DRAFT

ENVIRONMENTAL STEWARDSHIP SUMMARY REPORT OF THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF TACTICAL INFRASTRUCTURE

VEHICLE FENCE SEGMENTS O-1 THROUGH O-21
U.S. Border Patrol Rio Grande Valley Sector, Texas

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

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EXECUTIVE SUMMARY

The United States (U.S.) Customs and Border Protection (CBP), Secure Border Initiative (SBI) constructed Tactical Infrastructure (TI) for the U.S. Border Patrol (USBP), Rio Grande Valley Sector. TI is a term used by USBP to describe the physical structures that facilitate enforcement activities; these items typically include, but are not limited to, patrol roads, vehicle and pedestrian fences, lights, gates, and boat ramps. TI to be constructed under SBI's Pedestrian Fence 225 (PF-225) Program within the Rio Grande Valley Sector consisted of pedestrian fence, with adjacent roads, in 21 distinct sections (designated as O-1 through O-21) neighboring the Rio Grande in Starr, Hidalgo, and Cameron Counties, Texas. The first three sections, O-1, O-2 and O-3, are located in Star County. Sections O-4 through O-10 are located in Hidalgo County. The remaining Sections O-11 through O-21, are located in Cameron County. Although the original Environmental Stewardship Plan (ESP) analyzed anticipated impacts from the construction of all sections in Starr, Hidalgo and Cameron Counties, Sections O-1 through O-3 and O-20 have not been constructed to date. Also, the remainder of the fence in Section O-19 at the Brownsville and Matamoros (B&M) Port of Entry (POE) has not been fully completed to date. In addition, a portion of O-21 designated as O-21a Southpoint Wall, was not under construction at the time of the post-construction survey was conducted due to the presence of an archeological site recently discovered. This caused construction to be suspended on October 29, 2010. Therefore, this Environmental Stewardship Summary Report (ESSR) compares anticipated impacts described and assessed by the original ESP (Environmental Stewardship Plan) to actual impacts after construction occurring in 17 sections.

A total of (b) (7)(E) of TI was originally planned for all 21 sections; however, approximately (b) (7)(E) have been constructed thus far. Construction of Sections O-1 through O-3, O-19, O-20 and O-21a could be completed in the future and will be analyzed at that time.

The purpose of this report is to provide a comprehensive summary of the installation of TI and assess the final design and footprint of the TI. This ESSR will compare the final completed action to the originally planned installation of TI, as proposed in the July 2008, *Final Environmental Stewardship Plan for the Construction, Operation, and Maintenance of Tactical Infrastructure U.S. Border Patrol Rio Grande Valley Sector, Texas.*

Environmental monitors contracted by CBP were present during all construction activities and documented adherence to Best Management Practices (BMPs). Any deviations from the BMPs and required corrections were noted weekly on a BMP tracking spreadsheet.

The most common BMP infractions in the Rio Grande Valley Sector included concrete wash outside of designated areas, food related trash improperly contained, dust control measures not in place when needed, lack of demarcation of work and parking areas, and driving outside of designated areas. Most BMP infractions did not require revegetation efforts because little to no native vegetation was removed during these events. No known impacts on Federally listed species were documented as a result of the infractions and there were no predicted or actual impacts on threatened or endangered species or their habitat in the Rio Grande Valley Sector.

After the completion of the ESP, changes were made 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 Headquarters, CBP, and documented in Change Request (CR) forms. This report also summarizes any significant modifications during construction that resulted in additional or reduced environmental impacts.

The ESSR was prepared to document the impacted area, as compared to the original ESP and the changes identified in the CR forms, for the following reasons.

1. Provide a comparison of the anticipated impacts to the actual impacts so that a final new baseline is established for future maintenance and repair and any potential future actions,
2. Document success of BMPs and any changes/improvements for the future, and
3. Document any changes to the planned location or type of the TI.

CBP consultants surveyed the Rio Grande Valley Sections O-4 through O-21 to inspect the final project corridor and infrastructure footprints. The survey was conducted to document any significant differences between the planned action and completed actions. When changes were noted, the CR forms were consulted to see if the changes were recorded and approved. Approximately 96 CRs were approved for the Rio Grande Valley Sector; however, only 21 of these had the potential to result in environmental impacts.

Post-construction surveys were not performed in Starr County (Sections O-1, O-2 and O-3) since the proposed TI has not been constructed to date. Therefore, the length of the fence was reduced as compared to the original length described in the ESP. Fence in Sections O-1, O-2 and O-3 was reduced in length from a planned (b) (7)(E), respectively, to 0 miles. A CR was submitted for this change to remove Section O-1, O-2 and O-3 from the baseline.

Post-construction surveys for fence sections in Hidalgo County, O-4 through O-10, were performed to determine the actual length of the fence compared to the original length described in the ESP. Section O-4 was reduced as compared to the original length described in the ESP, decreasing the fence length from a planned (b) (7)(E). Section O-5 fence was originally described in the ESP to be (b) (7)(E) in length. Post-construction surveys indicated that the length of the O-5 fence was slightly reduced to (b) (7)(E). The fence length for Section O-6 was originally described in the ESP to be (b) (7)(E) in length. Post-construction surveys indicated that the length of the fence increased to (b) (7)(E). Section O-7 fence length was documented to be the same length described in the ESP, (b) (7)(E). Section O-8 fence length was increased as compared to the original length described in the ESP, slightly increasing the fence length from a planned (b) (7)(E) in length to (b) (7)(E). Post-construction surveys performed on Sections O-9 and O-10 fences indicated the length was reduced to (b) (7)(E) and (b) (7)(E) as compared to the original proposed lengths of (b) (7)(E), respectfully.

Post-construction surveys for fence sections in Cameron County, Sections O-11 through O-21, were performed to determine the actual length of the fence compared to the original length described in the ESP. Section O-11 was documented to be the same length as the original length ((b) (7)(E)) described in the ESP. Section O-12 fence was increased to (b) (7)(E) compared to the original proposed length of (b) (7)(E). A CR was submitted for this change in the fence length of 217 feet. Section O-13 was reduced as compared to the original length described in the ESP, decreasing the fence length from a planned (b) (7)(E). Post-construction surveys indicated that the length of Section O-14 fence was decreased from (b) (7)(E) compared to the original length described in the ESP. Section O-15 fence length was originally proposed in the ESP to be (b) (7)(E) miles in length. However, a change request was issued one month before the release of the final ESP. Post-construction surveys concluded that the length of Section O-15 fence is (b) (7)(E). Section O-16 fence length was reduced to (b) (7)(E) prior to the release of the ESP, compared to the proposed length of (b) (7)(E) (b) (7)(E). Post-construction surveys concluded that the Section O-16 fence length is (b) (7)(E).

Section O-17 fence was reduced from (b) (7)(E) as compared to the original length described in the ESP. Section O-18 fence was slightly reduced to (b) (7)(E) as compared to the proposed (b) (7)(E). Comparable to fence Sections O-15 an O-16, fence Section O-19 underwent a CR after the release of the ESP. Section O-19 was decreased from (b) (7)(E) to (b) (7)(E). It should be noted that a portion of the O-19 fence from Hope Park to the B&M Bridge POE was not completed at the time the post-construction survey was performed. Fence Section O-20 was not constructed at the time the post-construction survey was performed. Therefore, there is not a post-construction fence length to compare to the described fence length of (b) (7)(E) that was stated in the ESP. Section O-21 fence was slightly reduced from (b) (7)(E). Section O-21a was not constructed at the time the post-construction survey was performed. At the time the ESP was written, O-21a was proposed to be a continuous section within Section O-21, but was simply referred to as the area within O-21 containing Old Brulay (Nye) Plantation buildings. At the time of the post-construction survey O-21a was under contract and clearing and grubbing activities had begun. However, recent discovery of archeological resources halted construction.

The modifications of fence lengths estimated in the ESP compared to the post-construction survey are summarized in Table ES-1. As can be seen from this table the total decrease in fence length was (b) (7)(E), primarily due to the absence of construction in the planned fence alignment.

Table ES-1. Summary of Fence Lengths by Section, O-1 through O-21 (Miles)

Fence Section	Post-Construction Survey Length (miles)	ESP Estimated Length (miles)	Difference (miles)
O-1	(b) (7)(E)		
O-2			
O-3			
O-4			
O-5			
O-6			
O-7			
O-8			
O-9			
O-10			
O-11			
O-12			
O-13			
O-14			
O-15			
O-16			
O-17			
O-18			
O-19			
O-20			
O-21			
Total Length			

*Section O-19 fence construction was not complete at the time of the post-construction survey; fence length may increase post- construction.

Within the proposed Sections O-1, O-2, O-3, O-20 and O-21a, TI was not constructed at the time of the post-construction survey. Therefore, there were no modifications to these segments or post-construction surveys performed.

Impacts were not specified in the ESP as temporary or permanent impacts for fence sections, access roads and staging areas. As described in the ESP, the overall permanent impacts for sections O-1, O-2, O-3, O-11 through O-21 was proposed to be 365 acres. For sections O-4 through O-10 permanent impacts were proposed to be 106.2 acres. Combined, the total acres of permanent impact for sections O-1 through O-21 was proposed to be 471.2 acres. As described in the ESP, the total impacts for sections O-1 through O-21 for access roads was proposed to be 448.6 acres and 127.6 acres for staging areas. In order to be clear when defining post-construction survey data, it should be noted that permanent impacts will include the construction corridor (including fence length) and access roads. Temporary impacts will include staging areas and any other area where specific impacts resulted in revegetation. Post-construction surveys determined that the total permanent impact for sections O-1 through O-21, including all access roads, was (b) (7)(E) acres. Post-construction surveys determined a decrease of 215.9 acres in permanent impacts as compared to the ESP. Post-construction surveys determined the temporary impacts per fence section, including staging areas to be (b) (7)(E) acres. This reflects an increase in temporary impacts of 80.4 acres as compared to the ESP.

Table ES-2. Summary of Permanent and Temporary Impact Areas by Section, O-1 through O-21 (Acres)

Fence Section	Permanent Impact Area (acres)	Temporary Impact Area (acres)
O-1	(b) (7)(E)	
O-2		
O-3		
O-4		
O-5		
O-6		
O-7		
O-8		
O-9		
O-10		
O-11		
O-12		
O-13		
O-14		
O-15		
O-16		
O-17		
O-18		
O-19		
O-20		
O-21		
Total Acres		

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SECTION 1.0
INTRODUCTION, OUTREACH, AND METHODS

1.0 INTRODUCTION, OUTREACH, AND METHODS

As part of an effort to document the installation of tactical infrastructure (TI) completed under the PF-225 Program, this Environmental Stewardship Summary Report (ESSR) presents a compilation of the construction actions. It compares the Planned Action proposed in the July 2008 *Final Environmental Stewardship Plan for the Construction, Operation, and Maintenance of Tactical Infrastructure U.S. Border Patrol Rio Grande Valley Sector, Texas* to the final results of the construction project. A Biological Resources Plan (BRP) to identify the presence of sensitive biological resources, particularly Federally protected species, and potential impacts to these resources was prepared. The BRP was provided to affected resource agencies and land managers for review. The BRP was appended to the Environmental Stewardship Plan (ESP). The original ESP was made available to the public on the United States (U.S.) Customs and Border Protection's (CBP) website, http://www.borderfenceplanning.com, which has subsequently been changed to http://cbp.gov/xp/cgov/border_security/ti/ti_docs/. Information in this ESSR was compiled from approved modifications made during construction, and through post-construction surveys of the project corridor. The original ESP analyzed anticipated impacts from the construction of Sections O-1 through O-21 (Figures 1-1 through 1-3). However, Sections O-1, O-2, O-3, O-20 and O-21a have not been constructed to date and Section O-19 is not fully complete. Therefore, this ESSR compares anticipated impacts described and assessed by the original ESP to actual impacts after construction occurring in 17 Sections, O-4 through O-19 and O-21.

Prior to installing the TI, CBP performed an environmental review of the fencing projects and published the results of this analysis in an ESP, including mitigation and Best Management Practices (BMPs) developed to minimize adverse effects to the environment. These ESPs were drafted for each TI segment under the waiver. Some ESPs addressed specific TI sections, while others, such as the ESP for the Rio Grande Valley Sector, addressed all of the PF-225 sections planned for the Rio Grande Valley Sector in a single document. Professional biologists and archaeologists conducted field surveys of all project corridors during the planning process prior to construction. The results of the surveys were provided to the affected resources agencies (e.g., U.S. Fish and Wildlife Service [USFWS], State Historic Preservation Office) for review and comment. Conservation measures and other BMPs identified in the ESP were made part of the Request for Proposal (RFP) issued to commercial construction contractors and were also incorporated into the contract upon award.

The ESSR was prepared to document the impacted area, as compared to the original ESP and the changes identified in the Change Request (CR) forms, for the following reasons.

1. Provide a comparison of the anticipated impacts to the actual impacts so that a final new baseline is established for future maintenance and repair and any potential future actions,
2. Document the success of BMPs and any changes/improvements for the future, and
3. Document any changes to the planned location or type of the TI.

1.1 PUBLIC AND AGENCY OUTREACH

Prior to the waiver, CBP prepared an Environmental Impact Statement (EIS) to address the potential effects of the Planned Action. A Notice of Availability (NOA) for the draft EIS was published in the *The Monitor, The Brownsville Herald*, and *The Valley Morning Star, La Frontera* and *El Nuevo Heraldo* on November 16 and 18, and December 5 and 11, 2007, announcing the release of the document for a 45-day public comment period. In addition, public open houses

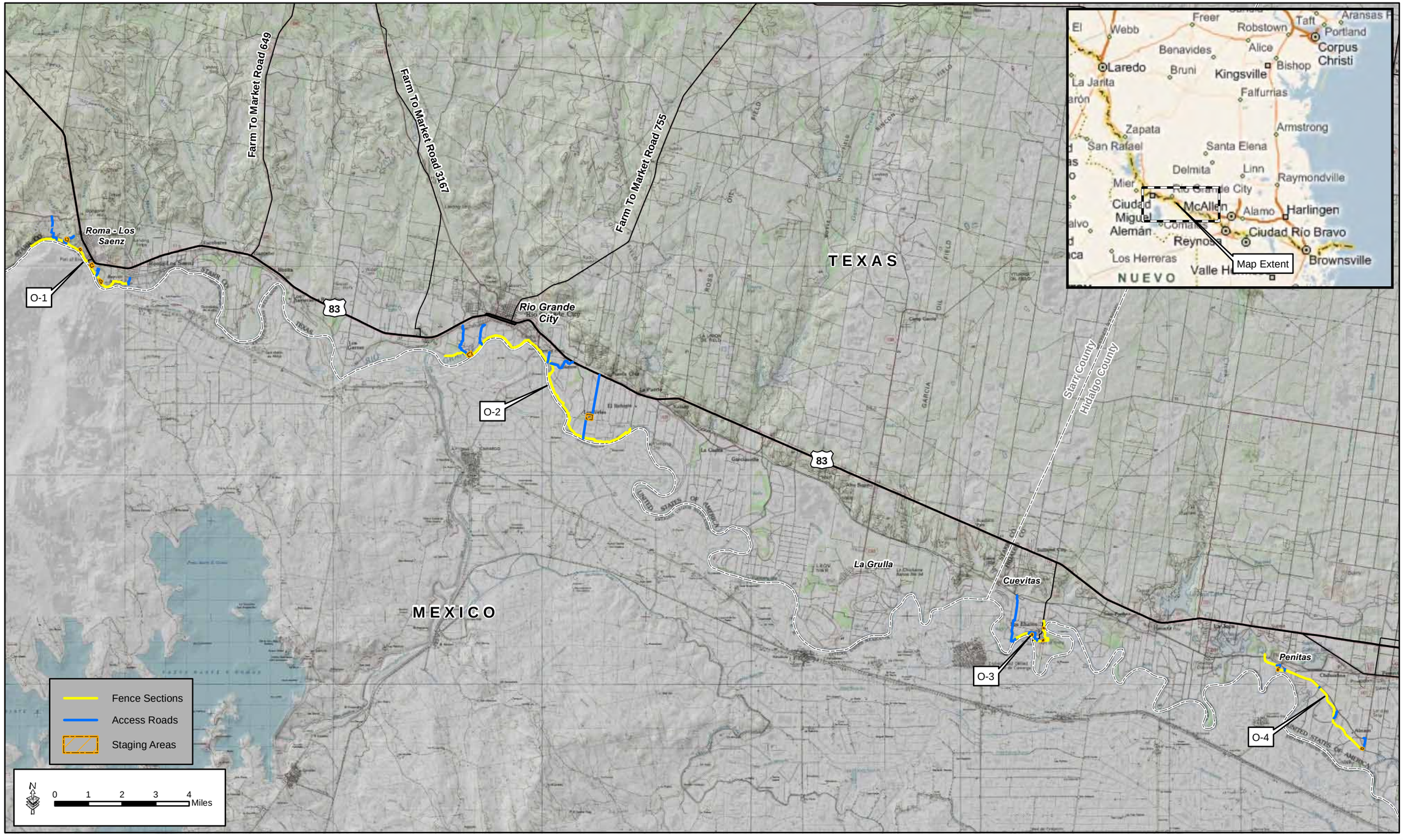

Figure 1-1: Locations of Tactical Infrastucture - Sections O-1 through O-4

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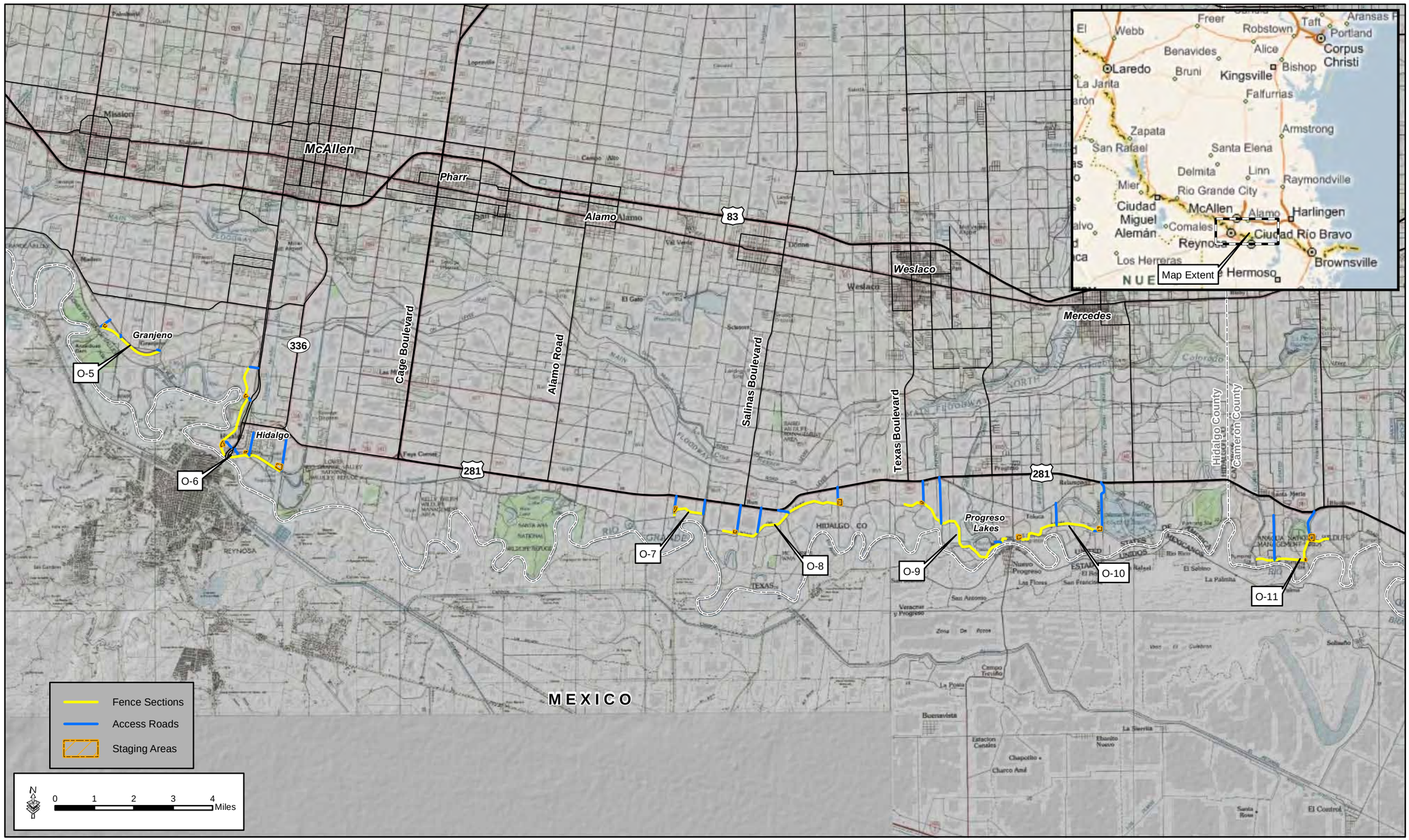


