DRAFT

ENVIRONMENTAL ASSESSMENT

FOR CONSTRUCTION, OPERATION, AND MAINTENANCE OF TACTICAL INFRASTRUCTURE U.S. BORDER PATROL, EL PASO SECTOR, TEXAS EL PASO, YSLETA, FABENS AND FORT HANCOCK STATIONS AREAS OF OPERATION

U.S. Department of Homeland Security
U.S. Customs and Border Protection
U.S. Border Patrol

FEBRUARY 2008

ACRONYMS AND ABBREVIATIONS

AO	Area of Operations
BEA	Bureau of Economic Analysis
BMP	Best Management Practices
CBP	U.S. Customs and Border Protection
CEQ	Council on Environmental Quality
CERM	Center for Environmental Resource Management
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CRS	Congressional Research Service
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted decibel
DHS	Department of Homeland Security
DNL	Day-night level
DOI	U.S. Department of the Interior
EA	Environmental Assessment
ECSO	Engineering and Construction Support Office
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPCWID1	El Paso County Water Improvement District No. 1
EPE	El Paso Electric Company
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM	Farm to Market Road
FOB	Forward Operating Base
FONSI	Finding of No Significant Impact
FY	Fiscal Year
GIS	Geographic Information Systems
HCCRD1	Hudspeth County Conservation and Reclamation District No. 1
IA	Illegal alien
INS	Immigration and Naturalization Service
JTFN	Joint Task Force North
MARAMA	Mid-Atlantic Regional Air Management Association
MBTA	Migratory Bird Treaty Act
MD	Management Directive
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NOA	Notice of Availability

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DRAFT
FINDING OF NO SIGNIFICANT IMPACT
FOR CONSTRUCTION, OPERATION, AND MAINTENANCE
OF TACTICAL INFRASTRUCTURE
U.S. BORDER PATROL, EL PASO SECTOR, TEXAS
EL PASO, YSLETA, FABENS AND FORT HANCOCK STATIONS AREAS OF OPERATION

PROJECT HISTORY: United States (U.S.) Border Patrol (USBP) is a law enforcement entity of U.S. Customs and Border Protection (CBP), a component of U.S. Department of Homeland Security (DHS). USBP's priority mission is to prevent the entry of terrorists and terrorist weapons and to enforce the laws that protect the U.S. homeland by the detection, interdiction, and apprehension of those who attempt to illegally enter or smuggle any person or contraband across the sovereign borders of the U.S.

During recent years, illegal aliens (IAs) and illegal entry into the U.S. along the U.S.-Mexico border in southwest Texas has been a severe problem. USBP is addressing this threat, focusing on accomplishing its goal of effective control of the border and is working to implement the right combination of personnel, technology and infrastructure, and thus deter illegal entries through improved enforcement. Deterrence is achieved when USBP has the ability to create and convey the immediate, credible, and absolute certainty of detection and apprehension. As such, tactical infrastructure (TI) components are a critical element in the current enforcement strategy. TI is a term used by USBP to describe physical structures that facilitate their enforcement activities; these items typically include but are not limited to roads, bridges, fences, lights, gates, and barriers. The recognition of environmental preservation concerns and the increase of criminal cross-border activities, continue to pose a border enforcement challenge and compound the need for TI along the international border.

USBP El Paso Sector currently patrols the area of the U.S. Section, International Boundary and Water Commission (USIBWC) levee, the irrigation canals north of the levee, and the floodplain of the Rio Grande south and east of El Paso, Texas. There are currently no physical impediments in the way of barriers or fences to prevent cross border violators from illegally crossing the river and the canal into the U.S., except in the developed area of El Paso. The lack of lighting at night poses a safety risk for USBP agents, and hinders the ability of USBP agents to detect and intercept IAs and smugglers in this area. Access to the area between the canal/levee and the Rio Grande is limited by a lack of bridge access across the El Paso County Water Improvement District No. 1 (EPCWID1) and Hudspeth County Conservation and Reclamation District No. 1 (HCCRD1) canals.

CBP proposes to construct, maintain, and operate the following TI: permanent lights along 21 miles of the USIBWC levee, installation of a continuous primary pedestrian fence along 56.7 miles of the protected side of the USIBWC levee between the irrigation canals and the levee, from a point 0.9 mile west of Ascarate Park to a point 2.8 miles east of the Fort Hancock Port of Entry (POE), improvement of dirt roads in the local patrol area near the levee, and installation of eight bridges across the EPCWID1 and HCCRD1 canals.

In accordance with the National Environmental Policy Act (NEPA), an Environmental Assessment (EA) was prepared to address the environmental impacts of this TI construction, operation and maintenance. Due to the similarity and proximity of past

projects to the proposed project, applicable information from several EAs within and near the current project is incorporated by reference to the extent practicable. This EA is tiered from the "*Programmatic Environmental Assessment for Proposed Tactical Infrastructure, Office of Border Patrol, El Paso Sector, Texas Stations*", and Finding of No Significant Impact (FONSI) prepared by USBP in October 2006; and the "*Environmental Assessment and FONSI for Installation of Fencing, Lights, Cameras, Guardrails, and Sensors along the American Canal Extension, El Paso District, El Paso, Texas, June 4, 1999"*. In addition, references are also made to the "*Supplemental Programmatic Environmental Impact Statement, Immigration and Naturalization Service (INS) and Joint Task Force-6 Activities on the Southwest U.S./ Mexican Border U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, Texas, June 2001*".

PROJECT LOCATION: The project corridor extends 56.7 miles from a point 0.9 mile west of Ascarate Park in El Paso southeast to 2.8 miles east of the Fort Hancock Port of Entry (POE), in El Paso and Hudspeth counties, Texas. The TI would be installed primarily along the USIBWC levee and the EPCWID1 and HCCRD1 canals. The TI would be contained within the USBP El Paso, Ysleta, Fabens, and Fort Hancock Stations Areas of Operation (AO).

PURPOSE AND NEED: The purpose of the Proposed Action is to increase border security within USBP El Paso Sector through the construction, operation, and maintenance of TI in the form of fences, roads, and supporting technological and tactical assets. USBP El Paso Sector has identified areas along the border that experience high levels of illegal cross-border activity. This activity occurs in areas that are remote and not easily accessed by USBP agents, near POEs where concentrated populations might live on either side of the border, or have quick access to U.S. transportation routes, and in crowded metropolitan areas where IAs can quickly assimilate into the U.S. population.

The Proposed Action is needed to provide USBP agents with the tools necessary to strengthen their control of the U.S. borders between POEs in the USBP El Paso Sector. It is designed to help to deter illegal cross-border activities within the USBP El Paso Sector by improving enforcement abilities, thus preventing terrorists and terrorist weapons from entering the U.S., reducing the flow of illegal drugs, and enhancing response time, while providing a safer work environment for USBP agents.

ALTERNATIVES: Three Alternatives were analyzed in detail, the No Action Alternative, Proposed Action Alternative, and the Floating Foundation Fence Alternative. Other alternatives were initially evaluated, but were eliminated from further consideration because they either failed to meet USBP's mission and operation needs or the project's purpose and need, or they were not acceptable for construction by the owners of the land within the project area (USIBWC, EPCWID1 and HCCRD1) due to interference with their agencies mandates, or operation and maintenance requirements.

NO ACTION ALTERNATIVE: Under the No Action Alternative, lights, primary pedestrian fencing, access bridges and road improvements along the 55-mile corridor would not be installed. This alternative would not meet the purpose and need of this project, but is carried forward for analysis in accordance with Council on Environmental Quality (CEQ) regulations.

PROPOSED ACTION ALTERNATIVE: The Proposed Action Alternative would install approximately 56.7 miles of primary pedestrian fence along the north side of the USIBWC levee from a point 0.9 mile west of Ascarate Park in El Paso to a point located 2.8 miles east of the Fort Hancock POE. Existing chain link fence would be replaced with primary pedestrian fence along the eastern-most portion of the project corridor. An additional 21 miles of permanent lights would be installed from the Riverside Canal diversion to a point 1 mile east of the Fabens POE. Eight bridges across the canal on the U.S. side of the levee would be constructed within the project corridor, and approximately 2 miles of existing dirt road would be improved with an all-weather surface within the same area. Gates would be installed in the fence at each bridge crossing to provide access to the USIBWC levee and the Rio Grande floodplain. Temporary construction staging areas would occur both in the Rio Grande floodplain and at discrete locations north of the levee along the project corridor.

The Proposed Action Alternative has been determined to be the Preferred Alternative, and, throughout the remainder of this document, Preferred Alternative and Proposed Action Alternative are synonymous

FLOATING FOUNDATION FENCE ALTERNATIVE: This alternative would construct the fence using a floating foundation, in which the concrete fence foundation sections would be built off-site and placed on the top of the USIBWC levee with little ground disturbance other than grading. The fence would then be installed on the connected foundation sections. This alternative would meet the purpose and need of the project, but would have greater operational issues for both USIBWC and USBP compared to the Proposed Action Alternative. All other lights and bridge portions of the project would be the same as for the Proposed Action Alternative. The Floating Foundation Fence Alternative could be used interchangeably with the Proposed Action, as necessary, in any section of the project corridor.

ENVIRONMENTAL CONSEQUENCES: The Proposed Action Alternative would require typical construction activities associated with digging holes and installing light stanchions, transformers, and underground wiring, and installing fencing along the levee within the project area, all of which has been previously disturbed. The eight bridges would also be installed in previously disturbed areas, some of which are the sites of former bridges. The road improvements would remain within existing footprints, so no additional ground disturbances would be expected. Because all activities would take place in previously disturbed areas, and CBP, in implementing its decision, would employ all practical means to further minimize the potential adverse impacts on the local

environment, no significant impacts are expected to occur to biological resources, aesthetic resources, air quality, water resources, socioeconomics, floodplains and noise levels from the implementation of the Proposed Action Alternative. Concurrence from the Texas State Historic Preservation Officer (SHPO) will be attained for the Proposed Action Alternative, completing the Section 106 process.

MITIGATION MEASURES: USBP will be responsible for implementation of mitigation measures. These mitigation measures include:

1. Best Management Practices (BMPs) will be implemented as standard operating procedures during all construction activities. These BMPs will include proper handling, storage, and disposal of hazardous and regulated materials. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents will be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein. The refueling of machinery will be completed following accepted guidelines, and all vehicles will have drip pans during storage to contain minor spills and drips. Although it would be unlikely for a major spill to occur, any spill of 5 gallons or more will be contained immediately within an earthen dike, and the application of an absorbent (*e.g.*, granular, pillow, sock) will be used to absorb and contain the spill. Any spill of 5 gallons or more of a hazardous or regulated substance will be reported immediately to on-site environmental personnel who will notify appropriate Federal and state agencies. A Spill Prevention, Control and Countermeasure Plan will be in place prior to the start of construction, and all personnel will be briefed on the implementation and responsibilities of this plan.

2. Vehicular traffic associated with the construction activities and operational support activities will remain on established roads when traveling to and from the proposed project area. Erosion control measures will be implemented before, during, and after construction activities. Any excess soils not used during construction will be hauled from the site and disposed of properly.

3. Monitoring for possible buried cultural resources will be conducted during all excavation activities. Although no cultural resources are known within the project areas, should any evidence of cultural resources be observed during construction, work will stop in the immediate vicinity, the resource will be protected, and SHPO will be notified within 24 hours of the discovery. If, in consultation with SHPO, it is determined that the resource is significant, and cannot be avoided, a mitigation plan will be developed and implemented before construction is resumed. Light switches will be installed, as specified in a memorandum of agreement (MOA) with the Ysleta del Sur Pueblo Tribe to provide for undisturbed tribal ceremonies along the river. Access to the Rio Grande will be provided with gates in the fence at prescribed intervals.

4. Since construction activities cannot be scheduled to avoid the migratory bird nesting season (typically February 15 through August 31), surveys will be performed to identify active nests. If construction activities would result in the take of a migratory bird, then coordination with U.S. Fish and Wildlife Service and Texas Parks and Wildlife Department and applicable permits will be obtained prior to construction or clearing activities. Monitoring for the presence of burrowing owls in the sides of the levee will be conducted, and relocation of owls present will be done for any owls present outside of the nesting season to the extent practicable. Monitoring of open holes for the presence of Texas horned lizards and other animals will also be conducted.

5. Fence and bridge designs will be coordinated with USIBWC, EPCWID1 and HCCRD1 to insure that the integrity of the levee and the canals is not compromised by foundation construction.

FINDING: Based upon the results of the EA and the mitigation measures that would be implemented by CBP and USBP and incorporated as part of the Proposed Action Alternative, it has been concluded that the Proposed Action Alternative and the Floating Foundation Fence Alternative would not have a significant effect on the environment. Therefore, no further environmental impact analysis for the Proposed Action Alternative is warranted.

_____ _____

Victor M. Manjarrez, Jr. Date
Chief Patrol Agent
U.S. Border Patrol
El Paso Sector Headquarters

_____ _____

Robert F. Janson Date
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

COVER SHEET

ENVIRONMENTAL ASSESSMENT FOR CONSTRUCTION, OPERATION, AND MAINTENANCE OF TACTICAL INFRASTRUCTURE

U.S. BORDER PATROL, EL PASO SECTOR, TEXAS EL PASO, YSLETA, FABENS AND FORT HANCOCK STATIONS AREAS OF OPERATION

Responsible Agency: United States (U.S.) Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP).

Cooperating Agencies: U.S. Army Corps of Engineers (USACE) Albuquerque District; U.S. Section, International Boundary and Water Commission (USIBWC); U.S. Department of the Interior (DOI); and Joint Task Force North (JTF-N).

Affected Location: U.S.-Mexico international border along the Rio Grande in El Paso and Hudspeth counties, Texas.

Proposed Action: The Proposed Action includes the construction, operation and maintenance of tactical infrastructure (TI), to include a primary pedestrian fence, patrol roads and access roads, bridges and permanent lights along approximately 56.7 miles of the USIBWC levee within the USBP El Paso Sector. The Proposed Action would be implemented in five segments: segment K-2A is 9.6 miles long, segment K-2B and C is 19.42 miles long, segment K-3 is 9 miles long, segment K-4 is 13.5 miles long, and segment K-5 is 5.2 miles long.

Report Designation: Draft Environmental Assessment (EA).

Abstract: CBP proposes to construct, operate and maintain approximately 56.7 miles of TI, including 21 miles of permanent lights, 56.7 miles of fence, 2 miles of existing roads, and eight bridges across irrigation canals along the U.S.-Mexico international border in El Paso and Hudspeth counties, Texas. The proposed TI would primarily involve public lands managed by USIBWC as part of the Rio Grande flood control levee system and irrigation canals managed by local water districts.

The EA will analyze and document potential environmental consequences associated with the Proposed Action. If the analyses presented in the EA indicate that implementation of the Proposed Action would not result in significant environmental or socioeconomic impacts, then a Finding of No Significant Impact (FONSI) would be prepared. If potential environmental concerns arise that cannot be mitigated to insignificance, a Notice of Intent to prepare an Environmental Impact Statement (EIS) would be required.

Throughout the National Environmental Policy Act (NEPA) process, the public may obtain information concerning the status and progress of the Proposed Action and the EA via the project Web site at *www.BorderFenceNEPA.com*; by emailing

information@BorderFenceNEPA.com; or by written request to Mr. Charles McGregor, Environmental Manager, U.S. Army Corps of Engineers, Fort Worth District, Engineering and Construction Support Office, 819 Taylor Street, Room 3B10, Fort Worth, TX 76102, Fax: (225) 761-8077.

You may submit written comments to CBP by contacting the SBI Tactical Infrastructure Program Office. To avoid duplication, please use only one of the following methods:

(a) Electronically through the website at *www.BorderFenceNEPA.com*

(b) By email to *EPEAcomments@BorderFenceNEPA.com*

(c) By mail to El Paso Fence and Lights EA, c/o Gulf South Research Corporation, 8081 GSRI Avenue, Baton Rouge, LA 70820

(d) By fax to (225) 761-8077.

Privacy Notice

Your comments on this document are due by March 19, 2008. Comments will normally be addressed in the EA and made available to the public. Any personal information included in comments will therefore be publicly available.

DRAFT

ENVIRONMENTAL ASSESSMENT
FOR
CONSTRUCTION, OPERATION, AND MAINTENANCE
OF TACTICAL INFRASTRUCTURE

U.S. BORDER PATROL, EL PASO SECTOR, TEXAS
EL PASO, YSLETA, FABENS AND FORT HANCOCK STATIONS AREAS OF OPERATION

February 2008

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Cooperating Agencies: U.S. Section, International Boundary and Water Commission
U.S. Department of the Interior
U.S. Army Corps of Engineers, Albuquerque District
Joint Task Force North

EXECUTIVE SUMMARY

INTRODUCTION

United States (U.S.) Border Patrol (USBP) is a law enforcement entity of U.S. Customs and Border Protection (CBP) within U.S. Department of Homeland Security (DHS). USBP's priority mission is to prevent the entry of terrorists and their weapons of terrorism and to enforce the laws that protect the U.S. homeland. This is accomplished by the detection, interdiction, and apprehension of those who attempt to illegally enter the U.S. or smuggle any person or contraband across the sovereign borders of the U.S. This Environmental Assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA), and analyzes the project alternatives and potential impacts to the human and natural environment from these alternatives.

CBP proposes to install primary pedestrian fence and high intensity lighting along the U.S. International Boundary and Water Commission (USIBWC) maintained Rio Grande levee from near the Ascarate Park in El Paso to a point 2.8 miles east of the Fort Hancock Port of Entry (POE). Bridges will also be constructed across the irrigation canal on the U.S. side of the levee for operational access.

PURPOSE AND NEED

The purpose of the Proposed Action is to increase border security within USBP El Paso Sector through the construction, operation, and maintenance of tactical infrastructure (TI) in the form of fences, roads, and supporting technological and tactical assets. USBP El Paso Sector has identified areas along the border that experience high levels of illegal cross-border activity. This activity occurs in areas that are remote and not easily accessed by USBP agents, near POEs where concentrated populations might live on either side of the border or have quick access to U.S. transportation routes, and in crowded metropolitan areas where IAs can quickly assimilate into the U.S. population.

The Proposed Action Alternative is needed to provide USBP agents with the tools necessary to strengthen their control of the U.S. borders between POEs in the USBP El Paso Sector. The Proposed Action Alternative would help to deter illegal cross-border activities within the USBP El Paso Sector by improving enforcement abilities, thus preventing terrorists and terrorist weapons from entering the U.S., reducing the flow of illegal drugs, and enhancing agents' response time, while providing a safer work environment for USBP agents.

PROPOSED ACTION ALTERNATIVE

CBP and USBP El Paso Sector propose to install approximately 56.7 miles of primary pedestrian fence along the USIBWC levee and the El Paso County Water Improvement District No. 1 (EPCWID1) and Hudspeth County Conservation and Reclamation District No. 1 (HCCRD1) canals, from a point 0.9 mile west of Ascarate Park to a point 2.8 miles

east of the Fort Hancock POE. Lights would be installed on the south side of the USIBWC levee along a 21-mile length of the border from the Riverside Canal Diversion to a point 1 mile east of the Fabens POE. Eight bridges across the EPCWID1 and HCCRD1 canals would also be constructed, and approximately 2 miles of existing dirt road would be improved. This alternative would involve conventional fence installation at the north toe of the USIBWC levee adjacent to the canals within the 56.7-mile section. However, an alternate design could be used, as described below, in various segments where engineering analyses indicate that the alternate design is more appropriate.

USBP has identified its Preferred Alternative as the Proposed Action Alternative. Throughout the EA, Preferred Alternative and Proposed Action Alternative are synonymous.

ALTERNATIVES CONSIDERED

No Action Alternative. The No Action Alternative would preclude the installation of fence, lights and bridges along this section of the U.S./Mexico border. The No Action Alternative will serve as a baseline against which the impacts of the Proposed Action Alternative will be evaluated.

Floating Foundation Fence Alternative. The fence would be installed with a "floating foundation". This design requires that the foundation would be constructed off-site, and the sections of fence would be placed on the top of the levee with little or no ground disturbance other than leveling the top of the levee. A hard surface road would be integrated into the proposed fence design. The lights, bridges and road improvements would be placed as indicated in the Proposed Action Alternative. The Floating Foundation Fence Alternative could be installed interchangeably with the Proposed Action in any portion of the 56.7-mile corridor.

Alternatives Considered but Eliminated from Further Consideration. Other alternatives considered but eliminated from further consideration include:

- Stronger enforcement and harsher penalties for employers that hire illegal immigrants: eliminated since it does not meet the project's purpose and need.
- Installation of the fence on the south side of the levee: eliminated due to possible interference with flood control.
- Installation of lights only without a fence: eliminated due to lack of deterrence value and it does not meet the project's purpose and need.
- Installation of fence only without lights: eliminated due to lack of increased safety value.
- Installation of a conventional fence on top of the levee: eliminated due to conflicts with levee maintenance by USIBWC.
- Additional USBP agents in lieu of TI: eliminated due to lack of increased agent safety factors.

- Technology in lieu of TI: eliminated because it does not meet the purpose and need for the project.
- Secure Fence Act (2-tier fence) alternative: eliminated due to lack of space and interference with existing canals and roads

ENVIRONMENTAL CONSEQUENCES

The proposed project corridor consists of previously disturbed landscape due to construction of the irrigation canals and the flood control levee. All of the corridor is maintained for vegetation control, and is heavily traveled by maintenance equipment and USBP vehicles. No natural environment exists within the footprint of the project corridor. A narrow, discontinuous natural riparian corridor is present along the Rio Grande south of the project corridor.

The No Action Alternative would not directly impact any human or environmental resources since there would be no new construction. Indirect and cumulative adverse impacts would occur due to the lack of IA deterrence and lighting along this section of the U.S.-Mexico border. Continued, and possibly increased, cross border violations would result in degradation of community values and an increase in drug related crimes. The lack of sufficient vehicle and personnel access to the area between the USIBWC levee and EPCWID1 and HCCRD1 canals and the Rio Grande would result in continued safety and rescue problems, and increased safety risk to USBP personnel operating in the area.

Implementation of the Proposed Action Alternative or Floating Foundation Fence Alternative would occur in previously disturbed areas impacted by the construction of the levee and canals along the U.S.-Mexico border. There would be no additional impacts to soils, native vegetation, or wildlife habitats. Land use would not change and no hazardous materials would be impacted. Short term insignificant impacts to water resources, air quality and noise would occur. Visual aesthetics are already impacted by the existing canals and levee, and no additional significant impacts would occur. No threatened or endangered species are present in the project corridor, and habitats outside the corridor would not be impacted. No significant impacts to cultural resources would occur, and Texas State Historical Preservation Officer (SHPO) concurrence will be obtained.

CONCLUSIONS

Based on the conclusions of this analysis and the assumption that all environmental design measures recommended herein are implemented, no significant adverse impacts would occur from the Proposed Action Alternative or Floating Foundation Fence Alternative, and no additional NEPA documentation is warranted.

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SECTION 1.0
INTRODUCTION

1.0 INTRODUCTION

1.1 BACKGROUND

The Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) entitled: "*Installation of Fencing, Lights, Cameras, Guardrails, and Sensors along the American Canal Extension El Paso District, El Paso, Texas*" was finalized on June 4, 1999 by the Immigration and Naturalization Service (INS) (INS 1999). Chain link fence and permanent lights were subsequently installed along the U.S.-Mexico border through El Paso to the Riverside Diversion Canal in accordance with that EA. U.S. Customs and Border Protection (CBP) now proposes to extend the project along the U.S. Section, International Boundary and Water Commission (USIBWC) levee, to a point 2.8 miles east of the Fort Hancock Port of Entry (POE), including replacement of a portion of the chain link fence previously installed, for a total distance of approximately 56.7 miles.

In 2006, CBP and U.S. Border Patrol (USBP) completed the "*Programmatic Environmental Assessment (PEA) for Proposed Tactical Infrastructure, USBP El Paso Sector, Texas Stations*" (USBP 2006). The USBP PEA discussed the tactical infrastructure (TI) program and the impacts of new infrastructure such as that proposed and addressed in this EA. Therefore, this EA is tiered from that PEA, and discussions concerning the affected environment and cumulative impacts are incorporated by reference from the 2006 USBP PEA. In addition, in 2001, Immigration and Naturalization Service (INS) completed the "*Supplemental Programmatic Environmental Impact Statement (SPEIS), Immigration and Naturalization Service and JTF-6 Activities on the Southwest U.S./Mexican Border U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, Texas, June 2001*" (INS 2001). Applicable discussions from the 2006 PEA and the 2001 SPEIS are incorporated by reference, where applicable.

1.2 USBP BACKGROUND

The mission of CBP is to prevent terrorists and terrorist weapons from entering the U.S., while also facilitating the flow of legitimate trade and travel. In supporting CBP's mission, USBP is charged with establishing and maintaining effective control of the borders of the U.S. USBP's mission strategy consists of five main objectives:

- Establish substantial probability of apprehending terrorists and their weapons as they attempt to enter illegally between the POEs;
- Deter illegal entries through improved enforcement;
- Detect, apprehend, and deter smugglers of humans, drugs, and other contraband;
- Leverage "smart border" technology to multiply the effect of enforcement personnel; and
- Reduce crime in border communities and consequently improve quality of life and economic vitality of targeted areas.

USBP has nine administrative sectors along the U.S.-Mexico border. Each sector is responsible for implementing an optimal combination of personnel, technology, and infrastructure appropriate for its operational requirements. The El Paso Sector is responsible for El Paso and Hudspeth counties, Texas and the entire state of New Mexico. The areas affected by the Proposed Action include El Paso and Hudspeth counties in Texas along the levees and floodplain of the Rio Grande.

1.3 PURPOSE AND NEED

The purpose of the Proposed Action Alternative is to increase border security and USBP agent safety within USBP El Paso Sector through the construction, operation, and maintenance of TI in the form of fences, roads, bridges, lights, and supporting technological and tactical assets. In alignment with Federal mandates USBP has identified this area of the border as a location where primary pedestrian fence would contribute significantly to their priority homeland security mission. The need for the proposed action is to meet USBP operational requirements; provide a safer

environment for USBP agents and general public; deter IAs by constructing an impediment to northward movement into the U.S.; enhance the response time of USBP agents; and meet the mandates of Federal legislation (i.e., Secure Fence Act of 2006 and 2007 Department of Homeland Security [DHS] Appropriations Act [HR 5441]).

USBP El Paso Sector has identified distinct areas along the border that experience high levels of illegal cross-border activity, and would require additional TI. This activity occurs in areas that are adjacent to the Rio Grande and not easily accessed by USBP agents, near POEs where concentrated populations might live on either side of the border or have quick access to U.S. transportation routes, and in areas where there is no TI to deter illegal cross-border activity.

The Proposed Action is needed to provide USBP agents with the tools necessary to strengthen control of the U.S. borders between POEs in the USBP El Paso Sector. It is designed to help deter illegal cross-border activities within the USBP El Paso Sector by improving enforcement abilities, thus preventing terrorists and terrorist weapons from entering the U.S., reducing the flow of illegal drugs, and enhancing agents' response time, while providing a safer work environment for USBP agents.

1.4 PROPOSED ACTION ALTERNATIVE

The Proposed Action Alternative would install approximately 56.7 miles of primary pedestrian fence along the north side of the USIBWC levee from a point 0.9 mile west of Ascarate Park in El Paso to a point located 2.8 miles east of the Fort Hancock POE (Figure 1-1). Existing chain link fence would be replaced with primary pedestrian fence for the portion of the project corridor labeled K-2A (see Figures 2-1a to 2-1d). An additional 21 miles of permanent lights would be installed from the Riverside Canal diversion to a point 1 mile east of the Fabens POE (see Figures 2-1d to 2-1j). Eight bridges across the irrigation canals on the U.S. side of the levee would be constructed within the project corridor, and approximately 2 miles of existing dirt road would be improved with an all-weather surface within the same area. Gates would be installed in

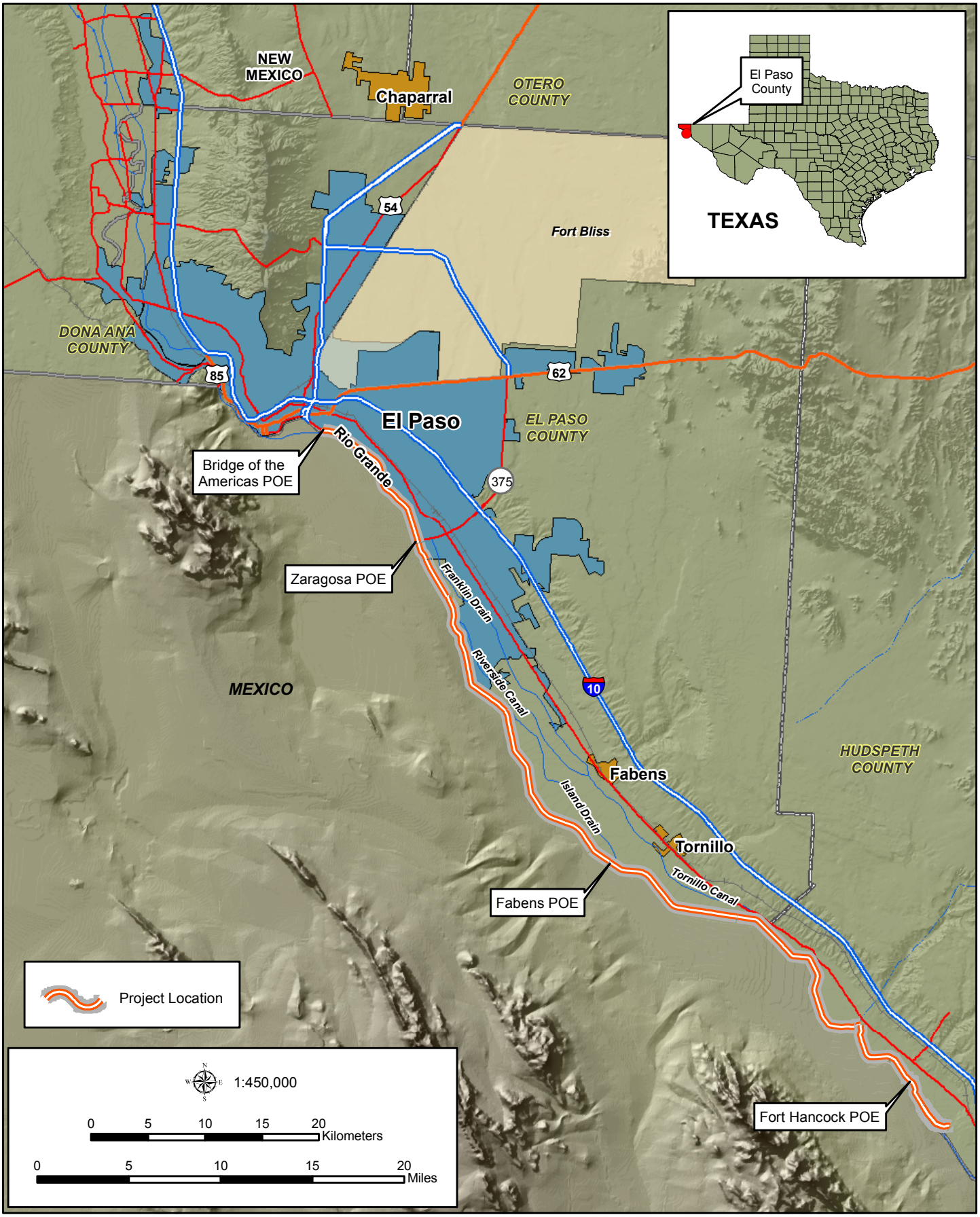

Figure 1-1: Vicinity Map

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January 2008

the fence at each bridge crossing to provide access to the USIBWC levee and the Rio Grande floodplain. Temporary construction staging areas would occur both in the Rio Grande floodplain and at discrete locations north of the levee along the project corridor.

The proposed locations of TI are based on a USBP El Paso Sector assessment of local operational requirements where such infrastructure would assist USBP agents in reducing illegal cross-border activities. The Fiscal Year (FY) 2007 U.S. Department of Homeland Security (DHS) Appropriations Act (Public Law [P.L.] 109-295) provided $1,187,565,000 under the Border Security Fencing, Infrastructure, and Technology appropriation for the installation of fencing, infrastructure, and technology along the border (CRS 2006).

1.5 PUBLIC INVOLVEMENT

1.5.1 Agency Coordination

A Notice of Availability (NOA) for this draft EA and draft Finding of No Significant Impact (FONSI) will be published in the *El Paso Times.* This is done to solicit comments on the Proposed Action Alternative and involve the local community in the decision-making process. Comments from the public and other Federal, state, and local agencies will be incorporated into the Final EA and included in Appendix F.

This Draft EA also serves as a public notice regarding impacts on floodplains. Executive Order (EO) 11988 directs Federal agencies to avoid floodplains unless the agency determines that there is no practicable alternative. Where the only practicable alternative is to site in a floodplain, a specific process must be followed to comply with EO 11988. This eight-step process is detailed in the Federal Emergency Management Agency (FEMA) document “Further Advice on EO 11988 Floodplain Management.” The eight steps are as follows:

1. Determine whether the action will occur in, or stimulate development in, a floodplain.
2. Receive public review/input of the Proposed Action.

3. Identify and evaluate practicable alternatives to locating in the floodplain.
4. Identify the impacts of the Proposed Action (when it occurs in a floodplain).
5. Minimize threats to life, property, and natural and beneficial floodplain values, and restore and preserve natural and beneficial floodplain values.
6. Reevaluate alternatives in light of any new information that might have become available.
7. Issue findings and a public explanation.
8. Implement the action.

Steps 1, 3, and 4 have been undertaken as part of this Draft EA and are further discussed in Section 3.5. Steps 2 and 6 through 8 are being conducted simultaneously with the EA development process, including public review of the Draft EA. Step 5 relates to mitigation and is currently undergoing development.

Throughout the National Environmental Policy Act (NEPA) process, the public may obtain information concerning the status and progress of the EA via the project web site at www.BorderFenceNEPA.com, by emailing information@BorderFenceNEPA.com, or by written request to Mr. Charles McGregor, Environmental Manager, U.S. Army Corps of Engineers (USACE), Fort Worth District, Engineering and Construction Support Office (ECSO), 819 Taylor Street, Room 3B10, Fort Worth, TX 76102; and Fax: (225) 761- 8077.

1.6 COOPERATING AGENCIES

1.6.1 U.S. Section, International Boundary and Water Commission

The Proposed Action Alternative will take place between a point 0.9 mile west of Asacarte Park and a point 2.8 miles east of the Fort Hancock POE on property owned by USIBWC (see Figure 1-2 and 1-3). Because most construction activities would take place on USIBWC property, USIBWC agreed to be a cooperating agency for this EA.

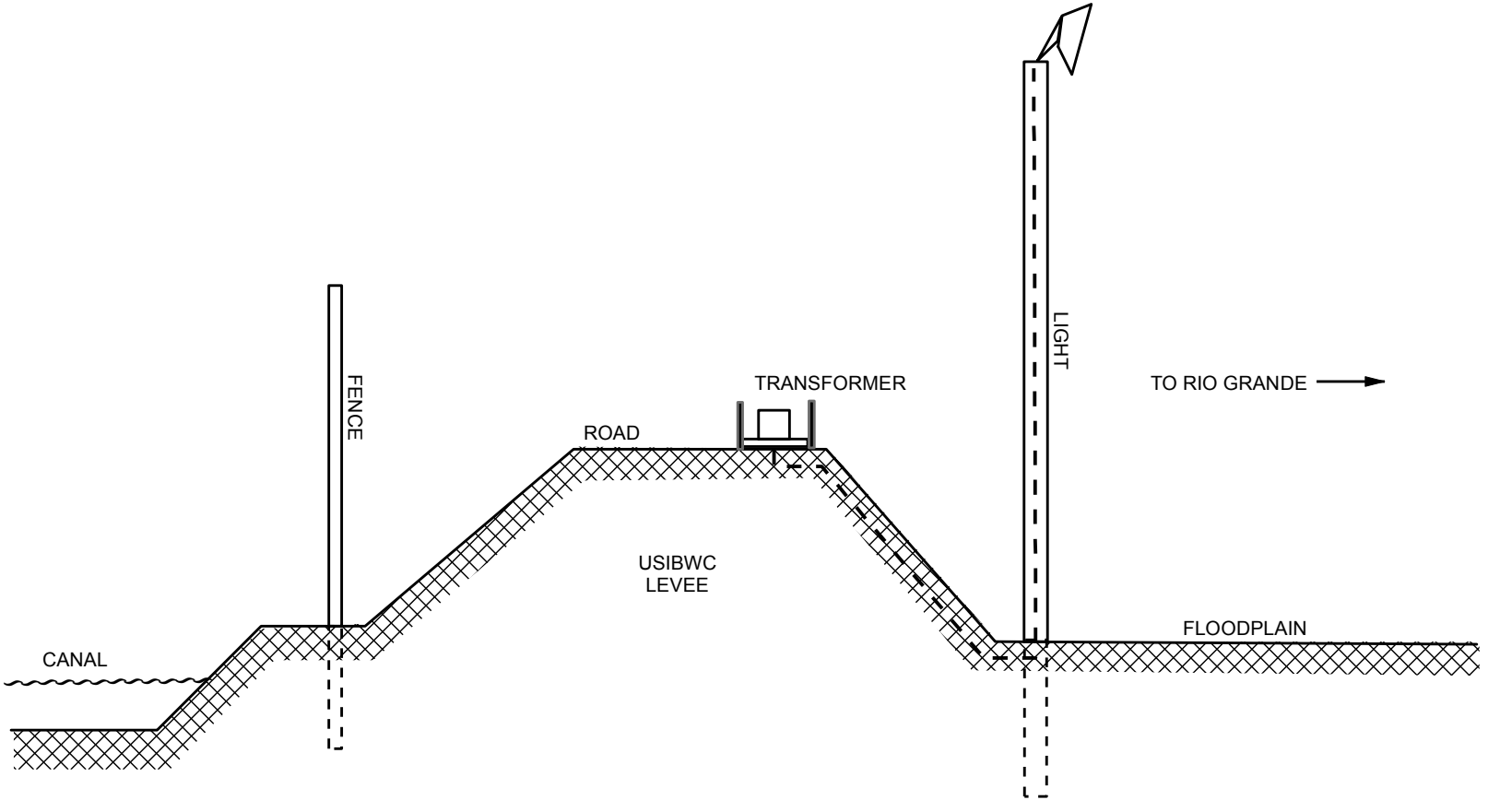

Figure 1-2: Typical Schmatic Cross Section, Proposed Action

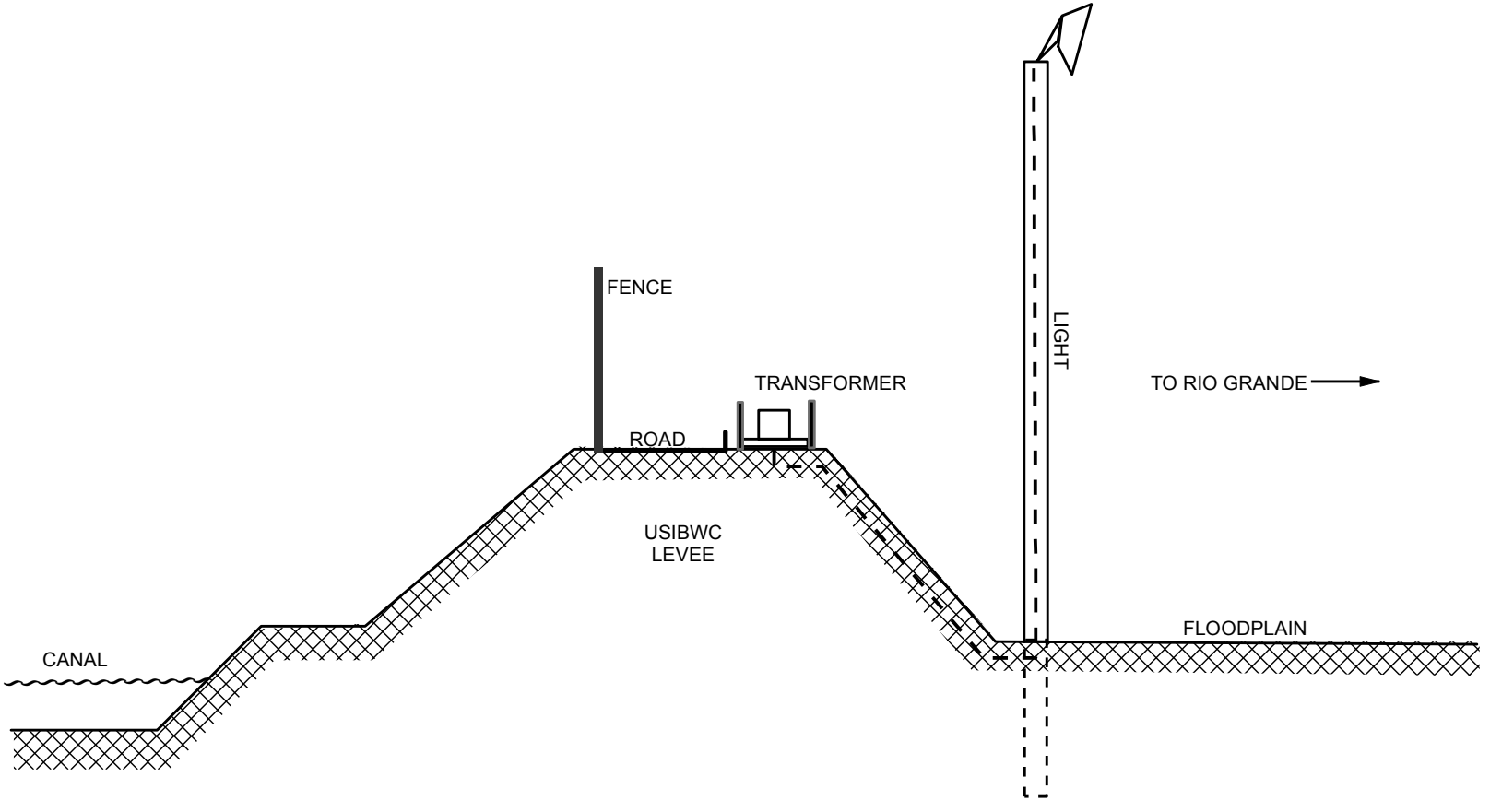

Figure 1-3: Typical Schmatic Cross Section, Floating Foundation Fence

1.6.2 U.S. Department of the Interior

The U.S. Department of the Interior (DOI) has agreed to be a cooperating agency for this EA. DOI cooperating agencies include National Park Service, U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management, Bureau of Reclamation, and Bureau of Indian Affairs. A Memorandum of Agreement (MOA) was signed indicating a commitment to work closely with CBP on this and other consultations regarding CBP projects along the U.S.-Mexico border. USFWS would coordinate with CBP during the Section 7 consultation, to identify the nature and extent of potential effects, and to jointly develop measures that would avoid or reduce potential effects on listed species.

1.6.3 Joint Task Force North

Joint Task Force-North (JTF-N) provides support to CBP using active duty, Reserve, and National Guard units from all military branches. CBP obtains military assistance through support requests forwarded to the Border Patrol Special Coordination Center, who then forwards the support request to JTF-N for sourcing. JTF-N staffs the request and, with appropriate approval, identifies a unit that is willing and capable of providing the skill sets necessary to support the request. Proposed projects must be able to satisfy the training requirements of the participating military unit. A portion of each unit's respective Mission-Essential Task List must be accomplished during each JTF-N operation. JTF-N forces may be utilized to construct all or portions of the proposed TI; therefore, JTF-N has been invited to be a cooperating agency for this EA.

1.6.4 U.S. Army Corps of Engineers, Albuquerque District

USACE, Albuquerque District is charged with facilitating real estate actions for the Proposed Action, and is a cooperating agency for this EA.

1.7 FRAMEWORK FOR ANALYSIS

NEPA is a Federal statute requiring the identification and analysis of potential environmental impacts of proposed Federal actions before those actions are taken. NEPA also established the Council on Environmental Quality (CEQ), which is charged

with the development of implementing regulations and ensuring agency compliance with NEPA. CEQ regulations mandate that all Federal agencies use a systematic interdisciplinary approach to environmental planning and the evaluation of actions that might affect the environment. This process evaluates potential environmental consequences associated with a Proposed Action Alternative and considers alternative courses of action. The intent of NEPA is to protect, restore, or enhance the environment through well-informed Federal decisions.

