

Alcon,

Please forgive me if I have forgotten to include anyone. Please see the attached draft detailed schedule and draft high level schedule for the Fence project. This is a combination of all of the schedule parts that I received from the team. Please let me know of any logic changes that I need to make or if I have overlooked any important long duration activities.

(b) (6), (b) (7)(C), LEED AP

Senior Program Management Specialist / Master Scheduler

E3 Federal Solutions

Border Patrol & Air and Marine Program Management Office (BPAM PMO)

Facilities Management & Engineering

(b) (6), (b) (7)(C)

Excel as a trusted strategic partner enhancing Border Patrol's proud legacy.

CBP Enterprise Services

Office of Facilities and Asset Management

Overview of CBP Fence and Roads

November 23, 2016



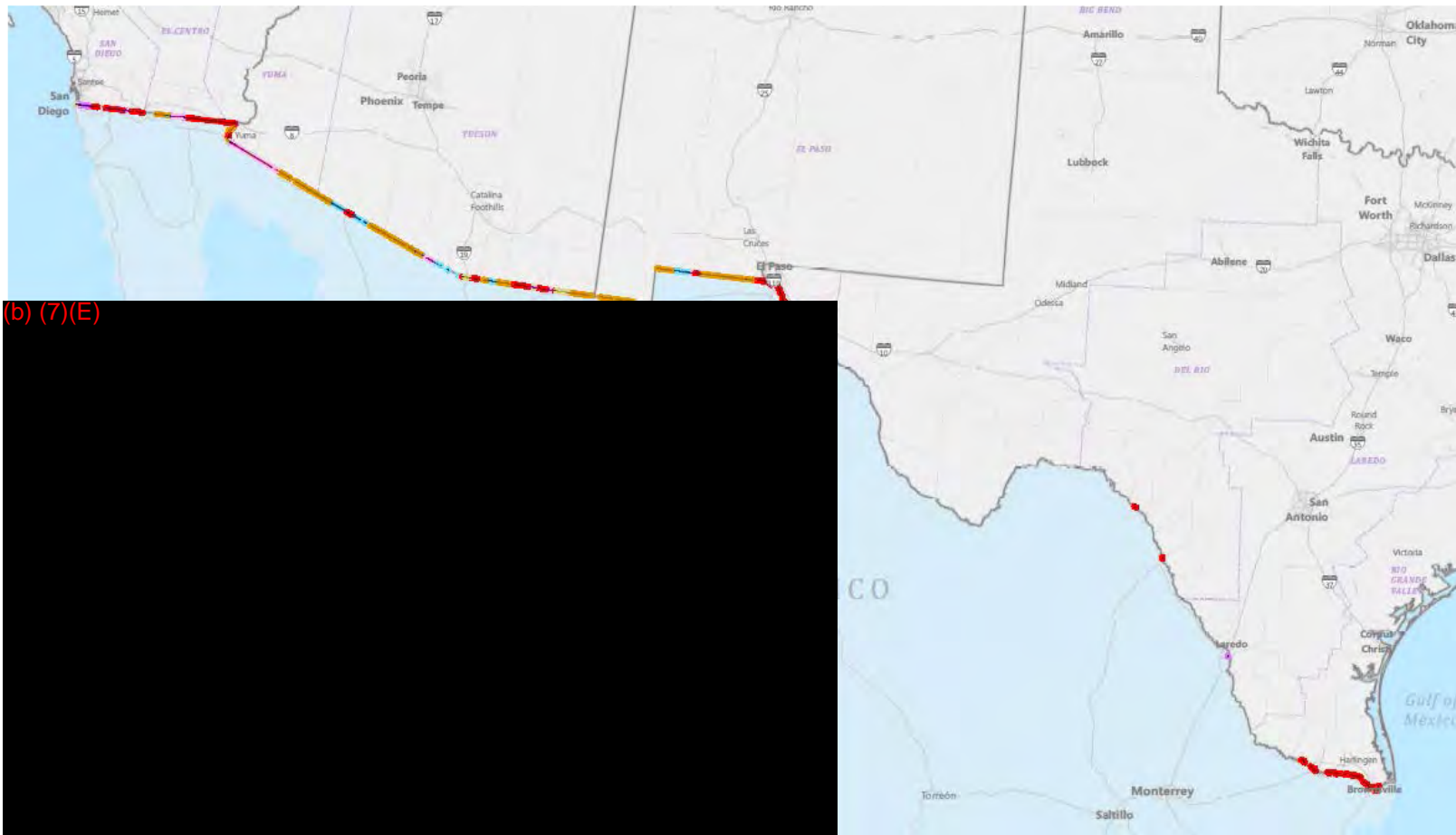
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Map of Existing Fence





A Foundation on Which to Build Fence

- CBP was tasked with building 700 miles of “two layer” fencing on the southwest border which was later changed to meet USBP operational requirements of 654 miles of primary fence.
- This was tasked to CBP in July 2007, with over 600 miles completed by January 20, 2009.
- 654 miles of primary fence have been completed to date, with the majority of mileage completed between 2008 and 2009.