Figure 1-2: Locations of Tactical Infrastucture - Sections O-5 through O-10

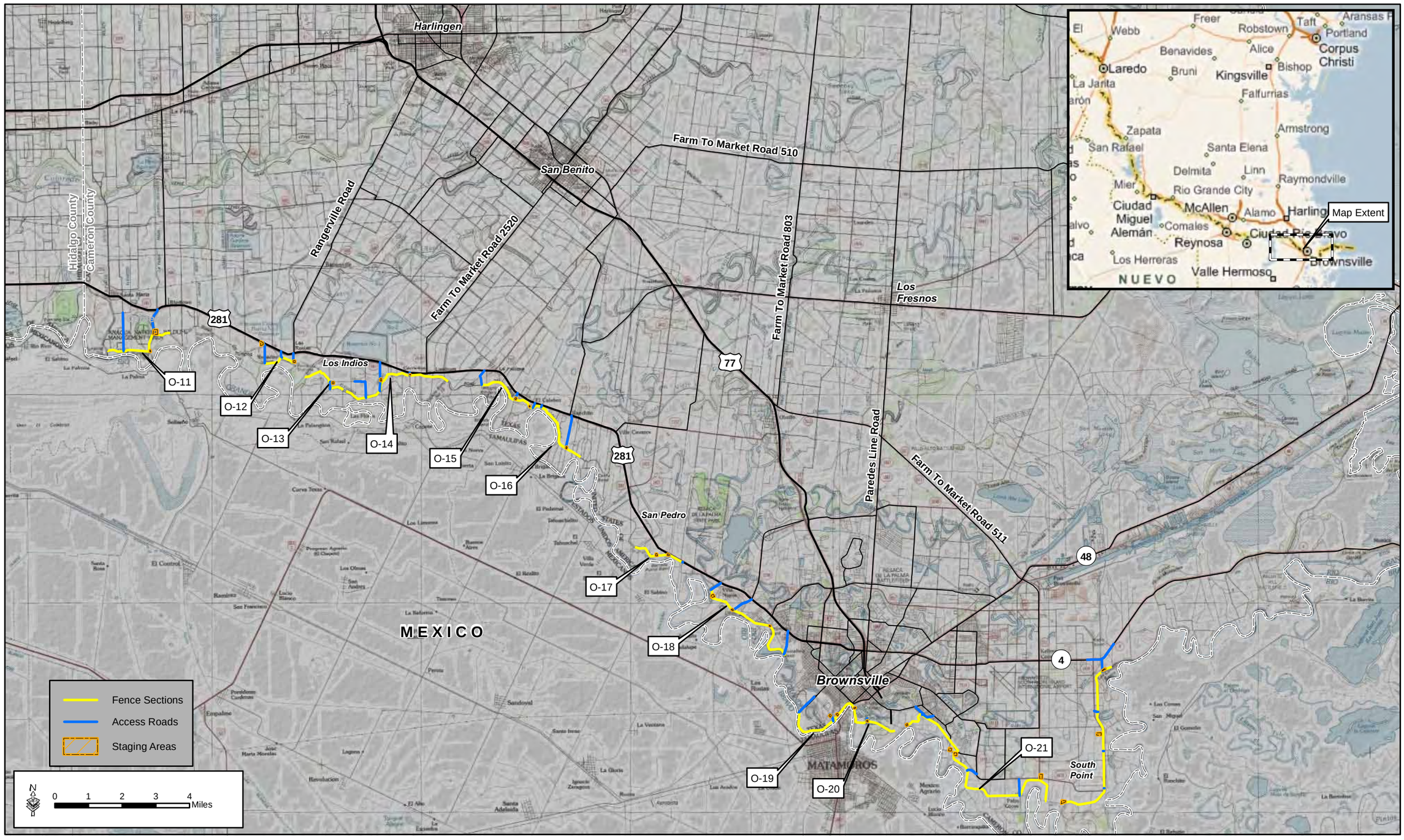


Figure 1-3: Locations of Tactical Infrastucture - Sections O-11 through O-21

were held at the McAllen Convention Center, the Brownsville Convention Center, and at VFW Post 8256 in Rio Grande City, Texas on December 11, 12, and 13, 2007, respectively.

After the Secretary of Homeland Security waived compliance with certain environmental laws and requirements in April 2008, CBP reviewed, considered and incorporated comments received from the public and other Federal, state, and local agencies, as appropriate, during the preparation of the ESP. CBP responses to public comments on the Draft EIS are available for viewing on the CBP web site http://www.cbp.gov/xp/cgov/border_security/ti/ti_docs/sector/rgv/rgv_eis/response/.

In addition to the past public involvement and outreach program, CBP has continued to coordinate with various Federal and state agencies during the construction. These agencies include but are not limited to those described in the following paragraphs.

U.S. Section, International Boundary and Water Commission (USIBWC) - CBP coordinated with USIBWC to ensure that any construction along the international border did not adversely affect International Boundary Monuments or substantially impede floodwater conveyance within international drainages.

U.S. Army Corps of Engineers (USACE), Galveston District - CBP coordinated all activities with USACE to identify potential jurisdictional waters of the U.S. (WUS), including wetlands, and to develop measures to avoid, minimize or compensate for losses to these resources.

USFWS - CBP has coordinated with USFWS to identify listed species that have the potential to occur in the project area and have cooperated with the USFWS to prepare a BRP that presents the analysis of potential effects to listed species and the BMPs proposed to reduce or off-set any adverse impacts.

1.2 METHODS

1.2.1 Environmental Monitoring Process

CBP provided an environmental monitor during construction activity. Duties of the designated environmental monitor included documenting impacts that occurred beyond those described in the ESP, advising onsite construction managers regarding implementation of the BMPs and other environmental issues as they arose, and ensuring implementation of the appropriate BMPs. Environmental monitors recorded observations daily. These observations were compiled weekly in BMP tracking spreadsheets which were submitted to CBP and the USACE. At the time the ESSR was prepared, a monitoring summary report was not compiled.

The designated environmental monitor was to notify the construction manager of any activities that could harm or harass a Federally listed species or any other environmental issue that was identified. Upon such notification, the construction manager was to temporarily suspend activities in the vicinity of the Federally listed species and notify the Contracting Officer, the Administrative Contracting Officer, and the Contracting Officer's Representative of the suspension so that the key USACE personnel could be notified and apprised of the situation for resolution. In addition, CBP notified USFWS Corpus Christi Field Office in the event that any Federally listed species were directly impacted during construction activities. CBP maintained open coordination with USFWS during construction to discuss implementation and effectiveness of BMPs to avoid adverse impacts to Federally listed species. In fact, CBP shared the BMP tacking spreadsheet with USFWS during construction activities.

1.2.2 Change Request (CR) Process

During construction, CBP identified potential modifications that, if implemented, would improve the effectiveness of the TI; reduce construction cost, schedule or environmental impacts; enhance long-term maintenance requirements; address stakeholder concerns; or reduce risk to U.S. Border Patrol (USBP) agents' health and safety. The proposed modification was submitted for review and headquarters CBP approval on a CR form. The CR form described the proposed change or modification, justification of the change, anticipated effects to construction costs and schedule, and any other extenuating circumstances that would help to clarify the change. Each proposed change was vetted throuhgout CBP to evaluate potential impacts prior to final headquarters CBP 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 fence and width of roads and project corridor. In addition, biological communities, wetlands and other environmental conditions in and adjacent to the project corridor were recorded during the surveys. Any other unusual conditions (e.g., fence failure, significant erosion, hazardous waste, construction debris) were also recorded when they were observed.

Prior to the field survey, CBP produced maps of the project corridor as described in the ESP. The ESP was reviewed 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. Approved CR forms were also produced and used in the field to document approved changes. A survey of the entire O-4 through O-21 project corridor was conducted and the center line, length and width of road alignments were recorded using a Trimble™ Global Positioning System (GPS). Periodic GPS coordinates were taken of the temporary and permanent construction footprint, especially when the corridor appeared to be expanded or reduced. The perimeter of staging areas was also recorded using GPS.

SECTION 2.0
DESCRIPTION OF THE PLANNED ACTION

2.0 DESCRIPTION OF THE PLANNED ACTION

The ESP addressed the construction, maintenance, and operation of a total of approximately 70.54 miles of TI in the USBP Rio Grande Valley Sector along the U.S./Mexico border in Starr, Hidalgo and Cameron counties in Texas, comprised of 21 different sections designated as Sections O-1 through O-21.

Descriptions of the planned fence sections have been referenced from the descriptions outlined in the ESP. Section O-1 was proposed to extend on either side of the Roma Port of Entry (POE) for a total length of approximately (b) (7)(E). Section O-2 was proposed near Rio Grande City POE at a total length of approximately (b) (7)(E). Section O-3 was proposed to be approximately (b) (7)(E) in length and near the Los Ebanos POE. Section O-4 was proposed to extend approximately (b) (7)(E) from Peñitas to Abram. Section O-5 was proposed to be approximately (b) (7)(E) near the future Anzaldaus POE. Section O-6 was proposed to be approximately (b) (7)(E) in length near the Hidalgo POE. Section O-7 was proposed to be (b) (7)(E) (b) (7)(E) near the proposed Donna POE. Section O-8 was proposed to be approximately (b) (7)(E) long and near the Retamal Dam. Section O-9 was proposed to be approximately (b) (7)(E) long west of the Progresso POE. Section O-10 was proposed to be approximately (b) (7)(E) in length and east of the Progresso POE. Section O-11 was proposed to be near Joe's Bar – Nemo Road and to be approximately (b) (7)(E) in length. Section O-12 was proposed to be approximately (b) (7)(E) in length and near Weaver's Mountain. Section O-13 was proposed to be (b) (7)(E) in length west of the Los Indios POE. Proposed as (b) (7)(E) in length and east of Los Indios POE is Section O-14. Section O-15 was proposed to be approximately (b) (7)(E) in length near Triangle - La Paloma. Section O-16 was proposed to be approximately (b) (7)(E) in length near Ho Chi Mihn - Estero. Section O-17 was proposed to be approximately (b) (7)(E) in length from Mulberry Lane to Riverbend Resort Water Tower ramp. Proposed at (b) (7)(E) in length, Section O-18 is near Fresnos Pump Road to PUB Fence Line (west). Section O-19 was proposed to be approximately 3.4 miles in length near Extension of Palm Boulevard to Fort Brown Gold Course (River Levee Drive). Section O-20 was proposed to be approximately (b) (7)(E) (b) (7)(E) in length from the Fort Brown Gold Course (River Levee Drive) to Veterans POE. The longest section, O-21, was proposed to be approximately (b) (7)(E) long from near Veterans International Bridge to Sea Shell Inn.

2.1 SECTIONS O-1 THROUGH O-3 AND O-11 THROUGH O-21

The analysis presented in the ESP anticipated that the O-1 through O-3 and O-11 through O-21 would consist of primary pedestrian fence and primary floating pedestrian fence along a specified route that decreased environmental impacts while meeting USBP operational needs.

Sections O-1 through O-3 primarily would follow a route along existing USBP patrol roads near the Rio Grande. As described in the ESP, during a flooding event, sections of the primary floating pedestrian fence in Sections O-1 through O-3 would be moved in order to allow conveyance of flood waters. Primary floating pedestrian fence would also be used in Sections O-14 and O-17. Sections O-11 through O-21 would be primary pedestrian fence and would follow the USIBWC levee system associated with the Rio Grande. In most cases, the alignment was to be placed approximately 30 feet from the north toe (protected side) of the levee. All primary pedestrian fence would include wildlife openings (8.5 by 11 inches) at ground level.

This design will allow the infrastructure to be located in an existing levee right-of-way (ROW) without disturbing current USIBWC operations or USBP patrol roads. Several locations along the levee ROW were expected to require the purchase of private land. Some fence sections were required to encroach on portions of the Lower Rio Grande Valley National Wildlife Refuge

and Texas Wildlife Management Areas in the Rio Grande Valley. Controlled access gates were to be installed to provide landowners, farmers, land managers, water and irrigation personnel, emergency services, and recreationists access to the area on the Rio Grande side of the TI.

As stated in the ESP, the TI for Sections O-1 through O-3 and O-11 through O-21 primary and floating pedestrian fence would impact an approximate 60-foot-wide corridor for fence and patrol roads. Whenever possible, existing roads and previously disturbed areas were to be used for construction access and staging areas. Fence maintenance will be either performed by USBP Rio Grande Valley Sector personnel or contracted personnel. Although the Planned Action described in the ESP included Sections O-1, O-2 and O-3, they were removed from the baseline via a CR. Thus, sections O-1, O-2 and O-3 are not discussed further in detail in this ESSR.

The ESP stated that the total area that was planned to be permanently impacted by the construction of O-4 through O-21 TI to be approximately 365 acres. Temporary impact acreage associated with staging areas were not discussed in the ESP; though, the proposed staging areas were included in the USACE's and U.S. Department of Homeland Security's (DHS) Facilities and Infrastructure Tracking Tool (FITT) data files. The planned staging areas for Sections O-1 through O-3 and O-11 through O-21, according to the FITT GIS data files, were to total 113.8 acres, as can be seen in Table 2-1.

Table 2-1. Summary of Staging Area Impacts by Section for the Pedestrian Fence, O-1 through O-3 and O-11 through O-21 (Acres)

Fence Section Staging Area	CBP's Estimate (acres)
O-1	15.9
O-2	23.9
O-3	2.7
O-11	12.1
O-12	7.0
O-13	2.0
O-14	2.2
O-15	2.1
O-16	1.1
O-17	3.6
O-18	5.8
O-19	5.1
O-20	0.8
O-21	29.5
Total Acres	**113.8**

The TI segment follows the USIBWC levee system of the Rio Grande for the majority of its length. Surface water features occurring within the impact corridors will be either directly or indirectly affected. Surface water features occurring adjacent to the impact corridors include the Santa Maria Canal (Section O-11), the Harlingen Canal (Section O-12), the San Benito Canal (Section O-13), the Los Fresnos pump canal (Section O-18) and the El Jaredin Canal (Section O-21).

As stated in the ESP, wetland ecology teams assessed wetlands and WUSs within a 150 foot-wide corridor for the length of the project corridor with the exception of Sections O-17, O-18, and O-19 where access was granted for a narrower, 60 foot-wide corridor survey. Additionally, construction staging areas were assessed for wetlands and WUSs in conjunction with the

corridor. In general, wetlands within the project corridor have become established in streams, arroyos, marshes and other wetlands and covers approximately 20.7 acres. A Section 404 permit application was filed indicating approximately 1.3 acres of wetlands would be impacted by the project (Table 2-2).

Table 2-2. Summary of Jurisdictional Wetlands within the Sections O-1 through O-3 and O-11 through O-21 (as stated in the ESP)

Wetland Type	Section	Size (acres)	Impacts (acres)
PSS/PEM	O-20	0.0	0
PEM/POW	O-17	0.5	0
PSS/PEM	O-17	2.7	0.21
PFO along ditch	O-11	3.3	1.0
POW/PFO/PEM	O-12	1.1	0
PSS/POW/PEM	O-13	0.8	0
PFO/PEM	O-13	0.1	0
PFO/PSS	O-13	0.2	0
PSS/PEM	O-13	0.1	0
PEM	O-13	0.1	0
PEM	O-13	0.4	0.1
PFO	O-18	0.0	0
PEM/PSS	O-18	0.2	0
POW/PEM	O-18	0.7	0
PFO/PEM	O-21	0.3	0
POW/PEM	O-21	1.8	0
PFO	O-20	0.4	0
Total		**12.7**	**1.3**

Notes: PEM=Palustrine Emergent; PSS=Palustrine Scrub-Shrub; POW=Palustrine Open Water; PFO= Palustrine Forested

2.2 SECTIONS O-4 THROUGH O-10

The analysis presented in the ESP anticipated that Sections O-4 through O-10 would consist of seven distinct sections of a concrete flood protection structure/concrete fence in Hidalgo County and would impact an approximate 40-foot-wide-corridor. This concrete flood protection structure/concrete fence would be constructed where the current USIBWC levee exists; the patrol roads and all construction activities were to be contained within the USIBWC ROW.

The concrete flood protection structure/concrete fence would range from 15 to 18 feet in height based on USIBWC requirements not to impact floodwaters in Mexico in accordance with the international treaty obligations. Also, a guard rail or bollard fence would be constructed on the top of the concrete flood protection structure/concrete fence to ensure the safety of drivers on the patrol road on top of the levee. Controlled access gates will be strategically located in the concrete fence to provide access to the area on the Rio Grande side of the TI by irrigation personnel, emergency services, recreationists and others requiring access. A patrol road was also planned to be included on the river side of and adjacent to the bottom of the concrete flood protection structure/concrete fence.

As stated in the ESP, the construction of the concrete flood protection structure/concrete fence would impact a corridor of approximately 24 to 40 feet wide on the river (flood) side of the levee. Approximately 24 feet of levee on the flood side of the levee was proposed to be removed. Approximately 16 additional feet within the USIBWC ROW will be temporarily impacted during construction. The ESP stated that the total area that would be permanently impacted would be approximately 106.2 acres. Temporary impact acreage associated with staging areas were not discussed in the ESP; though, the proposed staging areas were included in the USACE's and DHS's FITT data files. The planned staging areas for Sections O-4 through O-10, according to the FITT data files, were to total 52.8 acres, as can be seen in Table 2-3.

Table 2-3. Summary of Staging Area Impact by Section for the Concrete Flood Protection Structure/Concrete Fence, Sections O-4 through O-10 (Acres)

Fence Section Staging Area	CBP's Estimate (acres)
O-4	4.3
O-5	2.1
O-6	20.0
O-7	3.4
O-8	10.1
O-9	1.9
O-10	11.0
Total	**52.8**

The TI segment follows the USIBWC levee system of the Rio Grande for the majority of its length. Surface waters that will be affected either directly or indirectly include the Rio Grande (Section O-6), an irrigation canal (Section O-5), the Donna Canal (Section O-7), and the settling basin and Moon Lake (Section O-9). As stated in the ESP, wetland ecology teams assessed wetlands and WUSs within a 150 foot-wide corridor for the length of the project corridor. Additionally, construction staging areas were assessed for wetlands and WUSs in conjunction with the corridor. In general, wetlands within the project corridor have become established in ditches, marshes and other wetlands and covers approximately 3.5 acres. A Section 404 permit application was filed indicating approximately 0.2 acres of wetlands will be impacted by the project (Table 2-4).

Table 2-4. Summary of Jurisdictional Wetlands within the Sections O-4 through O-10 (as stated in the ESP)

Wetland Type	Section	Size (acres)	Impacts (acres)
PEM/PSS	O-10	0.4	0.0
PEM	O-9	2.6	0.2
PEM/ditch	O-8	0.1	0.0
PEM /POW	O-5	0.4	0
Total		**3.5**	**0.2**

Notes: PEM=Palustrine Emergent; PSS=Palustrine Scrub-Shrub; POW=Palustrine Open Water

2.3 MONITORING

Throughout the course of construction, unexpected field conditions required practical changes to the Planned Action during construction. In these situations, CBP conducted the appropriate field surveys to document the potential environmental impacts that may occur as a result of these changes. CBP further coordinated with USFWS to develop BMPs specific to the construction activities and applied them accordingly.

The most common BMP infractions in the Rio Grande Valley Sector included concrete wash outside of designated areas, food related trash improperly contained, dust control measures not in place when needed, lack of demarcation of work and parking areas, and driving outside of designated areas. Most BMP infractions did not require revegetation efforts because little to no native vegetation was removed during these events. No known impacts on Federally listed species were documented as a result of the infractions and there were no predicted or actual impacts on threatened or endangered species or their habitat in the Rio Grande Valley Sector.

2.4 CHANGE REQUEST FORMS

Approximately 96 CR forms were approved for the Rio Grande Valley Sector at the time the post-construction survey was performed. However, approximately 21 of these had the potential to affect the construction footprint and, thus, result in changes in environmental impacts. Table 2-5 summarizes the project modifications for Sections O-4 through O-21 determined to have the potential to result in a change to the environmental effects discussed in the project ESPs. Change requests for segments not constructed at the time of the post-construction survey that had the potential to result in environmental impacts were not summarized in the table below.

