



ENVIRONMENTAL STEWARDSHIP SUMMARY REPORT

**for the Construction, Operation, and Maintenance
of Vehicle Fence and Related Tactical Infrastructure,
Sections CV-2, CV-2A, and CV-1A,
Wellton Station and Yuma Station,
U.S. Border Patrol Yuma Sector, Arizona**



July 2012

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SECTIONS CV-2, CV-2A, AND CV-1A,
WELLTON STATION AND YUMA STATION,
U.S. BORDER PATROL YUMA SECTOR, ARIZONA**

July 2012

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EXECUTIVE SUMMARY

The U.S. Customs and Border Protection (CBP), Secure Border Initiative (SBI) built tactical infrastructure (TI) for the U.S. Border Patrol (USBP), Yuma Sector. USBP uses the term TI to describe the physical structures that facilitate enforcement activities; these items typically include roads, vehicle and pedestrian fences, lights, gates, and boat ramps. TI built under SBI's Vehicle Fence 300 (VF300) program within the Yuma Sector consisted of vehicle fence with adjacent access and maintenance roads and staging areas in three separate segments. The original plans were for 15.4 miles of vehicle fence to be built; 15.33 miles were actually built. The first segment, designated as CV-2, is along the U.S./Mexico international border, wholly contained within the Roosevelt Easement adjacent to the Cabeza Prieta National Wildlife Refuge (CPNWR) in Yuma County, Arizona. The second segment, designated as CV-2A, is also along the U.S./Mexico international border, wholly contained within the Roosevelt Easement adjacent to the CPNWR. These two segments are in the Wellton Station Area of Responsibility (AOR) within the Yuma Sector. The third segment, designated as CV-1A, is along the U.S./Mexico international border from Morelos Dam south to West County 13th Street near Yuma. This segment is included in the Yuma Station AOR within the Yuma Sector.

This Environmental Stewardship Summary Report (ESSR) was prepared to document the impact areas, compared with the original ESPs and the changes identified in the change request forms, for the following reasons:

1. To compare anticipated to actual impacts, so that a final new baseline is established for future maintenance and repair and any potential future actions;
2. To document success of best management practices (BMPs) and any changes or improvements for the future; and
3. To document any changes to the planned location or type of the TI.

Planned installation of TI was documented in three Environmental Stewardship Plans (ESPs) for the construction, operation, and maintenance of vehicle fence and related TI in the USBP Yuma Sector published in December 2008 and January 2009. Segment CV-2 was built between October 27 and December 23, 2008. Segment CV-2A was built between January 7 and March 23, 2009. Segment CV-1A was built between October 21 and December 19, 2008. Additional construction in segment CV-1A occurred between July 7 and July 15, 2010, to relocate existing fence adjacent to the Morelos Dam emergency spillway.

Overall, CBP determined that the projects within USBP Yuma Sector covered by this ESSR caused approximately 109 fewer acres of habitat and other environmental impacts than were predicted in the project-level ESPs. This represents a 28 percent reduction in impact acreage. Table ES-1 compares the predicted and actual environmental impacts, as determined through on-site monitoring during the construction effort.

Table ES-1. Comparison of Predicted and Actual Impacts

Segment/Area	ESP Predicted Impacts (acres)	Surveyed Impacts (acres)	Difference (acres)
CV-2	316.1	236.0	-80.1
CV-2A	35.3	17.7	- 17.6
CV-1A	38.4	26.6	- 11.8
Totals	389.8	280.3	- 109.5

CBP is committed to building TI in an environmentally responsible manner, and conducted environmental resource surveys and prepared management plans to ensure that potential environmental damage would be avoided or minimized where practical. CBP coordinated with the U.S. Fish and Wildlife Service (USFWS); Bureau of Land Management (BLM); Arizona State Historic Preservation Office (SHPO); other Federal, state, and local agencies; and potentially affected Tribal Nations, and requested input on potential environmental concerns regarding the projects.

Outreach activities also included affected property owners and members of the general public. CBP provided project descriptions to the public using both a dedicated Internet site and through public meetings. The current internet site is http://cbp.gov/xp/cgov/border_security/ti/ti_docs/sector/yuma/. In its continuing commitment to environmental stewardship, CBP implemented a comprehensive environmental monitoring program during construction. Monitors documented daily construction activity and ensured construction contractor adherence to BMPs. Monitors also provided guidance to construction contractors and the U.S. Army Corps of Engineers (USACE) on natural and cultural resources issues as they arose, served as a conduit for coordination with resource agencies if needed, and moved animals and plants from the construction corridor when needed. After construction was complete, the daily environmental monitor logs and weekly environmental monitor reports were compiled and analyzed to determine the actual final construction impacts of the projects.

Contractors strictly adhered to most BMPs during TI construction in the Yuma Sector. The most common deviations included off-road activity, widening of the existing roadbed due to improper use, vertical bollards without temporary or permanent covers, lack of flagging on access roads into and out of the project area, and the lack of drip pans underneath stored equipment. At the close of construction activities, no BMP infractions remained unresolved, and no impacts on federally listed species were documented as a result of such infractions.

One of the highlights of BMP implementation in the Yuma Sector was the low impact on saguaro (*Carnegiea gigantea*) cacti (a forage species for the endangered lesser long-nosed bat [*Leptonycteris curasoae*]) because an access road in segment CV-2A was not widened and a salvage plan was prepared to help the contractor identify, remove, and transplant the cacti. Of the 276 saguaro cacti anticipated to be affected in segments CV-2 and CV-2A, only 17 were affected.

Archaeological resource sites were monitored during the construction process. The monitor reports for these sections indicate that no unanticipated finds or mitigation impacts were recorded during construction and monitoring.

At the conclusion of the construction efforts, there were no measureable changes in impacts on other resource categories beyond what the original Yuma Sector ESPs anticipated. Potential effects, including physical disturbance and construction of solid barriers on wetlands, riparian areas, streambeds, and floodplains, were avoided or mitigated, as appropriate. BMPs to protect natural and cultural resources included implementation of plans for stormwater pollution prevention, construction mitigation and restoration, spill prevention control and countermeasures, dust control, fire prevention and suppression, and unanticipated discoveries.

After the completion of the ESP, CBP made changes to the alignment, design, or construction methods to facilitate construction, reduce costs or potential impacts, respond to stakeholder requests, or enhance the efficacy of the fence for enforcement purposes. These changes were reviewed and approved through CBP Headquarters and documented in change request (CR) forms. This report also summarizes any significant modifications during construction that increased or reduced environmental impacts.

CBP consultants surveyed CV-2, CV-2A, and CV-1A to inspect the final project corridor and infrastructure footprints. The survey documented any significant differences between the planned and completed actions. When changes were noted, surveyors consulted the CR forms to see if the changes were recorded and approved. Six CRs were approved for the three segments; only four had the potential to cause minor environmental impacts. Contractors strictly adhered to BMPs during construction to minimize any additional environmental impacts.

The post-construction surveys indicated that in segment CV-2 the actual impact was 80.1 acres less than the ESP projected. For segments CV-2A and CV-1A, impact areas were reduced by 17.6 acres and 11.8 acres, respectively. This is primarily because the actual fence construction and access road footprints were consistently narrower than the anticipated footprints.

CBP will install approximately 200 feet of vehicle fence at the northern end of the construction corridor to fill a temporary gap created by the Bureau of Reclamation requirement to access the Morelos Dam emergency spillway to perform maintenance work. Fence installation is scheduled for early 2011.

Construction of other TI and maintenance and repair of existing access or other roads might be required in the future as mission and operational requirements are continually reassessed. To the extent that other current and future actions are known, the project-level ESPs discuss them. The project-level ESPs also include additional project-level details. Should additional construction be required in the future, CBP will continue to demonstrate responsible environmental stewardship of our valuable natural and cultural resources.

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Appendix A. Public Outreach and Agency Coordination

SECTION 1.0
INTRODUCTION, OUTREACH, AND METHODS



1.0 INTRODUCTION, OUTREACH, AND METHODS

In support of a continuing commitment to environmental stewardship for the construction, operation, and maintenance of tactical infrastructure (TI) along the U.S./Mexico international border in U.S. Border Patrol (USBP) Yuma Sector, U.S. Customs and Border Protection (CBP) prepared project-level Environmental Stewardship Plans (ESPs) under the Vehicle Fence 300 (VF300) program that documented the projected environmental effects of the planned projects. TI within the Yuma Sector consisted of vehicle fence with adjacent construction/maintenance roads, access roads, and staging areas along the U.S./Mexico international border. The original plans were for 15.4 miles to be built; 15.33 miles were actually built. The ESPs discussed CBP plans to mitigate potential environmental impacts and detailed the best management practices (BMPs) that CBP would implement for the TI during and after construction.

After construction was completed, CBP prepared this Environmental Stewardship Summary Report (ESSR), which consolidates and summarizes the VF300 project-level ESPs for Wellton Station, segments CV-2 and CV-2A, and Yuma Station, segment CV-1A, into a single document. Information in this ESSR was compiled from environmental summary reports, approved modifications made during construction, and through a post-construction survey of the project corridor. This ESSR compares anticipated impacts described and assessed by the original ESPs to actual impacts after construction occurred. A project vicinity map is presented as Figure 1-1. Construction of other TI and maintenance and repair of existing access or other roads might be required in the future as mission and operational requirements are continually reassessed. To the extent that other current and future actions are known, the project-level ESPs discuss them. The project-level ESPs also discuss additional project-level details. Should additional construction be required in the future, CBP will continue to demonstrate responsible environmental stewardship of our valuable natural and cultural resources.

1.1 PUBLIC AND AGENCY OUTREACH

CBP is fully committed to public and agency outreach in the construction, operation, and maintenance of TI. CBP conducted environmental resource surveys and prepared management plans to ensure that potential damage is avoided or minimized where practical. CBP coordinated with the U.S. Fish and Wildlife Service (USFWS); Arizona State Historic Preservation Office (SHPO); other Federal, state, and local agencies; and potentially affected Tribal Nations, requesting input on potential environmental concerns regarding the projects.

Outreach activities also included affected property owners and members of the general public. CBP provided project descriptions to the public using both a dedicated Internet site resource and through public meetings. The current internet site is http://cbp.gov/xp/cgov/border_security/ti/ti_docs/sector/yuma/. A detailed summary of the public outreach and agency coordination that CBP conducted throughout the ESP development process is contained in Appendix A.