The process for implementing NEPA is codified in 40 Code of Federal Regulations (CFR) 1500–1508, Regulations for Implementing the Procedural Provisions of NEPA, and DHS Management Directive (MD) 5100.1, Environmental Planning Program. CEQ was established under NEPA to implement and oversee Federal policy in this process. CEQ regulations specify that the following must be accomplished when preparing an EA:

- Briefly provide evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a FONSI;
- Aid in an agency's compliance with NEPA when an EIS is unnecessary; and
- Facilitate preparation of an EIS when one is necessary.

To comply with NEPA, the planning and decision-making process for actions proposed by Federal agencies involves a study of other relevant environmental statutes and regulations. The NEPA process, however, does not replace procedural or substantive requirements of other environmental statutes and regulations. It addresses them collectively in the form of an EA or EIS, which enables the decision maker to have a comprehensive view of major environmental issues and requirements associated with the Proposed Action Alternative. According to CEQ regulations, the requirements of NEPA must be integrated "with other planning and environmental review procedures required by law or by agency so that all such procedures run concurrently rather than consecutively."

In addition to NEPA, additional authorities that will be addressed during the preparation of this EA will include Immigration Reform and Illegal Immigrant Responsibility Act (IIRIRA), Secure Fence Act (SFA), Clean Air Act, Clean Water Act (CWA) (including a National Pollutant Discharge Elimination System [NPDES] storm water discharge permit), Noise Control Act, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Archaeological Resources Protection Act, Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act, Environmental Quality Improvement Act of 1970, as amended, and Migratory Bird Treaty Act (MBTA).

Executive Orders (EOs) bearing on the Proposed Action Alternative include EO 11988 (Floodplain Management), EO 11990 (Protection of Wetlands), EO12088 (Federal Compliance with Pollution Control Standards), EO 12580 (Superfund Implementation), EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations), EO 13045 (Protection of Children from Environmental Health Risks and Safety Risks), EO 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), EO 13175 (Consultation and Coordination with Indian Tribal Governments), EO 13148 (Greening the Government through Leadership in Environmental Management), EO 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds), EO 11514 (Protection and Enhancement of Environmental Quality, as amended by EO 11991); EO 12114 (Environmental Effects Abroad of Major Federal Actions); EO 13101 (Greening the Government through Waste Prevention, Recycling, and Federal Acquisition); EO 13123 (Greening the Government through Efficient Energy Management); and EO 13149 (Greening the Government through Federal Fleet and Transportation Efficiency).

1.7.1 Federal, State and Local Permits, Licenses and Fees

Prior to construction, a Storm Water Pollution Prevention Plan (SWPPP) would be developed for the entire project area, and an appropriate storm water construction permit would be acquired from the responsible state or local agency.

There are no jurisdictional Waters of the U.S. (WUS) or regulated wetlands within the project footprint, and no Section 404 permit or Section 401 Water Quality Certification would be required from the U.S. Army Corps of Engineers (USACE) or the Texas Commission on Environmental Quality (TCEQ).

1.8 RELATED ENVIRONMENTAL DOCUMENTS

"*Installation of Fencing, Lights, Cameras, Guardrails, and Sensors along the American Canal Extension El Paso District, El Paso, Texas*": EA and FONSI prepared by INS, June 4, 1999.

"Supplemental Programmatic Environmental Impact Statement, Immigration and Naturalization Service and JTF-6 Activities on the Southwest U.S./Mexican Border U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, Texas" prepared by INS, June 2001

"*Programmatic Environmental Assessment For Proposed Tactical Infrastructure, U.S. Border Patrol, El Paso Sector, Texas Stations*": PEA and FONSI prepared by USBP, October 2006.

"*Final Environmental Assessment, Rio Grande Rectification Project: Flood Control Improvements, International Dam to Riverside Diversion Dam, El Paso County, Texas*": EA and FONSI prepared by USIBWC, May 2007.

"*Draft FONSI and Draft Environmental Assessment for El Paso County Riverside Canal and Structure Improvement Project*": EA and FONSI prepared by U.S. Department of the Interior, Bureau of Reclamation, January 2007.

SECTION 2.0
PROPOSED ACTION ALTERNATIVE AND ALTERNATIVES

2.0 PROPOSED ACTION AND ALTERNATIVES

This section provides detailed information on CBP's proposal to construct, operate, and maintain TI along the U.S.-Mexico border within the USBP El Paso Sector, Texas. The range of reasonable alternatives considered in this EA is constrained to those that would meet the purpose and need described in Section 1.3 to provide USBP agents with the tools necessary to maintain effective control of the border in the USBP El Paso Sector. Such alternatives must also meet essential technical, engineering, and economic threshold requirements to ensure that each alternative is environmentally sound, economically viable, and complies with governing standards and regulations.

2.1 SCREENING CRITERIA FOR ALTERNATIVES

The following screening criteria were used to develop the Proposed Action Alternative and evaluate potential alternatives. These criteria are presented in no particular order of priority.

- *USBP Operational Requirements:* The selected alternative must support USBP mission needs to hinder or delay individuals crossing the border; once they have entered an urban area or suburban neighborhood, it is much more difficult for USBP agents to identify and apprehend suspects engaged in unlawful border entry. Additionally, around populated areas it is relatively easy for cross border violators to find transportation into the interior away from the USBP patrol areas. For these reasons, primary border fencing could be constructed in urban population centers adjacent to the border. However, other operational criteria are also considered, including deterrence of illegal aliens from remote areas with harsh conditions and protection of natural resource areas north of the border.
- *Threatened or Endangered Species and Critical Habitat:* The selected alternative would be designed to minimize adverse impacts on threatened or endangered species and their critical habitat to the maximum extent practicable. USBP is working with the USFWS to identify potential conservation and mitigation measures.
- *Wetlands and Floodplains:* The selected alternative would be designed to avoid and minimize impacts on wetlands and floodplain resources to the maximum extent practicable.

- *Cultural and Historic Resources:* The selected alternative would be designed to minimize impacts on cultural and historic resources to the maximum extent practicable. USBP will coordinate with the State Historic Preservation Officer (SHPO) to identify potential conservation and mitigation measures.
- *Suitable Landscape:* Some areas of the border have steep topography, have highly erodible soils, are in a floodway, or have other characteristics that could compromise the integrity of fence or other TI. For example, in areas susceptible to flash flooding, fence and other TI might be prone to erosion that could undermine the fence's integrity. Areas with suitable landscape conditions would be prioritized.

2.2 ALTERNATIVES ANALYSIS

CBP evaluated a range of possible alternatives to be considered for the Proposed Action Alternative. During the early planning staging and public involvement process described in Section 1.5, the following potential alternatives were proposed: (1) stronger enforcement and harsher penalties for employers that hire illegal immigrants, (2) additional USBP agents in lieu of primary pedestrian fence, and (3) manned towers and electronic surveillance in lieu of primary pedestrian fence. Alternative fence designs were also proposed to make the fence taller, wider, or more impenetrable.

The following sections describe the alternative analysis for this Proposed Action Alternative. Sections 2.2.1 through 2.2.8 describe alternatives considered but eliminated from further detailed analysis. Sections 2.2.9 and 2.2.10 provide specific details of the Proposed Action Alternative and the Floating Foundation Fence Alternative, both of which will be carried forward for analysis. Section 2.2.11 presents the No Action Alternative. Section 2.3 is the identification of the preferred alternative.

2.2.1 Stronger Enforcement and Harsher Penalties for Employers That Hire Illegal Immigrants

Public comments that have been submitted regarding other TI projects have encouraged CBP to consider stronger enforcement of current immigration laws and harsher penalties for employers that hire illegal immigrants. This alternative was not studied in detail primarily because it would not meet the USBP El Paso Sector's

purpose and need and the screening criteria established for viable alternatives. The Proposed Action Alternative is needed to provide USBP agents with the tools necessary to strengthen their control of the U.S. border between POEs in the USBP El Paso Sector. USBP enforces current laws to the maximum extent practical. The alternative of stronger enforcement and harsher penalties would not prevent terrorists and terrorist weapons from entering the U.S., reduce the flow of illegal drugs, provide a safer work environment for USBP agents, or meet the USBP operational screening criteria of hindering or delaying individuals crossing the border illegally. For these reasons, this alternative is not a practical alternative to the construction of TI in the USBP El Paso Sector and will not be carried forward for detailed analysis.

2.2.2 Additional USBP Agents in Lieu of Tactical Infrastructure

CBP considered the alternative of increasing the number of USBP agents assigned to the U.S.-Mexico border as a means of gaining more effective control of the U.S.-Mexico border. Under this alternative, USBP would hire and deploy a significantly larger number of agents than are currently deployed along the U.S.-Mexico border and increase patrols to apprehend cross-border violators. USBP would deploy additional agents as determined by operational needs. Patrols might include the use of 4-wheel drive vehicles, all-terrain vehicles, helicopters, or fixed-wing aircraft. Currently, USBP maintains an aggressive hiring program and a cadre of well-trained agents.

This alternative was determined not to meet the screening criteria of USBP operational requirements. The physical presence of an increased number of agents could provide an enhanced level of deterrence against illegal entry into the U.S., but the use of additional agents alone, in lieu of the proposed TI, would not provide a practical solution to achieving the level of effective control of the border necessary in the USBP El Paso Sector. The use of physical barriers has been demonstrated to slow cross-border violators and provide USBP agents with additional time to make apprehensions (USACE 1994). Additionally, as TI is built, agents could be more effectively redeployed to secure other areas.

A Congressional Research Service (CRS) report concluded that USBP border security initiatives such as the 1994 San Diego Sector's "Operation Gatekeeper" or El Paso Sector's Operation "Hold the Line" required a 150 percent increase in USBP manpower, lighting, and other equipment. The report states that "It soon became apparent to immigration officials and lawmakers that USBP needed, among other things, a 'rigid' enforcement system that could integrate infrastructure (i.e., multi-tiered fence and roads), manpower, and new technologies to further control the border region" (CRS 2006).

Increased numbers of patrol agents would aid in interdiction activities, but not to the extent anticipated by the construction of primary pedestrian fence and other TI along sections within the El Paso Sector area of operations (AO). As such, this alternative is not practical in the USBP El Paso Sector and will not be carried forward for further detailed analysis.

2.2.3 Technology in Lieu of Tactical Infrastructure

CBP does and would continue to use various forms of technology to identify cross-border violators. The use of technology is a critical component of USBP efforts to maintain control of the U.S.-Mexico border in certain areas, and an effective force multiplier that allows USBP to monitor large areas and deploy agents to where they would be most effective and to apprehend cross-border violators. However, due to the large urban areas in Mexico along the U.S.-Mexico border in the USBP El Paso Sector, physical barriers represent the most effective means to control illegal entry into the U.S. The use of technology alone would not provide a practical solution to achieving the level of effective control of the U.S.-Mexico border necessary in the USBP El Paso Sector. Current USBP El Paso Sector operations include the use of technology to identify cross-border violations and deploying agents to make apprehensions. This alternative would not meet the purpose and need for increased safety for USBP agents and physical barriers to cross-border violators as described in Section 1.3, and will not be carried forward for further detailed analysis.

2.2.4 Fence and Light Placement on the Flood Side of the USIBWC Levee

Placement of the primary pedestrian fence along the toe of the south side (flood side) of the USIBWC levee was considered, but eliminated from further consideration for the following reasons:

- USIBWC determined that placement of the fence within the floodplain of the Rio Grande would interfere with flood water flows and would trap debris during high water stages.
- USIBWC is planning to raise the height of the levee in the future and, due to space constraints on the north side (protected side) of the levee, any expansion of the levee footprint during the elevation of the levee would have to occur on the south side; therefore, the fence placement on the south side of the levee would interfere with those efforts.

Because implementation of this alternative would conflict with flood control programs and planned improvements under the control of the property owner (USIBWC), it was eliminated from further consideration.

2.2.5 Conventional Fence Placement at the Top of the USIBWC Levee

Placement of the primary pedestrian fence along the crest of the USIBWC levee with a conventional foundation was considered, but was eliminated from further consideration. The installation of the fence on the crest of the USIBWC levee would require boring and filling within the levee structure, and USIBWC determined that the levee structure might be weakened by those activities. The potential weakening would result in an increased possibility of levee failure during flood events in the Rio Grande. Due to these increased risks of levee failure, and the consequent environmental and socioeconomic damages that could result, this alternative was eliminated from further consideration.

2.2.6 Installation of Primary Pedestrian Fence Only Without Lights

Installation of primary pedestrian fence only along the project corridor would have an effect of delaying and deterring IA traffic along the project corridor. However, it would not provide increased visibility for USBP agents during nighttime periods when most IA activity occurs, and it would not provide increased safety for USBP agents operating after dark in the area. Because this alternative does not meet the USBP agent safety

requirements, as stated in the purpose and need of the project, it was eliminated from further consideration.

2.2.7 Installation of Lights Only Without the Primary Pedestrian Fence

Installation of permanent lights along the project corridor would increase the visibility for USBP agents during hours of darkness, and would provide some benefit by providing an increased level of safety for USBP agents by allowing them to see IAs and drug smugglers in the illuminated areas. However, it would not provide much benefit for the enhanced apprehension of IAs crossing the project corridor, since there would be no physical barrier to prevent or delay IA movement sufficient to allow USBP agents to apprehend them more efficiently. This alternative also does not meet the requirements of recent Federal legislation. Because this alternative does not meet the purpose and need of the project, it was eliminated from further consideration.

2.2.8 Secure Fence Act Alternative

The Secure Fence Act (SFA) of 2006 (P.L. 109-367) authorized USBP to construct at least two layers of reinforced fencing along the U.S.-Mexico international border. Under the SFA Alternative, two layers of fence, known as primary and secondary fence, would be constructed approximately 130 feet apart along the same route as the Proposed Action Alternative. Due to the close proximity of the USIBWC levee, the irrigation canals and the public roads located adjacent to the canals on the north side, it would not be feasible to construct two layers of fencing as authorized by the SFA without interfering with operation of the irrigation canals, restricting floodwater conveyance with the Rio Grande floodplain, or restricting access to public roads. Therefore, this alternative was eliminated from further consideration.

2.2.9 Proposed Action Alternative

Photograph 2-1: Typical primary pedestrian fence

A primary pedestrian fence (Photograph 2-1) would be installed for approximately 56.7 miles on the north (protected) side of the USIBWC levee, from a point 0.9 mile west of Ascarate Park in El Paso to a point 2.8 miles east of the Fort Hancock POE (Figure 2-1). Existing chain link fence would be replaced with primary pedestrian fence for the portion of the project length identified as K-2A (see Figures 2-1a through 2-1d). Installation would require excavation and ground disturbance to install the fence. The fence would be constructed with a conventional concrete foundation along the entire length of the project. Fence designs that would be installed in this area are included in Appendix C. Based upon performance specifications established at the time of construction, fence placement would be similar to the design shown in Figure 1-2. Gates would be installed in the fence at canal bridge locations and at set intervals for emergency rescues within the canal and the Rio Grande for ingress/egress of USBP agents and USIBWC personnel. USBP would be responsible for maintenance of the fence.

Preliminary design performance measures dictate that the fence must:

- extend 15 to 18 feet above ground and 3 to 6 feet below ground;
- be capable of withstanding an impact from a 10,000-pound gross weight vehicle traveling at 40 miles per hour (mph);
- be resistant to vandalism, cutting, or penetrating;
- be semi-transparent, as dictated by operational need;
- be designed to survive extreme climate changes of a desert environment;
- not impede the natural flow of water.

Lights would be installed within the project corridor for a distance of approximately 21 miles along the USIBWC levee from the end of the Phase II Project, as described in the

June 1999 EA (INS 1999), near the City of El Paso water treatment plant at Rio Bosque to a point 1 mile east of the Fabens POE. The light standards would be steel poles approximately 45 feet high and installed at the south toe (flood side) of the USIBWC levee, within the floodplain. Transformers would be placed on the ground near the top of the levee on the south side, and six metal bollards, approximately 4 feet high, would be installed for protection (Photograph 2-2). El Paso Electric (EPE) would install the poles, lights, and transformers. Sections of the lights would be fitted with a switch so that lights could be turned off during Ysleta del Sur Pueblo Tribal ceremonies. The lights and fence for Phase II were described in a MOA with USIBWC, and a similar MOA would be executed between USBP and USIBWC for the proposed fence and lighting included in the Proposed Action Alternative.

Photograph 2-2. Typical light standard and transformer installation

The lights would be dual 1000 watt high pressure sodium (HPS) or metal halide lights installed at 150-foot intervals and directed toward the river. The power lines would be underground with the possible exception of any lateral feeds from the local grid. The locations of these lateral feeds are not known at present. EPE would be responsible for installing the power lines and connections to the existing grid, and for the maintenance of the lights and light standards.

In addition, approximately 2 miles of road improvements would be constructed on levee/ditch bank roads that are owned by the EPCWID1 and others. The roads are currently dirt roads, and become impassable during inclement weather. The roads are integral access points and patrol roads for USBP near the center of the project corridor. The proposed improvements would entail grading/leveling and application of an all-

weather aggregate surface. USBP would be responsible for maintenance of the all-weather surface on the roads once the improvements are made.

Up to eight bridges would be installed over the EPCWID1 and HCCRD1 irrigation canals at locations shown in Figures 2-1a through 2-1p. These bridges would be designed to extend across the canal with no structures or pilings within the canal, and would not require substantial ground disturbance. Some locations for the new bridges are the sites of previous canal bridges, which have been destroyed or removed for various reasons. The bridges would provide additional access points to the USIBWC levee and Rio Grande floodplain, and enhance the response time of USBP agents, thus increasing the apprehension rate for IAs in the area and providing enhanced response time for IA rescue in the Rio Grande floodplain during times of high water, when many IAs attempt to cross the river.

Photograph 2-3. Typical floodplain between the levee and the Rio Grande

As part of the construction efforts for the fence and lights installation, temporary turnarounds and staging areas would be used approximately every mile along the project corridor between the USIBWC levee and the Rio Grande (Photograph 2-3). Approximately 40 10,000 square foot staging areas would be located adjacent to the flood side of the levee on previously disturbed sites, as much as possible. Additional staging areas would be located north of the levee on private lands for the purpose of staging equipment and maintenance activities. An approximately 2-acre staging area would be temporarily disturbed at the south end of each bridge location. Figures 2-1a through 2-1p show the location of the proposed project components on topographic maps of the project corridor. The project corridor is divided into sections, designated K-2A through K-5, to designate contract and construction sections.

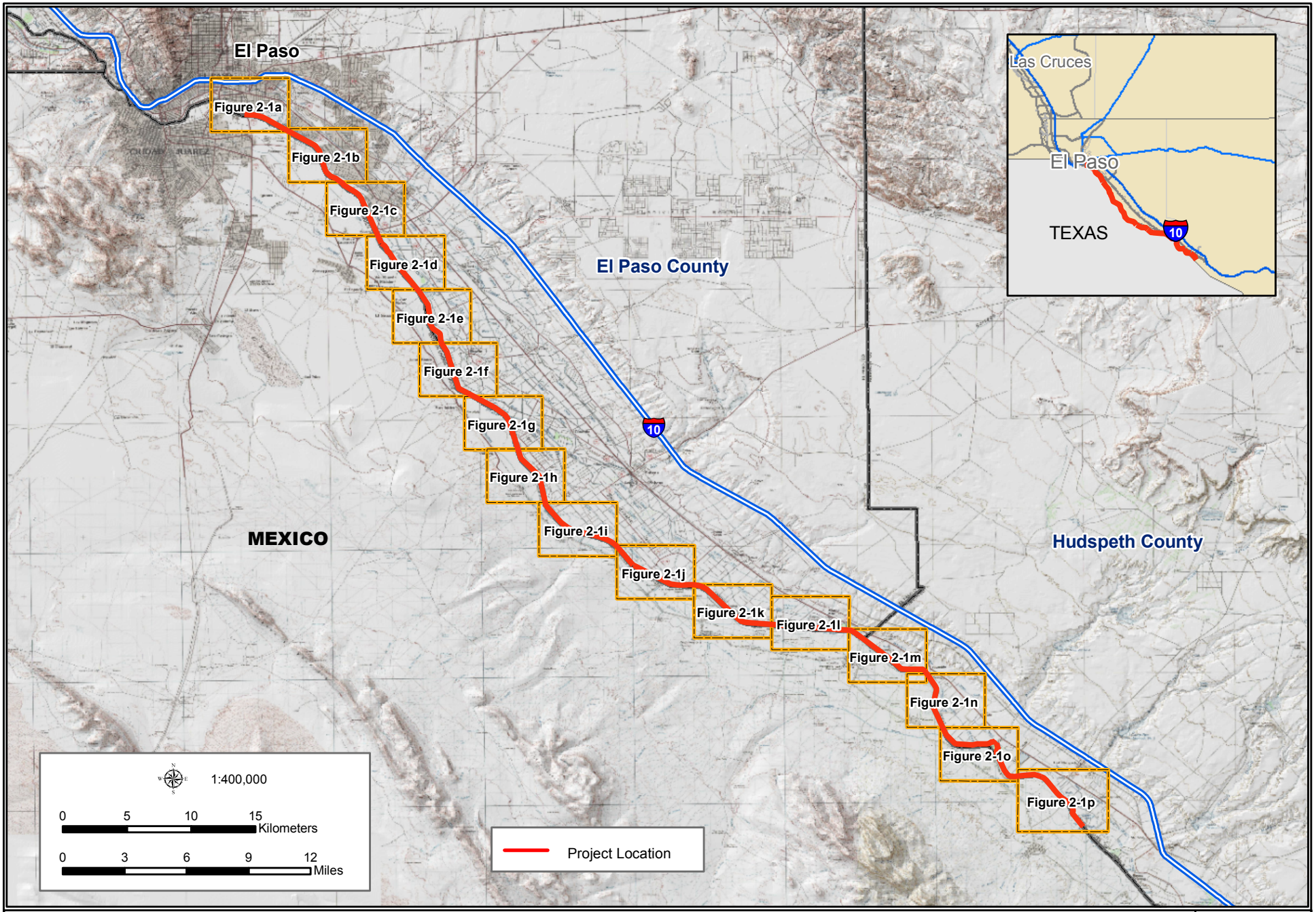

Figure 2-1: Project Area Index Map

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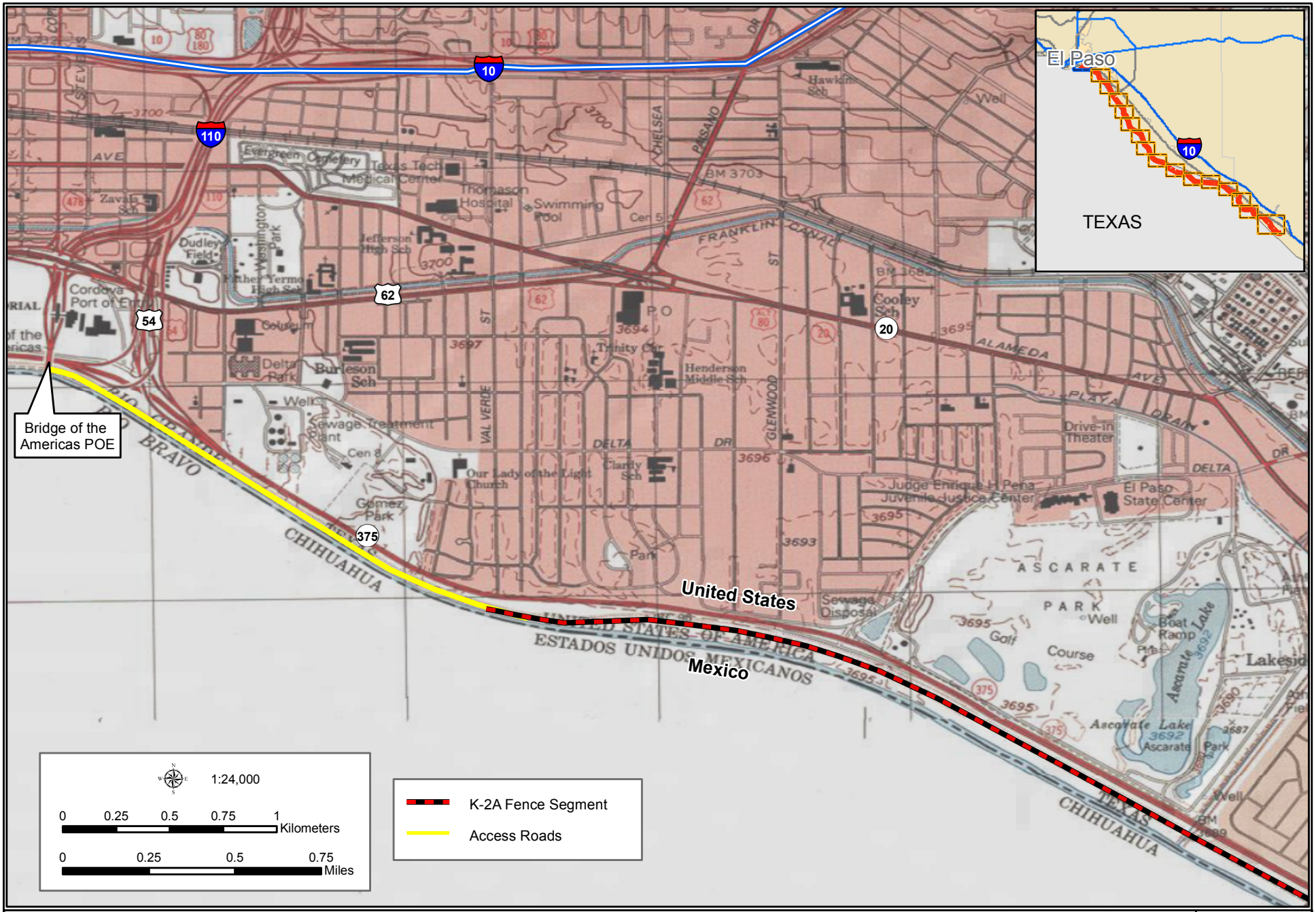

Figure 2-1a: Project Area Map

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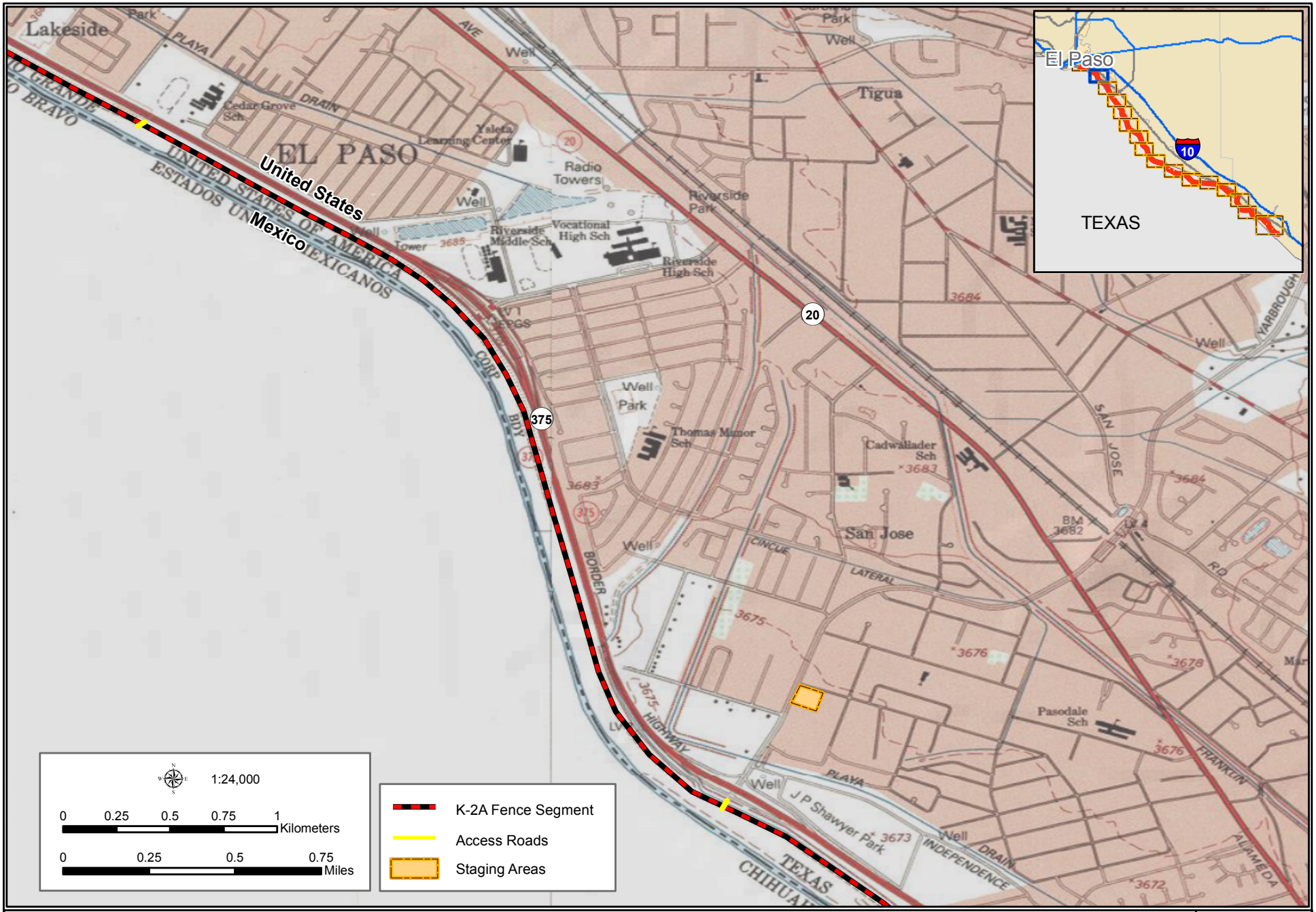

Figure 2-1b: Project Area Map

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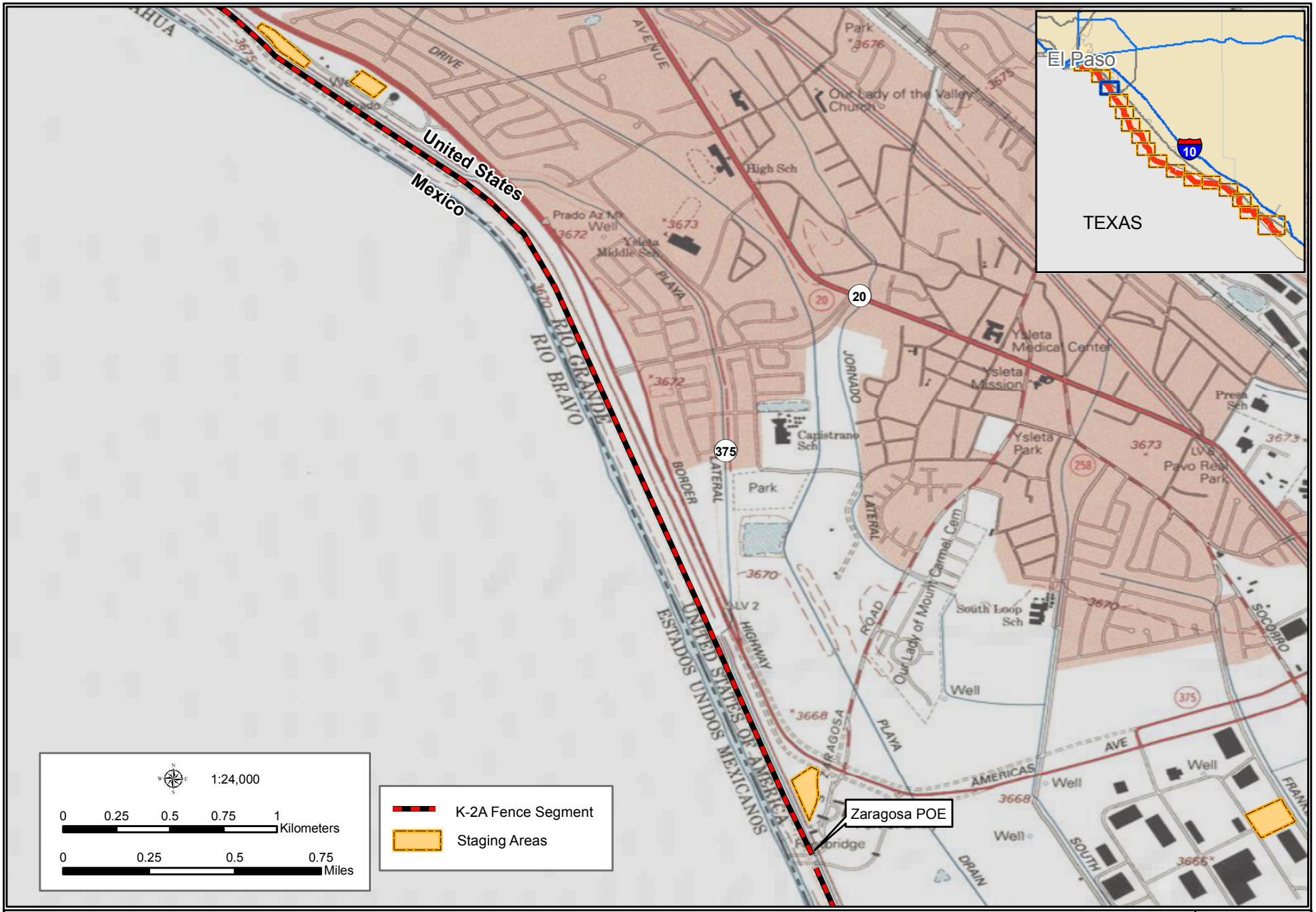

Figure 2-1c: Project Area Map

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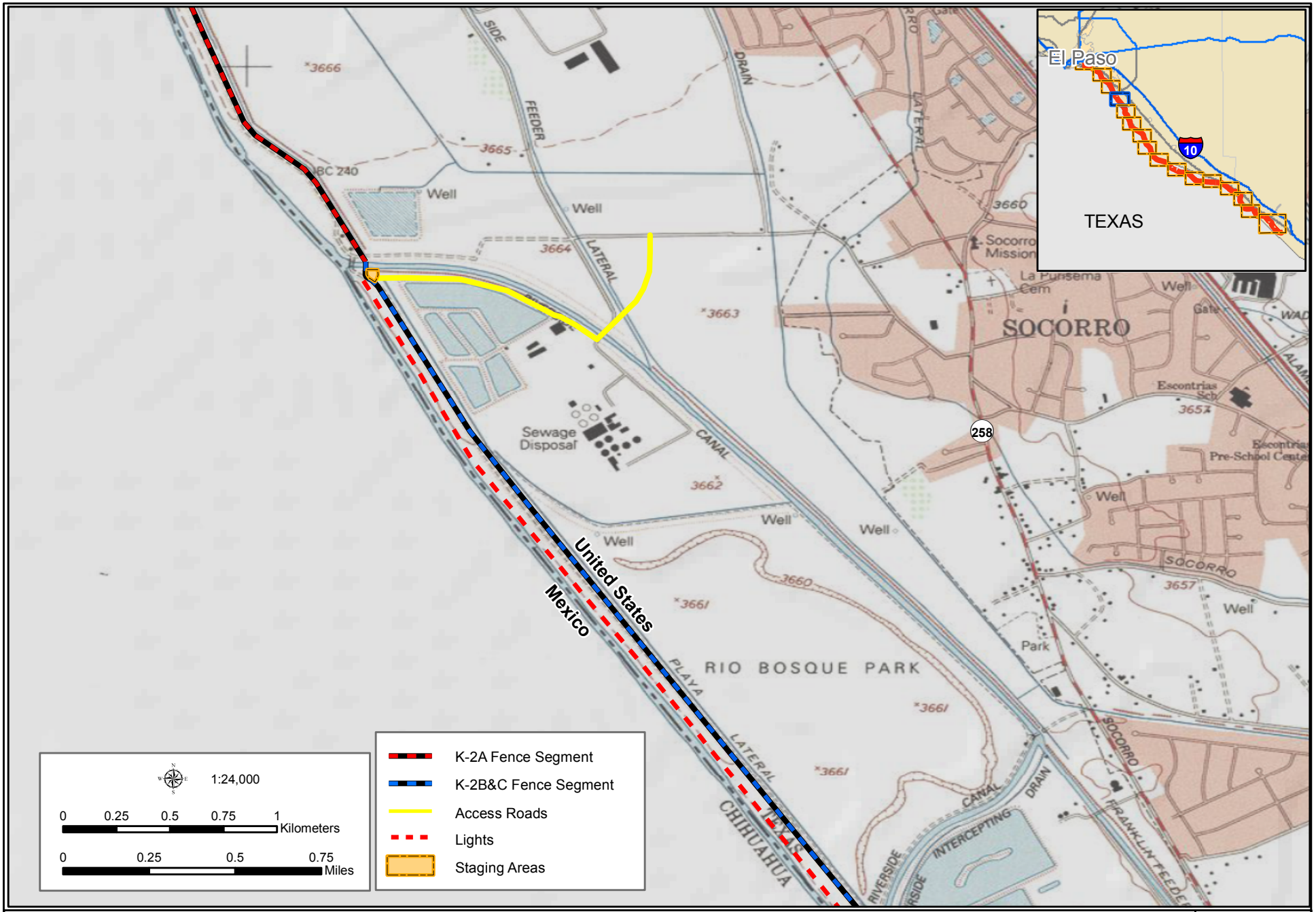

Figure 2-1d: Project Area Map

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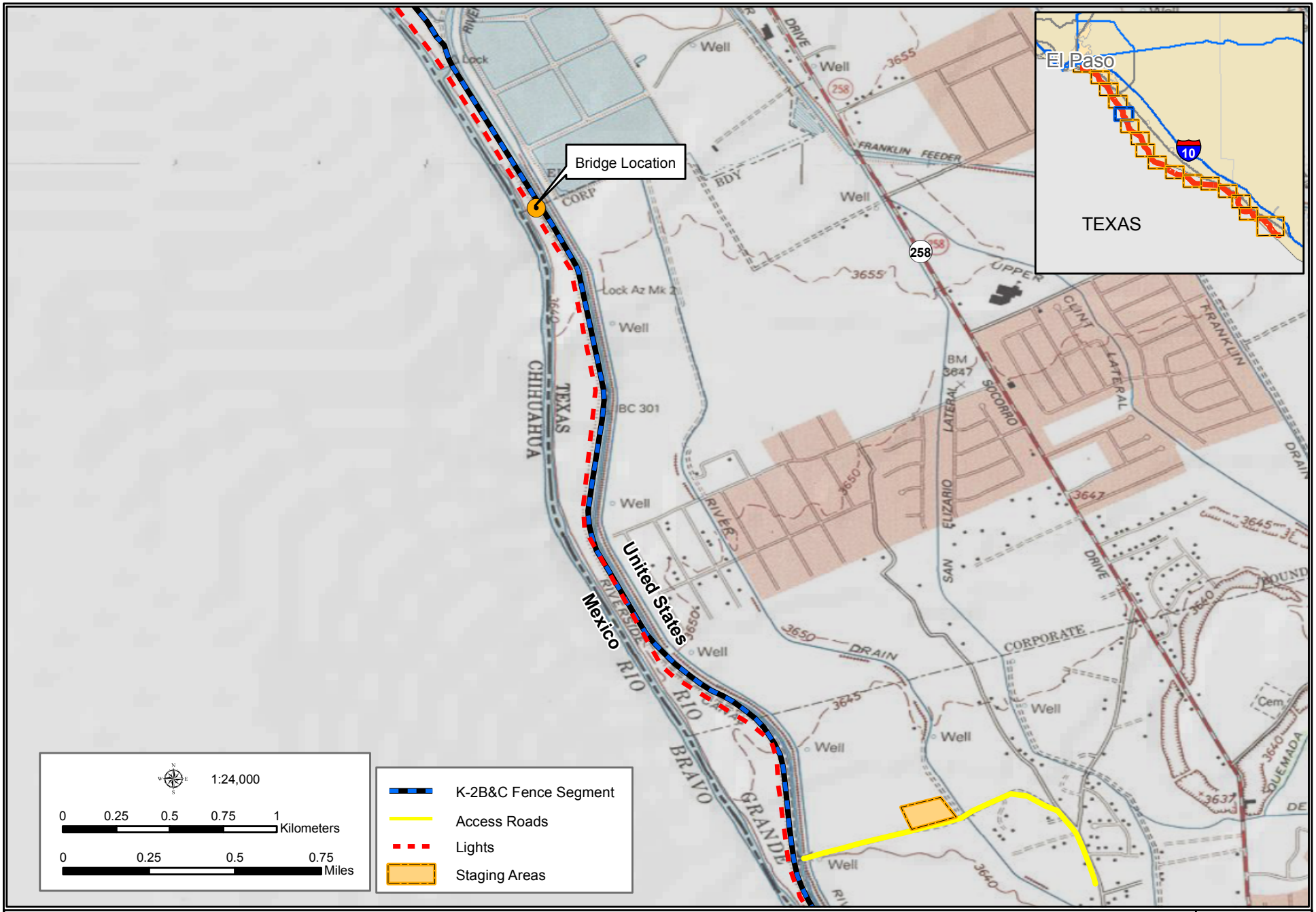

Figure 2-1e: Project Area Map

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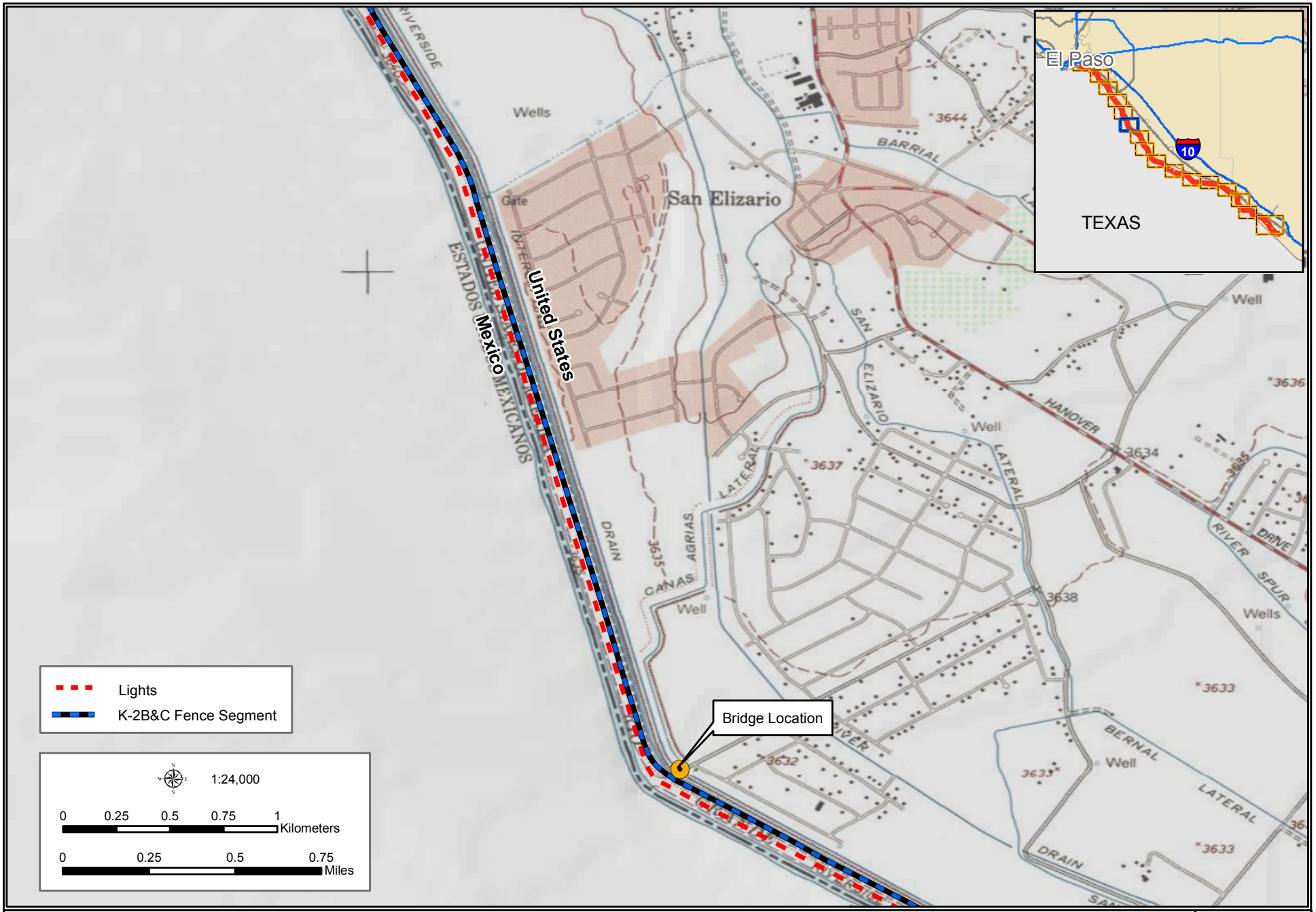