Map of Existing & Proposed Fence

United States Border Patrol Fence Along the Border

California



(b) (5), (b) (7)(E)

Michael Doherty

MR377 November 20, 2016

Please Note: Anywhere there is secondary fence, there is a primary fence layer below it.
This is a high level view of proposed requirements refinements of geospatial lines in progress



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Summary of Unconstrained Operational Needs & Cost Estimates

Southwest Border				
Requirement Type	New Miles	Acquisition/Initial Costs ROM (-50%/+100%) Cost	20 Year Recurring Costs (Maintenance and Repair)	Total End State Cost
New Primary PF	(b) (7)(E)	\$	(b) (5)	(b) (5)
New VF		\$		
Replacement Primary PF & VF		\$		
New Secondary PF		\$		
New Roads		\$		
Repairs to Existing Roads		\$		
Total Costs		\$		
Requirement Type	New Miles	A	(b) (5)	(b) (5)
New Primary PF	(b) (7)(E)	R		
New VF		\$		
Replacement Primary PF & VF		\$		
New Secondary PF		\$		
New Roads		\$		
Repairs to Existing Roads		\$		
Total Costs		\$		



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Summary of Unconstrained Operational Needs & Cost Estimates

Southwest and Northern Border				
Requirement Type	New Miles	Acquisition/Initial Costs ROM (-50%/+100%) Cost	20 Year Recurring Costs (Maintenance and Repair)	Total End State Cost
New Primary PF	(b) (7)(E)	\$	(b) (5)	
New VF		\$		
Replacement Primary PF & VF		\$		
New Secondary PF		\$		
New Roads		\$		
Repairs to Existing Roads		\$		
Total Costs		\$		

Unconstrained operational needs at the beginning of the planning process do not necessarily reflect the feasibility of the ultimate execution of those needs. These miles do not reflect the critical need nor do they reflect alternate enforcement solutions.

*****Statement pending USBP Approval / Edits*****



Quickest Wins

- Replacement of (b) (7)(E) primary pedestrian and vehicle fence in El Centro, Tucson, and El Paso where CBP already has real estate access and environmental analysis has been completed.
 - Approximately (b) (5) miles of the fence replacement will be an upgrade (b) (5)
- Construction of new primary pedestrian and vehicle fence on within existing Roosevelt Reservation and within Federal lands and where fence and a waiver already exists.
- The right to access, construct, maintain, and repair tactical infrastructure in many areas of the border is secured through the Roosevelt Reservation: a 1907 Executive Order authorizing federal property rights within 60-feet of the international border in CA, AZ, & NM. The Roosevelt Reservation is the basis for CBP property rights along much of the border fence.





Estimated High Level Timeline

Overall Project Assumptions:

- 1)
- 2)
- 3)

(b) (5)

Notice to
Proceed
(NTP)

NTP + 12
months

NTP + 24
months

NTP + 36
months

(b) (5)

Construction Phase Assumptions:

- 1)

(b) (5)



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Quick Win Timeline

Quick Win Assumptions:

1
2
3

(b) (5)

Notice to
Proceed
(NTP)

NTP + 12
months

NTP + 24
months

NTP + 36
months

Acquisition

Design

Environmental

Real
Estate

(b) (5)



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Approach to Fence Construction

- **Cost:**

- Primary PF: (b) (5) per mile
 - Average of (b) (5)/mile for real estate and environmental planning, construction and construction oversight.
 - (b) (5)/mile for mileage in all Sectors except Laredo & RGV
 - (b) (5) mile for mileage in Laredo & RGV
 - (b) (5) mile for environmental mitigation
 - (b) (5) mile for real estate acquisition
 - (b) (5) mile for staffing increases required to support the program
- Secondary PF: (b) (5) per mile
 - Average of (b) (5) mile for real estate and environmental planning, construction and construction oversight – also include (b) (5) mile for road between layers of fence
 - (b) (5) mile for environmental mitigation
 - (b) (5) mile for real estate acquisition
 - (b) (5) mile for staffing increases required to support the program



Approach to Fence Construction

- **Cost (continued)**

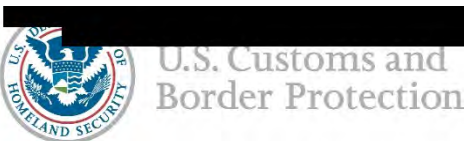
- VF: (b) (5) per mile
 - Average of (b) (5)/mile for real estate and environmental planning, construction and construction oversight.
 - (b) (5)/mile for environmental mitigation
 - (b) (5)/mile for real estate acquisition
 - (b) (5)/mile for staffing increases required to support the program

- **Government Furnished Material (GFM) and Supply Chain:**

- (b) (5)

- **Procurement**

- (b) (5)
- (b) (5)
- (b) (5)





Approach to Complete Fence Construction

- Other Considerations (slide 1 of 2)

(b) (5)



Approach to Complete Fence Construction

- Other Considerations (slide 2 of 2)

(b) (5)