Table 2-5. Summary of Approved CRs with Potential to Affect the Environment

Approval Date	Section	Summary Description	Potential Environmental Impact
10 March 08	O-12	Move location of fence off the IBWC levee onto canal access road owned by Cameron County Irrigation District #3. Use of P-2 fence placed 20 feet from the west bank of the Feria Canal with a maintenance road placed between the canal and fence. Delete proposed staging area #1, request addition of a staging area.	This would keep the fence away from the brush/tree line west of canal which would reduce impacts to wildlife and still afford the Irrigation District the ability to mow and dredge canal. Use of P-2 fence would permit the use of cat holes.
3 February 09	O-12	Lower the Harlingen irrigation canal levee and slope by one to two feet.	Decrease erosion on the banks of the canal.
3 April 09	O-12	Reduce fence length by 217 feet.	Decrease overall permanent impact corridor for this section.
27 January 2009	O-17	Culvert the Russell Canal and modify the fence type for this section	Reduce or eliminate seepage from the canal, avoid potential issues with fence foundation.
17 November 2009	O-17	Construct a 40-foot wide by 150-foot long earthen ramp with erosion protection for access to agricultural lands south of the Border fence and IBWC levee.	Loss of habitat outside of impact corridor; however, would prevent land lock to farm lands South of levee.

Table 2-5, continued

Approval Date	Section	Summary Description	Potential Environmental Impact
13 November 08	O-17	Include a concrete headwall and erosion protection at discharge end of Russell Canal.	Diminish potential for erosion by reducing energy dissipation.
24 March 2009	O-17	Relocate wooden power and light poles to northern limit of fence corridor.	Increase overall impact area for this section.
19 March 2009	O-18/O-19	Relocate wooden power and light poles to northern limit of fence corridor.	Increase overall impact area for this section.
5 October 2009	O-18	Extend an existing irrigation pipe to allow water to flow from an existing IBWC headwall to the irrigation pond north of the fence and construct a 200-foot earthen berm to contain the water within the irrigation pond and prevent flooding of the fence footprint.	Stabilize irrigation pond, increase or stabilize biological production.
17 November 2009	O-18	Construct a 35-foot wide by 20-foot long concrete low water crossing.	Decrease erosion and scouring of soils along fence foundation.
3 February 2010	O-18	Stabilize the slope along the Cordova gravel pit and construct a stable roadway with drainage ditch and caliche base to provide continuous access to border patrol and private citizens alongside the north side of the fence.	Stabilize soils on slope of pit, decrease erosion of soils and ponding of water.
12 November 2010	O-18	Clear and grub six areas within the project corridor that were not previously cleared during fence construction.	Increased area of new disturbance.
23 July 2009	O-18	Realign approximately 3,750 feet of the fence approximately 100 feet north of the originally proposed alignment within the USFWS Phillip Banco Refuge to avoid safety concerns with the existing transmission towers and overhead lines.	Removal of an additional 6 acres of refuge land.
29 July 2009	O-19	Relocate wooden power and light poles along the Art League section of Section 0-19.	Increase overall impact area for this section.
30 June 2009	O-19	Replace dog kennel and security fence, transplant trees, and construct drainage swale.	Impact fruit bearing trees; avoid impacts to fence due to water drainage.
21 April 2008	O-21	Move 2 miles of floating fence off the IBWC levee road to the North toe of the levee from the Impala Pump Facility to Monsees Road.	Increase overall impact area for this section of fence.
21 April 2009	O-21	Save approximately 300 mature sabal palms within the project corridor and transplant onto USFWS refuge lands.	Preservation of native habitat.
24 September 2009	O-21	Relocated utility power poles along 0.42 miles of the fence alignment.	Increase overall impact area for this section of fence.
18 July 2008	O-21	Due to survey and design information, project mileage has been redefined.	Increase overall permanent impact area for this section.
25 May 2010	O-21	Add a concrete mow strip along both sides of the fence barrier along the earthen ramp/embankment that leads up to the crown of the IBWC levee at the Impala Pump Station.	Eliminate erosion caused by drainage flows.
25 June 2008	O-11, O-1, O-16, O-17, O-19 and O-21	Due to survey and design information, mileage for fence sections has been redefined.	Increase or decrease of overall permanent project impacts.

2.5 IMPACT QUANTITIES ANTICIPATED IN THE ESP

Table 2-6 identifies the pertinent resources that were anticipated to be impacted, as described in the ESP. This table is not all inclusive, as post-construction quantities for some resource impacts (e.g., air, noise, socioeconomic) could not be measured.

Table 2-6. Anticipated Resources to be Impacted in Sections O-4 through O-21

Resource	Impacts*			
	Permanent	Temporary	Total	Comment
Soils	85	508	593	Short-term minor direct adverse impacts due to grading, contouring, and will impact approximately 508 acres. Permanent soil disturbance due to grading, contouring, and trenching will impact approximately 85 acres. Long-term minor direct adverse impacts on prime farmland soils in Hidalgo and Cameron counties will occur as a result of construction activities. No soils associated with farmland of local, unique, or statewide importance are identified for Starr, Hidalgo, and Cameron counties.
Vegetation	62	310	372	Short- and long-term adverse impacts on vegetation will range from negligible to major due to habitat loss and modification. Minor beneficial effects on floristic composition at the local level will result from the removal of plant species listed by the State of Texas as noxious or invasive nonnatives. ESP states a total of 376 acres of vegetation will be impacted. However, calculations made with data given in the ESP differ than what is described in the document.
Cultural Resources	0 sites	3 sites	3 sites (eligible)	Moderate to major long-term adverse impacts on cultural resources.
Wetlands and WUS	2.8	0	2.8	Construction erosion and sediment runoff, potential oil spills and leaks. Removal of wetland vegetation and fill of waters of the United States, including wetlands, and temporary degradation of water quality.

* Unless otherwise noted, all quantifications are in acres.

** Table 2-6 identifies the pertinent resources that were anticipated to be impacted, as described in the ESP. This table is not all inclusive, as post-construction quantities for some resource impacts (e.g., air, noise, socioeconomic) could not be measured.

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 the pertinent resources, based on these post-construction surveys, is presented at the end of this section. Appendix A contains maps of the various sections and illustrates the location and extent of the impacts.

3.1 RESULTS OF ROAD MEASUREMENTS

3.1.1 Access Roads

The impacts associated with access roads were not discussed in detail in the ESP. The access roads for Sections O-1 through O-3, and O-20 were not analyzed during the post-construction survey due to the absence of construction. Therefore, no impacts were associated with access roads for these four sections. Section O-4 contained three proposed access roads in the ESP. However, four access roads were utilized during construction. Section O-5 also had three access roads proposed in the ESP, and all three proposed roads were utilized during construction. Section O-6 had a total of seven access roads proposed, but only three access roads were utilized during construction. Section O-7 had three access roads proposed, and three roads were used during construction. Two primary roads were used to access the eastern and western end of the impact corridor. As construction progressed over the canal on the eastern end, a third access road was opened to access both sides of the canal. Section O-8 had four access roads proposed in the ESP, and all four roads proposed were utilized during construction. Section O-9 had three access roads proposed; however, five access roads were used during construction. Section O-10 had two access roads proposed, and two were utilized during construction. Section O-11 had two access roads proposed and both were utilized during construction. Section O-12 had two access roads proposed in the ESP. However, four access roads were equally utilized during construction. During the canal bridge construction in Section O-12, the fourth access road was used to mobilize equipment and supplies to the impact corridor. The access road on the eastern end of Section O-12 was fully paved. One access road was proposed for use in Section O-13 in the ESP. However, three access roads were utilized during construction; one east of the Free Trade International Bridge and two west of the bridge. Section O-14 had four access roads proposed in the ESP, although just two were primarily utilized during construction. Three access roads were proposed for Section O-15 in the ESP. However, four access roads were used in this section during construction. Section O-16 had three access roads proposed in the ESP, two of which were also shared by Section O-15. However, two primary access roads were used to access Section O-16, both located near the eastern end of the tactical infrastructure. The most eastern access road for this section was not included in the proposed access roads in the ESP. Section O-17 had two proposed access roads in the ESP. However, a total of three access roads were used during construction. The middle access road was eliminated upon the closure of a gap in the border fence. The additional access road was the most western access road and was utilized via permission of a private land owner. Four access roads were proposed for Section O-18 in the ESP. A total of three access roads were used during construction. The eastern most proposed access road was not utilized. In addition, one to two small access roads near residential areas were used during construction, but not favored. Access between Sections O-18 from O-19 was done via the levee road and therefore was documented as an access road during the post-construction survey. Section O-19 had four access roads proposed in the ESP. However, up to five access roads were used during construction particularly in areas were the TI was not accessible via the levee road between the Brownsville and Matamoros International Bridge and the Gateway Bridge, such as roads used by citizens to enter the municipal park in Brownsville, Alice Wilson Hope Park. One access road was proposed in the ESP for Section O-20. At the time of the

post-construction survey, Section O-20 was not built. Therefore, no post-construction data regarding access roads was recorded for Section O-20. Section O-21 had 14 proposed access roads in the ESP. However, approximately 17 access roads were used during varying times of construction. Approximately nine of these access roads are named roads accessible to local citizens living in the area.

Table 3-1. Summary of Access Roads by Section, O-4 through O-21

Fence Section	Access Roads Proposed (numbers)	Access Road Used (numbers)	Difference (numbers)
O-4	3	4	1
O-5	3	3	1
O-6	7	3	-4
O-7	3	3	0
O-8	4	4	0
O-9	3	5	2
O-10	2	2	0
O-11	2	2	0
O-12	2	4	2
O-13	1	3	2
O-14	4	2	-2
O-15	3	4	1
O-16	3	2	-1
O-17	2	3	1
O-18	4	3	-1
O-19	4	5	1
O-20	1	0	-1
O-21	14	17	-3
Total	**65**	**68**	**-3**

Unless otherwise noted, all proposed or utilized access roads were pre-existing prior to construction of the tactical infrastructure.

3.1.2 Maintenance and Other Roads

During post-construction surveys, the fence and adjacent maintenance/other road footprint for Sections O-11 through O-21 was noted as sitting on top of the USIBWC levee and was not considered to be a part of the 60-foot-wide footprint that was described in the ESP. These roads were utilized during construction to mobilize supplies and equipment and to monitor construction activity. It was noted during the post-construction survey that Sections O-4 through O-10 also contained a fence and adjacent maintenance/other road footprint on top of the USIBWC levee. This levee road was considered to be a part of the footprint described in the ESP and was used during construction to mobilize supplies and equipment and to monitor construction. The ESP reported approximately 471.2 acres of permanent impacts would occur; however, post-construction surveys revealed that only 255.5 acres were permanently impacted. Although only 255.5 acres were permanently impacted, an additional 208.7 acres were temporarily impacted.

3.2 FENCE

The analysis in the ESP anticipated that five fence types would be constructed for the USBP Rio Grande Valley Sector. These five fence types include two styles of primary pedestrian fence, floating primary pedestrian fence, concrete retaining wall and concrete flood protection structure/concrete fence. The two styles of primary pedestrian fence consist of steel bollards or bollards anchored into concrete footings. Floating primary pedestrian fence consist of

prefabricated floating fence panels placed on the levee or within the impact corridor (Photograph 3-1). The floating fence design includes concrete barriers with bollards anchored on top. Concrete retaining walls consist of prefabricated concrete wall panels sheet-piled into the existing embankment. The concrete flood protection structure/concrete fence consists of concrete retaining wall built on the south side of the levee and includes a road within the current footprint on the levee ROW (Photograph 3-2). Wildlife openings could not be placed into floating fence, concrete retaining walls or concrete flood protection structures/concrete fence. The post-construction survey confirmed the installation of all five fence types.

Photograph 3-1. Concrete Flood Protection Structure/Concrete Fence Design in Hidalgo County

Photograph 3-2. Primary Pedestrian Fence Design in Cameron County

The total length of fence was stated as (b) (7)(E) in the ESP. The post-construction survey recorded the fence to be (b) (7)(E) long; however, approved CRs for the exclusion of Sections O-1 through O-3 from the baseline construction and the incomplete construction of Sections O-19 and O-20 attributes to the reduction of fence.

3.3 STAGING AREAS

Although the ESP did not indicate location of the planned staging areas, they were obtained from the USACE's and DHS's FITT data files. The post-construction survey revealed that staging area locations or acreage differed from what was proposed in the ESP for almost all sections. Also, supplementary staging areas were documented during the post-construction survey that differed from proposed staging areas in the FITT data files (Photographs 3-3 and 3-4). The FITT data files indicated that temporary impacts associated with staging areas would be 113.8 acres for Sections O-1 through O-3 and O-11 through O-21 and 52.8 acres for Sections O-4 through O-10. The post-construction survey concluded that total temporary impacts for staging areas for Sections O-11 through O-21 were 38.8 acres and for Sections O-4 through O-10 was 18.0 acres. This is a net reduction of 109.7 acres fromt was originally proposed (Table 3-2).

Photograph 3-3. Eastern Staging Area in Section O-21

Photograph 3-4. Western Staging Area in Section O-14

Table 3-2. Summary of Staging Area Impacts by Section, O-4 through O-21 (Acres)

Fence Section	Post Construction Survey (acres)	CBP's Estimate (acres)	Difference (acres)
O-1	0.0	15.9	-15.9
O-2	0.0	23.9	-23.9
O-3	0.0	2.7	-2.7
O-4	10.9	4.3	6.6
O-5	0.0	2.1	-2.1
O-6	4.1	20.0	-16.0
O-7	0.0	3.4	-3.4
O-8	3.0	10.1	-7.1
O-9	0.0	1.9	-1.9
O-10	0.0	11.0	-11.0
O-11	3.2	12.1	-8.9
O-12	0.5	6.9	-6.4
O-13	1.8	2.0	-0.2
O-14	16.0	2.2	13.8
O-15	0.0	2.1	-2.1
O-16	0.0	1.1	-1.1
O-17	2.8	3.6	-0.8
O-18	2.7	5.8	-3.1
O-19	0.8	5.1	-4.6
O-20	0.0	0.8	-0.8
O-21	11.0	29.5	-18.5
Total	**56.8**	**166.5**	**-109.7**

Source: GSRC 2010

3.4 WILDLIFE CROSSINGS

Wildlife crossings were briefly discussed in the ESP. As good stewards of the environment, CBP proposed to install 438 wildlife crossings at ground level within the primary pedestrian fence in sections O-1 through O-3 and O-11 through O-21. These 8.5 by 11 inch wildlife openings were to be installed to encourage the passage of wildlife, particularly the ocelot (*Leopardus pardalis*) and jaguarondi (*Puma yagovaroundi*), through the fence to access sustainable habitat (Photographs 3-5 and 3-6). Wildlife crossings were not incorporated in Sections O-4, O-5, O-6, O-7, and O-14 due to the fence design that contained concrete barriers as bases. Crossings were not available to document in Section O-20 at the time of the post-

construction survey due to the absence of current construction of the fence. As can be seen in Table 3-3, post-construction surveys performed by CBP environmental contractor determined that a total of 352 wildlife crossings were incorporated in the as-built fence. This is a net reduction of 86 crossings compared to what was proposed in the ESP.

Photograph 3-5. Wildlife Crossing in Section O-12 at UTM 0623572_2881869

Photograph 3-6. Wildlife Crossing in Section O-19 at UTM 0648032_2864946

Table 3-3. Summary of Wildlife Crossings within the Sections O-1 through O-3 and O-11 through O-21

Fence Section	Post-Construction Survey Count* (crossings)	Pre-Construction Proposed Count (crossings)	Difference (crossings)
O-1**	0	20	-20
O-2**	0	34	-34
O-3**	0	21	-21
O-4	0	0	0
O-5	0	0	0
O-6	0	0	0
O-7	0	0	0
O-8	12	0	+12
O-9	8	0	+8
O-10	12	0	+12
O-11	25	35	-10
O-12	37	35	+2
O-13	45	35	+10
O-14[a]	0	13	-13
O-15	36	37	-1
O-16	19	19	0
O-17	19	27	-8
O-18	28	28	0
O-19**	22	21	+1
O-20**	0	11	-11
O-21	89	102	-13
Total Crossings	352	438	-86

* Data provided by HDR/e2m

** Fence not built or complete at time of post-construction survey. Therefore, post-construction survey count may be inaccurate.

[a] This fence section will not contain wildlife crossings due to the primary floating pedestrian fence design.

3.5 SABAL PALM RELOCATION

The Texas sabal palm (*Sabal texana*) is a unique tree native to the Rio Grande Valley. Approximately 300 mature sabal palm trees within the project corridor in Section O-21 were slated to be bulldozed during the clearing and grubbing operations for construction of the fence. As good stewards of the environment, CBP proposed that these unique trees be saved by transplanting them to local refuge lands prior to commencing clearing and grubbing operations for construction of the fence. A CR was issued in April 2009 for the action to relocate the sabal palms in Section O-21. As discussed in the ESP, potential impacts due to the removal of Texas sabal palms could be reduced by avoidance or could be minimized by transplanting individuals in areas selected by USFWS, Texas Parks and Wildlife Department or other resource agencies. However, avoidance of all Texas sabal palm trees within the impact corridor was not feasible. CBP, construction contractor worked in conjunction with USFWS, CBP and local contractors to relocate and transplant 237 sabal palm trees from Section O-21 to nearby USFWS refuge lands. Survival of the relocated sabal palm trees was not documented in the post-construction survey (Photographs 3-7 and 3-8).

Photograph 3-7. Preparation of Sabal Palm Removal

Photograph 3-8. Relocation of Sabal Palm to USFWS Refuge Lands

3.6 MEASURED IMPACT QUANTITIES

3.6.1 Soils

The analysis in the ESP anticipated that the Planned Action would permanently remove 85 acres of soils from biological production. An additional 508 acres of soils would be temporarily impacted as a result of being scraped and bladed using bulldozers or graders to level the area and accommodate material staging, corridor construction and levee improvement. A combined total of 593 acres of soil was proposed to be impacted. Results of the post-construction field survey confirmed that the project corridor was reduced in length by (b) (7)(E). Most of these changes were authorized in various CRs described previously. However, the permanent impacts to soils increased by 170.3 acres from what was reported in the ESP. The temporary impacted acreage decreased by 300.0 acres.

3.6.2 Vegetation

The TI was expected to impact an approximate 60-foot-wide corridor for O-11 through O-21 and a 40-foot-wide corridor for Sections O-4 through O-21 for fences and other roads totaling 372 acres of vegetation. Vegetation within the corridor was to be cleared and graded where needed. However, based on post-construction surveys, the area that was permanently impacted by the construction of TI totaled 255.31 acres. The temporary impacts decreased from the estimated 310 acres to 208.04 acres. Some of the project area was being naturally

revegetated or was showing signs of established revegetation from hydroseed application during the time of post-construction surveys. It was also noted during the post-construction survey that hydroseed application was not successfully established in a few canals on the north side of the TI in Section O-21 and on either sides of the bridge in Section O-12. It should also be noted that an USIBWC levee improvement project occurred during the construction of the TI. Vegetation was removed, levee slopes were improved and the area was revegetated. Although these areas were being temporary impacted during the same time of the TI construction, and in most instances by the same contractor, these areas were not documented as temporary impacts during the post-construction survey.

3.6.3 Cultural Resources

The TI was expected to impact three eligible cultural resources sites. However, construction of the TI occurred in only one of these three sites, Section O-13. At the time the post-construction survey was performed, Section O-21a (Old Brulay Plantation) was experiencing clearing and grubbing activity in preparation of TI construction. Crews were placed on standby 29 October 2010 due to inadvertent archeological finds. The project was to be awarded 22 December 2010 for archeological testing to determine limits and significance of the site.

3.6.4 Wetlands and WUS

Results of the post-construction surveys confirmed that the TI construction did not increase the footprint within jurisdictional wetland areas beyond what was originally planned. No other additional wetlands or WUS were identified where the project corridor was modified, such as the staging areas. Erosion and sediment control and storm water management practices during and after construction were implemented in accordance with the Storm Water Pollution Prevention Plan for the project.

