SUMMARY

THE I-69 LOCATION STUDY

The Louisiana Department of Transportation and Development (DOTD), in cooperation with the Federal Highway Administration (FHWA), proposes to construct a four-lane fully controlled access highway on new location designed to Interstate standards. The proposed project, hereafter referred to as the I-69 Project, is part of the planned improvements to Congressionally-designated High Priority Corridor 18 (Corridor 18) that extends from the Canadian border at Port Huron, Michigan to several points on the Mexican/Texas border. The I-69 Project extends between U.S. Highway 171 (U.S. 171) near the Town of Stonewall in Desoto Parish and Interstate Highway 20 (I-20) near the Town of Haughton in Bossier Parish, a distance of approximately 35 miles. The routing and logical termini are identified and described in the Corridor 18 Special Issues Study (1997) and in the I-69 (Corridor 18) Special Environmental Study, Task C Report - Sections of Independent Utility (SIU) report (1999) for SIU 15.

The Transportation Equity Act for the 21st Century (TEA-21) (Public Law 105-178) redefined Corridor 18 and officially designated it as Interstate 69 and amended the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) (Public Law 102-240) legislation, specifying that I-69 in Louisiana shall follow the alignment generally identified in the Corridor 18 Special Issues Study report (see Section 1.2.2).

The FHWA issued a Notice of Intent (NOI) to prepare an Environmental Impact Statement for this project in the July 20, 2000 Federal Register (see Appendix C, page C-1). The current study of alternatives and the environmental consequences of the proposed action were initiated by DOTD in April 2001. This study is fully documented in the remaining sections of this Environmental Impact Statement (EIS).

ALTERNATIVES CONSIDERED AND THE SELECTED ALIGNMENT

The development of alternatives for the I-69 Project followed a multi-step study approach that evaluated possible highway locations in several stages so that only the most practicable alternatives, i.e., those that met the project purpose and need and that had the potential to minimize environmental impacts, were advanced to the next phase of study. Initially, a GIS-based Environmental Inventory map was created for the Study Area by collecting available environmental information from federal and state sources. This information was used to avoid and minimize impacts to sensitive environmental resources, while considering engineering design criteria.

The Corridor Study involved the development of seven distinct corridors within the Study Area. Corridor development used the environmental inventory mapping as a guide to avoid and minimize impacts to sensitive resources in addition to

consideration of appropriate engineering design criteria and local community leader concerns. All corridors were analyzed and screened against the sensitive resources, and reviewed by the public, local community leaders, participating Native American tribes, and resource agencies, including the cooperating federal agencies.

A comprehensive public involvement program was conducted during the Corridor Studies that involved the public, local community leaders, appropriate state and federal resource agencies, and participating Native American Tribes. Comments from those involved resulted in an expanded Study Area in order to evaluate additional corridors closer to the Port of Shreveport-Bossier. Once individual corridors or portions of corridors were eliminated from further study, a multi-corridor combination, the Preferred Corridor, was identified that provided the best opportunity to develop highway alignments within it which would avoid or minimize impacts to the social, natural, and cultural environments.

The Alignment Study initially developed four preliminary alignment alternatives, approximately 300 feet in width, within the Preferred Corridor to enhance the transportation services and economic vitality of the Study Area, and accommodate the overall purpose of the National I-69 Corridor.

The Preferred Corridor was divided into three discrete sections to allow a more detailed analysis of potential impacts. Section 1 begins at U.S. 171 and extends northward to the Kansas City Southern Railway (KCS) line at Frierson in DeSoto Parish, a distance of approximately 9.1 miles. Section 2N and Section 2S are the northern and southern routes of the Preferred Corridor respectively, and include the Red River crossing. These sections extend from the KCS line at Frierson to LA 157 in Bossier Parish. Section 2N and Section 2S are approximately 15.9 and 15.4 miles in length, respectively. Section 3 begins at LA 157 and extends northward to I-20, a distance of approximately 10.6 miles.

