, and 24-hour averaging periods) are established for pollutants contributing to acute health effects, while long-term standards (annual averages) are established for pollutants contributing to long-term health effects. The NAAQS are included in Table 7. The State of Arizona has adopted the NAAQS. Areas that do not meet these standards are called non-attainment areas; areas that meet both primary and secondary standards are known as attainment areas. The Clean Air Act (CAA) Amendments of 1990 established new deadlines for the achievement of NAAQS, depending on the severity of non-attainment.

The EPA requires each state to develop a State Implementation Plan (SIP) that sets forth how the CAA provisions would be implemented within that state to obtain the NAAQS. The SIP is the primary means for the implementation, maintenance, and enforcement of the measures needed to

attain and maintain compliance with the NAAQS within each state. To provide consistency in different state programs and ensure that a state program complies with the requirements of the CAA and EPA, approval of the SIP must be made by the EPA. The purpose of the SIP is two-fold. First it must provide a strategy that would result in the attainment and maintenance of the NAAQS. Second, it must demonstrate that progress is being made in attaining the standards in each nonattainment area.

<b>Table 7. National Ambient Air Quality Standards.</b>		
<b>Pollutant</b>	<b>Standard Value*</b>	<b>Standard Type</b>
<b>Carbon Monoxide (CO)</b>		
8-hour average	9ppm (10mg/m <sup>3</sup> )	P
1-hour average	35ppm (40mg/m <sup>3</sup> )	P
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>		
Annual arithmetic mean	0.053ppm (100µ/m <sup>3</sup> )	P and S
<b>Ozone (O<sub>3</sub>)</b>		
1-hour average	0.12ppm (235µ/m <sup>3</sup> )	P and S
8-hour average	0.08ppm (157µ/m <sup>3</sup> )	P and S
<b>Lead (Pb)</b>		
Quarterly average	1.5µg/m <sup>3</sup>	P and S
<b>Particulate&lt;10 micrometers (PM-10)</b>		
Annual arithmetic mean	50µg/m <sup>3</sup>	P and S
24-hour average	150µg/m <sup>3</sup>	P and S
<b>Particulate&lt;2.5 micrometers (PM-2.5)</b>		
Annual arithmetic mean	15µg/m <sup>3</sup>	P and S
24-hour Average	65µg/m <sup>3</sup>	P and S
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>		
Annual arithmetic mean	0.03ppm (80µg/m <sup>3</sup> )	P
24-hour average	0.14ppm (365µg/m <sup>3</sup> )	P
3-hour average	0.50ppm (1300µg/m <sup>3</sup> )	S
Source: USEPA 2001. Legend: P=Primary; ppm=parts per million; µg/m <sup>3</sup> =micrograms per cubic meter; S=Secondary; mg/m <sup>3</sup> =milligrams per cubic meter. *Parenthetical value is an approximately equivalent concentration.		

Arizona is located in the EPA's Region 9. The Arizona Department of Environmental Quality (ADEQ) is the state agency responsible for controlling present and future sources of air pollution. Nogales is currently in violation of the NAAQS for Particulate Matter (PM). The emission sources have been identified as unpaved roads, cleared areas, and paved roads. The Nogales PM<sub>10</sub> nonattainment area SIP was submitted to the EPA on June 17, 1993 and demonstrates attainment "but for emissions emanating from outside the United States" (see Section 179B of the Clean Air Act). The plan was determined complete by the EPA on November 30, 1993; however, EPA has taken no further action on the plan.

According to the Federal Highway Administration (FHWA), truck and rail transport consume about 35 billion gallons of diesel fuel each year, which produces CO<sub>2</sub>, nitrogen dioxide (NO<sub>2</sub>), and PM. Of the nation's total transportation-related emissions, ground freight contributes 40 percent of NO<sub>2</sub> and 30 percent of PM. Truck idling consumes almost 1 billion gallons of diesel fuel annually and emits an estimated 11 million tons of CO<sub>2</sub>, 180,000 tons of NO<sub>2</sub>, and 5,000 tons of PM.

According to the *Plan of Action for Improving Air Quality in Ambos, Nogales* by the Arizona-Mexico Commission, vehicle emissions are the second most important source of PM contamination in the air of Nogales. The ports are the most important points of traffic congestion in Nogales.