BACKUP



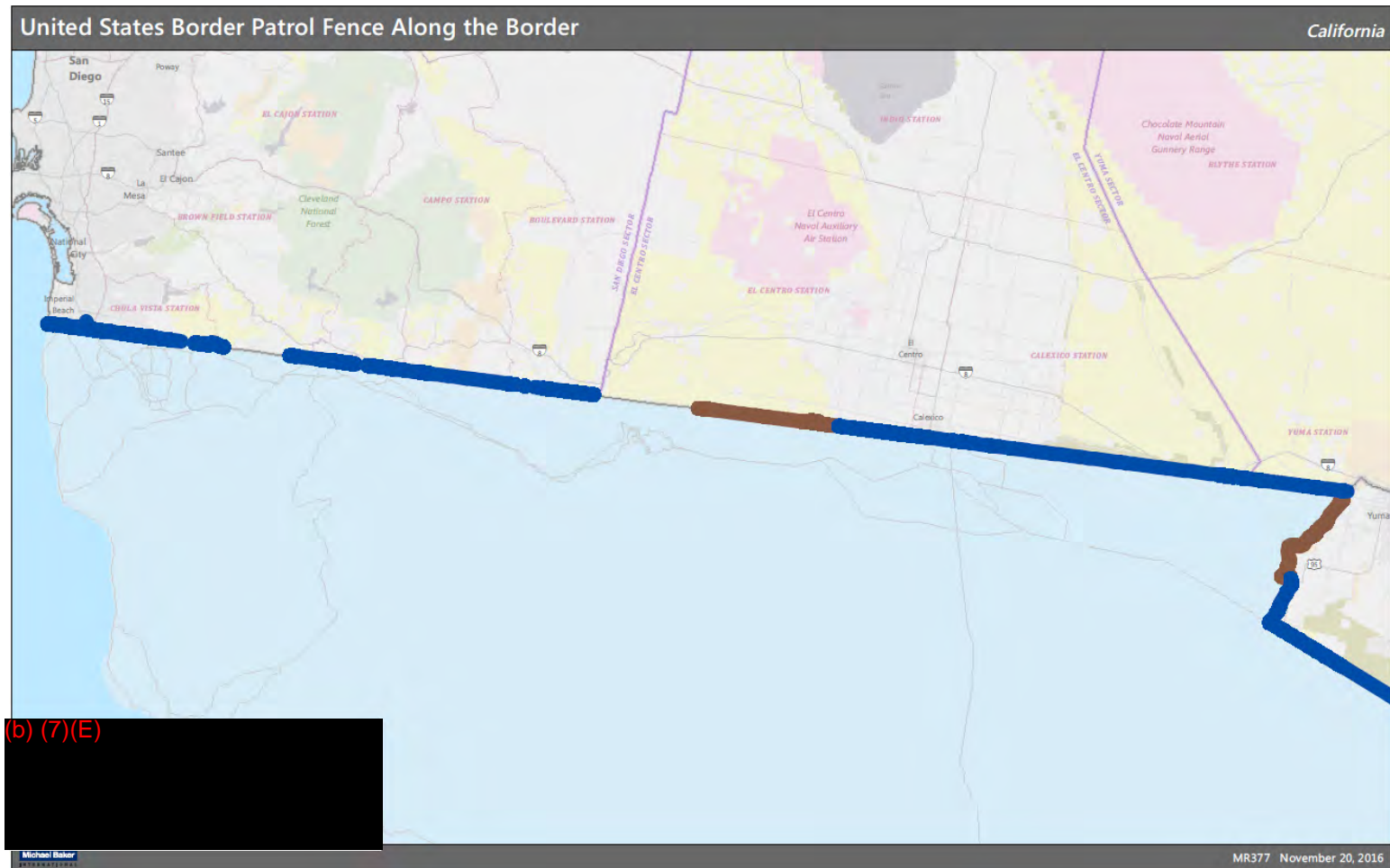
Border Fence Overview

- To date, U.S. Customs and Border Protection (CBP) completed **654 miles of primary pedestrian and vehicle fence**.
 - Border Fence provides persistent impedance to illegal cross-border activity, which offers Border Patrol agents more time to respond to and resolve threats.
 - CBP has completed three main fence programs since the enactment of the Secure Fence Act in 2006: Pedestrian Fence (PF) 70, PF 225, and Vehicle Fence (VF) 300. Any fence constructed prior to these programs is considered “legacy.”*
 - Tactical Infrastructure (TI) also includes gates; roads, bridges and boat ramps; drainage structures and grates; lighting and electrical systems; and vegetation and debris removal.

Sector	Pedestrian Fence				Vehicle Fence
	Primary	Secondary	Tertiary	TOTAL PF	TOTAL VF
Big Bend (BBT)	(b) (7)(E)				
Del Rio (DRT)					
El Centro (ELC)					
El Paso (EPT)					
Laredo (LRT)					
Rio Grande Valley (RGV)					
San Diego (SDC)					
Tucson (TCA)					
Yuma (YUM)					
TOTAL					



Maps – Current Fence, California



Please Note: This is a high level view of proposed requirements refinements of geospatial lines in progress



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Maps – Current & Proposed Fence, California

(b) (7)(E), (b) (5)



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Maps – Current Fence, Arizona



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Maps – Current & Proposed Fence, Arizona

(b) (7)(E), (b) (5)