The alignment development process first emphasized avoidance, if practical, and then considered efforts to insure that the alternatives minimized impacts to sensitive resources such as wetlands, threatened and endangered species, and residential areas. This phase of study also included updating and refining the environmental inventory based on specific field investigations within the Preferred Corridor.

A comprehensive public involvement program was conducted during the Alignment Studies that involved the public, local community leaders, appropriate state and federal resource agencies, and participating Native American Tribes. Comments from those involved resulted in revisions to the preliminary highway alignments and the addition of a fifth and sixth alignment were developed that combined portions of the four preliminary alignments. As a result of this program, sufficient information and public opinion was available to identify a Preferred Alignment in the Draft EIS for the I-69 project. The basis for the

identification of the Preferred Alignment in each section is discussed in detail in Section 2.

The Draft EIS Notice of Availability was published in the Federal Register on June 17, 2005 (see Appendix C, page C-35). Public Hearings were held in Haughton and Stonewall, Louisiana on July 20 and 21, 2005, respectively. Over 140 Draft EISs were distributed to federal and state agencies, elected officials, Native American tribes, and other organizations and places listed in Section 6. Comments received on the Draft EIS are discussed in Section 7.

Additional engineering and environmental studies, in response to Public Hearing comments or commitments made in the Draft EIS, were conducted, and possible revisions to the Draft EIS Preferred Alignment (Line 6) evaluated. The Louisiana State University Agricultural Center (LSU AgCenter) expressed their opposition to the Draft EIS Preferred Alignment (Line 6) passing through the LSU AgCenter Pecan Research Station (Station) in a June 15, 2007 letter to US Senator Mary Landrieu and requested her assistance in reconsidering the preferred alignment decision. Senator Landrieu forwarded the LSU AgCenter's letter to the FHWA for appropriate action.

A protracted alignment and interchange evaluation to identify possible revisions to the Draft EIS Preferred Alignment (Line 6) that avoided the Station was conducted.

No feasible alternatives were identified along the Preferred Corridor's *northern* route through the Port of Shreveport-Bossier that would avoid the Station. An alignment that avoided the facility while satisfying both driver expectations and AASHTO and DOTD design criteria could not be developed within the Preferred Corridor due to the proximity of the Station to the Port and their current and planned infrastructure improvements; the CCS Midstream and ChemTrade Logistics properties, both identified hazardous waste sites; and an existing SWEPCO electric substation. Two additional alignments were developed, one within the Preferred Corridor's *northern* route that minimized impacts to the Station. The other, was an avoidance alternative within the Preferred Corridor's *southern* route. The minimization and avoidance alternatives along with the Draft EIS Preferred Alignment (Line 6) were presented for federal and state agencies, local community leaders, Native American tribes, and public review at August 2 and 3, 2010 outreach meetings. Prior to the meetings, the aerial photography and environmental inventory were updated to better represent the project's current natural and social contexts. Comments received are discussed in Section 7

In their September 6, 2011 letter, LSU informed DOTD that as a result of a continuing decline in state appropriations, LSU has decided to close the Station and withdrew their opposition to the Draft

EIS Preferred Alignment (Line 6) (see Appendix F, page F-121). No timeline for closing the facility was cited. Consequently, the Station minimization and avoidance alternatives were eliminated from further consideration. The alignment shift and the additional cost for providing a retaining wall to minimize Station impacts were no longer warranted. The avoidance alternative would impact the Lucas Sludge Disposal facility; increase regional transportation improvement costs to widen LA 1 and US 71 and extend the future Inner Loop Extension to meet the Project; and was not the alignment preferred by local officials and the Northwest Louisiana Council of Governments (Shreveport-Bossier City area Metropolitan Planning Organization (MPO)).