#### **4.7.1 Proposed Action**

The project would improve the flow of traffic through the POE and reduce the length of time trucks and other vehicles are idle or in stop-and-go traffic. By reducing the length of queues and start-and-stop traffic, the amount of emissions from idle vehicles would be reduced.

In order to reduce dust emissions, disturbed areas that are a part of the POE property should be landscaped, stabilized with granite, or seeded with species native to the project area. Construction dust emissions would be controlled according to local regulations including Santa Cruz County Ordinance 2001-06 on Excavation and Grading.

The Proposed Action would not contribute to any further violations of NAAQS, and would not interfere with the implementation of the SIP for the Ambos, Nogales nonattainment area.

#### **4.7.2 No Action**

Without additional inspection lanes or other POE improvements, traffic back-ups would continue and could worsen in the future. These conditions would further contribute to the amount of emissions from vehicles idling and moving slowly in stop-and-go traffic.

#### **4.8 Noise Analysis**

Noise is considered as the unwanted component of sound. Sound level is measured in decibels (dB). The “A”-weighted sound level (dBA) response is similar to the typical human hearing capability. The steady state sound level (Leq) is the metric unit used to describe the calculated average sound energy level over a measurement period. As a point of comparison, ADOT uses the hourly Leq sound level descriptor to determine noise level impacts.

The noise level impact determination used in this analysis is based upon the FHWA Noise Abatement Criteria (NAC) and the ADOT Noise Abatement Policy (NAP). The FHWA NAC specifies the allowable noise level for different categories of land use and activities, as shown in Table 8. Homes, churches, schools, and parks are classified in Category B, and the allowable hourly Leq for this category is 67 dB.

<b>Table 8. FHWA Noise Abatement Criteria.</b>		
<b>Activity Category</b>	<b>Leq</b>	<b>Description of Activity Category</b>
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	---	Undeveloped lands.
E	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

Note: Hourly "A"-Weighted Sound Level in Decibels (dBA)

The ADOT NAP determines impact as the noise level approaches the FHWA NAC. ADOT defines “approach” as 3 dBA below the FHWA NAC noise level for each land-use category. Therefore, for Category B, ADOT would consider mitigation for receivers whose predicted project noise level is 64 dBA or higher.

The urban environment of Nogales, Mexico creates common sounds of a city environment and can be heard for more than 1 mile from the POE. According to a 1998 Environmental Assessment (JTF-6, 1998) for a project in the Nogales, Arizona area, the ambient noise level within the general area is typical of rural areas, with projected levels ranging from 35 to 55 dBA averaged over a 24-hour period.

In a 2005 Environmental Assessment (US Department of Homeland Security, 2005) the distance to the 64-dBA contour from the POE traffic activities during maximum peak hour volumes was estimated to be approximately 105 feet from the center of the roadway.



#### **4.8.1 Proposed Action**

The new routing of traffic around the perimeter of the facility would move truck traffic and associated traffic noise closer to existing receptors, such as the hospital and potential future development. The new perimeter of the POE facility, however, would still be approximately 1,000 feet from the hospital and, therefore, would not substantially increase noise levels at this receiver.

Construction of the improvements would generate noise; however, this is expected to be short term and limited to the months during active construction. Construction noise is not considered a substantial impact due to the limited period of noise generation during each day combined with the limited period of the construction activity overall. The noise from the construction activity would not create substantial or long-term effects.

#### **4.8.2 No Action**

The No Action Alternative would not change the existing sources of noise within the POE.

### **4.9 Visual Resources**

The visual resources consist of the natural and man-made landscape features that give a particular environment its visual characteristics. The POE facilities and the deep Ephraim Canyon dominate the current visual characteristics of the project area. Background vistas consist of views of the surrounding hillsides and distant mountains. These visually appealing characteristics of outlying areas of Nogales are what make the city aesthetically attractive. Since most of the project area lies outside the residential areas of Nogales, the aesthetic value lie in undeveloped landforms and native vegetation.

#### **4.9.1 Proposed Action**

The visual impact of the project would occur primarily with the above-ground construction of structures such as new buildings and inspection stations. Expansion of the POE facilities and the necessary slope stabilization into Ephraim Canyon would require fill slopes that would appear

disturbed unless seeded or vegetation establishes itself. Erosion-control measures would help stabilize the slopes until new vegetation becomes established. Therefore, no substantial impacts to visual resources would occur.