Figure 2-1f: Project Area Map

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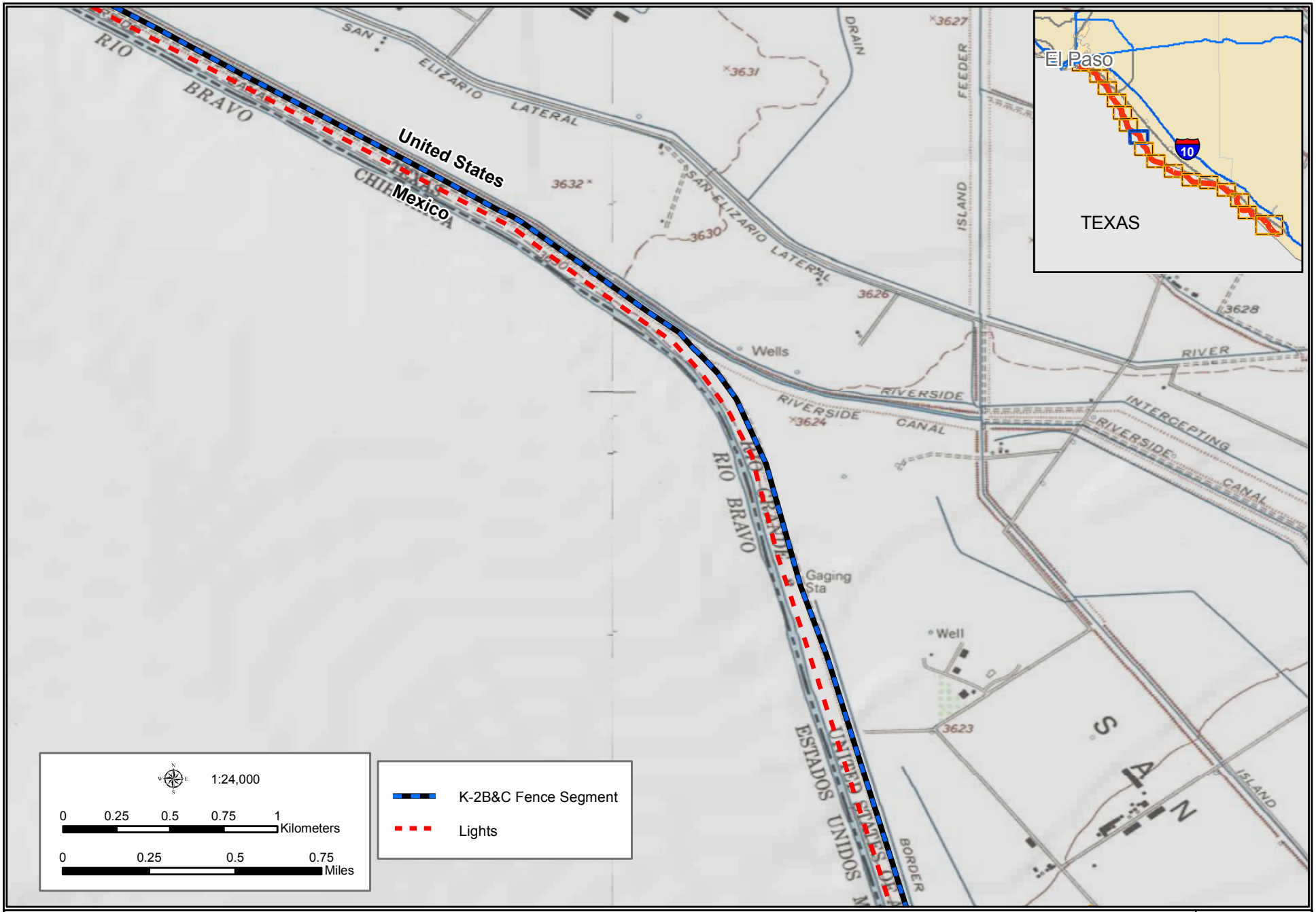

Figure 2-1g: Project Area Map

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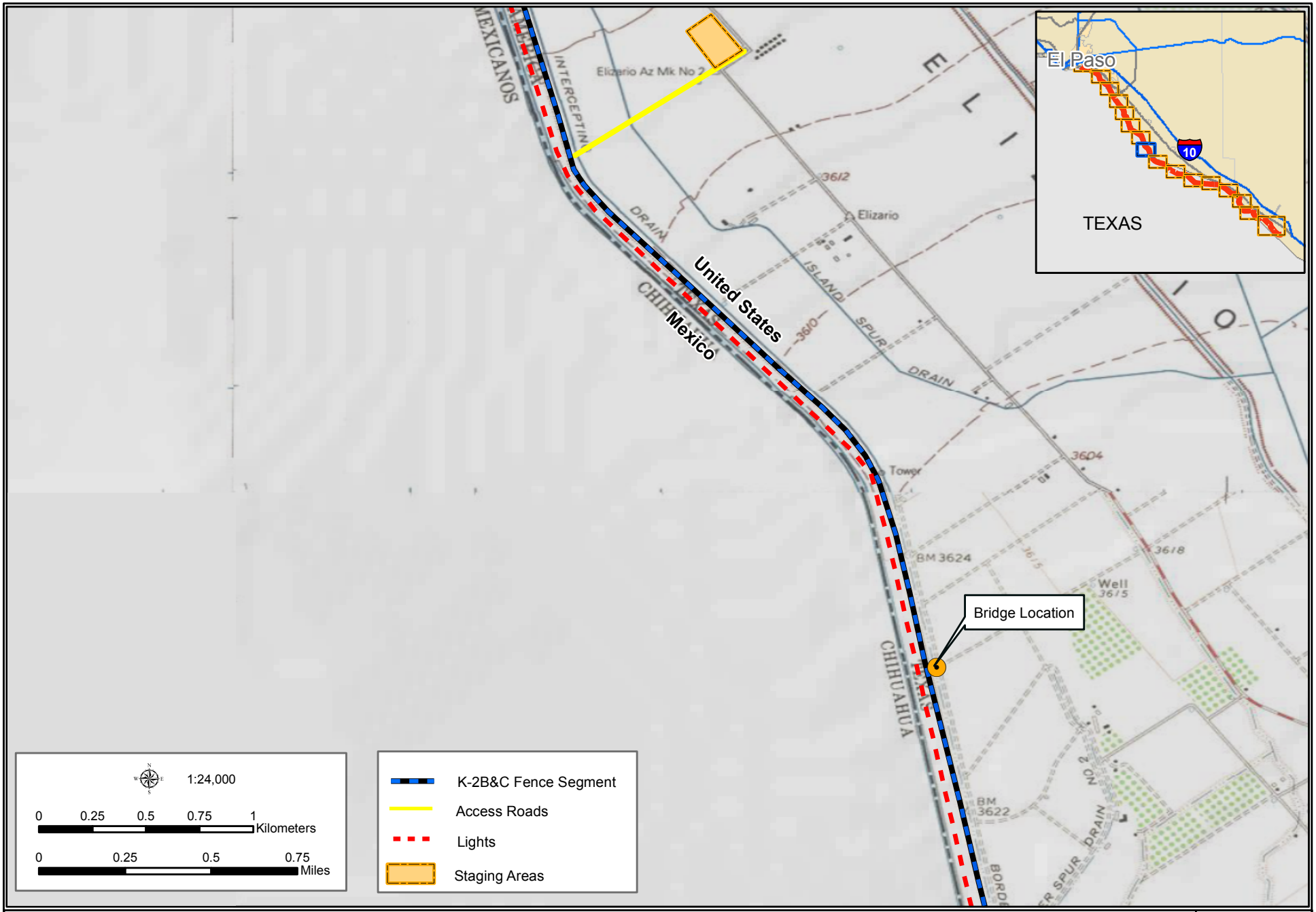

Figure 2-1h: Project Area Map

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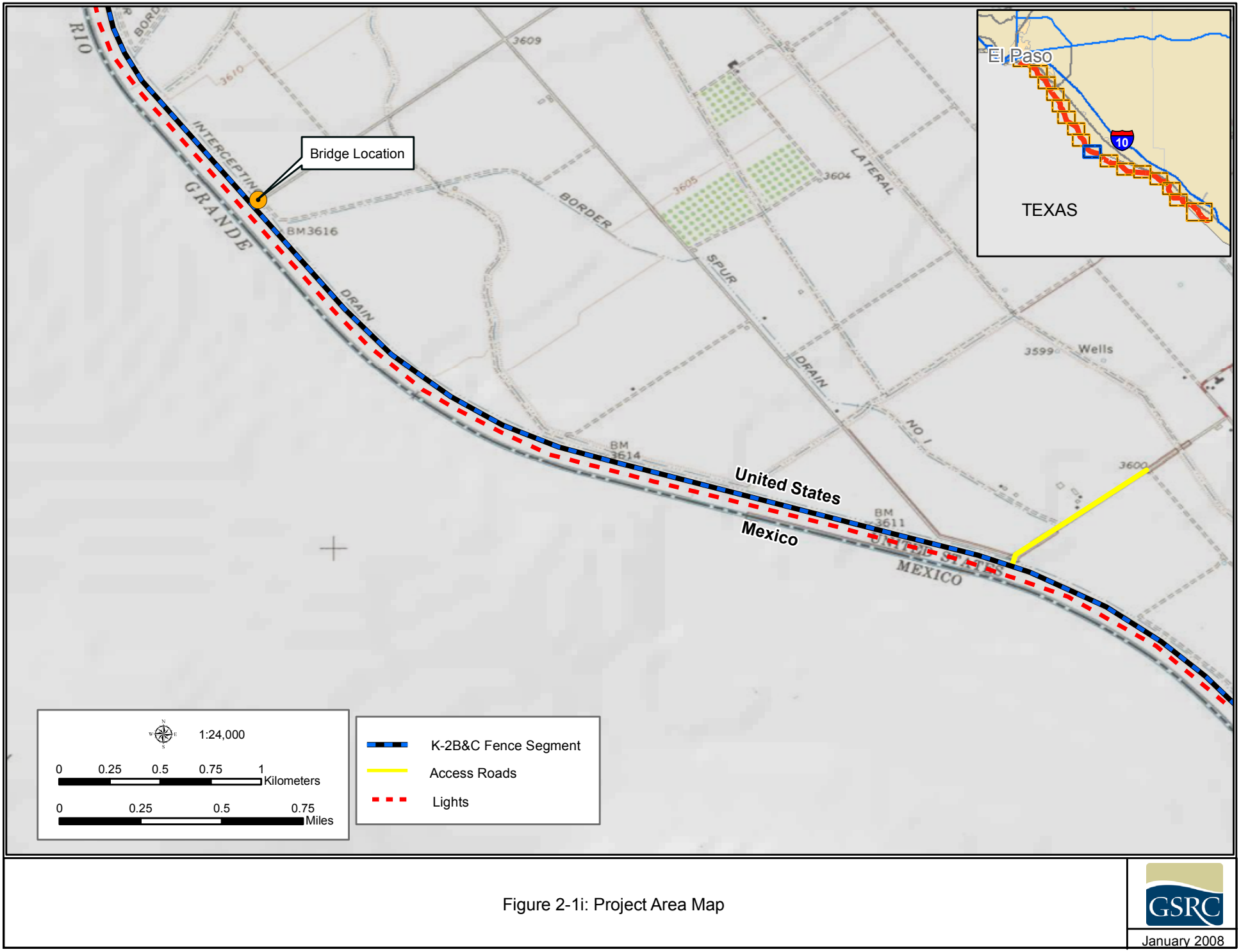

Figure 2-1i: Project Area Map

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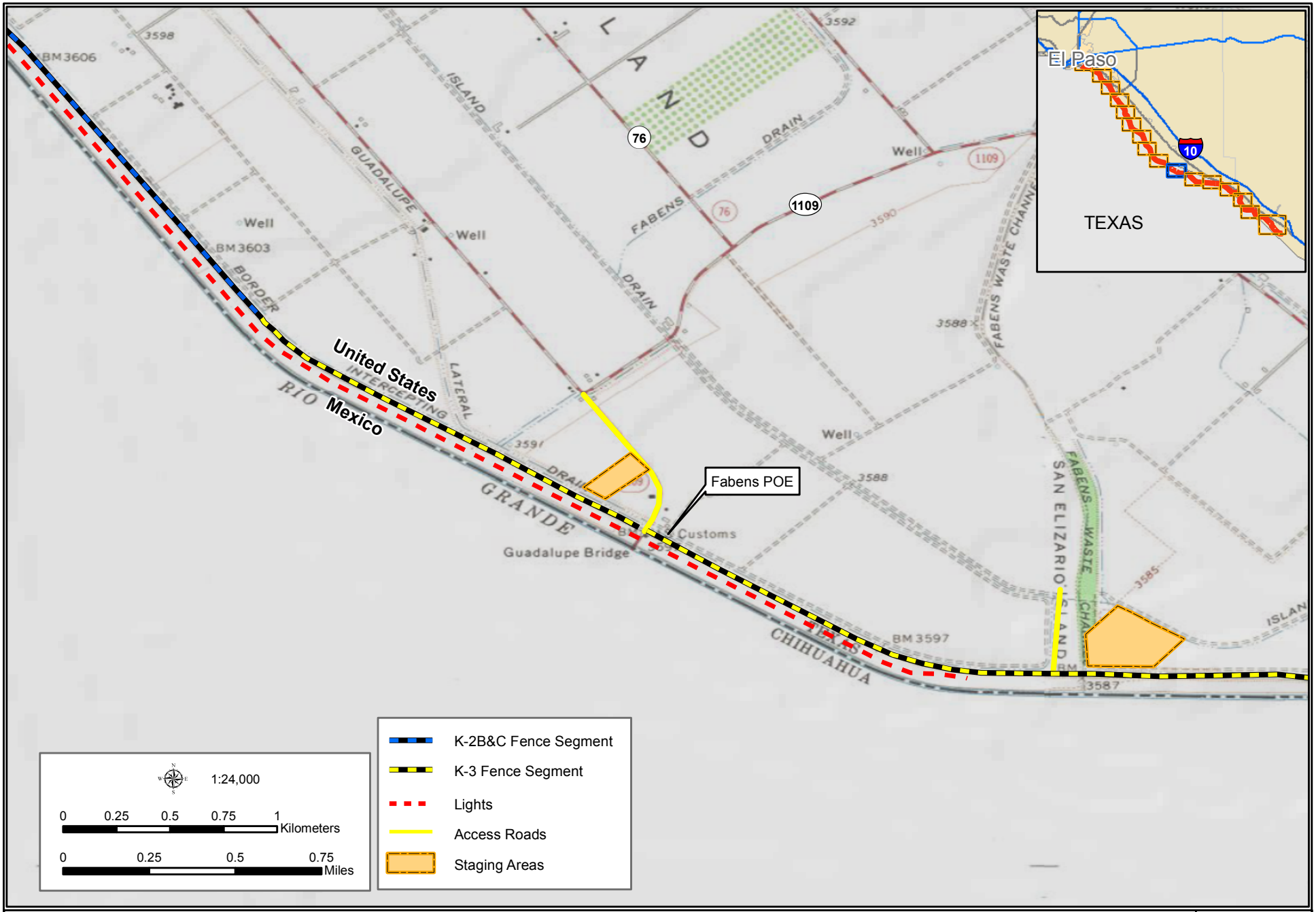

Figure 2-1j: Project Area Map

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Figure 2-1k: Project Area Map

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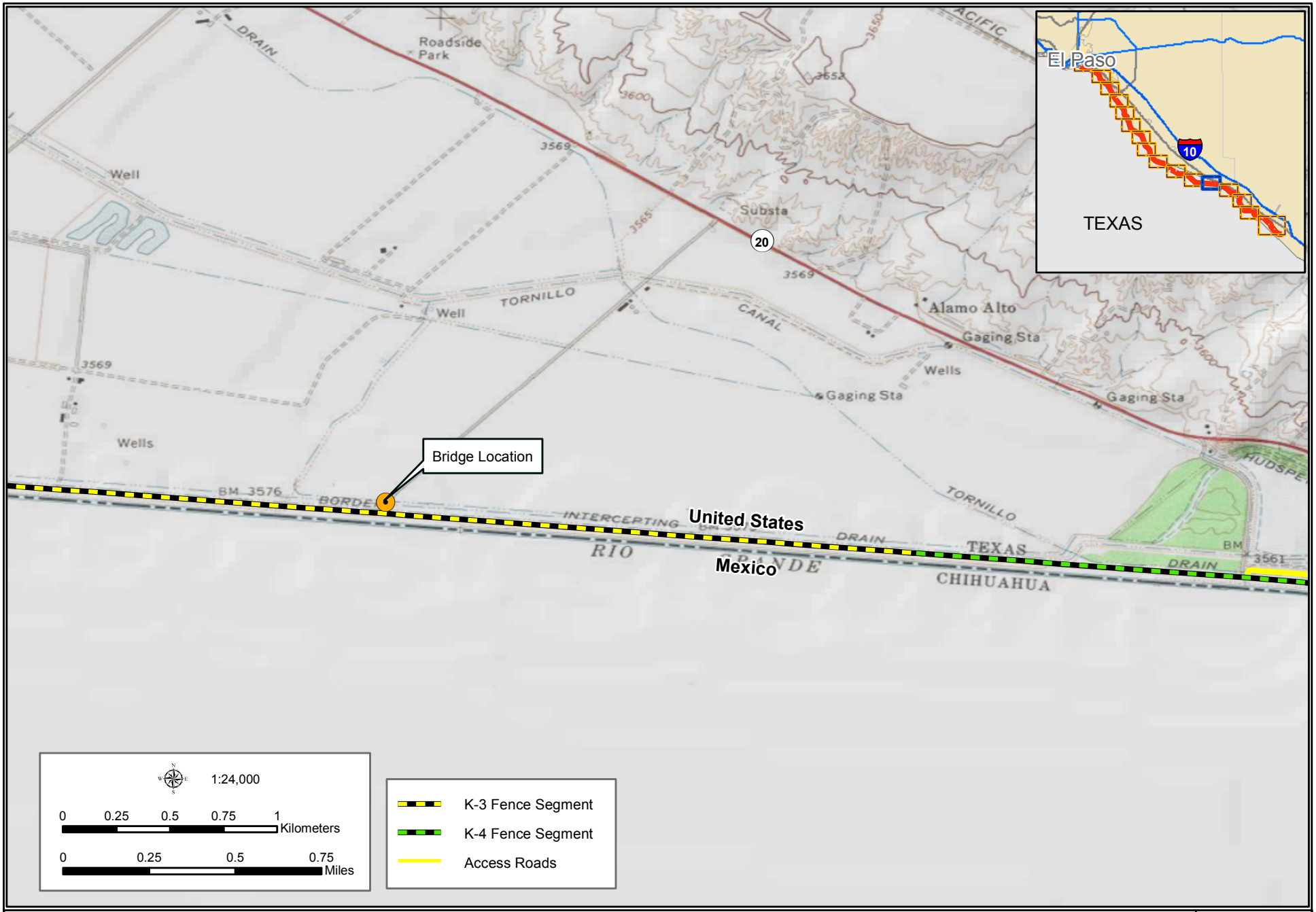

Figure 2-1l: Project Area Map

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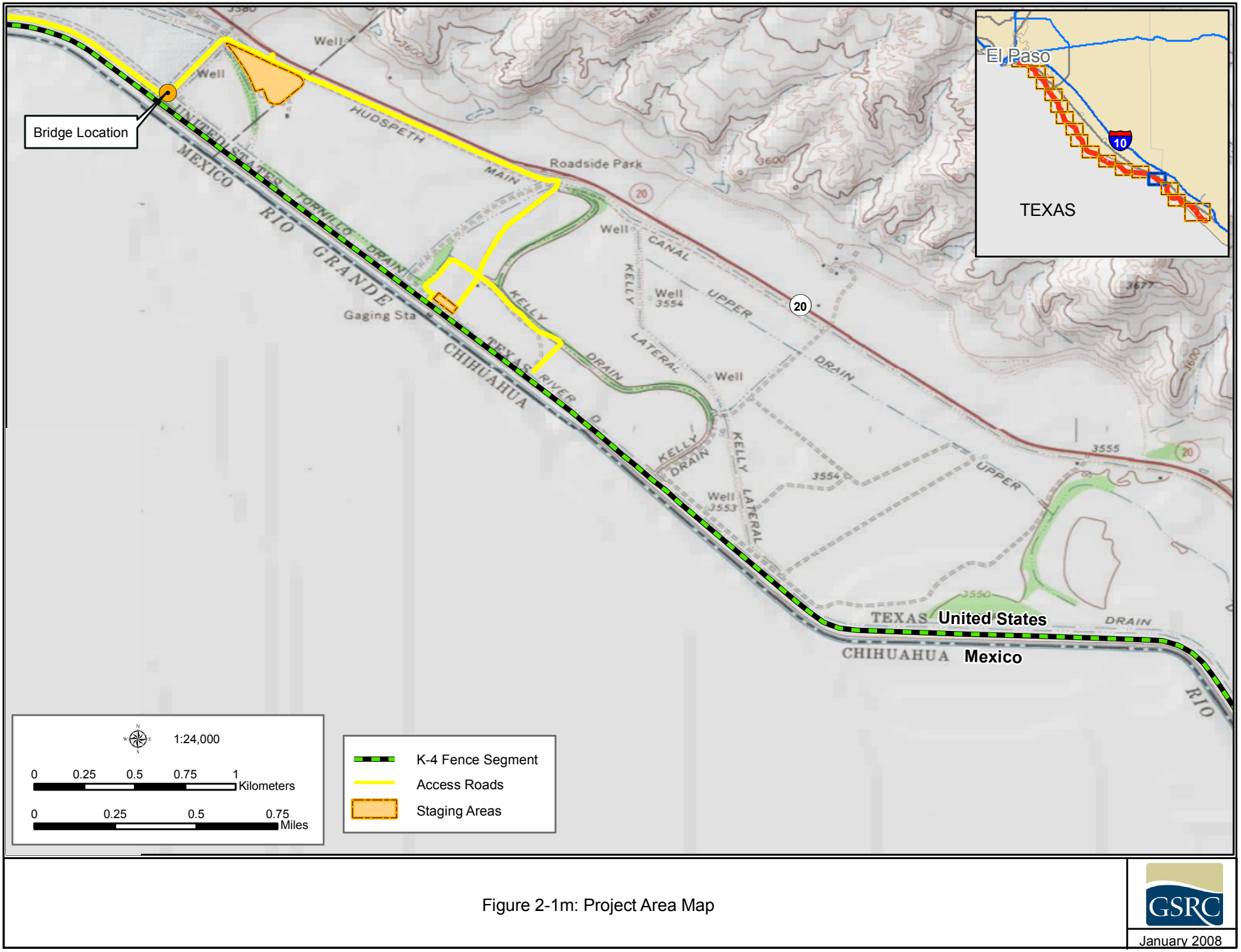

Figure 2-1m: Project Area Map

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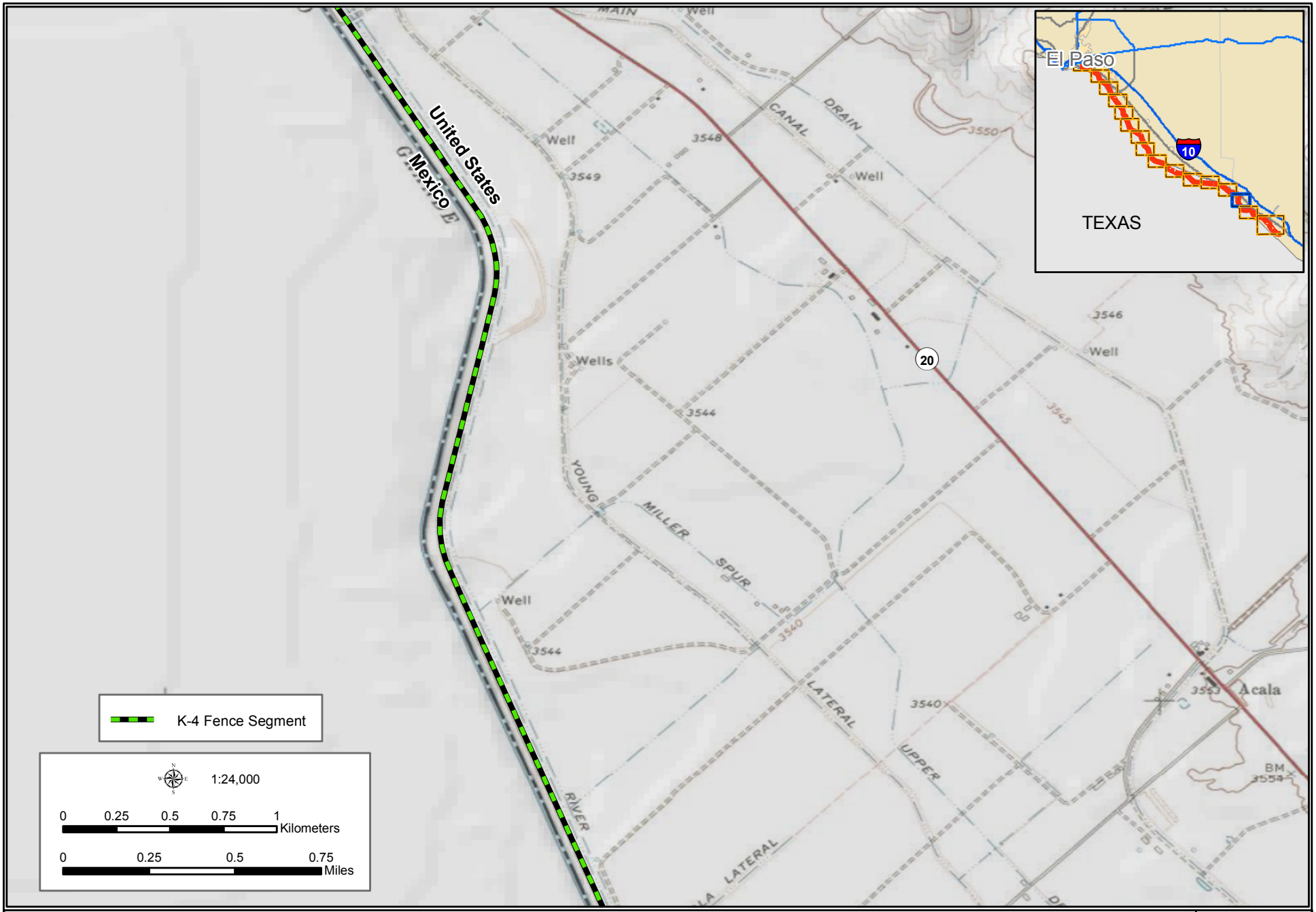

Figure 2-1n: Project Area Map

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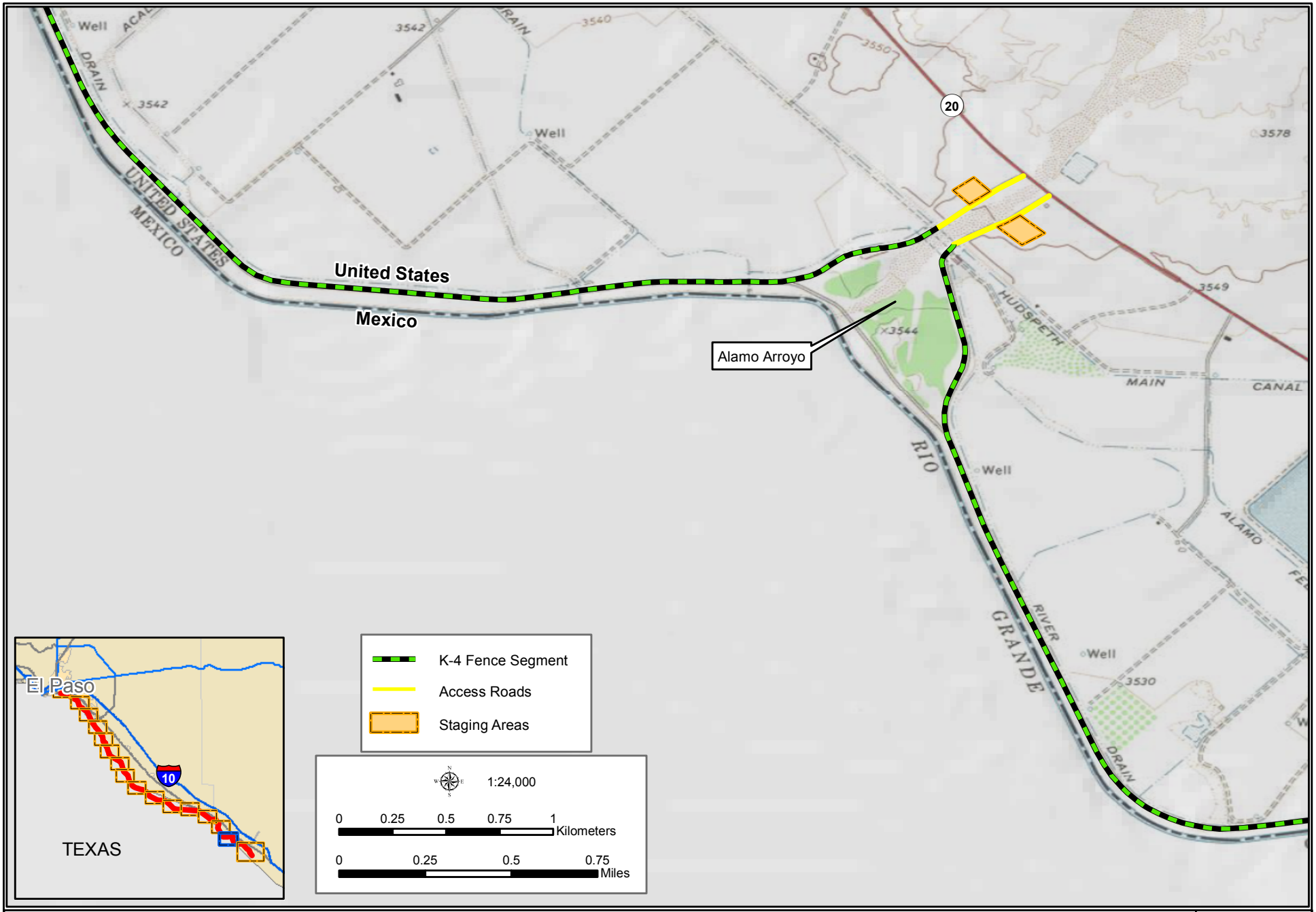

Figure 2-1o: Project Area Map

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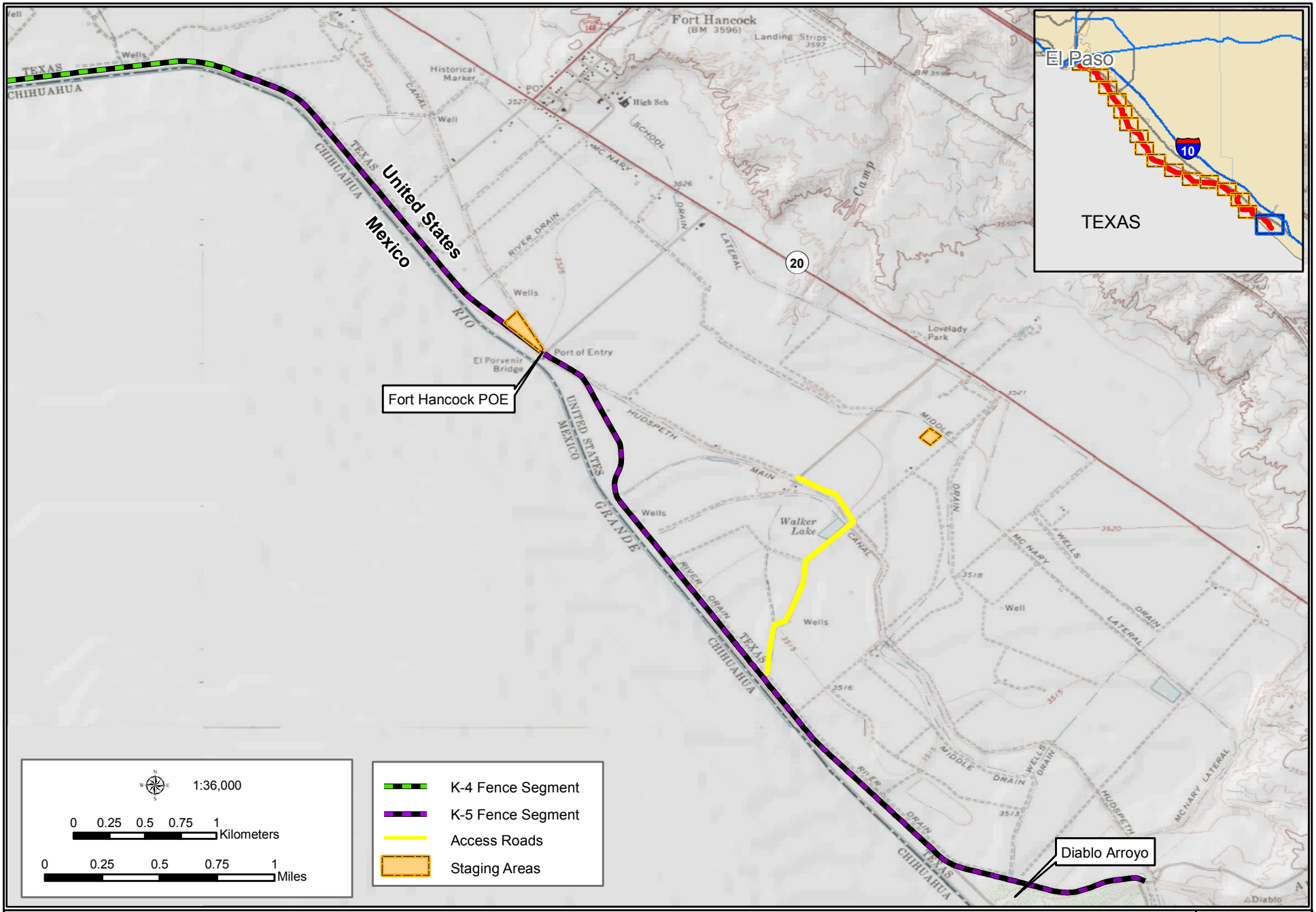

Figure 2-1p: Project Area Map

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Table 2-1, below, presents the general locations and lengths of each section of the proposed fence.

Table 2-1. Proposed Fence Segments for USBP El Paso Sector

Map Number	Border Patrol Station	General Location	Land Ownership	Length (mi) of Fence Segment
K-2A	El Paso	El Paso, west of Ascarate Park to Rio Bosque	USIBWC	9.6
K-2B&C	Ysleta/Fabens	Rio Bosque to 1 mile west of Fabens POE	USIBWC	19.42
K-3	Fabens	1 mile west of Fabens POE to 8.2 miles east of Fabens POE	USIBWC	9.02
K-4	Fabens/Fort Hancock	8.2 miles east of Fabens POE to 1.5 miles west of Ft. Hancock POE	USIBWC	13.48
K-5	Fort Hancock	1.5 miles west of Ft. Hancock POE to 2.8 miles east of Ft. Hancock POE	USIBWC	5.21
Total				56.73

2.2.10 Floating Foundation Fence Alternative

This alternative would install a fence constructed to the same performance specifications as the Proposed Action Alternative. The fence would be pre-fabricated in modular sections off-site, and would be transported in sections to the work site, and placed and secured along the top of the levee with no ground disturbance other than leveling the surface for placement. A road parallel to the fence would be cast into each modular foundation segment, and would be integral to the design. The lights, bridges and road improvements would occur as described in the Proposed Action Alternative. A schematic diagram of the Floating Foundation Fence Alternative design is shown in Figure 1-3. The included hard surface road may limit use of some USIBWC equipment and may limit vehicle ingress and egress from the road due to its location on top of the levee. USBP might need to implement this alternative at some point in the future, in the event an agreement between USIBWC, EPCWID1, HCCRD1 and CBP cannot be reached in a timely fashion for the construction of the Proposed Action Alternative. Thus, it is carried forward as a viable action alternative. The Floating Foundation Fence Alternative could also be used interchangeably with the Proposed Action, as necessary, in any section of the project corridor.

2.2.11 No Action Alternative

CEQ regulations require inclusion of the No Action Alternative. Under the No Action Alternative, the lights, fence, bridges and road improvements would not be constructed. Implementation of the No Action Alternative would not meet the USBP mission or operational needs. The No Action Alternative will serve as a baseline against which the impacts of the other action alternatives can be evaluated.

2.3 IDENTIFICATION OF THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

CEQ's implementing regulation 40 CFR 1502.14(c) instructs NEPA preparers to "Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference." USBP has identified its Preferred Alternative as the Proposed Action Alternative. Throughout the remainder of this EA, Preferred Alternative and Proposed Action Alternative are synonymous.

Implementation of Proposed Action Alternative would meet USBP's purpose and need described in Section 1.2. The No Action Alternative would not meet USBP's purpose and need. The Floating Foundation Fence Alternative would meet USBP's purpose and need, but would have greater operational issues for both USIBWC and USBP compared to the Proposed Action Alternative. As indicated above, the Floating Foundation Fence Alternative design could also be used for discrete sections of the project corridor, in lieu of the Proposed Action Alternative design.

2.4 SUMMARY

Table 2-2 provides a matrix of alternatives analyzed and their relationship with the purpose and need for the project. Table 2-3 summarizes the potential impacts to environmental resources for the Proposed Action Alternative, Floating Foundation Fence Alternative and the No Action Alternative.

Table 2-2. Alternatives Matrix

Purpose and Need	No Action Alternative	Proposed Action Alternative	Floating Foundation Fence Alternative
To comply with the Federal legislation.	O	●	●
To provide USBP agents with the tools necessary to prevent terrorists and terrorist weapons from entering the U.S.	O	●	●
To provide a safer work environment for USBP agents.	O	●	●
To enhance the response time of USBP agents and to reduce the flow of illegal drugs.	O	●	●

Legend: O NO ● YES

Table 2-3. Summary of Effects for the Proposed Action Alternative and Other Alternatives

Impacted Resource	No Action Alternative	Proposed Action Alternative	Floating Foundation Fence Alternative
Land Use	No adverse effects	There would be no change in land use, and no adverse effects.	There would be no change in land use, and no adverse effects.
Water Resources	No adverse effects	There are no WUS in the project footprint, no wetlands in project area, no significant increase in water resources demand, and BMPs would minimize erosion and surface water effects.	There are no WUS in the project footprint, no wetlands in project area, no significant increase in water resources demand, and BMPs would minimize erosion and surface water effects.
Native Vegetation	No adverse effects	The area is already highly disturbed, and vegetation would re-colonize, thus, there would be no long-term effects.	The area is already highly disturbed, and vegetation would re-colonize, thus, there would be no long-term effects.
Common Wildlife Species	No adverse effects	The wildlife habitat is highly disturbed, thus there would be negligible effects.	The wildlife habitat is highly disturbed, thus there would be negligible effects.
Threatened/Endangered Species	No adverse effects	Habitat in the project area is highly disturbed, and no listed species are present, thus there would be no adverse effects. Lights would be designed and installed to avoid illumination of the riparian areas along the Rio Grande.	Habitat in the project area is highly disturbed, and no listed species are present, thus there would be no adverse effects. Lights would be designed and installed to avoid illumination of the riparian areas along the Rio Grande.
Cultural Resources	No adverse effects	The area is heavily disturbed, and no adverse effects are anticipated.	The area is heavily disturbed, and no adverse effects are anticipated.
Air Quality	No adverse effects	The area is rural, effects would be temporary and negligible, BMPs would minimize adverse effects.	The area is rural, effects would be temporary and negligible, BMPs would minimize adverse effects.
Noise	No adverse effects	Portions of the project corridor are adjacent to sensitive receptors; however, BMPs would reduce adverse effects to less than significant.	Portions of the project corridor are adjacent to sensitive receptors; however, BMPs would reduce adverse effects to less than significant.
Utilities and Infrastructure	No adverse effects	No significant effects	No significant effects
Aesthetics	No adverse effects	Effects would be negligible due to remote site locations and existing visual impacts.	Effects would be negligible due to remote site locations and existing visual impacts.
Socioeconomics	No adverse effects	No adverse effects would occur.	No adverse effects would occur.
Hazardous Materials	No adverse effects	No adverse effects would occur, since no hazardous waste is present, and BMPs will be used during construction.	No adverse effects would occur, since no hazardous waste is present, and BMPs will be used during construction.

Table 2-3 continued

Impacted Resource	No Action Alternative	Proposed Action Alternative	Floating Foundation Fence Alternative
Human Health and Safety	Long-term adverse effects for USBP and general public	There would be long-term beneficial effects for USBP and the general public.	There would be long-term beneficial effects for USBP and the general public.
Cumulative Effects	Adverse cumulative effects on crime rate and public safety	Minor cumulative effects would occur due to construction of all USBP projects.	Minor cumulative effects would occur due to construction of all USBP projects.

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SECTION 3.0
AFFECTED ENVIRONMENT AND CONSEQUENCES

3.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

3.1 PRELIMINARY IMPACT SCOPING

This section of the EA describes the existing natural and human environment in the study corridor within El Paso and Hudspeth counties. All of the proposed infrastructure projects would take place in previously disturbed areas between the Rio Grande and the canal (see Figure 1-2). Where data for resources are typically provided on a county-wide basis (e.g., socioeconomics), the affected environments for those resources are described by county. Otherwise, where possible, resources were described for the project corridor.

Data were derived from the most recent sources (e.g., land use maps, soil surveys, groundwater basin maps), and all area calculations for resource categories were conducted by overlaying the boundaries of the projects in the project corridor on to the data source and determining the area of the affected resource category in Geographic Information Systems (GIS).

Impacts to the human and natural environment can be characterized as beneficial or adverse, and can be direct or indirect based upon the result of the action. Impacts are also characterized as being permanent or temporary, where temporary impacts are defined as those that occur immediately during or after construction, and permanent impacts are those caused by the placement, use, and operation of infrastructure.

Impacts can vary in magnitude from a slight to a total change in the environment. The impact analysis presented in this EA is based upon existing regulatory standards, scientific and environmental knowledge and best professional opinions. The impacts on each resource are described as significant, moderate, minor (minimal), insignificant or no impact. Significant impacts are those effects that would result in substantial changes to the environment (as defined by 40 CFR -1508.27). All impacts described are adverse unless otherwise noted.

Only those parameters and resources that have the potential to be affected by the Proposed Action Alternative, Floating Foundation Fence Alternative or the No Action Alternative are described. The resources listed below would not be affected by any of the alternatives considered in this EA, and therefore will not be discussed further:

Physiography

The physiography of the project area was discussed in the 2006 PEA (USBP 2006), and that discussion is incorporated herein by reference. The topography of the project area is generally flat, associated with the floodplain of the Rio Grande. Man-made alterations to the topography consist of the EPCWID1 and HCCRD1 canals which are excavated and maintained on the U.S. side of the river, and the USIBWC levee which separates the canals from the Rio Grande floodplain. Practically the entire landscape within the project area is altered to some degree by development. No alteration of the topography of the project area would occur as a result of the Proposed Action Alternative; therefore, physiography impacts will not be discussed further.

Geology and Soils

Geological resources include physical surface and subsurface features of the earth such as geological formations, and the seismic activity of the area. The Proposed Action Alternative and Floating Foundation Fence Alternative involve only disturbances to the topsoil layers, and in the case of creating holes for either fence posts or light poles, the impacts will occur to only a very small surface area, not substantially altering the geology of the region. Additionally, all roads proposed for improvement within the project corridor are preexisting, and would, therefore, not require substantial modifications to the area's topography (i.e., road cuts). There are no critical geologic resources or sensitive seismic areas located in the vicinity of the project corridor; therefore, geologic resources will not be discussed further.