A southeastward shift in the Draft EIS Preferred Alignment (Line 6) to avoid the Elm Grove Baptist Church was evaluated. A frontage road adjacent to the Draft EIS Preferred Alignment (Line 6) between Stonewall Frierson Road in DeSoto Parish and Ellerbe Road in Caddo Parish to maintain access to properties along Old Church Road and improve area access for police, fire protection, and emergency medical services was also evaluated. These revisions and the Station alternatives eliminated from further consideration are discussed in detail in Section 2.

The evaluation of additional alignments and preparation of the Final EIS was not completed within three years of FHWA approving the Draft EIS, and in accordance with 23 CFR 771.129(a), DOTD prepared a written evaluation assessing changes that have occurred and their effect on the adequacy of the Draft EIS. DOTD concluded that a Supplemental EIS was not required because there were no changes in the issues encountered, and the project was constantly under environmental study with no stoppage in the NEPA process. FHWA concurred with the assessment (see Appendix D, page D-172).

After thorough consideration of the comments received on the Draft EIS; the additional environmental and engineering studies performed; and the comprehensive involvement by the public, local officials, federal and state resource agencies, and Native American tribes; sufficient information and public opinion exists to identify the Selected Alignment for the I-69 Project.

The Selected Alignment is identical to the Draft EIS Preferred Alignment (Line 6), except it includes a minor horizontal shift at US 71 to avoid the Elm Grove Baptist Church, a slight adjustment to the vertical profile to center the vertical curve over the Red River navigation span to reduce the bridge height, and the Red River bridge and the LA 1 and US 71 interchange bridges were lengthened to reduce the fill heights. The Selected Alignment also includes the Frontage Road between Stonewall Frierson Road in DeSoto Parish and Ellerbe Road in Caddo Parish.

The Selected Alignment will require a Design Exception because the interchange with I-49 is only 1.4 miles south of the existing I-49/LA 3276 interchange. AASHTO Interstate Design Standards (AASHTO 2005) and DOTD Engineering Directives (DOTD 2006) require a minimum interchange spacing of three miles in rural areas. An Interchange Justification Study (IJS) demonstrated that there were no weaving or operational issues at the proposed I-69/I-49 interchange at this spacing. Per DOTD requirements, the Design Exception would be requested during final design.

Louisiana State legislation limits the amount of roadway that can be included in the State highway system. Therefore, after construction, the frontage road operational and maintenance responsibilities will be turned over to the local municipalities, most likely DeSoto and Caddo Parishes, so the amount of roadway included in the State highway system remains unchanged. Parish-City/State Agreements will be required to transfer maintenance responsibilities to the municipalities.

The Selected Alignment would not impact any resources protected by Section 4(f) of the Department of Transportation Act of 1966 or Section 6(f) of the Land and Water Conservation Fund Act of 1965.

The I-69 project would be implemented in construction stages, as funding becomes available. The construction stages are separated by the six project interchanges at US 171, I-49, LA 1, US 71, LA 157 and I-20 with five segments of highway connecting those interchanges. The construction stages represent portions of the project that can be constructed independently and provide a reasonable schedule and funding level for planning purposes. An Implementation Plan is presented in Section 2.8.

The Project is included in the Northwest Louisiana Long Range Transportation Plan (LRTP-2030) and was added to the 2010 Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP) for engineering/design in FY 2012 through MPO administrative amendment on February 27, 2012 (see Appendix F, page F-128). FHWA approved the STIP amendment on March 28, 2012 (see Appendix F, page F-130).

The Selected Alignment satisfies the project Purpose and Need, minimizes wetland impacts to the greatest extent practicable in accordance with Clean Water Act Section 404 b(1) Guidelines, is endorsed by the Northwest Louisiana Council of Governments, the regional Metropolitan Planning Organization, and best balances the expected project benefits with the overall impacts.

The six alignments identified in the Draft EIS, and the Selected Alignment, are shown on Exhibit S-1. Potential impacts and estimated construction costs are presented in Table S-1. The Frontage Road

potential impacts and estimated construction costs are presented separately so that the alignments developed can be more readily compared.