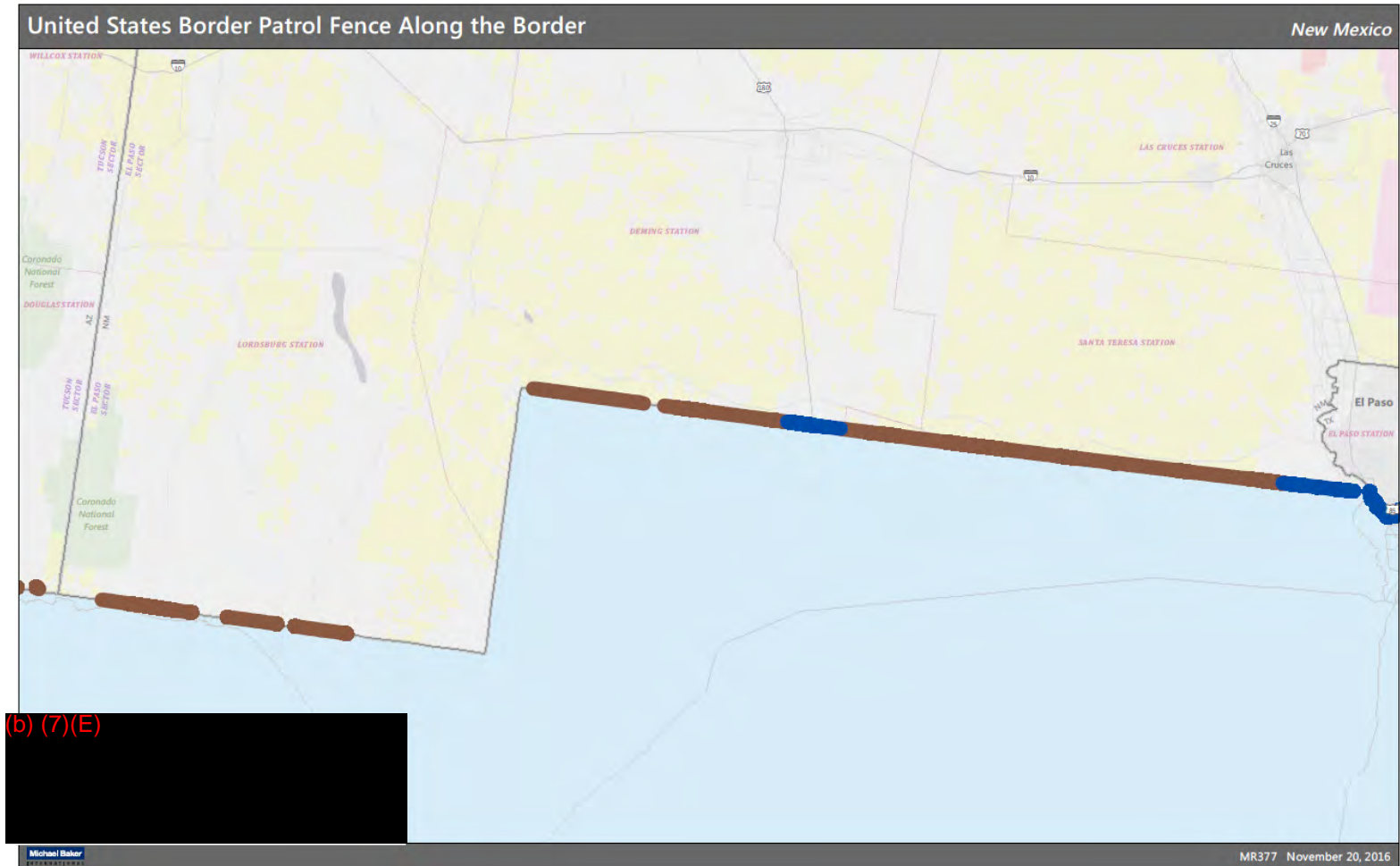
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Maps – Current Fence, New Mexico



