

CHAPTER 2: ALTERNATIVES ANALYSIS

2.1 ALTERNATIVES DEVELOPMENT PROCESS

The alternatives development process for the proposed Loop 375 Border Highway West Extension Project has occurred in three distinct phases to date (See **Table 2-1**). The process established the basis to select alternatives that best serve the project’s Purpose and Need and avoid or minimize environmental impacts.

During the alternatives development and decision making process, a full range of alternatives were analyzed, including the No-Build Alternative. **Chapter 2** summarizes the alternative screening and evaluation process, based on environmental issues, traffic, engineering, public involvement, and agency coordination.

Table 2-1: Alternatives Analysis Timeline

Year	Phase	Activities
2007 – 2008	Phase I-A	<ul style="list-style-type: none"> • Notice of Intent (NOI) published in <i>Federal Register</i> on September 7, 2007 and in <i>Texas Register</i> on September 12, 2007 • Project limits: State Highway (SH) 20 to United States Highway (US) 54 • Project length approximately 16 miles • Developed Universe of Alternatives and Recommended Preliminary Alternatives • Held Agency and Public Scoping Meeting #1 • The proposed project was included as a toll project in the region’s Comprehensive Mobility Plan (CMP)
2008-2010	Project Placed on Hold	No activities occurred during development negotiations between the Camino Real Regional Mobility Authority (CRRMA) and the Texas Department of Transportation (TxDOT)
2010	Phase I-B	<ul style="list-style-type: none"> • Project restarted • Developed additional Recommended Preliminary Alternatives to reflect availability of Burlington Northern Santa Fe Railway Company (BNSF) rail yard, American Smelting and Refining Company (ASARCO), and CEMEX properties for alternative alignments • Held three alternatives workshops with Federal Highway Administration (FHWA) and TxDOT

Table 2-1: Alternatives Analysis Timeline

Year	Phase	Activities
2011	Phase II	<ul style="list-style-type: none"> • Changed funding from federal to state • Divided Phase I study area into three independent utility projects <ul style="list-style-type: none"> ○ I-10 Collector-Distributor Project (SH 20 (Mesa Drive) to Racetrack Drive) (Federal Categorical Exclusion (CE)) ○ Spur 1966 (US 85 (Paisano Drive) to Schuster Avenue) (State CE) ○ Loop 375 Border Highway West Extension Project (Racetrack Drive@US 85/NM 273) to US 54) (State Environmental Impact Statement (EIS)) • Rescinded Federal NOI and published State NOI • Developed Recommended Reasonable Alternatives • Presented all Recommended Preliminary Alternatives and Recommended Reasonable Alternatives at Agency and Public Scoping Meeting #2 • Reduced study area to reflect state funded project limits (Racetrack Drive to Park Street, 8 miles) and elimination of Preliminary Alternatives through downtown El Paso due to public and agency coordination as well as fatal flaws
2012	Phase III	<ul style="list-style-type: none"> • Revised eastern project limit back to US 54 to allow for new interchange connecting existing Loop 375 to US 85 (Paisano Drive) at Coles Street in response to agency and public comments after Agency and Public Scoping Meeting #2 • Published revised NOI in the <i>Texas Register</i> • Presented changes at Public Scoping Meeting #3 <ul style="list-style-type: none"> ○ Project limits (Racetrack Drive to US 54) ○ Access changes in the vicinity of Racetrack Drive and downtown El Paso ○ Revised Reasonable Alternatives

2.2 PHASE I-A (2007-2008)

2.2.1 Universe of Alternatives/Preliminary Alternatives

The universe of alternatives was developed using recommendations from the 1999 *Interstate Highway 10 (I-10) Major Investment Study (MIS)*, which included a full range of multi-modal alternatives including the No-Build Alternative, Transportation Systems Management (TSM), localized improvements, addition of I-10 express lanes, improving/connecting local arterials, tunnels, mass transit, and bicycle/pedestrian routes. Previous studies are summarized in **Appendix M**.

Following the recommendations outlined in the MIS, the 2005 *Loop 375 Border Highway West Extension Route Study* developed a connection of Doniphan Drive and US 85 (Paisano Drive) to Loop 375 south of downtown El Paso to serve as the parallel alternate route to I-10. At the time, there was only one constrained border corridor for the parallel alternate route. The one corridor led to a limited set of preliminary alternatives consisting of non-tolled, elevated, and depressed options.

The 2006 *Southern Relief Route Mobility and Funding Study* was initiated to meet legislative requirements and evaluated a conceptual toll facility along the Loop 375 corridor from the I-10/Loop 375 Americas Interchange to the New Mexico state line to serve as a relief route for I-10. The proposed project was included in the limits of the study. The toll feasibility study

identified a potential to support toll bonds. The proposed project was carried forward under an Environmental Impact Statement (EIS) as a tolled facility, due to limited availability of transportation funding. The project team started with the limited set of preliminary alternatives presented in the 2005 study and developed tolled preliminary alternatives under the Loop 375 Border Highway West Extension Project EIS from SH 20 (Mesa Drive) to US 54.

The non-tolled (**Figure 2-1**) and tolled (**Figure 2-2**) options described above served as the recommended preliminary alternatives within the constrained border corridor and were presented, along with the universe of alternatives, at Agency and Public Scoping Meeting #1 (October 23, 2007 and October 30, 2007).

Each of the preliminary alternatives shown at Agency and Public Scoping Meeting #1 was evaluated on the following criteria:

- Meets Purpose and Need
- Provides parallel alternate to I-10
- Minimizes environmental impacts

It was determined from the alternatives analysis that the most viable solution to meet the above criteria was to carry forward the alternatives in the 2005 and 2006 studies, which were the Doniphan/Paisano/Loop 375 Alternatives from the 1999 MIS. The No-Build Alternative was carried forward for a baseline comparison. All other alternatives from the universe of alternatives in the 1999 MIS were not carried forward as they did not meet the above criteria.

Figure 2-1: Non-Tolled Concepts (2007)

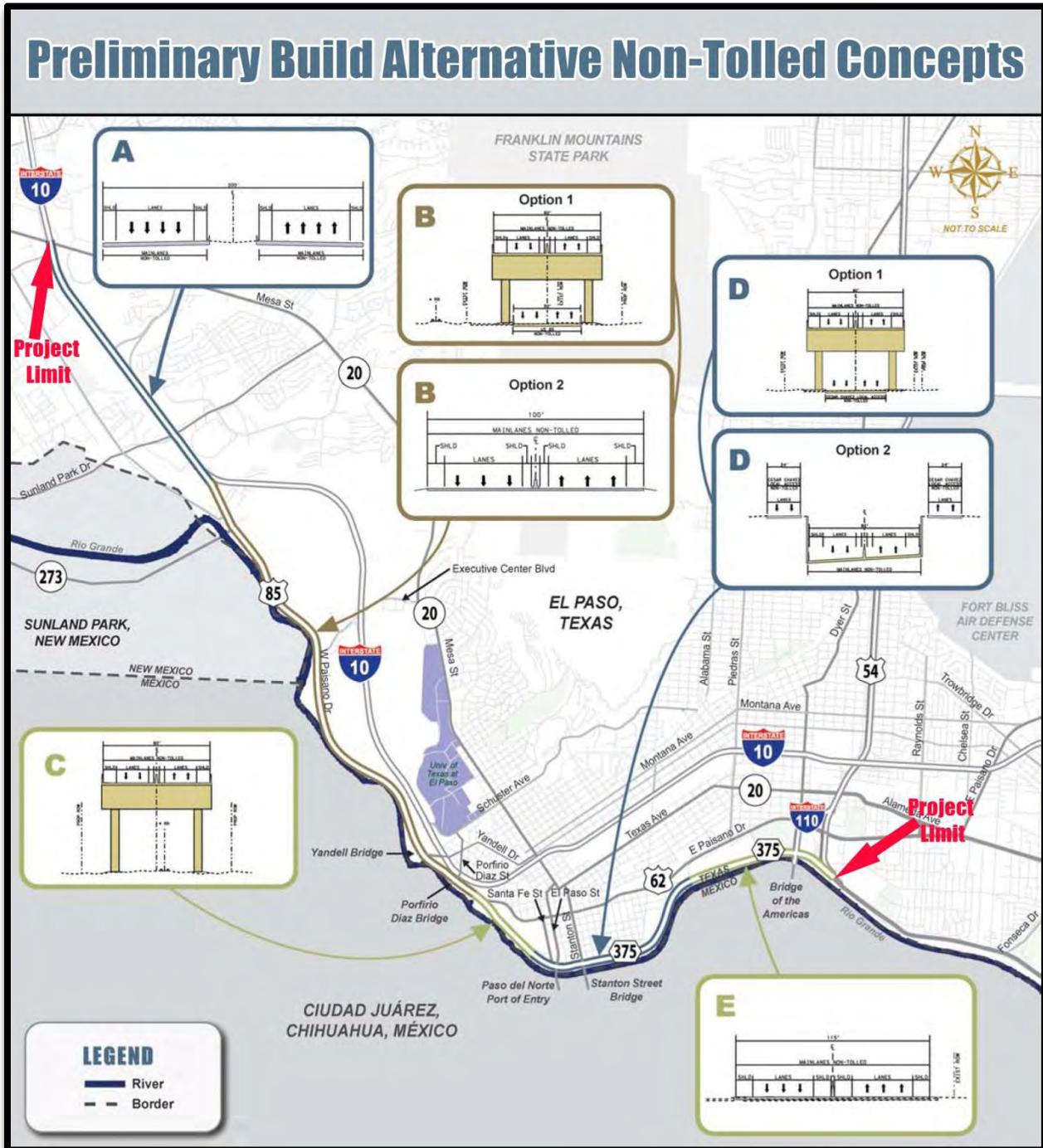
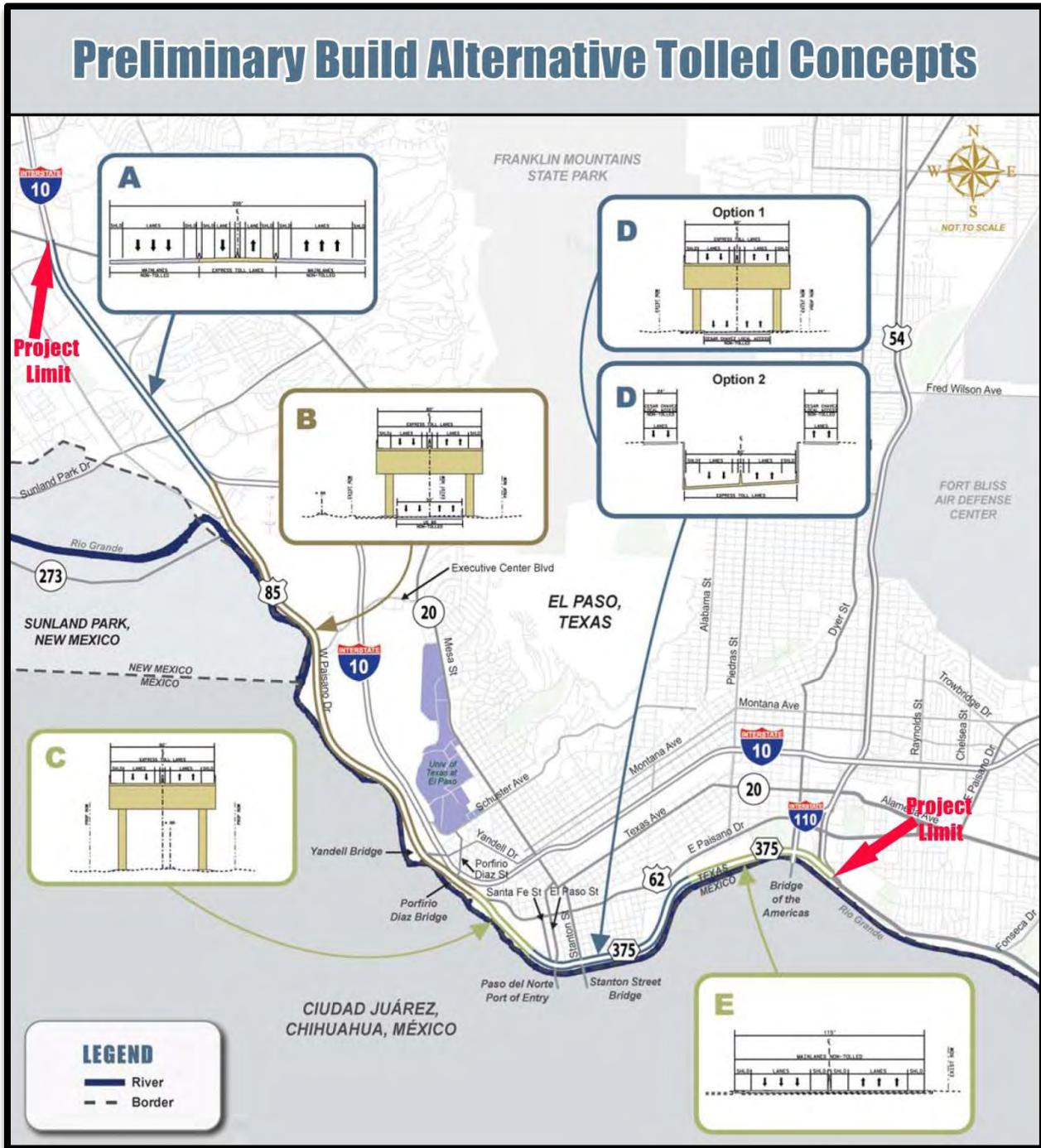