A No-Action alternative was retained throughout the study as a basis for comparing the relative benefits and impacts of the alternatives. Under this alternative, the only projects undertaken would be currently planned safety and capacity improvement projects in the Study Area. Safety projects generally involve shoulder widening and curve realignment where necessary and would be implemented regardless of the decision to construct the proposed highway. This project would not be completed under the No-Action alternative.

The final decision on the highway alignment ultimately selected for the I-69 Project will not be made until all comments received on the Final EIS are fully evaluated. The alignment decision will be documented in the project's Record of Decision.

SUMMARY OF BENEFICIAL AND ADVERSE IMPACTS

Construction of the proposed project would:

- Complete Section of Independent Utility (SIU) 15 of the Congressionally-mandated Interstate Highway 69, expanding Interstate linkage between Shreveport / Bossier City and the rest of the Nation
- Improve international and interstate movement of freight and people
- Facilitate economic development and enhance economic growth opportunities domestically and internationally
- Improve the intermodal connectivity of existing truck, rail and port transportation modes, including the Port of Shreveport-Bossier
- Complete transportation system improvements identified in the Shreveport-Bossier Metropolitan Area Transportation Plan and have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made.

Table S-1 summarizes the direct impacts for the developed alignments. The shaded information in Table S-1 represents the Selected Alignment. Direct, indirect, and cumulative impacts are discussed in Section 4. The alignments were developed in a corridor that allowed impact avoidance and minimization for a number of resources while providing feasible engineering alternatives. Adverse impacts to the social, economic, natural, and cultural environments would result if any of the alignments were constructed.

Caddo Parish
DeSoto Parish
Stonewall
I-69 SIU 16
(Interstate 69/Trans-Texas Corridor)
I-69 SIU 15
Preferred Corridor
Selected Alignment, Line 6 (DEIS Preferred) & Line 5
Line 1
Line 2 & 4
Line 3
Conceptual Interchange (All Lines)
Relocated Road (All Lines)
Match Line See Sheet 2 of 6
Brushy Bayou
Sand Bayou
Wendy Ln
Jeanne Ln
Hilaire Rd
Cherri Ln
Ramblin Rd
Old Jefferson Rd
Julie Ln
Kayla Dr
Pine Grove Rd
Baker Rd
3276
Lesa Ln
Middleton Rd
Stanley Rd
Katherine Loop
Curtis Cir
Nancy Ln
Hall Rd
Twin Oaks Rd
Stacy Ln
Memory Ln
Hillside Cir
Douglas Rd
Rosemary Ln
Mize Ln
Thornton Rd
171
Jackie Ln
Scarlett Rd
Long Rd
Buena Vista
McCoy Ln
Neva Ln
Red Bluff Rd
Glenn Rd
Artha Rd
Hines Rd
Jessie Latin Rd
Linwood Ave
Baker

Legend

- LINE 1 — Proposed Interchange
- LINE 2 — Proposed Interchange
- LINE 3 — Proposed Interchange
- LINE 4 — Proposed Interchange
- LINE 5 — Proposed Interchange
- LINE 6 (DEIS Preferred) — Proposed Interchange
- SELECTED ALIGNMENT* — Proposed Interchange
- OIL OR GAS WELL
- HAZMAT SITE
- CHURCH
- WELLHEAD PROTECTION AREA
- PARCEL BOUNDARY
- URBANIZED AREA BOUNDARY
- CEMETERY
- FLOODPLAIN
- FLOODWAY
- WETLAND