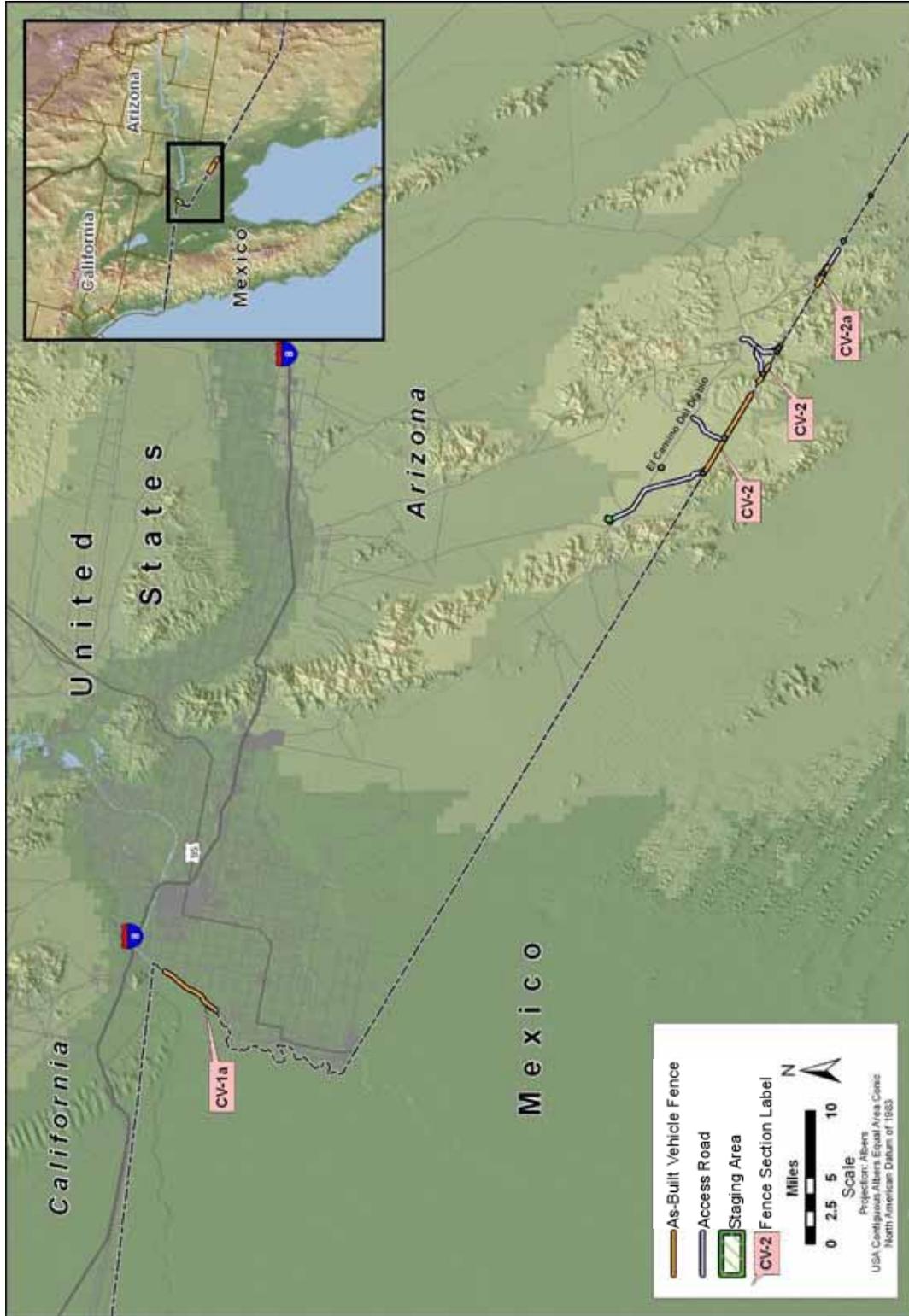


Figure 1-1. Vicinity Map of Segments CV-2, CV-2A, and CV-1A

1.2 METHODS

During construction, CBP followed specially-developed criteria to reduce environmental damage and implemented mitigation measures to further reduce or offset environmental damage to the extent practical. Mitigation measures included avoiding both physical disturbance and construction of barriers in wetlands, riparian areas, and streambeds where practicable. Coordination with Federal and state agencies and other stakeholders augmented efforts to avoid or minimize environmental damage. Contractors observed appropriate BMPs to protect natural and cultural resources, which included implementation of plans for stormwater pollution prevention, construction mitigation and restoration, spill prevention control and countermeasures, dust control, fire prevention and suppression, and unanticipated discoveries. Some of these same criteria and BMPs will be used during operation and maintenance to reduce or offset environmental damage and protect natural and cultural resources to the extent practicable.

1.2.1 Environmental Monitoring Process

In its continuing commitment to environmental stewardship, CBP implemented a comprehensive environmental monitoring program during construction. Environmental monitors documented daily construction activity and ensured that construction contractors adhered to BMPs. Monitors also provided guidance to contractors and the U.S. Army Corps of Engineers (USACE) on natural and cultural resources issues as they arose, served as a conduit for coordination with resource agencies if needed, and moved animals from the construction corridor when needed. After construction was complete, the daily environmental monitor logs and weekly environmental monitor reports were compiled and analyzed to determine the actual final construction impacts of the projects.

CBP implemented an environmental monitoring reporting program to use for the projects discussed in this ESSR. Environmental monitor reports documented conformance to BMPs; issues related to environmental resources, such as threatened and endangered species habitat; and cultural resources encountered during construction.

The reports also documented BMP infractions, including their impact on biological, cultural, or other resources, and corrective actions taken. Lastly, the reports provided a summary of completed and planned construction activity.

1.2.2 Change Management Process

CBP developed a change management process to identify, analyze, and approve unforeseen modifications during design and construction of TI, and implemented a monitoring program to document compliance with environmental requirements and adherence to the BMPs. The change management plan was implemented through a formal system of design and construction change requests (CRs). Each CR was evaluated for potential environmental impacts as part of the approval process.

CRs document unforeseen modifications, additions, or deletions to construction of the VF300 TI. These changes occur as a result of various factors, including changes in terrain, changes in construction material, variations on planned routes and staging areas, stakeholder requests, and

others. Each CR has a unique identifier. In addition, each request contains a description of the requested change, a justification for why the change was necessary, information on additional costs, if applicable, and a description of how the change might affect the construction schedule. If necessary, it includes attachments such as maps or photographs to further explain the required change. Each CR was reviewed and submitted to CBP Headquarters for approval.

1.2.3 Post-Construction Survey Methods

The objective of the post-construction survey was to locate, identify, photograph, and record the installation of the TI infrastructure, including types of fences and width of access roads and project corridors. In addition, the surveys recorded biological communities, wetlands, and other environmental conditions in and adjacent to the project corridor. Surveyors also recorded any other unusual conditions they observed, such as fence failure, significant erosion, hazardous waste, or construction debris.

Before the field survey, CBP produced maps of the project corridor as described in the ESP. Surveyors reviewed the ESP for the description of locations and type of fence to be installed, location and width of access and maintenance areas, and location and size of staging areas. CBP also produced approved CR forms, which surveyors used in the field to document approved changes. Surveyors covered the entire Yuma Sector project corridor and recorded the centerline, length, and width of construction and access road alignments using a Trimble Global Positioning System (GPS). They took periodic GPS coordinates of the temporary and permanent construction footprint, particularly when the corridor appeared to be expanded or reduced. They also recorded the perimeters of staging areas using GPS, as well as the beginning and end coordinates for various fence types.

SECTION 2.0
DESCRIPTION OF THE PLANNED ACTION



2.0 DESCRIPTION OF THE PLANNED ACTION

CBP built and now intends to operate and maintain approximately 42 miles of TI, including approximately 15 miles of vehicle fence and 27 miles of access roads along the U.S./Mexico international border in the Yuma Sector.

The locations of TI were based on a Yuma Sector assessment of local operational requirements that identified where such infrastructure would assist USBP agents in reducing illicit cross-border activities. Where possible, the location and design of TI was also based on consultation with local stakeholders. The vehicle fence for segments CV-2, CV-2A, and CV-1A consists of a combination of Normandy-style and post-on-rail-style fences (see Figures 2-1 and 2-2).



Figure 2-1. Photograph of Completed Normandy-Style Fence, CV-1A



Figure 2-2. Photograph of Completed Post-on-Rail-Style Fence, CV-2

Generally, vehicle fencing was installed approximately three to six feet north of the U.S./Mexico international border within the Roosevelt Reservation.¹ It affected an approximately 60-foot-wide corridor along each fence segment, although some construction contractors were able to limit the corridor to lesser widths, as noted in some environmental monitor reports. TI was built around the U.S. Section, International Boundary and Water Commission (USIBWC) monuments.

Wherever possible, contractors used existing roads and previously disturbed areas for construction access and staging areas. Any necessary aggregate or fill material was clean material that construction contractors obtained from available sources that posed no potential adverse impact on biological or cultural resources. New fence was fabricated from nonreflective steel and required no painting.

Maintenance will include removing any accumulated debris on the fence after rain to avert future flooding. The Normandy-style fence placed within the washes is expected to allow a sufficient flow of stormwater and debris during storms. After storms, TI will be inspected for large debris, which will be removed. Normandy-style fence was securely anchored to the bottom and sides of washes. Sand that builds up against the fence and brush near the fence will also be removed, as needed. Brush removal could include mowing, removal of small trees, and application of

¹ In 1907, President Roosevelt reserved from entry and set apart as a public reservation all public lands within 60 feet of the international boundary between the United States and Mexico within the State of California and the Territories of Arizona and New Mexico. Known as the "Roosevelt Reservation," this land withdrawal was found "necessary for the public welfare ... as a protection against the smuggling of goods." The proclamation excepted from the reservation all lands that, as of its date, were (1) embraced in any legal entry; (2) covered by any lawful filing, selection, or rights of way duly recorded in the proper U.S. Land Office; (3) validly settled pursuant to law; or (4) within any withdrawal or reservation for any use or purpose inconsistent with its purposes.

herbicide approved by the U.S. Environmental Protection Agency (USEPA) and U.S. Department of Agriculture (USDA), if needed. Any destruction or breaches of the fence will be repaired, as needed. Additionally, access roads will be maintained or potentially upgraded to ensure year-round access for fence maintenance. Access road maintenance activities can include periodic grading or repair of eroded areas.

2.1 SEGMENT CV-2

Within the Wellton Station Area of Responsibility (AOR), the TI designated as segment CV-2 totals approximately 36.82 miles, including 8.82 miles of vehicle fence and 28 miles of access road. The vehicle fence and access roads are wholly contained within the Roosevelt Easement adjacent to Cabeza Prieta National Wildlife Refuge (CPNWR). Additional access was through the adjacent Barry M. Goldwater Range (BMGR)(see Figure 2-3). The vehicle fence is approximately three to six feet north of the U.S./Mexico international border, within the Roosevelt Reservation.

2.2 SEGMENT CV-2A

Within the Wellton Station AOR, the TI designated as segment CV-2A totals approximately 4.7 miles, with 1.6 miles of vehicle fence with approximately 3.1 miles of existing access road. This vehicle fence section extends approximately 1.6 miles to the east and west wholly contained within the Roosevelt Easement adjacent to CPNWR (see Figure 2-4). The vehicle fence section is approximately three to six feet north of the U.S./Mexico international border, within the Roosevelt Reservation.

2.3 SEGMENT CV-1A

Within the Yuma Station AOR, the TI designated as segment CV-1A totals approximately 5 miles, with 4.5 miles of vehicle fence approximately 0.5 mile of access roads. Segment CV-1A extends from approximately 50 feet east of Morelos Dam approximately 5 miles south to West County 13th Street (see Figure 2-5).

2.4 MONITORING

A contractor prepared daily logs and weekly monitoring reports for VF300 TI construction. Post-construction environmental monitor reports documented the final overall impacts from all projects within the Yuma Sector covered by this ESSR, and compared the actual post-construction impacts of the projects with the impacts anticipated in the individual project-level ESPs. No BMP infractions listed in the environmental monitor reports posed potential harm to the federally listed threatened and endangered species identified in the Yuma Sector Biological Resources Plan (BRP). Issues within the Yuma Sector project sections were minimal. Most issues the monitors identified were immediately brought to the attention of the project engineer and resolved in a timely manner.