Figure 2-2: Tolled Concepts (2007)



2.3 PHASE I-B (2010)

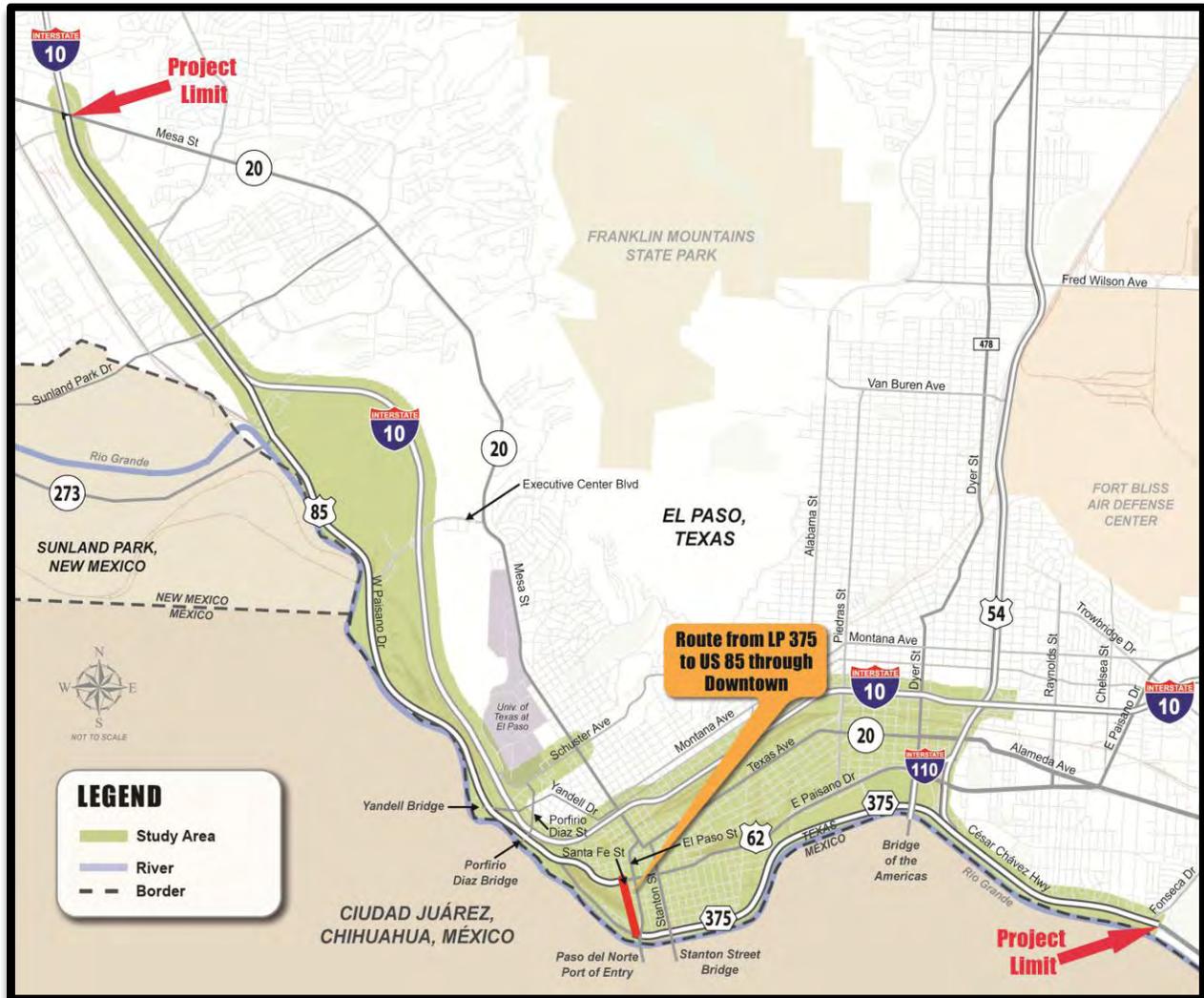
2.3.1 Preliminary Alternatives

The preliminary alternatives identified in Phase I-A were confined to a single corridor paralleling the U.S.-Mexico international border. The options straddled much of existing US 85 (Paisano Drive) due to geographical limitations and to avoid impacting the American Smelting and Refining Company (ASARCO) and CEMEX properties.

In 2008, the proposed project was placed on hold while TxDOT, the City of El Paso, and the El Paso Metropolitan Planning Organization (MPO) addressed planning and development funding agreements with the Camino Real Regional Mobility Authority (CRRMA). The 2008 Comprehensive Mobility Plan (CMP) included the proposed project as a toll facility as part of the Southern Relief Route.

In 2010, the eastern project limits were changed to Fonseca Drive to transition the project into the existing Loop 375 (**Figure 2-3**). These project limits met the requirements for logical termini based on connections with SH 20 at Mesa Drive and US 54 by accommodating the transitions into the existing facilities (Mesa Drive for western terminus and Fonseca Drive just past US 54 for the eastern termini and taper into the existing Loop 375). With the new opportunity to redevelop the former ASARCO property, the City of El Paso initiated a “Plan and Code” study as part of their ongoing City of El Paso Comprehensive Plan for the former ASARCO facility and CEMEX properties in April 2010. The redevelopment plan provided TxDOT the opportunity to look at additional alternative alignments for the proposed project.

Figure 2-3: 2010 Project Study Limits: SH 20/Mesa Street to Fonseca Drive



Alternatives Numbering System

Since the CMP was adopted as an official public document, the numbering system for the included projects was carried over for the Border Highway West recommended preliminary alternatives. The CMP has the Loop 375 Border Highway West Extension Project limits divided into two sections – Section 13 and Section 14. The divide between 13 and 14 is the proposed Spur 1966 project (formerly named the Schuster Avenue Extension in the CMP).

Section 13 is the eastern portion of the proposed project. The limits are the proposed Spur 1966 project to Fonseca Drive. From Spur 1966 to downtown, the section is proposed for new alignments up to Santa Fe Street/Paso Del Norte international bridge and would be tolled.

Section 14 is the western portion of the proposed project. The limits are from the interchange between I-10 and US 85 (Paisano Drive) on the west side to the proposed Spur 1966 project. This portion of the project would be tolled. The primary difference between the preliminary alternatives is within the vicinity of the CEMEX and ASARCO properties.

The project team developed and evaluated 15 recommended preliminary alternatives based on the 2010 expanded study area. Various design options were analyzed including at-grade (boulevard, super-street, etc.), elevated, depressed, and tunnels under downtown. The alternatives also included options for interchanges at major cross-streets and the ability to maintain access to existing facilities.

Each recommended preliminary alternative, including the No-Build Alternative, was evaluated using a set of environmental, traffic, and engineering criteria along with public and agency input. The results of the evaluation and reasons why certain alternatives were not carried forward are presented in **Table 2-2**. Refer to **Exhibit 2-1** (2010 Preliminary Alternatives) for the location of the alternatives within the study area.

The following section details each of the recommended preliminary alternatives.

2.3.1.1 Section 13 Alternatives

Alternative 13a (Deep-Bore Tunnel Option 1)

Alternative 13a utilizes a deep-bore tunnel to cross downtown under US 85 (Paisano Drive) and East Delta Avenue. Elevated on either side of downtown, the alternative would drop below-grade in the existing Burlington Northern Santa Fe Railway Company (BNSF) rail yard on the west side of downtown, and between Cotton Street and existing Loop 375 on the east side of downtown. Portions of the BNSF rail yard west of downtown would need to be relocated to accommodate the alternative. East Delta Avenue would also have to be realigned to accommodate the transition between depressed and elevated sections. Aesthetic, access, and displacement impacts to downtown are minimized due to the deep bore tunnel, but the cost of construction would be high.

Alternative 13b (Trench through Downtown)

The alternative uses a trench section in the vicinity of the Santa Fe Street and Stanton Street international bridges to reduce traffic impacts. The transitions between elevated and depressed sections would occur in the BNSF rail yard on the west side of downtown, and east of the Stanton Street international bridge on the south side of downtown. The alternative joins the alignment of existing Loop 375 west of Park Street and remains elevated over existing Loop 375 east of downtown. Aesthetic and displacement impacts are anticipated with the alternative as it curves across the southern portion of downtown.

Alternative 13c (Deep-Bore Tunnel Option 2)

Alternative 13c is nearly identical to Alternative 13a, except it follows US 85 (Paisano Drive) through downtown instead of following East Delta Avenue. Displacement impacts are anticipated to be high in the transition regions between elevated and depressed sections.

Alternative 13d (Existing Loop 375/Border)

This alternative was derived from the alternative identified as “Alternative D2” in the *Loop 375 Cesar Chavez (Border Highway West) Draft Preliminary Engineering Report* (July 2008). The alignment follows the Rio Grande and the U.S.-Mexico international boundary and then follows the existing Loop 375 alignment to Coles Street. Displacement impacts would be minimal due to the use of undeveloped land and straddling existing Loop 375 south of downtown.

Alternative 13e (Downtown Depressed Couplets)

Alternative 13e was developed as an alternative to 13a, 13c, and 13d to reduce displacement and aesthetic impacts to downtown by utilizing a couplet of depressed roadways in the central business district. Existing capacity along Father Rahm Avenue and Sixth Avenue would be maintained by cantilevered local roadways over the proposed facility. The transitions between elevated and depressed sections would occur in the BNSF rail yard on the west side of downtown and in the Guillen Middle School athletic fields on the east side of downtown. Displacement impacts would be high in the transition regions between elevated and depressed sections.

Alternative 13f (UPRR Yard)

This alternative is similar to Alternative 13d, except the alignment is shifted to the south of existing Loop 375 and is at-grade through a portion of the Union Pacific Railroad (UPRR) rail yard and crosses under the Santa Fe Street and Stanton Street international bridges. The alternative has minimal displacement impacts to downtown buildings, but requires relocation of existing UPRR capacity within the yard.

2.3.1.2 Section 14 Alternatives

Alternative 14a (US 85 (Paisano Drive))

The alternative uses the same alignment as the proposed alternative for Sections A and B in the *Loop 375 Cesar Chavez (Border Highway West) Draft Preliminary Engineering Report* (July 2008). The alternative is elevated over existing US 85 (Paisano Drive) along the entire length. By utilizing the existing US 85 (Paisano Drive) alignment, the alternative minimizes impacts to the proposed redevelopment of the CEMEX and ASARCO facilities. The alternative requires the realignment of Executive Center Boulevard to allow the proposed project to fit under the UPRR truss bridges.

Alternative 14b (Parallel to I-10/ASARCO)

The alternative follows the I-10 centerline alignment (center median), then jumps to the I-10 southern right-of-way (ROW) approximately 2500 feet (ft) east of the I-10/US 85 (Paisano Drive) Interchange. As the existing I-10 and US 85 (Paisano Drive) alignments converge on the east side of the ASARCO property, 14b transitions to elevated over US 85 (Paisano Drive). The alternative reduces the area available for proposed redevelopment of the CEMEX and ASARCO properties, but does not divide the properties. Multiple complex rail crossings would be required.

Alternative 14c (I-10 Median/ASARCO)

This alternative is similar to Alternative 14b, but follows the I-10 alignment in the center median from the interchange with US 85 (Paisano Drive) to Executive Center Boulevard. After crossing Executive Center Boulevard, the alternative then transitions to the ASARCO property, following the UPRR railroad lines on the north side of the property. Like 14b, the alternative follows US 85 (Paisano Drive) east of the ASARCO property. The alternative reduces the area available for proposed redevelopment of the ASARCO property and requires complex crossings of the UPRR rail lines.

Alternative 14d (I-10 Median/CEMEX/ASARCO)

This alternative is similar to Alternative 14b, but leaves the I-10 centerline (center median) approximately 2500 ft east of the I-10/US 85 (Paisano Drive) Interchange near Sunland Park and traverses through the CEMEX property. The alternative transitions back to the southern I-10 ROW after crossing Executive Center Boulevard, then follows US 85 (Paisano Drive) east of

the ASARCO property the same as 14b and 14c. The alternative has numerous rail crossings. The alternative reduces the area available for proposed redevelopment of the CEMEX property and requires complex crossings of the UPRR rail lines.