#### **4.9.2 No Action**

The No Action Alternative would have no impact on visual resources.

### **4.10 Water Resources**

#### **4.10.1 Clean Water Act Section 404/401**

The POE is located on a small plateau surrounded on three sides by ephemeral dry washes that are the only surface water features within and adjacent to the POE. The drainages are dry except during times of heavy rainfall and eventually flow into an unnamed drainage in Ephraim Canyon. This wash is a tributary to Nogales Wash, which eventually flows into the Santa Cruz River. The river flows south into Mexico, and then turns northward, reentering the US just east of Nogales. The river continues to flow north, past Tucson, to the Santa Cruz Flats, where it joins the Gila River. The Gila River enters the Colorado River just north of Yuma, Arizona. A Jurisdictional Delineation of the project area was completed in February 2007. Sixteen unnamed drainages flow through the project area. Seven of the drainages were identified as being potential jurisdictional waters of the US (Waters) in a field survey completed by AZTEC.

##### ***4.10.1.1 Proposed Action***

Improvements that would impact Waters include structural earthen fill, access roads, parking lots, drainage culverts, and commercial primary inspection lanes. The Proposed Action would involve approximately 0.38-acre of permanent disturbance to Waters. It is anticipated that the proposed improvements would qualify for the use of a US Army Corps of Engineers (Corps) Clean Water Act Nationwide Permit Number 39 for Residential, Commercial, and Institutional Developments. The conditions of this permit require a Preconstruction Notification (PCN) be submitted to the Corps District Engineer if greater than 0.10 acre, or greater than 300 linear feet of a perennial stream, of Waters are permanently impacted. Two of the drainages identified as Waters would incur impact that would result in a loss greater than 0.10 acre; therefore, a PCN

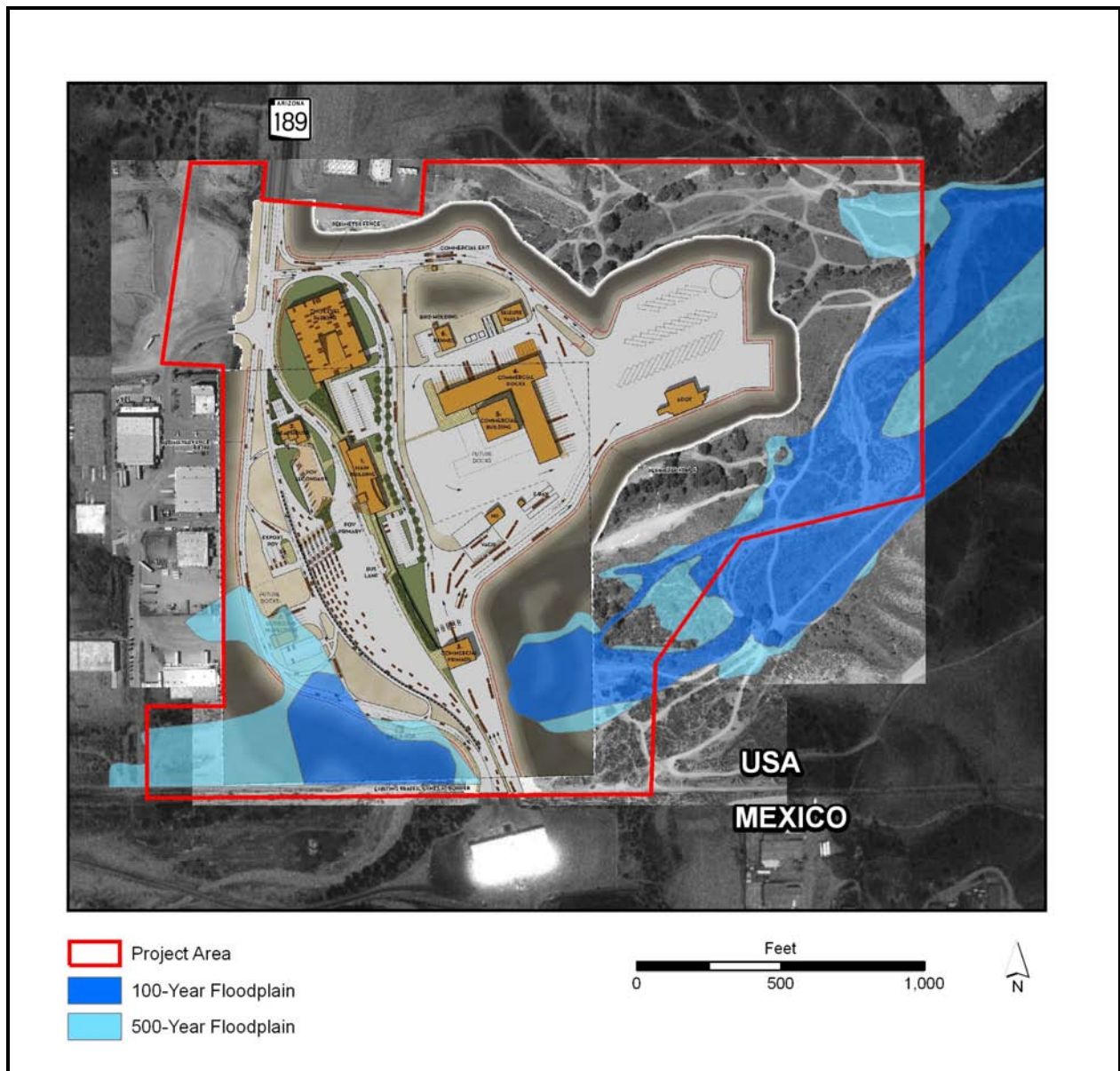
would be submitted to the Corps. Permit authorization from the Corps would be received prior to any work in these Waters.