Soil components within the project area were described in the 2006 PEA (USBP 2006), and those descriptions are incorporated herein by reference. Soils in the project area consist of fine sandy and silty clay loams associated with the Rio Grande floodplain. All

of the soils have been disturbed by canal excavation, levee and road construction, and general grading and leveling of the area around the river and the canals. On the U.S. side of the canal system, the soils are tilled and irrigated in rural areas for agricultural crop production. No unique or prime farmland soils are located within the project corridor, and soils in staging areas outside the construction corridor would not be permanently disturbed; therefore soils and soil impacts will not be discussed further.

Climate

None of the alternatives considered in this EA would affect or be affected by climate, so climate impacts will not be discussed further.

Roadways/Traffic

All of the activities proposed by the Proposed Action Alternative and Floating Foundation Fence Alternative would take place on the levees and canals along the U.S.-Mexico border, and no activities would take place on public roadways, other than normal transport of goods and personnel on an intermittent basis. Therefore, impacts to roadways and traffic will not be discussed further.

Communications

None of the action alternatives would affect communications systems in the area.

Sustainability and Greening

EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management* (January 24, 2007) promotes environmental practices, including acquisition of bio-based products, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and maintenance of cost-effective waste prevention and recycling programs in government facilities. The Proposed Action Alternative would use minimal amounts of resources during construction and maintenance and there would be minimal changes in USBP operations. Therefore, the Proposed Action Alternative would have negligible impacts on sustainability and greening.

Wild and Scenic Rivers

None of the alternatives would affect any designated Wild and Scenic Rivers because no rivers designated as such are located within or near the project corridor.

3.2 LAND USE

3.2.1 Affected Environment

The entire project corridor is owned and maintained by USIBWC, EPCWID1 and HCCRD1. It is maintained for flood control and irrigation water diversion, and the general public does not generally access the area, except in the adjacent Rio Bosque Wetland Park. The adjacent areas on the U.S. side of the EPCWID1 and HCCRD1 canals range from developed residential and commercial/industrial property in the City of El Paso to tilled and irrigated agricultural land south and east of the city in El Paso County. In Hudspeth County, the adjacent areas on the U.S. side of the levee and canal are tilled and irrigated agricultural land.

3.2.2 Environmental Consequences

3.2.2.1 No Action Alternative

The No Action Alternative would have no direct adverse impacts, since no fence or lighting would be installed, and no new bridges would be constructed.

3.2.2.2 Proposed Action Alternative

The Proposed Action Alternative would occur within the property owned and managed by USIBWC, EPCWID1 and HCCRD1, and currently used for USBP enforcement activities; therefore, the proposed use is compatible with the existing land use, and no direct effect on land use in the region would occur. Indirect beneficial effects would occur due to reduced illegal traffic from crossing IAs and resulting damage to adjacent agricultural fields.

3.2.2.3 Floating Foundation Fence Alternative

The Floating Foundation Fence Alternative would also occur within property owned and managed by USIBWC, EPCWID1 and HCCRD1, and currently used for USBP enforcement activities; therefore, the proposed use is compatible with the existing land use, and no direct effect on land use in the region would occur. Indirect beneficial effects would occur due to reduced illegal traffic from crossing IAs and resulting damage to agricultural fields.

3.3 HYDROLOGY AND GROUNDWATER

3.3.1 Affected Environment

Subsurface aquifers within the project area were described and discussed in the 2006 PEA (USBP 2006), and those descriptions and discussions are incorporated herein by reference.

Subsurface water resources within the project area are found in the Hueco Basin, which is recharged by storm water, and in the Rio Grande aquifer system, which is recharged by stream flow originating as precipitation in the mountains of Colorado and northern New Mexico, as well as by irrigation-return recharge. The primary loss of subsurface water resources in the project area is through wells which extract groundwater for municipal and irrigation uses.

The average daily water demand for the City of El Paso was 97 million gallons per day in 2006 (El Paso Water Utilities 2007), and annual water use in El Paso County and Hudspeth County was 11.1 billion gallons and 5.5 billion gallons, respectively, in 2004 (Texas Water Development Board 2007). Available water supply for El Paso County in 2005 was 49 billion gallons, and for the lower portion of Hudspeth County it was approximately 200 billion gallons. Neither county is experiencing water shortages due to excess demand over water supply.

3.3.2 Environmental Consequences

3.3.2.1 No Action Alternative

There would be no additional use of subsurface water resources.

3.3.2.2 Proposed Action Alternative

Local subsurface water resources would be utilized for dust control and all-weather surfacing of roads in the project area, and water would be obtained from existing suppliers. Water would also be used for mixing and preparing concrete used to construct the fence footings and to install the light standards. It is estimated that approximately 12 to 14 million gallons of water would be used over the 56.7-mile length of the project during the course of construction (approximately 2 years). Because the water required for the Proposed Action Alternative would be considered insignificant when compared to the very large average water use and availability of the City of El Paso and El Paso and Hudspeth counties, and the increased water use would be temporary during the construction period, no significant impact on water resources would result from implementation of the Proposed Action Alternative.

3.3.2.3 Floating Foundation Fence Alternative

Groundwater resources impacts for implementation of the Floating Foundation Fence Alternative would be similar to or slightly greater than those described above for the Proposed Action Alternative, but impacts would still be insignificant. It is anticipated that more concrete would be used, resulting in more water required for the fence portion of the project. However, it has not been decided where the construction of the fence/road pre-cast sections would take place, and construction could take place outside of the region.

3.4 SURFACE WATERS AND WATERS OF THE U.S.

3.4.1 Affected Environment

Surface water resources in the area consist of the Rio Grande and various canals which divert the river water flow for irrigation and flood control purposes. The Rio Grande is

located adjacent to, but not within, the project corridor. The EPCWID1 and HCCRD1 canals are located directly adjacent to the project area, and would be crossed by the eight proposed bridges. No waters of the U.S. (WUS) are located within the project corridor.

The only wetlands in the vicinity of the project area are found in the Rio Grande, the Rio Bosque Wetland Park, the Alamo Arroyo near Fort Hancock and the Diablo Arroyo at the east end of the project corridor. None of these wetland areas are located within the proposed project construction footprint; however, the Rio Bosque Wetland Park, the Alamo Arroyo and the Diablo Arroyo are located adjacent to the project corridor.

3.4.2 Environmental Consequences

3.4.2.1 No Action Alternative

Under the No Action Alternative, no new infrastructure would be constructed in the project area, and there would be no impacts to surface water resources and wetlands.

3.4.2.2 Proposed Action Alternative

The Proposed Action Alternative is not expected to directly impact surface water resources, and no activities would take place in jurisdictional WUS, including wetlands. No construction is planned within Alamo Arroyo or Diablo Arroyo that would require fill within the jurisdictional portions of these drainages. A Storm Water Pollution Prevention Plan (SWPPP) would be prepared prior to construction, and BMPs would be implemented in order to minimize impacts to surface water resources resulting from erosion during construction or fluids spills/leaks from construction equipment. Therefore, impacts to surface water resources would be minimal.

3.4.2.3 Floating Foundation Fence Alternative

Surface water resources impacts from the implementation of this alternative would be similar to those described above for the Proposed Action Alternative.

3.5 FLOODPLAINS

3.5.1 Affected Environment

The current floodplain of the Rio Grande on the U.S. side of the river is defined by the Rio Grande and the USIBWC flood control levee. The floodplain is characterized by relatively flat ground, vegetated by various bunch-type grasses and invasive species which are routinely mowed by USIBWC for flood control, and to improve visibility for USBP operations. The only natural vegetation remaining in the floodplain is a narrow strip of riparian vegetation immediately adjacent to the Rio Grande. A dirt road runs along the unprotected side of the levee within the floodplain.

Pursuant to the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001 et seq.), and the Flood Disaster Protection Act of 1973 (P.L. 93-234, 87 Stat. 975), EO 11988, Floodplain Management, requires that each Federal agency take actions to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and preserve the beneficial values which floodplains serve. EO 11988 requires that agencies evaluate the potential effects of actions within a floodplain and to avoid floodplains unless the agency determines that there is no practicable alternative. Where the only practicable alternative is to site in a floodplain, a planning process is followed to insure compliance with EO 11988. This process includes the following steps:

- Determination of whether or not the action is in the regulatory floodplain;
- conduct early public notice;
- identify and evaluate practicable alternatives, if any;
- identify impacts of the action;
- minimize the impacts;
- reevaluate alternatives;
- present the findings and a public explanation; and
- implementation of the action.

This process is further outlined on the Federal Emergency Management Agency's (FEMA), Environmental Planning and Historic Preservation Program web site (FEMA 2006). As a planning tool, the NEPA process incorporates floodplain management

through analysis and public coordination, ensuring that the floodplain management planning process is adhered to. In addition, floodplains are managed at the local municipal level through the assistance and oversight of FEMA.

3.5.2 Environmental Consequences

3.5.2.1 No Action Alternative

Because no construction activities would take place under the No Action Alternative, there would be no impacts to the Rio Grande floodplain.

3.5.2.2 Proposed Action Alternative

The Proposed Action Alternative would install light poles within the Rio Grande floodplain at the base of the USIBWC levee. The poles would not impede flood water flow within the floodplain, and would not impact the integrity of the levee, so floodplain impacts would be minimal. Installation of the light standards on the levee would result in increased risks of levee failure. Installation of the lights north of the levee would require that the lights be substantially more powerful to provide an equivalent level of illumination within the floodplain, where it is needed for enforcement and safety reasons. This would result in much larger area illuminated and a higher potential for light trespass into sensitive areas (e.g. Rio Bosque Wetland Park) and residential areas. Thus, installation within the floodplain is the only practicable alternative. Some equipment or material staging could occur within the Rio Grande floodplain as well, but this would be temporary, and no equipment or materials would be left during high water events. All other activities (installation of fence and bridges) would occur outside of the floodplain.

3.5.2.3 Floating Foundation Fence Alternative

Floodplain impacts for the Floating Foundation Fence Alternative would be the same as for the Proposed Action Alternative.

3.6 VEGETATIVE HABITAT

3.6.1 Affected Environment

A general vegetation species survey conducted by the USACE on a portion of the project corridor was completed on February 4, 2003. Vegetation observed consisted mainly of bunch-type grasses, Russian thistle (*Salsola kali*), saltcedar (*Tamarix ramisissima*), dandelion (*Taraxacum* spp.), and cottonwood (*Populus* spp.). Various willows (*Salix* spp.) were located within the floodplain of the Rio Grande adjacent to the river.

A second vegetation species survey was conducted on January 17, 2007. In addition to those species identified above, vegetation observed included the following: tree cholla (*Opuntia imbricata*), four-winged saltbush (*Atriplex canescens*), mesquite *(Prosopsis* sp.), cattail (*Typha* sp.) and prickly pear (*Opuntia* spp.).

The levee system grasses are mowed regularly to ensure suitable design flood features and slope protection, and to provide clearance for maintenance equipment and USBP vehicles. The banks and bed of the EPCWID1 and HCCRD1 canals are regularly maintained by dredging to remove excess sediment and debris, and to clear bank vegetation to improve flow characteristics. Vegetation between the canal and the river has been either cut and removed, or is routinely mowed to provide visibility for USBP operations. Only a very narrow riparian corridor (approximately 0-8 feet wide) remains along the top banks of the Rio Grande.

The Rio Bosque Wetland Park is a wetland restoration project constructed in 1997, and managed by the University of Texas at El Paso (UTEP) (Photograph 3-1). The bosque area was restored, and wetland hydrology was introduced through a series of channels and basins connected to the adjacent irrigation canals. The park now supports a wide variety of native wetland and riverside flora (UTEP-Center for Environmental Resource Management [CERM] 2007).

Photograph 3-1. Rio Bosque view from the USIBWC levee

3.6.2 Environmental Consequences

3.6.2.1 No Action Alternative

The No Action Alternative would preclude any construction or installation of TI, so there would be no impacts to vegetative habitat.

3.6.2.2 Proposed Action Alternative

Because the project corridor has already been disturbed from levee and canal construction, impacts to native vegetation would be negligible. Construction activities which would disturb vegetation would be kept to a minimum, and existing vegetation would be left in place wherever possible. Temporarily disturbed areas along the construction access roads in the Rio Grande floodplain and in the temporary staging areas would be allowed to revegetate naturally, and no herbicides would be used. No activities would take place within the Rio Bosque Wetland Park, the Alamo Arroyo or the Diablo Arroyo. Beneficial, indirect effects on the Rio Bosque Wetland Park would be expected as illegal traffic through the park is reduced or eliminated once the TI is completed.

3.6.2.3 Floating Foundation Fence Alternative

Vegetative habitat impacts resulting from the Floating Foundation Fence Alternative would be minimal, since the fence would be placed on top of the levee with no vegetated ground disturbance

3.7 WILDLIFE AND AQUATIC RESOURCES

3.7.1 Affected Environment

A general animal species survey was conducted by USACE on February 4, 2003. Animal species observed during the survey consisted of: redtail hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), great blue heron (*Ardea herodias*), cattle egret (*Bubulcus ibis*), muskrat (*Ondantra zibethicus*), peregrine falcon (*Falco peregrinus*), common black hawk (*Buteogallus anthracinus*), greater roadrunner (*Geococcyx californianus*), northern goshhawk (*Accipiter gentiles*), mallard (*Anas platyrhynchos*), black-tailed jackrabbit (*Lepus californicus*), blue-winged teal (*Anas discors*), mule deer (*Odocoileus hemionus*) tracks, and fox (*Vulpes spp.* or *Urocyon cinereoargenteus*) tracks. A group of wading birds and raptors (no owls) of varying color phases and sizes were observed, but positive identifications of these were not made.

In the January 17, 2007 survey, conducted by GSRC, species observed included mallard, Swainson's hawk (*Buteo swansoni*), killdeer (*Charadrius vociferus*), northern harrier (*Circus cyaneus*), wood duck (*Aix sponsa*), Chihuahuan raven (*Corvus cryptoleucus)*, loggerhead shrike (*Lanius ludoviscianus*), American kestrel, great-tailed grackle (*Quiscalus mexicanus*), cattle egret, mourning dove (*Zenaida macroura*), great blue heron and common moorhen (*Gallinule chloropus*).

Burrowing owls (*Athene cunicularia*) have been observed by USBP agents and during surveys of the levee by USIBWC personnel (USIBWC 2007). This species may use existing burrows in the levee flanks year around. The burrows might also be used for nesting.

Within the Rio Bosque Wetland Park, over 216 species of birds utilize the park wetland areas, including 39 species of conservation concern (UTEP-CERM 2007).

There are no aquatic resources within the project corridor. The water in the irrigation canals is pumped from the river and screened. In addition, the canals are sometimes dry during droughts and non-irrigation seasons, and thus would not support a viable aquatic fauna population.

3.7.2 Environmental Consequences

3.7.2.1 No Action Alternative

Under the No Action Alternative, no construction would take place; therefore, there would be no impacts to wildlife.

3.7.2.2 Proposed Action Alternative

Direct impacts to wildlife resulting from the operation of the high intensity lighting at night could potentially occur. Approximately 21 additional miles of the floodplain along the Rio Grande would be illuminated under this alternative. The increase in lights along the border could also produce some long-term behavioral effects, although the magnitude of these effects in some areas is not presently known. Artificial lighting can disrupt terrestrial animal dispersal movement or increase the risk of a small animal being killed by a predator; however, many animals would simply choose to move away from the lights (Beier 2006).

The use of high pressure sodium vapor lamps does not attract insects to the extent of mercury vapor lamps. These lamps will still attract bats to forage, but the light–attracted insects would be impacted to a lesser extent (Rydell 2006). Artificial lighting may influence species movements or impact migration corridors; however, for species that are susceptible to light attraction or disorientation, shielding would reduce the impact to less than significant levels (Longcore and Rich 2006).

An illumination study was prepared by EPE detailing the contours for illumination levels of the proposed lights. The results of this study can be found in Appendix B. The lights would be spaced 125 to 150 feet apart and are back shielded so that the illumination is directed forward and downward away from the levee. Furthermore, the design of the lighting is such that it would only illuminate 175 feet in front of the lights. The Rio Grande is approximately 230 feet from the lighting source, leaving approximately 50 feet of the Rio Grande floodplain closest to the river illuminated only by natural light. The lighting system is also designed in such a way that the lights will not illuminate the top of the levee or behind it; therefore, there would be no impacts to wildlife north of the levee or beyond 175 feet south of the lights.

Short-term construction activities may temporarily disturb wildlife on adjacent properties; the levees and existing agricultural fields within and adjacent to the project area provide suitable habitat for burrowing owls. If construction activities begin between March 1 and September 1, a field survey would be conducted by a qualified biologist to determine if active burrowing owl nests are present in the construction zone or within a buffer of 150 meters (approximately 500 feet). If no active nests are found during the survey, construction activities may proceed. Also, mitigation measures identified in Section 5.0 would be implemented and the birds would be relocated to habitat outside of the project area, thus, avoiding a significant impact to the owls.

Species that could be affected by construction noise would include passerine birds, such as song sparrow (*Melospiza melodia*), black-throated sparrow (*Amphispiza bilineata*) or western kingbird (*Tyrannus veticalis*); and small mammals such as kangaroo rats (*Dipodomys* spp.), ground squirrels (*Spermophilus* spp.) or striped skunk (*Mephitis mephitis*). Since the highest period of movement for most wildlife species occurs during night time or low daylight hours, and construction activities would be conducted during daylight hours to the maximum extent practicable, temporary noise impacts on wildlife species are expected to be insignificant.

Noise generated during construction would impact wildlife resources in the Rio Bosque Wetland Park; however, attenuation of noise levels prior to reaching the Rio Grande riparian corridor would reduce impacts to wildlife in the riparian corridor to less than a significant level, and the impacts would be temporary.

To comply with the MBTA, additional surveys for nesting migratory birds would occur during the typical nesting season (February 15 through September 15), and active nests would be marked and avoided to the extent practical.

The presence of a continuous canal north of the USIBWC levee, in addition to the Rio Grande, constitutes an existing impediment to the migration of terrestrial wildlife north from Mexico. Furthermore, the heavily developed and populated areas south of the Rio Grande in Mexico would also discourage wildlife migration from north to south in the project area. Therefore, the addition of a fence south of the canal would not significantly increase impediments to north-south migration of terrestrial wildlife in the area.

3.7.2.3 Floating Foundation Fence Alternative

Wildlife impacts resulting from the Floating Foundation Fence Alternative would be the same as the Proposed Action Alternative.

3.8 THREATENED AND ENDANGERED SPECIES

3.8.1 Affected Environment

The Federally threatened and endangered species section for El Paso County is herein incorporated by reference from the 2006 PEA (USBP 2006). There are five Federally endangered (E) and threatened (T) species known to occur in the El Paso area, and two of those species (Northern aplomado falcon and Southwestern willow flycatcher) also occur in Hudspeth County. A list of these species is presented in Table 3-1.

Table 3-1. Federally Listed Species for El Paso County, Texas.

Common Name	Scientific Name	Federal Status
Plants		
Sneed's pincushion cactus	*Coryphantha sneedii var. sneedii*	E
Birds		
Northern aplomado falcon**	*Falco femoralis septentrionalis*	E
Interior least tern	*Sterna antillarum*	E
Southwestern willow flycatcher**	*Empidonax traillii extimus*	E
Mexican spotted owl**	*Strix occidentalis lucida*	T

** Also listed for Hudspeth County, Texas

The Sneed's pincushion cactus grows on limestone ledges at elevations between 3,900 to 7,000 feet above mean sea level. The northern aplomado falcon prefers open grasslands terrain with relatively low ground cover and scattered shrubs and yucca for nesting. The interior least tern, although preferring nearly bare ground for nesting, has had its habitat severely disturbed by channelization projects and constant traffic associated with urban areas. Suitable habitat may occur for the interior least tern and the southwestern willow flycatcher intermittently along the Rio Grande adjacent to the project corridor. Finally, no preferred habitat exists within the project limits for the Mexican spotted owl, which prefers remote, shaded canyons of coniferous mountain woodlands (pine and fir).

The state threatened and endangered species section for El Paso County is herein incorporated by reference from the 2006 PEA (USBP 2006), and several of the listed species also occur in Hudspeth County. Many of the species listed as endangered or threatened by TPWD for El Paso and Hudspeth counties would not occur in the study area. There are two endangered state listed species that possibly occur in the project area; the interior least tern and the southwestern willow flycatcher, and their habitat and occurrence were described above. In addition, the Texas horned lizard (*Phrynosoma cornutum*), listed as threatened, may occur in the project corridor. The Big Bend slider (*Trachemys gaigeae*) and the western burrowing owl may occur in the project corridor, and are listed as rare, but with no regulatory listing status (TPWD 2006).

3.8.2 Environmental Consequences

3.8.2.1 No Action Alternative

The No Action Alternative would have no direct adverse impacts to threatened and endangered species, since no additional TI would be constructed.

3.8.2.2 Proposed Action Alternative

No Federally threatened or endangered species were observed within the project area during the biological surveys performed in 2003 and 2007. Also, no designated critical habitat for any protected species occurs within the project corridor. Since the artificial lighting would not reach the Rio Grande riparian corridor, there would be no effect to the southwest willow flycatcher or the interior least tern.

Noise generated during construction of the lights would temporarily increase in the area north of the Rio Grande riparian corridor; however, the amount of noise reaching the river would be between 65 and 75 dBA (A-weighted decibel, see Section 3.11) at a maximum on an intermittent basis, and would not constitute a significant impact on bird species that might be present in the riparian corridor. Construction of the fence would occur on the north side of the USIBWC levee, and the levee would help to shield the Rio Grande riparian corridor from excess noise during construction.

Open holes during construction would be checked each day for Texas horned lizards, and any lizards or other wildlife species found would be removed. Mitigation measures described in Section 3.7.2 above would be implemented to avoid impacts to burrowing owls.

3.8.2.3 Floating Foundation Fence Alternative

Impacts to threatened and endangered species resulting from the Floating Foundation Fence Alternative would be the same as the Proposed Action Alternative.

3.9 CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES

3.9.1 Affected Environment

An overview of the cultural resources history of the project area was presented in the 2006 PEA (USBP 2006), and that discussion is incorporated herein by reference. Preliminary investigations of the files at the Texas Archaeological Research Laboratory indicated that portions of the project cross the features of the EPCWID1 Historic District and sites 41EP4678 and 41EP4679, the Riverside Intercepting Drain and Riverside Canal, respectively. The EPCWID1 Historic District has been listed on the National Register of Historic Places (NRHP) under criteria A and C. Both 41EP4678 and 41EP4679 are recommended potentially eligible under criterion A.

Given that the area of the proposed infrastructure has been previously and deeply disturbed by the construction of the USIBWC levee and the EPCWID1 and HCCRD1 irrigation canals, there is a low probability for intact prehistoric cultural deposits in the project area.

The Ysleta del Sur Pueblo requires an unlighted landscape near the Rio Grande for tribal ceremonies. A MOA between USBP and the Tribe signed in 2005 requires switches on banks of the lights near their ceremonial areas so that the lights can be turned off when necessary. A new MOA would need to be negotiated with the Ysleta de Sur Pueblo to address the added length of the project corridor and the addition of primary pedestrian fence to the Proposed Action.

3.9.2 Environmental Consequences

3.9.2.1 No Action Alternative

Under the No Action Alternative no ground disturbance would take place within the project area; therefore, no impacts to cultural resources would occur.

3.9.2.2 Proposed Action Alternative

Implementation of the Proposed Action Alternative would result in ground disturbance in the form of excavation of the toe of the levee to accept placement of the fence foundations, use of temporary staging areas during construction, and excavation within the project area to install light poles; however, all of the ground surface within the project area has already been disturbed by construction of the USIBWC levee, the EPCWID1 and HCCRD1 canals and numerous dirt roads. The likelihood for discovery of any intact prehistoric cultural material is very remote.

Archaeological monitoring during the installation of all light poles and fence foundations within the project corridor would be conducted to ensure no deeply buried archaeological deposits would be impacted during the installation of the lights and fence. Should any deeply buried resources be discovered, work would cease in the area of the discovery until an archaeologist can determine the significance of the resource. The Texas State Historic Preservation Officer (SHPO) would be contacted, and a mitigation plan prepared, if necessary.

It is not anticipated that the proposed infrastructure installation would impact the integrity of the EPCWID1 Historic District. Replacement of the bridges over the irrigation systems would occur in areas where pre-existing bridges have deteriorated or been removed, and that are noted as ancillary structures in the EPCWID1 Historic District form. Other bridge placement locations are at the ends of existing roads where canal crossovers would be logically placed. SHPO would be allowed to review the proposed bridge designs to be sure that they do not diminish the integrity of the Historic District.

Given that the area of the proposed infrastructure has been previously disturbed in the past by the construction of the USIBWC levee and EPCWID1 and HCCRD1 canals, there is a low probability for intact buried cultural deposits. Furthermore, an archaeological monitor will be present during the installation of all lights and fence foundations. Therefore, no adverse impacts to historic properties are anticipated from

implementation of the Proposed Action Alternative. Additionally, the Section 106 process will be completed, and concurrence from SHPO will be received prior to construction (see correspondence in Appendix D).

In order to prevent interference with Ysleta del Sur Pueblo ceremonial activities along the river, sections of the lights would be equipped with switches to allow them to be turned off when necessary, as required by the MOA between CBP and the Tribe.

3.9.2.3 Floating Foundation Fence Alternative

The placement of the fence on the top of the levee would be done so that it would not impact the structural integrity of the irrigation systems, and would provide protection for the irrigation systems from illegal vehicle and pedestrian traffic through the area. Impacts to cultural resources as a result of implementation of the Floating Foundation Fence Alternative would be the same as described above for the Proposed Action Alternative. All activities would occur in previously disturbed areas, and the likelihood for discovery of any intact prehistoric cultural material is very remote.

3.10 AIR QUALITY

3.10.1 Affected Environment

Federal and state standards for air quality and the status of air quality within the project corridor were discussed in the 2006 PEA (USBP 2006), and those discussions and definitions are incorporated herein by reference.

El Paso County is classified as a non-attainment area for the particulate matter (PM-10) and carbon monoxide (CO) air quality standards. PM-10 are small particles (less than 10 micrometers) in the air that originate from internal combustion engines, unpaved roads, fires, and dry exposed soils that are disturbed during construction activities. Hudspeth County is classified as an attainment area for all air quality standards.

Exposure to PM-10 can lead to detrimental health effects such as:

- Coughing, wheezing, shortness of breath
- Aggravated asthma
- Lung damage (including decreased lung function and lifelong respiratory disease)
- Premature death in individuals with existing heart or lung diseases

CO is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. When CO enters the bloodstream, it reduces the delivery of oxygen to the body's organs and tissues. Health threats are most serious for those who suffer from cardiovascular disease, particularly those with angina or peripheral vascular disease. Exposure to elevated CO levels can cause impairment of visual perception, manual dexterity, learning ability and performance of complex tasks (EPA 2006).

3.10.2 Environmental Consequences

3.10.2.1 No Action Alternative

No direct impacts to air quality would be expected under the No Action Alternative, since there would be no new construction activities in the project area. There would continue to be fugitive dust from vehicles on the roads along the levee.

3.10.2.2 Proposed Action Alternative

Calculations were performed to estimate the total air emissions from the new construction activities. Calculations were made for standard construction equipment such as bulldozers, excavators, pole trucks, front end loaders, back hoes, cranes, and dump trucks using emission factors from AP-42 Chapter 3 Vol. 1 (EPA 1995).

Fugitive dust calculations were made for disturbing the soils while grading, driving, and building the fence, installing lights, rebuilding bridges and resurfacing the patrol road. Large amounts of dust can arise from the mechanical disturbance of surface soils. Dust generated from these open sources is termed "fugitive" because it is not discharged to the atmosphere in a confined flow stream. Fugitive dust emissions were calculated

using emission factors from Mid-Atlantic Regional Air Management Association (MARAMA 2006).

The total air quality emissions were calculated to determine the applicability of the General Conformity Rule. The General Conformity rule applies to areas that have been designated as a non-attainment zone for an air pollutant, such as the El Paso area. Regulations set forth in 40 CFR 51 Subpart W-Determining Conformity of the General Federal Action to State or Federal Implementation Plans determine if additional permits are needed. According to 40 CFR 51.853(b), Federal actions require a Conformity Determination for each pollutant where the total of direct and indirect emissions in a non-attainment or maintenance area caused by a Federal action would equal or exceed any of the rates (*de minimis* thresholds) in paragraphs 40 CFR 51.853(b)(1) or (2). Assumptions were made regarding the type of equipment, duration of the total number of days each piece of equipment would be used, and the number of hours per day each type of equipment would be used. The assumptions, emission factors, and resulting calculations are presented in Appendix A. A summary of the total emissions are presented in Table 3-2. As can be seen from this table, the proposed construction activities do not exceed *de minimis* thresholds and, thus, do not require a Conformity Determination.

Table 3-2. Total Air Emissions (tons/year) from Construction Activities vs. the *de minimis* Levels

Pollutant	Total	*de minimis* Thresholds
Carbon monoxide (CO)	44.03	100
Particulate matter (PM-10)	20.36	100

Source: 40 CFR 51.853 and GSRC

Impacts from combustible air emissions from USBP traffic and commuting to work are expected to be the same before and after the proposed the installation of lights and resurfacing of the road. Construction workers for the Proposed Action would temporarily increase the combustible emissions in the air shed during their commute to

and from work. Their emissions were calculated in the air emission analysis (Appendix A), and those emissions are included in the totals in Table 3-2.

During the construction of the proposed project, proper and routine maintenance of all vehicles and other construction equipment would be implemented to ensure that emissions are within the design standards of all construction equipment. Dust suppression methods would be implemented to minimize fugitive dust. While there would continue to be dust emissions from USBP and other traffic on the dirt road on the top of the levee, air emissions from the Proposed Action Alternative would be temporary and would not significantly impair air quality in the region.

3.10.2.3 Floating Foundation Fence Alternative

All emissions factors and calculations described above for the Proposed Action Alternative would also apply to the Floating Foundation Fence Alternative. Impacts to air quality would also be temporary and would not significantly impair air quality in the region, since the emissions would not be expected to exceed *de minimis* levels. Since the current dirt road on the top of the USIBWC levee would be replaced by a hard surface road integrated with the new fence foundation, long-term dust emissions due to vehicle traffic on the top of the levee would be expected to be reduced substantially.

3.11 NOISE

3.11.1 Affected Environment

Noise is generally described as unwanted sound, which can be based either on objective effects (i.e., hearing loss, damage to structures, etc.) or subjective judgments (e.g., community annoyance). Sound is usually represented on a logarithmic scale with a unit called the decibel (dB). Sound on the decibel scale is referred to as sound level. The threshold of human hearing is approximately 0 dB, and the threshold of discomfort or pain is around 120 dB. A discussion of noise measurement and classification was presented in the 2006 PEA (USBP 2006), and that discussion is incorporated herein by reference.

Noise levels occurring at night generally produce a greater annoyance than do the same levels occurring during the day. It is generally agreed that people perceive intrusive noise at night as being 10 dBA (A-weighted decibel is a measure of noise at a given, maximum level or constant state level) louder than the same level of intrusive noise during the day, at least in terms of its potential for causing community annoyance. This perception is largely because background environmental sound levels at night in most areas are also about 10 dBA lower than those during the day.

Acceptable noise levels have been established by the U.S. Department of Housing and Urban Development (HUD) for construction activities in residential areas:

- **Acceptable** (not exceeding 65 dB) – The noise exposure may be of some concern but common building construction will make the indoor environment acceptable and the outdoor environment will be reasonably pleasant for recreation and play.
- **Normally Unacceptable** (above 65 but not greater than 75 dB) – The noise exposure is significantly more severe; barriers may be necessary between the site and prominent noise sources to make the outdoor environment acceptable, and; special building constructions may be necessary to ensure that people indoors are sufficiently protected from outdoor noise.
- **Unacceptable** (greater than 75 dB) – The noise exposure at the site is so severe that the construction costs to make the indoor noise environment acceptable may be prohibitive and the outdoor environment would still be unacceptable.

As a general rule of thumb, noise generated by a stationary noise source, or "point source," will decrease by approximately 6dB over hard surfaces and 9dB over soft surfaces for each doubling of the distance. For example, if a noise source produces a noise level of 85 dBA at a reference distance of 50 feet over a hard surface, then the noise level would be 79 dBA at a distance of 100 feet from the noise source, 73 dBA at a distance of 200 feet, and so on. To estimate the attenuation of the noise over a given distance the following relationship is utilized (Department of Environment and Conservation [DEC] New South Wales 2000):

Equation 1: $dBA_2 = dBA_1 - 20 \log^{(d2/d1)}$

Where:

dBA_2 = dBA at distance 2 from source (predicted)

dBA_1 = dBA at distance 1 from source (measured)

d_2 = Distance to location 2 from the source

d_1 = Distance to location 1 from the source

Within the project area there are neighborhoods and parks located adjacent to the project corridor in the northern portion of the project corridor that would constitute receptors for noise generated during construction of the Proposed Action Alternative. The remainder of the project corridor is located adjacent to rural farm land with few noise sensitive receptors nearby.

3.11.2 Environmental Consequences

3.11.2.1 No Action Alternative

Under the No Action Alternative, the noise receptors near the project corridors would not experience additional noise events; however, they would continue to experience ambient noise disturbances in excess of 65 dBA from trains, trucks and cars traveling in the area.

3.11.2.2 Proposed Action Alternative

The project corridor stretches approximately 56.7 miles along the border. About 75 percent of the area is rural or industrial with no sensitive noise receptors. In San Elizario, the project corridor passes within 230 feet of three residential neighborhoods for a total of 2 miles (Figure 3-1d and 3-1e) where there is currently no fence or lights installed. The projection of the noise emissions from construction equipment to the three neighborhoods in San Elizario was determined using equations described previously in Section 3.11.1. Table 3-3 describes noise emission levels for construction equipment which range from 70 dBA to 85 dBA (FHWA 2007).

The Rio Grande riparian corridor is located approximately 230 feet from the project construction corridor, and noise levels reaching the riparian corridor would be temporary and would not exceed 73 dBA. For a discussion of noise impacts to wildlife, see Section 3.7.

Table 3-3. A-Weighted (dBA) Sound Levels of Construction Equipment

dBA	Actual Measured Lmax at a distance of 50 feet
78	Backhoe
81	Crane
76	Dump Truck
81	Excavator
79	Front end loader
73	Generator
79	Concrete mixer truck
85	Auger drill rig
82	Bull dozer

Source: Dept. of Transportation Federal Highway Administration 2007

Assuming the worst case scenario of 85 dBA, the noise model projected that noise levels of 85 dBA from construction equipment would have to travel 500 feet before it would attenuate to acceptable levels of 65 dBA. The distance of the nearest residential properties to the project corridor is approximately 230 feet; thus a portion of these residential properties would experience Normally Unacceptable (less than 75 dBA and greater than 65 dBA) noise levels of 72 dBA during construction activities. Figures 3-1d and 3-1e show modeled noise projections emitting from construction equipment and the distance that noise will travel before it attenuates to 75 dBA and 65 dBA (Acceptable).

The construction activities are expected to create noise impacts above Acceptable levels; however, the noise emissions are expected to be minor (<75 dBA) and short-term in duration. Construction activities near the San Elizario neighborhoods are estimated to last 2 to 3 months. To minimize this impact, it is recommended that construction activities in the San Elizario neighborhoods be limited to daylight hours during the work week when most of the residents are at school or at work. More specifically, construction activities should be limited to hours between 7:00 am and 7:00

pm on Monday through Friday where neighborhoods are located within 500 feet of the project corridor. Likewise, visitors to the Rio Bosque Wetland Park would experience intermittent and temporary minor noise emissions during construction.

At the western end of the project, primary pedestrian fence would be installed replacing existing chain link fence. Lights are already installed in this portion of the project corridor. This portion of the project corridor also parallels the Border Highway, a four-lane divided highway directly adjacent to the irrigation canal, which separates the fence construction area from residential neighborhoods. While the houses in these neighborhoods are located approximately 270 feet from the proposed fence construction zone (see Figures 3-1a, 3-1b, and 3-1c), construction noise from fence construction would not exceed the current ambient highway noise generated by traffic on the Border Highway. Therefore, there would be no significant impacts on these receptors from the Proposed Action Alternative.

3.11.2.3 Floating Foundation Fence Alternative

Discussions of noise impacts and mitigation measures for the Proposed Action Alternative would also apply to the Floating Foundation Fence Alternative.

3.12 UTILITIES AND INFRASTRUCTURE

3.12.1 Affected Environment

Currently, electrical power for the project corridor is provided by EPE through its regional power grid. In the rural portions of the project corridor, electric power supply is available adjacent to the irrigation canals to support scattered rural farm homes and intermittent irrigation pumping equipment along the project corridor. EPE provides power to an approximately 10,000-square-mile area of Texas and New Mexico, and participates in balance area agreements with surrounding power companies, including those in Mexico, to provide additional power during peak user times. The 2006 peak