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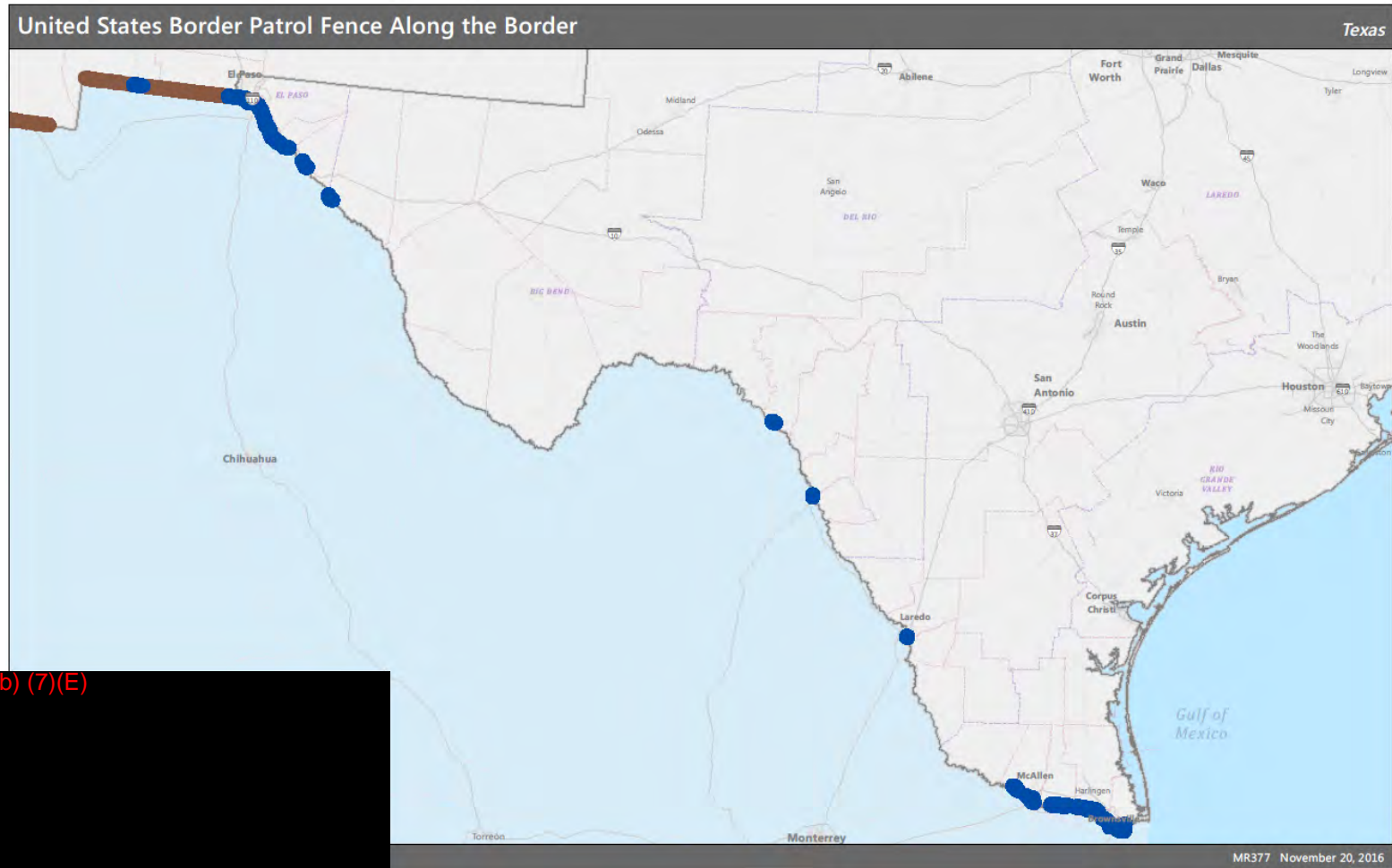
Maps – Current & Proposed Fence, New Mexico

(b) (7)(E), (b) (5)





Maps – Current Fence, Texas



Please Note: This is a high level view of proposed requirements refinements of geospatial lines in progress



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Maps – Current & Proposed Fence Fence, Texas

(b) (7)(E), (b) (5)



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Maps – Current & Proposed Fence Fence, Washington

(b) (7)(E), (b) (5)



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Maps – Proposed Fence, Idaho

(b) (5)



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Maps – Current & Proposed Fence, Montana

(b) (7)(E), (b) (5)



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Maps – Proposed Fence, New York

(b) (5)





Maps – Proposed Fence, Vermont

(b) (5)



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Maps – Proposed Fence, New Hampshire

(b) (5)



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Maps – Proposed Fence, Maine

(b) (5)





Proposed New Fencing

(b) (5)

(b) (5)



(b) (5)

(b) (5)



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All Fence Requirements – Primary, PF & VF

Sector	Existing VF	New Miles VF	ROM (-50/+100) Acquisition Cost VF	Existing Primary PF	New Miles Primary PF	ROM (-50/+100) Acquisition Cost Primary PF
Northern Border Total	(b) (7)(E)	(b) (7)(E)	\$ (b) (5)	(b) (7)(E)	(b) (7)(E)	\$ (b) (5)
BLW	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
BUN	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
DTM	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
GFN	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
HLT	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
HVM	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
SPW	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
SWB	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
Southwest Border Total	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
BBT	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
DRT	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
ELC	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
EPT	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
LRT	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
RGV	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
SDC	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
TCA	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
YUM	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$
Grand Total	(b) (7)(E)	(b) (7)(E)	\$	(b) (7)(E)	(b) (7)(E)	\$





All Fence Requirements – Replacement PF & Secondary PF

Sector	Replacement Miles PF	ROM (-50/+100) Acquisition Cost Replacement PF	Existing Secondary PF	New Miles Secondary PF	ROM (-50/+100) Acquisition Cost Secondary PF	Existing Tertiary PF
Northern Border Total	(b) (7)(E)	\$ (b) (5)	(b) (7)(E)	(b) (7)(E)	\$ (b) (5)	(b) (7)(E)
BLW		\$			\$	
BUN		\$			\$	
DTM		\$			\$	
GFN		\$			\$	
HLT		\$			\$	
HVM		\$			\$	
SPW		\$			\$	
SWB		\$			\$	
Southwest Border Total		\$			\$	
BBT		\$			\$	
DRT		\$			\$	
ELC		\$			\$	
EPT		\$			\$	
LRT		\$			\$	
RGV		\$			\$	
SDC		\$			\$	
TCA		\$			\$	
YUM		\$			\$	
Grand Total		\$			\$	