Alternative 14e (US 85 (Paisano Drive)/ASARCO)

This alternative is similar to Alternative 14a, but diverges from the US 85 (Paisano Drive) west of Executive Center Boulevard and traverses through the ASARCO property. The alternative crosses nearly parallel to and under the UPRR rail lines on the ASARCO property, requiring over 10 complex and expensive crossings of the UPRR rail lines. After leaving the ASARCO property, the alternative follows the US 85 (Paisano Drive) alignment. The alternative reduces the area available for proposed redevelopment of the ASARCO property.

Alternative 14f (US 85 (Paisano Drive)/CEMEX/ASARCO) – Option 1

This alternative is similar to Alternative 14a, but leaves the US 85 (Paisano Drive) alignment west of the existing CEMEX service drive intersection and traverses through the CEMEX property. It crosses Executive Center Boulevard near I-10, and follows the I-10 southern ROW of 14b and 14d through the ASARCO property. The alternative would form a barrier between the CEMEX and ASARCO properties and would have potential impacts on the proposed redevelopment of both properties. Alternative 14f has the same railroad impacts as alternatives 14b, 14c, and 14d.

Alternative 14g (US 85 (Paisano Drive)/CEMEX/ASARCO) – Option 2

Alternative 14g follows the same alignment as 14f east of Executive Center Boulevard. Largely on new alignment, the alternative more severely divides the CEMEX property than 14f, impacting the proposed redevelopment of the CEMEX and ASARCO properties. The alternative allows for several at-grade railroad crossings versus the more expensive elevated crossings in the other alternatives. Alternative 14g is the shortest of the Section 14 alternatives.

Alternative 14h (I-10 Median/ASARCO) – Option 1

The alternative is similar to Alternative 14c, but remains elevated along the centerline (center median) of I-10 until east of the ASARCO property where it crosses over I-10 eastbound lanes and the UPRR railroad lines to follow the US 85 (Paisano Drive) alignment. The use of existing alignments minimizes impacts to the proposed redevelopment of the CEMEX and ASARCO properties, but increases the disruption to traffic during construction. Alternative 14h is the longest and most expensive alternative in Section 14.

Alternative 14i (I-10 Median/ASARCO) – Option 2

The alternative is similar to Alternative 14h, but is at-grade in the I-10 center median instead of elevated. As such, it has similar impacts to the UPRR and the proposed redevelopment of the ASARCO and CEMEX properties as 14h. Alternative 14i is the least expensive of all the Section 14 alternatives. Construction of 14i would result in major traffic disruptions to I-10.

Table 2-2: Preliminary Alternatives (2010)

PRELIMINARY ALTERNATIVES *Note: 16 miles	Environmental Evaluation Criteria																								Traffic and Engineering Evaluation Criteria					Result	Reason			
	Potential Relocations	Residential	Residential within 500'	Commercial	Mixed Use	Public Housing	Churches	Cemeteries	Schools	Schools	Flood-plains	Parklands	Archeological Sites	Potential Historic in Area of Potential Impact (Texas Historical Commission markers, Potential Historic Sites, Historic Districts)	Franklin Canal/ American Canal	Hazardous Materials	ASARCO	Border Security Sites	Border Security Sites	Potential IBWC Crossing	Env. Justice Community	Sensitive Air Receptors	Potential Threatened/ Endangered Species Habitat within 500'	Major Utilities	Railroad	Rail yard	Total Length	New ROW	Parcels			Estimated Construction Cost	Maintain Same Number of Non-tolled Lanes?	
	Units of Measure	#	acres	acres	acres	acres	# of churches	acres	# of schools	acres	acres	acres	# of sites within 300'	# of sites within 150' of ROW	# of crossings	# of sites	acres	acres	# of sites	✓ / X	acres below poverty level	# of receptors	✓ / X	#	# of crossings	acres	miles	acres	# of parcels			\$ Millions	✓ / X	
Section 14 (SH 20 to Schuster)	14a (elevated/at-grade)	2	6.32	71.00	69.69	8.67	0.00	0	0.00	0	0.00	0.67	0.00	3	7, 8, 2	2	0	3.69	0.00	0	✓	79.59	0	✓	8	3	0.28	4.27	4.43	57	\$341	✓	Carried Forward to Reasonable Alternatives	Potential concerns for Border Patrol operations - lighting, fencing, patrol roads, etc.
	14b (elevated/at-grade)	2	6.32	72.08	76.72	7.69	0.00	0	0.00	0	0.00	0.60	0.00	4	6, 8, 2	1	0	3.51	0.00	0	X	80.09	0	✓	3	4	0.66	4.69	17.04	51	\$342	✓	Eliminated	Similar alignment to 14h and 14i
	14c (elevated/at-grade)	2	6.31	81.25	77.53	7.59	0.00	0	0.00	0	0.00	0.59	0.00	4	6, 8, 2	1	1	7.22	0.00	0	X	80.28	0	✓	3	4	0.51	4.74	19.72	47	\$400	✓	Eliminated	Eliminated due to impacts to ASARCO redevelopment
	14d (elevated/at-grade)	3	6.32	71.00	75.76	7.66	0.00	0	0.00	0	0.00	0.60	0.00	4	6, 8, 2	1	0	5.67	0.00	0	X	79.15	0	✓	3	4	0.66	4.62	32.85	51	\$310	✓	Eliminated	Eliminated due to impacts to future development - bisects Cemex property
	14e (elevated/at-grade)	9	6.35	70.98	67.60	8.74	0.00	0	0.00	0	0.00	0.65	0.00	4	6, 9, 2	1	5	13.14	0.00	0	X	79.23	0	✓	9	10	1.69	4.13	22.04	59	\$353	✓	Eliminated	Eliminated due to impacts to ASARCO redevelopment
	14f (elevated/at-grade)	2	6.35	70.98	69.85	8.74	0.00	0	0.00	0	0.00	0.65	0.00	4	6, 8, 2	1	0	5.94	0.00	0	X	81.39	0	✓	7	4	0.82	4.29	16.07	60	\$359	✓	Carried Forward to Reasonable Alternatives	Allows for needed connections to Doniphan and other roadways identified in previous studies
	14g (elevated/at-grade)	5	6.32	71.00	69.38	8.66	0.00	0	0.00	0	0.00	0.60	0.00	4	6, 8, 2	1	4	5.94	0.00	0	X	79.30	0	✓	3	4	0.66	4.25	32.15	55	\$331	✓	Eliminated	Eliminated due to impacts to future development - bisects Cemex property
	14h (elevated/at-grade)	2	6.31	81.24	68.23	16.48	0.00	0	0.00	0	0.00	0.59	0.00	3	6, 7, 2	1	1	0.00	0.00	0	X	79.86	0	✓	3	5	0.01	4.71	4.03	47	\$410	✓	Eliminated	Removed due to shortened project length (state funding)
	14i (elevated/at-grade)	2	6.31	81.25	68.24	16.48	0.00	0	0.00	0	0.00	0.59	0.00	3	6, 7, 2	1	1	0.00	0.00	0	X	79.85	0	✓	3	5	0.01	4.71	4.03	47	\$207	✓	Eliminated	Removed due to shortened project length (state funding)

Table 2-2: Preliminary Reasonable Alternatives (2010), Continued

PRELIMINARY ALTERNATIVES *Note: 16 miles	Environmental Evaluation Criteria																								Traffic and Engineering Evaluation Criteria					Result	Reason			
	Potential Relocations	Residential	Residential within 50'	Commercial	Mixed Use	Public Housing	Churches	Cemeteries	Schools	Schools	Flood-plains	Parklands	Archeological Sites	Potential Historic in Area of Potential Impact (Texas Historical Commission markers, Potential Historic Sites, Historic Districts)	Franklin Canal/American Canal	Hazardous Materials	ASARCO	Border Security Sites	Border Security Sites	Potential IBWC Crossing	Env. Justice Community	Sensitive Air Receptors	Potential Threatened/Endangered Species Habitat within 500'	Major Utilities	Railroad	Rail yard	Total Length	New ROW	Parcels			Estimated Construction Cost	Maintain Same Number of Non-tolled Lanes?	
	#	acres	acres	acres	acres	acres	# of churches	acres	# of schools	acres	acres	acres	# of sites within 300'	# of sites within 150' of ROW	# of crossings	# of sites	acres	acres	# of sites	✓ / X	acres below poverty level	# of receptors	✓ / X	#	# of crossings	acres	miles	acres	# of parcels			\$ Millions	✓ / X	
Section 13 (Schuster to Fonseca)	13a (deep bore tunnel through downtown)	1	11.16	119.28	6.92	0.00	0.00	0	0.00	0	0.00	0.00	0	2, 2, 2	2	0	0.00	0.00	0	X	27.76	3	✓	24	4	1.07	5.49	13.01	17	\$2,150	✓	A portion of the 13a alignment carried forward as 13g (elevated or depressed options)	Removed due to shortened project length (state funding)	
	13b (elevated)	49	18.89	186.84	23.37	5.25	1.31	0	0.00	0	0.00	0.00	0.00	1	0, 2, 2	2	3	0.00	1.18	1	X	65.92	7	✓	5	14	15.20	5.90	24.39	59	\$416	✓	A portion of the 13b alignment carried forward as 13g (elevated or depressed options)	Eliminated due to number of conflicts and potential displacements
	13c (deep-bore tunnel/elevated)	47	20.78	189.93	22.99	7.60	0.02	0	0.00	0	0.00	0.00	0.00	0	2, 2, 1	2	1	0.00	0.00	0	X	60.04	8	✓	29	20	9.96	5.50	15.31	97	\$2,063	✓	Eliminated	Magnitude of cost difference for tunnel option; elevated section is in close proximity to buildings
	13d (elevated or depressed with cantilevered frontage roads)	1	16.72	180.25	20.21	6.38	0.02	0	0.00	0	0.00	5.23	0.00	0	1, 3, 3	3	0	0.00	0.08	1	X	67.90	7	✓	1	12	11.45	6.04	20.82	27	\$452	✓	Carried Forward to Reasonable Alternatives (elevated)	Depressed option eliminated from further study due to potential conflicts
	13e (depressed with cantilevered frontage roads)	7	24.87	239.94	24.12	5.45	0.00	0	0.00	0	0.00	0.00	0.08	1	0, 7, 2	2	1	0.00	0.03	1	X	65.86	9	✓	5	23	15.24	5.70	34.57	84	\$508	X	A portion of the 13e alignment carried forward as 13g (elevated or depressed options)	Removed due to shortened project length (state funding)
	13f (depressed with cantilevered frontage roads)	2	14.39	175.04	20.21	4.07	0.00	0	0.00	1	0.08	2.72	0.00	0	1, 35, 3	3	0	0.00	0.00	0	X	67.91	7	✓	1	19	19.69	6.04	30.45	23	\$396	✓	Eliminated	Would require relocation of international rail yard
No-Build	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0	X	0.00	0	0	0	0	0.00	0.00	0.00	0	\$0	✓	Carried Forward to Reasonable Alternatives	Carried Forward to Compare with Reasonable Alternatives	

Lowest Impact in range of units
 Medium Impact in range of units
 Highest Impact in range of units