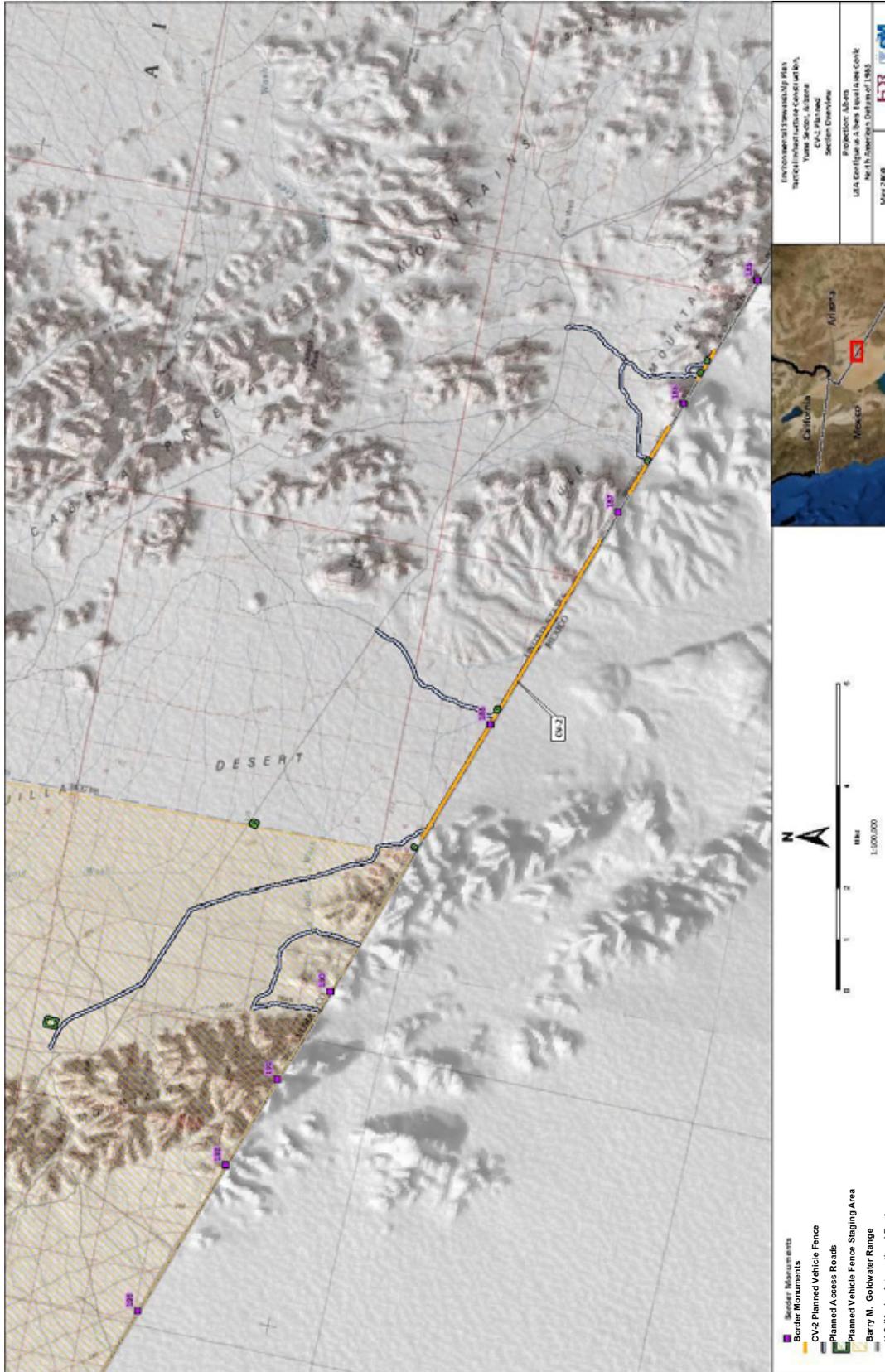


Figure 2-3. Location of Segment CV-2 Planned Action, Wellton Station, Arizona

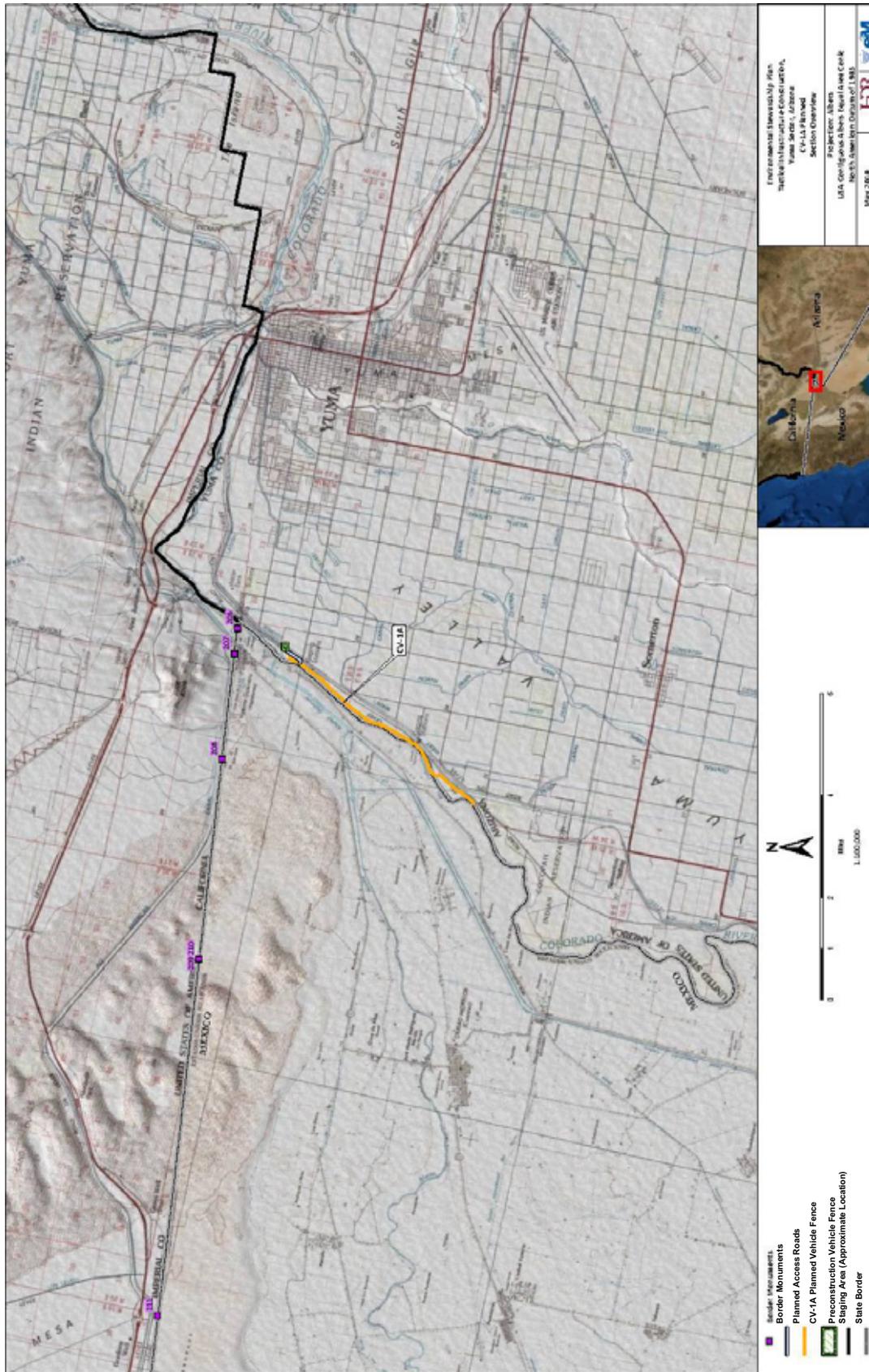


Figure 2-5. Location of Segment CV-1A Planned Action, Yuma Station, Arizona

Most BMPs were strictly adhered to during TI construction in the Yuma Sector. The most common BMP infractions included off-road activity (see Figure 2-6), widening of the existing roadbed due to improper use (see Figure 2-7), vertical bollards without temporary or permanent covers (see Figure 2-8), lack of flagging on access roads into and out of the project area (see Figure 2-9), and the lack of drip pans underneath stored equipment (see Figure 2-10). At the close of construction activities, no BMP infractions remained unresolved. One of the highlights of BMP implementation in the Yuma Sector was the low impact on saguaro (*Carnegiea gigantea*) cacti (a forage species for the endangered lesser long-nosed bat [*Leptonycteris curasoae*]) because an access road in CV-2A was not widened and a salvage plan was prepared to help the contractor identify, remove, and transplant the cacti (see Figure 2-3). Of the 276 saguaro cacti in CV-2 and CV-2A, 17 were affected: 13 could not be transplanted and were removed from the project area, three were transplanted outside the project area, and one was flagged for transplant but was accidentally destroyed by construction activities (see Figures 2-11, 2-12, 2-13, and 2-14). Additionally, limiting the width of the project corridor to only what was necessary for construction (approximately 30 feet in most places, rather than the planned 60 feet) and implementing and strictly adhering to BMPs reduced impacts on natural resources, including soil, water, vegetation, and habitat for threatened and endangered species, such as the lesser long-nosed bat (see Figures 2-15, 2-16, 2-17, 2-18, and 2-19).



Figure 2-6. Photograph of Off-Road Activity, CV-2



Figure 2-7. Photograph of Improper Road Widening, CV-2A



Figure 2-8. Photograph of Vertical Bollard without Cover, CV-2A



Figure 2-9. Photograph of Lack of Flagging, CV-1A



Figure 2-10. Photograph of Lack of Drip Pans Under Stored Equipment, CV-2



Figure 2-11. Photograph of Avoided Saguaro, CV-2



Figure 2-12. Photograph of Removed Saguaro, CV-2A



Figure 2-13. Photograph of Destroyed Saguaro, CV-2



Figure 2-14. Photograph of Transplanted Saguaro Outside the Project Corridor, CV-2A



Figure 2-15. Photograph of Transplanted Saguaro within the Project Corridor, CV-2



**Figure 2-16. Photograph of BMP:
Minimizing Road Widths, CV-1A**



**Figure 2-17. Photograph of BMP:
Controlling Erosion, CV-1A**



**Figure 2-18. Photograph of BMP:
Minimizing Vegetative
Removal, CV-2A**



**Figure 2-19. Photograph of BMP:
Minimizing Disturbance to Threatened
and Endangered Species Habitat, CV-2**

2.5 CHANGE REQUEST FORMS

The CR process described in the introduction was used during the course of this project. The majority of CRs for VF300 TI in the Yuma Sector did not worsen the environmental impacts anticipated in the original project-level ESPs, and in some cases reduced the impacts. Where a design or construction change caused a change from the baseline established in the project-level ESPs, the change typically resulted in a reduction of impacts.

CBP approved six CR forms during construction in the Yuma Sector. However, only four had the potential to affect the construction footprint and thus change environmental impacts. Table 2-1 summarizes the approved project modifications determined to have the potential to change the construction footprint anticipated in the project ESPs.

Table 2-1. Summary of Approved Change Requests with Potential to Affect the Construction Footprint

Approval Date	Summary Description	Potential Construction Impact
Segment CV-1A		
Dec 8, 2009	Excavate a barrier trench parallel and perpendicular to a portion of the Dam spillway. Revise approximately 0.12 mile of fence and delete approximately 0.02 mile of fence altogether.	Minor additional impacts on soils from additional earthwork. Reduced impacts from the reduction of 0.02 mile of fence.
Dec 8, 2009	Modify the quantities of post-on-rail (VF-1) and Normandy-style fence (VF-2) to be installed on this segment to accommodate geotechnical conditions. The total mileage of the CV-1A segment remains unchanged at 5.0 miles.	Minor additional impacts on soils and vegetation because the inadvertent road is approximately 500 feet longer than the planned road.
Segments CV-1A, CV-2		
Nov 13, 2008	Change the position of the rail on VF-1 from the Mexico-facing side of the post to the United States-facing side. This is a user-requested change. Rail installed on the Mexico-facing side of the fence would be more difficult for Border Patrol to inspect for breaches.	No additional impacts.
Segment CV-2		
Sep 22, 2008	Based on the plan and profile sheets included in the Requests for Proposals (RFPs) and the latest amendments, these mileages have been calculated: Planned Miles: 8.86 Geographic Information System (GIS) Miles: 9.04	Minor increase in anticipated impacts by the addition of 0.08 mile of fence.
Dec 31, 2008	Add 264 linear feet of Normandy-style (VF-2) vehicle fence to the western end of segment 2 of CV-2. To meet schedule requirements, VF-1 material was used to create VF-2, similar to the design approved for CV-1B.	Additional minor impacts on vegetation and soils because the fence is 264 linear feet longer than anticipated.
Segment CV-2A		
Apr 17, 2009	This change request includes three changes to either fence type or length and one change to construction methodology. Overall, the requested change includes the deletion of approximately 1,100 feet of drainage crossing vehicle fence (DV-1), an addition of 700 feet of post-on-rail-style vehicle fence (VF-1), and an addition of 300 feet of Normandy-style fence (VF-2), which results in a net decrease of approximately 100 feet (0.02 mile) of fence at CV-2A for a revised total project length of 1.56 miles. These changes to fence type and length occur in three separate areas. Also, anchors are required to secure fence on steep slopes.	Decrease in impacts due to the reduced length of the fence by 0.02 mile.

Table 2-1, continued

Approval Date	Summary Description			Potential Construction Impact
	<u>Change</u>	<u>(+/-) Type</u>	Approx. qty. (feet)	
	Wash Area	(-) DV-1	1,109	
	Wash Area	(+) VF-1	1,116	
	Gap Area	(+) VF-2	59	
	Mtn top Area	(-) VF-1	415	
	Mtn top Area	(+) VF-2	250	
	Totals	(-)DV-1	1,109	
		(+) VF-1	701	
		(+) VF-2	309	

Additionally, in August 2009, a project was approved to relocate approximately 932 feet of existing Normandy-style vehicle fence and install approximately 320 feet of additional Normandy-style vehicle fence adjacent to the Morelos Dam emergency spillway. Relocation was required because the fence was within the spillway and could impede bypass flows during floods. Furthermore, the fence's alignment made it vulnerable to damage from the high water typical during floods. Building additional vehicle fence was required to effectively seal the border to vehicle traffic in the area. Related work included building an access road along the new fence route and widening the levee road to maintain the Bureau of Reclamation 40-foot maintenance easement.