Border Fence Photos – Legacy for Replacement

Pedestrian Fence – Bollard & Legacy



Pedestrian Fence – Legacy

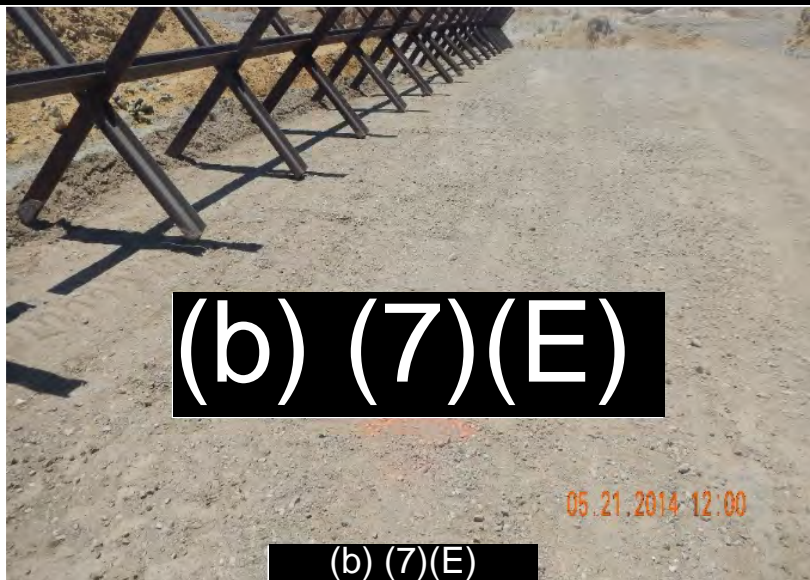




Border Fence Photos – VF Designs

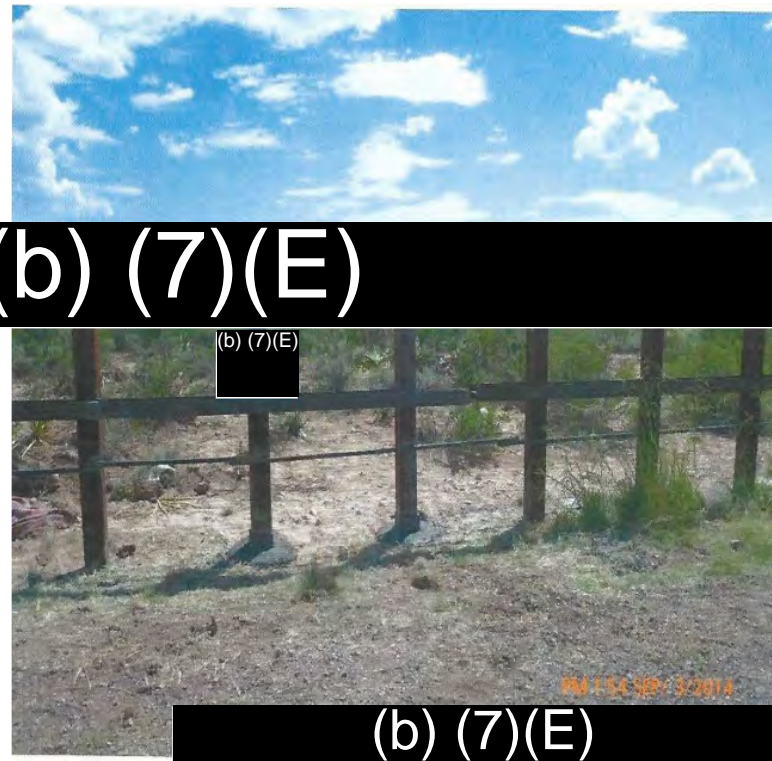
Vehicle Fence – Normandy

(b) (7)(E)



Vehicle Fence – Post/Rail

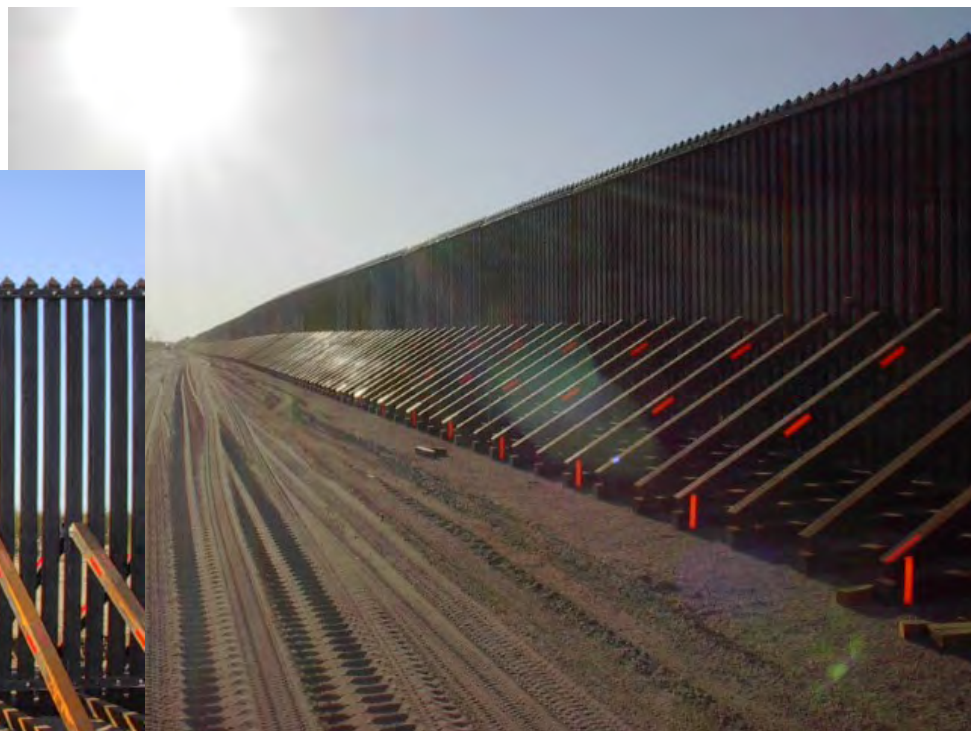
(b) (7)(E)