SECTION 4.0
DISCUSSION

4.0 DISCUSSION

4.1 DECREASED PROJECT FOOTPRINT

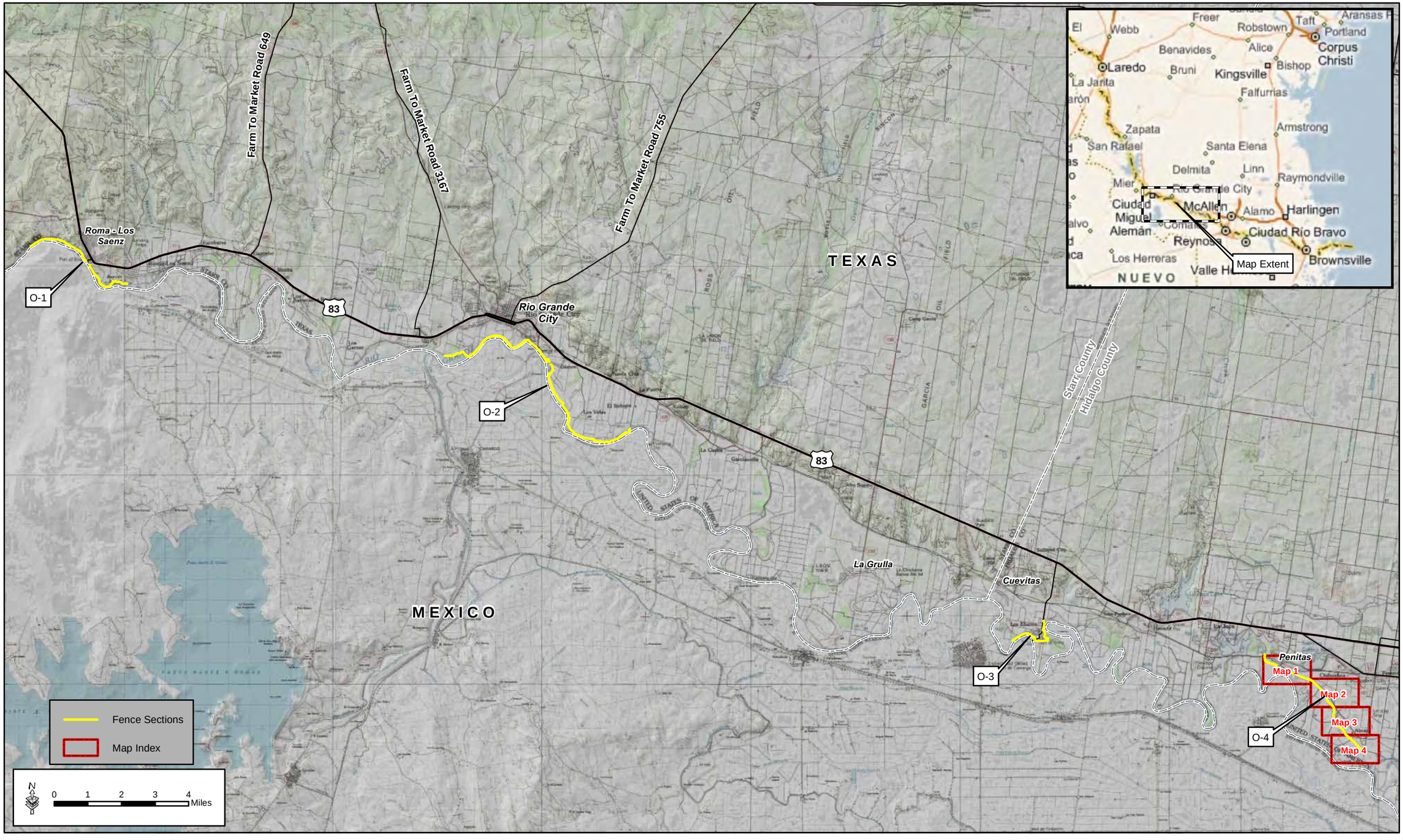
The temporary impacts to soils and vegetation decreased in acreage, from the original estimation. The decrease was due to the decrease in size of the staging areas as well as the temporary footprint for constructing the fence. The proposed staging areas described in the FITT data files indicated staging areas totaling approximately 166.35 acres. The post-construction survey determined that the total acreage used for staging areas was 57.66. No temporary impacts were attributed to the fence in the ESP; however, 151.38 acres of temporary impacts (excluding staging areas) attributable to fence construction were recorded during post-construction surveys.

The ESP stated that the total fence would be approximately (b) (7)(E) long; however, post-construction surveys recorded a total fence length of (b) (7)(E). This decrease in fence length can be attributed to the exclusion of fence Sections O-1, O-2, O-3 and O-20 and the incomplete construction of O-19. The permanently impacted area as presented in the ESP was reduced from 471.20 acres to 255.31, based on the post-construction surveys. This decrease in acreage can probably be attributed to the construction crew minimizing permanent impacts to the greatest extent possible, which is in accordance with the project BMPs.

4.2 ADDITIONAL ISSUES THAT NEED TO BE RESOLVED

One issue was identified during the post-construction survey that will require some consideration. Drainage within the ephemeral washes that cross the project corridor will need to be addressed as the water can back up within the roadbed and create impassable water depths along the fence corridor.

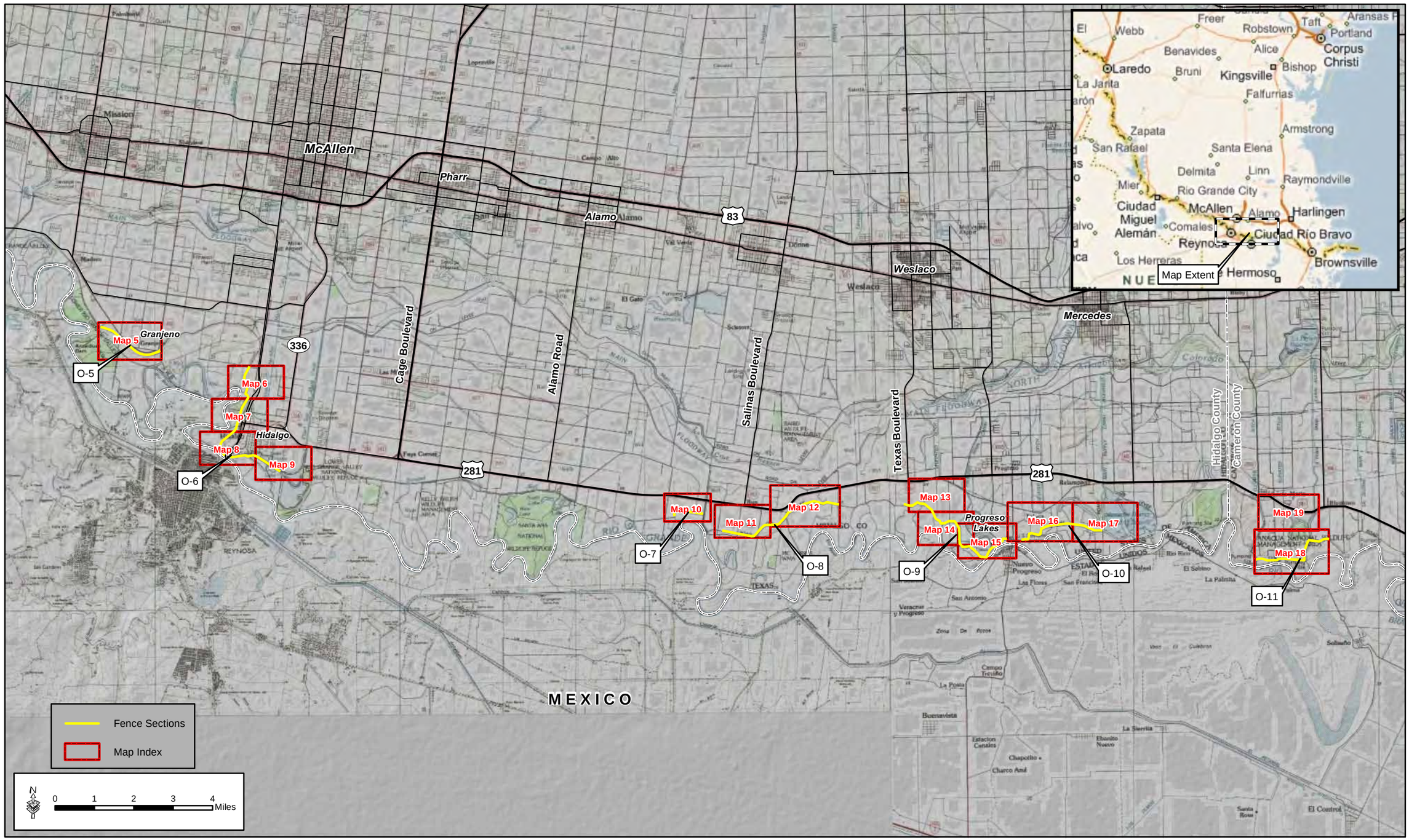
APPENDIX A
FIGURES



Locations of Tactical Infrastucture Index Map - Sections O-1 through O-4

GSRC

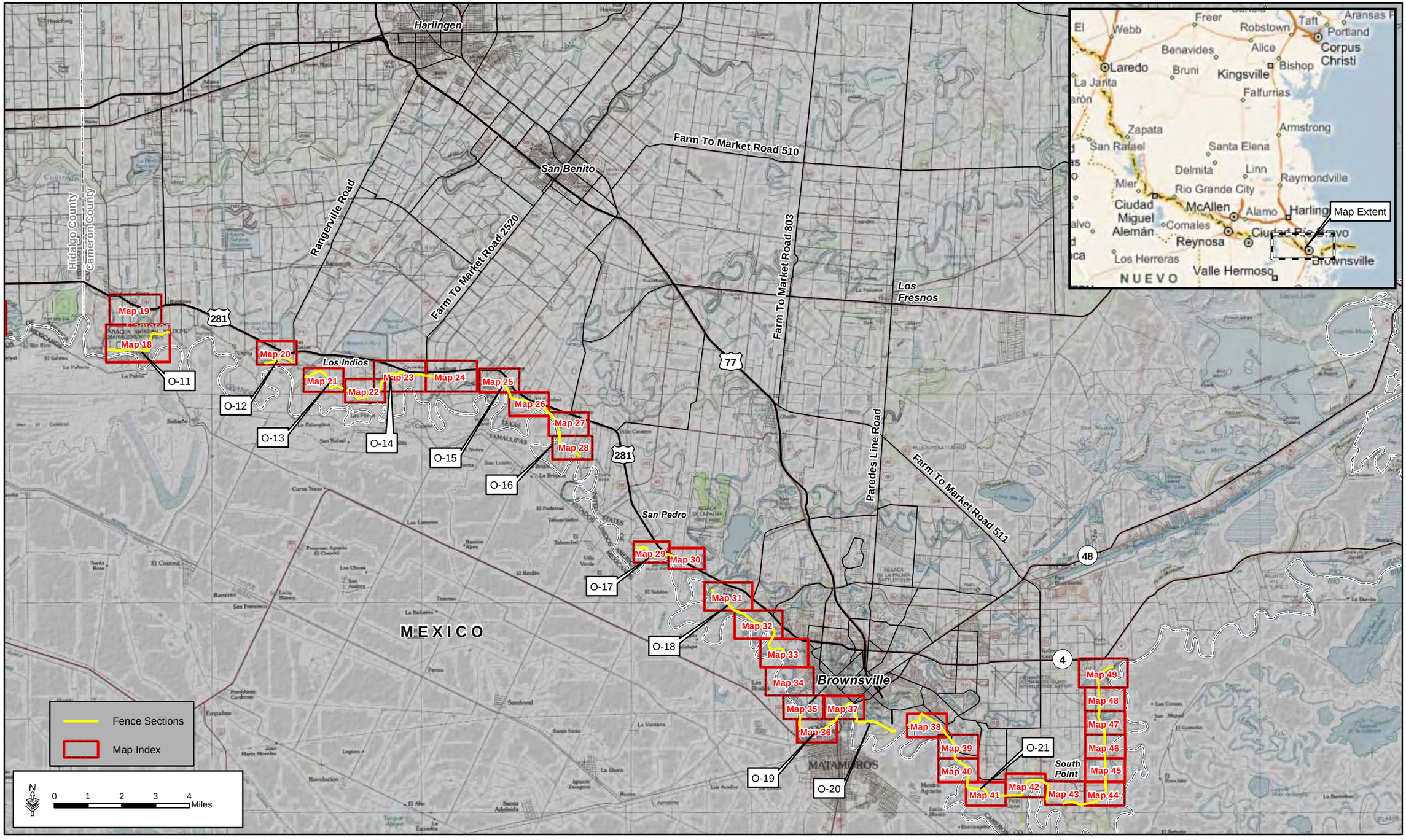
January 2011



Locations of Tactical Infrastucture Index Map - Sections O-5 through O-10

GSRC

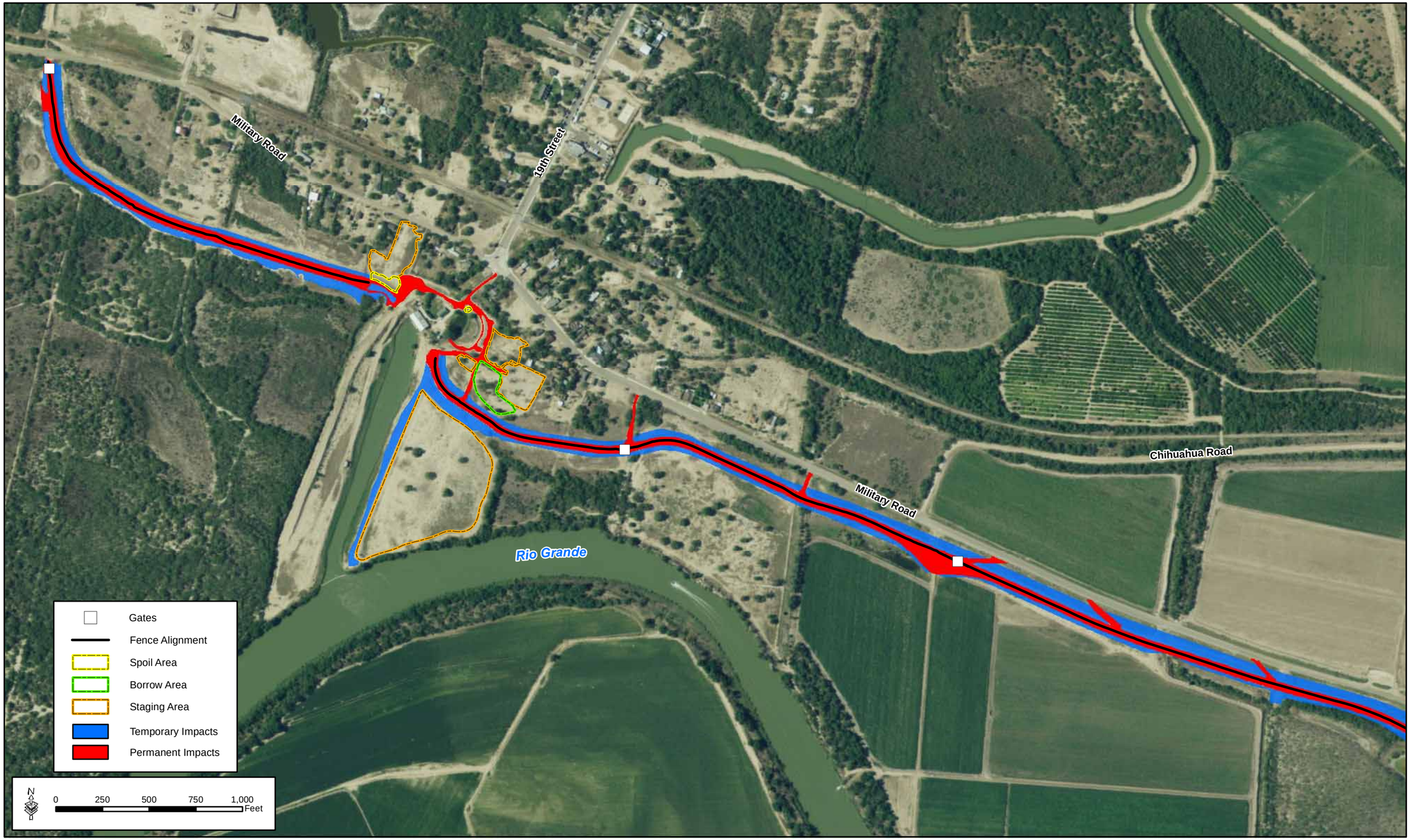
January 2011



Locations of Tactical Infrastucture Index Map - Sections O-11 through O-21

GSRC

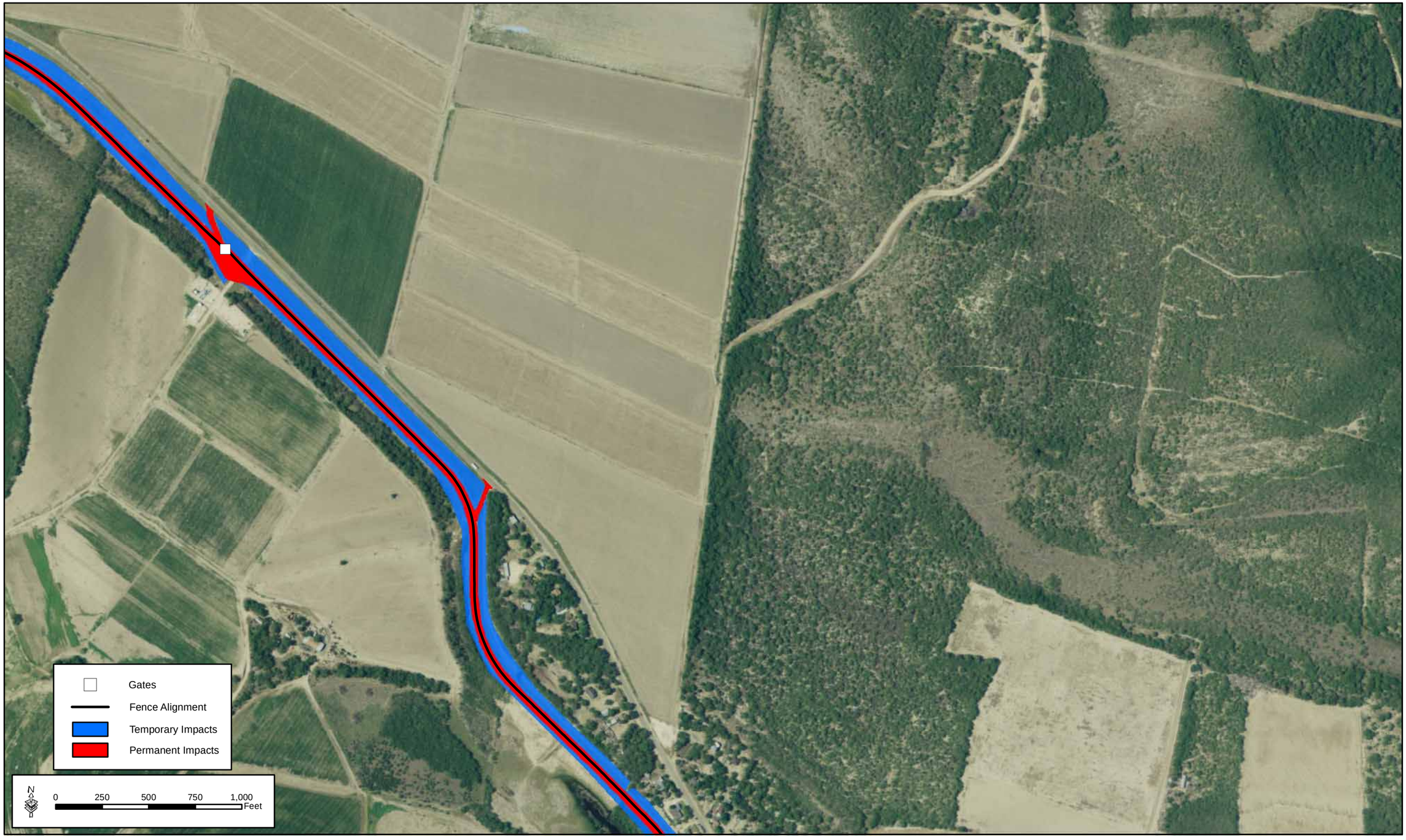
January 2011



Section O-4 Post Construction Infrastructure Impacts - Map 1

GSRC

January 2011



Section O-4 Post Construction Infrastructure Impacts - Map 2

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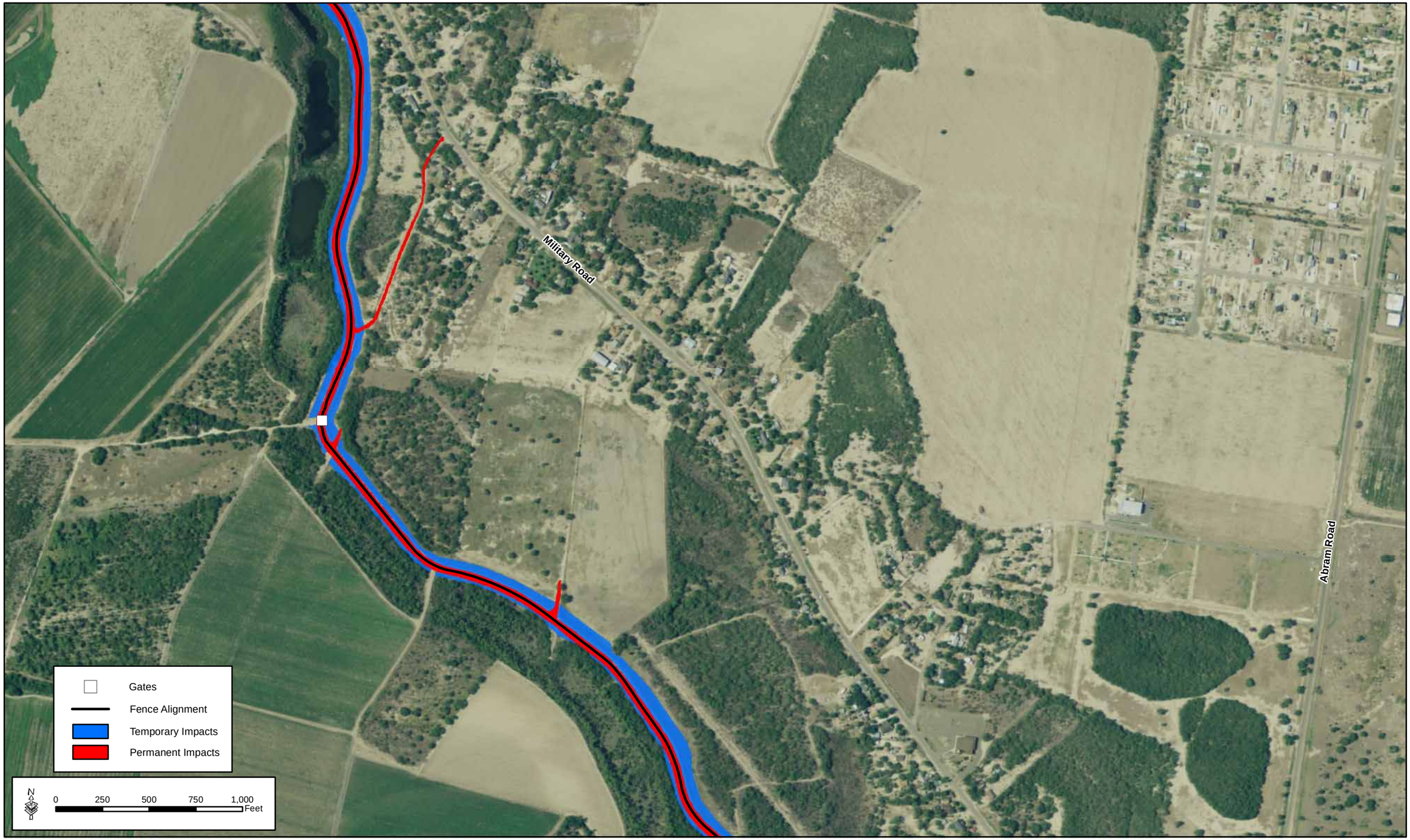
January 2011