2.6 IMPACT QUANTITIES ANTICIPATED IN THE ENVIRONMENTAL STEWARDSHIP PLAN

Table 2-2 identifies the pertinent resources that the ESPs expected to be affected. This is not all-inclusive, as post-construction quantities for some resource impacts (such as air, noise, and socioeconomic factors) could not be measured. Unless otherwise noted, all quantities are in acres.

Table 2-2. Resources Anticipated to be Affected

Resource	Impacts*			Comment
	Permanent	Temporary	Total	
Soils	285.3	12.2	297.5	No prime farmland soils affected.
Vegetation	285.3	0	285.3	Various scrubland in CV-2 and CV-2A. Saltcedar in CV-1A.
Cultural Resources	0	0	0	No sites were identified within the project corridor.
Waters of the United States	18.73	0	18.73	Located throughout the Yuma Sector.
Wetlands	0.59	0	0.59	Four sites in CV-1A.

* Unless otherwise noted, all quantities are in acres.

SECTION 3.0
POST-CONSTRUCTION FINDINGS



3.0 POST- CONSTRUCTION FINDINGS

This section discusses the results of the post-construction surveys in both qualitative and quantitative terms, by construction activity. A summary of the impacts on resources, based on these post-construction surveys, is at the end of this section. During large construction projects it is common for minor difference between field conditions and design drawings to require small modifications. These modifications can result in increases in the length of fence sections or the footprint of roads and staging areas. Changes such as these are expected under typical construction projects. Table 3-1 summarizes the impacts predicted in the ESPs, plus the actual post-construction impacts, and the difference between the predicted and actual impacts for all VF sections in the Yuma Sector. Figures 3-1, 3-2, and 3-3 present the post-construction footprint.

Table 3-1. Summary of Construction Impact for VF Sections in the Yuma Sector

Sections	Predicted Impact (acres) ^a	Post-construction Impact (acres) ^b	Difference Between Predicted and Actual Impacts
Segment CV-2			
60-foot-wide Construction Corridor	66.3	52.0	-14.3
Access Roads	209.0	159.9	-49.1
Staging Areas	40.8	24.1	-16.7
Totals	316.1	236.0	-80.1
Segment CV-2A			
60-foot-wide Construction Corridor	11.7	8.6	-3.1
Access Roads	22.8	6.4	-16.4
Staging Areas	0.8	2.7	1.9
Totals	35.3	17.7	-17.6
Segment CV-1A			
60-foot-wide Construction Corridor	36.3	25.9	-10.4
Access Roads ^c	1.7	0.0	-1.7
Staging Areas	0.4	0.7	0.3
Totals	38.4	26.6	-11.8

Notes:

- Area based on computer-aided design and drafting (CADD) data provided by USACE.
- Area based on GPS data collected during post-construction surveys.
- Access roads were developed on previously disturbed land with no additional impact; therefore, it was not possible to assess actual impacts for the proposed access roads.

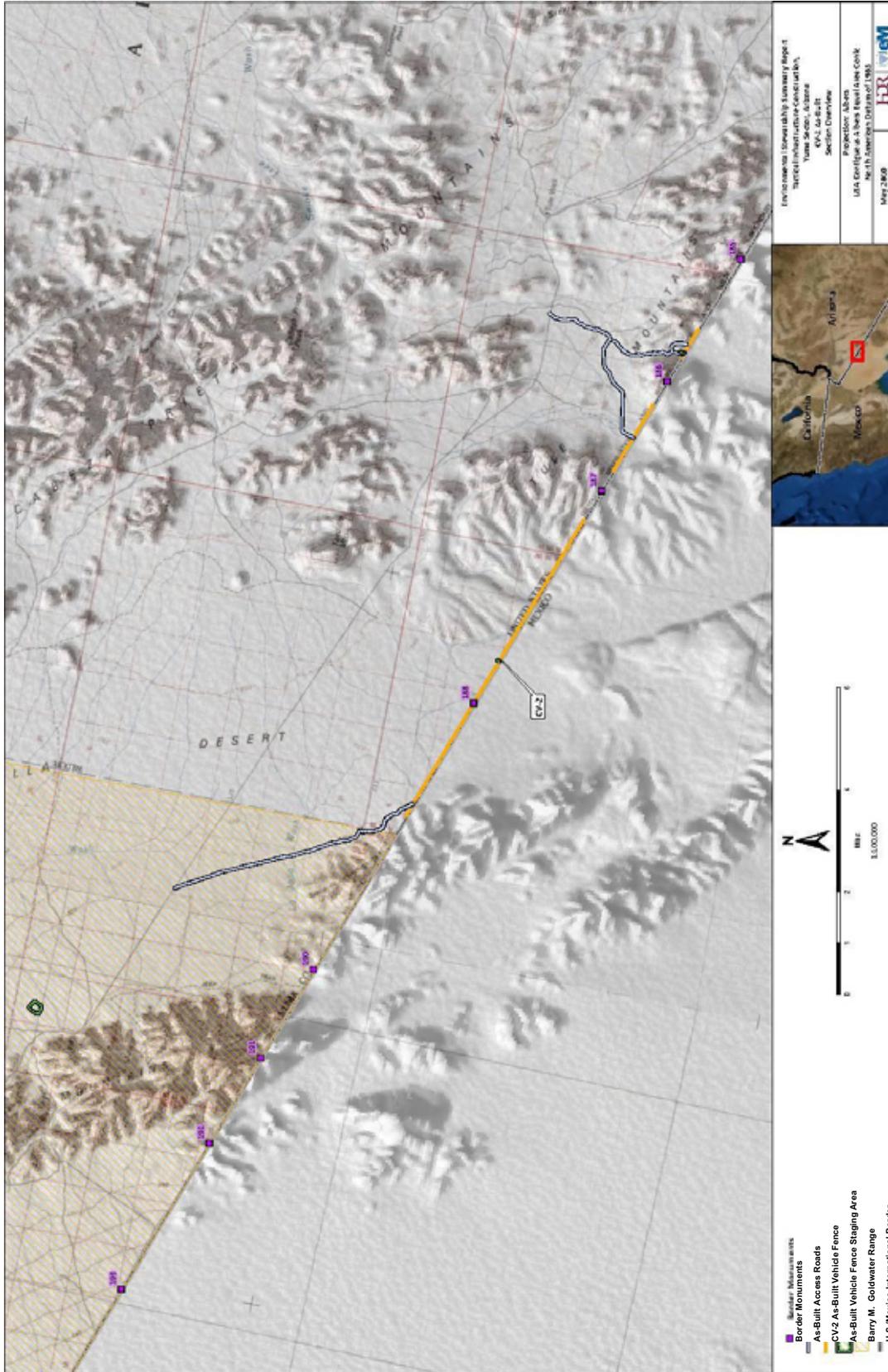


Figure 3-1-1. Location of Segment CV-2 Post-construction, Wellton Station, Arizona

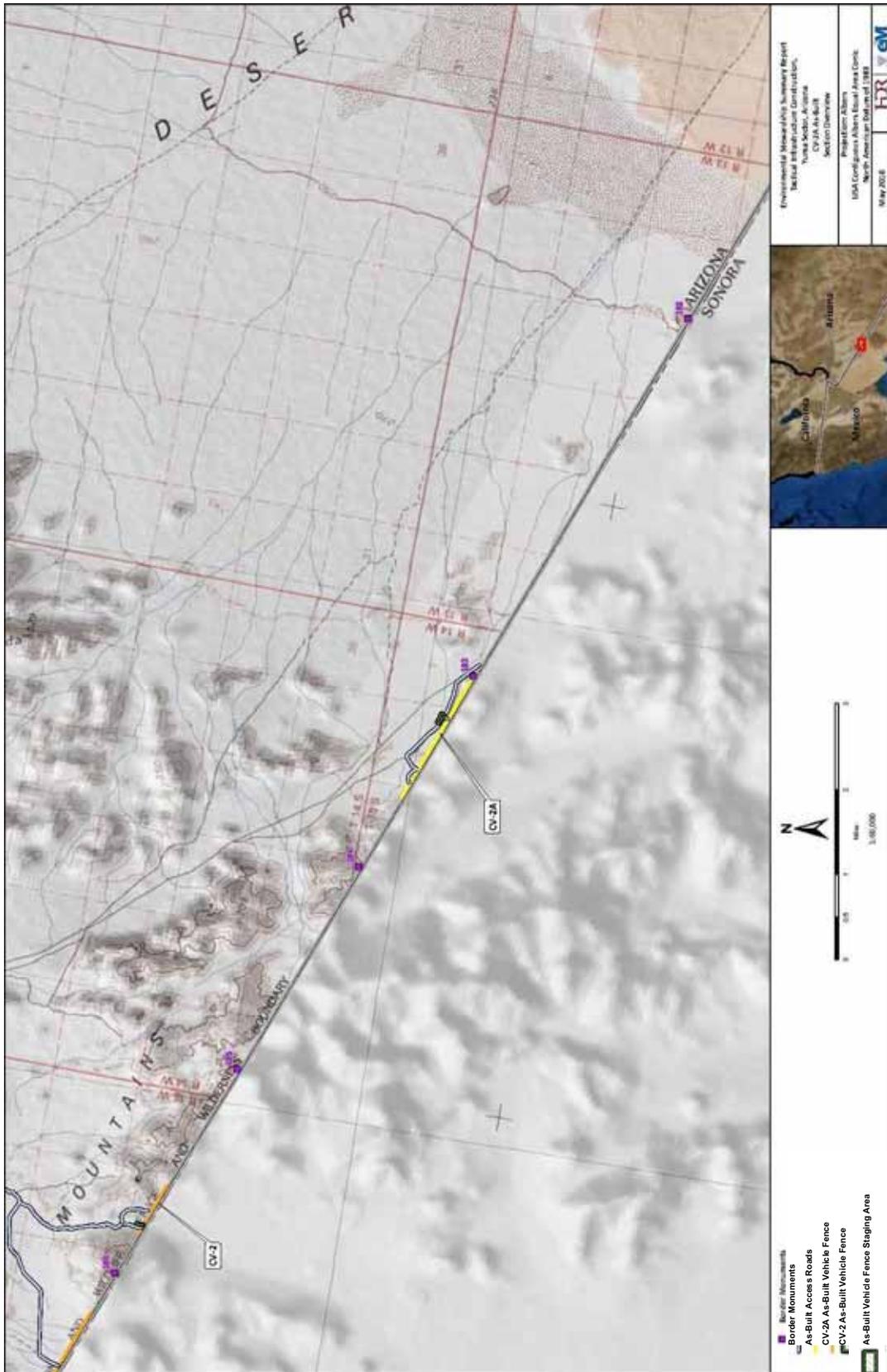


Figure 3-2. Location of Segment CV-2A Post-construction, Wellton Station, Arizona