2.4 PHASE II (2011) (STATE EIS)

2.4.1 Recommended Reasonable Alternatives

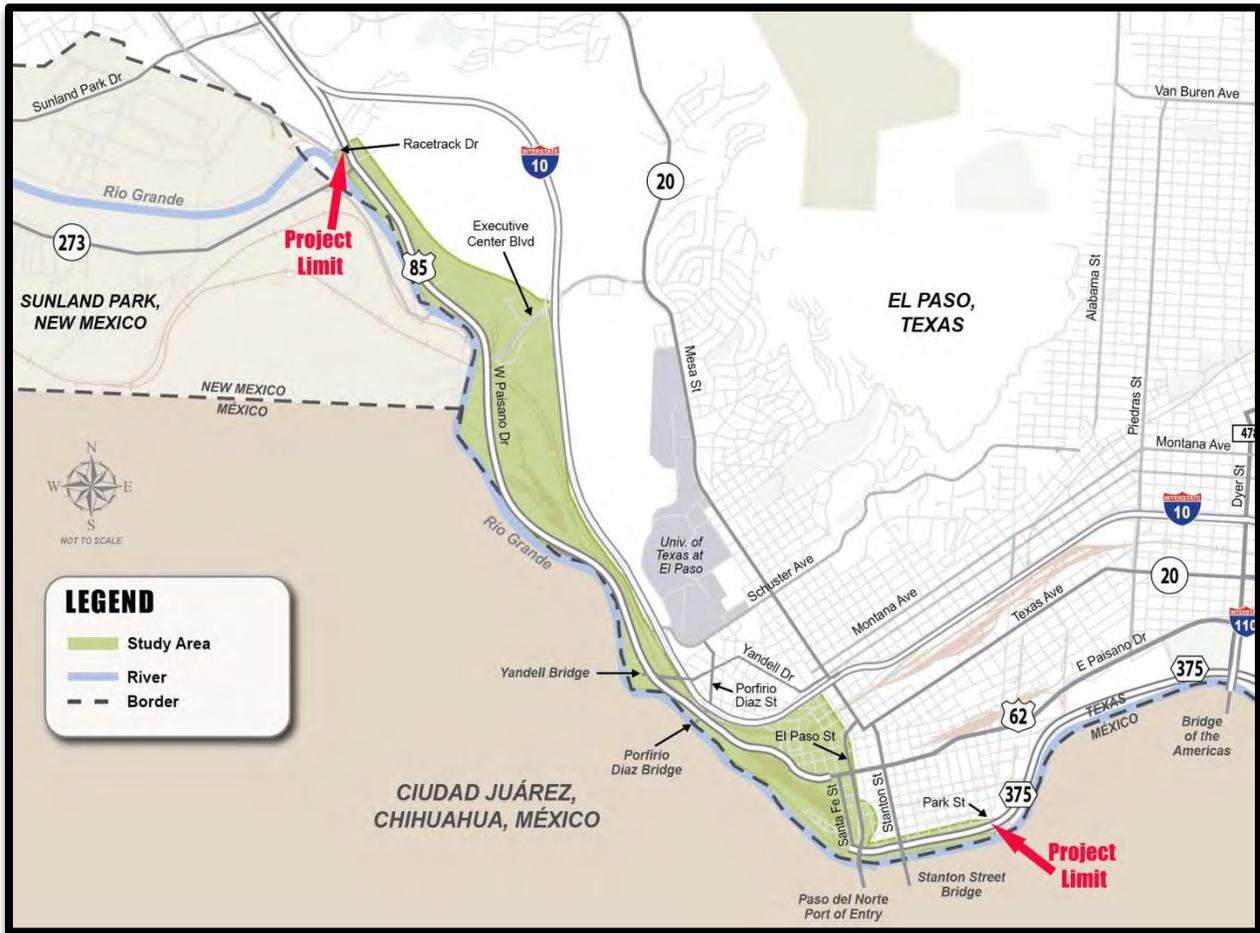
In late 2011, the funding commitment for the proposed project changed from federal to state. The change allowed the Phase I-A and I-B study area to be divided into three independent utility projects that would move forward under separate environmental documents (**Table 2-3** and **Exhibit 2-2**).

Table 2-3: Phase II Independent Utility Projects

Highway	Limits	Phase II Environmental Documentation	Description
I-10/US 85 (Paisano Drive) Interchange Collector-Distributor Project	SH 20 (Mesa Street) to Executive Center Boulevard	Federal Categorical Exclusion (CE)	Construct collector-distributor (C-D) lanes and construct interchange at US 85/ NM 273, with interchange improvements at Mesa Street, Executive Center Boulevard, Sunland Park Interchange, and Resler Drive
Spur 1966 (formerly Schuster Extension Project)	US 85 (Paisano Drive) to Schuster	State Categorical Exclusion	Realign existing Yandell Drive connection across I-10 to connect US 85 (Paisano Drive) to Schuster Avenue inside the UTEP campus.
Loop 375 Border Highway West Extension Project	Racetrack Drive to US 54	State Environmental Impact Statement (EIS)	Construct four-lane expressway – toll facility from Racetrack Drive (at US 85 and NM 273) to US 54.

The western limit of the project was reduced from SH 20 (Mesa Street) to Racetrack Drive at US 85 and NM 273, the logical termini for the I-10/US 85 Interchange Collector-Distributor Project. The eastern limit was changed to Park Street since this was the end of the existing Loop 375 controlled-access facility and the first available entrance into downtown from the east. This reduced the overall project length for the Loop 375 Border Highway West Extension Project from 16 miles to eight miles (later extended to US 54 to include the Coles Street Interchange for a total distance of approximately nine miles) (**Figure 2-4**).

Figure 2-4: 2011 Project Study Limits: Racetrack Drive to Park Street

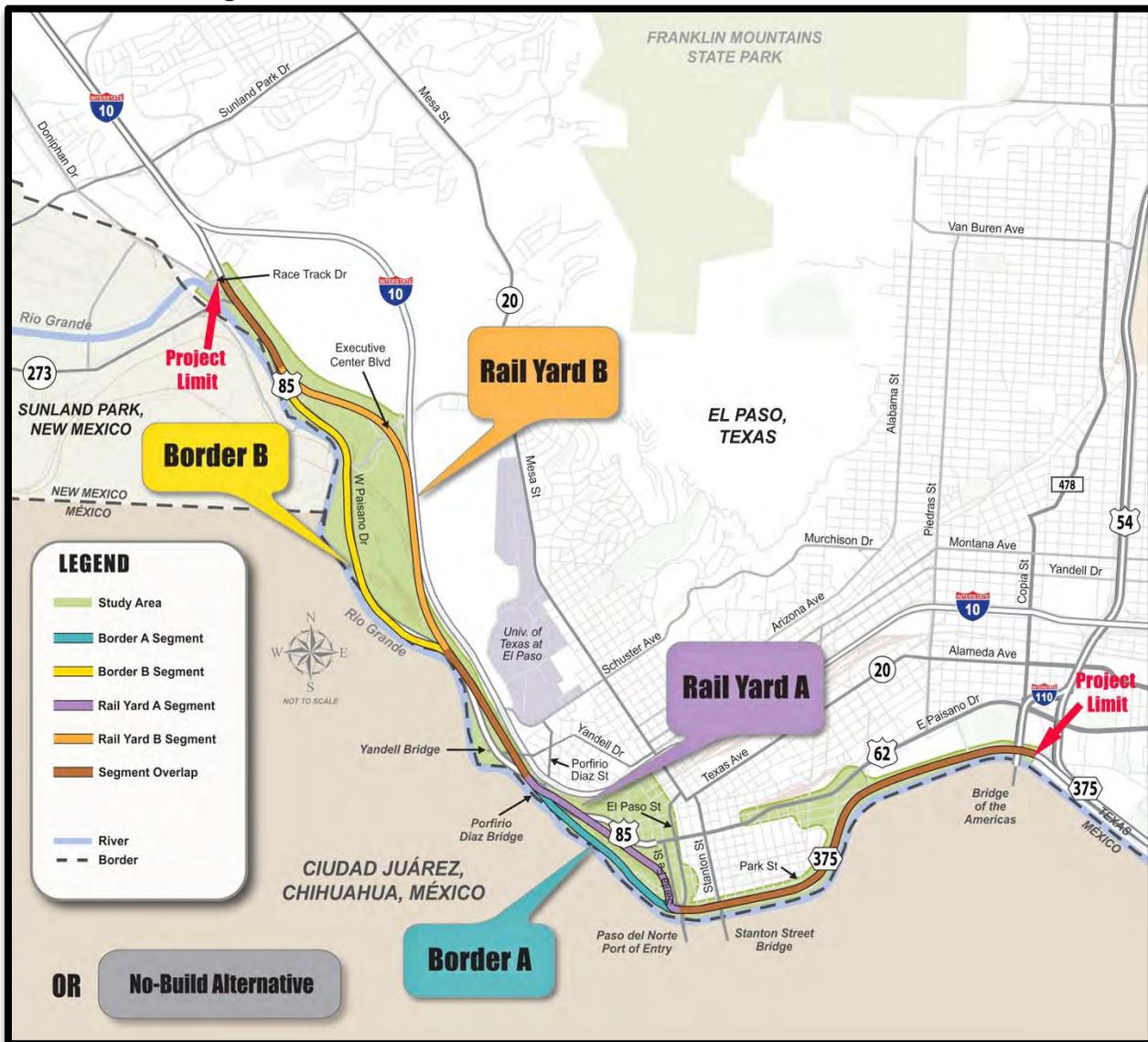


The project team modified the previously identified 15 recommended preliminary alternatives to the revised study area from Racetrack Drive to Park Street and developed four shorter, more concise, recommended reasonable alternatives (two within **Segment 13** and two within **Segment 14**). The naming convention was also modified for easier public and agency comment. The recommended reasonable alternatives now utilize a “Border” or “Rail Yard” nomenclature to identify the location within the study area (**Table 2-4**). **Figure 2-5** shows the location and names of each recommended reasonable alternative.

Table 2-4: Phase II Naming Conventions

Phase I-B Alternative	Phase II Alternative
13d	Border A
13g	Rail Yard B
14a	Border B
14f	Rail Yard B

Figure 2-5: 2011 Recommended Reasonable Alternatives



The Agency and Public Scoping Meetings (Series #2) were held December 7 and 8, 2011, respectively, to present the revised study area, the 15 recommended preliminary alternatives (discussed in **Section 2.3**, Phase I-B), and the four recommended reasonable alternatives to the public and the participating agencies. The meetings requested comments on the project's purpose and need, project coordination plan, constraints mapping, project schedule, and methodologies used in the development and analysis of alternatives. All comments received were taken into consideration in further project development.

Each of the recommended reasonable alternatives evaluated during Phase II and shown at Agency and Public Scoping Meetings #2, was evaluated on the criteria shown in **Table 2-5**. It was determined that all the alternatives, including the No-Build Alternative, would be carried forward as a reasonable alternative for further evaluation. Following the table is a discussion for each of the reasonable alternatives.

2.4.1.1 Common Sections of the Reasonable Alternatives

Due to physical constraints in the corridor, the reasonable alternatives share the same connectivity at the termini (Racetrack Drive and US 54) and through the Old Fort Bliss/Hart's Mill area. These common areas are described below.

Racetrack Drive/New Mexico (NM) 273. The connectivity improvements at the US 85 (Paisano)/NM 273 interchange and extension of Doniphan Drive were designed to allow all reasonable alternatives to maintain the non-tolled movements from I-10/US 85 (Paisano) and NM 273. The improvements also include the reconnection of Doniphan Drive to allow for a more direct connection to US 85 (Paisano Drive) and the proposed project in support of providing a free-flow incident management route. All alternatives follow the same alignment between Racetrack and the existing CEMEX drive intersection.

Old Fort Bliss/Hart's Mill. The Old Fort Bliss/Hart's Mill section of the study area is the most constrained. The area constraints include: I-10, three railroads, the Franklin Canal, existing US 85 (Paisano Drive), the international border fence, Old Fort Bliss/Harts Mill historically-sensitive area, and the El Paso Rescue Mission. These physical barriers are sandwiched between the Franklin Mountains and the Rio Grande River/U.S.-Mexico border. All reasonable alternatives share the same alignment between ASARCO and the BNSF rail yard, and connect to Spur 1966 at the same location within the existing 900-ft ROW.

Downtown El Paso. Similar to the Old Fort Bliss/Hart's Mill area, the reasonable alternatives east of the Paso Del Norte International Bridge/Santa Fe Street south of downtown are constrained to a single corridor, and thus follow the existing Loop 375. The downtown access refinements and the Coles Street Interchange are also the same for all alternatives.

Table 2-5: Recommended Reasonable Alternatives (2011)

RECOMMENDED REASONABLE ALTERNATIVES *Note: Reduced Study Area Length Approx. 8 miles	Environmental Evaluation Criteria																								Traffic and Engineering Evaluation Criteria					Result		
	Potential Relocations	Residential	Residential within 500'	Commercial	Mixed Use	Public Housing	Churches	Cemeteries	Schools	Floodplains	Parklands	Archeological Sites	Potential Historic Sites in Proposed ROW	Potential Historic in Area of Potential Impact (Texas Historical Commission markers, Potential Historic Sites, Historic Districts)	Franklin Canal/American Canal	Hazardous Materials	Border Security Sites	ASARCO	Potential BWC Crossing	Environmental Justice Communities	Sensitive Air Receptors	Potential Threatened/Endangered Species Habitat within 500'	Major Utilities	Railroad	Rail yard	Total Length	New ROW	Parcels	Estimated Construction Cost		Maintain Same Number of Non-tolled Lanes?	
	#	acres	acres	acres	acres	acres	# of churches	acres	# of schools	acres	acres	# of sites within 300'	# of sites	# of sites	# of crossings	# of sites	acres	acres	✓ / X	acres below poverty level	# of receptors	✓ / X	#	# of crossings	acres	miles	acres	# of parcels	\$ Millions		✓ / X	
Section 14 (Racetrack Dr. to Schuster)	14a BORDER B (elevated and at-grade)	4	0.01	2.20	0.01	0.00	0.00	0	0.00	0	3.17	0.00	0	2	4, 0, 6	5.36	2	0.00	6.33	✓	81.82	0	✓	16	8	1.13	7.99	31.01	44	\$429	✓	Carried forward to Recommended Reasonable Alternative
	14f RAIL YARD B (elevated and at-grade)	2	0.01	11.45	0.01	0.00	0.00	0	0.00	0	1.86	0.00	0	1	5, 0, 42	3.01	0	0.00	7.17	X	63.13	0	✓	9	8	1.32	2.27	43.62	33	\$424	✓	Carried forward to Recommended Reasonable Alternative
Section 13 (Schuster to Park Street)	13d BORDER A (elevated and at-grade)	2	0.00	20.96	4.09	0.70	0.01	0	0.00	0	3.52	0.19	0	1	1, 0, 28	2.86	2	0.05	0.00	X	41.51	6	✓	5	13	14.77	2.33	27.67	27	\$276	✓	Carried forward to Recommended Reasonable Alternative
	13g RAIL YARD A (elevated OR depressed)	4	0.00	20.59	9.49	1.79	0.01	0	0.00	0	0.03	0.00	0	2	1, 0, 11	3.48	1	0.10	0.00	X	42.10	6	✓	8	30	20.97	2.32	28.97	28	\$305	✓	Carried forward to Recommended Reasonable Alternative
	No-Build	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0	0	0	0.00	0	0.00	0.00	X	0.00	0	0	0	0	0.00	0.00	0	\$0	✓	Carried forward to Compare with Recommended Reasonable Alternatives	

Lowest Impact in range of units
 Highest Impact in range of units

2.5 PHASE III (2012)

2.5.1 Recommended Reasonable Alternatives

The recommended reasonable alternatives were developed by combining the four individual segments developed in Phase II.