#### ***4.10.1.2 No Action***

The No Action Alternative would have no impact on Waters.

#### **4.10.2 Floodplains**

Portions of the project area are located within the current Federal Emergency Management Agency (FEMA) designated 100-year floodplain and the 500-year floodplain. The 100-year floodplain is an area that would be inundated by the flood event having a 1 percent chance of being equaled or exceeded in any given year. The 1 percent annual chance flood is also referred to as the "base flood" (Figure 13).



**Figure 13. FEMA-Designated Floodplain Map.**

The Santa Cruz County Flood Control District in coordination with FEMA has embarked on a new Flood Insurance Study that is remapping the floodplain for this watershed. This project is to be completed by September 2007. Because of this study, the FEMA floodplain maps for the area may be revised.

The Santa Cruz County Floodplain and Erosion Hazard Management Ordinance #2001-03, Section 5.4, requires all commercial/industrial projects to retain/detain water such that the level

of runoff from the site in its developed condition does not exceed the level of runoff in the pre-developed condition. In addition, the watershed that the POE is within is defined as a Critical Basin, which means that flooding is already a problem and developments are required to retain at least an extra 10 percent of the discharge created by the site.

Executive Order 11988 directs the GSA to “take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains.”

The Water Resources Council document, *Floodplain Management Guidelines for Implementing Executive Order 11988*, defines a critical action as any activity for which even a slight chance of flooding would be too great a risk (and, therefore, should be located outside the 500-year floodplain). Examples include storage of irreplaceable records; storage of volatile, toxic, or water-reactive materials; construction or operation of hospitals and schools; and construction or operation of utilities and emergency services that would be inoperative if flooded.

#### **4.10.2.1 Proposed Action**

Portions of the improvements to the POE under the Proposed Action would occur within the existing FEMA-designated 100-year floodplain and FEMA-designated 500-year floodplain. These improvements would be constructed on fill slopes that would elevate them above the base flood elevation. A Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) would need to be submitted and approved by FEMA and the local floodplain administrator. The improvements that would be constructed in the current base flood areas would include new fill slopes and slope stabilization, roadways, and drainage culverts. Improvements that would be constructed in the 500-year floodplain include a parking lot or structure, and the export inspection area. The uses of these facilities are not considered critical. Because of the topographical constraints of the site and limitations of available expansion space, any improvements to the POE that would satisfy the need would require development in the floodplain. The location of the facility itself was agreed to in diplomatic notes exchanged between the United States and Mexico.

A CLOMR is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations. The CLOMR indicates whether the project, if built as proposed, would be recognized by FEMA.

Once a project has been completed, GSA would coordinate with Santa Cruz County to request a revision to the Flood Insurance Rate Map (FIRM) to reflect the project. "As-built" certification and other data must be submitted to support the revision request. A LOMR is FEMA's modification to an effective FIRM, or Flood Boundary and Floodway Map (FBFM), or both. The LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations, or the Special Flood Hazard Area. The LOMR officially revises the FIRM or FBFM, and sometimes the flood insurance study report, and when appropriate, includes a description of the modifications.