Section O-4 Post Construction Infrastructure Impacts - Map 3

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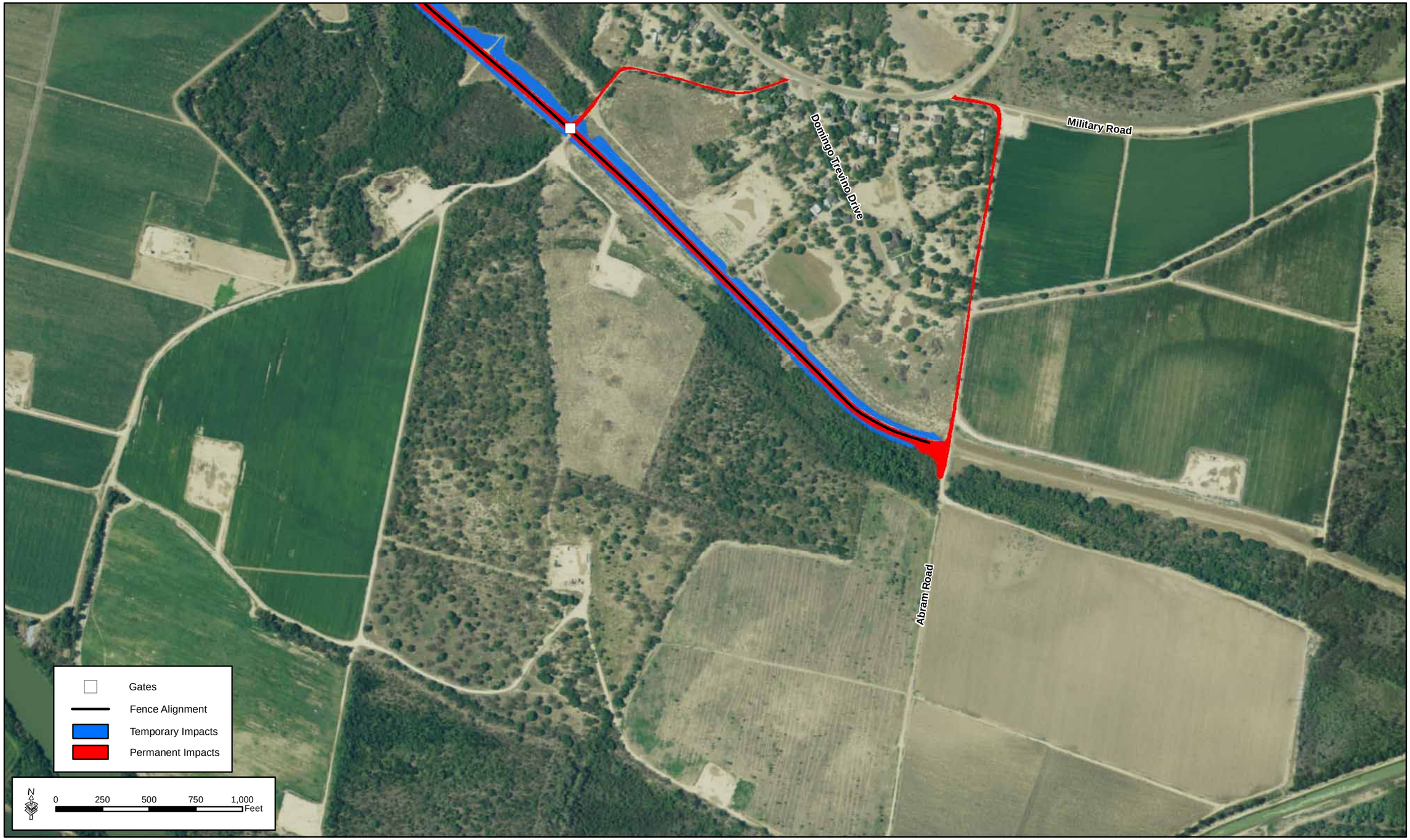

Section O-4 Post Construction Infrastructure Impacts - Map 4

GSRC

January 2011

Section O-5 Post Construction Infrastructure Impacts - Map 5

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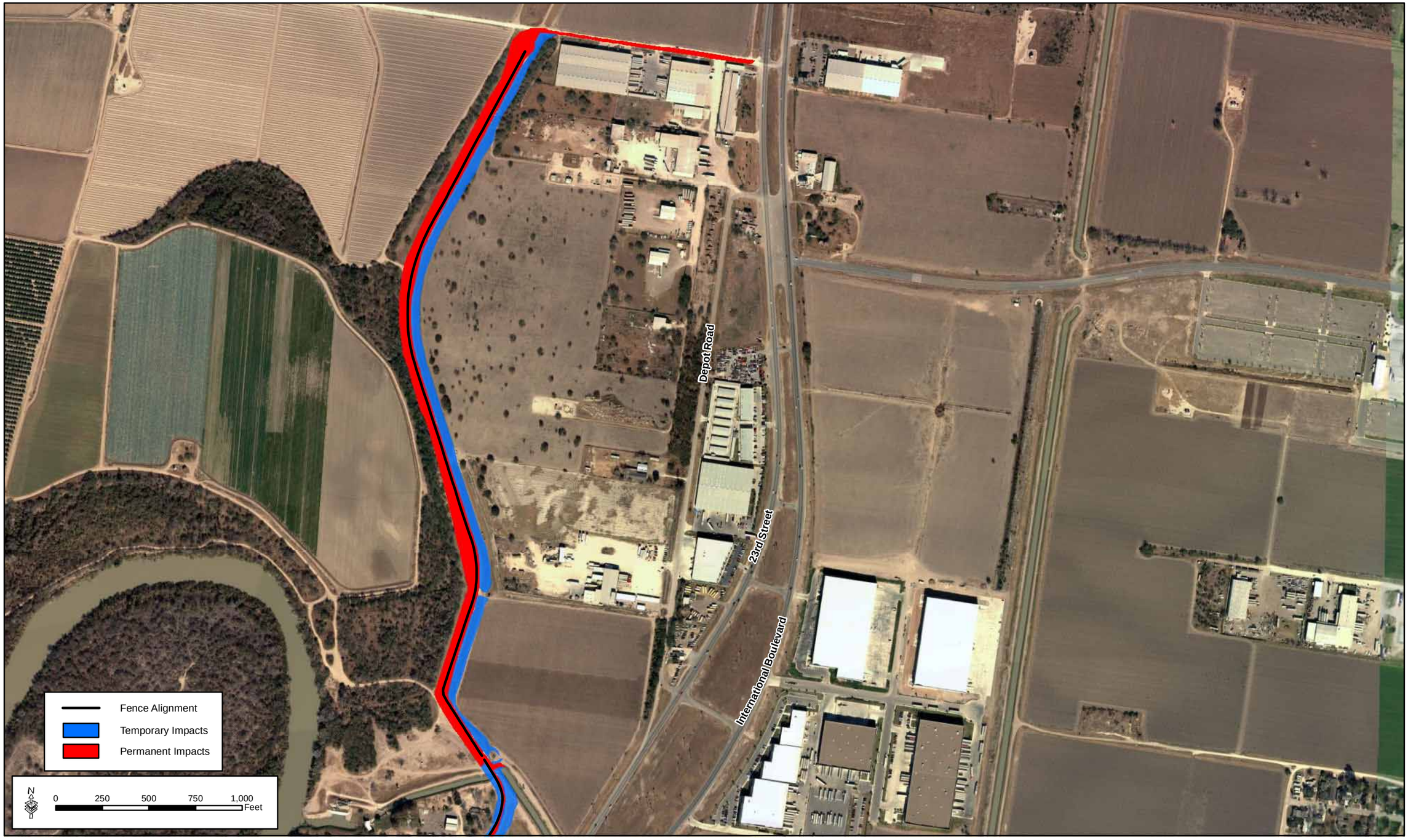
January 2011



Section O-6 Post Construction Infrastructure Impacts - Map 6

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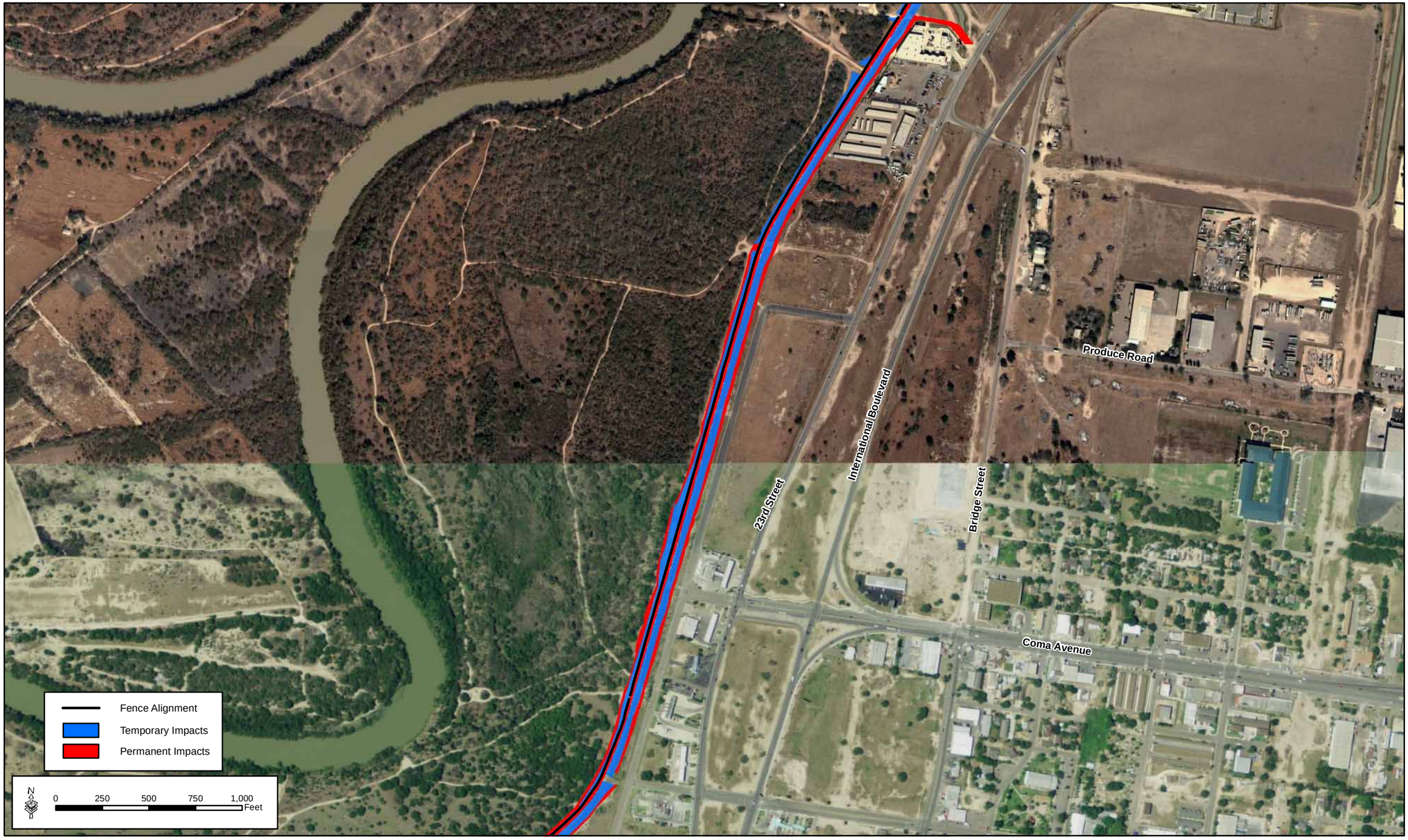

Section O-6 Post Construction Infrastructure Impacts - Map 7

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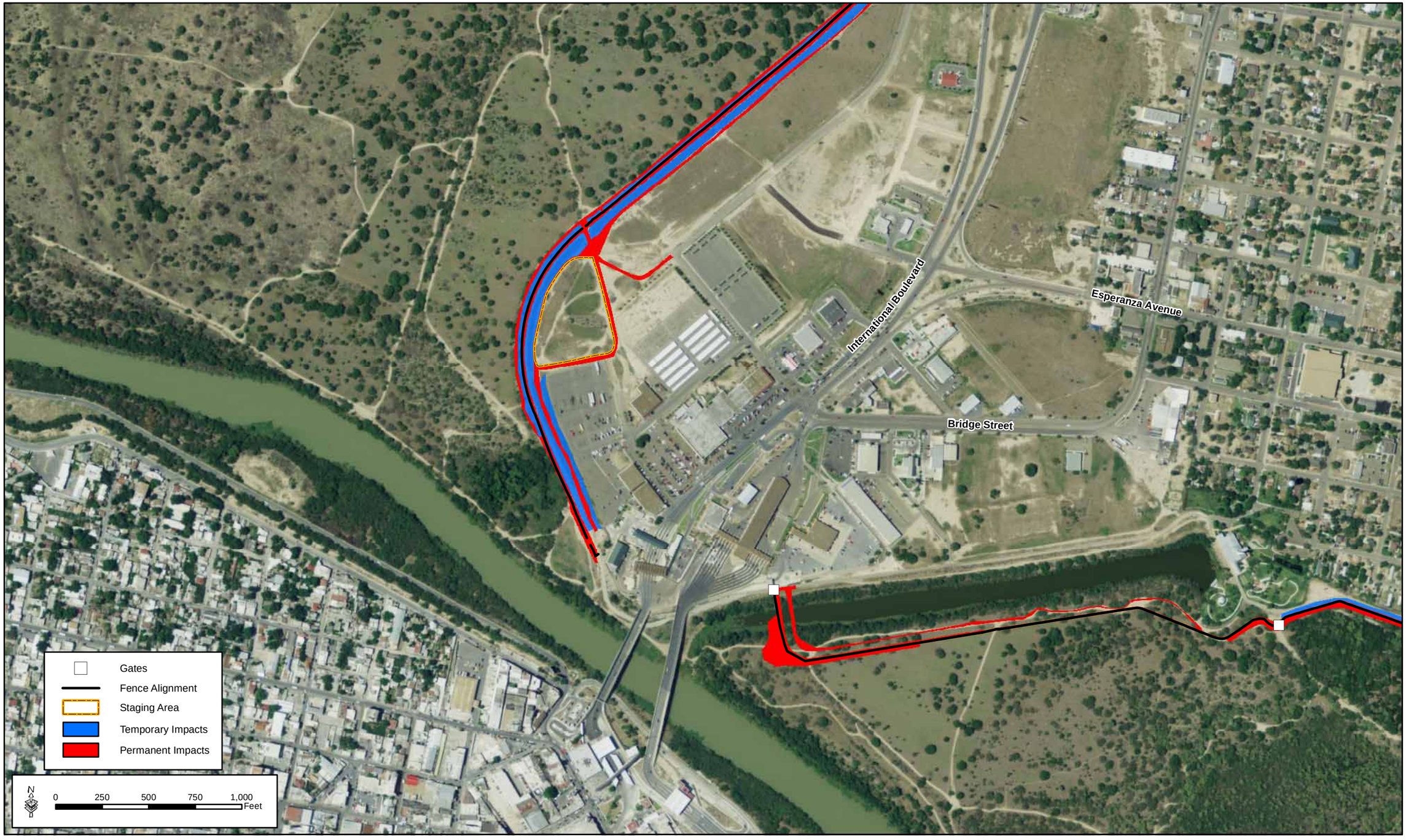