Comments received through ongoing agency coordination and at the Public Scoping Meeting #2 indicated the need for additional access from the proposed project into the central business district of downtown El Paso. Both residents and businesses in the southern portion of the central business district utilize the existing Loop 375 as a connection for local access.

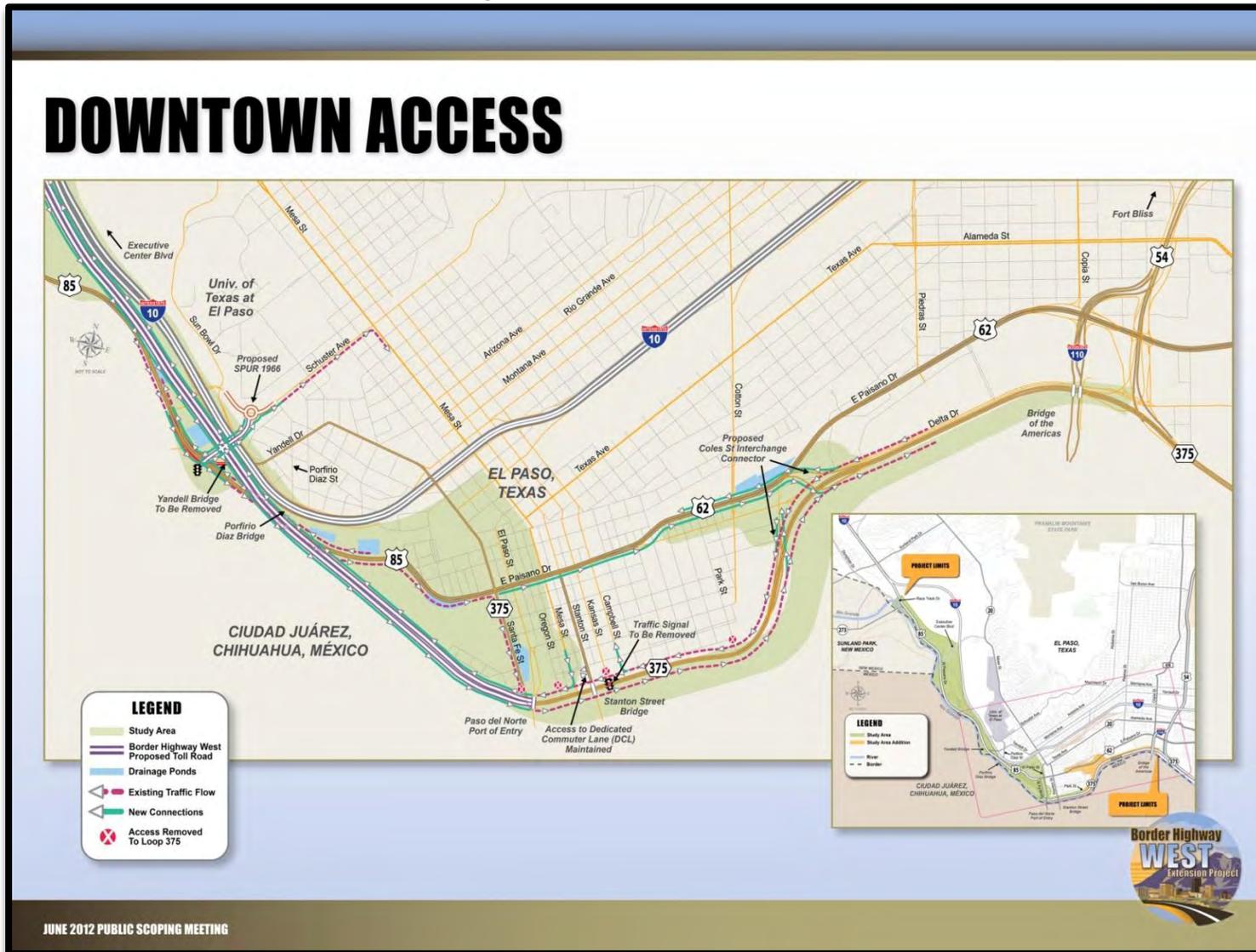
TxDOT studied numerous options to provide access and determined the need to extend the eastern project limit approximately one mile from Park Street to US 54 to allow for a new interchange at Coles Street, which increased the total project length to approximately nine miles. Extending the project to US 54 to include additional access on the east side of downtown at Coles Street, established logical termini from US 85 to US 54. The Coles Street Interchange provides a new, non-tolled, direct connection to US 85 (Paisano Drive) from both the eastbound and westbound approaches to downtown. The proposed Spur 1966 project would serve as the local non-tolled access point from the west (**Figure 2-6**).

Traffic modeling, using the enhanced Mission Model, was conducted to determine travel time differences with the implementation of direct connectors at Loop 375 and US 85 (Paisano Drive).

The direct connectors between Loop 375 and US 85 (Paisano Drive) provide comparable travel time to access businesses north of Father Rahm Avenue and west of Mesa Street when compared to the existing Loop 375 access. Areas south of Father Rahm Avenue and east and west of Mesa Street may require up to one additional minute for business access.

The access to downtown El Paso from Loop 375 currently occurs at six locations: 1) Santa Fe Street, 2) Oregon Street, 3) Stanton Street, 4) Kansas Street, 5) Campbell Street, and 6) Park Street. Of the six, the five western access points are proposed to be consolidated into one right-in access at Campbell Street and one right-out at Mesa. Access to businesses between Mesa Street and Santa Fe Street is provided via either Campbell Street or the proposed direct connectors near Coles Street. The sixth existing access at Park Street is also proposed to be removed. Access to businesses on Park Street would be provided via Coles Street. The tolled portion of the proposed project begins south of downtown at Campbell Street. Existing Loop 375 from Campbell Street westbound is proposed to be converted to controlled-access and would be tolled.

Figure 2-6: Downtown Access



TxDOT also determined a need to revise the alternatives near the western terminus at US 85 (Paisano Drive) and Racetrack Drive. Information regarding a proposed levee project, railroad easements, and potential historic structures became available following the December 2011 public scoping meeting. The revised alternatives at the US 85 (Paisano Drive), Racetrack Drive, Doniphan Drive, and NM 273 (McNutt Road) interchange would provide for a controlled access connection, better ramping configurations, improved trip circulation, and improved incident management for I-10.

The project team combined the “Border” and “Rail Yard” alternatives to create complete end-to-end recommended reasonable alternatives for a thorough evaluation of the project alternatives. The alternatives are now named Reasonable Alternative 1, Reasonable Alternative 2, Reasonable Alternative 3, Reasonable Alternative 4, and the No-Build Alternative.

As a result of these changes, TxDOT held Public Scoping Meeting #3 on June 21, 2012 to inform the public and agencies about the previously described changes that occurred since Public Scoping Meeting #2. Refer to **Exhibit 2-2** for the recommended reasonable alternatives shown at the Public Scoping Meeting #3. Additionally, the No-Build Alternative was carried forward as a baseline for analysis. Note that all the recommended reasonable alternatives follow the same alignment and have the same proposed access in the downtown area from Santa Fe Street to US 54.

2.5.1.1 No-Build Alternative

Under the No-Build Alternative, the proposed project would not be constructed.

It was determined through the alternatives analysis process that the No-Build Alternative would not address increased **system capacity and reliability** as well as **regional system linkage** needs for the project. Currently, Loop 375 only partially encircles the City of El Paso and ends near downtown at Santa Fe Street. The MPO Travel Demand Model indicates that Loop 375 and other roadways within the study area are currently congested and, with the addition of the projected traffic growth in the area, these roadways would not be able to adequately handle future traffic demands.

2.5.1.2 Reasonable Alternative 1

Reasonable Alternative 1 is a combination of Recommended Reasonable Alternatives Border B and Border A (**Figure 2-7**). The non-tolled length of Reasonable Alternative 1 is approximately 1.9 miles. The total tolled length is approximately 7.1 miles and would require a total of 119.1 acres of proposed ROW.

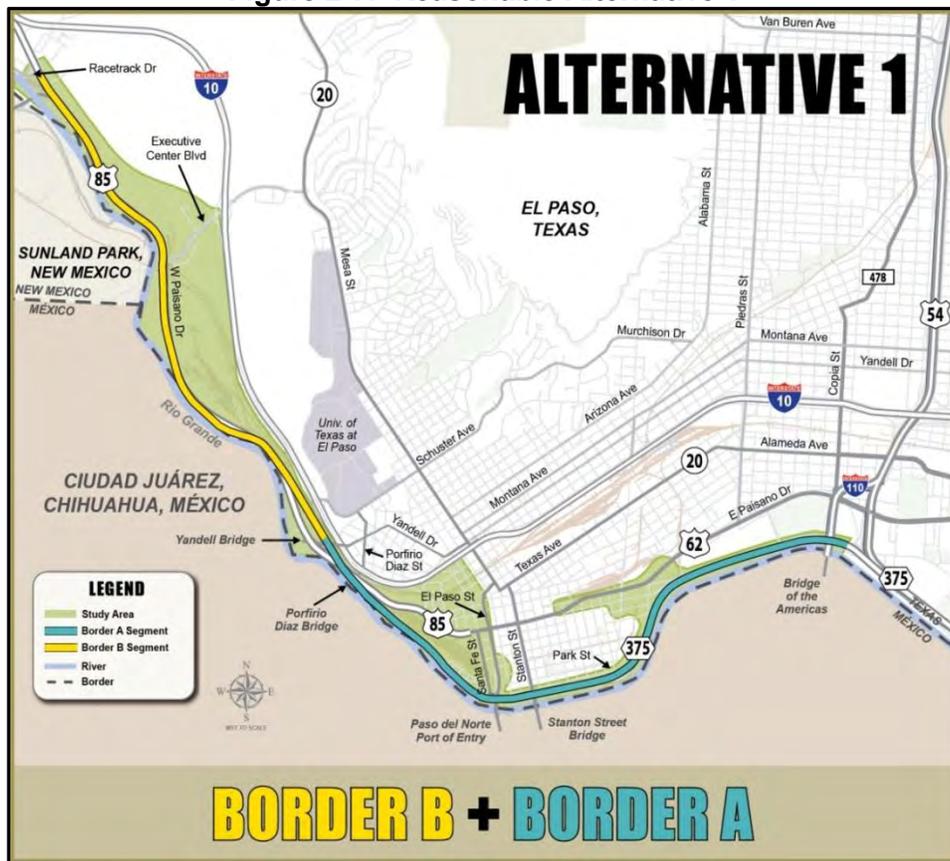
Pros

- Minimizes impact to Chihuahuita community (Border A)
- No impact to BNSF Rail Yard (Border A)
- Minimizes disturbance to ASARCO site (Border B)
- Lowest number of displacements (43) (Border A and Border B)
- Consistent with the City resolution preferring Border A over Rail Yard A (Border A)

Cons

- Visual and minor acquisition impact to Chihuahuita Park (0.2 ac) (Border A)
- Impacts Customs and Border Protection (CBP) fence and operations (Border A and Border B)
- Complex structures over US 85, BNSF Track, and the American Canal (Border A)
- Impacts to the Rio Grande floodplain (27.7 acres floodplain) (Border A and Border B)
- Impacts to the International Boundary and Water Commission (IBWC) jurisdictional area (Border A and Border B)
- Requires reconstruction of Executive Center Boulevard (Border B)
- Requires reconstruction of portions of US 85, Racetrack Dr. to Ruhlen Court (Border B)

Figure 2-7: Reasonable Alternative 1



2.5.1.3 Reasonable Alternative 2, the Preferred Alternative

Reasonable Alternative 2 is a combination of Recommended Reasonable Alternatives Rail Yard B and Border A (**Figure 2-8**). The non-tolled length of Reasonable Alternative 2 is approximately 1.9 miles. The total tolled length is approximately 7.1 miles and would require a total of 134.4 acres of proposed ROW (**Table 2-6**).