All requests for changes to effective maps, other than those initiated by FEMA, must be made in writing by the Chief Executive Officer of the community or an official designated by the Chief Executive Officer. Because a LOMR officially revises the effective National Flood Insurance Program map, it is a public record that the community must maintain. Any LOMR should be noted on the community's master flood map and filed by panel number in an accessible location.

#### **4.10.2.2 No Action**

There are currently no structures or developed features within either the 100-year or 500-year floodplain. The No Action Alternative would have no impact on floodplains.

#### **4.11 Sole Source Aquifer**

The project area occurs within the limits of the Upper Santa Cruz and Avra Basin Sole Source Aquifer designated area. Coordination with the EPA included sending a scoping letter. Per a telephone conversation on November 1, 2006 with the EPA Sole Source Aquifer contact for Arizona, the EPA's only concern was whether or not retention or detention basins were to be used in the project's design that would allow water to percolate into the aquifer below. Further

analysis and coordination may be needed once design plans are completed and if on-site retention basins are to be considered.

#### **4.11.1 Proposed Action**

Because the Santa Cruz County Floodplain and Erosion Hazard Management Ordinance require on-site retention of runoff, retention/detention basins would be included in the improvements to the POE. Further coordination with the EPA would occur during final design to ensure that the project would not impact the Upper Santa Cruz and Avra Basin Sole Source Aquifer; however, no substantial impacts are anticipated.

#### **4.11.2 No Action**

The No Action Alternative would not alter the existing drainage patterns or construct any retention or detention basins; therefore, the No Action Alternative would have no impact on the Upper Santa Cruz and Avra Basin Sole Source Aquifer.

### **4.12 Hazardous Materials**

#### **4.12.1 Database Records Review**

State and federal databases were searched to determine the presence, or former presence on any hazardous waste generating activities on or adjacent to the property. Historical records were also reviewed to determine if there were previous activities that may have released hazardous materials on or near the subject property. The search provided results on any properties that have had a release of a hazardous substance, as well as any properties with underground storage tanks (USTs) or leaking USTs (LUSTs). No hazardous substances, USTs or LUSTs were shown on the property and no releases have been reported on or near the property. Furthermore, site visits gave no indication to suspect a release had occurred that would negatively impact the property.

However, GSA records maintained by the Safety and Environmental Branch indicate that two USTs, a 1,000 gallon diesel tank and a 1,500 diesel tank, were located on the property. The tanks were located in the vicinity of the Border Station Office building and the Commercial Building and Docks, respectively. Based on information provided by GSA, the steel tanks were

installed in 1974/1975 as backups for the emergency generators and to provide heating for the two buildings. The tanks were abandoned in 1992 and removed in 1994.

There was some soil contamination associated with the 1,500 gallon tank that was due to flooding on an unknown date. The contaminated soil was removed and four monitoring wells were installed. The wells are apparently covered by gravel or asphalt and were not observed during the facility tour. GSA has no sampling or testing data available. Although both tanks have been removed, GSA has not received letters of No Further Action from the ADEQ. To facilitate the process for closeout of the former UST sites, GSA is currently working with ADEQ to have both tanks accepted into the state's voluntary remediation program.

In addition to the two former UST's located on the facility, there are two facilities within ½-mile of the property that are tracked by state and federal agencies: Optimize Manufacturing, Inc., a Resource Conservation and Recovery Act permitted small quantity generator, and the Bordermart Shell, a service station north of the Mariposa POE. Neither of these properties has had a reported release of a hazardous material, and neither has an open violation of its waste handling/storage permits. However, since they are both topographically upgradient of the Mariposa POE, a future release at either facility could negatively impact the subject property.

No other waste generators or properties regulated by federal, state and local agencies were found in the immediate vicinity of the property.