Border Fence Photos – Floating Fence Design

Pedestrian Fence – Floating Fence – El Centro Sector





Border Fence Photos – Preferred PF Design

Pedestrian Fence – PV-1 Bollard Tucson Sector



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Border Fence Photos – Preferred PF Design

Pedestrian Fence – PV-1 Bollard Tucson Sector



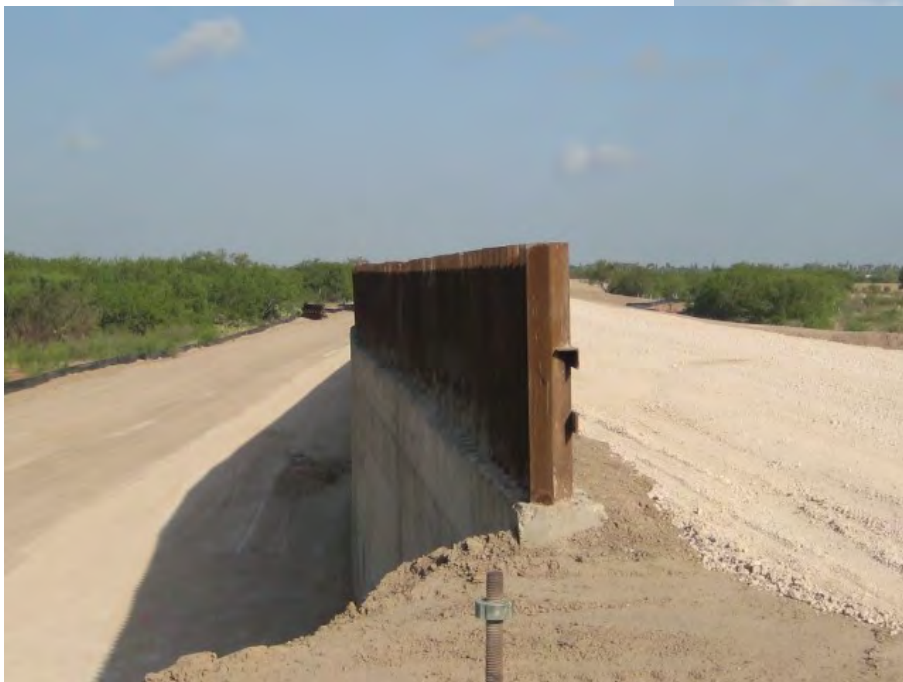
Pedestrian Fence – PV-1 Bollard Yuma Sector





Border Fence Photos – Levee Wall

Pedestrian “Flevee” – Fence on Levee





Approach to Fence Construction

- **Costs to Construct Primary PF (same for fence replacement costs)**

- On average, cost to construct primary pedestrian or replace primary pedestrian fence is approximately (b) (5) per mile.
- Estimate is a rough order of magnitude (-50/+100) and includes project planning and oversight, environmental planning and compliance, environmental mitigation, real estate planning and acquisition, staffing and human capital requirements, design and construction.

- **Cost to Construct Secondary PF**

- On average, cost to construct secondary PF is approximately (b) (5) per mile.
- Estimate is a rough order of magnitude (-50/+100) and includes project planning and oversight, environmental planning and compliance, environmental mitigation, real estate planning and acquisition, staffing and human capital requirements, design and construction.

- (b) (5)

- **Costs to Construct VF**

- On average, cost to construct vehicle fence fence is approximately (b) (5) per mile.
- Estimate is a rough order of magnitude (-50/+100) and includes project planning and oversight, environmental planning and compliance, environmental mitigation, real estate planning and acquisition, staffing and human capital requirements, design and construction.



Approach to Fence Construction

- Legal Considerations

(b) (5)



Approach to Complete Fence Construction

- **Government Furnished Material (GFM) and Supply Chain:**

- The Buy American Act restricts the purchase of supplies that are not domestic products requiring 50% of the components to be produced in the U.S.
 - Exceptions include non-availability and unreasonable costs. In order to purchase steel at a reasonable cost, the CBP Head of Contracting Activity (HCA) will need to utilize FAR Part 25.2 to make a determination on cost reasonableness. Without a determination of cost reasonableness, there is a high risk of extremely high costs for steel.
- In order to ensure steel availability on time, at a lower cost and to avoid contractors competing for materials, CBP will establish a Supply Chain Management contract to purchase and deliver steel to the sites. Contract will be similar to the Boeing contract utilized during the prior fence construction programs.