Pros

- Minimizes impacts to IBWC jurisdictional area (Rail Yard B)
- Minimizes impact to Chihuahuita community (Border A)
- No impact to BNSF Rail Yard (Border A)
- Smallest amount of total land use conversion (122.7 acres) (Border A and Rail Yard B)
- Consistent with the City resolution preferring Border A over Rail Yard A (Border A)

Cons

- Visual and minor acquisition impact to Chihuahuita Park (0.2 acres) (Border A)
- Elevated roadway along international border impacts CBP activities (Border A)
- Requires complex structures over US 85, BNSF Track, and American Canal (Border A)
- Requires complex railroad crossing structures east of ASARCO site (Rail Yard B)
- Does not maximize use of existing roadway footprint (Rail Yard B)
- Largest amount of proposed ROW (134.4 acres) (Border A and Rail Yard B)
- Largest vegetation (25.8 acres) and habitat impact (115.6 acres) (Border A and Rail Yard B)

Figure 2-8: Reasonable Alternative 2



2.5.1.4 Reasonable Alternative 3

Reasonable Alternative 3 is a combination of Recommended Reasonable Alternatives Rail Yard B and Rail Yard A (**Figure 2-9**). The non-tolled length of Reasonable Alternative 3 is approximately 1.8 miles. The total tolled length is approximately 7.2 miles and would require a total of 133.2 acres of ROW.

Pros

- Minimizes impact to CBP fence and operations (Rail Yard A)
- Minimizes elevated structures (Rail Yard A)
- Minimal changes to existing traffic (Rail Yard A and B)
- Smallest impact to the 100-year floodplain (6.0 acres)

Cons

- Splits the Chihuahuita community and local historic district (Rail Yard A)
- Requires removal of several minor rail lines within BNSF Rail Yard (Rail Yard A)
- Second highest amount of ROW required (133.2 acres) (Rail Yard A and B)
- Does not maximize use of existing roadway footprint (Rail Yard A and B)
- Highest total of displacements (50) (Rail Yard A and B)
- Largest amount of total land use conversion (129.1 acres) (Rail Yard A and B)
- Moderate to high potential for unrecorded archeological resources (Rail Yard A and B)

Figure 2-9: Reasonable Alternative 3



2.5.1.5 Reasonable Alternative 4

Reasonable Alternative 4 is a combination of Recommended Reasonable Alternatives Border B and Rail Yard A (**Figure 2-10**). The non-tolled length of Reasonable Alternative 4 is approximately 1.8 miles. The total tolled length of Reasonable Alternative 4 is approximately 7.2 miles and would require a total of 118 acres of ROW.

Pros

- Follows existing roadway footprint of US 85 (Paisano Drive) (Border B)
- Minimizes disturbance to ASARCO site (Border B)
- Smallest amount of proposed ROW (118.0 acres) (Border B and Rail Yard A)
- Smallest total vegetation (15.9 acres)/habitat (92.3 acres) impact (Border B and Rail Yard A)

Cons

- Splits the Chihuahuita community and local historic district (Rail Yard A)
- Requires removal of several minor lines within BNSF Rail Yard (Rail Yard A)
- Requires complex railroad crossing structures east of ASARCO site (Rail Yard A)
- Potential impacts to CBP fence and operations (Border B)
- Impacts to the IBWC jurisdictional area (Border B)
- Requires reconstruction of Executive Center Boulevard (Border B)
- High potential for unrecorded archeological resources (Border B and Rail Yard A)

Figure 2-10: Reasonable Alternative 4



2.6 PREFERRED ALTERNATIVE

The Draft EIS fully evaluates all four reasonable alternatives and the No-Build Alternative on an equal level of detail. **Table 2-6** below is the decision matrix which shows the differentiators used to select the Preferred Alternative. Alternative 1 and 4 both would overhang the Rio Grande and would have more floodplain impacts and heavy impacts to existing utilities. Based on a comparison of impacts and the results of Public Scoping Meeting #3, Alternative 2 will be carried forward as the Preferred Alternative to a Public Hearing, and will be fully evaluated in the Final EIS.

Construction would not begin until after receipt of the Record of Decision (ROD) on the Final EIS. The current estimated date of construction to begin is 2015. The ROW, utility, and mitigation costs are all site specific and cannot be accurately estimated at this stage.

As of August 2012, the estimated construction cost for each reasonable alternative is similar at approximately \$500 million.

Table 2-6: Preferred Alternative (2012)

Decision Matrix: Preferred Alternative													
Reasonable Alternative	Environmental												Decision
	Displacements			FEMA Floodplain	Cultural Resources		IBWC	Major Utilities	GSA/CBP Property	Railroad		Public and Agency Preference	
	Residential Buildings	Commercial Buildings	Total Displacements	100-year Floodplain	Potential for Unrecorded Historic Period Archeological Resources	Effect to NRHP-Listed Historic Districts, Including Individually Listed Resources Contributing to a Historic District	Alternative Would Require Permitting with IBWC	Intersects with Major Utilities	Potential Impacts	Rail Crossings	Potential Impacts to Rail Yard		
Units of Measure	number	number	number	acres	Low, Moderate or High	Adverse Effect or No Adverse Effect	Yes/No	number	acres	number	acres	Generally Supported/Generally Not Supported	
Alternative 1 (Border B + Border A)	2	41	43	27.7	Low to Moderate	No Adverse Effect	Yes Alternative would overhang Rio Grande	50	0.05	20	22.0	Generally Supported	Not Carried Forward
Alternative 2 (Rail Yard B + Border A)	2	42	44	16	Moderate to High	No Adverse Effect	Yes	34	0.05	20	20.8	Generally Supported	Preferred Alternative
Alternative 3 (Rail Yard B + Rail Yard A)	1	49	50	6	High	No Adverse Effect	No	35	0.1	35	26.2	Generally Not Supported	Not Carried Forward
Alternative 4 (Border B + Rail Yard A)	1	48	49	17.7	High	No Adverse Effect	Yes Alternative would overhang Rio Grande	51	0.1	35	27.3	Generally Not Supported	Not Carried Forward
Low	≤10	≤10	≤10	≤10 acres	Low to Moderate	No Adverse Effects	No	≤20	≤ 0.05 acre	≤15	≤15	Generally Supported	N/A
Medium	11 to 25	11 to 25	11 to 25	11 acres to 20 acres	Moderate to High	N/A	N/A	21 to 35	0.06 acre to 0.5 acre	11 to 25	11 to 25	N/A	N/A
High	>26	>26	>26	>21 acres	High	Adverse Effects	Yes	>36	>0.5 acre	>25	>25	Generally Not Supported	N/A

2.7 DESCRIPTION OF THE PROPOSED FACILITY

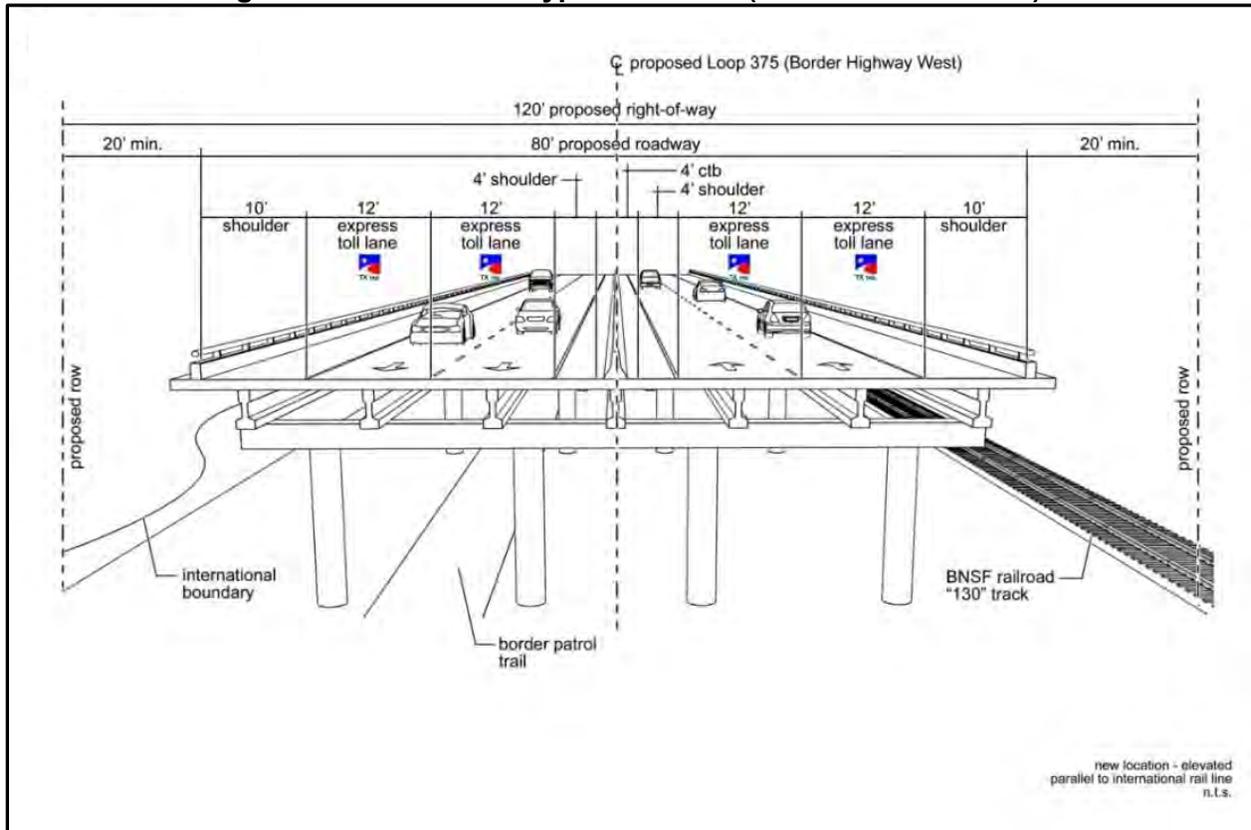
The following descriptions of the roadway typical section components reflect planning efforts to date. As the project is developed further, minor refinements to the project concept could occur. Although these refinements could affect the typical sections, the refinements would not be expected to alter the results of the alternatives analysis presented in the document.

All of the reasonable alternatives have a common typical section that features an 80-ft wide roadway inside of a 120-ft ROW with four 12-ft wide lanes, 10-ft wide outside shoulders, 4-ft wide inside shoulders, and 4-ft at the center of the roadway for a concrete traffic barrier to separate opposing directions of traffic. The following sections highlight the major differences between the alternatives (**Figure 2-11** through **Figure 2-15**).

2.7.1 Border A Typical Section (Alternatives 1 and 2)

Border A is elevated along the majority of the alignment to avoid impacts to the international boundary, border patrol trail, and BNSF Track 130.

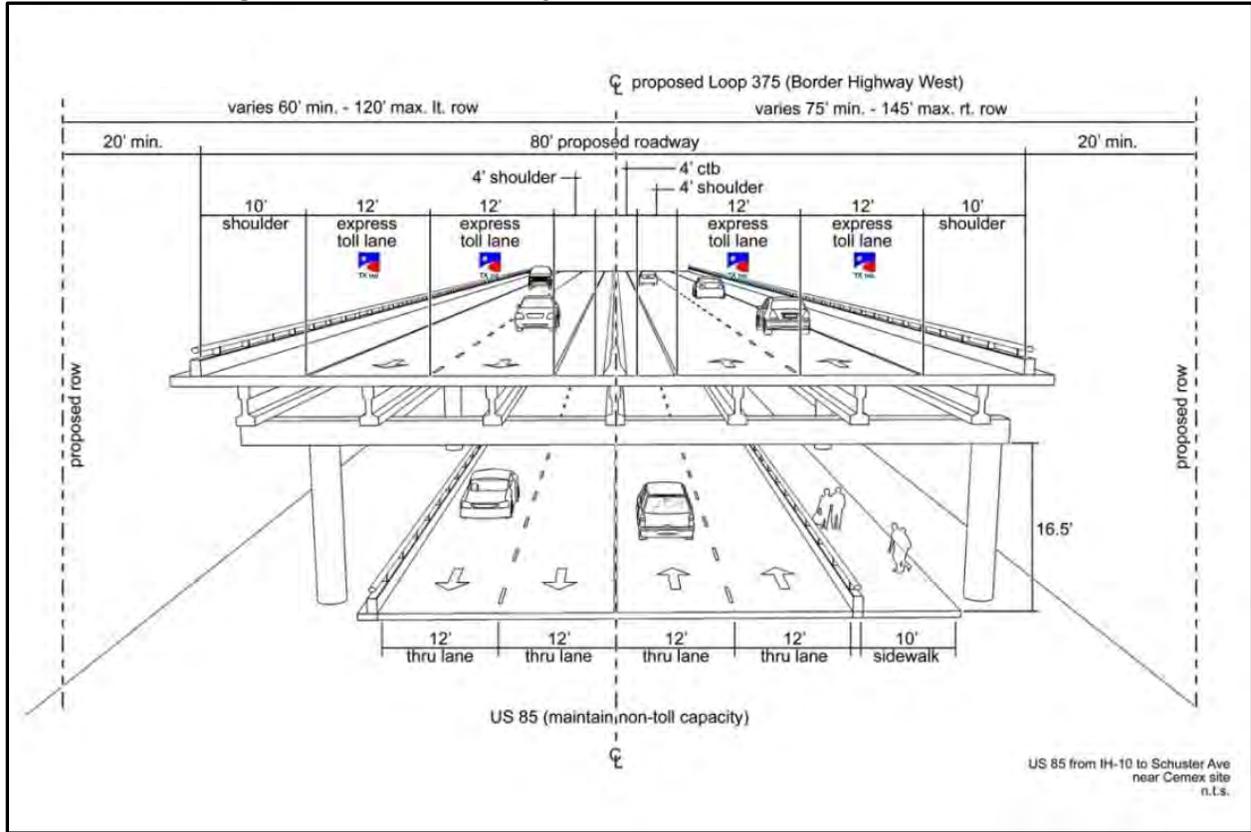
Figure 2-11: Border A Typical Section (Alternatives 1 and 2)



2.7.2 Border B Typical Section (Alternatives 1 and 4)

Much of Border B is elevated above US 85 (Paisano Drive).