#### **4.12.2 Asbestos Containing Materials**

Pursuant to the CAA of 1970, EPA established the Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP). It is intended to minimize the release of asbestos fibers during activities involving the handling of asbestos. It specifies work practices to be followed during renovation, demolition, and other abatement activities when friable asbestos is involved. The ADEQ Asbestos NESHAP coordinator has jurisdiction in Santa Cruz County. Prior to beginning renovation or demolition activities of a facility, a certified Asbestos Hazard Emergency Response Act building inspector must thoroughly inspect the facility or part of the



facility where the renovation or demolition operation would occur for the presence of asbestos, including friable and non-friable asbestos-containing materials.

For all demolitions (even when no asbestos is present) and renovations activities involving threshold amounts of regulated asbestos-containing material (RACM), provide the ADEQ with a NESHAP notification at least 10 working days prior to the demolition or renovation activity.

#### **4.12.2.1 Proposed Action**

The Proposed Action would include a Hazardous Material drive-in pit. This pit would enable leaking vehicles or containers to be placed in the pit and contain any runoff. Appropriate response teams could then remove the material.

Because the Proposed Action would involve demolition of existing structures, an Asbestos Hazard Emergency Response Act-certified inspector would inspect all structures to be demolished. If RACM are present in the structures, a work plan would be developed to remove, transport, and dispose of these materials. At least 10 days prior to demolition of any structure the GSA would provide the ADEQ NESHAP Coordinator with a NESHAP notification form for each structure to be demolished.

#### **4.12.2.2 No Action**

An existing Hazardous Material drive-in pit would continue to provide a location to contain leaking vehicles or containers. Because it is unknown if RACM are present in the existing structures, under the No Action Alternative the presence of RACM may remain a potential hazard.

### **4.13 Secondary Effects**

Secondary effects are broadly defined by the CEQ as those impacts that are caused by an action and occur later in time, or are farther removed in distance but are still reasonably foreseeable after the action has been completed (40 CFR 1508.8). They comprise a wide variety of secondary effects, such as changes in land use, economic vitality, and population density. Secondary impact issues relevant to this project are discussed below.

#### **4.13.1 Transportation Impacts**

Traffic volumes on SR 189 and other local roads are anticipated to increase as the efficiency and capacity of the POE improves. Improvements to other local infrastructure may be required in the future. These improvements may include signalization at the Target Range Road and Industrial Park Drive intersections with SR 189. Turn lanes at existing signalized intersections may need to be expanded to handle the increased traffic volumes. An increase in length of turn lanes or additional capacity improvements at the SR 189/I-19 traffic interchange may need to be provided to handle the additional traffic.

Due to the growing truck traffic through the POE and construction of new distribution centers in the city of Nogales, larger-sized commercial vehicles may be traveling on the streets of Nogales, SR 189, and I-19. It is likely that the turning radius at the major intersections along SR 189 and at SR 189/I-19 traffic interchange would need to be reevaluated.

Increased traffic on SR 189 could cause local traffic to look for alternative roads to use in their daily commute. If this occurs, additional travel lanes on existing roadways would be required or in some cases new roadways could be required to provide an efficient and safe transportation network in Nogales. Additionally, increased traffic volumes on SR 189 and other area streets may increase noise levels to adjacent parcels.

#### **4.13.2 Economic Vitality and Land Use**

It is likely that the expanded POE and increased shipping traffic would result in the influx into Nogales of additional businesses related to transportation, such as customs brokerages and truck stops. These developments would most likely occur adjacent to SR 189 or along the I-19 corridor where the City of Nogales has zoned these areas for commercial or light industrial uses.

An increase in produce production in Sonora, Mexico may also occur if the perception that the improved POE could handle additional produce traffic. The potential for producing more leafy vegetables in Sonora exists, at least in theory, and this would involve a different growing season from Yuma, thereby complementing that warmer-climate production area. Some

production/shipping of produce might increase regardless of other possibilities, because of recent actions by California allowing avocados from Mexico to be imported into that state.

#### **4.14 Cumulative Effects**

Cumulative effects are the combined impacts on the environment that result from the incremental effect of the Proposed Action when added to past, present, and reasonably foreseeable future actions within the immediate vicinity of the project area (40 CFR 1508.7). These impacts are less defined than secondary effects. The cumulative effects of an action may be undetectable when viewed in the context of individual direct or indirect actions but could add to a measurable environmental change. For this assessment, only those at risk critical resources would be evaluated. These include past actions that have occurred since 1990 and foreseeable future actions based on the best available information from the associated planning agencies.