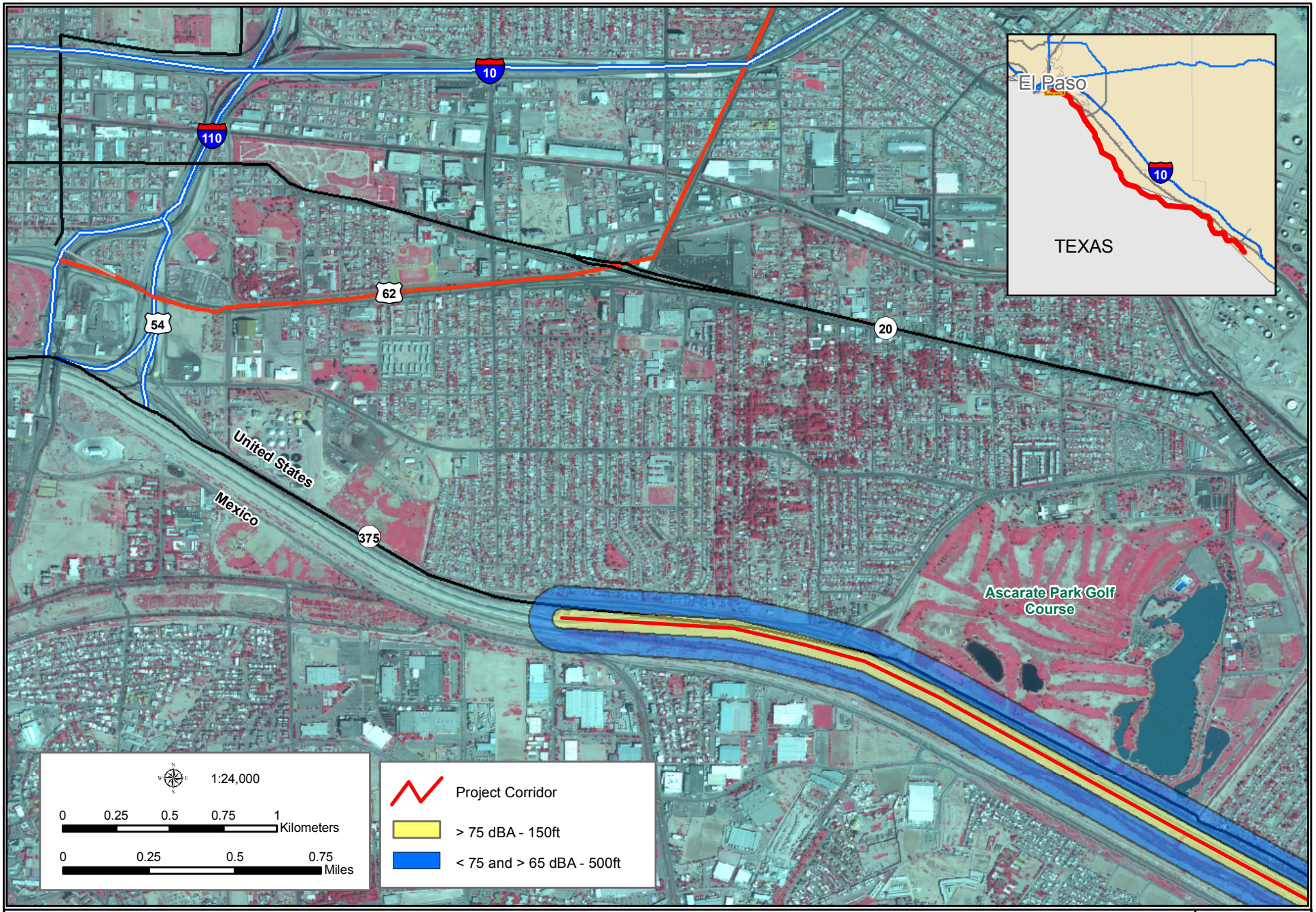

Figure 3-1a: Noise Attenuation of Construction Equipment

GSRC

January 2008

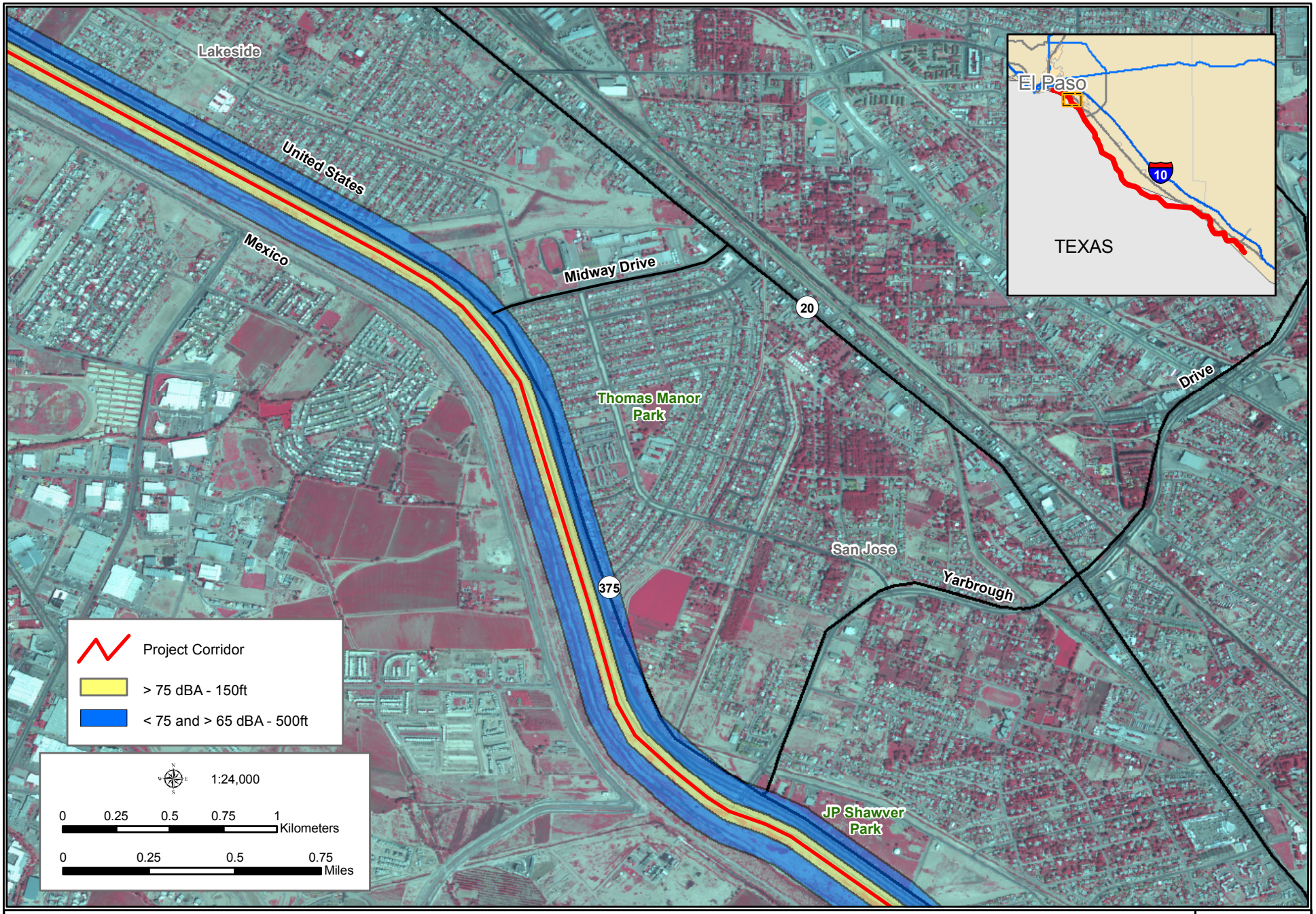

Figure 3-1b: Noise Attenuation of Construction Equipment

GSRC

January 2008

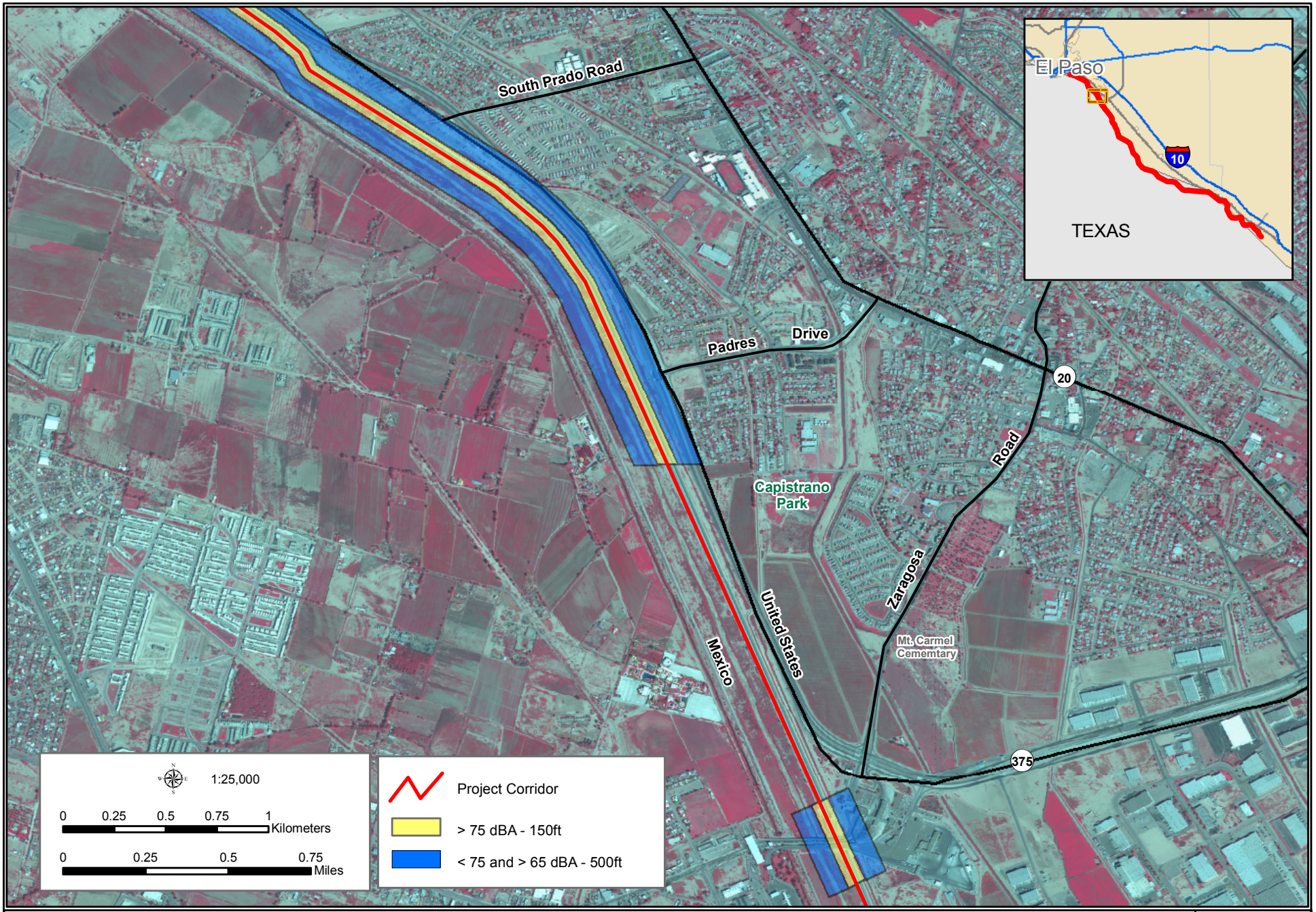

Figure 3-1c: Noise Attenuation of Construction Equipment

GSRC

January 2008

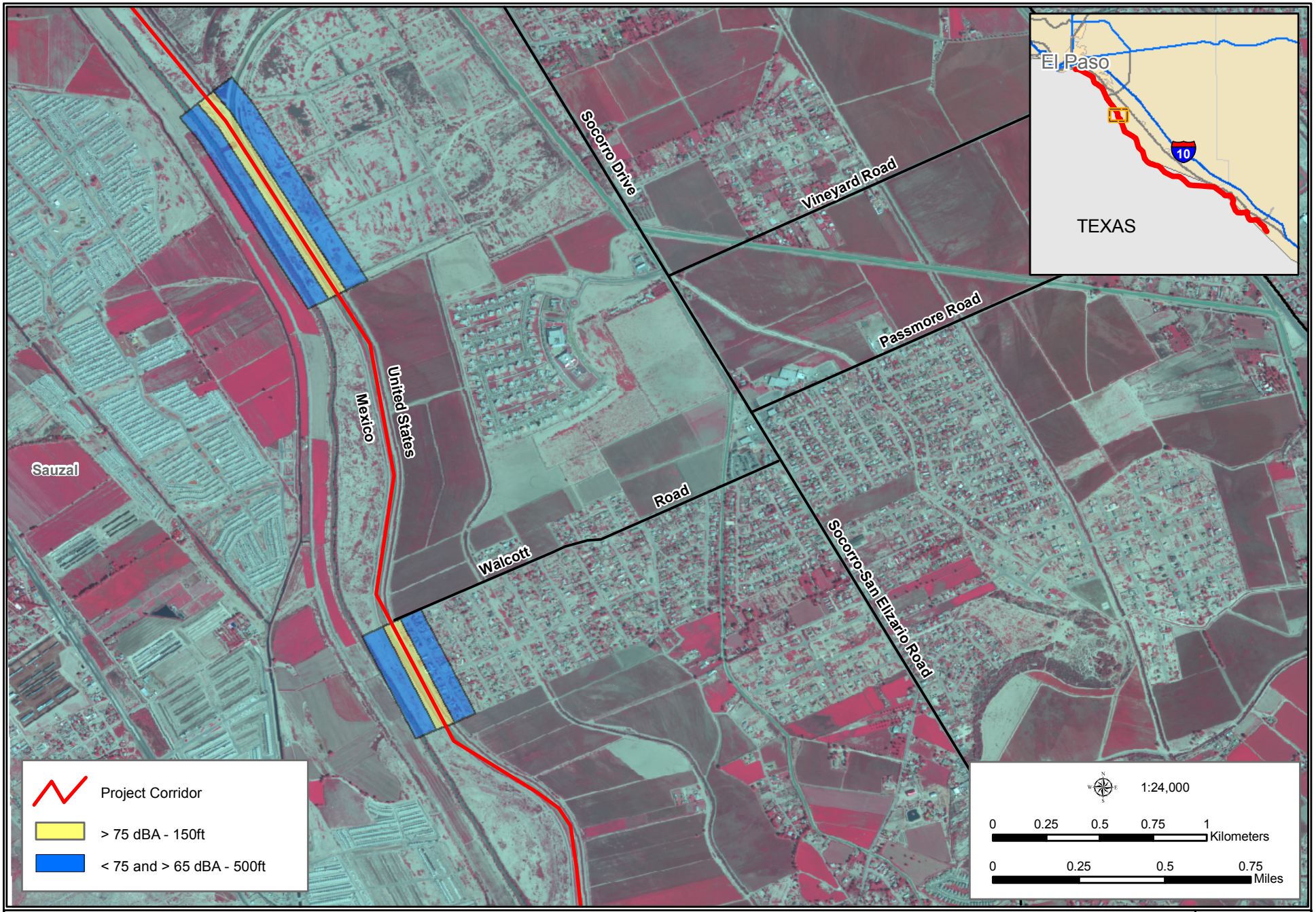

Figure 3-1d: Noise Attenuation of Construction Equipment

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January 2008

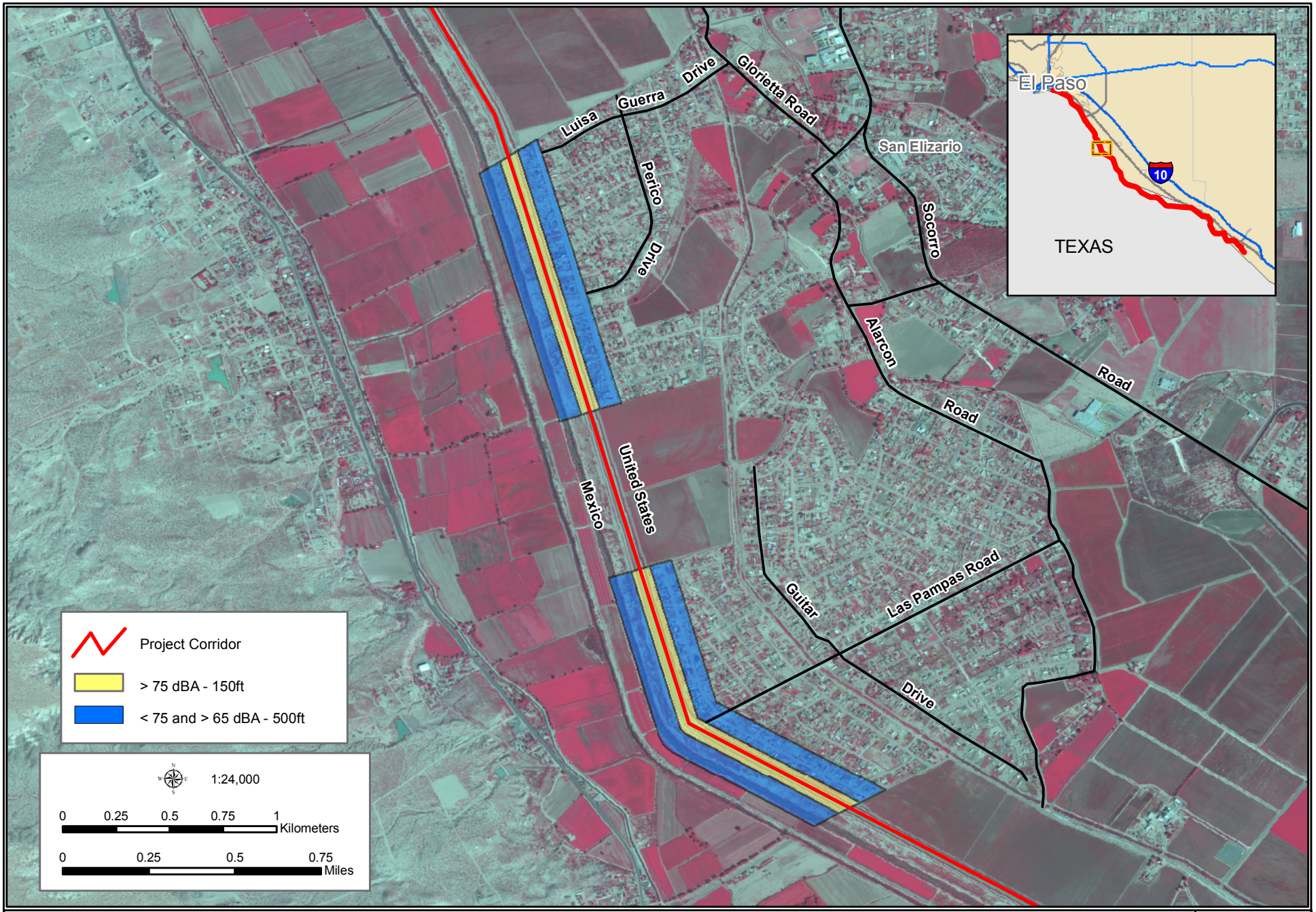

Figure 3-1e: Noise Attenuation of Construction Equipment

GSRC

January 2008

daily demand for EPE was 1,376 megawatts (North American Electric Reliability Council 2006). EPE maintains a 16 percent margin of available power above firm peak demand (El Paso Regional Economic Development Corporation [REDCO] 2006).

3.12.2 Environmental Consequences

3.12.2.1 No Action Alternative

There would be no impacts to electric power utilities under the No Action Alternative, since there would be no additional installation of lights in the area.

3.12.2.2 Proposed Action Alternative

Installation of permanent lights along 21 miles of the project corridor by EPE would require additional installation of power grid feeds from the local network, and installation of power line support poles and transformers. Installation of this additional power infrastructure would result in minor impacts on soils and minor noise impacts where infrastructure is installed adjacent to residential neighborhoods. All of the soil disturbance would occur in existing disturbed ROWs, and the noise impacts would be no different than those resulting from normal power infrastructure maintenance operations; thus, the impacts would be considered insignificant.

The power required for operation of the permanent lights would be roughly equivalent to the amount required to power a small high school (approximately 7.7 million kilowatt hours annually). The substations that would be serving the additional lighting have ample capacity to serve the additional load (EPE 2008). This would not be considered a significant amount when compared to the overall electric power available in the local power grid and the 16 percent power reserve maintained by EPE. The lights would be installed and maintained by EPE as part of their overall public light maintenance program.

3.12.2.3 Floating Foundation Fence Alternative

Impacts of the Floating Foundation Fence Alternative on utilities and infrastructure would be the same as those of the Proposed Action Alternative.

3.13 AESTHETIC AND VISUAL RESOURCES

3.13.1 Affected Environment

The project area contains a man-made canal and levee system that has altered the natural topography. The cities of El Paso and Juarez are located north and southwest of the project area in the U.S. and Mexico, respectively. Properties adjacent to the levee system are primarily developed, consisting of industrial, agricultural, commercial and residential development. USBP shelters located approximately every mile and the USBP lights are the only structures between the levee and the Rio Grande. The levee is cleared and mowed regularly to maintain flood control features, and it is topped by a dirt and gravel road. The only natural landscapes in the area are the Rio Bosque Wetland Park, which is a wetland mitigation area that is being restored with native flora, and the Alamo Arroyo and Diablo Arroyo drains, located approximately 4 miles northwest of the Fort Hancock POE and at the east end of the project corridor, respectively.

The view of the Rio Grande and the floodplain is obscured by the presence of the USIBWC levee, and access to the levee is restricted, so that views of the Rio Grande are not generally available to the general public.

3.13.2 Environmental Consequences

3.13.2.1 No Action Alternative

The No Action Alternative would result in no additional infrastructure construction along the project corridor, so there would be no additional impacts on the aesthetic qualities of the area.

3.13.2.2 Proposed Action Alternative

The USIBWC levee already interrupts the view of the Rio Grande from the U.S. side of the border. The addition of a fence along the toe levee would not detract appreciably from this current view. Access for the Ysleta de Sur Pueblo to the unrestricted Rio

Grande floodplain south of the levee would be provided through gates at specified locations.

The installation of permanent lights along the flood side of the levee would have an impact on the nighttime appearance of the area due to the illumination of the south side of the levee and the area between the levee and the river. The lights would be directed to illuminate only the ground area beneath and to the south of the light standards, and would be shielded to prevent light trespass north of the levee, into areas currently inhabited by U.S. citizens. Roads and developed areas already border the north side of the EPCWID1 and HCCRD1 canals, and, where development is absent, rural farm land is the predominant land use. Therefore, the addition of lights in this area would have minimal effect on the aesthetics of the area on the U.S. side of the canal. Design criteria and illumination diagrams for the proposed lights can be found in Appendix B.

The proposed bridges would be constructed in the same footprint as previous bridges across the EPCWID1 and HCCRD1 canals and at logical canal crossing points at the ends of established roads and, therefore, would not detract from the appearance of the area.

A proposed pedestrian walkway along the Rio Grande through El Paso and connecting to the Rio Bosque Park could not be constructed in the floodplain if the Proposed Action Alternative is implemented, since the fence would prevent any pedestrian connection between the river and the area north of the USIBWC levee. Since the existing portions of this trail system are located north of the border fence in El Paso, this restriction should not result in a significant impact. USBP will coordinate with the city and the county to ensure that future expansion of the existing trail and the proposed fence do not conflict with each other. No visitors are allowed in the Rio Bosque Wetland Park at night, so there would be no significant impacts on appearance from lights along the levee.

3.13.2.3 Floating Foundation Fence Alternative

Impacts of the Floating Foundation Fence Alternative on aesthetic and visual resources would be similar to those of the Proposed Action Alternative. Because the fence would be at a higher elevation on the top of the levee, visual impacts would be slightly greater than those of the Proposed Action Alternative, but still less than significant.

3.14 HAZARDOUS MATERIALS

3.14.1 Affected Environment

Solid and hazardous waste occurrence in the general area of the project corridor was discussed in the 2006 PEA (USBP 2006), and that discussion is incorporated herein by reference. As determined by a reconnaissance survey of the project corridor, there are no industrial or other commercial facilities near the project corridor that would contain hazardous materials or hazardous waste. Construction equipment used to implement the Proposed Action Alternative would contain fuel and petroleum fluids and lubricants that would be considered hazardous if released into the environment.

3.14.2 Environmental Consequences

3.14.2.1 No Action Alternative

There would be no impacts under the No Action Alternative, since no construction activity would take place in the project area, and no solid waste or hazardous waste would be generated.

3.14.2.2 Proposed Action Alternative

Implementation of the Proposed Action Alternative would involve the use of various types of heavy construction equipment. BMPs would be implemented to minimize the possibility that lubricating fluids or fuel would be discharged into the environment from this equipment. The BMPs are described in detail in Section 5.0 of this EA. In addition, a Spill Prevention, Control and Countermeasures Plan (SPCCP) would be developed and implemented prior to the start of construction on the project.

3.14.2.3 Floating Foundation Fence Alternative

Impacts due to implementation of the Floating Foundation Fence Alternative and proposed BMPs would be the same as those described above for the Proposed Action Alternative.

3.15 SOCIOECONOMICS

3.15.1 Affected Environment

The socioeconomic environment for the project region is described in detail in the USBP Programmatic EA, and is incorporated herein by reference (USBP 2006). In summary, the USBP Programmatic EA examined population structure, housing, environmental justice and protection of children. Only those portions of the socioeconomic environment that have changed since the USBP Programmatic EA are discussed in this EA. Table 3-4 illustrates the difference in socioeconomic data for those indices which have changed between the current EA and the USBP Programmatic EA in 2006. The region of influence (ROI) examined is El Paso County and Hudspeth County, Texas.

Table 3-4. Socioeconomic Data for El Paso and Hudspeth Counties

Index	El Paso County		Hudspeth County	
	USBP 2006 Data	Current Data	USBP 2006 Data	Current Data
Total population	702,609 (2000)	736,310 (2006)	3,257 (2000)	3,344 (2006)
Total number of jobs	240,723 (2000)	349,204 (2005)	1,228 (2000)	1,551 (2005)
Percent annual unemployment rate	5.2 (2000)	6.7 (2006)	4.3 (2000)	7.4 (2006)
Total personal income	$14.7B (2003)	$16.8B (2005)	$53.7M (2003)	$48.9M (2005)
Per capita personal income, in thousands	$20,875 (2003)	$23,256 (2005)	$16,482 (2003)	$14,804 (2005)
Percentage of all ages in poverty	23.8 (2000)	24.6 (2004)	35.8 (2000)	26.6 (2004)

Source: Bureau of Economic Analysis (BEA) 2005 a, b, c, and d, Census Bureau 2004, USBP 2006, Texas County Information Project 2006 a and b
B= billion, M=million

In 2005, El Paso County had a per capita personal income (PCPI) of $23,256 (BEA 2005c). This PCPI ranked 184th in the State of Texas, and was 72 percent of the state average of $32,460, and 67 percent of the National average of $34,471. The average

annual growth rate of PCPI from 1995 to 2005 was 4.6 percent. This average annual growth rate was higher than the growth rate for the state (4.4 percent) and higher than that for the Nation (4.1 percent). In 2005, El Paso County had a total personal income (TPI) of $16.8 billion. This TPI ranked 9th in the state and accounted for 2.3 percent of the state total. The 2005 TPI reflected an increase of 6.6 percent from 2004, which was lower than the 2004-2005 state change of 7.8 percent and the national change of 5.2 percent. In El Paso County during 2004, 24.6 percent of the population was living below the poverty level, which is higher than the 16.2 percent of the state population in poverty (U.S. Census Bureau 2004).

In 2005, Hudspeth County had a PCPI of $14,804 (BEA 2005d). This PCPI ranked 249th in the State of Texas, and was 46 percent of the state average of $32,460, and 43 percent of the national average of $34,471. The average annual growth rate of PCPI from 1995 to 2005 was 3.7 percent. This average annual growth rate was lower than the growth rate for the state (4.4 percent) and lower than that for the nation (4.1 percent). In 2005, Hudspeth County had a TPI of $48.9 million, which ranked 234th in the state. The 2005 TPI reflected a decrease of 7.1 percent from 2004, which was lower than the 2004-2005 state increase of 7.8 percent and the national increase of 5.2 percent. In Hudspeth County during 2004, 26.6 percent of the population was living below the poverty level, which is higher than the 16.2 percent of the state population in poverty (U.S. Census Bureau 2004).

3.15.2 Environmental Consequences

3.15.2.1 No Action Alternative

There would be no direct impacts on socioeconomic resources under the No Action Alternative, since no construction of lights, primary pedestrian fence or bridges would occur in the project area. There would continue to be indirect impacts on local crime rates as a result of IA and drug smuggling activities in the vicinity of the project corridor, as well as on law enforcement costs associated with those activities.

3.15.2.2 Proposed Action Alternative

The Proposed Action Alternative would utilize USBP staff, JTF-N or National Guard units, or private contractors to construct the permanent lights, fence and bridges; therefore, there would be no effects on population, personal income, or housing unless private contractors were used. In this event, a temporary increase in personal income may occur. Most materials and other project expenditures would be obtained from within the local community, providing minor temporary, direct economic benefits. Adequate housing is available in the El Paso area, and no displacement is predicted to result from this action; therefore, there would be no direct impacts on housing in the region. The proposed fence and lights along the USIBWC levee should not impact recreational activities south of the levee, since access to the Rio Grande floodplain is already restricted by existing fences and gates, as well as USBP patrols. No significant, permanent or long-lasting socioeconomic impacts would be anticipated as a result of the construction activity.

3.15.2.3 Floating Foundation Fence Alternative

Socioeconomic effects of the Floating Foundation Fence Alternative would be the same as those for the Proposed Action Alternative.

3.16 ENVIRONMENTAL JUSTICE

3.16.1 Affected Environment

EO 12898 (Federal Actions to Address Environmental Justice in Minority and Low-Income Populations) was signed in February 1994. This order was intended to direct Federal agencies "…to make achieving environmental justice part of its mission by identifying and addressing… disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the [U.S.]…" To comply with the EO, minority and poverty status in the vicinity of the project was examined to determine if any minority and/or low-income communities would potentially be disproportionately affected by implementation of the

Proposed Action Alternative and other alternatives. Both low-income and minority populations are present within the ROI.

3.16.2 Environmental Consequences

3.16.2.1 No Action Alternative

Under the No Action Alternative, continuing IA migration through the area would have adverse impacts on all populations in the ROI.

3.16.2.2 Proposed Action Alternative

No significant adverse environmental effects have been identified for any resource area or population (minority, low-income, or otherwise) analyzed in this EA. There would be no displacements of residences or businesses.

Elimination of illegal cross-border activities would benefit the entire population of El Paso and Hudspeth counties, regardless of age, nationality, ethnicity, or economic status. Thus, the Proposed Action Alternative would be in compliance with EO 12898.

3.16.2.3 Floating Foundation Fence Alternative

The effects of the Floating Foundation Fence Alternative, relative to EO 12898 would be the same as the Proposed Action Alternative.

3.17 PROTECTION OF CHILDREN

3.17.1 Affected Environment

EO 13045 requires each Federal agency "to identify and assess environmental health risks and safety risks that may disproportionately affect children; and ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." This EO was prompted by the recognition that children, still undergoing physiological growth and development, are more sensitive to adverse environmental health and safety risks than adults. Special risks to children related to construction activity may include safety, noise, pollutants, and

hazardous materials. Children would be more likely to be present in residential neighborhoods adjacent to the project corridor rather than in the less populated agricultural areas.

3.17.2 Environmental Consequences

3.17.2.1 No Action Alternative

Under the No Action alternative, continuing IA migration through the area would have adverse impacts on all populations in the ROI, including children.

3.17.2.2 Proposed Action Alternative

Safety precautions to protect children in areas surrounding the work sites for the Proposed Action Alternative would include adequate measures to restrict access, minimization of hazards associated with construction activities, and proper handling and disposal of hazardous materials. Such mitigation measures would serve to offset any potential for impacts to children. All of the construction activity, with the exception of bridge construction, would occur south of the EPCWID1 and HCCRD1 canals, where access is currently restricted. With the implementation of mitigation measures, no impacts or special risks to children would be associated with the Proposed Action Alternative, thus, the Proposed Action Alternative would be in compliance with EO 13045.

3.17.2.3 Floating Foundation Fence Alternative

The effects of the Floating Foundation Fence Alternative implementation would be the same as those described for the Proposed Action Alternative, and no special risks to children would be expected.

3.18 HUMAN HEALTH AND SAFETY

3.18.1 Affected Environment

Currently, the safety of USBP agents in the area of the Proposed Action Alternative is compromised by a lack of visibility at night along the canal and levee, and the inability to

readily access portions of the patrol area between the canal and the Rio Grande. Substantially more patrols are necessary due to the absence of TI components, such as fences and lights, to provide some level of safety for USBP agents and IAs.

The health and safety of IAs attempting to cross the river and the EPCWID1 and HCCRD1 canals are at risk, especially during periods of high water, due to the lack of deterrent structures and the inability to judge water depth and current strength at night, when most crossing attempts are made. Emergency rescue attempts are hindered by a lack of bridge access to the area between the canal and the river and the lack of visibility at night. The safety of residents and property in the U.S. along the project corridor during floods is also diminished due to lack of access for USIBWC, EPCWID1 and HCCRD1 maintenance and flood fighting personnel.

3.18.2 Environmental Consequences

3.18.2.1 No Action Alternative

Under the No Action Alternative, there would be no primary pedestrian fence, lights or bridges constructed in the project area. The safety of USBP agents operating in the area at night would still be compromised by the inability to see IAs and drug smugglers during hours of darkness, when most illegal activities occur. Rescue efforts in the EPCWID1 and HCCRD1 canals and the Rio Grande floodplain during flood events would remain hampered by a lack of bridge access and a lack of nighttime visibility. The lack of an effective physical deterrent to IA movement across the border (i.e., fence) would result in increased public health and safety concerns and law enforcement concerns due to the increasing numbers of IAs crossing the border, and the concomitant increase in associated criminal activity in the community.

3.18.2.2 Proposed Action Alternative

Impacts to human health and safety would be limited to those normally encountered during construction activities. An approved Health and Safety Plan would be developed prior to initiating construction activities to minimize those impacts. Construction site safety is largely a matter of adherence to regulatory requirements imposed for the

benefit of employees and implementation of operational practices that reduce risks of illness, injury, death, and property damage. The Occupational Safety and Health Administration (OSHA) and EPA issue standards that specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits with respect to workplace stressors.

Construction workers at any of the proposed construction sites would be exposed to safety risks from the inherent dangers at construction sites. Contractors would be required to establish and maintain safety programs at the construction site. The proposed construction would not expose members of the general public to increased safety risks.

Increased nighttime visibility of the border area and the added deterrent of border fencing would have long-term beneficial effects for USBP employees operating in the El Paso, Ysleta, Fabens and Fort Hancock AOs.

Medical services, fire protection and police service would not be changed from the current standards for the area. The Proposed Action Alternative would not create any additional burden on any health and safety services. The safety of persons in distress in the area between the canal and the Rio Grande would be enhanced by the added access for emergency personnel afforded by the new bridges, and the increased visibility resulting from the lighting of the area.

The design and location of the primary pedestrian fence footings would not compromise the integrity of either the USIBWC levee or the EPCWID1 and HCCRD1 canals, and the flood protection and irrigation afforded by these structures would not be diminished.

3.18.2.3 Floating Foundation Fence Alternative

Impacts to human health and safety of the Floating Foundation Fence Alternative would be the same as those of the Proposed Action Alternative.

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SECTION 4.0
CUMULATIVE EFFECTS

4.0 CUMULATIVE EFFECTS

This section of the EA addresses the potential cumulative impacts associated with the implementation of the alternatives and other projects/programs that are planned for the region. The CEQ defines cumulative impacts as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR 1508.7). This section continues, "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

The cumulative impacts associated with USBP activities such as those addressed by this EA were previously addressed in the 2006 PEA (USBP 2006), and are incorporated herein by reference. This EA is tiered from that 2006 PEA, and the Proposed Action Alternative is of the type addressed in that PEA. The Proposed Action Alternative or Floating Foundation Fence Alternative would have numerous cumulative beneficial impacts, including the long-term reduction of flow of illegal drugs into the U.S. and the concomitant effects upon the nation's health and economy, drug-related crimes, community cohesion, property values and traditional family values.

Future projects are being planned by CBP throughout the El Paso Sector. In 2006, a Programmatic EA was prepared to address proposed construction of TI along the U.S.-Mexico border in the Texas portion of the El Paso Sector (USBP 2006). The TI involves improvements or construction of up to 19 Remote Video Surveillance System (RVSS), improvements to or construction of approximately 99 miles of all-weather patrol roads and approximately 40 miles of drag roads, installation of permanent pedestrian barriers, installation of permanent lights, construction of ancillary structures (i.e., low water crossings, access gates, pipe gates, bridges), vegetation management, and permanent vehicle barriers. It is anticipated that the projects would be implemented over the next 10 years and disturb a total of 571 acres. An additional 3.6 miles of pedestrian fence along

the levee in El Paso is also planned for construction with minimal impacts on 7 acres of previously disturbed land.

The Texas Mobile project would install 12 fixed tower systems, 12 vehicle mobile surveillance systems, and unattended ground sensors (UGSs) within the USBP Ysleta, Fabens, and Fort Hancock stations AOs. Access roads in and near the proposed towers would be constructed or improved as necessary. The project would permanently disturb approximately 1.79 acres for the construction of all towers and roads, of which 0.34 acre has been previously disturbed. Additionally, approximately 7.26 acres would be temporarily affected by the proposed construction activities.

CBP is also planning several facilities projects in the sector. These include the construction of new USBP stations in Fort Hancock, Texas (14 acres) and Lordsburg, New Mexico (25 acres), and the construction of two forward operating bases (FOB) in New Mexico along New Mexico Highway 9, one in the Deming Station AO and the other in the Lordsburg Station AO. The approximate footprint for each FOB is 10 acres. USBP also plans to install 10 emergency beacons in the Lordsburg and Deming stations AOs.

Three USBP checkpoints in El Paso Sector are being enlarged or relocated on Interstate 25 (I-25) and Interstate 10 (I-10) in New Mexico, and on Highway 62/180 near Ysleta in Texas. A total of 30 additional acres would be acquired and potentially disturbed outside of the existing footprint at the three sites.

The Texas Department of Transportation (TxDOT) El Paso District has several construction projects in progress or in planning stages.

- **I-10 Southern Relief Route** - TxDOT is studying the feasibility of a Southern Relief Route for I-10 along the southern corridor of Loop 375 in El Paso.
- **I-10 E3 rail project/closure update** - permanent concrete railings will be built, and high mast illumination lights will be installed on I-10, between Schuster Drive and Raynolds Street.

- **Northeast Parkway Project** - TxDOT, in cooperation with the New Mexico Department of Transportation, has recently completed the design schematic for a 21-mile long, limited access highway connecting Loop 375 in northeast El Paso near Railroad Drive to I-10 in Anthony, New Mexico.
- **I-10 Americas Interchange** - the I-10/Americas Interchange project will involve improving the existing cloverleaf interchange; constructing the Loop 375 main lanes over I-10 to the Socorro Independent School District's Activities Center at Bob Hope Drive; and adding directional ramps/connections between Loop 375 and I-10.
- **I-10 East Corridor Study** - TxDOT has completed the 22-mile I-10 East Corridor Study from just west of US 54 at Piedras Street to Farm to Market (FM) 1110 at the Town of Clint. The corridor also included portions of FM 76 (North Loop Road) from FM 1281 (Horizon Boulevard) to FM 1110, and SH 20 (Alameda Avenue) from just east of Loop 375 to FM 1110, and FM 1110 between I-10 and FM 76. The I-10 East Corridor Study, designed as a comprehensive multi-modal study, has resulted in recommended strategies to address identified long-term transportation and corridor needs through 2025.

The El Paso County Road and Bridge Department has an ongoing road paving schedule. All of these streets are 24 feet in width. Paving projects in the Fabens area include:

- Wingo Reserve Road from Jeff Harris Road to Rawls Road - 0.8 mile
- Rawls Road from Wingo Reserve Road to Isla Road - 0.1 mile
- Island Road from Lower Island Road to Newman Road - 1.4 miles
- Highland Street from 5th Street to the end of Highland Street - 0.6 mile
- Tornillo Avenue from OT Smith Road to 5th Street - 0.3 mile
- Florinda Drive from Cobb Avenue to Linda Drive - 0.3 mile
- Flor Del Rio Drive from Cobb Avenue to Linda Drive - 0.3 mile
- Florelia Drive from Gaby Road to Linda Drive - 0.1 mile
- Flor Bella Lane from Linda Drive to the end of Flor Bella Lane - 0.1 mile
- Linda Drive from Feed Penn Road to Henderson Street - 0.3 mile
- Los Lettunich Road from Henderson Street to Feed Penn Road - 0.3 mile
- Chamizo Road from Feed Penn Road to Henderson Street - 0.3 mile

The Base Realignment and Closure Act (BRAC) proposed several potential changes and force increases for Fort Bliss, located in El Paso, north of the proposed project corridor. These potential force increases would result in moderate to significant impacts to numerous resources, but the impacts could be mitigated to less than significant (U.S.

Army Environmental Command [USAEC] 2007). Cumulative impacts to utilities and infrastructure from alternatives considered for this EA would not add significantly to those resulting from the BRAC actions at Fort Bliss.

Neither the Proposed Action Alternative or Floating Foundation Fence Alternative would significantly contribute to the cumulative construction projects and impacts within the ROI; however, the net effect of all USBP projects would be minor when compared to the overall effect of other construction in the vicinity of El Paso, the major populated area in the ROI. Therefore, cumulative impacts from past, present and future developments as a result of the Proposed Action Alternative or Floating Foundation Fence Alternative would be minor.

The No Action Alternative would have no immediate effect on the existing human environment, but the lack of upgraded USBP access and the lack of deterrent features, such as lighting and pedestrian fences along the USIBWC levee, would have future cumulative adverse effects due to increased illegal immigration and importation of drugs, potential public safety problems, and the consequential degradation of quality of life in the ROI.

A summary of the anticipated cumulative impacts of the Proposed Action Alternative is presented in the following sections. Discussions are presented for each of the resources described previously.

4.1 LAND USE

There would be a significant impact if any action is inconsistent with adopted land use plans or if any action would substantially alter those resources required for, supporting, or benefiting the current use. Since there would be no change in land use as a result of the Proposed Action Alternative or Floating Foundation Fence Alternative, there would be no cumulative impacts on land use.

4.2 WATER RESOURCES

The significance threshold for water resources includes any action that substantially depletes ground water supplies or interferes with groundwater recharge, substantially alters drainage patterns, or results in the loss of WUS that cannot be compensated. No significant cumulative impacts on surface water resources would occur as a result of the construction and maintenance of the proposed primary pedestrian fence and lights. No cumulative impacts on WUS would be expected as no WUS occur within the project corridor. The required SWPPP measures would reduce erosion and sedimentation during construction to negligible levels, and would eliminate post-construction erosion and sedimentation from the site. The same measures would be implemented for other local and regional construction projects; therefore, cumulative impacts would not be significant.

There are no significant effects on water supplies or water availability identified in the EA as a result of any alternatives considered, therefore there would be no significant cumulative impacts to water supplies or availability if the Proposed Action Alternative or Floating Foundation Fence Alternative are implemented.

4.3 NATIVE VEGETATION

The significance threshold for biological resources includes a substantial reduction in ecological processes, communities, or populations that would threaten the long term viability of a species or result in the substantial loss of a sensitive community that could not be offset. Since no extensive native vegetation communities occur within the project corridor, there would be no significant direct or cumulative adverse impact on vegetation communities if the Proposed Action Alternative or Floating Foundation Fence Alternative were implemented. Other USBP projects, including the vegetation clearing and additional lighting, would result in cumulative adverse impacts on native vegetation.

4.4 WILDLIFE

Since no additional native vegetation communities would be impacted under the Proposed Action Alternative or Floating Foundation Fence Alternative, insignificant cumulative impacts on wildlife populations would be expected. Cumulative impacts due to fragmentation of habitat would be considered minor, since the USIBWC levee and the EPCWID1 and HCCRD1 canal system already inhibit north-south migration of terrestrial species. In addition, prior to construction, site surveys for migratory species and appropriate mitigation measures would be implemented. The loss, when combined with other ground disturbing or development projects in the project region, would not result in significant cumulative negative impacts on the region's biological resources.

4.5 THREATENED SPECIES AND CRITICAL HABITAT

Since no Federally threatened or endangered species would be affected by the Proposed Action Alternative or Floating Foundation Fence Alternative, there would be no cumulative impacts when considered with other USBP projects in the El Paso Sector.

4.6 CULTURAL RESOURCES

Since no impacts on cultural resources are anticipated from implementation of the Proposed Action Alternative or Floating Foundation Fence Alternative, there would be no cumulative effect on cultural resources when considered with other USBP projects in the El Paso Sector.

4.7 AIR QUALITY

Impacts to air quality would be considered significant if the action results in a violation of air quality standards, obstructs implementation of an air quality plan, or exposes sensitive receptors to substantial pollutant concentrations. The emissions generated

during and after the construction of the primary pedestrian fence and lights would be short-term and minor. BMPs designed to reduce fugitive dust have been and will continue to be standard operation procedure for USBP construction projects. Therefore, no cumulative impacts are anticipated due to implementation of the Proposed Action Alternative or Floating Foundation Fence Alternative.

4.8 NOISE

Actions would be considered to cause significant impacts if they permanently and substantially increase ambient noise levels over 65 dBA (current ambient conditions). Most of the noise generated by the Proposed Action Alternative or Floating Foundation Fence Alternative would occur during construction and, thus, would not contribute to cumulative impacts to ambient noise levels. Routine maintenance of the fence would result in slight temporary increases in noise levels, which would continue to sporadically occur over the long term. Potential sources of noise from other projects are not enough (temporal or spatial) to increase ambient noise levels above the 65 dBA range along the proposed corridor. Thus, the noise generated by the construction and maintenance of the primary pedestrian fence and lights, when considered with the other existing and proposed projects in the region, would not be considered as a significant cumulative adverse effect.

4.9 UTILITIES AND INFRASTRUCTURE

Since no significant impacts to utilities and infrastructure would occur due to implementation of the Proposed Action Alternative or Floating Foundation Fence Alternative, there would be no significant cumulative effect on utilities and infrastructure when considered with other USBP projects in the El Paso Sector. Although the City and County of El Paso are expected to continue to experience development over the next 5 years, particularly in regards to troop realignment to Fort Bliss, the electrical capacity provided by EPA is more than sufficient to ensure that no significant adverse cumulative

effect would occur. As discussed previously, EPE maintains a 16 percent reserve power capacity above firm peak demand.

4.10 AESTHETIC RESOURCES

Actions that cause the permanent loss of the characteristics that make an area visually unique or sensitive would be considered to cause a significant impact. No major impacts to visual resources would occur from implementing the Proposed Action Alternative or Floating Foundation Fence Alternative, due in part to the surrounding development, agricultural operations, and the existing levee and canal structures. Construction and maintenance of the proposed primary pedestrian fence and lights, when considered with existing and proposed developments in the surrounding area, would not result in a significant cumulative negative impact on the visual quality of the region.

Cumulative visual impacts to the project corridor, when viewed from the Rio Bosque Wetlands Park, would be long-term; but would not be considered significant when considered with the surrounding development, including the levees and the adjacent wastewater treatment plant. The long-term reduction of illegal traffic and the synergistic effects (e.g., trash, trails, etc.) would provide cumulative beneficial visual effects within the park.

Cumulative impacts to the view of the Rio Grande floodplain across the USIBWC levee from the Ysleta del Sur Pueblo would be less than significant, since there is a fence located there already, and the proposed primary pedestrian fence would be of mesh construction, providing some view of the river and the floodplain.

4.11 SOCIOECONOMICS

Significance threshold for socioeconomic conditions includes displacement or relocation of residences or commercial buildings, increases in long term demands to public

services in excess of existing and projected capacities, and disproportionate impacts to minority and low income families. Construction of the proposed primary pedestrian fence, bridges and lights would result in temporary, minor and beneficial impacts to the region's economy. Loss of potential recreational use of the levee and Rio Grande floodplain due to non-construction a proposed pedestrian walkway corridor would result in No impacts to residential areas, population, or minority or low-income families would occur. These effects, when combined with the other projects currently proposed or on-going within the region, would not be considered as significant cumulative impacts.

4.12 HAZARDOUS MATERIALS

Significant impacts would occur if an action creates a public hazard; the site is considered a hazardous waste site that poses health risks, of if the action would impair the implementation if an adopted emergency response or evacuation plans. Only minor increases in the use of hazardous substances would occur as a result of the construction and maintenance of the proposed primary pedestrian fence and lights. No health or safety risks would be created by the Proposed Action Alternative or Floating Foundation Fence Alternative. These effects, when combined with other on-going and proposed projects in the region, would not be considered a significant cumulative effect.

4.13 HUMAN HEALTH AND SAFETY

Long-term beneficial effects on human health and safety for the public would result from implementation of the Proposed Action Alternative or Floating Foundation Fence Alternative due to decreased adverse impacts from IA migration through the area and associated criminal activity. Long-term beneficial effects on safety for USBP agents would also result from increased nighttime visibility and the deterrent effect of the primary pedestrian fence on IA migration in the El Paso Sector. When considered with other USBP actions in the El Paso Sector, moderate beneficial effects would occur to human health and safety due to implementation of the Proposed Action Alternative or Floating Foundation Fence Alternative.

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SECTION 5.0
MITIGATION MEASURES

5.0 MITIGATION MEASURES

It is CBP's policy to reduce impacts through the sequence of avoidance, minimization, mitigation, and finally, compensation. Mitigation efforts vary and include activities such as restoration of habitat in other areas, acquisition of lands, and implementation of appropriate BMPs. CBP coordinates its environmental design measures with the appropriate Federal and state resource agencies, as appropriate.

This section describes those measures that could be implemented to reduce or eliminate potential adverse impacts on the human and natural environment. Many of these measures have been incorporated by USBP as standard operating procedures on past projects. Environmental design measures are presented for each resource category that would be potentially affected. It should be emphasized that these are general mitigation measures; development of specific mitigation measures would be required for certain activities implemented under the action alternatives. The proposed mitigation measures would be coordinated through the appropriate agencies and land managers or administrators, as required.

The 2006 PEA (USBP 2006) described numerous BMPs and environmental design measures that would be implemented to reduce impacts to resources. Those BMP and design measure descriptions are incorporated herein by reference. In particular, BMPs and mitigation measures will be implemented to address impacts to the following resources.

5.1 WATER RESOURCES

A SWPPP, as part of the Texas Pollution Discharge Elimination System (TPDES) permit process, and a SPCCP will be developed for the area affected during construction procedures. To minimize potential impacts from solid and hazardous materials, all fuels, waste oils, and solvents will be collected and stored in tanks or drums within a secondary

containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein. The refueling of machinery will be allowed only as described in the SPCCP, and all vehicles would have drip pans during storage to contain minor spills and drips. Although it would be unlikely for a major spill to occur, any spill of 5 gallons or more will be contained immediately with the application of an absorbent material (e.g., granular, pillow, sock). Furthermore, any petroleum liquids (e.g., fuel) or material listed in 40 CFR 302 Table 302.4 of a reportable quantity must be cleaned up and reported to the appropriate Federal and state agencies. Reportable quantities of those substances listed on 40 CFR 302 Table 302.4 will be included as part of the SPCCP. A SPCCP will be in place prior to the start of construction and all personnel will be briefed on the implementation and responsibilities of this plan.