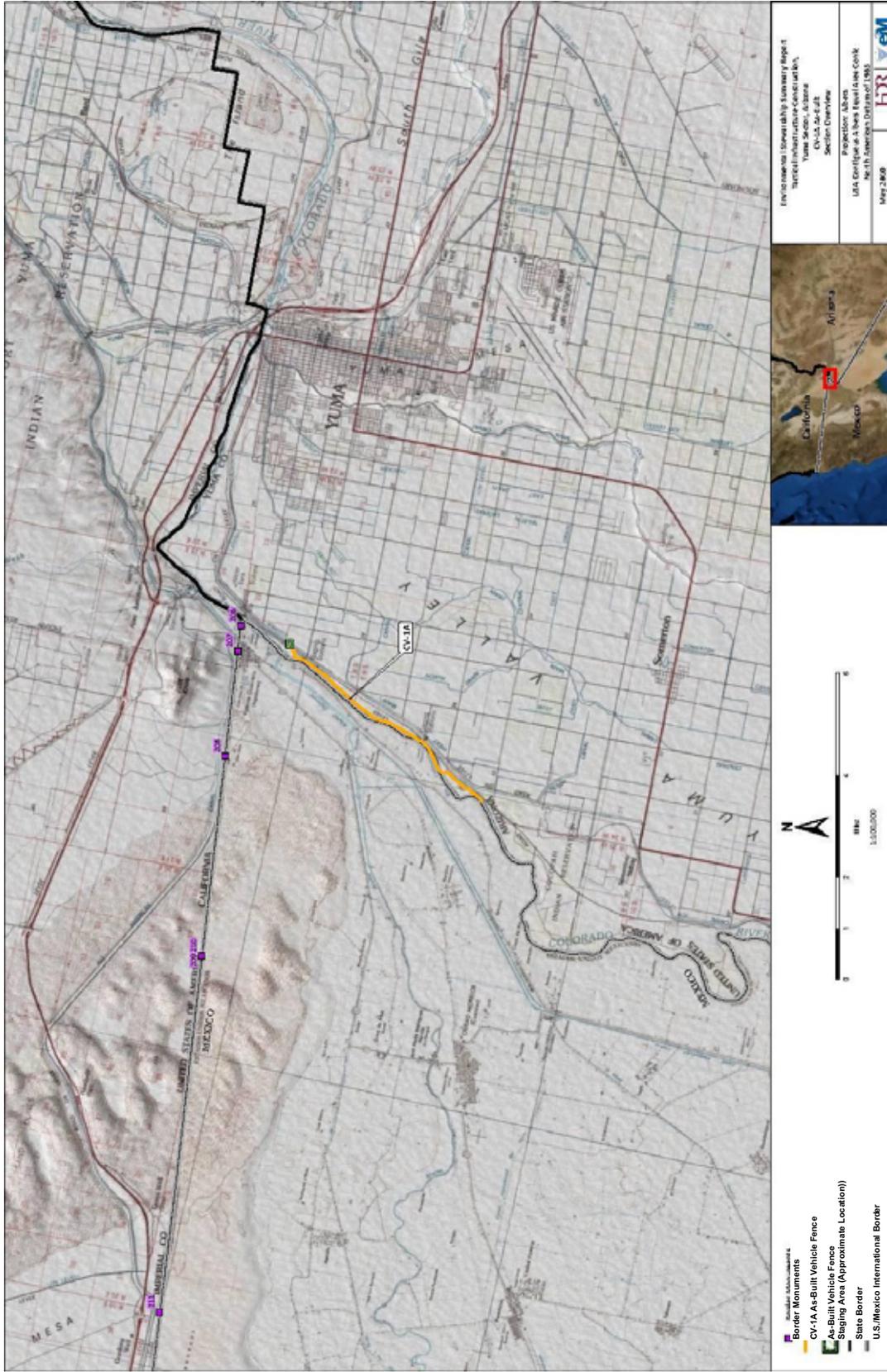


Figure 3-3. Location of Segment CV-1A Post-construction, Yuma Station, Arizona

3.1 RESULTS OF ROAD MEASUREMENTS

3.1.1 Access Roads

Access roads provide access to the border fence and its adjacent construction and maintenance road discussed in Section 3.2. Passing zones can be developed where necessary to allow for safe passage of transport vehicles and equipment. Access roads include passing zones in some places. Temporary road improvements consist of placing aggregate on access roads and passing zones to accommodate large equipment (see Figure 3-4).



Figure 3-4. Photograph of Access Road, CV-2

3.1.1.1 Segments CV-2, CV-2A, and CV-1A

Segment CV-2. The contractor narrowed access roads to the fence construction corridor to minimize impacts on designated wilderness and construction staging areas. The ESP anticipated that approximately 28.7 miles (209 acres²) of road would be required for access to the border construction corridor. The post-construction survey calculated the actual impact area to be 159.9 acres, or 49.1 acres less than anticipated. The contractor removed temporary road improvements at completion of the project.

Segment CV-2A. The contractor narrowed access roads to the fence construction corridor to minimize impacts on designated wilderness and construction staging areas. The ESP anticipated that approximately 3.07 miles (22.8 acres²) of road would be required for access to the border construction corridor. The post-construction survey calculated the actual impact area to be

² Access road conversion from miles to acres for CV-2 and CV-2A assumes a 60-foot-wide roadway. Access road conversion from miles to acres for CV-1A assumes a 30-foot-wide roadway.

6.4 acres, or 16.0 acres less than anticipated. The contractor removed temporary road improvements at completion of the project.

Segment CV-1A. The ESP anticipated four new access road segments totaling 0.5 mile (1.7 acres) to meet design/build requirements. However, these were developed on previously disturbed land with no additional impact; therefore, the actual impact area was 1.7 acres less than anticipated.

3.2 FENCE AND ADJACENT CONSTRUCTION AND MAINTENANCE ROAD

Vehicle fences are intended to prevent illegal vehicle traffic but are not designed to preclude pedestrian or wildlife movement. The fence is approximately three to six feet north of the border. Construction and maintenance roads are needed to build TI, provide a safe driving surface along the border, and provide access for fence maintenance. Construction is contained within the 60-foot-wide Roosevelt Reservation corridor. The ESPs for CV-1A, CV-2, and CV-2A anticipated that two types of fence would be installed. The post-construction survey confirmed that the two types of fence, post-on-rail and Normandy-style, were installed (see Figures 2-1, 2-2, 3-5 through 3-8).



Figure 3-5. Photograph of Construction of Post-on-Rail-Style Fence, CV-1A



Figure 3-6. Photograph of Construction of Normandy-Style Fence, CV-2



Figure 3-7. Photograph of Construction of Post-on-Rail-Style Fence, CV-2A



Figure 3-8. Photograph of Construction of Normandy-Style Fence, CV-2A

3.2.1 Segments CV-2, CV-2A, and CV-1A

Segment CV-2. According to the post-construction survey, the construction footprint of the primary vehicle fence and adjacent construction and maintenance road was almost entirely contained within the 60-foot-wide corridor, which was the planned footprint delineated in the ESP. The analysis in the ESP indicated that the designed 60-foot-wide construction corridor for CV-2 would be 66.3 acres. The post-construction survey calculated the actual impact area to be 52.0 acres, or 14.3 acres less than anticipated, primarily because the contractor did not use the full 60 feet of the construction right-of-way (ROW).

Segment CV-2A. According to the post-construction survey, the construction footprint of the primary vehicle fence and adjacent construction and maintenance road was almost entirely contained within the 60-foot-wide corridor, which was the planned footprint delineated in the ESP. The analysis in the ESP indicated that the designed 60-foot-wide construction corridor for CV-2A would be 11.7 acres. The post-construction survey calculated the actual impact area to be 8.6 acres, or 3.1 acres less than anticipated, primarily because the contractor did not use the full 60 feet of the construction ROW.

Segment CV-1A. According to the post-construction survey, the construction footprint of the primary vehicle fence and adjacent construction and maintenance road was almost entirely contained within the 60-foot-wide corridor, which was the planned footprint delineated in the ESP. An exception was the relocation and installation of approximately 1,170 feet of Normandy-style fence adjacent to the Morelos Dam emergency spillway. Construction occurred outside the planned footprint to avoid impeding bypass flows during floods and effectively seal the border (see Figures 3-9 and 3-10).



Figure 3-9. Photograph of Segment CV-1A Fence Relocation at Morelos Dam



Figure 3-10. Segment CV-1A Fence Relocation Location Map

The analysis in the ESP indicated that the designed 60-foot-wide construction corridor for CV-1A would be 36.3 acres. The post-construction survey calculated the actual impact area to be 25.9 acres, or 10.4 acres less than anticipated. Careful project planning allowed staging areas and access roads to have no measurable impacts. No mitigation measures were necessary for CV-1A, primarily because the contractor did not use the full 60 feet of the construction ROW and adhered to BMPs.

3.3 STAGING AREAS

Staging areas are required for facilitating operation of equipment, staging materials, and construction access to the project corridor described in Section 3.2.

3.3.1 Segments CV-2, CV-2A, and CV-1A

Segment CV-2. The ESP anticipated four staging areas totaling 40.8 acres to facilitate construction of CV-2. The post-construction survey calculated the actual impact area to be 24.1 acres, or 16.7 acres less than anticipated (see Figures 2-3 and 3-11).



Figure 3-11. Photograph of Staging Area, CV-2

Segment CV-2A. The ESP anticipated a 0.8-acre staging area just to the north of the mid-point of the fence in CV-2A, adjacent to the access road. The post-construction survey calculated the actual impact area to be 2.7 acres, or 1.9 acres greater than anticipated (see Figures 2-4 and 3-12).



Figure 3-12. Photograph of Staging Area, CV-2A

Segment CV-1A. The ESP anticipated a 0.4-acre staging area for facilitating construction of CV-1A. The staging area was built on previously disturbed lands with no additional impact; therefore, the actual impact area was 0.4 acre less than anticipated. However, a 0.7-acre staging area was required for the Morelos Dam fence relocation, resulting in an overall increase of 0.4 acre over the impact area anticipated for CV-1A (see Figures 2-5 and 3-13).



Figure 3-13. Photograph of Staging Area, CV-1A

3.4 MEASURED IMPACT QUANTITIES

The post-construction surveys allow comparison of the anticipated and actual impacts as summarized in Table 2-3.

3.4.1 Segments CV-2, CV-2A, and CV-1A

TI built in the Yuma Sector under the VF300 program consisted of vehicle fence with adjacent construction and maintenance roads, access roads, and staging areas in three separate segments.

3.4.1.1 Vegetation and Soils

The vegetative habitats within the CV-1A project areas are part of the Sonoran Desert biome (Brown 1994) and consist primarily of creosotebush (*Larrea tridentata*) and bursage (*Ambrosia* spp.) vegetation, and a riparian community immediately adjacent to the Colorado River (see Figure 3-14). Both habitats are typical of the Lower Colorado River Valley subdivision. The creosotebush-bursage community typically is species-poor and consists of a single canopy of low shrubs and sparse herbaceous cover.



Figure 3-14. Photograph of Vegetative Habitat and Soils, CV-1A

The vegetative habitats in CV-2 and CV-2A are consistent with the basin and range lowlands of southwestern Arizona (see Figures 3-15 and 3-16) and have generally been classified under the Dry Domain, Tropical/Subtropical Desert Division by Bailey (1995). The project area is more finely classified by Bailey (1995) as the American Semi-desert and Desert Province, Sonoran Desert Section. There were minimal permanent impacts on vegetation communities within the Yuma Sector.



Figure 3-15. Photograph of Vegetative Habitat and Soils, CV-2



Figure 3-16. Photograph of Vegetative Habitat and Soils, CV-2A

The December 2008 Yuma Sector BRP indicated that the project in segments CV-1A and CV-2 would permanently affect a total of approximately 23.0 acres of vegetation that serve as suitable habitat for Federally listed threatened and endangered species. However, due to project planning

and monitoring during construction, contractors avoided permanent impacts on these vegetative communities. A comparison of predicted and actual impacts on habitat supporting threatened and endangered species is in Table 3-2.

Table 3-2. Summary of Projected Versus Actual Impacts on Vegetative Community Types Supporting Federally Listed Species in Yuma Sector

Habitat Type	Segment	ESP Predicted Impact (acres)	Surveyed Impact (acres)	Difference (acres)
Colorado River Riparian (habitat for southwestern willow flycatcher, including approximately 1 acre of overlapping yellow-billed cuckoo habitat)	CV-1A	14.0	0	-14.0
Saguaro/Creosotebush-White Bursage Wooded Shrubland (habitat for lesser long-nosed bat)	CV-2	9.0	0	-9.0
	Total	23.0	0	-23.0

Note: The actual impact acreage for southwestern willow flycatcher habitat was calculated by overlaying a GIS map of the actual impact corridor over the previously identified suitable habitat for the species. The actual impact corridor and the previously identified suitable habitat did not overlap. Actual impact corridor data were collected using GPS units with sub-meter accuracy.

3.4.1.2 Cultural Resources

A search of existing archaeological site records within a 1-mile radius of the U.S./Mexico international border within segment CV-2 identified international border monuments 185 through 190. These border monuments were not affected. Only isolated objects were found in addition to the above-mentioned border monuments.

The search within segment CV-2A identified international border monuments 183 and 184. These border monuments were not affected. No previous sites were found to be recorded within one mile of CV-2A.

For segment CV-1A, previous surveys identified 11 sites within one mile of the project area. No sites were affected during construction.

3.4.1.3 Wetlands and Waters of the United States

In segment CV-2, CBP identified 83 wash channels (61.91 acres). Of this area, 17.95 acres were within the project area (see Figure 3-17). No waters of the United States were within the staging areas. Contractors avoided or minimized environmental damage.