Section O-6 Post Construction Infrastructure Impacts - Map 8

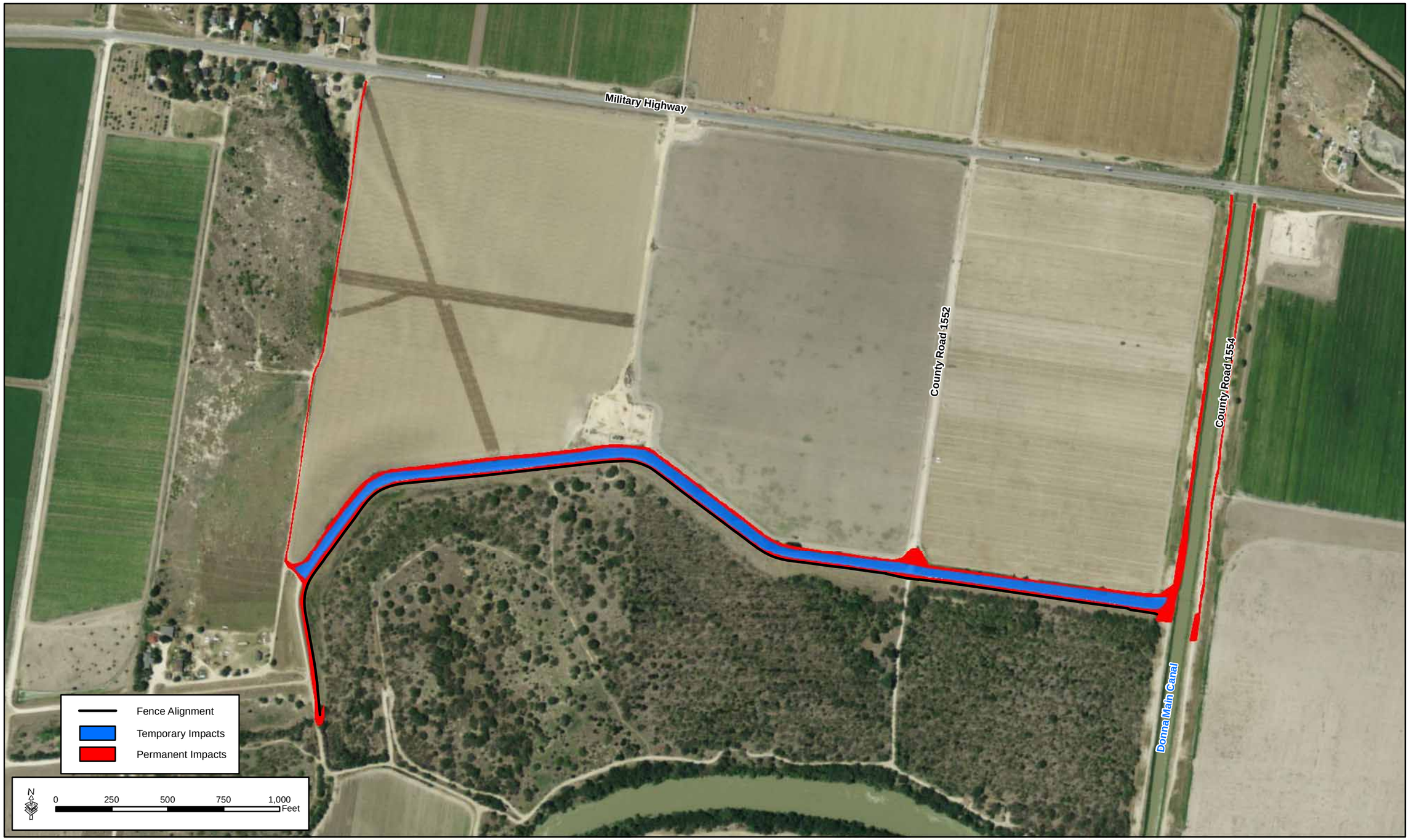
GSRC

January 2011

Section O-6 Post Construction Infrastructure Impacts - Map 9

GSRC

January 2011



Section O-7 Post Construction Infrastructure Impacts - Map 10

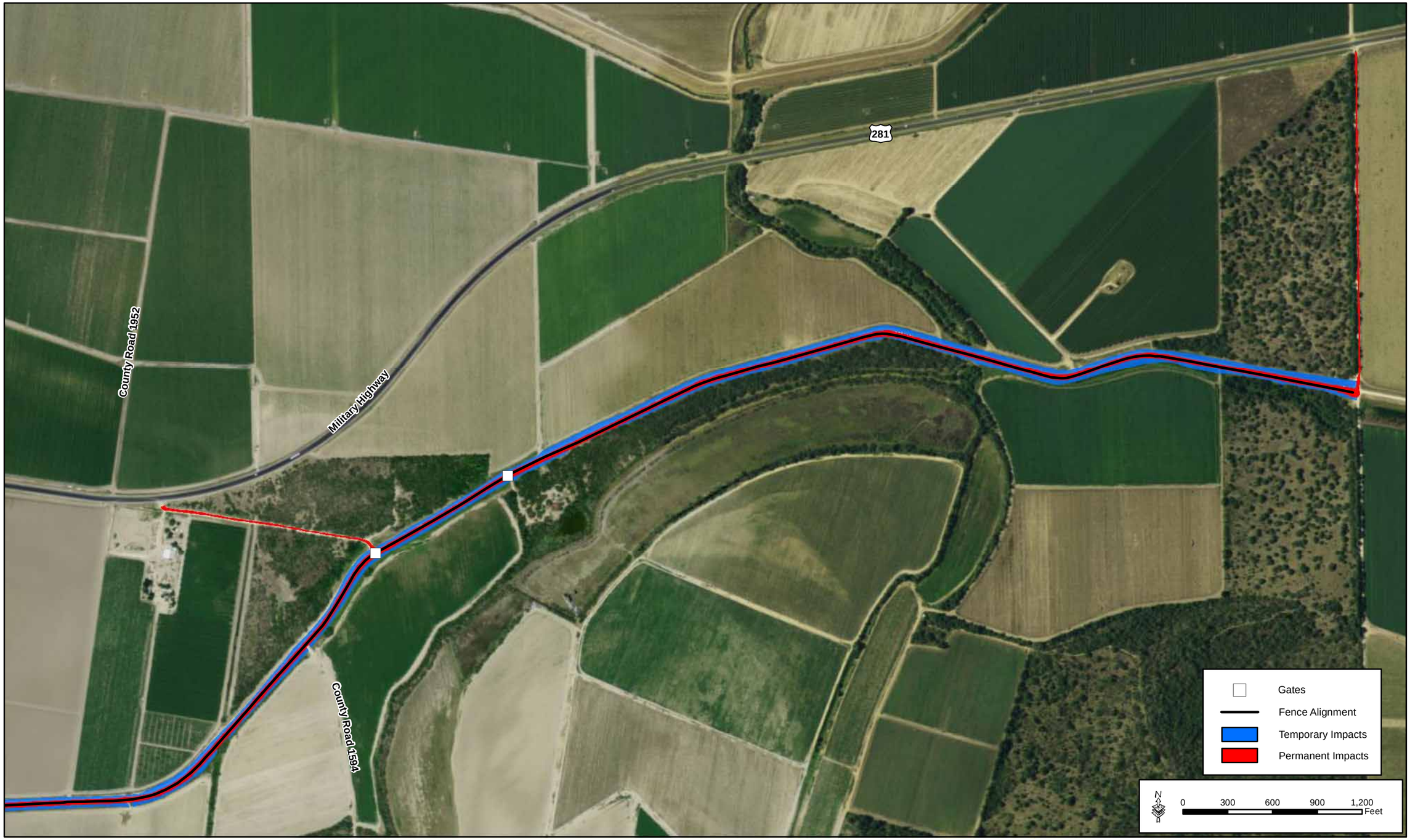
GSRC

January 2011

Section O-8 Post Construction Infrastructure Impacts - Map 11

GSRC

January 2011



Section O-8 Post Construction Infrastructure Impacts - Map 12

GSRC

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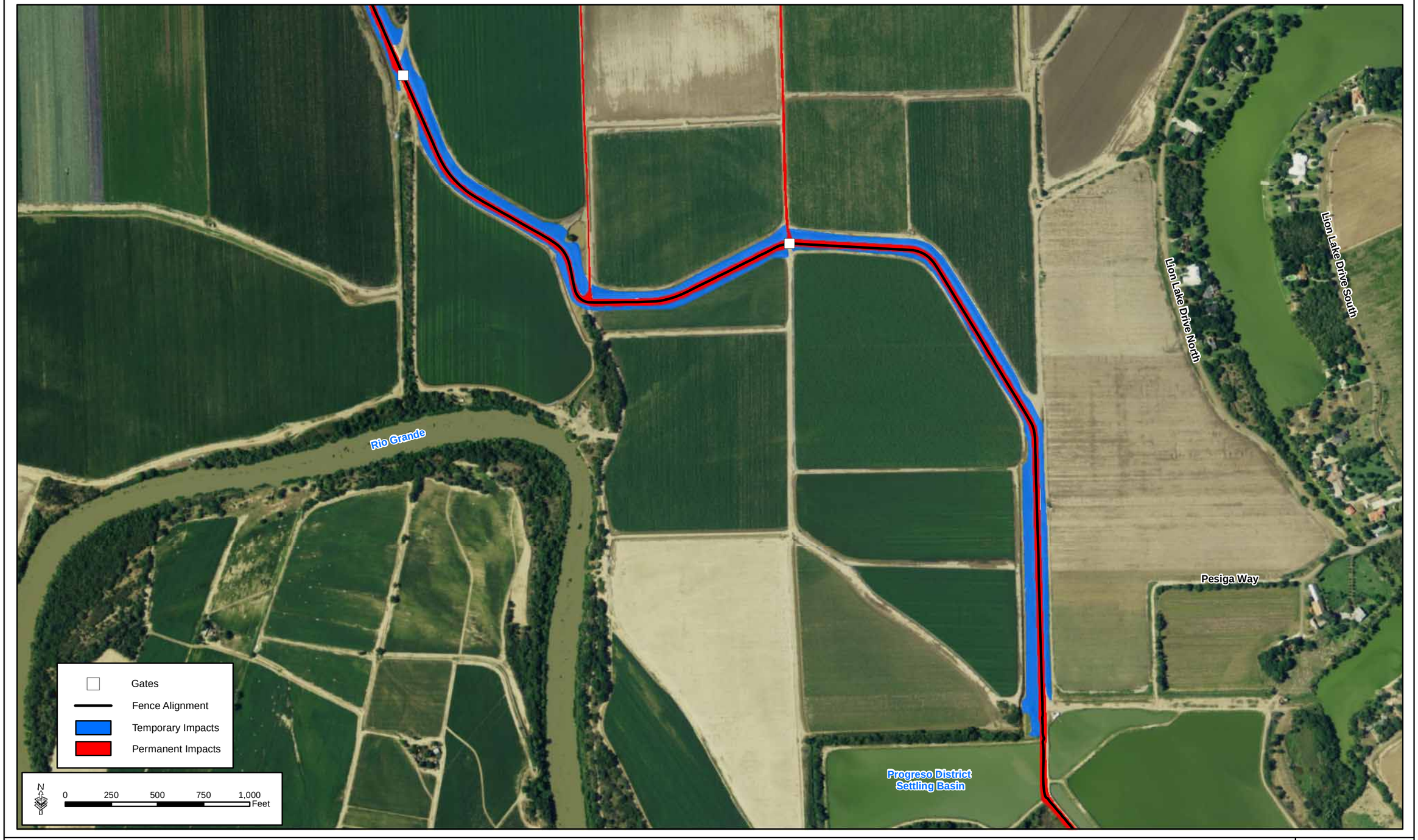
Section O-9 Post Construction Infrastructure Impacts - Map 13

GSRC

January 2011



Section O-9 Post Construction Infrastructure Impacts - Map 14

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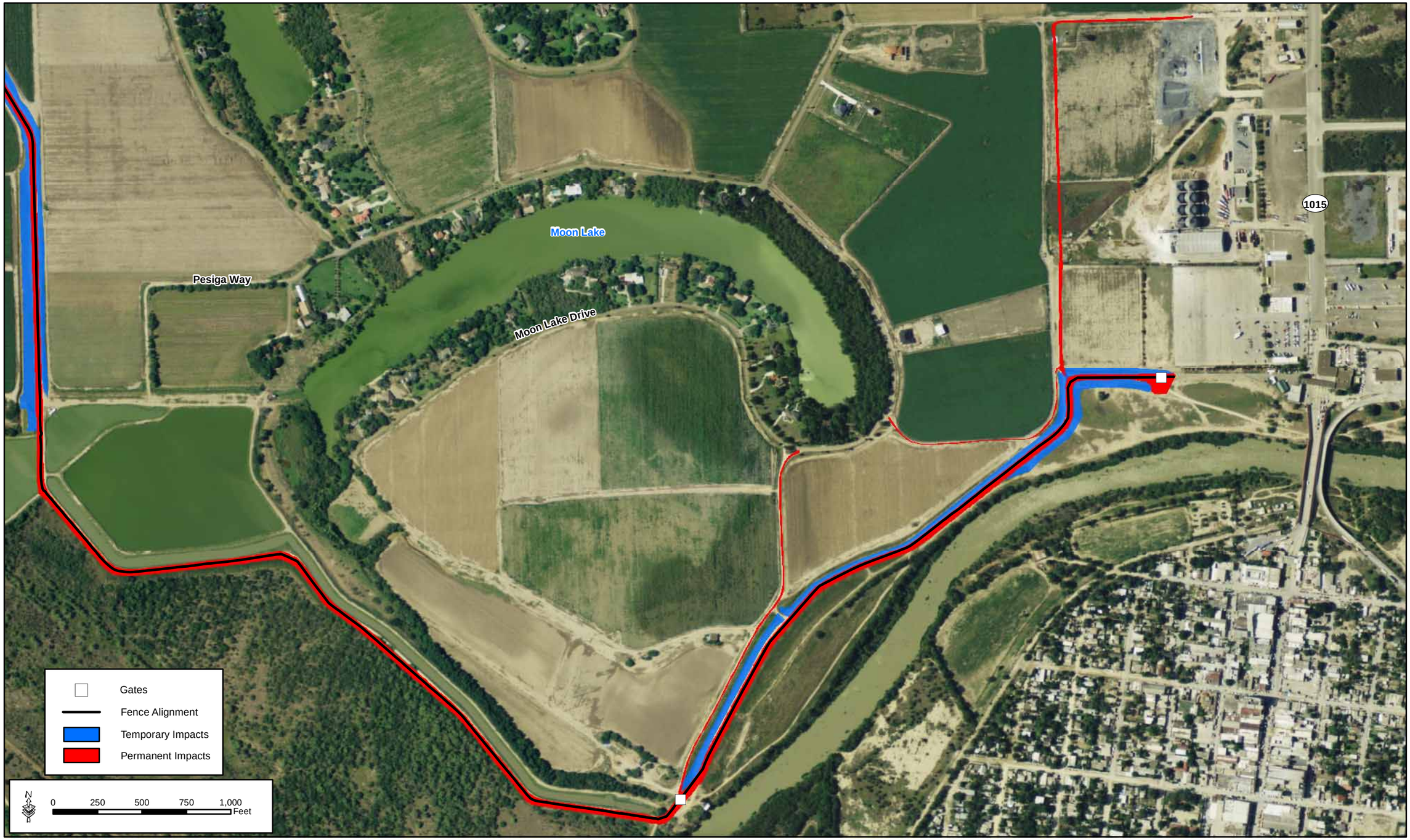

Section O-9 Post Construction Infrastructure Impacts - Map 15

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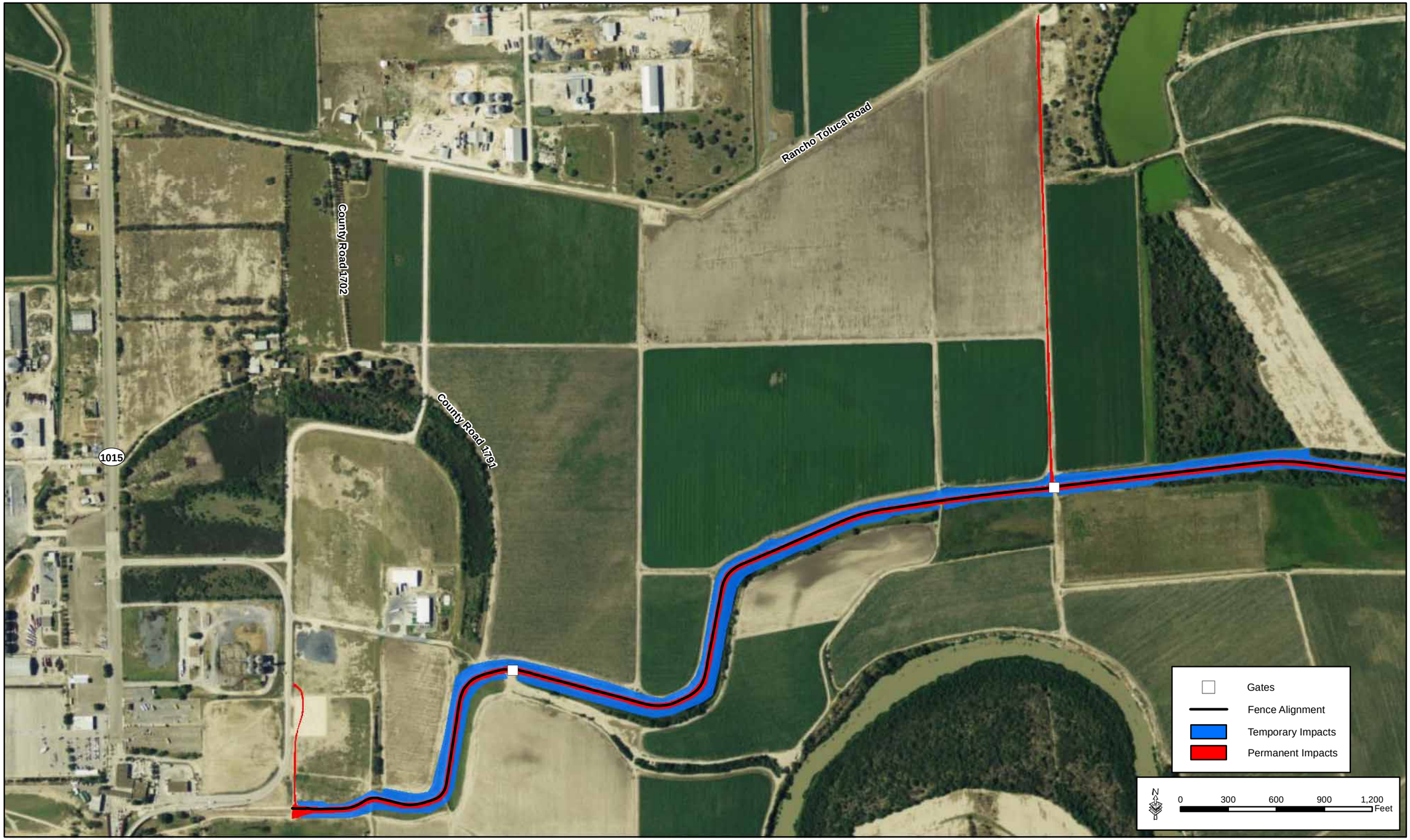

Section O-10 Post Construction Infrastructure Impacts - Map 16

GSRC

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Section O-10 Post Construction Infrastructure Impacts - Map 17

GSRC

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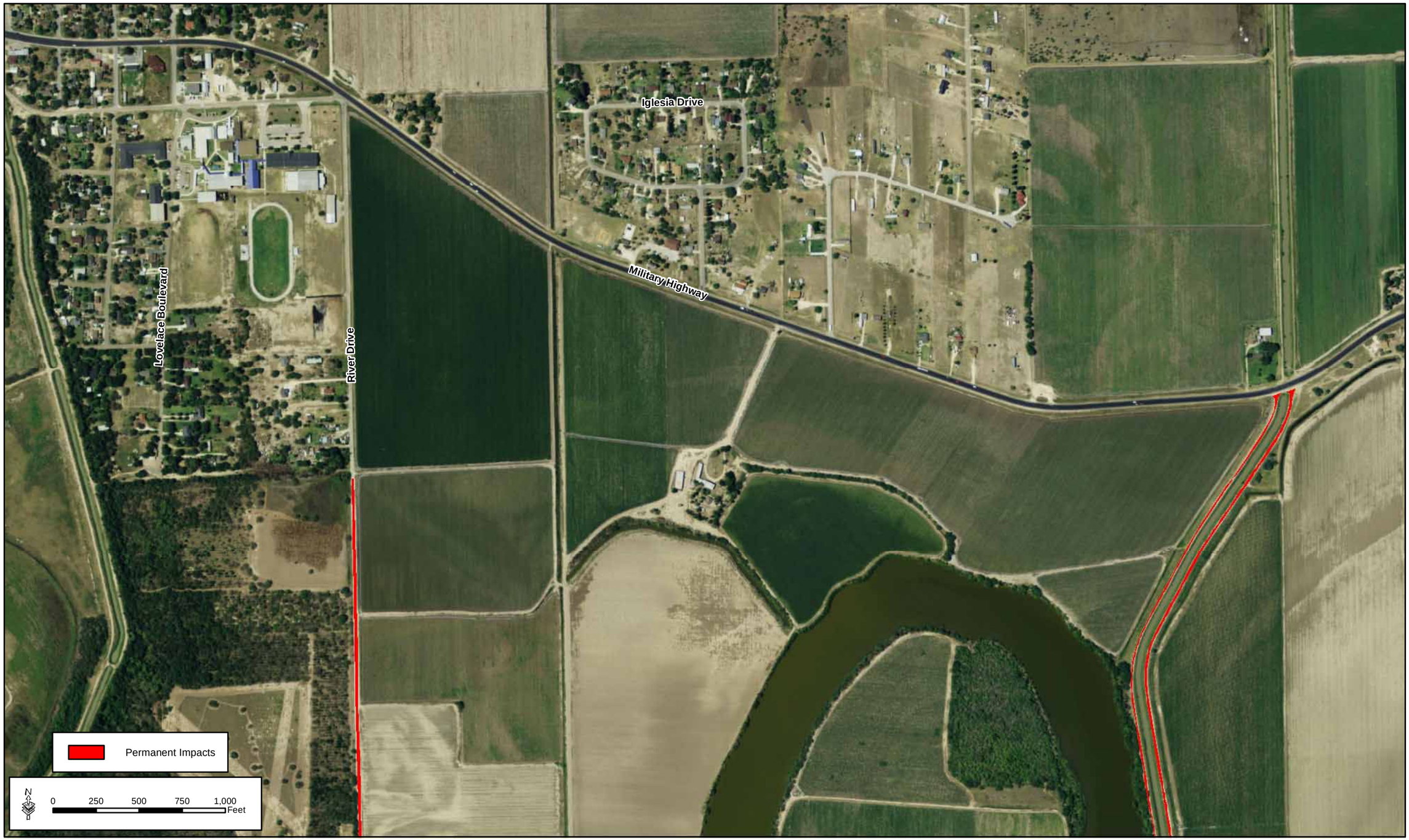
Section O-11 Post Construction Infrastructure Impacts - Map 18