##### **4.14.1 Transportation Facility Development**

The Proposed Action design incorporates the need to meet capacity until the year 2025 and be expandable for growth beyond that projected timeframe. The number of vehicles that are inspected is determined by the procedures and policies of the various inspecting agencies that utilize the POE. Future changes in the inspection requirements of these agencies could increase or decrease the number of vehicles that require primary and/or secondary inspection. The CBP is moving towards implementing programs that pre-screen vehicles and improve the efficiency of processing vehicles. In the future if additional processing capacity is needed at the POE, the facilities can be incrementally expanded.

##### **4.14.2 Natural Environment**

Cumulative effects to ESA protected species are those effects of future non-federal (state, tribal, local, or private) actions that are reasonably certain to occur in the project area. Future federal actions unrelated to the Proposed Action are not considered cumulative because they require separate consultation pursuant to Section 7 of the ESA (USFWS, 1998). No known future federal actions related to the proposed project are currently planned in the project area. Lands adjacent to the project area are private and state lands that likely contain suitable foraging habitat for the LLNB and suitable habitat for the Pima pineapple cactus. These lands are located within the city

boundaries of Nogales and, due to expected growth in the Nogales area, development of adjacent lands is reasonably certain to occur in the future, which would likely degrade or eliminate potential LLNB foraging habitat. However, some actions on private, city, and state lands may require federal permits (such as a Clean Water Act permit), and thus would be subject to Section 7 consultation. When no federal lands, funds, or permits are involved, the Section 10(a)(1)(B) permit process can be used to ensure compliance with the ESA.

Future development of adjacent lands could lead to the removal and/or destruction of native plants. As vacant parcels are developed, removal or destruction of protected native plants would be subject to the APNPL.

#### **4.14.3 Human Environment**

Official population growth projections in Santa Cruz County, shown on Table 9, follow a pattern similar to that forecast for the state of Arizona as a whole; that is, the population increases however the rate of growth decreases each year from the starting year. It is reasonable to assume that these projections, for both the state and Santa Cruz County, are conservative at least for the period after 2015. Growth in the interim is subject to a number of factors, but perhaps most importantly to the capacity of the area to absorb population and employment activities at a rate any faster than what is projected.

**Table 9. Population Projections.**

<b>Year</b>	<b>Projected Santa Cruz County Population</b>	<b>Percent Change / Year</b>
2005	44,055	
2006	45,303	2.83%
2007	46,545	2.74%
2008	47,777	2.65%
2009	48,998	2.56%
2010	50,210	2.47%
2011	51,418	2.41%
2012	52,607	2.31%
2013	53,800	2.27%
2014	54,973	2.18%
2015	56,144	2.13%
2016	57,291	2.04%
2017	58,412	1.96%
2018	59,514	1.89%
2019	60,595	1.82%
2020	61,658	1.75%
2021	62,699	1.69%
2022	63,726	1.64%
2023	64,728	1.57%
2024	65,691	1.49%
2025	66,627	1.42%

Source: "Arizona Population Projections 2006 – 2055." Arizona Department of Economic Security, Research Administration, Population Statistics Unit.

Although it is likely that the expanded POE and increased shipping traffic would result in the influx into Nogales of additional businesses related to transportation, the location of these businesses would be dependent on the location of the major transportation corridors identified in the CANAMEX. Future truck by-pass routes around Nogales could promote these businesses to locate along these new transportation corridors.

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## 5.0 Public Involvement/Project Coordination

### 5.1 Agency and Stakeholder Coordination

An agency scoping meeting for the project was held at the DeConcini Courthouse, 405 West Congress Street, in Tucson, Arizona on Tuesday, September 12, 2006.

Coordination letters requesting comments on the project were sent to the following public agencies and organizations:

<b>Table 10. Agency Scoping List.</b>	
<b>Agency</b>	<b>Position</b>
Arizona Department of Transportation	MVD- Nogales
	AZ-Mexico Liaison
	ADOT Traffic Design, Team 2 Manager
	ADOT Regional Traffic
	Tucson District Engineer
	Environmental Planning Group
Arizona Department of Environmental Quality	Border Environment Manager
Arizona Department of Public Safety	Lt. District 8
Arizona Division of Emergency Management	Deputy Director
Arizona Game and Fish Department	Project Evaluation Program Supervisor
	Regional Supervisor
Arizona Homeland Security	Southwest Border Specialist
Bordermart Gas Station	Facilities Manager
CANAMEX Corridor & Cyber Port	Executive Director
City of Nogales	City Manager
	Finance Director
	Mayor
	Parks & Recreation Director
	Public Works Director
	Fire Chief
	Chief of Police
County of Santa Cruz	Supervisor, District 1 Chairman
Federal Highway Administration	Area Engineer