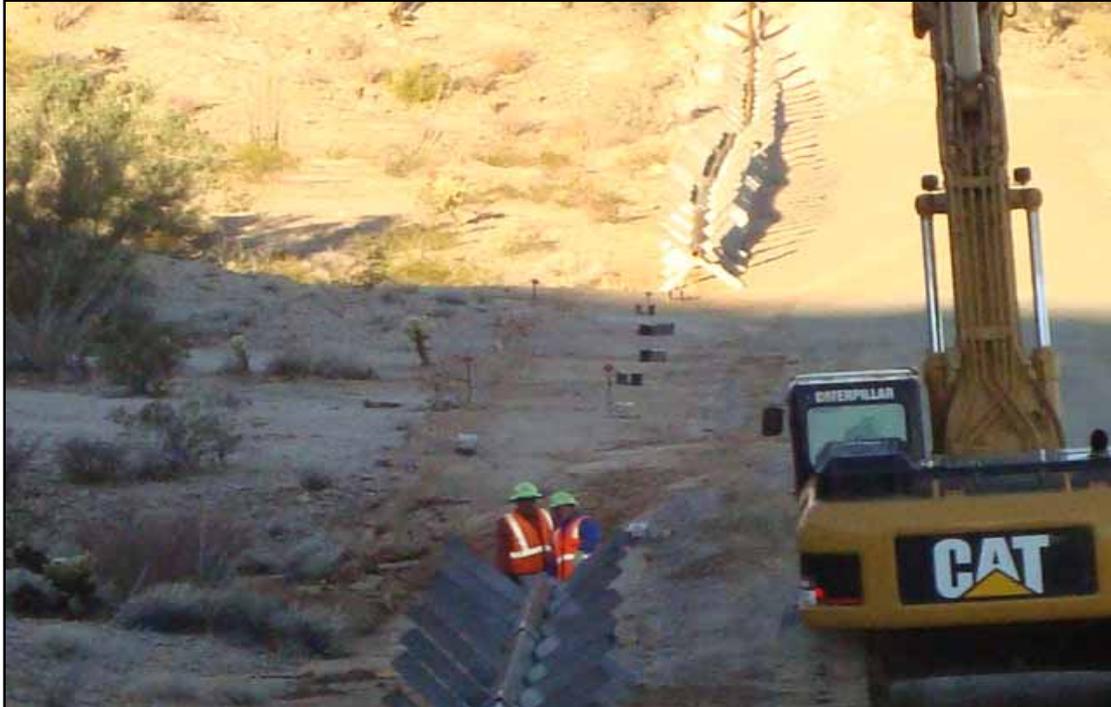


Figure 3-17. Photograph of Washes, CV-2

For segment CV-2A, CBP delineated all washes and other waters of the United States. They included a total of 27 ephemeral wash channels totaling 1.16 acres. No waters of the United States were within the staging areas. Contractors avoided or minimized environmental damage. A total of 0.78 acre was directly within potential impact areas (see Figure 3-18).

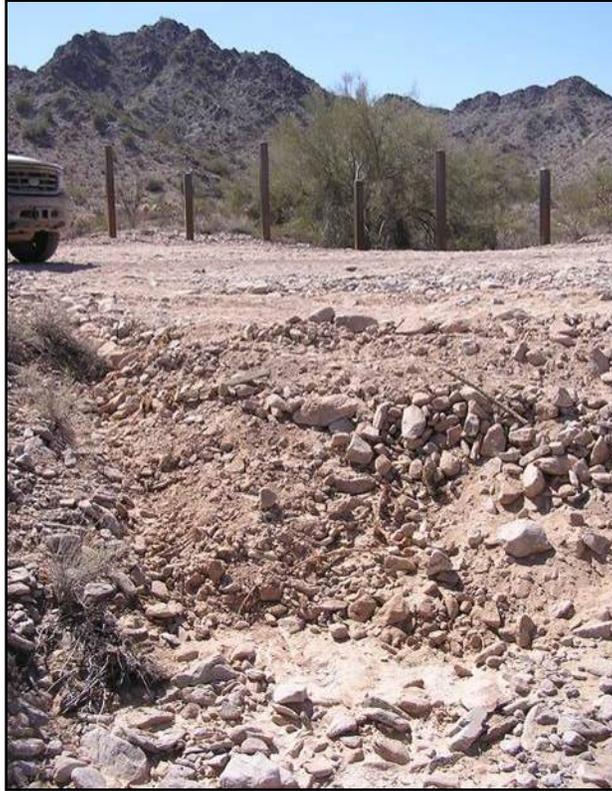


Figure 3-18. Photograph of Washes, CV-2A

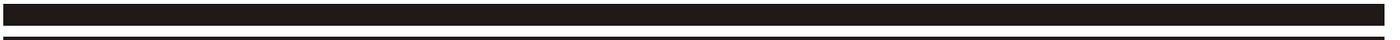
In segment CV-1A, five wetlands were within the project corridor. Wetlands 1 through 4 are in the riparian zone of the Colorado River and total approximately 0.8 acre within the project corridor. Wetland 5 is a small, isolated depressional system that appears to be connected to the Colorado River via a small, shallow overflow system. No waters of the United States were within the staging area. Contractors avoided or minimized environmental damage (see Figure 3-19).



Figure 3-19. Photograph of Wetlands (background), CV-1A

Impacts on wetlands and waters of the United States were negligible. CBP implemented BMPs for construction activities and controlling site soil erosion to ensure that impacts would be minimal.

SECTION 4.0
DISCUSSION



4.0 DISCUSSION

4.1 PERMANENT IMPACTS

Permanent impacts on soils and vegetation decreased from the original estimate of approximately 390 acres in the ESPs to 280 acres as determined by the post-construction survey, a reduction of 110 acres. As can be seen in Table 3-1, the decrease was largely due to reducing the footprint width of the fence line and access roads from the predicted footprint.

4.2 ADDITIONAL CONSTRUCTION PERFORMED

Following completion of the CV-1A fence relocation at Morelos Dam (see Section 3.2.1), the Bureau of Reclamation initiated a project to perform maintenance on the Morelos Dam spillway, necessitating a temporary gap in the project corridor at the northern end to allow equipment access. CBP then installed approximately 200 feet of Normandy-style vehicle fence to close the gap (see Figure 4-1).

4.3 ADDITIONAL ISSUES

CBP identified no issues at the completion of construction or during the post-construction surveys that required resolution. CBP is implementing a Comprehensive Tactical Infrastructure Maintenance and Repair (CTIMR) program to ensure the TI and related areas are maintained and prepared as needed.

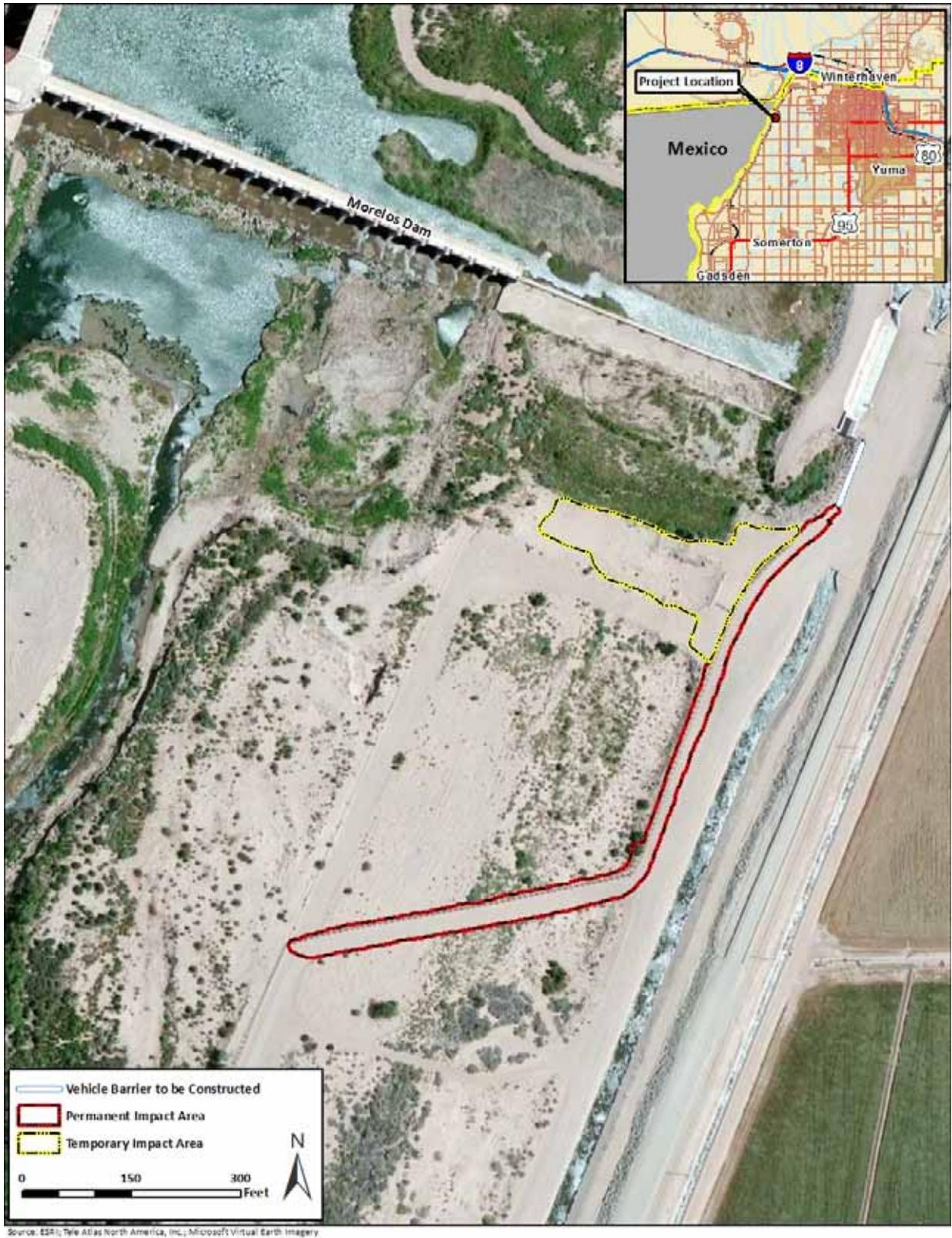


Figure 4-1. Permanent and Temporary Impact Footprints for Fence Relocation, CV-1A

APPENDIX A
PUBLIC OUTREACH AND AGENCY COORDINATION





APPENDIX A

Public Outreach and Coordination



APPENDIX A

PUBLIC OUTREACH AND AGENCY COORDINATION

A.1 INTRODUCTION

The U.S. Department of Homeland Security, Customs and Border Protection (CBP) is committed to environmentally responsible building and maintenance of tactical infrastructure identified as necessary along the U.S./Mexico international border in the U.S. Border Patrol (USBP) Yuma Sector, Arizona. Public outreach and agency coordination has been an important component of this effort.

This appendix provides additional detailed information for all activities associated with public outreach and agency coordination related to vehicle fence segments CV-1A, CV-2, and CV-2A within the Yuma Sector.

CBP notified relevant Federal, Tribal, state, and local agencies concerning the project and requested input on potential environmental concerns that such parties might have regarding the project. Because CBP is committed to building tactical infrastructure in an environmentally responsible manner, CBP has also conducted environmental resource surveys and prepared management plans to ensure that potential environmental damage is minimized. CBP has subsequently coordinated with the U.S. Fish and Wildlife Service (USFWS); Bureau of Land Management (BLM); Arizona State Historic Preservation Office (SHPO); other Federal, state and local agencies; and potentially affected Tribal Nations.

Coordination and outreach has also included affected property owners and members of the general public. CBP has actively solicited public input into the development of the Environmental Stewardship Plans (ESPs) through both a dedicated Internet site resource and public meetings.

The remainder of this appendix provides specific information on public outreach and agency coordination in the Yuma Sector related to building the tactical infrastructure, organized around the particular public audience or resource agencies involved.

A.2 PUBLIC COMMENT SOLICITATION

A.2.1 Public Meetings and Project Web Site Information

CBP announced in local newspapers a public open-house meeting to provide the public with information on the projects, which was held at the Shilo Inn in Yuma as shown in Table A.2-1.