All used oil and solvents will be recycled if possible. All non-recyclable hazardous and regulated wastes will continue to be collected, characterized, labeled, stored, transported, and disposed of as regulated by the EPA and managed by CBP, pursuant to compliance with the Resources Conservation and Recovery Act (RCRA) P.L. 94-580, 90 Statute 2795 (1976), and other Federal guidelines and regulations.

The SWPPP will include BMPs to control erosion and fugitive dust emissions, including the use of silt fencing and hay bales adjacent to open water, such as the canals, and dust suppression by watering haul roads and construction areas.

5.2 AIR QUALITY

During the construction of the proposed project, proper and routine maintenance of all vehicles and other construction equipment will be implemented to ensure that emissions are within the design standards of all construction equipment. Dust suppression methods, such as watering of roads and construction areas, will be implemented to minimize fugitive dust.

5.3 CULTURAL RESOURCES

All excavation activities will be monitored for possible buried cultural resources. Although no buried cultural resources are known within the project areas, should any evidence of cultural resources be observed during construction, work will stop in the immediate vicinity, the resource will be protected, and SHPO will be notified within 24 hours of the discovery. If, in consultation with SHPO, it is determined that the resource is significant, and cannot be avoided, a mitigation plan will be developed and implemented before construction is resumed.

Light switches will be installed, as specified in an MOA with the Ysleta del Sur Pueblo, so that lights can be turned off when necessary during tribal ceremonies along the river. Access to the river will be provided with gates in the fence at prescribed intervals.

5.4 HEALTH AND SAFETY

A health and safety plan will be developed prior to construction to direct construction activities in accordance with OSHA requirements. Construction sites will be barricaded to prevent unauthorized entry.

Fence designs will be coordinated with USIBWC, EPCWID1 and HCCRD1 so that fence footings will not be constructed in any ways that could compromise the levee or irrigation canal structural integrity.

5.5 BIOLOGICAL RESOURCES

Since construction or clearing activities cannot be scheduled to avoid the migratory bird nesting season (typically February 15 through September 15), surveys will be performed to identify active nests. If construction activities would result in the take of a migratory bird, then coordination with the USFWS and TPWD would be initiated, and applicable permits would be obtained prior to construction or clearing activities. Monitoring for the

presence of burrowing owls in the sides of the levee will be conducted, and relocation of owls present would be accomplished outside of the nesting season. An incidental take permit would be obtained if this is not possible. Monitoring of open holes would take place daily to reduce or avoid impacts on Texas horned lizards.

SECTION 6.0
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6.0 REFERENCES

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APPENDIX A
Air Quality Calculations

CALCULATION SHEET

Personal Vehicle Estimated Emissions

	Emission Factors								
Pollutants	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emisssions Cars tns/yr	Total Emissions Trucks tns/yr	Total
VOCs	1.36	1.61	60	208	20	20	0.37	0.44	0.82
CO	12.4	15.7	60	208	20	20	3.41	4.32	7.73
NOx	0.95	1.22	60	208	20	20	0.26	0.34	0.60
PM-10	0.0052	0.0065	60	208	20	20	0.00	0.00	0.00
PM 2.5	0.0049	0.006	60	208	20	20	0.00	0.00	0.00
							-		

POV Source: EPA 2005 Average annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. EPA 420-F-05-022 August 2005

Fleet Charactorization: 80 POVs commuting to work were 50% are pick up trucks and 50% passenger cars

Conversion factor: gms to lbs

0.002204

Emissions from Combustion Engines: Preferred Alternative-Yselta Lights

Construction Emissions:			Calculation Assumptions			
Construction Equipmen	Units	Working Days/yr	Hrs/ day	Horse power	Type of Fuel	Total hp-hr
Dump truck	1	208	10	340	Diesel	707,200
Excavator	1	20	10	463	Diesel	92,600
Bull dozer	1	20	10	324	Diesel	64,800
Cement truck	3	208	10	215	Diesel	1,341,600
Water truck-fugitive dus	1	208	6	270	Diesel	336,960
Pole truck	1	208	10	320	Diesel	665,600
Diesel generators	5	208	10	30	Diesel	312,000
Compressors	5	208	10	25	Diesel	260,000
Employee commute	40	208	1 hr-60 miles	POV(1)	Gasoline	NA

Construction Emissions:			Calculation Results for NOx		
Construction Equipment	Emission Factor	Unit	Total hp-hr	Total Emissions	Total in tns/yr
Dump truck	0.031	lb/hp-hr	707,200	21,923	10.96
Excavator	0.031	lb/hp-hr	92,600	2,871	1.44
Bull dozer	0.031	lb/hp-hr	64,800	2,009	1.00
Cement truck	0.031	lb/hp-hr	1,341,600	41,590	20.79
Water truck-fugitive dust	0.031	lb/hp-hr	336,960	10,446	5.22
Pole truck	0.031	lb/hp-hr	665,600	20,634	10.32
Diesel generators	0.031	lb/hp-hr	312,000	9,672	4.84
Compressors	0.031	lb/hp-hr	260,000	8,060	4.03
Employee commute	1.22	g/mile	NA	NA	0.60
Total Emissions					**59.20**

Construction Emissions:			Calculation Results for CO		
Construction Equipment	Emission Factor	Unit	Total hp-hr	Total Emissions	Total in tns/yr
Dump truck	0.00668	lb/hp-hr	707,200	4,724	2.36
Excavator	0.00668	lb/hp-hr	92,600	619	0.31
Bull dozer	0.00668	lb/hp-hr	64,800	433	0.22
Cement truck	0.00668	lb/hp-hr	1,341,600	8,962	4.48
Water truck-fugitive dust	0.00668	lb/hp-hr	336,960	2,251	1.13
Pole truck	0.00668	lb/hp-hr	665,600	4,446	2.22
Diesel generators	0.00668	lb/hp-hr	312,000	2,084	1.04
Compressors	0.00668	lb/hp-hr	260,000	1,737	0.87
Employee commute	15.7	g/mile	NA	NA	7.73
Total Emissions					**20.36**

Emissions from Combustion Engines: Preferred Alternative-Yselta Lights

Construction Emissions:	Calculation Results for SOx				
Construction Equipment	Emission Factor (1)	Unit	Total hp-hr	Total Emissions	Total in tns/yr
Dump truck	0.00205	lb/hp-hr	707,200	1,450	0.72
Excavator	0.00205	lb/hp-hr	92,600	190	0.09
Bull dozer	0.00205	lb/hp-hr	64,800	133	0.07
Cement truck	0.00205	lb/hp-hr	1,341,600	2,750	1.38
Water truck-fugitive dust	0.00205	lb/hp-hr	336,960	691	0.35
Pole truck	0.00205	lb/hp-hr	665,600	1,364	0.68
Diesel generators	0.00205	lb/hp-hr	312,000	640	0.32
Compressors	0.00205	lb/hp-hr	260,000	533	0.27
Employee commute	NA		NA	NA	
Total Emissions					**3.88**

Construction Emissions:	Calculation Results for PM-10				
Construction Equipment	Emission Factor (1)	Unit	Total hp-hr	Total Emissions	Total in tns/yr
Dump truck	0.0022	lb/hp-hr	707,200	1,556	0.78
Excavator	0.0022	lb/hp-hr	92,600	204	0.10
Bull dozer	0.0022	lb/hp-hr	64,800	143	0.07
Cement truck	0.0022	lb/hp-hr	1,341,600	2,952	1.48
Water truck-fugitive dust	0.0022	lb/hp-hr	336,960	741	0.37
Pole truck	0.0022	lb/hp-hr	665,600	1,464	0.73
Diesel generators	0.0022	lb/hp-hr	312,000	686	0.34
Compressors	0.0022	lb/hp-hr	260,000	572	0.29
Employee commute	0.0065	g/mile	NA	NA	0.00
Total Emissions					**4.16**

Construction Emissions:	Calculation Results for VOCs				
Construction Equipment	Emission Factor (1)	Unit	Total hp-hr	Total Emissions	Total in tns/yr
Dump truck	0.0025141	lb/hp-hr	707,200	1,778	0.89
Excavator	0.0025141	lb/hp-hr	92,600	233	0.12
Bull dozer	0.0025141	lb/hp-hr	64,800	163	0.08
Cement truck	0.0025141	lb/hp-hr	1,341,600	3,373	1.69
Water truck-fugitive dust	0.0025141	lb/hp-hr	336,960	847	0.42
Pole truck	0.0025141	lb/hp-hr	665,600	1,673	0.84
Diesel generators	0.0025141	lb/hp-hr	312,000	784	0.39
Compressors	0.0025141	lb/hp-hr	260,000	654	0.33
Employee commute	1.61	g/mile			
Total Emissions					**4.75**

Emission Factor Source: AP 42, Fifth Edition, Volume 1 Chapter 3: Table 3.3-1

1. POVs=Personally Operated Vehicles i.e. rucks, SUVs,etc. trucks

POV Source: EPA 2005 Average annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. EPA 420-F-05-022 August 2005

CALCULATION SHEET

Proposed Action Construction Emissions for Criteria Pollutants (tons per year)

Emission source	PM-10	CO	NOx	VOC	SO_2
Combustable Emissions	4.16	20.36	59.20	4.75	3.88
Construction Site-fugitive PM-10	39.87	NA	NA	NA	NA
Total emissions	44.03	20.36	59.20	4.75	3.88
De minimis threshold	100.00	100.00	NA	NA	NA

CALCULTION SHEET

Fugitive Dust Emissions (PM-10) fo New Construction Site.				
Construction Site	Emission Factor tons/acre/month	Total Area-Construction Site (acres)	Months/yr	Total PM-10 Emissions tns/yr
Resurface Road	0.11	7.27	3	2.4
Install lights	0.11	1.62	12	2.1
Staging area	0.11	2.07	12	2.7
Fence	0.11	24.24	12	32.0
Bridges	0.11	0.92	6	0.6
Transformers	0.11	0.01	4	0.0
Total		36.1		39.9

Source: Mid-Atlantic Regional Air Management Association (MARAMA). Fugitive Dust-Construction Calculation Sheet can be found online at: http://www.marama.org/visibility/Calculation_Sheets/

Soil surface area disturbed				
	Dementions (ft)			
Construction Site	Width	Length	Units	Total acres
Resurface Road	30	10,560	1	7.27
Install lights	10	10	704	1.62
Staging areas	300	300	1	2.07
Fence	10	105,600	1	24.24
Bridges	100	100	4	0.92
Transformers	10	10	4	0.01

Conversion factors	
ft2 per acre	0.000022957
ft per mile	5280

Number of lights to be installed	704

APPENDIX B
Lighting Specifications and Diagrams

Field Measurements on the River taken 7/11/02 with Raul Guel.
The following illuminance (foot-candle) values were measured @ 10:00 PM
with a Greenlee Digital Light Meter 93-172.
The values in this table were taken between 2 lighting poles.
Each pole has 2 1000 Watt HPS Floodlights with a 7x7 beam spread.
The floodlights are mounted approximately 38' above ground.
The floodlights are aimed approximately 15 degrees to each other and tilted 65 degrees up.
The values below represent a symmetrical pattern that approximates the values to be found along the river.

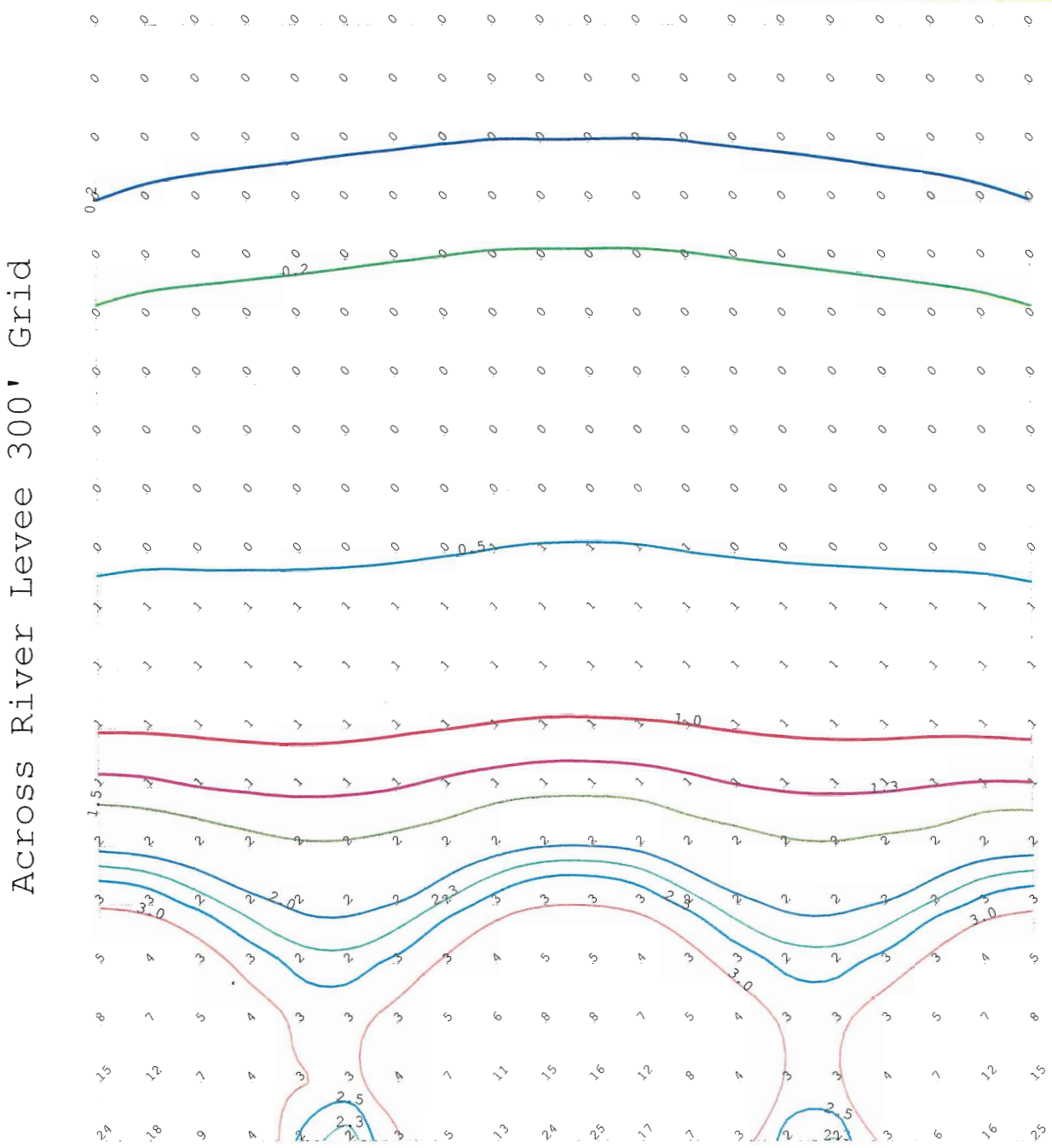
	Longitudinal distance to adjacent poles			
Drop in Elevation From Base of Pole	1/2 Distance 62.5'	1/4 Distance 31.25'	In Line to Pole 0'	Transverse Distance From the Pole
10'-9"	1.67	1.15	2.15	120'
	1.70	1.45	2.48	105'
	1.65	2.29	3.23	90'
	2.09	2.42	3.78	75'
10'-2"	2.12	3.78	6.13	60'
	2.38	4.00	8.88	45'
8'-9"	2.23	4.98	10.93	30'
4'-7"	1.39	2.82	11.57	15'
	0.46	0.80	6.23	0'
	0.15	0.12	0.80	-15' (Behind Pole)
	Foot-candles	Foot-candles	Foot-candles	

Other Data:
@ (0',120') 3.57 FC @ 5' above ground.
@ (0', 220'); .4 FC on ground; 1.7 FC @ 5' above ground.
@ (62.5', 220'); .5 FC on ground; 1.6 FC @ 5' above ground.

Points of Reference:
Light on ground on a moonlight night: .017 FC
Average light on ground on a residential street: .3 FC
Average light on ground on a Freewway: 1.3 FC
Average light on a parking lot for security purposes: .2 to .8 FC

DSR/ 7/11/02

Border Patrol Project 125' Spacing



Site
Calculation Grid: Arbitrary Grid
Horizontal Illuminance

Grid Name: Arbitrary Grid
Grid Type: Horizontal Illuminance
Grid Units: Footcandles

Grid Origin: (0.00, 0.00)
Grid Orient:
Grid Elev.: 0.00

Grid Surface: n/a
Grid Hinge: 0
Grid Azimuth: 0

Statistical Area Summary

Stat. Area	Ave	Max	Min	Ave/Min	Max/Min	Std. Dev.
Arbitrary Grid	1.86	25.18	0.10	18.60	251.80	3.60

Calculation Grid

	6.23	18.70	31.17	43.64	56.11	68.58	81.05	93.52	105.98	118.45	130.92	143.39	155.86	168.33	180.80	193.27	205.74
291.12	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11
276.19	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12
261.26	0.13	0.13	0.14	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14
246.33	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.16
231.40	0.17	0.18	0.18	0.19	0.19	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.20	0.20	0.20	0.19	0.19
216.47	0.20	0.21	0.22	0.22	0.22	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.23	0.23	0.22
201.54	0.24	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.29	0.29	0.29	0.29	0.28	0.28	0.27	0.27	0.26
186.62	0.29	0.30	0.31	0.31	0.32	0.32	0.33	0.34	0.34	0.35	0.35	0.35	0.34	0.33	0.33	0.32	0.31
171.69	0.36	0.37	0.37	0.38	0.38	0.39	0.40	0.41	0.42	0.42	0.42	0.42	0.41	0.40	0.39	0.39	0.38
156.76	0.44	0.45	0.46	0.46	0.47	0.47	0.48	0.50	0.51	0.52	0.52	0.51	0.50	0.49	0.48	0.47	0.47
141.83	0.55	0.57	0.57	0.58	0.58	0.59	0.60	0.61	0.63	0.64	0.64	0.64	0.62	0.61	0.60	0.59	0.58
126.90	0.70	0.72	0.73	0.73	0.73	0.74	0.75	0.77	0.79	0.81	0.81	0.80	0.78	0.77	0.75	0.74	0.74
111.97	0.92	0.94	0.94	0.93	0.93	0.94	0.96	0.99	1.02	1.04	1.04	1.03	1.01	0.98	0.96	0.95	0.95
97.04	1.27	1.27	1.24	1.20	1.19	1.19	1.23	1.29	1.35	1.40	1.41	1.38	1.32	1.26	1.22	1.21	1.22
82.11	1.83	1.79	1.60	1.54	1.49	1.49	1.56	1.65	1.85	1.98	1.99	1.91	1.70	1.62	1.54	1.53	1.57
67.18	2.79	2.62	2.29	1.99	1.86	1.86	1.97	2.28	2.63	2.93	2.96	2.76	2.40	2.08	1.94	1.92	2.02
52.25	4.62	4.02	3.21	2.60	2.31	2.28	2.53	3.08	3.90	4.68	4.80	4.18	3.33	2.70	2.41	2.38	2.63
37.32	8.12	6.67	4.84	3.47	2.73	2.66	3.24	4.49	6.25	8.03	8.31	6.85	4.98	3.60	2.87	2.83	3.48
22.39	15.43	11.97	7.56	4.20	2.74	2.67	3.60	6.70	10.75	15.21	15.61	12.21	7.75	4.37	2.89	2.85	4.13

125'

Calculation Grid

	218.20	230.67	243.14
291.12	0.11	0.10	0.10
276.19	0.12	0.12	0.11
261.26	0.14	0.14	0.13
246.33	0.16	0.16	0.15
231.40	0.19	0.18	0.18
216.47	0.22	0.21	0.21
201.54	0.26	0.25	0.25
186.62	0.31	0.31	0.30
171.69	0.38	0.37	0.36
156.76	0.46	0.46	0.44
141.83	0.58	0.57	0.56
126.90	0.74	0.73	0.71
111.97	0.96	0.95	0.93
97.04	1.26	1.28	1.28
82.11	1.62	1.80	1.85
67.18	2.30	2.62	2.80
52.25	3.20	4.00	4.62
37.32	4.80	6.60	8.11
22.39	7.43	11.76	15.39

Calculation Grid

125'

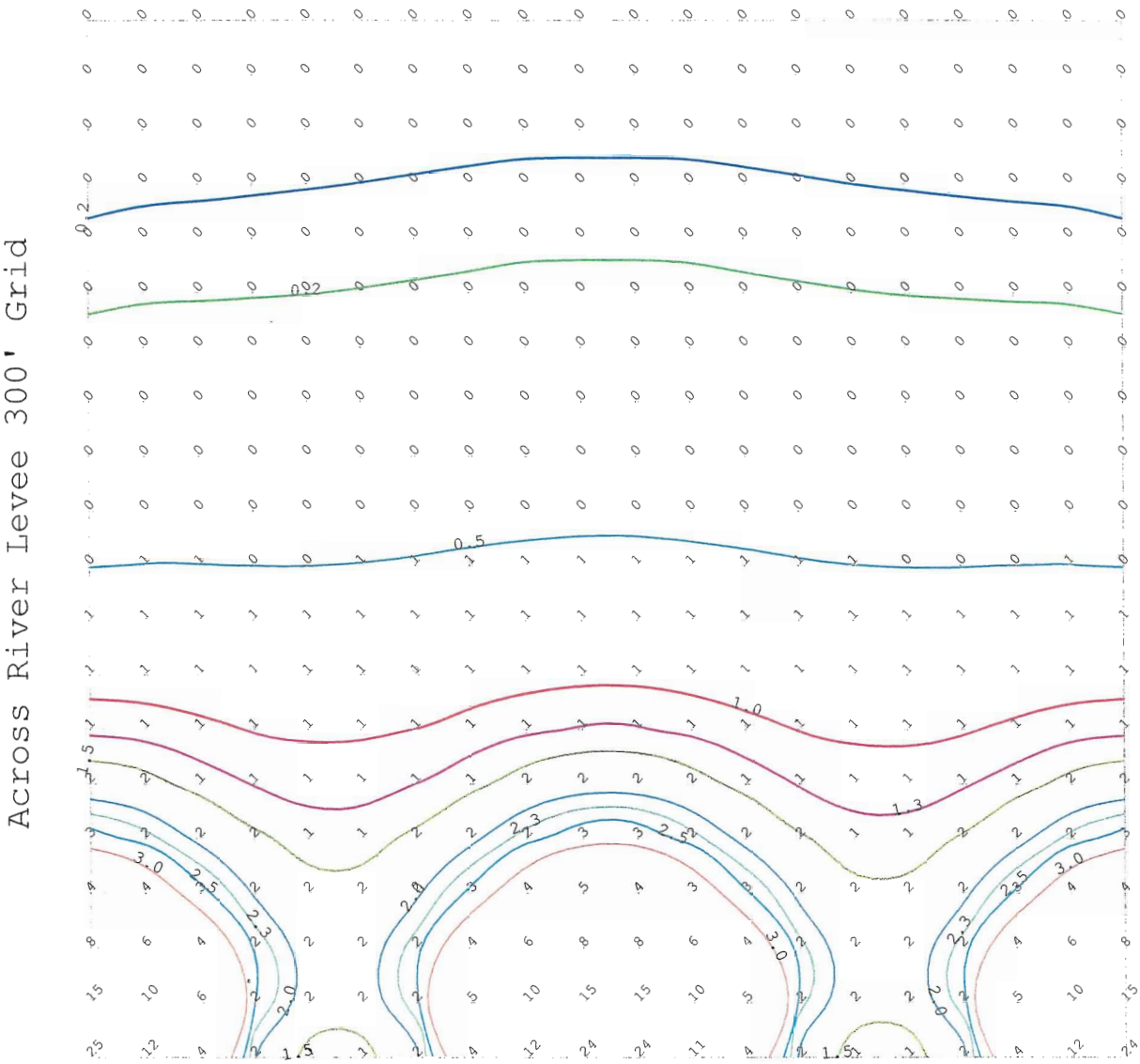
	6.23	18.70	31.17	43.64	56.11	68.58	81.05	93.52	105.98	118.45	130.92	143.39	155.86	168.33	180.80	193.27	205.74
7.46	24.98	16.26	6.64	3.22	2.18	2.09	2.84	5.32	13.07	24.13	25.18	16.68	6.88	3.35	2.29	2.24	3.20

125'

Calculation Grid

	218.20	230.67	243.14
7.46	6.37	15.64	24.85

Border Patrol Project 150' Spacing



150'

Site
Calculation Grid: Arbitrary Grid
Horizontal Illuminance

Grid Name: Arbitrary Grid
Grid Type: Horizontal Illuminance
Grid Units: Footcandles

Grid Origin: (0.00, 0.00)
Grid Orient:
Grid Elev.: 0.00

Grid Surface: n/a
Grid Hinge: 0
Grid Azimuth: 0

Statistical Area Summary

Stat. Area	Ave	Max	Min	Ave/Min	Max/Min	Std. Dev.
Arbitrary Grid	1.56	24.57	0.09	17.33	273.00	3.29

Calculation Grid

	7.50	22.50	37.50	52.50	67.50	82.50	97.50	112.50	127.50	142.50	157.50	172.50	187.50	202.50	217.50	232.50	247.50
292.50	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10
277.50	0.10	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11
262.50	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13
247.50	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.14
232.50	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.19	0.19	0.19	0.19	0.18	0.18	0.17	0.17	0.17
217.50	0.19	0.19	0.19	0.20	0.20	0.20	0.21	0.21	0.22	0.22	0.22	0.22	0.21	0.21	0.20	0.20	0.20
202.50	0.22	0.23	0.23	0.23	0.23	0.24	0.24	0.25	0.26	0.26	0.26	0.26	0.25	0.24	0.24	0.23	0.23
187.50	0.26	0.27	0.27	0.28	0.28	0.28	0.29	0.30	0.30	0.31	0.31	0.30	0.29	0.29	0.28	0.28	0.27
172.50	0.32	0.33	0.33	0.33	0.33	0.34	0.35	0.35	0.37	0.37	0.37	0.36	0.35	0.34	0.34	0.33	0.33
157.50	0.39	0.40	0.40	0.40	0.41	0.41	0.42	0.43	0.44	0.45	0.45	0.44	0.43	0.42	0.41	0.40	0.40
142.50	0.49	0.50	0.50	0.50	0.50	0.50	0.52	0.53	0.55	0.56	0.56	0.54	0.53	0.51	0.50	0.49	0.50
127.50	0.64	0.64	0.63	0.62	0.62	0.62	0.64	0.67	0.69	0.70	0.70	0.69	0.66	0.64	0.62	0.61	0.62
112.50	0.85	0.84	0.81	0.79	0.77	0.78	0.81	0.84	0.89	0.93	0.93	0.89	0.84	0.80	0.77	0.76	0.78
97.50	1.19	1.14	1.06	0.98	0.95	0.96	1.00	1.10	1.20	1.27	1.27	1.19	1.08	0.99	0.95	0.94	0.97
82.50	1.73	1.61	1.38	1.24	1.15	1.16	1.25	1.42	1.65	1.82	1.81	1.63	1.40	1.23	1.14	1.13	1.22
67.50	2.67	2.35	1.90	1.56	1.38	1.39	1.56	1.91	2.38	2.75	2.74	2.35	1.87	1.53	1.36	1.36	1.53
52.50	4.44	3.59	2.60	1.95	1.62	1.62	1.94	2.59	3.58	4.50	4.47	3.50	2.52	1.89	1.58	1.58	1.91
37.50	7.89	5.87	3.79	2.44	1.77	1.75	2.39	3.71	5.78	7.90	7.80	5.63	3.58	2.31	1.69	1.72	2.37
22.50	15.15	10.27	5.58	2.49	1.76	1.75	2.41	5.36	9.91	15.13	14.99	9.51	5.06	2.31	1.68	1.70	2.40

150'

Calculation Grid

	262.50	277.50	292.50
292.50	0.10	0.09	0.09
277.50	0.11	0.11	0.10
262.50	0.12	0.12	0.12
247.50	0.14	0.14	0.14
232.50	0.17	0.16	0.16
217.50	0.19	0.19	0.19
202.50	0.23	0.23	0.22
187.50	0.27	0.27	0.26
172.50	0.33	0.33	0.32
157.50	0.40	0.40	0.39
142.50	0.50	0.50	0.49
127.50	0.63	0.64	0.64
112.50	0.80	0.84	0.85
97.50	1.05	1.14	1.19
82.50	1.37	1.60	1.73
67.50	1.88	2.34	2.67
52.50	2.57	3.56	4.45
37.50	3.71	5.81	7.91
22.50	5.43	10.09	15.12

150

Calculation Grid

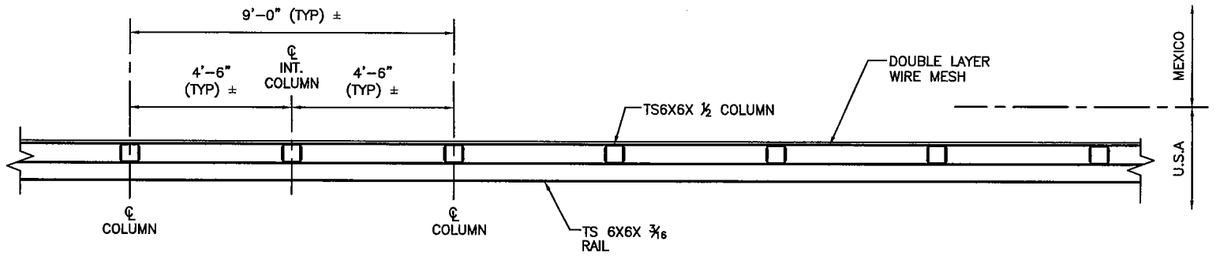
	7.50	22.50	37.50	52.50	67.50	82.50	97.50	112.50	127.50	142.50	157.50	172.50	187.50	202.50	217.50	232.50	247.50
7.50	24.57	12.45	4.19	1.99	1.37	1.36	1.94	3.96	11.58	24.34	23.98	10.67	3.72	1.85	1.31	1.32	1.91

150'

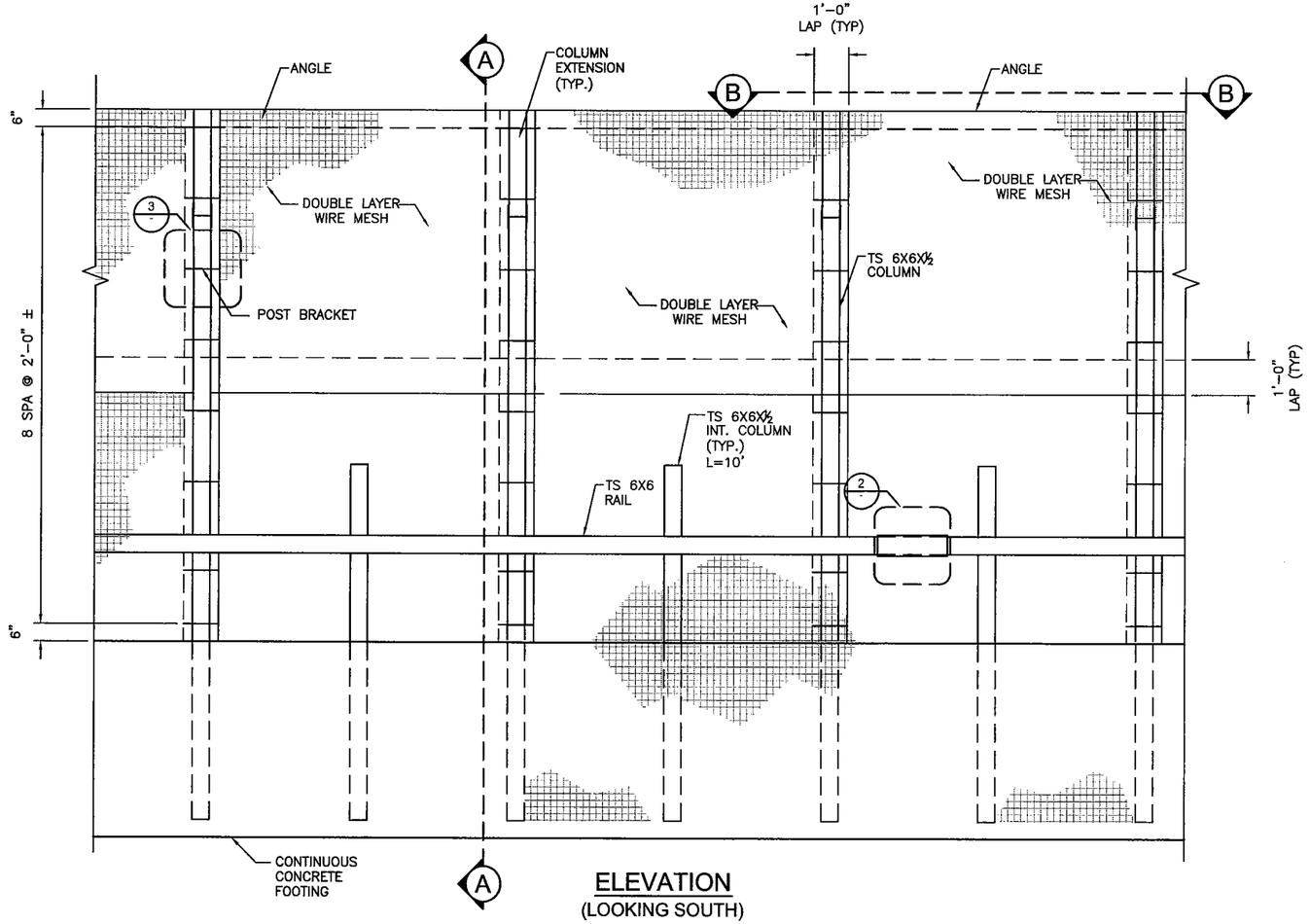
Calculation Grid

	262.50	277.50	292.50
7.50	3.99	12.11	24.42

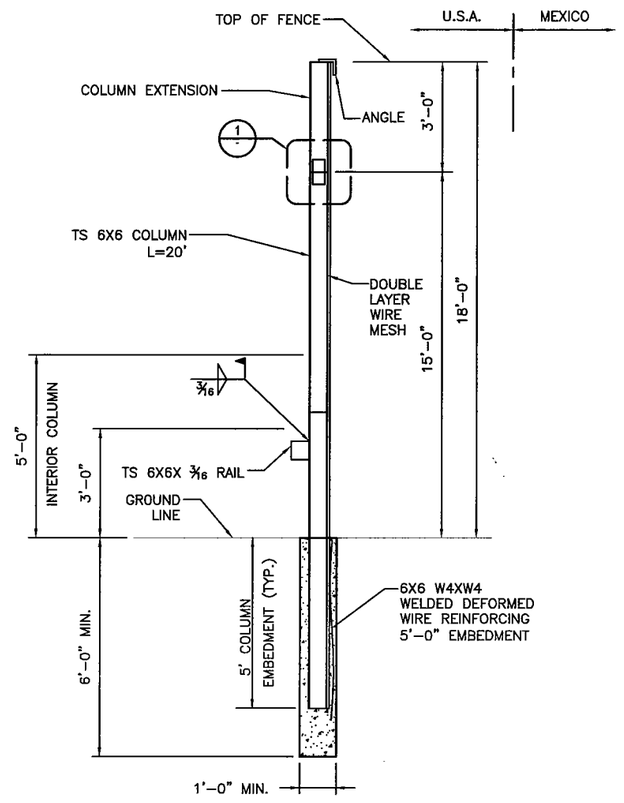
APPENDIX C
Fence Specifications



PLAN VIEW



ELEVATION
(LOOKING SOUTH)



SECTION A-A

NOTES:
1. VALID FOR 90 MPH WIND.

2. FOUNDATION DETAILS SHOWN REPRESENT MINIMUM DIMENSIONAL REQUIREMENTS AND SHALL BE INCREASED IF NECESSARY BASED ON FOUNDATION DESIGN.

US Army Corps of Engineers
Fort Worth District

Mark	Description	Date	Appr.

SCHEMATIC NOT FOR CONSTRUCTION

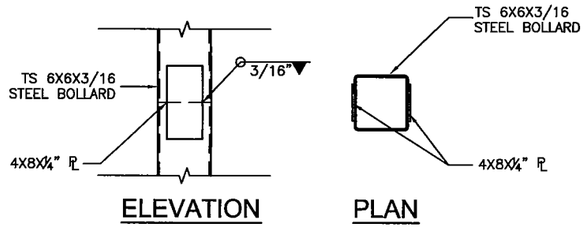
Baker
MICHAEL BAKER JR., INC
ASU RIVER PARK
2999 NORTH 44TH STREET, SUITE 600
PHOENIX, AZ 85012

Date:	
Rev.	
Submitted by:	Michael Baker Jr., Inc.
Plot date:	11/18/07
Baker Project No:	112319
Designed by:	KAS
Drwn by:	KAS/MC
Ckd by:	JWB
Reviewed by:	TQ

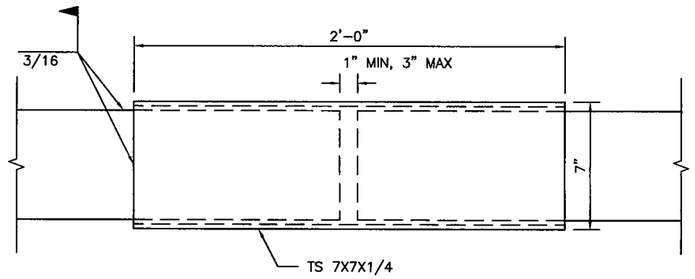
PF225 CONCEPTUAL FENCE DESIGNS

PERSONNEL - VEHICLE TYPE 2A

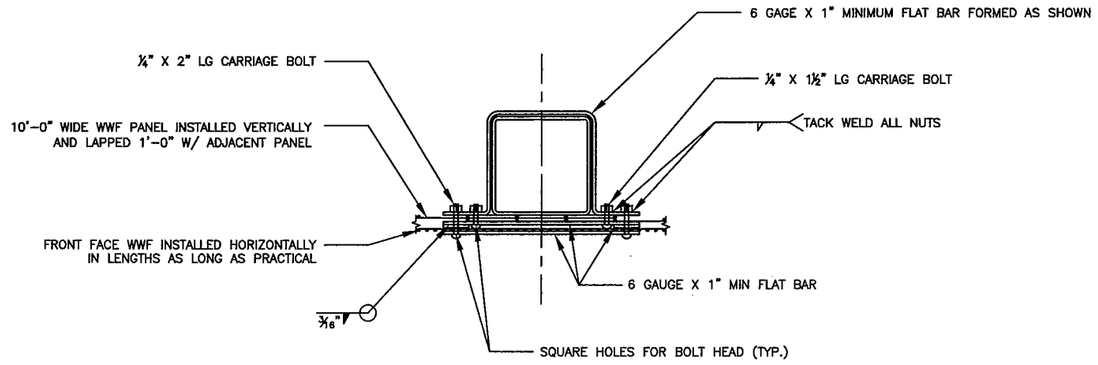
SHEET REFERENCE NUMBER
PV-2A



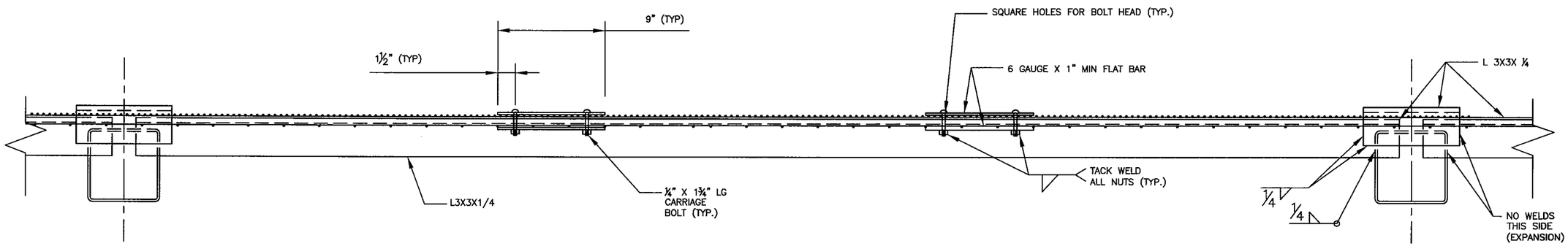
DETAIL 1
OPTIONAL SPLICE



DETAIL 2
RAIL SPLICE (36' MAX SPACE)



DETAIL 3
POST BRACKET



SECTION B-B
TOP HORIZONTAL RAIL DETAIL

US Army Corps of Engineers
Fort Worth District

Mark	Description	Date	Appr.