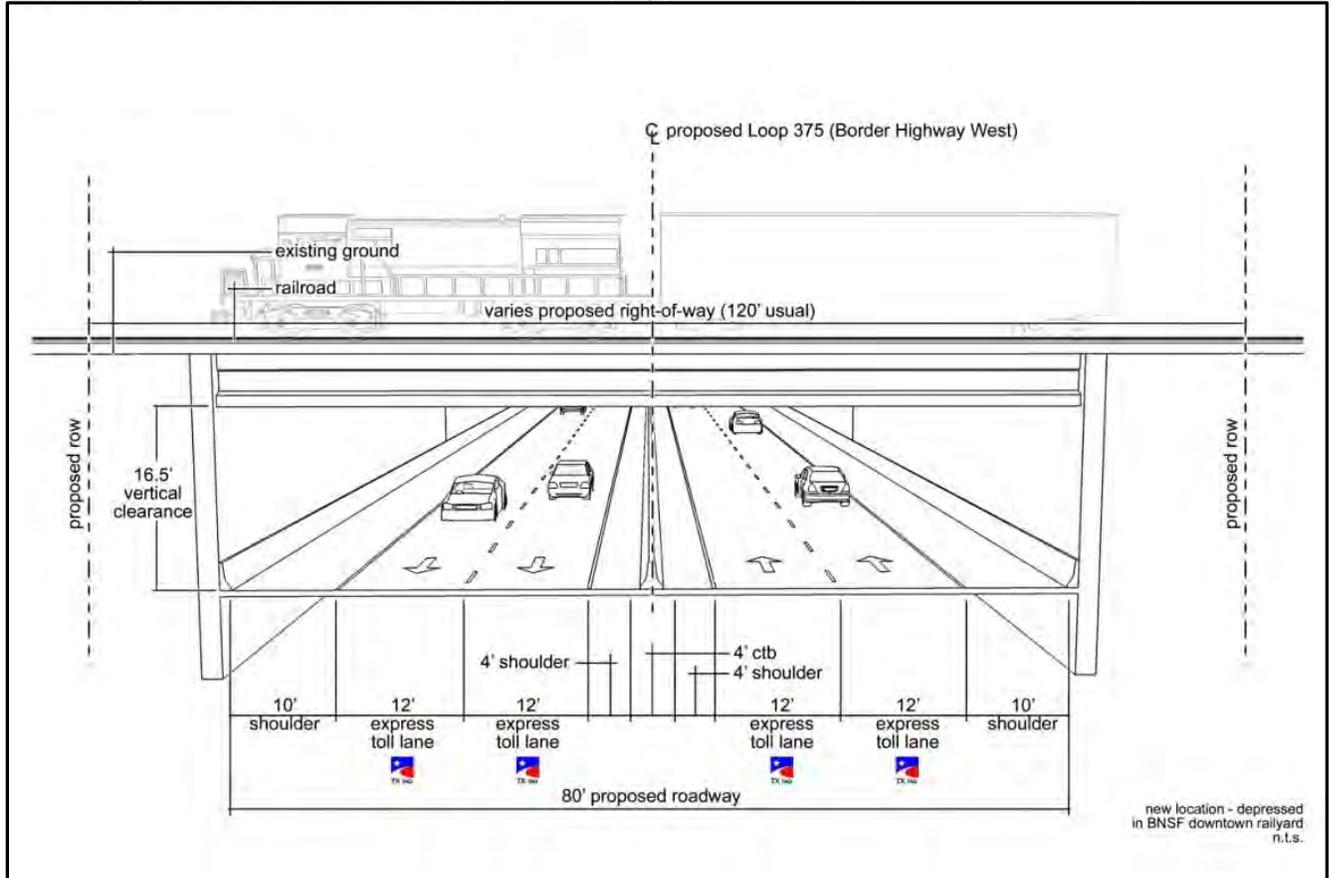
Figure 2-12: Border B Typical Section (Alternatives 1 and 4)



2.7.3 Rail Yard A Typical Sections (Alternatives 3 and 4)

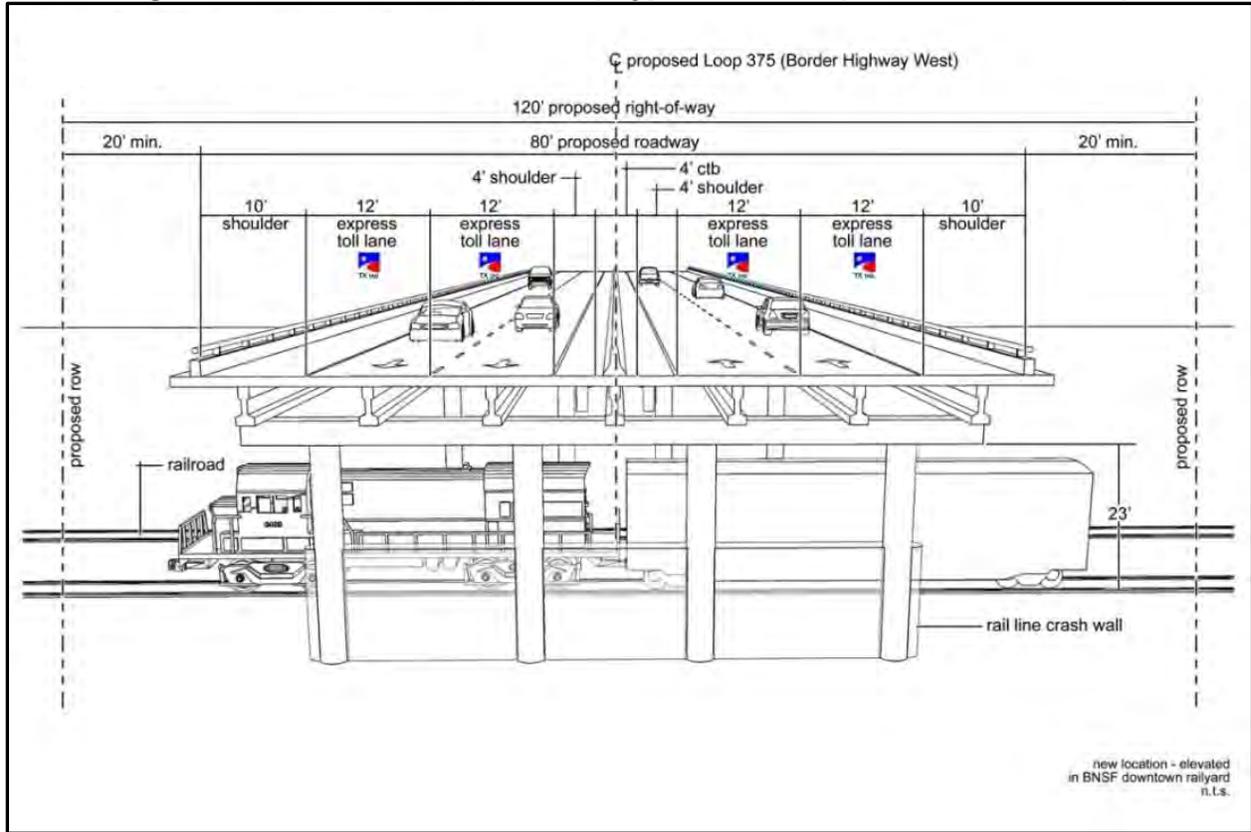
There are two options for Rail Yard A. Option 1 depresses the facility into a trench through the existing BNSF rail yard and beneath ongoing railroad operations. Structural walls would flank the section to minimize ROW needs and disruption to railroad operations. When appropriate, railroad lines or other rail yard facilities would span over the roadway trench.

Figure 2-13: Rail Yard A (Depressed) Typical Section (Alternatives 3 and 4)



Option 2 places the roadway structure through the existing BNSF rail yard, elevated above railroad operations.

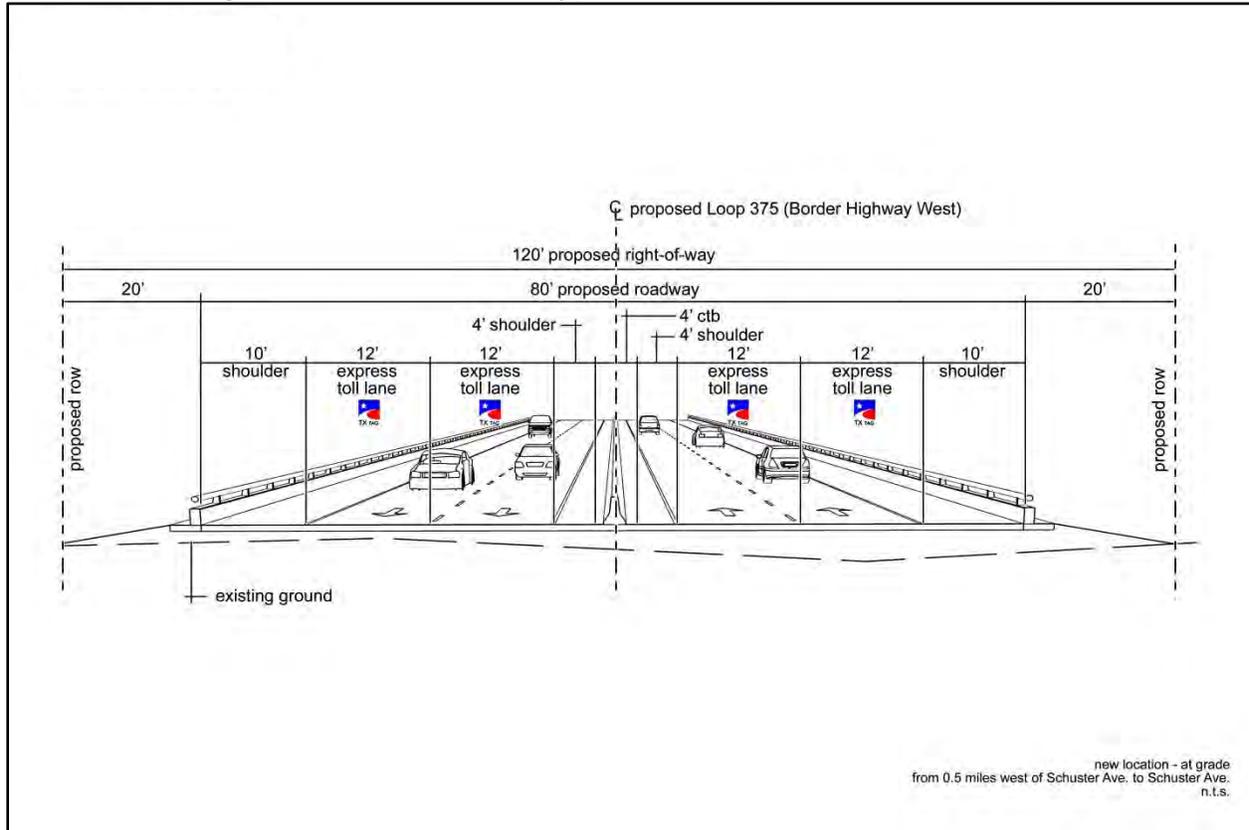
Figure 2-14: Rail Yard A (Elevated) Typical Section (Alternatives 3 and 4)



2.7.4 Rail Yard B Typical Section (Alternatives 2 and 3)

The most common typical section for the Rail Yard B alternative is elevated roadway on new alignment. The roadway could be carried on concrete segmental box structure in constrained or aesthetically sensitive areas, or on steel or concrete beams.