Table A.2-1. Public Meeting, Yuma Sector

VF300 Sector	Public Meeting Location	Date	Estimated Attendees	Registered Attendees
Yuma Sector	The Shilo Inn Hotel 1550 S. Castle Dome Ave. Yuma, AZ 85365	5/15/08	15	10

A.2.1.1 Public Meetings Materials

The following figures present exhibits of various materials prepared in connection with the public meeting, including the newspaper announcement, the presentation for the meeting, and the materials available to the public at the meeting, including the general project description.

The announcement was run in the *Yuma Sun* on May 10, 2008.

Public Open House Announcement

**Construction of Tactical Infrastructure along the U.S./Mexico international border
U.S. Border Patrol (USBP) Yuma Sector, Arizona**

U.S. Department of Homeland Security, Customs and Border Protection (CBP) plans to construct, operate, and maintain tactical infrastructure along the U.S./Mexico international border in the USBP Yuma Sector, Arizona. The infrastructure will consist of vehicle fence, access roads, and patrol roads. The tactical infrastructure will be constructed in areas of the border that are not currently fenced. Through our consultation and environmental stewardship efforts, CBP seeks to identify, avoid, minimize, and mitigate impacts on air quality, noise, land use, recreation, visual resources, geology and soils, water use and quality, cultural resources, socioeconomic resources and environmental justice, utilities and infrastructure, and biological resources including vegetation, wildlife, aquatic species, and special status species. CBP will prepare an Environmental Stewardship Plan (ESP) to ensure that adverse environmental impacts are minimized whenever possible during the construction of tactical infrastructure along the U.S./Mexico international border in the USBP Yuma Sector, Arizona. CBP is committed to building tactical infrastructure in an environmentally responsible manner that protects valuable natural and cultural resources.

Additional information regarding the ESP can be found at www.dhs.gov/xnews/releases/pr_1207080713748.shtm, or by e-mailing: information@BorderFencePlanning.com. For further information please contact Loren Flossman, Program Manager, SBI Tactical Infrastructure, 1300 Pennsylvania Ave, NW, Washington, DC 20229, Tel: (877) 752-0420, Fax: (703) 752-7754.

A public open house to discuss the planned infrastructure will be held on May 15, 2008, from 4:30 p.m. to 8:00 p.m. at The Shilo Inn Hotel, 1550 South Castle Dome Avenue, Yuma, Arizona 85365.

Public Open House Announcement

Public meeting materials were presented as posted presentations and available as handouts. The following figures show the materials available at the public meeting.



**CONSTRUCTION, MAINTENANCE, AND OPERATION
OF TACTICAL INFRASTRUCTURE
U.S. BORDER PATROL YUMA SECTOR, ARIZONA
FACT SHEET**

Environmental Review and Consultation with Stakeholders

Although Secretary Chertoff exercised his authority under Section 102(c) of IIRIRA to waive certain laws, DHS is neither compromising its commitment to responsible environmental stewardship nor its commitment to solicit and respond to the needs of state, local, and tribal governments, other agencies of the federal government, and local residents.

CBP is committed to consultation with the Department of the Interior, the Department of Agriculture, States, local governments, Indian tribes, and property owners in the United States to minimize the impact on the environment, culture, commerce, and quality of life for the communities and residents located near the sites at which such tactical infrastructure is to be constructed.

As part of this process, CBP will conduct natural and cultural resources surveys in the project area to identify resources present, consider project revisions to avoid or minimize impacts to the extent practical, provide reasonable mitigations for impacts that cannot be avoided, and share the results with the public and other stakeholders in Environmental Stewardship Plans for Tactical Infrastructure projects.

U.S. Customs and Border Protection, U.S. Border Patrol



Overview of Environmental Stewardship Plans



**CONSTRUCTION, MAINTENANCE, AND OPERATION
OF TACTICAL INFRASTRUCTURE
U.S. BORDER PATROL YUMA SECTOR, ARIZONA
FACT SHEET**

Environmental Stewardship Plan Resource Areas

Air Quality
The Air Quality analysis will calculate the emissions from construction and operation of the proposed fence and the impacts of those emissions on local and regional air quality.

Cultural/Historic Resources
This review generally includes a review of known and potential archaeological and cultural resources including field surveys. Existing historical and cultural resources will be identified and avoided to the maximum extent practical. An Unanticipated Discoveries Plan will be developed and followed during project construction.

Noise
Noise analysis estimates the level of anticipated noise during construction and operation and the impact on nearby residences, businesses, and other sensitive noise receptors.

Socioeconomic Issues and Environmental Justice
Socioeconomic and Environmental Justice analysis will analyze impacts from construction and operation pacts on local communities, including employment. It will also determine if these impacts will fall disproportionately on minority or low income populations.

Biological Resources
A review of biological resources near the fence and roads will be conducted to identify impacts to species and their habitat. Adverse impacts on sensitive species will be avoided whenever possible through collaboration with the U.S. Fish and Wildlife Service. Unavoidable impacts will be mitigated.

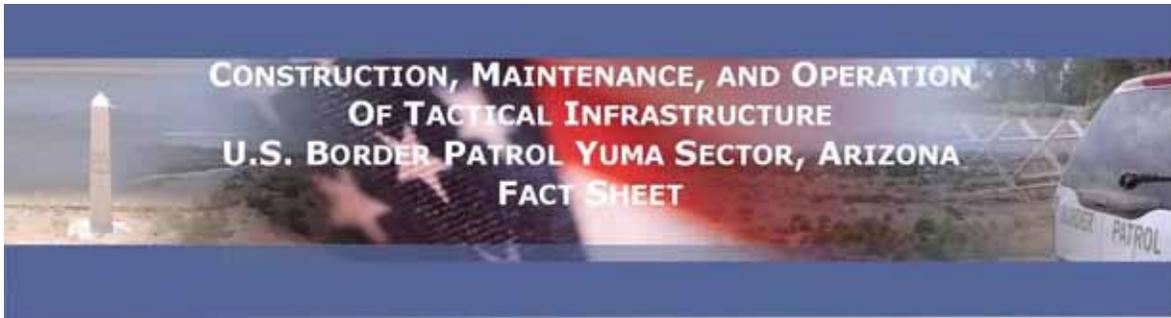
Water Quality
A water quality review will evaluate impacts of construction and operation on existing water resources and compare them to established water quality parameters, including impacts on wetlands and other waters of the United States.

Land Use
A review of land use will evaluate impacts of construction and operation of the fence and access roads. The review will determine if these impacts are consistent with established Federal, state, and local land use plans.

U.S. Customs and Border Protection, U.S. Border Patrol



Summary of Environmental Stewardship Plan Resource Areas



EXAMPLES OF VEHICLE FENCE



Normandy Style Fence

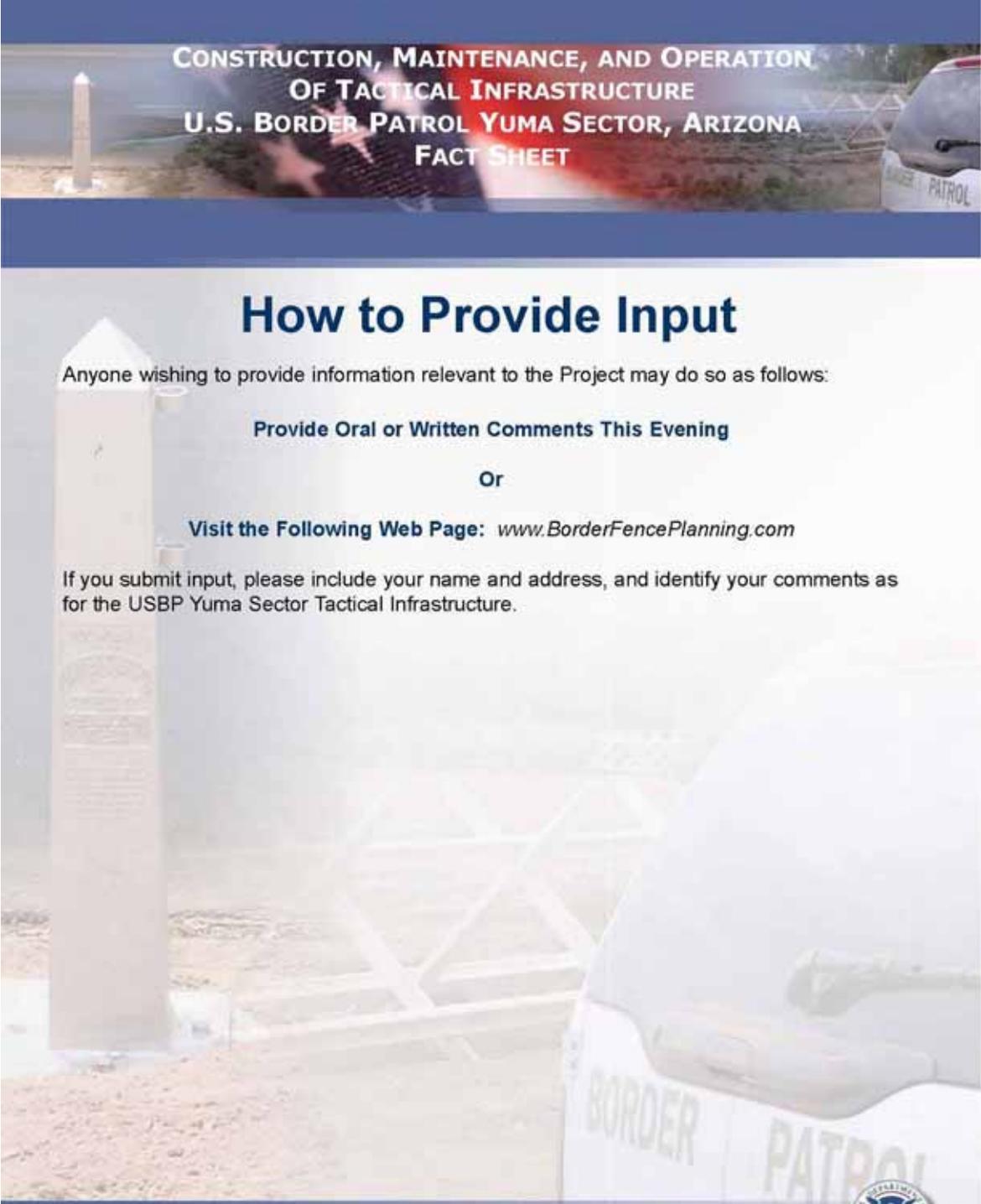


Post on Rail Style Fence

U.S. Customs and Border Protection, U.S. Border Patrol



Examples of Vehicle Fence Style for Yuma Sector



**CONSTRUCTION, MAINTENANCE, AND OPERATION
OF TACTICAL INFRASTRUCTURE
U.S. BORDER PATROL YUMA SECTOR, ARIZONA
FACT SHEET**

How to Provide Input

Anyone wishing to provide information relevant to the Project may do so as follows:

Provide Oral or Written Comments This Evening

Or

Visit the Following Web Page: www.BorderFencePlanning.com

If you submit input, please include your name and address, and identify your comments as for the USBP Yuma Sector Tactical Infrastructure.

U.S. Customs and Border Protection, U.S. Border Patrol



Guidance for Providing Input on the Project



**CONSTRUCTION, MAINTENANCE, AND OPERATION
OF TACTICAL INFRASTRUCTURE
U.S. BORDER PATROL YUMA SECTOR, ARIZONA
FACT SHEET**

PROJECT DESCRIPTION

- Construct, maintain, and operate approximately 15.6 miles of tactical infrastructure and 27.9 miles of access roads.
- The Project will be implemented in 2 discrete sections of tactical infrastructure. The project area for the individual sections will range from approximately 5 miles to 10.6 miles in length.
- Tactical infrastructure will consist of vehicle fence, associated patrol roads, and access roads.
- One section of tactical infrastructure will follow the U.S./Mexico International Border on the Roosevelt Reservation¹ in the Cabeza Prieta National Wildlife Refuge (CPNWR). Some access roads will cross designated wilderness lands within the CPNWR. One section will follow the Colorado River.
- The tactical infrastructure will be constructed in areas of the border that are not currently fenced and will assist U.S. Border Patrol agents in reducing illegal cross-border activities.
- Vehicle fencing will be Normandy style and post on rail style, as terrain and operational need dictates.
- Fencing will be engineered to not impede water flow, designed to survive extreme climate changes, and reduce or minimize impediments to small animal movements.
- Fencing will be able to withstand vandalism and aesthetically pleasing to the extent possible.
- Patrol roads will generally run parallel to the fence sections and the total footprint will be approximately 60 feet wide, expanding as necessary for access roads and staging areas.