SCHEMATIC
NOT FOR
CONSTRUCTION

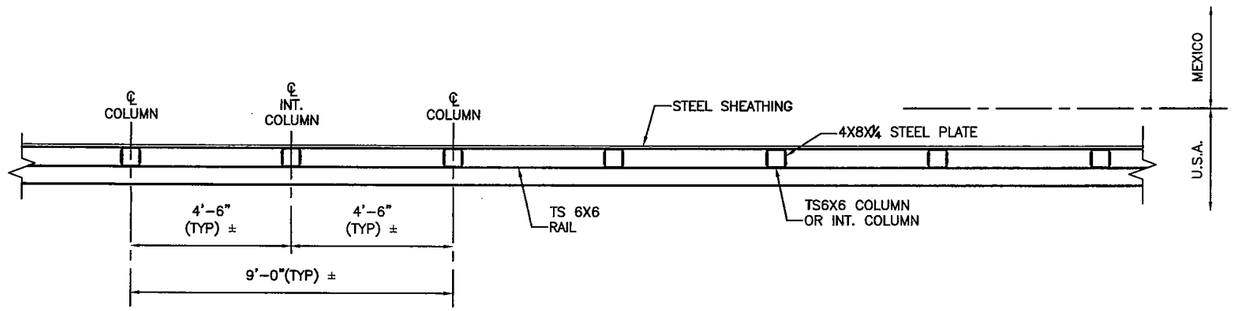
Baker
MICHAEL BAKER JR., INC
2929 NORTH CENTRAL AVENUE
SUITE 600
PHOENIX, AZ 85012

Designed by: KAS	Date:	Rev.
Drawn by: KAS	Ckd by: JWB	Submitted by: Michael Baker Jr., Inc.
Reviewed by: TQ		Plot date: 11/18/07
		Baker Project No: 112319

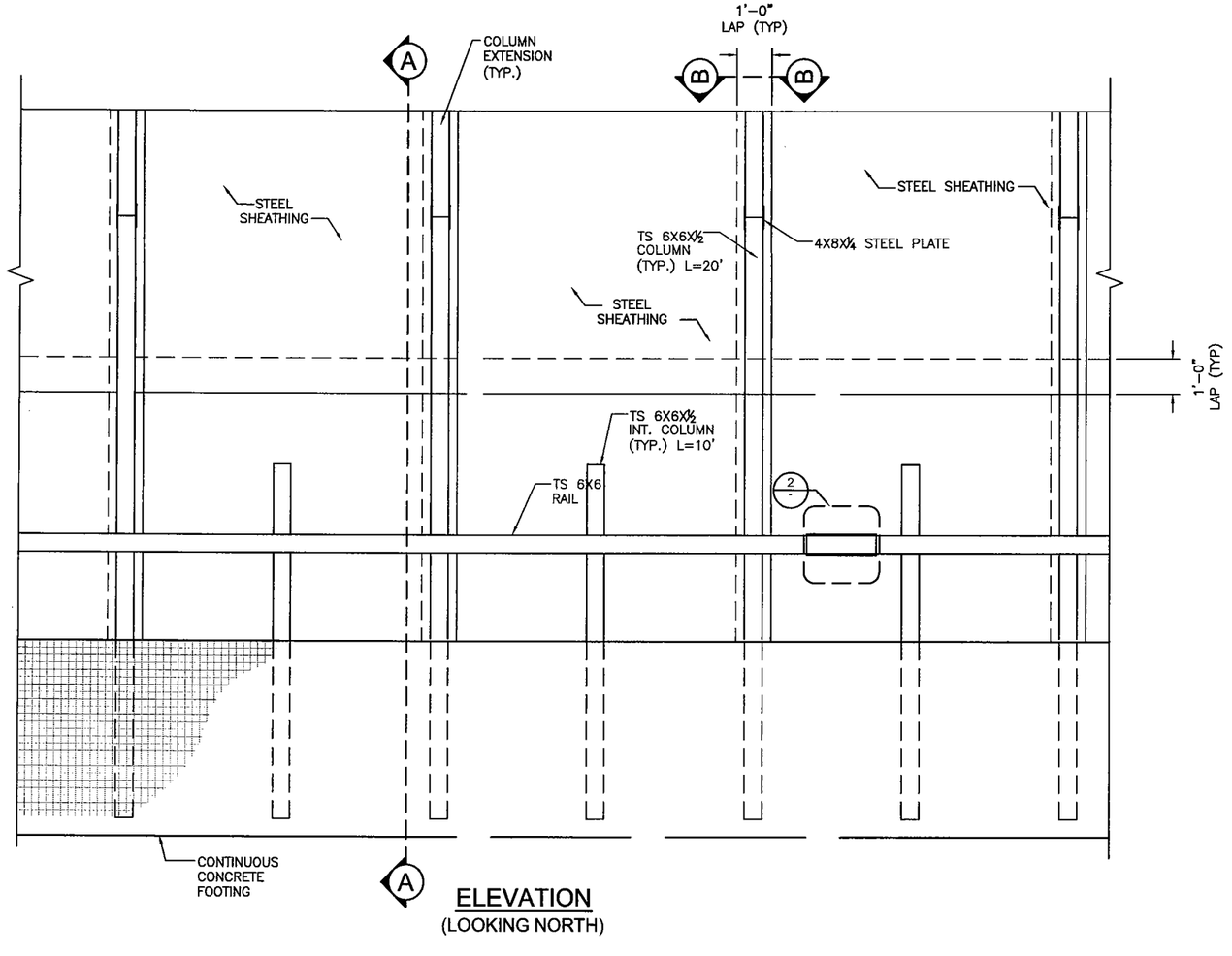
PF225
CONCEPTUAL
FENCE
DESIGNS

PERSONNEL -
VEHICLE
TYPE 2A

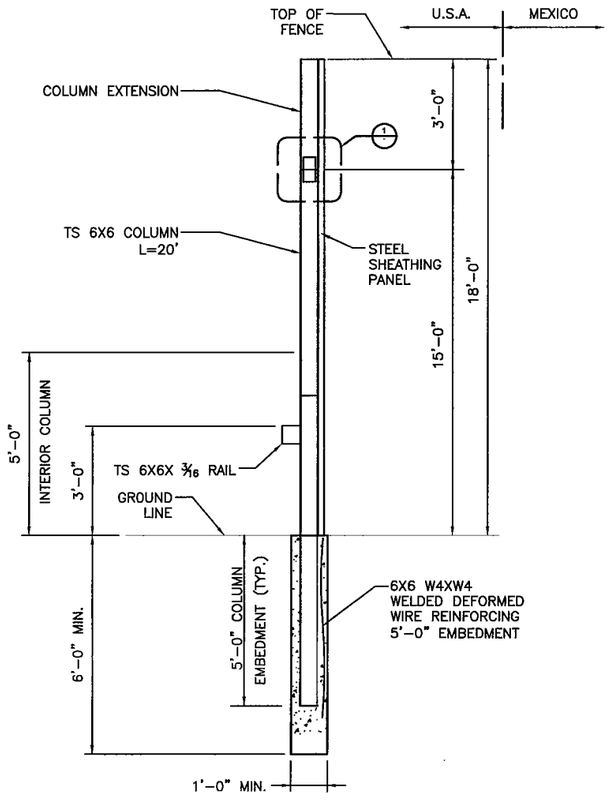
SHEET NOTEBACK NUMBER
PV-2A



PLAN VIEW



ELEVATION
(LOOKING NORTH)



SECTION A-A

NOTE:
1. VALID FOR 90 MPH WIND

2. FOUNDATION DETAIL REQUIREMENTS SHOWN REPRESENT MINIMUM DIMENSIONS. FOUNDATION DESIGN REQUIRED BASED ON SITE SPECIFIC SOIL PROPERTIES.

US Army Corps of Engineers
Fort Worth District

SCHEMATIC NOT FOR CONSTRUCTION

Baker
MICHAEL BAKER JR., INC
2929 NORTH CENTRAL AVENUE
SUITE 800
PHOENIX, AZ 85012

Mark	Description	Appr.

Designed by: KAS	Date:	Submitted by: Michael Baker Jr., Inc.	Baker Project No: 112319
Dwn by: MC	Ckd by: JWB	Plot date: 11/18/07	Rev.
Reviewed by: TQ			

PF225 CONCEPTUAL FENCE DESIGNS

PERSONNEL - VEHICLE TYPE 2B

SHEET REFERENCE NUMBER
PV-2B

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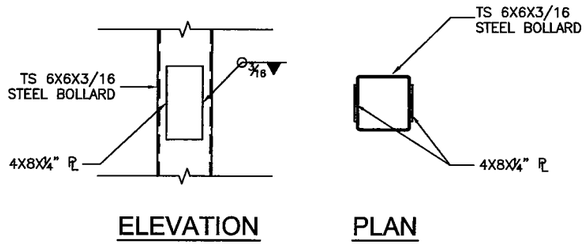
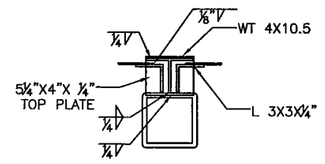
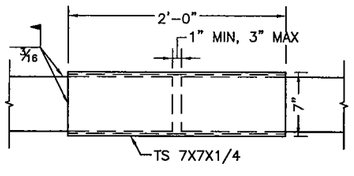


ELEVATION PLAN

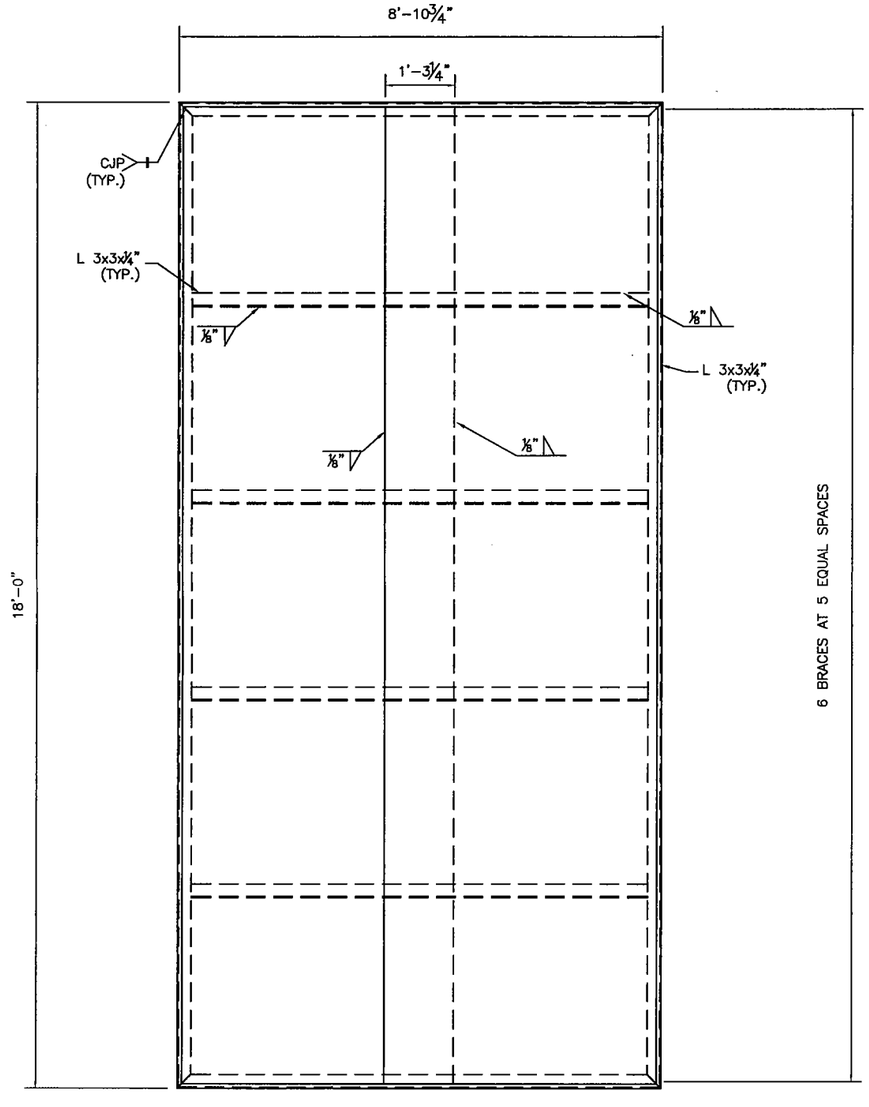
DETAIL 1
OPTIONAL SPLICE



SECTION B-B



DETAIL 2
RAIL SPLICE (36' MAX SPACE)



STANDARD STEEL SHEATHING PANEL

US Army Corps of Engineers
Fort Worth District

Mark	Description	Date

SCHEMATIC
NOT FOR
CONSTRUCTION

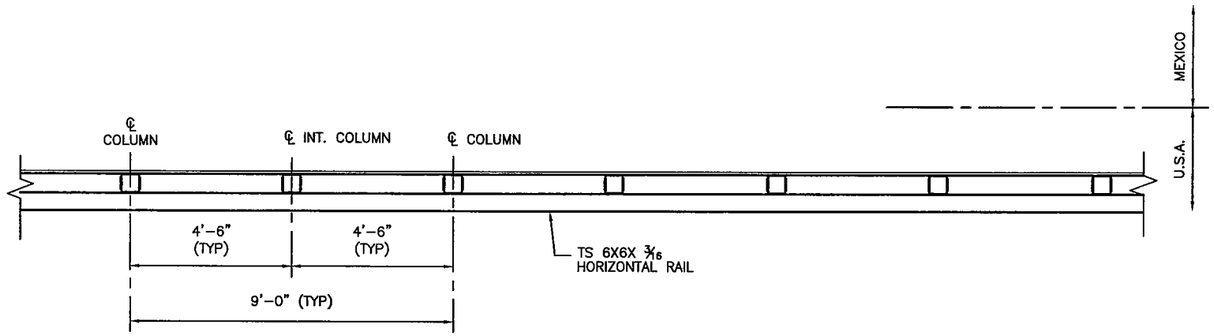
Baker
MICHAEL BAKER JR., INC
2609 NORTH GREENFIELD ROAD
SUITE 600
PHOENIX, AZ 85012

Designed by: KAS	Date:
Drwn by: KAS	Ckd by: JWB
Reviewed by: TQ	Submitted by: Michael Baker Jr., Inc.
Rev.	Plot date: 11/18/07
	Baker Project No: 112319

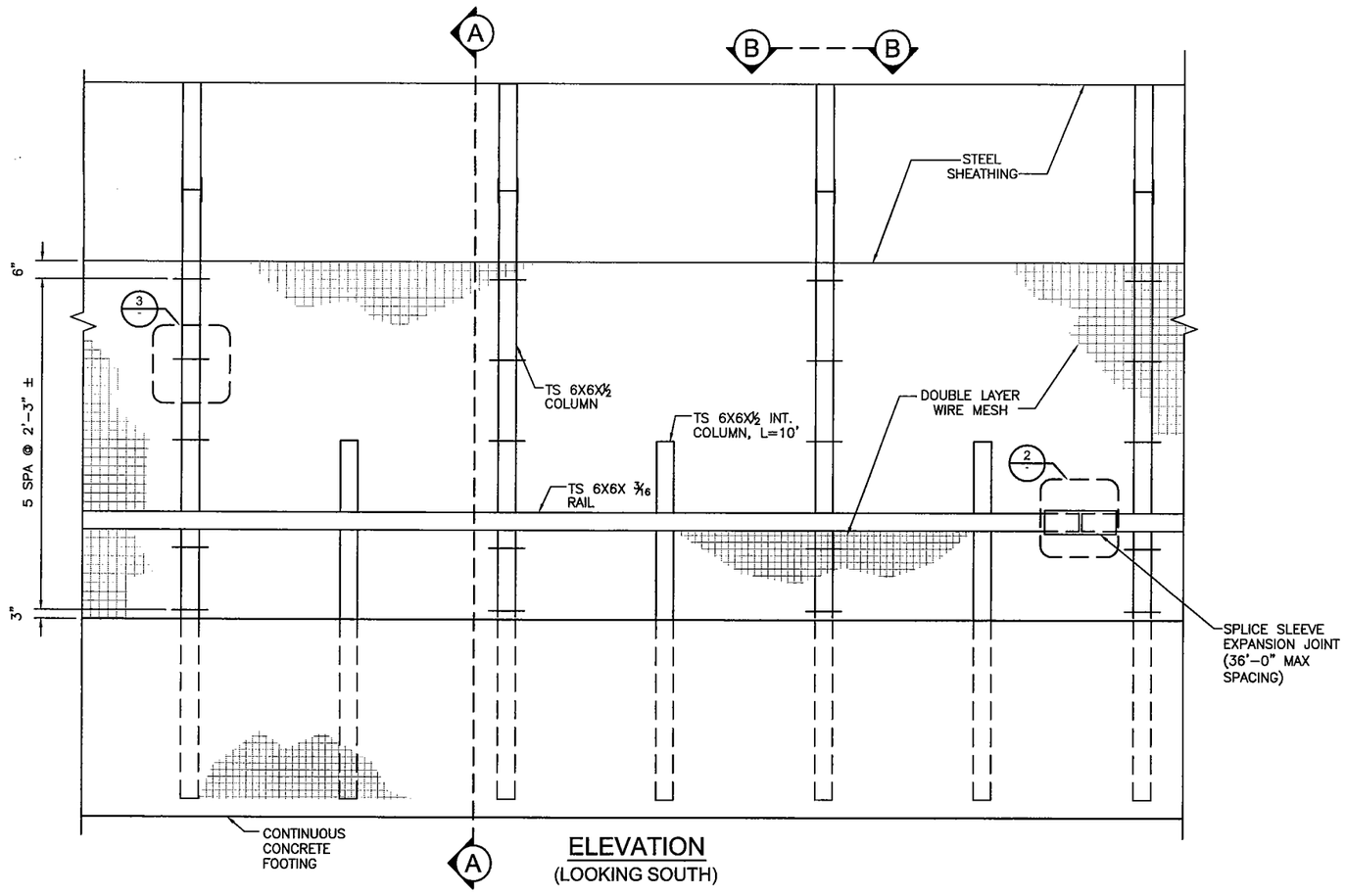
PF225
CONCEPTUAL
FENCE
DESIGNS

PERSONNEL -
VEHICLE
TYPE 2B

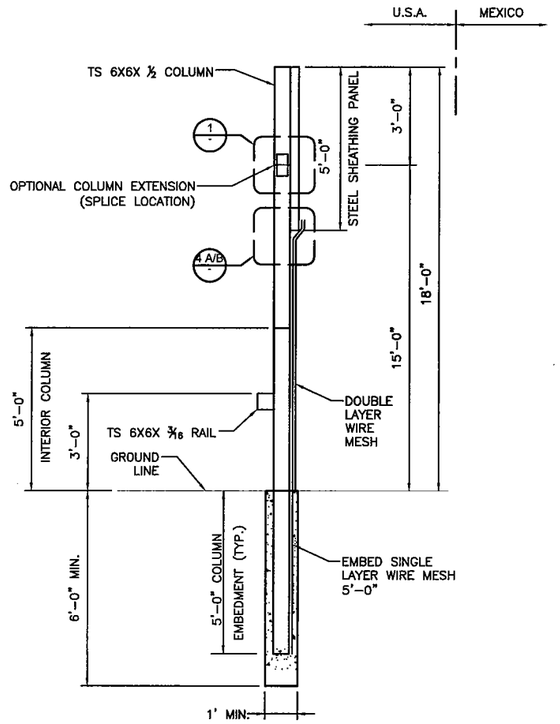
SHEET REFERENCE NUMBER
PV-2B



PLAN VIEW



ELEVATION
(LOOKING SOUTH)



SECTION A-A

NOTE:
1. DESIGN VALID FOR 90 MPH WIND

2. FOUNDATION DETAIL REQUIREMENTS SHOWN REPRESENT MINIMUM DIMENSIONS AND MAY NEED INCREASED BASED ON FOUNDATION DESIGN.

US Army Corps of Engineers
Fort Worth District

SCHEMATIC NOT FOR CONSTRUCTION

Baker
MICHAEL BAKER JR., INC
2929 NORTH CENTRAL AVENUE SUITE 800
PHOENIX, AZ 85012

Mark	Description	Date	Appr.

Designed by: RB
Drwn by: JN
Checked by: TEQ
Reviewed by: DJL
Date:
Rev.
Submitted by: Michael Baker Jr., Inc.
Plot date: 11/18/07
Baker Project No: 112319

PF225 CONCEPTUAL FENCE DESIGNS

PERSONNEL - VEHICLE TYPE 2C

SHEET NOTEBOOK NUMBER
PV-2C

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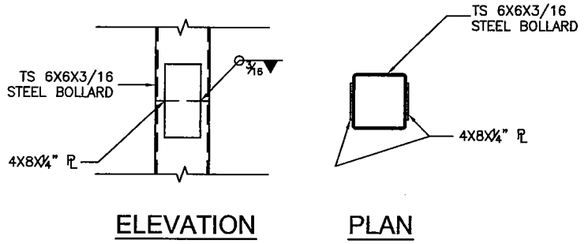
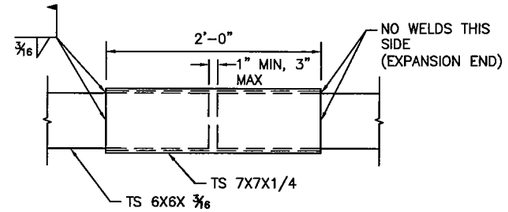
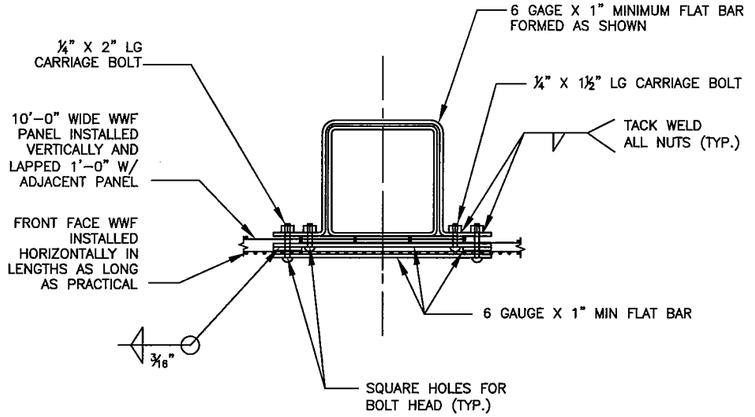


ELEVATION PLAN

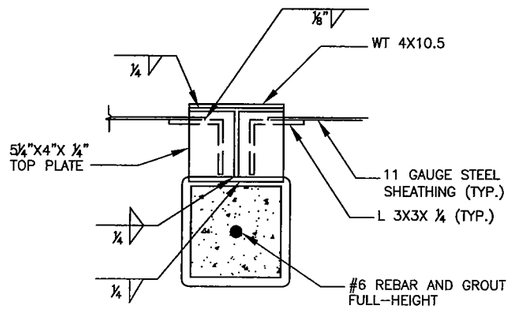
DETAIL1
OPTIONAL COLUMN SPLICE



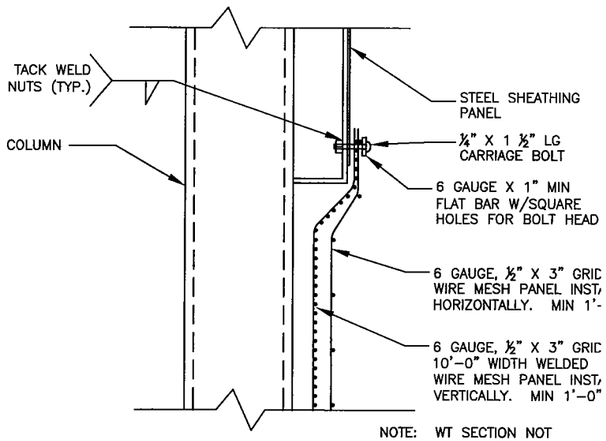
DETAIL 2
HORIZONTAL RAIL EXPANSION JOINT
36'-0" MAXIMUM SPACING



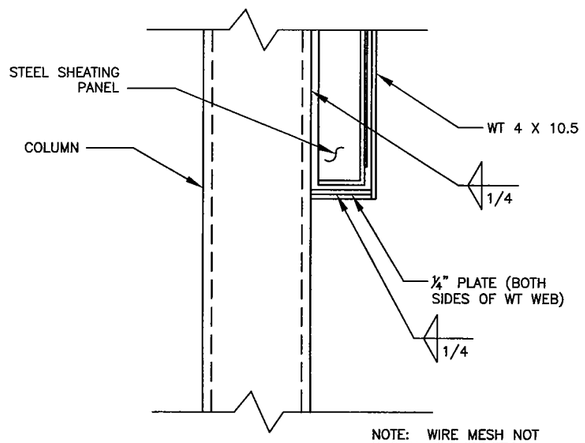
DETAIL3
POST BRACKET



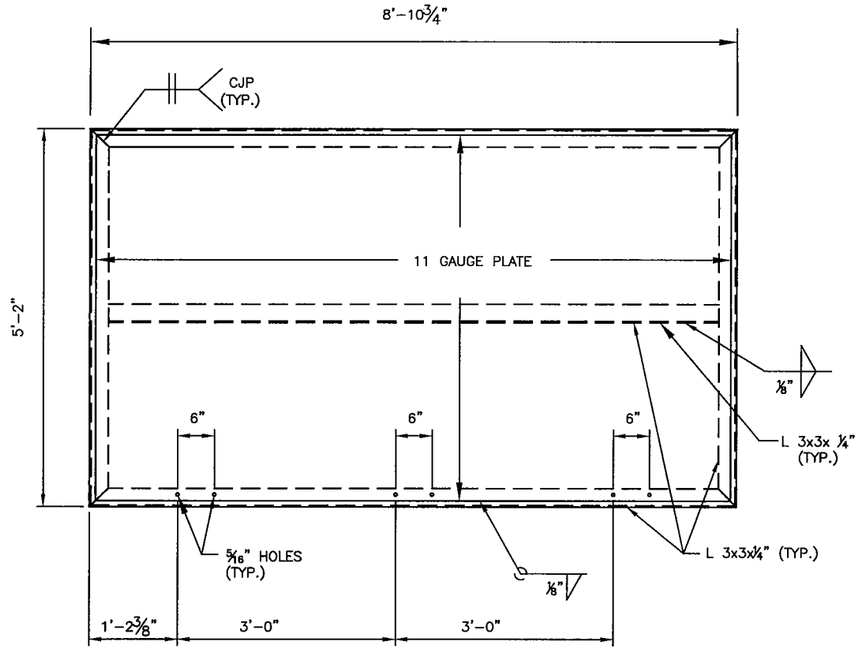
SECTION B-B



DETAIL 4 (A)
MESH - STEEL SHEATING PANEL ATTACHMENT BETWEEN COLUMNS



DETAIL 4 (B)
STEEL SHEATING PANEL SUPPORT (AT COLUMNS)



STEEL SHEATHING PANEL DETAIL

US Army Corps of Engineers
Fort Worth District

Mark	Description	Date	Appr.

SCHEMATIC NOT FOR CONSTRUCTION

Baker
MICHAEL BAKER JR., INC
2929 NORTH CENTRAL AVENUE
SUITE 900
PHOENIX, AZ 85012

Designed by: RB	Date:	Rev.	
Drwn by: JN	Chkd by: TEQ	Submitted by: Michael Baker Jr., Inc.	
Reviewed by: DJL		Plot date: 11/18/07	Baker Project No: 1112319

PF225 CONCEPTUAL FENCE DESIGNS

PERSONNEL - VEHICLE TYPE 2C

SHEET REFERENCE NUMBER
PV-2C

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APPENDIX D
Correspondence

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

July 11, 2007

Planning, Environmental and Regulatory Division

SUBJECT: Supplemental Environmental Assessment for the Proposed Construction of Fence, Lights and Road Improvements along the International Boundary and Water Commission Levee in El Paso County

United States International Boundary and Water Commission
ATTN: Mr. Doug Echlin
U.S. Section, IBWC
417 North Mesa Street, C-310
El Paso, TX 79902

Dear Mr. Echlin:

On behalf of U.S. Customs and Border Protection (CBP) and Department of Homeland Security, the U.S. Army Corps of Engineers (USACE) intends to prepare a Supplemental Environmental Assessment (SEA) for the proposed construction of up to 21 miles of pedestrian fence, border lighting, and road improvements along a section of the United States Section, International Boundary and Water Commission (USIBWC) levee near the Rio Grande from the Rio Bosque to the Fabens Port of Entry (POE) in El Paso County, Texas. In addition, four bridges over the District irrigation canal would also be replaced.

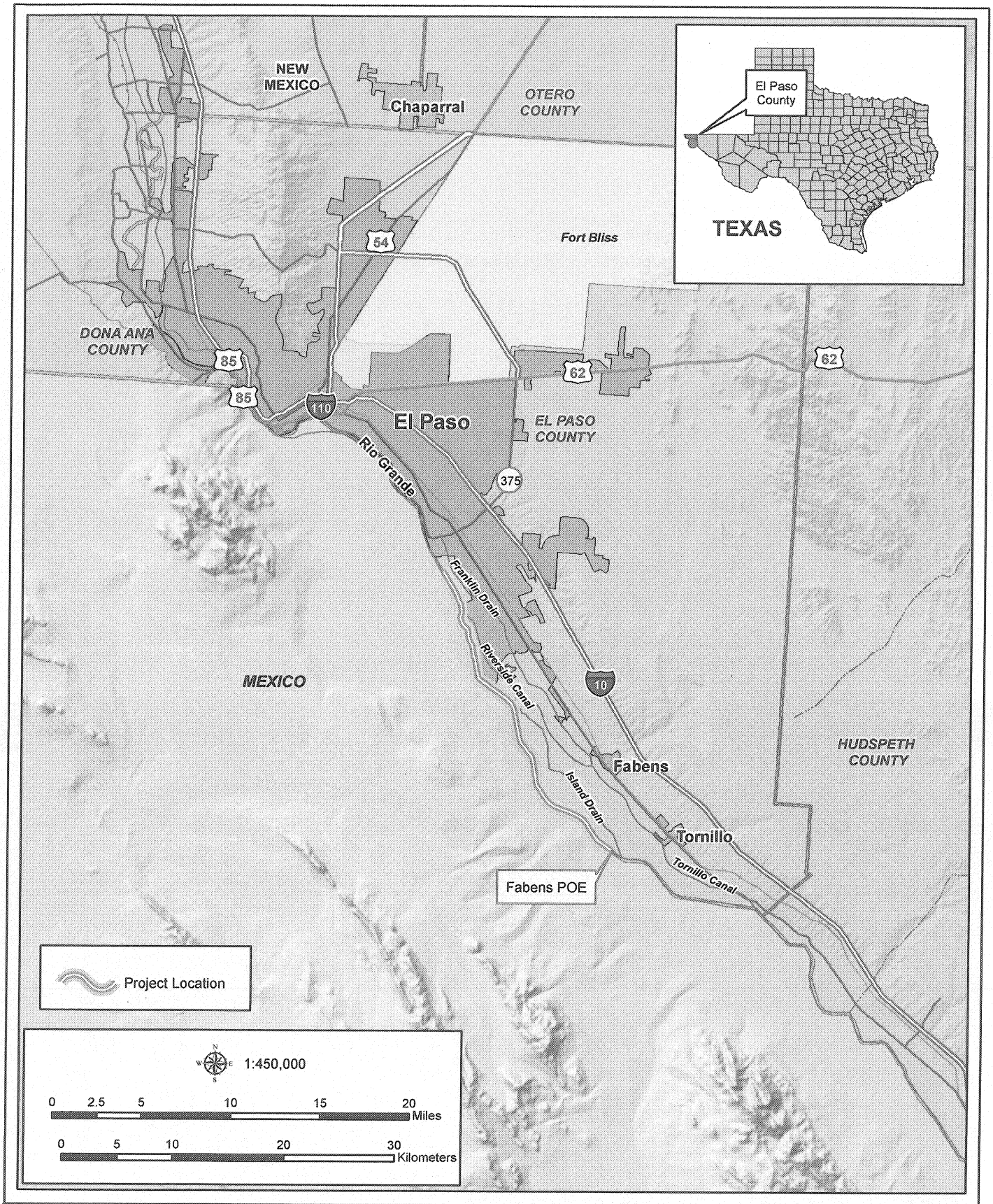
The SEA will analyze the potential for significant adverse or beneficial impacts of the proposed action. The SEA is tiered from the 2006 Programmatic Environmental Assessment (PEA) for Proposed Tactical Infrastructure, Office of Border Patrol, El Paso Sector, Texas Stations.

We are currently in the process of gathering the most current information available regarding environmental resources and other areas of concern occurring within this area. We respectfully request that your agency provide input regarding unique or environmentally sensitive areas or other issues that you believe may be affected by the proposed OBP activities.

We intend to provide your agency with a copy of the Draft SEA for the proposed action once completed. Please let us know if additional copies are needed. Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division



Project Location Map

GSRC

July 2007

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

November 5, 2007

Mr. Charles McGregor
United States Army Corps of Engineers
Fort Worth District
Engineering Construction Support Office
P.O. Box 17300
Fort Worth, TX 76102-0300

Dear Mr. McGregor:

Reference is made to various letters dated October 18, 2007, from Mr. Robert F. Janson, U.S. Customs and Border Protection, requesting us to become a cooperating agency with regard to the development of National Environmental Policy Act (NEPA) environmental documentation for the proposed construction, maintenance, and operation of tactical infrastructure throughout the international boundary. According to the letters, the following projects are being considered:

1) Environmental Impact Statement for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol San Diego Sector;

2) Environmental Assessment for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol San Diego Sector;

3) Environmental Assessment for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol El Centro Sector;

4) Environmental Assessment for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Yuma Sector;

5) Supplemental Environmental Assessment for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol El Paso Sector;

6) Environmental Assessment for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Marfa Sector;

7) Environmental Assessment for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Del Rio Sector; and

8) Environmental Impact Statement for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Rio Grande Valley Sector.

The United States Section, International Boundary and Water Commission (USIBWC) accepts your request to become a cooperating agency in the NEPA process. We look forward to working with you on issues related to the international boundary, specifically international treaties and agreements, issues related to USIBWC jurisdiction, and USIBWC real property. Due to the overwhelming list of Border Patrol initiatives along the international boundary, I have designated Mr. Richard Peace, Division Engineer, Operations and Maintenance Division, as the agency single point of contact for matters related to these projects. Mr. Peace can be reached at (915) 832-4158 for overall project coordination. If you have any questions feel free to contact me at (915) 832-4101.

Sincerely,

Carlos Marin, P.E.
Commissioner

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

July 11, 2007

Planning, Environmental and Regulatory Division

SUBJECT: Supplemental Environmental Assessment for the Proposed Construction of Fence, Lights and Road Improvements along the International Boundary and Water Commission Levee in El Paso County

U.S. Fish and Wildlife Service
ATTN: Mr. Allen Strand
6300 Ocean Drive, Campus Box 338
Corpus Christi, TX 78412

Dear Mr. Strand:

On behalf of U.S. Customs and Border Protection (CBP) and Department of Homeland Security, the U.S. Army Corps of Engineers (USACE) intends to prepare a Supplemental Environmental Assessment (SEA) for the proposed construction of up to 21 miles of pedestrian fence, border lighting, and road improvements along a section of the United States Section, International Boundary and Water Commission (USIBWC) levee near the Rio Grande from the Rio Bosque to the Fabens Port of Entry (POE) in El Paso County, Texas. In addition, four bridges over the District irrigation canal would also be replaced.

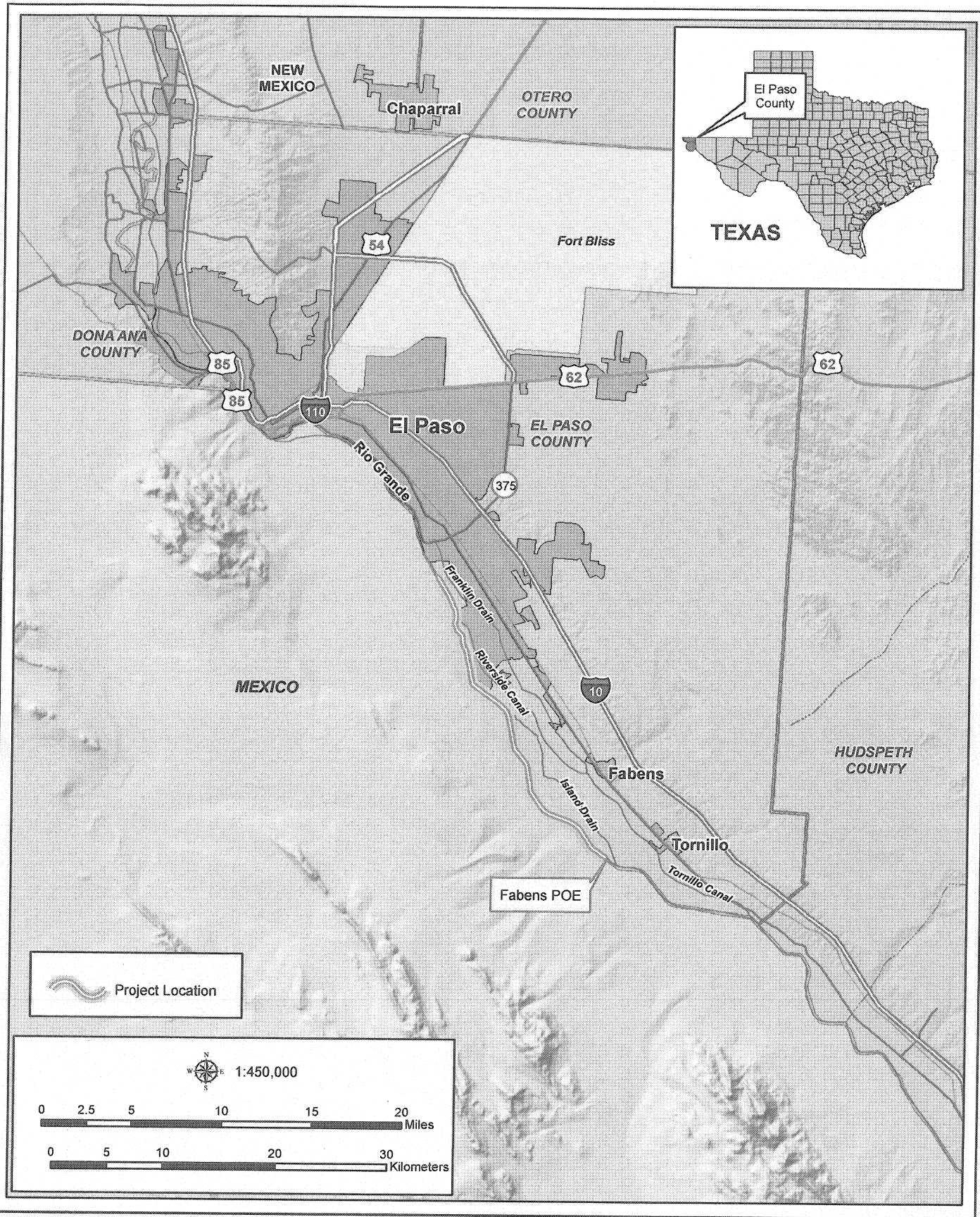
The SEA will analyze the potential for significant adverse or beneficial impacts of the proposed action. The SEA is tiered from the 2006 Programmatic Environmental Assessment (PEA) for Proposed Tactical Infrastructure, Office of Border Patrol, El Paso Sector, Texas Stations.

Enclosed is a map showing the location of the project corridors for both PEAs. We are currently in the process of gathering the most current information available regarding Federally and state listed species potentially occurring within this area. We respectfully request that your agency provide input regarding protected species, designated critical habitat, descriptions of the sensitive resources (*e.g.,* rare or unique plant communities, threatened and endangered and candidate species), and unique or environmentally sensitive areas that you believe may be affected by the proposed OBP activities.

We intend to provide your agency with a copy of the Draft SEA for the proposed action once completed. Please let us know if additional copies are needed. Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division



Project Location Map

GSRC

July 2007

United States Department of the Interior

FISH AND WILDLIFE SERVICE
10711 Burnet Road, Suite 200
Austin, Texas 78758
512 490-0057
FAX 490-0974

AUG 0 7 2007

-WY
PER-E
-EE

William Fickel, Jr.
Chief Planning, Environmental, and Planning Division
Department of the Army
Fort Worth District, Corps of Engineers
P.O. Box 17300
Fort Worth, TX 76102-0300

Consultation #: 21450-2007-TA-0216

Dear Mr. Fickel:

Thank you for your July 11, 2007, letter to the U. S. Fish and Wildlife Service's (Service) Corpus Christi Field Office regarding your intent to develop a Supplemental Environmental Assessment for the proposed construction of fence, lights, and road improvements along the United States Section, International Boundary and Water Commission (USIBWC) levee in El Paso County. Please note that for your convenience, we have established a single point of contact for border security projects in Texas. Please continue to send all future correspondence to Mr. Allan Strand, Field Supervisor, Corpus Christi Ecological Services Field Office, U.S. Fish and Wildlife Service, c/o TAMU-CC, 6300 Ocean Drive, Campus Box 338, Corpus Christi, TX 78412. However, you may receive letters signed by myself or Allan Strand, depending upon the geographic location of the project. For your convenience, please find enclosed a map of both offices' jurisdictions on a county-by-county basis.

According to your letter, the proposed project may include up to 21 miles of pedestrian fence, border lighting, and road improvements along a section of the USIBWC levee near the Rio Grande from the Rio Bosque to Fabens Port of Entry in El Paso County, Texas. In addition, four bridges over the District irrigation canal will be replaced.

We are providing the following information to assist consultants and/or Federal action agencies in assessing, avoiding, and minimizing adverse effects to species listed as threatened or endangered according to the Endangered Species Act of 1973, as amended (16 United States Code [U.S.C.] 1531 *et seq.*), designated critical habitat, as well as migratory birds protected by the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), and designated wetlands.

Federally Listed Species

According to Section 7(a)(2) of the Endangered Species Act and its implementing regulations, it is the responsibility of each Federal agency to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any Federally-listed species. In this case, the responsibility belongs to the U.S. Customs and Border Patrol or their designated representative.

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RECEIVED
10 Aug 2007

A county-by-county listing of Federally-listed threatened and endangered species that occur within this office's work area can be found at http://www.fws.gov/southwest/es/EndangeredSpecies/lists/. You should use the county-by-county listing and other current species information to determine whether suitable habitat for a listed species is present at your project site. If suitable habitat is present, a qualified individual should conduct surveys to determine whether a listed species is present. After completing a habitat evaluation and/or any necessary surveys, you should evaluate the project for potential effects to listed species and make one of the following determinations:

1) *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation; however, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of effect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.

2) *May affect, but is not likely to adversely affect* – the appropriate determination when a proposed action's anticipated effects are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. "Take" is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. In addition to the direct take of an individual animal, habitat destruction or modification can be considered take, regardless of whether it has been formally designated as critical habitat, if it would result in the death or injury of wildlife by removing essential habitat components or impairing essential behavior patterns, including breeding, feeding or sheltering. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.

3) *May affect, is likely to adversely affect* – the appropriate determination if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action, and the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service's Consultation Handbook is available online to assist you with further information on definitions, process, and fulfilling Endangered Species Act requirements for your projects at http://endangered.fws.gov/consultations/s7hndbk/s7hndbk.htm.

If a "may affect" determination is made, the Federal action agency shall initiate the formal section 7 consultation process by writing to: Field Supervisor; U.S. Fish and Wildlife Service; c/o TAMU-CC, Campus Box 338; 6300 Ocean Drive; Corpus Christi, Texas 78412. If no effect is evident, no further consultation is needed; however, we would appreciate it if you could submit a copy of your determination for our files.

Non-Federal representatives (i.e. consultants, state agencies, county or local officials) may request and receive species lists, prepare environmental documents, biological assessments, and provide information for formal consultations. However, the Service requires the action agency to designate the non-Federal representative in writing. If not designated, we recommend non-Federal

representatives provide a complete record of their evaluation to the Federal action agency so that they may make a determination of effect and, if necessary, consult with the appropriate Service office on the proposed action.

The Service recommends the action agency and/or non-Federal representative maintain a complete record that identifies steps leading to the determination of effect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related articles.

State Listed Species

The State of Texas protects certain species. Please contact the Texas Parks and Wildlife Department (Endangered Resources Branch), Fountain Park Plaza Building, Suite 100, 3000 South IH-35, Austin, Texas 78704 (telephone 512/912-7011) for information concerning fish, wildlife, and plants of State concern or visit their website at http://www.tpwd.state.tx.us/nature/Ending/animals/mammals/.

Migratory Birds

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions for the protection of migratory birds. Under the MBTA, taking, killing or possessing migratory birds is unlawful. Many may nest in trees, brush areas or other suitable habitat. The Service recommends activities requiring vegetation removal or disturbance avoid the peak nesting period of March through August to avoid destruction of individuals, nests or eggs. If project activities must be conducted during this time, we recommend surveying for nests prior to commencing work. If a nest is found, and if possible, the Service recommends a buffer of vegetation ($\geq$ 164 feet [ft] for songbirds, $\geq$ 328 ft for wading birds, and $\geq$ 590 ft for terns, skimmers and birds of prey) remain around the nest until young have fledged or the nest is abandoned. A list of migratory birds may be viewed at http://migratorybirds.fws.gov/intrnltr/mbta/proposedbirdlist.pdf.

Wetlands

Wetlands and riparian zones provide valuable fish and wildlife habitat and contribute to flood control, water quality enhancement, and groundwater recharge. Wetland and riparian vegetation provide food and cover for wildlife, stabilize banks, and decrease soil erosion. These areas are inherently dynamic and very sensitive to changes caused by such activities as overgrazing, logging, major construction, or earth disturbance. Executive Order 11990 asserts that each agency shall provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial value of wetlands in carrying out the agency's responsibilities. Construction activities near riparian zones should be carefully designed to minimize impacts. If vegetation clearing is needed in these areas, they should be re-vegetated with native wetland and riparian vegetation to prevent erosion or loss of habitat. We recommend minimizing the area of soil scarification and initiating incremental re-establishment of herbaceous vegetation at the proposed work sites. Denuded and/or disturbed areas should be re-vegetated with a mixture of native legumes and grasses.

Species commonly used for soil stabilization are listed in the Texas Department of Agriculture's (TDA) Native Tree and Plant Directory, available from TDA at P.O. Box 12847, Austin, Texas 78711. The Service also urges taking precautions to ensure sediment loading does not occur to any receiving streams in the proposed project area. To prevent and/or minimize soil erosion and compaction associated with construction activities, avoid any unnecessary clearing of vegetation, and

follow established rights-of-way whenever possible. All machinery and petroleum products should be stored outside the floodplain and/or wetland area during construction to prevent possible contamination of water and soils. No permanent structures should be placed in the 100-year floodplain.

If your project will involve filling, dredging, or trenching of a wetland or riparian area it may require a Section 404 permit from the U.S. Army Corps of Engineers (COE). For permitting requirements please contact the U.S. Corps of Engineers, District Engineer, P.O. Box 1229, Galveston, TX 77553-1229, (409) 766-3002.

Beneficial Landscaping

In accordance with Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping, where possible, any landscaping associated with project plans should be limited to seeding and replanting with native species. A mixture of grasses and forbs appropriate to address potential erosion problems and long-term cover should be planted when seed is reasonably available. Although Bermuda grass is listed in seed mixtures, this species and other introduced species should be avoided as much as possible. The Service also recommends the use of native trees, shrubs and herbaceous species that are adaptable, drought tolerant and conserve water.