GSRC

January 2011



Section O-11 Post Construction Infrastructure Impacts - Map 19

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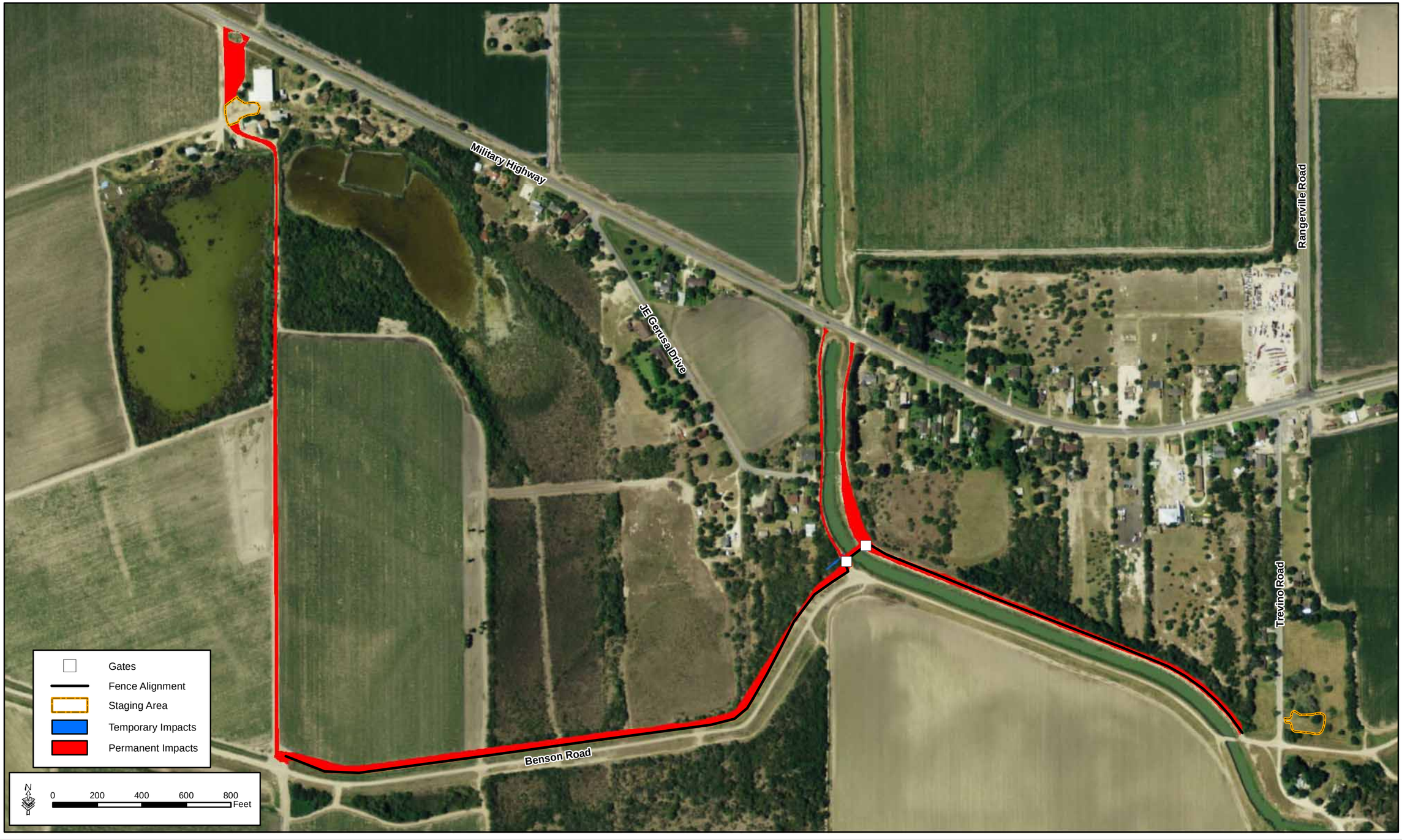

Section O-12 Post Construction Infrastructure Impacts - Map 20

GSRC

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Section O-13 Post Construction Infrastructure Impacts - Map 21

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Section O-13 / O-14 Post Construction Infrastructure Impacts - Map 22

GSRC

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Section O-14 Post Construction Infrastructure Impacts - Map 23

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January 2011

Section O-14 Post Construction Infrastructure Impacts - Map 24

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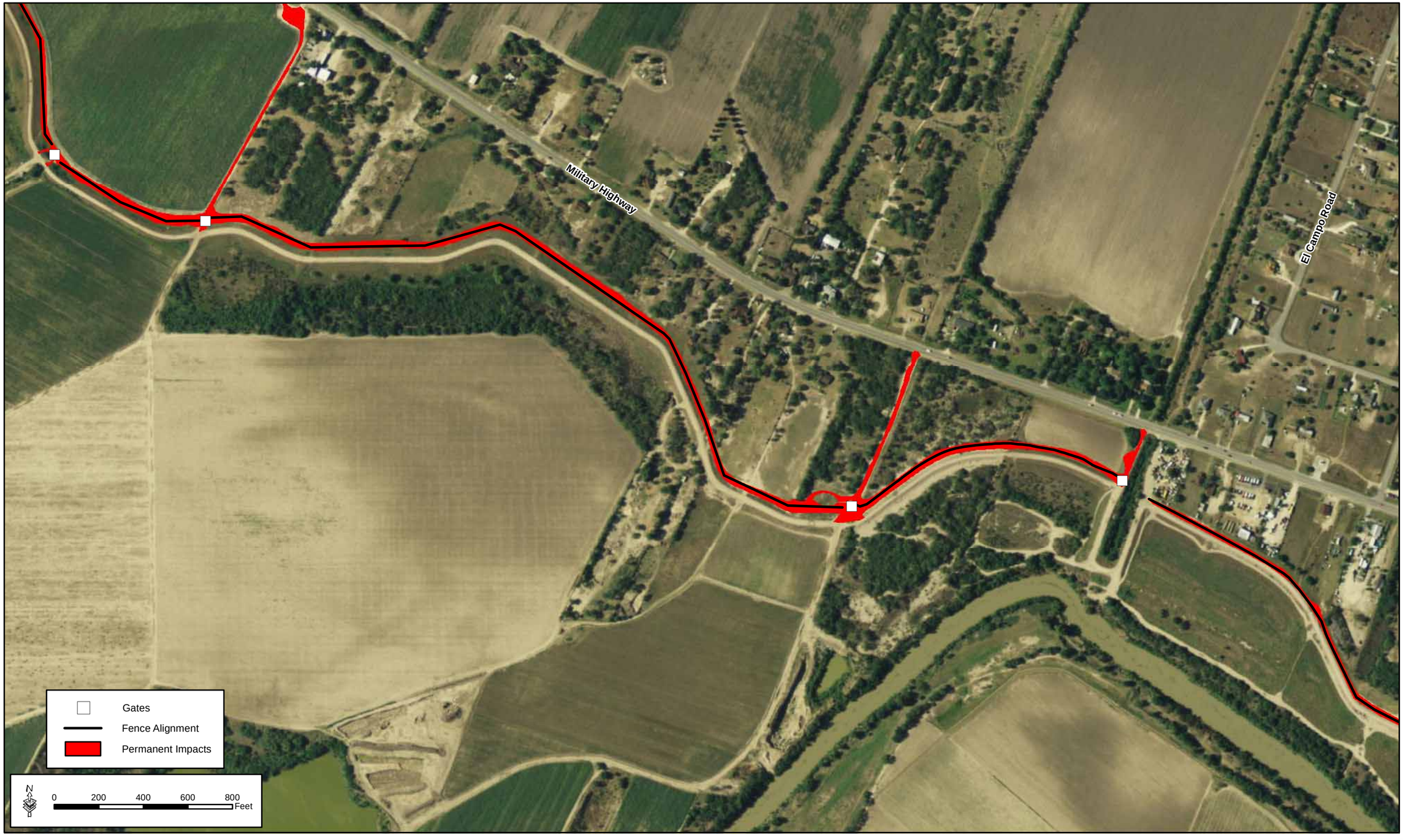
January 2011

Section O-15 Post Construction Infrastructure Impacts - Map 25

GSRC

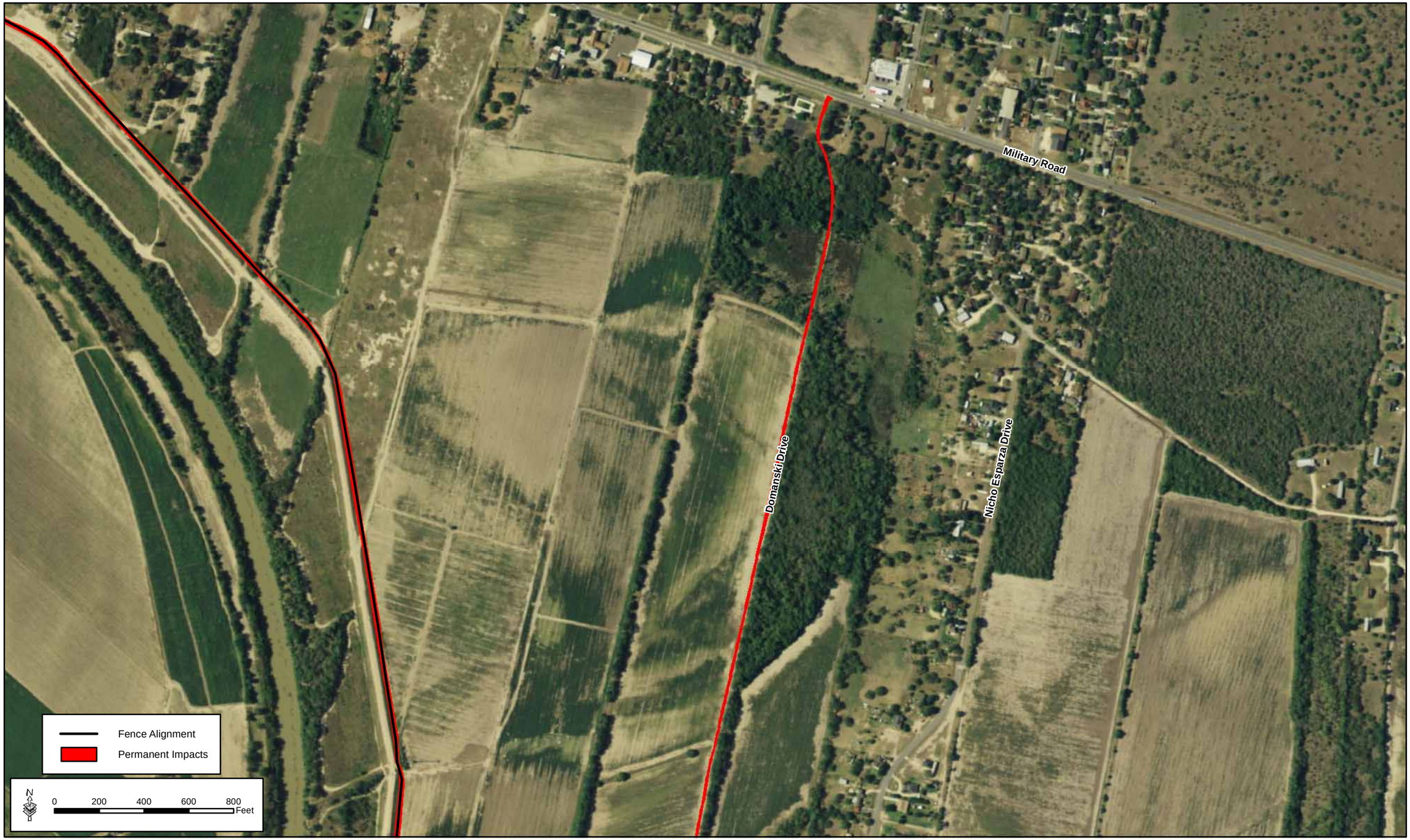
January 2011



Section O-15 / O-16 Post Construction Infrastructure Impacts - Map 26

GSRC

January 2011



Section O-16 Post Construction Infrastructure Impacts - Map 27

GSRC

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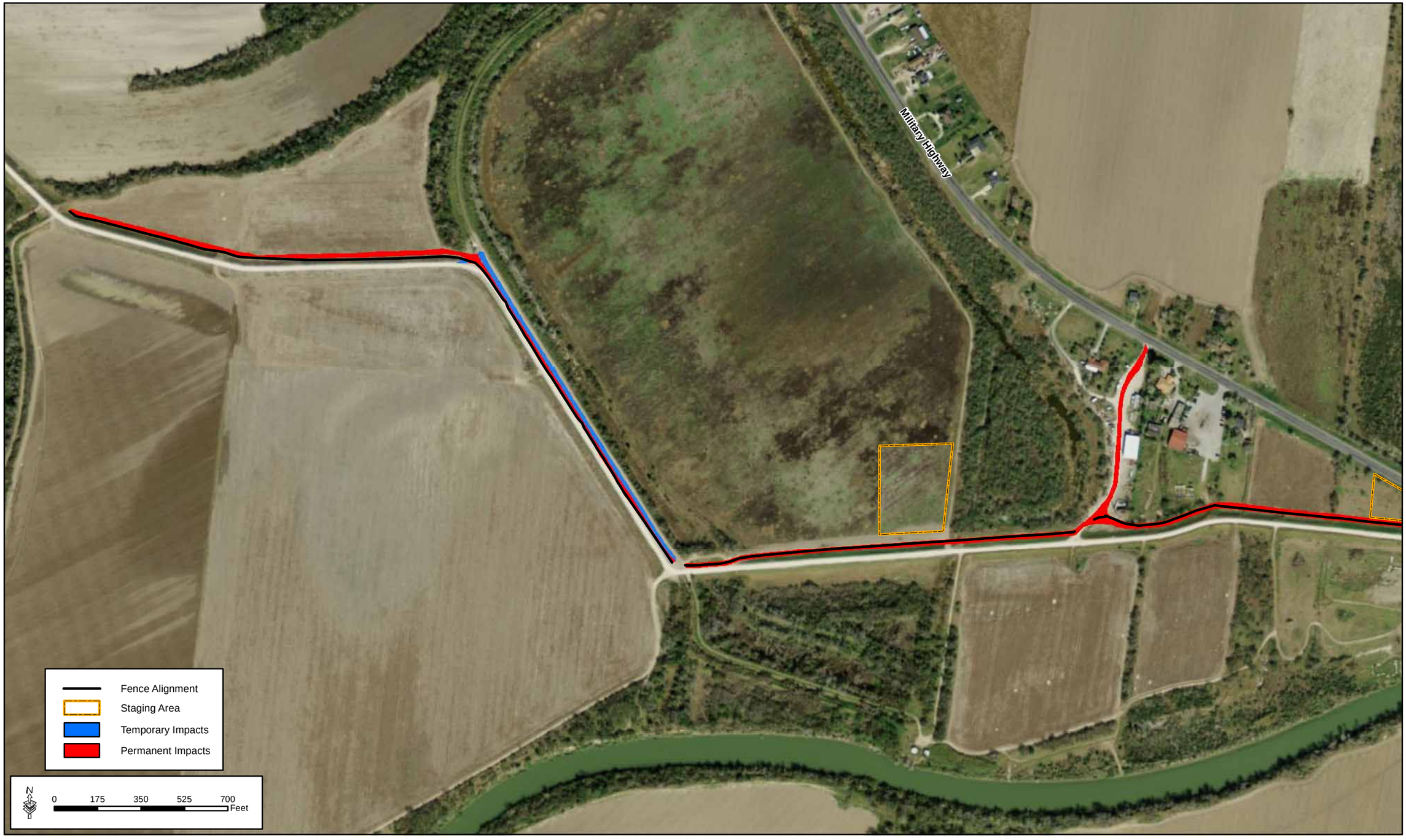
Section O-16 Post Construction Infrastructure Impacts - Map 28

GSRC

January 2011



Section O-17 Post Construction Infrastructure Impacts - Map 29

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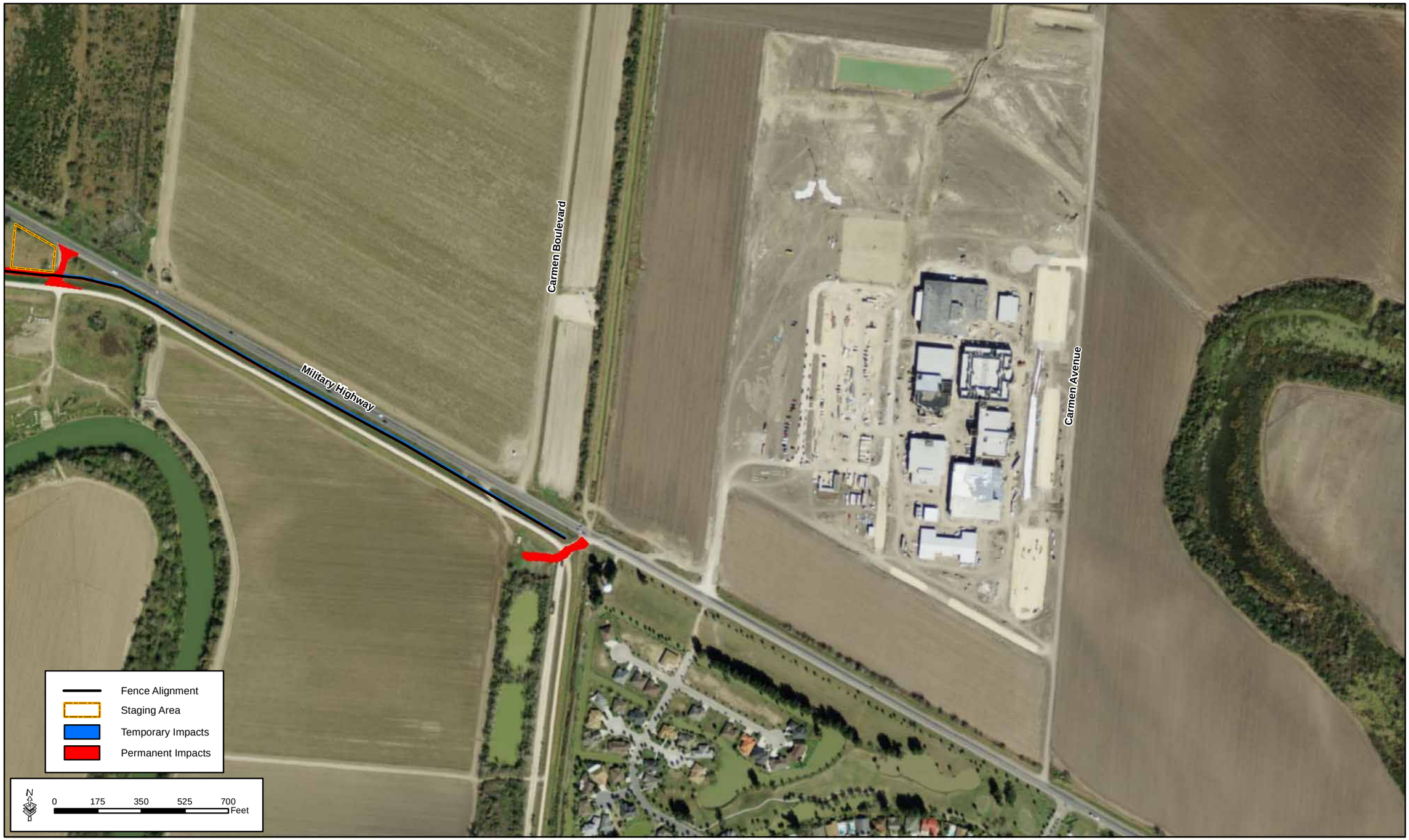

Section O-17 Post Construction Infrastructure Impacts - Map 30

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Section O-18 Post Construction Infrastructure Impacts - Map 31

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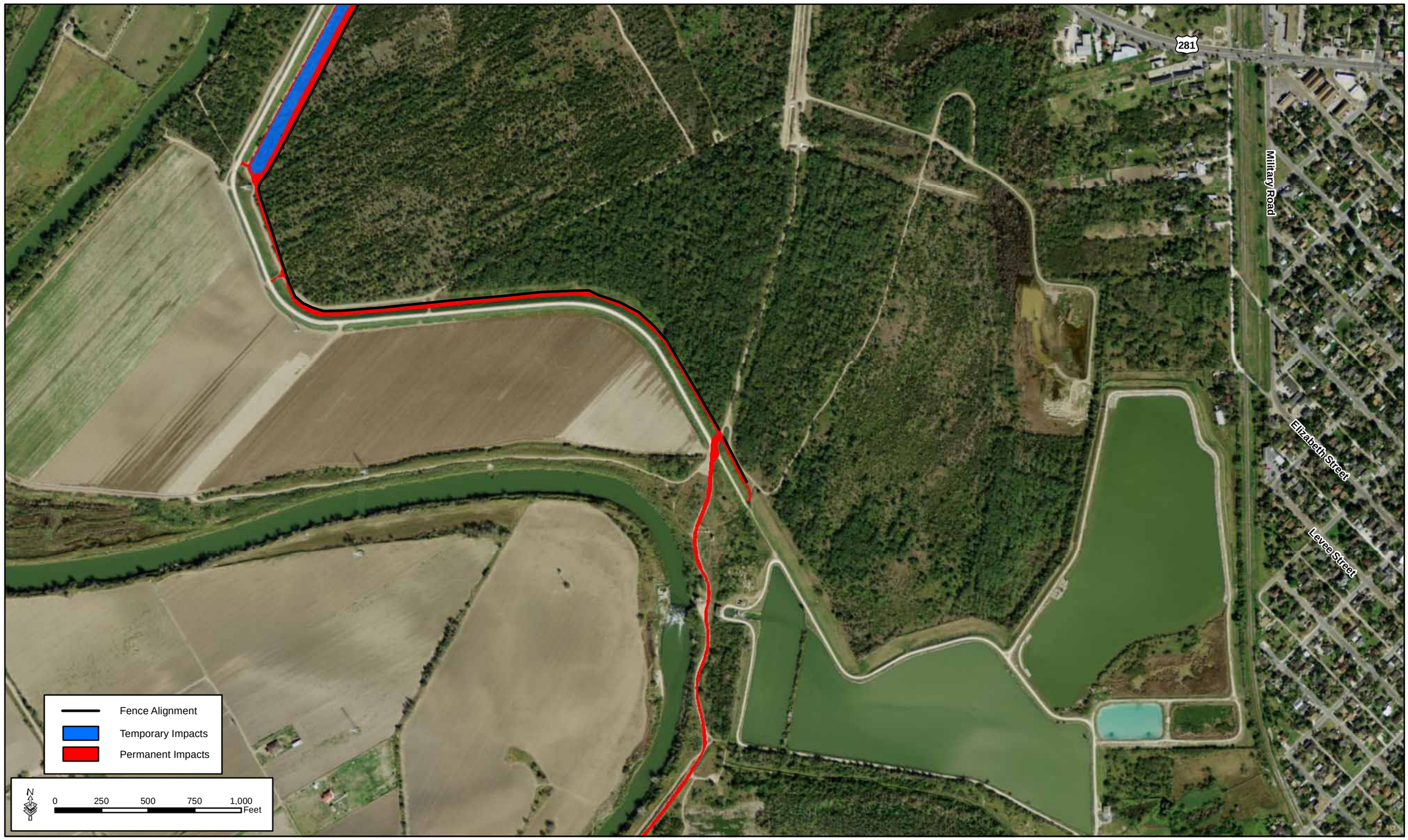
Section O-18 Post Construction Infrastructure Impacts - Map 32