¹ In 1907, President Roosevelt reserved from entry and set apart as a public reservation all public lands within 60 feet of the international boundary between the United States and Mexico within the State of California and the Territories of Arizona and New Mexico. Known as the "Roosevelt Reservation," this land withdrawal was found "necessary for the public welfare ... as a protection against the smuggling of goods."

U.S. Customs and Border Protection, U.S. Border Patrol



Summary of Tactical Infrastructure for Yuma Sector, CV-1A

**ENVIRONMENTAL STEWARDSHIP PLAN
FOR
CONSTRUCTION, OPERATION, AND MAINTENANCE
OF TACTICAL INFRASTRUCTURE
U.S. BORDER PATROL YUMA SECTOR, ARIZONA**

**GENERAL LOCATION OF TACTICAL
INFRASTRUCTURE**

The map displays the geographical context of the tactical infrastructure project. It shows the border between the United States (California and Arizona) and Mexico. A yellow line indicates the 'Proposed Vehicle Fence' running along the border. Key locations like Yuma are marked. An inset map shows the location within the broader context of California, Arizona, and Mexico. A scale bar (0 to 20 miles) and a north arrow are provided for reference.

U.S. Customs and Border Protection, U.S. Border Patrol

General Location of Tactical Infrastructure for Yuma Sector, CV-1A



PROJECT DESCRIPTION

- Construct, maintain, and operate approximately 15.6 miles of tactical infrastructure and 27.9 miles of access roads.
- The Project will be implemented in 2 discrete sections of tactical infrastructure. The project area for the individual sections will range from approximately 5 miles to 10.6 miles in length.
- Tactical infrastructure will consist of vehicle fence, associated patrol roads, and access roads.
- One section of tactical infrastructure will follow the U.S./Mexico International Border on the Roosevelt Reservation¹ in the Cabeza Prieta National Wildlife Refuge (CPNWR). Some access roads will cross designated wilderness lands within the CPNWR. One section will follow the Colorado River.
- The tactical infrastructure will be constructed in areas of the border that are not currently fenced and will assist U.S. Border Patrol agents in reducing illegal cross-border activities.
- Vehicle fencing will be Normandy style and post on rail style, as terrain and operational need dictates.
- Fencing will be engineered to not impede water flow, designed to survive extreme climate changes, and reduce or minimize impediments to small animal movements.
- Fencing will be able to withstand vandalism and aesthetically pleasing to the extent possible.
- Patrol roads will generally run parallel to the fence sections and the total footprint will be approximately 60 feet wide, expanding as necessary for access roads and staging areas.

¹ In 1907, President Roosevelt reserved from entry and set apart as a public reservation all public lands within 60 feet of the international boundary between the United States and Mexico within the State of California and the Territories of Arizona and New Mexico. Known as the "Roosevelt Reservation," this land withdrawal was found "necessary for the public welfare ... as a protection against the smuggling of goods."

U.S. Customs and Border Protection, U.S. Border Patrol



Summary of Tactical Infrastructure for Yuma Sector, CV-2



**CONSTRUCTION, MAINTENANCE, AND OPERATION
OF TACTICAL INFRASTRUCTURE
U.S. BORDER PATROL YUMA SECTOR, ARIZONA
FACT SHEET**

PROJECT DESCRIPTION

- Tactical infrastructure will consist of vehicle fence, associated construction roads, and access roads.
- Construct, maintain, and operate approximately 1.6 miles vehicle fence and 2.0 miles of new construction and access roads.
- The vehicle fence will follow the U.S./Mexico International Border on the Roosevelt Reservation¹ in the Cabeza Prieta National Wildlife Refuge (CPNWR). Some new access roads will cross designated wilderness lands within the CPNWR. An existing access road that crosses the Organ Pipe Cactus National Park will also be utilized.
- The tactical infrastructure will be constructed in areas of the border that are not currently fenced and will assist U.S. Border Patrol agents in reducing illegal cross-border activities.
- Vehicle fencing will be Normandy style and Post on Rail style, as terrain and operational need dictates.
- Fencing will be engineered to not impede water flow, designed to survive extreme climate changes, and reduce or minimize impediments to small animal migration, and minimize scour at wash crossings.
- Fencing will be able to withstand vandalism and aesthetically pleasing to the extent possible.
- Construction roads will generally run parallel to the fence sections and the total footprint will be approximately 60 feet wide, expanding as necessary for access roads and staging areas. New access roads will generally run 28 feet wide and will run from existing access roads to the new construction road along the border.

¹ In 1907, President Roosevelt reserved from entry and set apart as a public reservation all public lands within 60 feet of the international boundary between the United States and Mexico within the State of California and the Territories of Arizona and New Mexico. Known as the "Roosevelt Reservation," this land withdrawal was found "necessary for the public welfare ... as a protection against the smuggling of goods."

U.S. Customs and Border Protection, U.S. Border Patrol



Summary of Tactical Infrastructure for Yuma Sector, CV-2A



GENERAL LOCATION OF TACTICAL INFRASTRUCTURE



U.S. Customs and Border Protection, U.S. Border Patrol



General Location of Tactical Infrastructure for Yuma Sector, CV-2A

A.2.1.2 Project Web Site Materials

In addition to conducting public meetings, CBP established a Web site about the project at: www.BorderFencePlanning.com (currently http://cbp.gov/xp/cgov/border_security/ti/ti_docs/sector/yuma/)

This Web site provided information about to the project and also gave individuals an alternative opportunity to submit comments. A 15-day review period for the project descriptions and related material lasted from June 1, 2008, through June 15, 2008.

A.2.1.3 Public Meetings and Project Web Site Comments

Comments received on the Web site during the 15-day public review of the projects are provided below. CBP received three comments from the public via the project Web site comment page during the 15-day period, primarily requesting additional information (see Table A.2-2). No written or oral comments were received during the Yuma Sector open-house-style public meeting.

Table A.2-2. Public Comments, Yuma Sector

Comment Number	Comment	Response	Solicitation Type
1	I am conducting some research regarding the proposed border fence in the Sonoran Desert and would greatly appreciate if you could provide me links you have to any Environmental Impact Statements or Environmental Assessments that you have for this area. Thank you.	Thank you for your comment. CBP appreciates the public involvement in the VF300 planning and development process and encourages all comments.	Website
2	Arizona Open Land Trust is a 501(c)(3) conservation organization. We have reviewed the following links on DHS' website regarding the waiver authority and environmental reviews that the website says will be prepared prior to the start of any major construction: http://www.dhs.gov/xnews/releases/pr_1207080713748.shtm http://www.dhs.gov/xprevprot/programs/border-fence-southwest.shtm Because the Arizona side of the southern U.S.-Mexico border falls within the area in which our organization works for conservation, we would like more information on any and all environmental stewardship plans (ESPs) that DHS Customs and Border Protection has already prepared or will be preparing, including any maps showing the affected areas. Could you direct us to, or email to us, or snail mail to us, all materials, including maps, that have been prepared related to ESPs for the Arizona-Mexico border area, including the USBP Tucson Sector? Thank you in advance.	Thank you for your comment. CBP appreciates the public involvement in the VF300 planning and development process and encourages all comments.	Website

Comment Number	Comment	Response	Solicitation Type
3	Our firm has been made aware of the Public Open House in Yuma, AZ on 5/15, we have been following this project closely. I respectfully request additional information that you may have with regards to this project. Our multi-disciplined firm has been involved in providing engineering services to Tetra Tech and L-3Communications for projects involving border security. We are also the civil engineer for the San Luis Commercial Port of Entry II, providing civil, geotechnical and environmental engineering as well as construction staking, and special inspections. We would appreciate being considered to assist for this phase of the work as well.	Thank you for your comment. CBP appreciates the public involvement in the VF300 planning and development process and encourages all comments.	Website

A.3 COORDINATION WITH RESOURCE AGENCIES/STAKEHOLDERS

A.3.1 Coordination with Resource Agencies/Stakeholders

On several occasions while preparing the ESPs, CBP mailed correspondence to points of contact at potentially interested resource agencies and to potentially interested stakeholders to inform them of the status of the ongoing environmental analyses and to solicit input. This coordination included seeking input during the scoping of the analyses to be included in the ESPs and notifying such parties of the availability of the ESPs on the project website once they were completed.

CBP received written correspondence with feedback about the project as a result of the activities. CBP considered agency comments on the VF300 project and incorporated them as applicable into the ESP analysis of potential environmental impacts.

A.3.2 Coordination with Natural Resources-Related Agencies on VF300 Biological Resources Plans

As part of environmental stewardship for the project, CBP conducted natural resources surveys of the project corridor areas. The purpose of these surveys was to collect information on existing plant and animal species that might be present in the project corridor, including threatened and endangered species, and related habitat. CBP used this information to prepare a Biological Resources Plan that subsequently contributed to the analyses in the ESPs and that was also intended to be a future resource for CBP and contractor personnel during the construction, operation, and maintenance of the tactical infrastructure.

CBP distributed draft BRPs for review by selected resource agencies (BLM, USFWS, and U.S. Forest Service), as applicable, based on the resources within the area of a particular project corridor.

A.3.3 Coordination for Cultural Resources

As a part of environmental stewardship for the project, CBP conducted cultural resources surveys of the project corridor areas. The purpose of these surveys was to collect information on cultural resources that might be present in the project corridor, including previously unknown

resources. CBP coordinated with the Arizona SHPO and appropriate Native American Tribal points of contact before the surveys to gather additional information that might assist the survey team.

CBP used the results of the surveys to prepare Cultural Resources Survey Reports, which subsequently contributed to the analyses in the ESPs. CBP also sent the reports to the Arizona SHPO and appropriate Native American Tribal points of contact for review and comment.

A.4 EXTENDED OUTREACH TO RESOURCE AGENCIES, ELECTED OFFICIALS, AND OTHER STAKEHOLDERS

A.4.1 Extended Outreach to Resource Agencies, Elected Officials, and Other Stakeholders

CBP conducted coordination meetings with Federal and state resource agencies and interested stakeholders in May and July 2008 to present and discuss environmental aspects of the VF300 projects and to obtain feedback and information on any potential sensitive resources in the project areas, as described in the tables below.

In May 2008, CBP held a sector-level projects kickoff meeting at the Yuma Sector station in Yuma, Arizona. The purpose was to discuss the plans and timeline for VF300 ESPs covering projects in the Yuma Sector. Participating in the meeting were approximately 25 representatives from the USFWS, BLM, Arizona Game and Fish Department (AG&F), Tohono O’odham Nation, National Park Service, CBP, USBP, U.S. Army Corps of Engineers (USACE), Gulf South Research Corporation (GSRC), and engineering-environmental Management, Inc. (e²M). Table A.4-1 provides the meeting specifics.

**Table A.4-1. Sector-level Projects Kickoff Meeting
Sector-level Projects “Kickoff” Meeting in Yuma, AZ**

VF300 Sector	Meeting Location	Date	Number of Attendees
Yuma Sector	Yuma Border Patrol Station, Yuma, Arizona	May 22, 2008	25

In July 2008, CBP held a follow meeting in Yuma. It was attended by approximately 20 representatives from the USFWS, United States Section, International Boundary and Water Commission (USIBWC), BLM, Tohono O’odham Nation, USBP, CBP, USACE, e²M, and GSRC. The purpose of the meeting was to assemble appropriate Federal, state, and local agencies, Tribal Nation representatives, and interested stakeholders to move forward on planning and timelines for the Yuma Sector VF300 ESPs. Table A.4-2 provides the meeting specifics.

**Table A.4-2. Sector-level Projects Follow-up Meeting
Sector-level Projects Follow-Up Meeting in Yuma, AZ**

VF300 Sector	Meeting Location	Date	Number of Attendees
Yuma Sector	Yuma Border Patrol Station, Yuma, Arizona	July 22, 2008	21

In January 2009, approximately 13 representatives from the USFWS, BLM, AG&F, National Park Service, CBP, USBP, USACE, GSRC, and e² Mconvened in a conference call to discuss the plans and timeline for the Yuma Sector VF300 Environmental Stewardship Summary Report (ESSR). The purpose of the meeting was to provide appropriate Federal, state, and local agencies, Tribal Nation representatives, and interested stakeholders with updated information on the progress of construction and the Yuma Sector ESSR.