<b>Table 10. Agency Scoping List (continued).</b>	
<b>Agency</b>	<b>Position</b>
Immigration & Customs Enforcement	Detention & Removal Deputy FO Director
Office of the Governor	Arizona-Mexico Commission Member
	Border Coordination Officer
Port Authority	Santa Cruz County Chamber of Commerce
Santa Cruz County	County Floodplain Administrator
	Community Development Director
	County Manager
	Deputy Public Works Director
	Public Works Director
	Superintendent of Schools
	Sheriff
Southeastern Arizona Governments Organization	Director
US Department of Homeland Security	Arizona Homeland Security Director
US Environmental Protection Agency	Hydrogeologist
USFWS Arizona Ecological Services Field Office	Assistant Field Supervisor for Southern Arizona

Responses to the scoping letters were received from the Santa Cruz County Flood Control District, the Greater Nogales Santa Cruz County Port Authority, and the USFWS (attached). Their responses are summarized below:

Santa Cruz County Flood Control District

- The POE straddles a watershed that is in a both federally and locally mapped floodplain.
- A Flood Insurance Study is currently underway to remap the floodplain. New mapping data will be available in September, 2007.
- The watershed is defined as a Critical Basin that requires developments to retain at least an extra 10 percent of the discharge created by the site.
- The Santa Cruz County Flood Control District requests to review plans and hydrology report.
- A rainfall and stream level gauge site is located on the west end (inlet) headwall of the culverts in Ephraim Canyon. Modifications to this equipment should be coordinated with the Santa Cruz County Flood Control District.



### Greater Nogales Santa Cruz County Port Authority

- Ensure the design provides adequate truck maneuverability within the compound.
- Ensure the environmental studies are large enough to encompass the final footprint of the project.
- Keep the POE operational during construction.
- Perform demolition and construction during off-peak periods.
- The Port Authority will assist in obtaining any Presidential permits.
- The Border Wizard report should reflect the seasonality of the port.
- The Border Wizard should take into account idle time for refrigerated trucks.
- Adequate dock space available for off-loading perishable cargo should be provided.
- The GSA should coordinate with ADOT to handle traffic congestion in the transportation facilities in the surrounding area.

### US Fish and Wildlife Service

- The USFWS recommends comprehensive surveys be performed for Pima pineapple cactus.
- Xeroriparian washes and large trees and shrubs should be avoided.
- Disturbed areas should be reseeded with native species.

## **5.2 Public Involvement**

The following adjacent businesses were sent scoping letters:

- American Family Insurance
- Amphenol Bco
- FedEx Trade Networks
- Formosa Chinese Restaurant
- Holy Cross Hospital
- Nationwide Vision
- Nogales Office Supplies
- Optimize Manufacturing, Inc.
- Ups Supply Chain Solutions

No responses to these letters were received.

A public hearing is scheduled to provide the public the opportunity to comment on the Environmental Assessment. A copy of the public hearing notice is included in Appendix 9.2.

## 6.0 Conclusion

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The potential environmental impacts of the proposed improvements were evaluated based on both the context of the effects on the project area and the intensity or severity of impacts as defined in CEQ's regulations. Table 11 summarizes the potential environmental impacts of the Proposed Action.

<b>Table 11. Results of Environmental Analysis.</b>	
<b>Environmental Consideration</b>	<b>Result of Alternative Evaluation</b>
Ownership, Jurisdiction, and Land Use	No substantial impact
Social and Economic Resources	Beneficial impact
Title VI/Environmental Justice	No substantial impact
Transportation	Beneficial impact
Biological Resources	No substantial impact
Cultural Resources	No impact
Air Quality Analysis	No substantial impact
Noise Analysis	No substantial impact
Visual Resources	No substantial impact
Water Resources	No substantial impact
Sole Source Aquifer	No substantial impact
Hazardous Materials	No substantial impact
Secondary Effects	No substantial impact
Cumulative Effects	No substantial impact

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## 9.0 Appendices

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