- **Procurement**

- CBP continues to work with its service providers to establish Multiple Award Task Order Contracts (MATOC) and Indefinite Delivery Indefinite Quantity (IDIQ) Contracts to allow for an expedited contract award process for fence construction. Currently the existing contract vehicles allow for (b) (5) in capacity for design and (b) (5) in capacity for construction.



- Additional staffing will be required in all program areas to meet the demands of fence construction while still maintaining current programs
 - Additional workload specifically in the areas of real estate, environmental, engineering, financial management, communications and reporting, project management, and support services will require additional staff within the program office and its parent organizations.
 - (b) (5)
- To meet additional staffing requirements, staff support contracts will need to be put in place and an expedited hiring process for hiring federal employees needs to be prioritized and completed as soon as possible.
- (b) (5)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- Majority of fence requirements up to this point were for legacy fence replacement





Border Fence Background

- Section 102(b) of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), as amended, authorizes the Department of Homeland Security (DHS) to construct border infrastructure, including fencing, in locations where such infrastructure would be most practical and effective in deterring illegal entry on the southwest border.
- The purpose of border fence construction is to provide persistent impedance to illegal cross-border activity, which offers Border Patrol agents more time to respond to and resolve threats. (b) (7)(E)
(b) (7)(E)
- To date, CBP complet (b) (5) miles of primary pedestrian border: approx (b) (5) miles of pedestrian fence and (b) (7) miles of vehicle fencing along the southwest border: approx (b) (5) miles of vehicle fence at the cost of approximately (b) (5).
- It is important to note that tactical infrastructure (TI) also includes roads; gates and bridges; drainage structures and grates; lighting and electrical systems; vegetation and debris removal; and tower real property, construction and maintenance.



Road Requirements

Sector	Existing All Weather Roads	New Road Miles	ROM (-50/+100) Acquisition Cost New Roads	Road Repair Miles*	ROM (-50/+100) Repair Cost New Roads
SDC	(b) (7)(E)	(b) (7)(E)	(b) (5)	(b) (7)(E)	\$ (b) (5)
ELC					\$ (b) (5)
YUM					\$ (b) (5)
TCA					\$ (b) (5)
EPT					\$ (b) (5)
BBT					\$ (b) (5)
DRT					\$ (b) (5)
LRT					\$ (b) (5)
RGV					\$ (b) (5)
BLW					\$ (b) (5)
SPW					\$ (b) (5)
HVM					\$ (b) (5)
GFN					\$ (b) (5)
DTM					\$ (b) (5)
BUN					\$ (b) (5)
SWB					\$ (b) (5)
HLT					\$ (b) (5)
					\$ (b) (5)





Road Considerations

- CBP manages an inventory of over 5,100 miles of roads identified by the U.S. Border Patrol for maintenance.
 - Roads are utilized for operational requirements include patrol and drag roads. Additionally, these roads provide access to tactical infrastructure including fence and boat ramps.
- CBP is currently in the process of obtaining both real estate access and environmental clearance to ensure maintenance can be conducted on these roads.
 - As of November 2016, 1,509 miles are fully cleared for maintenance and the remaining 3,619 miles are in the process of acquiring both real estate access and environmental clearance. CBP is in the process of acquiring real estate access and completing environmental clearances on the remaining 3,619 miles.
- The average cost to construct new roads is currently estimated at (b) (5)
 - Estimate is a rough order of magnitude (-50/+100) and includes project planning and oversight, environmental planning and compliance, environmental mitigation, real estate planning and acquisition, staffing and human capital requirements, design and construction.
- The recurring average cost to maintain existing roads is (b) (5) per mile, per year.
 - Estimates for "recurring costs" are rough order of magnitude (-50/+100) and reflect average maintenance costs per mile of road plus environmental compliance and staffing and human capital requirements.



Other Critical TI Requirements

- **Carrizo Cane Removal**

- Method: Mechanical with herbicide
- Required in:
 - All Laredo
 - All Del Rio
 - Some RGV
 - Some El Centro

- **Boat Ramps**

- RGV – 17
- LRT – TBD
- DRT – TBD



Current Tactical Infrastructure Unfunded Requirements

- Currently identified requirements from USBP that have been documented by FM&E are listed below. USBP is currently developing their full requirements list to provide to CBP leadership.
 - RGV (b) (7)(E) Phase 2, (b) (5): (b) (7)(E).
 - Rough Order of Magnitude (ROM) includes approximately (b) (5) in real estate costs.
 - RGV Fence Segments O-1 – O-3, (b) (5) Project includes the construction of (b) (7)(E) miles of primary pedestrian fence. (Note, this mileage in
 - ROM cost estimate includes (b) (7)(E) miles of roads to access the fence segments.
 - Assumes (b) (7)(E) bollard fence design and costs associated with real estate acquisition are not included in this estimate.
 - ELC Fence Repair / Panel Replacement, (b) (5) Project includes replacement and repair of approximately (b) (7)(E) of primary pedestrian fence.
 - YUM (b) (7)(E) Sand Dunes All Weather Road Improvement, (b) (5): Project includes (b) (7)(E) of road improvements.
 - TCA Organ Pipe Maintenance and Repair, (b) (5): Requirement includes maintenance on the Organ Pipe Cactus National Monument.