Figure 2-15: Rail Yard B Typical Section (Alternatives 2 and 3)

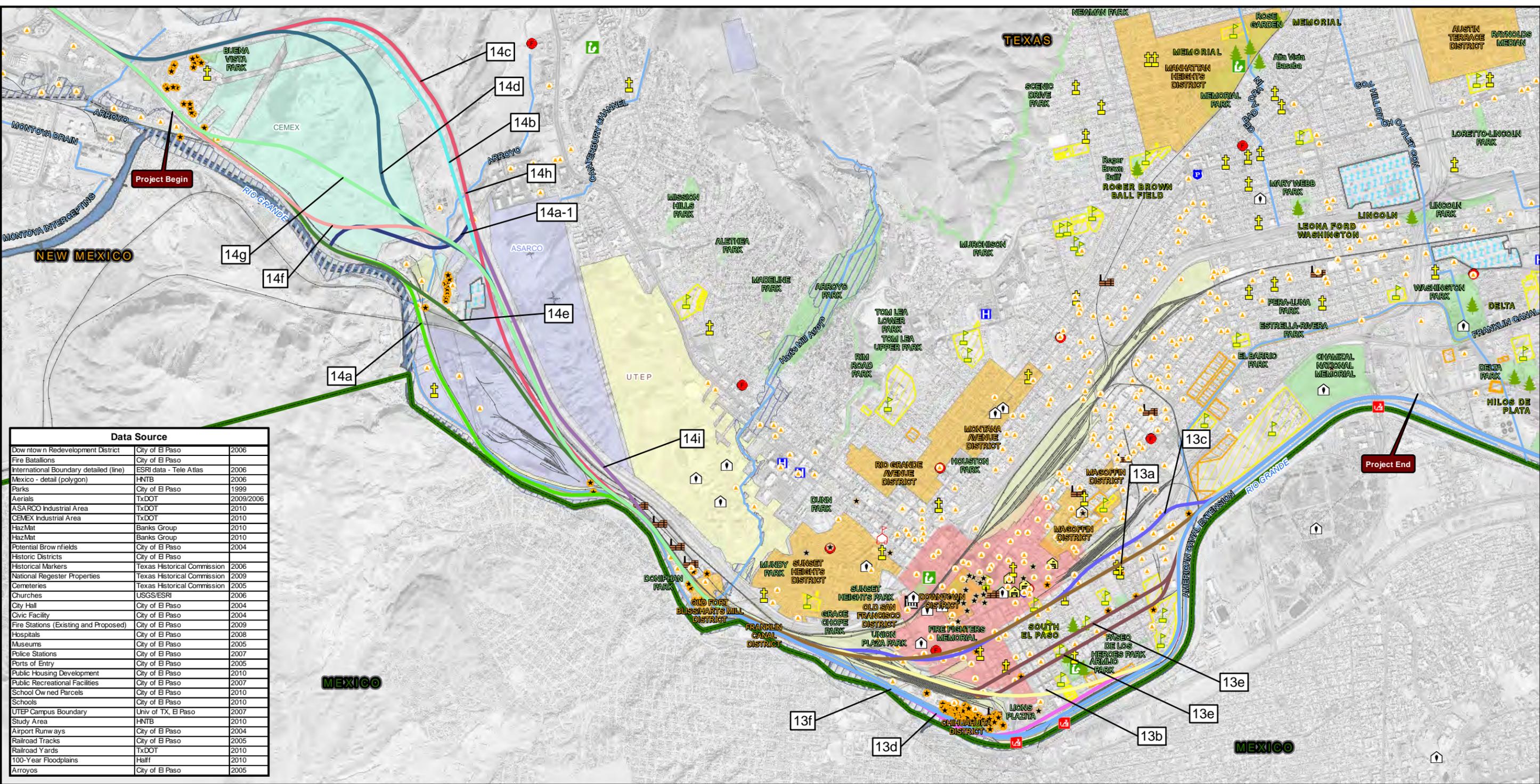


Chapter 2 Exhibits

Exhibit 2-1: 2010 Preliminary Alternatives

Exhibit 2-2: 2012 Reasonable Alternatives

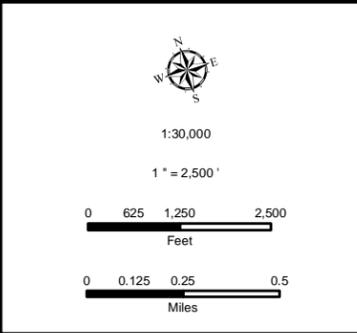
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Data Source		
Downtown Redevelopment District	City of El Paso	2006
Fire Battalions	City of El Paso	
International Boundary detailed (line)	ESRI data - Tele Atlas	2006
Mexico - detail (polygon)	HNTB	2006
Parks	City of El Paso	1999
Aerials	TxDOT	2009/2006
ASARCO Industrial Area	TxDOT	2010
CEMEX Industrial Area	TxDOT	2010
HazMat	Banks Group	2010
HazMat	Banks Group	2010
Potential Brownfields	City of El Paso	2004
Historic Districts	City of El Paso	
Historical Markers	Texas Historical Commission	2006
National Register Properties	Texas Historical Commission	2009
Cemeteries	Texas Historical Commission	2005
Churches	USGS/ESRI	2006
City Hall	City of El Paso	2004
Civic Facility	City of El Paso	2004
Fire Stations (Existing and Proposed)	City of El Paso	2009
Hospitals	City of El Paso	2008
Museums	City of El Paso	2005
Police Stations	City of El Paso	2007
Ports of Entry	City of El Paso	2005
Public Housing Development	City of El Paso	2010
Public Recreational Facilities	City of El Paso	2007
School Owned Parcels	City of El Paso	2010
Schools	City of El Paso	2010
UTEP Campus Boundary	Univ of TX, El Paso	2007
Study Area	HNTB	2010
Airport Runways	City of El Paso	2004
Railroad Tracks	City of El Paso	2005
Railroad Yards	TxDOT	2010
100-Year Floodplains	Half	2010
Arroyos	City of El Paso	2005

2010 Preliminary Alternatives	
13a	14b
13b	14c
13c	14d
13d	14e
13e	14f
13f	14g
14a	14h
14a-1	14i

City Hall	Schools - Private	Church	ASARCO	Public Housing
Community College	School	HazMat	Railroad Yard	Hazmat
Fire Station	Civic Facility	Railroad	Downtown Re-Development Dist.	
Hospital	Potential Brownfield	Arroyo	University of Texas El Paso	
Library	Historic-age Windshield Survey	Airport Runway	Historic District	
Museum	NRHP Site	State/County	School	
Police Station	Ports of Entry	Park	100-Yr Floodplain	
Public Rec Facility		CEMEX	Cemetery	



Loop 375 Border Highway West Extension Project

From Racetrack Drive to US 54

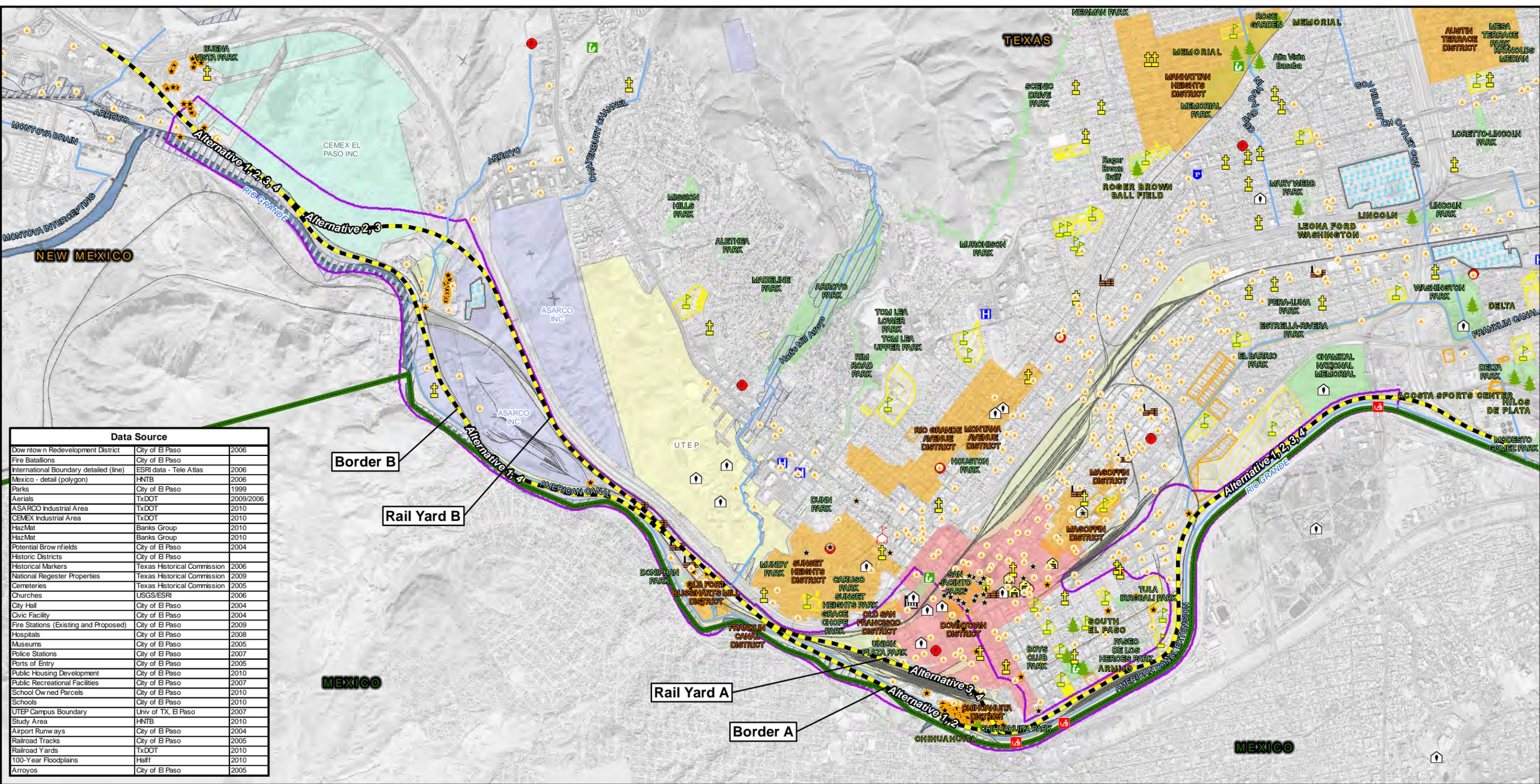
Exhibit 2-1

2010 Preliminary Alternatives

El Paso County, Texas - August, 2012
CSJ: 2552-04-027

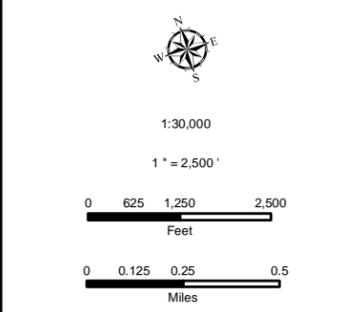
DISCLAIMER: This map was generated by HNTB Corporation using GIS (Geographic Information Systems) software. No claims are made to the accuracy or completeness of the information shown herein nor to its suitability for a particular use. The scale and location of all mapped data are approximate.

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Data Source		
Downtown Redevelopment District	City of El Paso	2006
Fire Battalions	City of El Paso	2006
International Boundary detailed (line)	ESRI data - Tele Atlas	2006
Mexico - detail (polygon)	HNTB	2006
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Study Area	HNTB	2010
Airport Runways	City of El Paso	2004
Railroad Tracks	City of El Paso	2005
Railroad Yards	TxDOT	2010
100-Year Floodplains	Haif	2010
Arroyos	City of El Paso	2005

- | | | | | |
|---------------------|--------------------------------|-------------------|-------------------------------|-----------------|
| City Hall | Schools - Private | Church | ASARCO | Public Housing |
| Community College | School | HazMat | Rio Grande | Hazmat |
| Fire Station | Civic Facility | BHW Alternative | Railroad Yard | Study Area 2012 |
| Hospital | Potential Brownfield | Railroad | Downtown Re-Development Dist. | |
| Library | Historic-age Windshield Survey | Arroyo | University of Texas El Paso | |
| Museum | NRHP Site | Airport Runway | Historic District | |
| Police Station | Ports of Entry | State/County | School | |
| Public Rec Facility | Park | 100-Yr Floodplain | Cemetery | |



Loop 375 Border Highway West Extension Project

From Racetrack Drive to US 54

Exhibit 2-2

2012 Reasonable Alternatives

El Paso County, Texas - September, 2012
CSJ: 2552-04-027

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