GSRC

January 2011



Section O-18 Post Construction Infrastructure Impacts - Map 33

GSRC

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Section O-18 Post Construction Infrastructure Impacts - Map 34

GSRC

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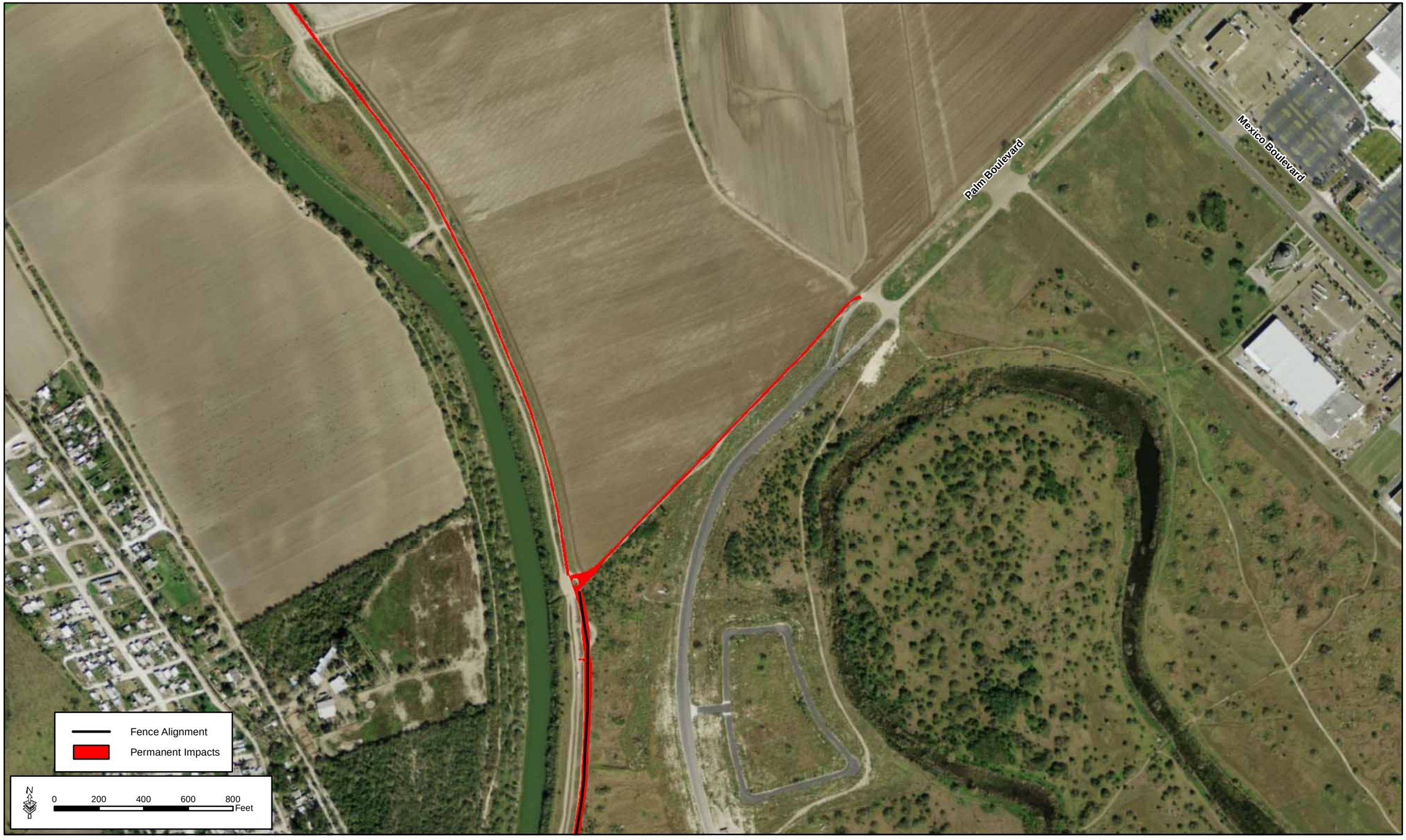

Section O-19 Post Construction Infrastructure Impacts - Map 35

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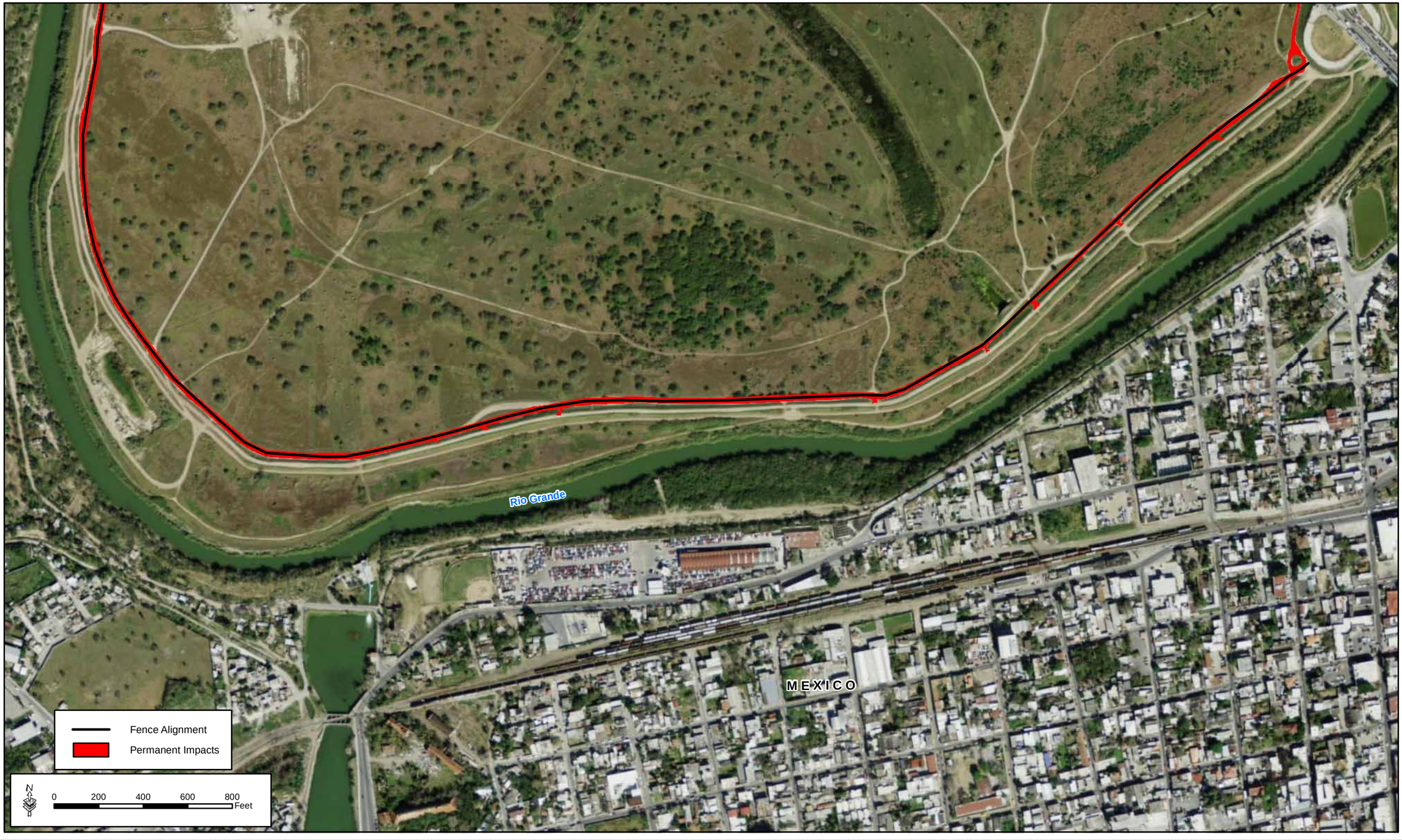

Section O-19 Post Construction Infrastructure Impacts - Map 36

GSRC

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Section O-19 Post Construction Infrastructure Impacts - Map 37

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Section O-21 Post Construction Infrastructure Impacts - Map 38

GSRC

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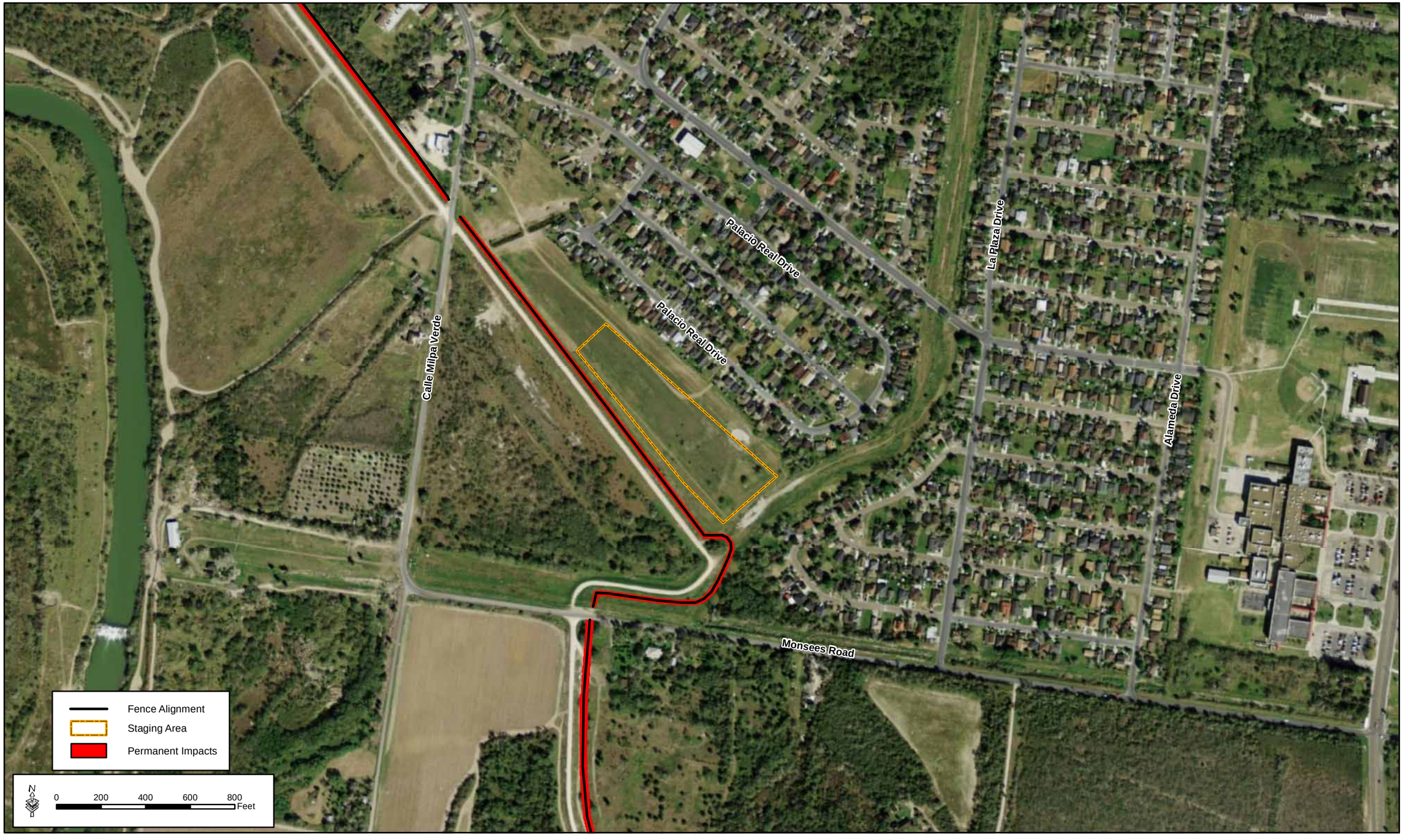

Section O-21 Post Construction Infrastructure Impacts - Map 39

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Section O-21 Post Construction Infrastructure Impacts - Map 40

GSRC

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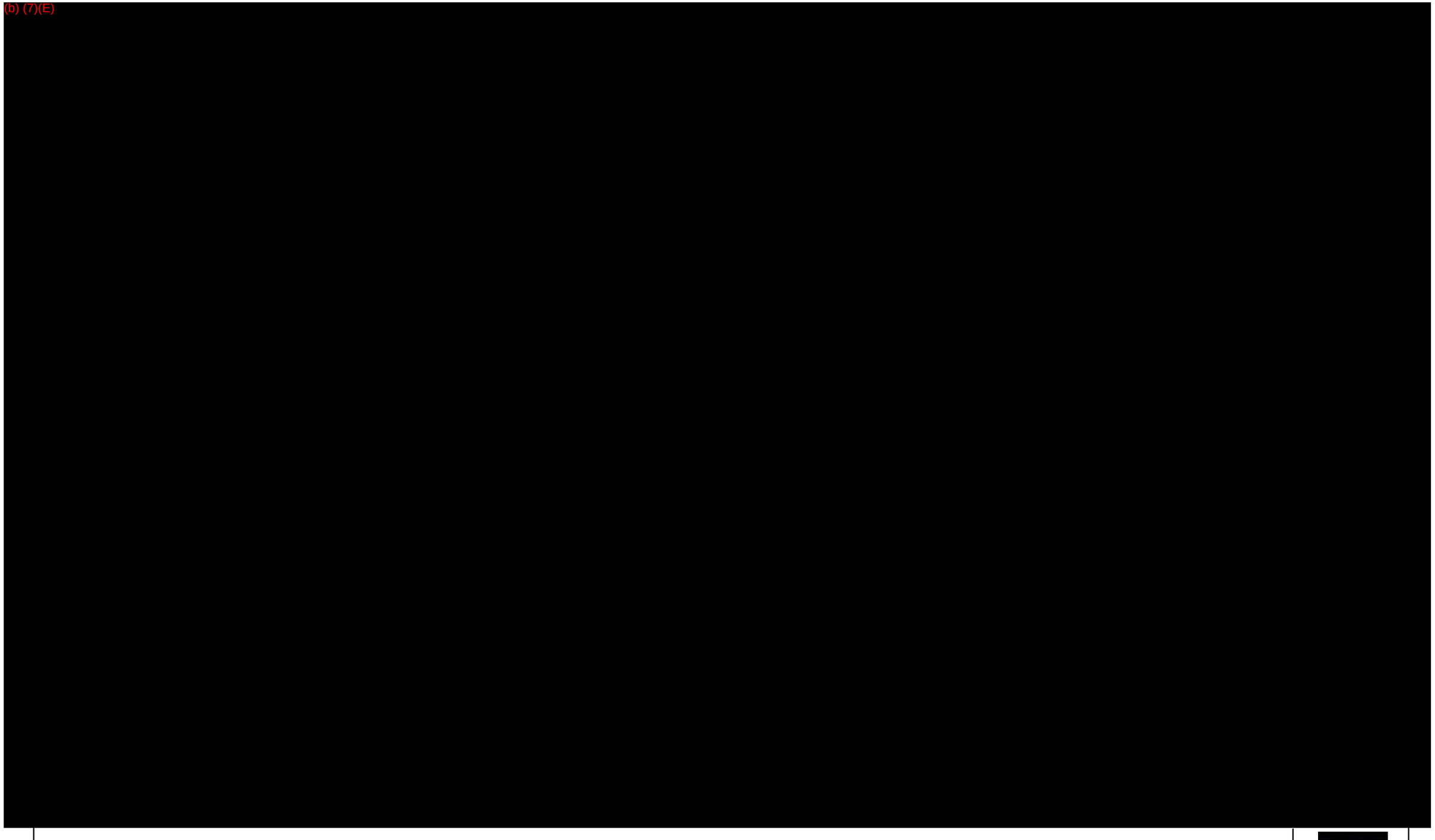

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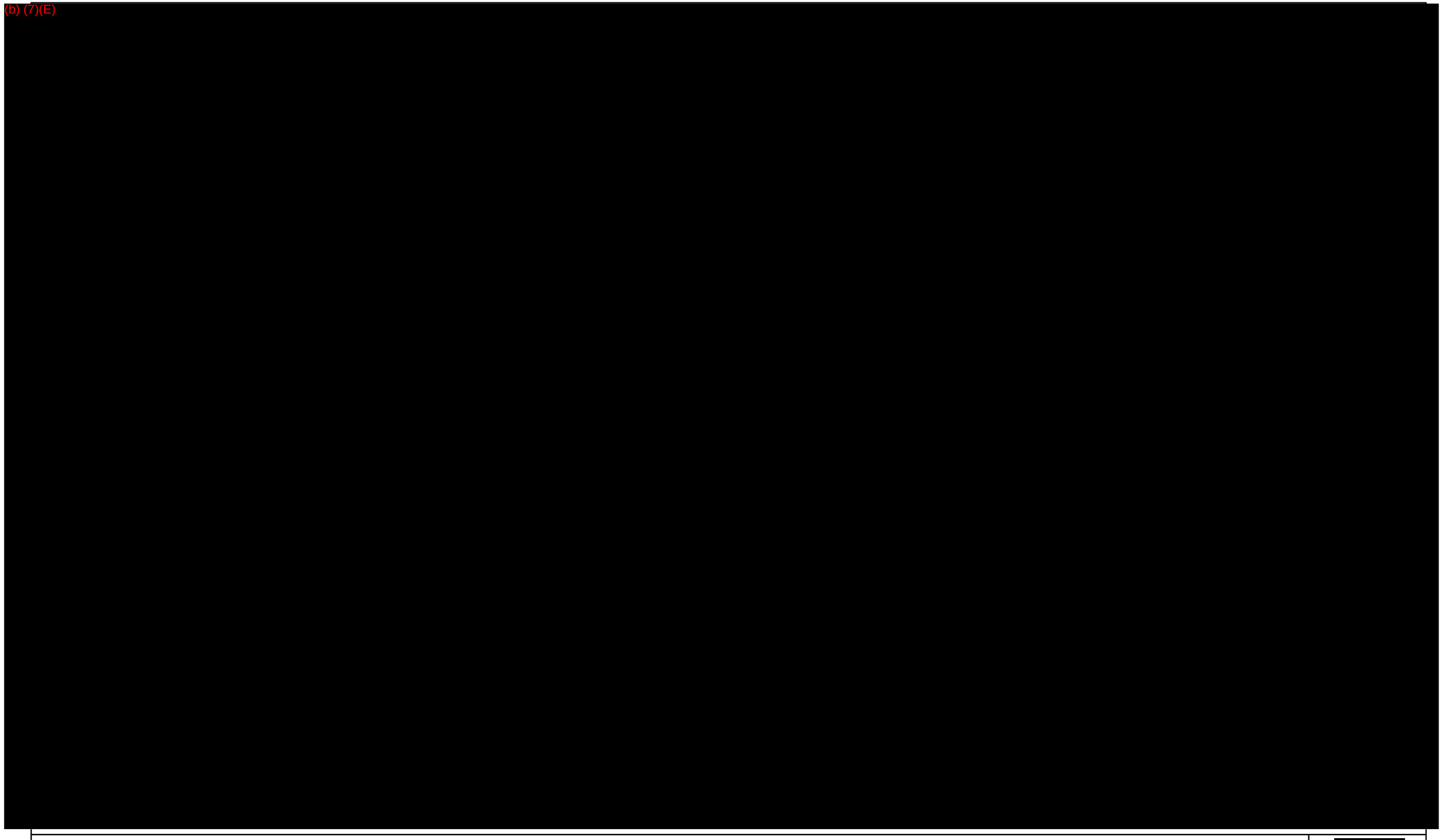

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