Service Response

Please note that the Service strives to respond to requests for project review within 30 days of receipt, however, this time period is not mandated by regulation. Responses may be delayed due to workload and lack of staff. Failure to meet the 30-day timeframe does not constitute a concurrence from the Service that the proposed project will not have effects to threatened and endangered species.

Thank you for your concern for endangered and threatened species and other resources, and we appreciate the opportunity to comment on the proposed project. If we can be of further assistance, or if you have any questions about these comments, please contact Larisa Ford at 361-994-9005. Please refer to the Service Consultation number listed above in any future correspondence regarding the proposed construction of fence, lights, and road improvements along the USIBWC levee in El Paso County.

Sincerely,

Adam Zerrenner
Field Supervisor

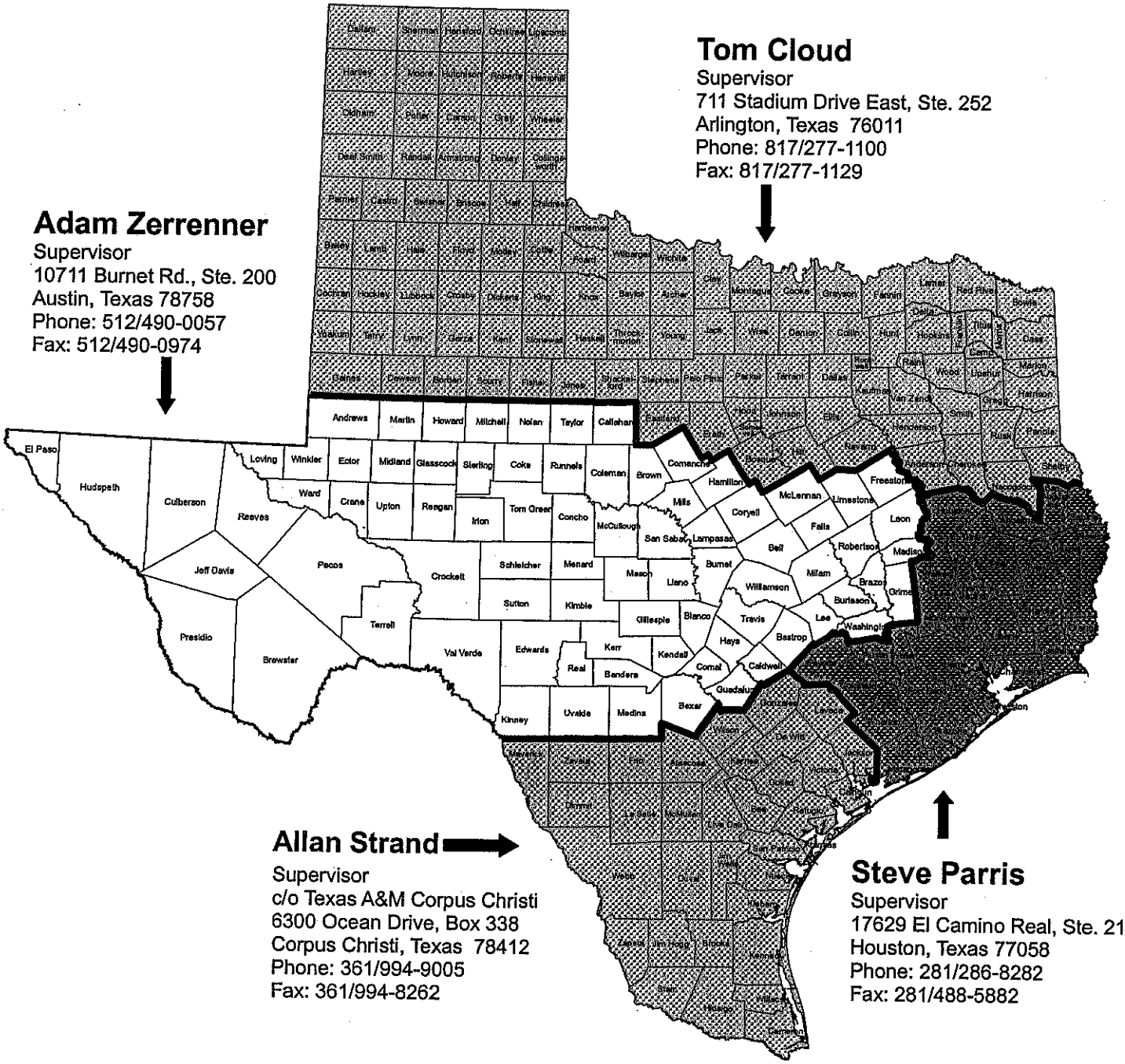
Enclosure

cc: Allan Strand, Corpus Christi ESFO, Corpus Christi, Texas

U. S. Fish and Wildlife Service

Ecological Services Field Offices
Areas of Responsibility

Joy Nicholopoulos
Texas State Administrator for Ecological Services
8027 Exchange Drive
Austin, Texas 78754
Phone 512/927-3557
Fax 512/927-3590



Tom Cloud
Supervisor
711 Stadium Drive East, Ste. 252
Arlington, Texas 76011
Phone: 817/277-1100
Fax: 817/277-1129

Adam Zerrenner
Supervisor
10711 Burnet Rd., Ste. 200
Austin, Texas 78758
Phone: 512/490-0057
Fax: 512/490-0974

Allan Strand
Supervisor
c/o Texas A&M Corpus Christi
6300 Ocean Drive, Box 338
Corpus Christi, Texas 78412
Phone: 361/994-9005
Fax: 361/994-8262

Steve Parris
Supervisor
17629 El Camino Real, Ste. 211
Houston, Texas 77058
Phone: 281/286-8282
Fax: 281/488-5882

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

June 21, 2007

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 consultation for the proposed Phase III installation of lighting, a pedestrian fence, road maintenance and the replacement of four bridges.

Mr. F. Lawerence Oaks
Attn: Ms. Debra Beene
Texas Historical Commission
1511 Colorado St.
Austin, Texas 78701

Dear Mr. Oaks,

On behalf of the U.S. Customs and Border Protection (CBP), Office of Border Patrol, El Paso Sector, the U.S. Army Corps of Engineers, Fort Worth District is preparing a Supplemental Environmental Assessment for the proposed installation of various infrastructure within an approximately 20-mile long corridor along the U.S.-Mexico border from the City of El Paso water treatment plant east to the Fabens port of entry (POE) (Figures 1-6).

Flood lights would be installed for a distance of 20 miles along the U.S. Section, International Boundary and Water Commission (USIBWC) levee from the end of the existing light corridor constructed as part of CBP's Phase II tactical infrastructure project (near the City of El Paso water treatment plant at Rio Bosque) to the Fabens POE at the Guadalupe Bridge. The light standards would be steel poles approximately 45 feet high and installed at the south toe of the USIBWC levee, within the Rio Grande floodplain. Transformers would be placed on the ground near the southern edge of the top side of the levee, and six metal bollards, approximately 4 feet high, would be installed for protection (Photograph 1). The power lines for the light poles would be underground with the possible exception of lateral feeds from the local grid. The location of these lateral feeds is not known at this time. Archaeological monitoring during the installation of all light poles within the 20-mile long project corridor would be conducted to ensure no deeply buried archaeological deposits would be impacted during the installation of the lights.

A pedestrian fence would be installed at the base of the north slope of the USIBWC levee, within the 2- to 8-foot wide corridor between the levee and the existing irrigation ditch (Photograph 2), for the entire length of the project (approximately 20 miles). The fence would be between 15 and 16 feet tall, and designed to withstand an impact by a 10,000-pound (gross weight) vehicle traveling at 40 miles per hour. Gates would be installed at set intervals for emergency rescues within the irrigation canal and the Rio Grande floodplain. Given the disturbance from past construction activities associated with the USIBWC levee and the irrigation ditch, it is not anticipated that any intact cultural material would be impacted by the construction of the fence.

In addition, approximately 2 miles of road improvements would be conducted on the levee/ditch bank roads that are owned by the El Paso County Water Improvement District No. 1 (EPCWID1). The road is currently a dirt road that often becomes impassable during inclement weather. The proposed road improvements would entail grading and leveling the road and the application of an all-weather aggregate surface. This would take place in an area that has been impacted by the past construction of the road, levee and irrigation ditch. As a result, there is a little probability that intact cultural deposits are present in this area.

Finally, up to four bridges would be replaced over the EPCWID1 irrigation canal. The locations of the bridges would be at sites where previous canal bridges were located, but have since been removed (Photographs 3-6). A 300 by 300 foot temporary staging area would be utilized at the south end of each bridge location.

Preliminary investigations of the files at the Texas Archaeological Research Laboratory indicated that portions of the project cross the features of the EPCWID1 Historic District and sites 41EP4678 and 41EP4679, the Riverside Intercepting Drain and Riverside Canal Respectively. The EPCWID1 Historic District has been listed on the National Register of Historic Places (NRHP) under criteria A and C. Both 41EP4678 and 41EP4679 are recommended potentially eligible under criterion A. It is not anticipated that the proposed infrastructure installation would impact the integrity of these historic properties. Replacement of the four bridges over the irrigation systems would be limited to areas where there were pre-existing bridges and that are noted as ancillary structures in the EPCWID1 Historic District form. The placement of the fence would be done so it would not impact the structural integrity of the irrigation systems, and would provide protection for the irrigation systems from illegal vehicle and pedestrian traffic through the area. A cross section of the proposed infrastructure and its relationship to the USIBWC levee and irrigation canal is shown in Figure 7.

Given that the area of the proposed infrastructure has been previously disturbed in the past by the construction of the USIBWC levee and irrigation canal, roads and bridges; that there is a low probability for intact cultural deposits; and that an archaeological monitor will be present during the installation of all lights, no adverse impacts to historic properties are anticipated. In accordance with 36 CFR Part 800.4(d)(1) we ask for your concurrence that no historic properties will be affected by the proposed project as planned. We plan to consult with appropriate Federally recognized Native American Tribes on this action and will coordinate any concerns for traditional cultural places or sacred sites that come to light through that consultation. If you have any questions pertaining to this project please do not hesitate to contact Ms. Nancy Parrish at (817) 886-1725 or via email at nancy.a.parrish@swf02.usace.army.mil.

Sincerely,

William Fickel, Jr.,
Chief, Planning, Environmental
and Regulatory Division

Enclosures

ATTACHMENT

From: Parrish, Nancy A SWF [mailto:Nancy.A.Parrish@swf02.usace.army.mil]
Sent: Monday, July 23, 2007 4:06 PM
To: Debra Beene
Cc: Eric Webb; John Lindemuth
Subject: Ysleta Lights Project

Hi Debra-
Sorry it took me a while to get this back to you today, I was hoping to get the info on the depths of excavation for the light posts and fence to add to this, but I can't get the engineer on the phone.

Anyway, in reference to the planned CBP infrastructure along the canal in the Ysleta Station area of operations, we will ensure the 300 x 300 foot staging areas are located outside the boundary of the NRHP-eligible canal site. If possible, we will select staging areas that have previously been disturbed. If that is not possible, then we will have the areas surveyed by a professional archaeologist prior to use as a staging area. The staging areas are only meant to serve as a location to park heavy equipment and supplies such as steel or prefabricated fence/barriers, light posts, etc. \and should not require significant blading, grading or excavation.

Bridge construction should not impact any sort of intact deposits as they will be located in areas where previous bridges have been situated. I will ask the engineer what the plans are for any remaining/existing footings. If necessary, extant bridges can be documented (HABS/HAER?) before they are replaced since they are cited as contributing elements to the NRHP canal sites. The new bridges can also be designed to mimic the old design so as to not create visual impacts to the site.

I will get back to you about the depths of excavation.

Thanks for the call. I look forward to working together in the future.
Nancy

****

Nancy Parrish
Archaeologist
BRAC NEPA Support Team
US Army Corps of Engineers
Fort Worth District
819 Taylor Street, Room 3A14
Fort Worth, TX 76102
Ph. 817.886.1725
Fax 817.886.6499
Cell 817.229.3371

CONCUR
by William A. Martin
for F. Lawerence Oaks
State Historic Preservation Officer
Date 7/26/07
Track# 200710143

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

July 11, 2007

REPLY TO
ATTENTION OF:
Planning, Environmental and Regulatory Division

SUBJECT: Supplemental Environmental Assessment for the Proposed Construction of Fence, Lights and Road Improvements along the International Boundary and Water Commission Levee in El Paso County

University of Texas at El Paso
Center for Environmental Resource Management
Mr. John Sproul, Manager
Rio Bosque Wetlands Park
500 West University Avenue
El Paso, TX 79968-0684

Dear Mr. Sproul:

On behalf of U.S. Customs and Border Protection (CBP) and Department of Homeland Security, the U.S. Army Corps of Engineers (USACE) intends to prepare a Supplemental Environmental Assessment (SEA) for the proposed construction of up to 21 miles of pedestrian fence, border lighting, and road improvements along a section of the United States Section, International Boundary and Water Commission (USIBWC) levee near the Rio Grande from the Rio Bosque to the Fabens Port of Entry (POE) in El Paso County, Texas. In addition, four bridges over the District irrigation canal would also be replaced.

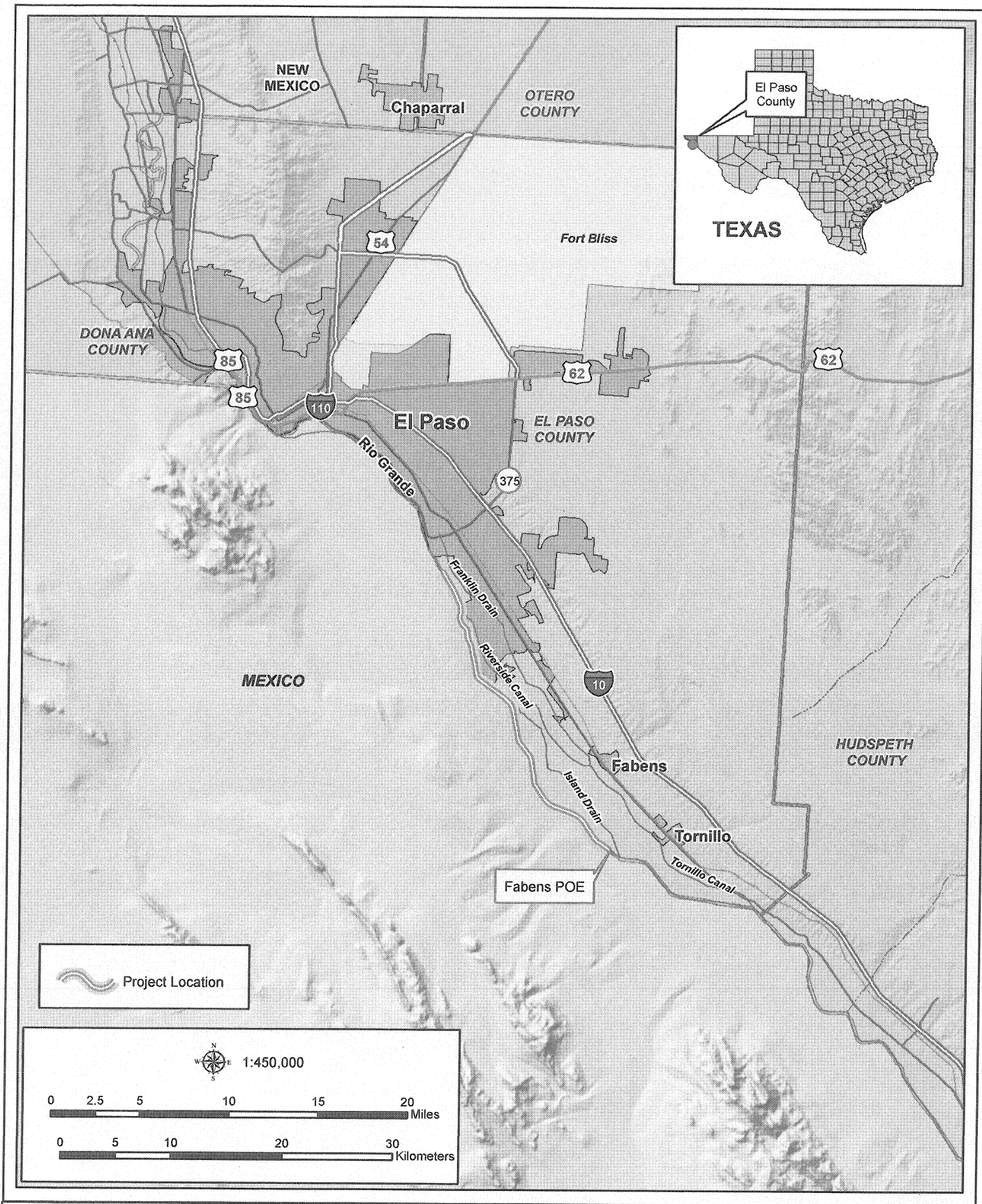
The SEA will analyze the potential for significant adverse or beneficial impacts of the proposed action. The SEA is tiered from the 2006 Programmatic Environmental Assessment (PEA) for Proposed Tactical Infrastructure, Office of Border Patrol, El Paso Sector, Texas Stations.

We are currently in the process of gathering the most current information available regarding environmental resources and other areas of concern occurring within this area. We respectfully request that your agency provide input regarding unique or environmentally sensitive areas or other issues that you believe may be affected by the proposed OBP activities.

We intend to provide your agency with a copy of the Draft SEA for the proposed action once completed. Please let us know if additional copies are needed. Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division



Project Location Map

GSRC

July 2007

THE UNIVERSITY OF TEXAS AT EL PASO

VY
PER-E

September 18, 2007

Mr. William Fickel, Jr., Chief
Planning, Environmental and Regulatory Division
U.S. Army Corps of Engineers, Fort Worth District
P.O. Box 17300
Fort Worth, TX 76102-0300

Center for Environmental Resource Management

Re: Supplemental Environmental Assessment for the Proposed Construction of Fence, Lights and Road Improvements along the International Boundary and Water Commission Levee in El Paso County, Texas

Dear Mr. Fickel:

Thank you for giving us the opportunity to provide input to the Supplemental Environmental Assessment (SEA) that will be prepared for construction of up to 21 miles of fence, border lighting and road improvements along the Rio Grande levee from the vicinity of Rio Bosque Wetlands Park to the Fabens Port of Entry in El Paso County, Texas. We offer these comments to assist you in your work.

Rio Bosque Wetlands Park as a Unique, Environmentally Sensitive Area

Rio Bosque Wetlands Park is a City of El Paso park located immediately east of the Rio Grande levee in the project area. At 372 acres, it is the largest city park in El Paso. The University of Texas at El Paso manages the site under a license agreement with the City.

The Rio Grande valley in the El Paso area is a highly modified environment. The wetlands, riparian forests and other productive native habitats once found in the valley are today largely gone. Rio Bosque Wetlands Park is the largest and most significant parcel of relatively natural land remaining along the river in this region.

Since 1999, UTEP has been working at Rio Bosque to establish, over time, approximate examples of the native plant and animal communities characteristic of the Rio Grande and its floodplain in pre-settlement days. This work is guided by a Biological Management Plan that you can access through our website, **www.riobosque.org**.

This ecological restoration effort began with a project to create a shallow-water emergent wetland as mitigation for construction of the American Canal Extension, a concrete-lined canal that parallels the Rio Grande upriver from the Park. The U.S. Section of the International Boundary and Water Commission did the site-preparation work for this mitigation project in 1997.

The work involved building a winding channel through the Park that follows the former alignment of the Rio Grande before it was channelized as part of the Rio Grande Rectification Project in the mid-1930s. Also built were a series of large, shallow impoundments that can be flooded by diverting water from the main channel. In total, approximately 100 acres

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500 W. University Ave.
El Paso, Texas
79968-0684
(915) 747-5494
FAX: (915) 747-5145
www.cerm.utep.edu

(27% of the Park) can be flooded. The source of water for flooding these areas is treated effluent from the adjacent Roberto Bustamante Wastewater Treatment Plant. El Paso County Water Improvement District No. 1 and El Paso Water Utilities cooperate to provide this water to the Park when it is not being used for irrigation.

The ecological restoration effort at Rio Bosque is a long-term undertaking, but it has already enjoyed significant progress. The landscape at the Park has changed dramatically over the past 10 years. With each passing year, native plant associations are becoming increasingly prominent, and wildlife numbers and species richness are increasing. To date, 219 bird species, 20 mammal species, 16 reptile species and 4 amphibian species have been recorded at the Park. Lists of these species can be found at **www.riobosque.org**.

Impacts to Wildlife and Wildlife Movement

Due to a unique combination of circumstances, the segment of the Rio Grande downstream of the site of the former Riverside Diversion Dam for several miles supports a narrow band of riparian vegetation, much of it native cottonwood and willow, that is more extensive than the riparian vegetation found along other segments of the river near El Paso. For approximately one mile, Rio Bosque Wetlands Park is immediately east of this portion of the river floodway.

The link between Rio Bosque and the river floodway is an important one. Currently, there is an unimpeded connection between the two. Terrestrial wildlife can move readily between the Park and the floodway. The floodway also provides opportunities for movement of native wildlife between the Park and other pockets of suitable habitat along the river. A fence would sever these connections and adversely affect wildlife use of the Park. Accordingly, we ask that you fully evaluate in the SEA the impacts of any fencing, lighting or road improvements on wildlife and wildlife movement, especially with respect to Rio Bosque Wetlands Park.

Aesthetic Impacts

Rio Bosque Wetlands Park is managed as a natural area. We want to offer visitors a chance to experience what the river valley once was like, before intensive land-use and water-management practices began transforming it into the highly modified environment we see today. A fence and a series of light towers paralleling the Park can be expected to detract from this experience. Please address in the SEA the aesthetic impact of any fencing, lighting or road improvements.

Recreational Impacts

Since 1999, the City and County of El Paso have pursued a vision of a trail that winds along or near the Rio Grande throughout the length of El Paso County. Upriver of El Paso, a portion of this trail is complete. Ultimately, the trail would link many river-valley cultural, historic and environmental features, including Rio Bosque Wetlands Park. Please address in the SEA the impact of any fencing, lighting or road improvements on the proposed Rio Grande Trail System.

Alternatives

Given the potential impacts – both at Rio Bosque and elsewhere – of the proposed project on wildlife, wildlife movement, aesthetics and recreational opportunity, the use of sensors and cameras to provide a "virtual fence" in place of a physical fence deserves consideration for all or portions of the project area. Please fully evaluate such an alternative in the SEA.

We also recommend that the SEA explore approaches to lighting that will minimize impacts to Rio Bosque Wetlands Park and other sensitive sites along the project alignment, including:

- shielding and other appropriate design features to prevent light trespass on the Park, and
- design and placement of the light poles to eliminate or minimize their visibility from the Park during daytime.

In your letter of July 11, 2007, you state that the SEA is to be tiered from the 2006 Programmatic Environmental Assessment for Proposed Tactical Infrastructure, Office of Border Patrol, El Paso Sector, Texas Stations. We would appreciate obtaining a copy of that document to better understand how the proposed project might relate to Rio Bosque Wetlands Park.

Thank you for the opportunity to contribute to the SEA for the proposed project. Please keep us informed of its progress, and please feel free to contact me if you have questions or need more information.

Very truly yours,

John Sproul
Program Coordinator/Manager
Rio Bosque Wetlands Park
(915) 747-8663
(915) 747-5145 fax
jsproul@utep.edu

c: Deborah Hamlyn, Deputy City Manager, Quality of Life Services, City of El Paso
Barry Russell, Acting Director, Parks and Recreation Dept., City of El Paso

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

July 11, 2007

Planning, Environmental and Regulatory Division

SUBJECT: Supplemental Environmental Assessment for the Proposed Construction of Fence, Lights and Road Improvements along the International Boundary and Water Commission Levee in El Paso County

El Paso Water Improvement District No. 1
ATTN: General Manager
P. O. Box 17489
El Paso, TX 79917-7489

Dear Gentlemen:

On behalf of U.S. Customs and Border Protection (CBP) and Department of Homeland Security, the U.S. Army Corps of Engineers (USACE) intends to prepare a Supplemental Environmental Assessment (SEA) for the proposed construction of up to 21 miles of pedestrian fence, border lighting, and road improvements along a section of the United States Section, International Boundary and Water Commission (USIBWC) levee near the Rio Grande from the Rio Bosque to the Fabens Port of Entry (POE) in El Paso County, Texas. In addition, four bridges over the District irrigation canal would also be replaced.

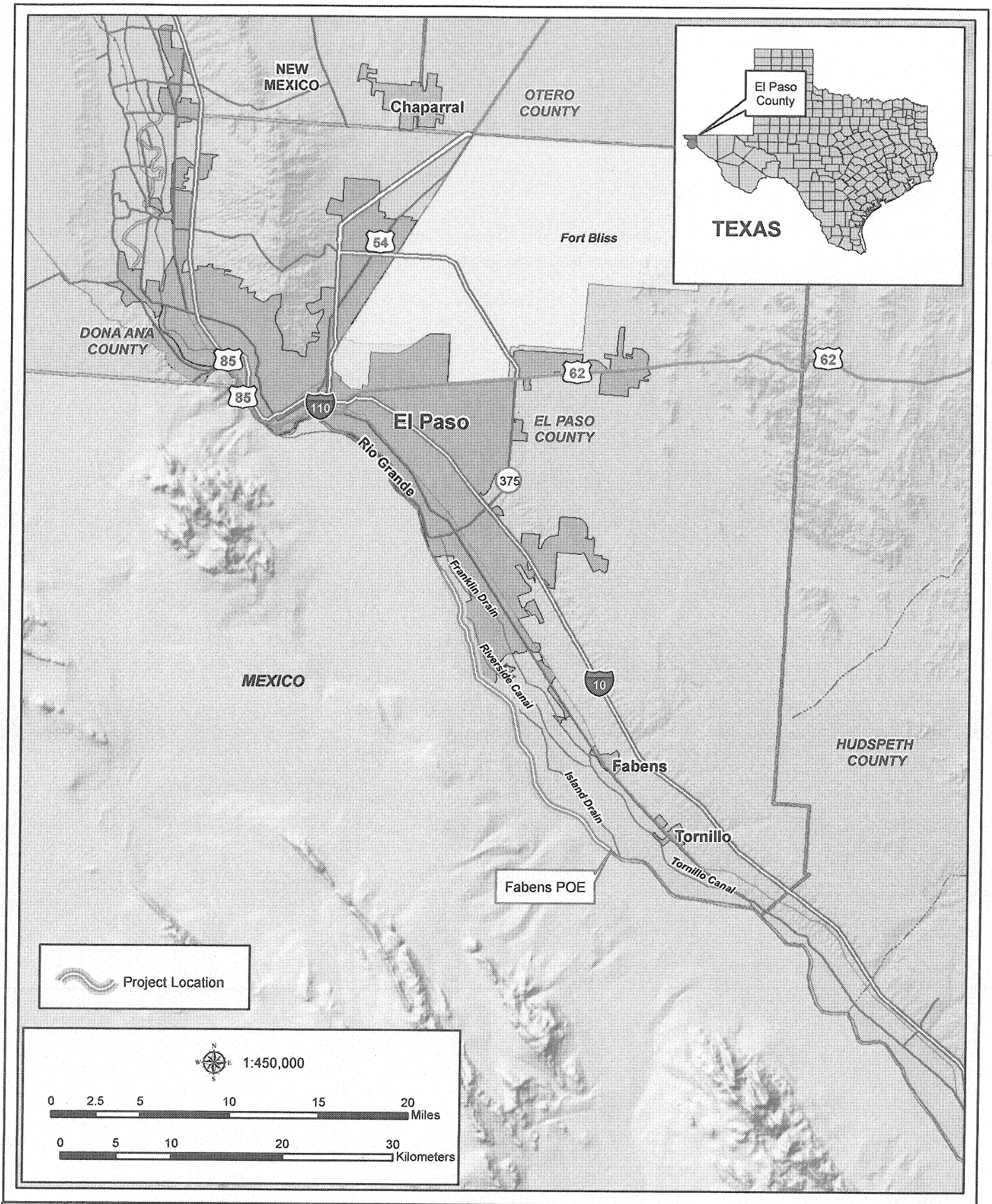
The SEA will analyze the potential for significant adverse or beneficial impacts of the proposed action. The SEA is tiered from the 2006 Programmatic Environmental Assessment (PEA) for Proposed Tactical Infrastructure, Office of Border Patrol, El Paso Sector, Texas Stations.

We are currently in the process of gathering the most current information available regarding environmental resources and other areas of concern occurring within this area. We respectfully request that your agency provide input regarding unique or environmentally sensitive areas or other issues that you believe may be affected by the proposed OBP activities.

We intend to provide your agency with a copy of the Draft SEA for the proposed action once completed. Please let us know if additional copies are needed. Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division



Project Location Map

CSRC

July 2007

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

July 11, 2007

Planning, Environmental and Regulatory Division

SUBJECT: Supplemental Environmental Assessment for the Proposed Construction of Fence, Lights and Road Improvements along the International Boundary and Water Commission Levee in El Paso County

Texas Parks and Wildlife
West Texas Wildlife District
ATTN: Mr. Tim Bone, Natural Resource Specialist
109 South Cockrell
Alpine, TX 79830

Dear Mr. Bone:

On behalf of U.S. Customs and Border Protection (CBP) and Department of Homeland Security, the U.S. Army Corps of Engineers (USACE) intends to prepare a Supplemental Environmental Assessment (SEA) for the proposed construction of up to 21 miles of pedestrian fence, border lighting, and road improvements along a section of the United States Section, International Boundary and Water Commission (USIBWC) levee near the Rio Grande from the Rio Bosque to the Fabens Port of Entry (POE) in El Paso County, Texas. In addition, four bridges over the District irrigation canal would also be replaced.

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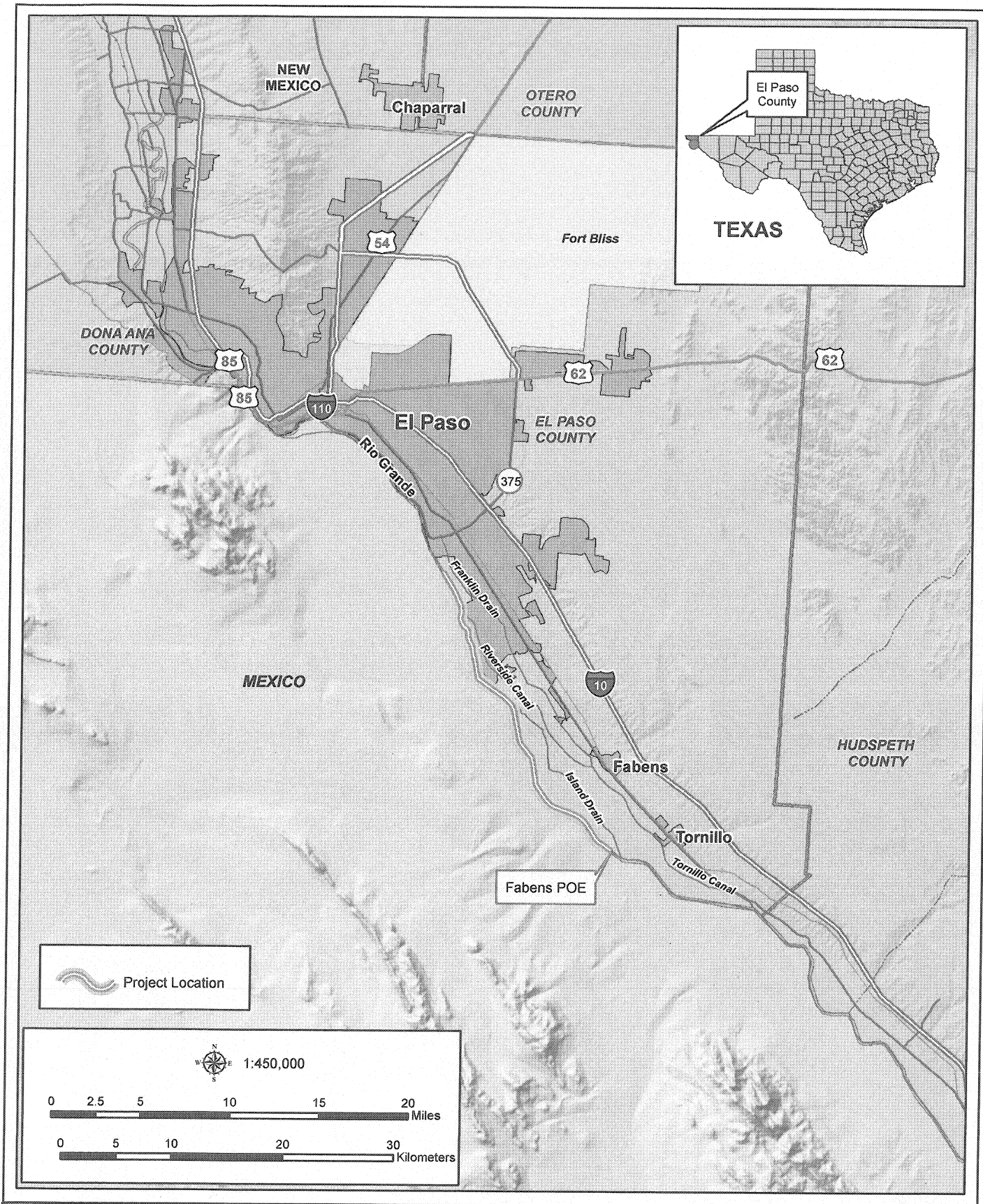
Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division



Project Location Map

GSRC

July 2007

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

July 11, 2007

Planning, Environmental and Regulatory Division

SUBJECT: Supplemental Environmental Assessment for the Proposed Construction of Fence, Lights and Road Improvements along the International Boundary and Water Commission Levee in El Paso County

Texas Commission on Environmental Quality
ATTN: Ms. Patty Reeh
1921 Cedar Bend Drive, Suite 150
Austin, TX 78758

Dear Ms Reeh:

On behalf of U.S. Customs and Border Protection (CBP) and Department of Homeland Security, the U.S. Army Corps of Engineers (USACE) intends to prepare a Supplemental Environmental Assessment (SEA) for the proposed construction of up to 21 miles of pedestrian fence, border lighting, and road improvements along a section of the United States Section, International Boundary and Water Commission (USIBWC) levee near the Rio Grande from the Rio Bosque to the Fabens Port of Entry (POE) in El Paso County, Texas. In addition, four bridges over the District irrigation canal would also be replaced.

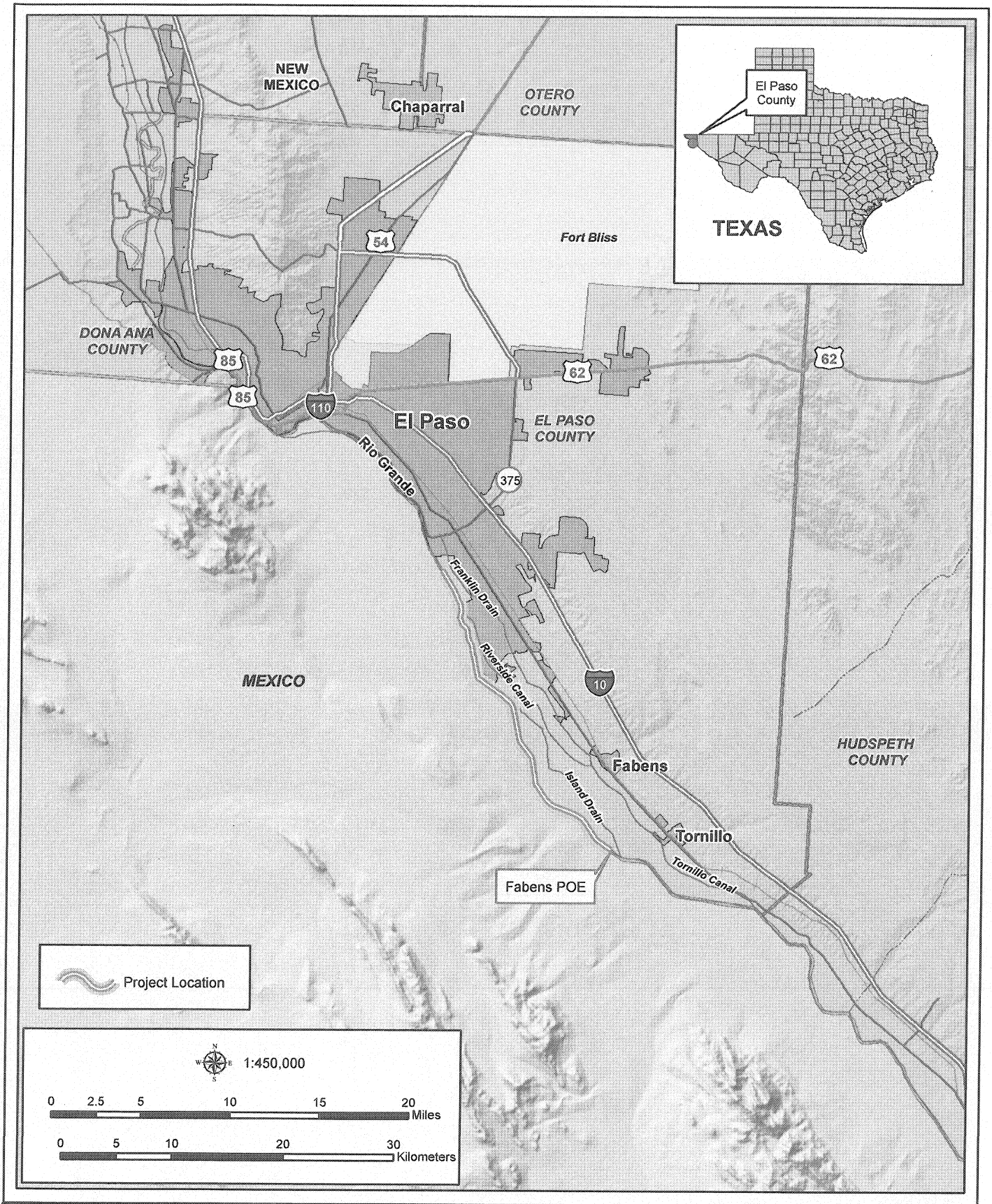
The SEA will analyze the potential for significant adverse or beneficial impacts of the proposed action. The SEA is tiered from the 2006 Programmatic Environmental Assessment (PEA) for Proposed Tactical Infrastructure, Office of Border Patrol, El Paso Sector, Texas Stations.

We are currently in the process of gathering the most current information available regarding environmental resources and other areas of concern occurring within this area. We respectfully request that your agency provide input regarding unique or environmentally sensitive areas or other issues that you believe may be affected by the proposed OBP activities.

We intend to provide your agency with a copy of the Draft SEA for the proposed action once completed. Please let us know if additional copies are needed. Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division



Project Location Map

CSRC

July 2007

APPENDIX E
List of Preparers

The following people were primarily responsible for preparing this report.

Name	Discipline/Expertise	Experience	Role In Preparing Report
Stephen Oivanki	Geologist Environmental Assessment	20 years of environmental assessment and remediation experience	Project manager, EA preparation
Greg Lacy	Wildlife Biology	10 years NEPA and natural resources studies	Biological Field Survey
John Lindemuth	Archaeology	15 years professional archaeologist	Cultural Resources evaluation
Chris Ingram	Biology and Ecology	25 years EA/EIS studies	EA review
Suna Adam Knaus	Forestry/Wildlife	17 years natural resources	EA review
Shanna McCarty	Ecology/Botany	2 years environmental studies	Socioeconomics
Steve Kolian	Water and Air Quality	10 years environmental studies	Noise and Air Quality
Chris Cothron	GIS/Graphics	1 year GIS analysis	GIS and Graphics
Sharon Newman	GIS/Graphics	13 years GIS analysis	GIS and Graphics
Eric Webb	Biology and Ecology	15 years NEPA and related studies	EA review

APPENDIX F
Public Notice and Comments

Notice of Availability and Public Open House Announcement

Draft Environmental Assessment (EA)
For the Construction, Operation, and Maintenance of Tactical Infrastructure
U.S. Border Patrol (USBP) El Paso Sector, Texas, El Paso, Ysleta, Fabens and Fort Hancock Stations Areas of Operation

The U.S Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP) announces the availability of, and invites public comment on, the Draft EA. Pursuant to the National Environmental Policy Act of 1969, 42 U.S.C. 4321 et seq. (NEPA), CBP has prepared the Draft EA to identify and assess the potential impacts associated with the proposed construction, operation, and maintenance of tactical infrastructure, to include primary pedestrian fence, permanent lights, access roads, patrol roads, and bridges, along approximately 56.7 miles of the U.S./Mexico international border within USBP El Paso Sector, Texas (the Proposed Action). The Proposed Action would be implemented in five sections, ranging from approximately 5.2 to 19.4 miles in length. The purpose of the Proposed Action is to assist USBP agents in gaining effective control of the U.S. border between Ports of Entry in the USBP El Paso Sector.

The Draft EA complies with NEPA, the Council on Environmental Quality (CEQ) regulations in 40 CFR Parts 1500–1508, and DHS Management Directive 5100.1 (Environmental Planning Program). Copies of the Draft EA can be downloaded from the project Web site at *www.BorderFenceNEPA.com* or *https://ecso.swf.usace.army.mil/Pages/Publicreview.cfm*, or can be requested by e-mailing: *information@BorderFenceNEPA.com*. To request a hard copy of the Draft EA, you may call toll-free (888) 275-9740. Hard copies of the Draft EA can be reviewed at the El Paso Public Library, Richard Burges Branch, 9600 Dyer, El Paso, Texas 79901, (915) 759-2400; El Paso Public Library, Ysleta Branch, 9321 Alameda, El Paso, Texas 79907, (915) 858-0905; and Fort Hancock Public Library, 101 School Road, Fort Hancock, Texas 79839, (915) 769-3811.

CBP invites public comment on the Draft EA. A public open house will be held on February 28, 2008, from 4:30 p.m. to 8:00 p.m. at the Ambassador Ballroom, located at 10921 Pellicano Drive, El Paso, Texas.

Pursuant to the CEQ's regulations, CBP invites public participation in the NEPA process. In order for comments to be considered for inclusion in the Final EA, comments on the Draft EA must be received by March 19, 2008. Please provide comments using only one of the following methods:

(a) Attend and submit comments at the public open house to be held from 4:30 p.m. to 8:00 p.m. on February 28, 2008 at the Ambassador Ballroom, 10921 Pellicano Drive, El Paso Texas.

(b) Electronically through the Web site at: *www.BorderFenceNEPA.com*

(c) By e-mail to: *EPEAcomments@BorderFenceNEPA.com*

(d) By mail to: El Paso Sector Tactical Infrastructure EA, c/o Gulf South Research Corporation, 8081 GSRI Avenue, Baton Rouge, Louisiana 70820

(e) By Fax to: (225) 761-8077

When submitting comments, please include your name and address, and identify your comments as for the El Paso Sector Draft EA. Requests for information may be submitted to: Charles McGregor, U.S. Army Corps of Engineers, Engineering and Construction Support Office, 819 Taylor Street, Room 3B10, Fort Worth, Texas 76102; and by Fax to: (225) 761-8077.

← *continued from front cover*

NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PCPI	Per Capita Personal Income
PEA	Programmatic Environmental Assessment
P.L.	Public Law
PM-10	Particulate matter less than 10 microns
POE	Port of Entry
POL	petroleum, oil, or lubricants
PVB	Permanent vehicle barrier
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
ROW	Right-of-Way
RVSS	Remote Video Surveillance System
SBI	Strategic Border Initiative
SEA	Supplemental Environmental Assessment
SHPO	State Historic Preservation Officer
SPCCP	Spill Prevention, Control, and Countermeasures Plan
SPEIS	Supplemental Programmatic Environmental Impact Statement
SWPPP	Storm Water Pollution Prevention Plan
TCEQ	Texas Commission on Environmental Quality
THPO	Tribal Historic Preservation Officer
TI	Tactical infrastructure
TPDES	Texas Pollution Discharge Elimination System
TPI	Total Personal Income
TPWD	Texas Parks and Wildlife Department
TxDOT	Texas Department of Transportation
U.S.	United States
USAEC	U.S. Army Environmental Command
USACE	U.S. Army Corps of Engineers
USBP	U.S. Border Patrol
U.S.C.	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USIBWC	U.S. Section, International Boundary and Water Commission
UTEP	University of Texas at El Paso
WUS	Waters of the U.S.