* Line 6 (DEIS Preferred) with minor modifications

I-69, SIU 15
US 171 to I-20

Exhibit S-1

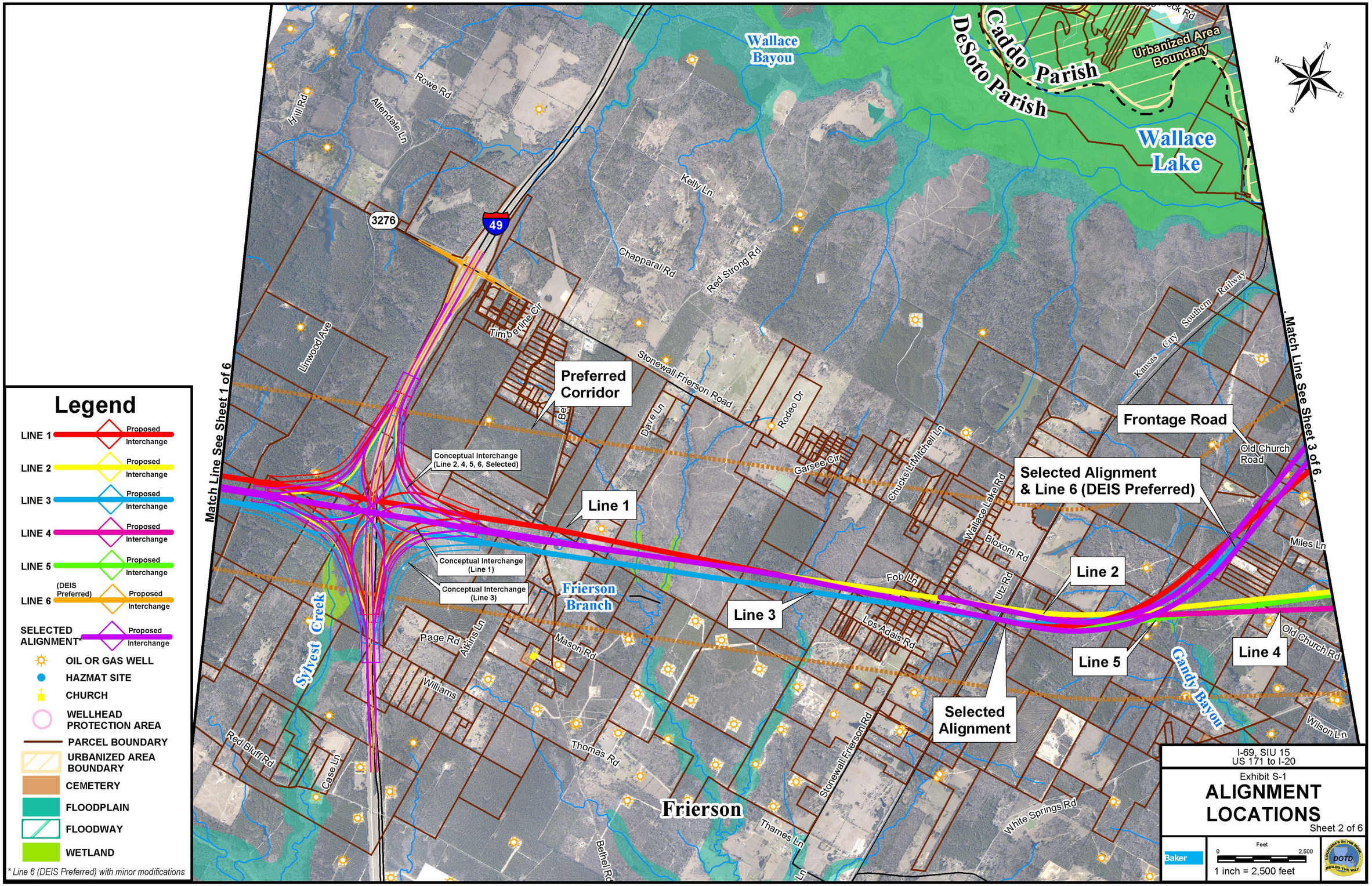
ALIGNMENT LOCATIONS

Sheet 1 of 6

Baker

Feet
0 2,500
1 inch = 2,500 feet

DOTD

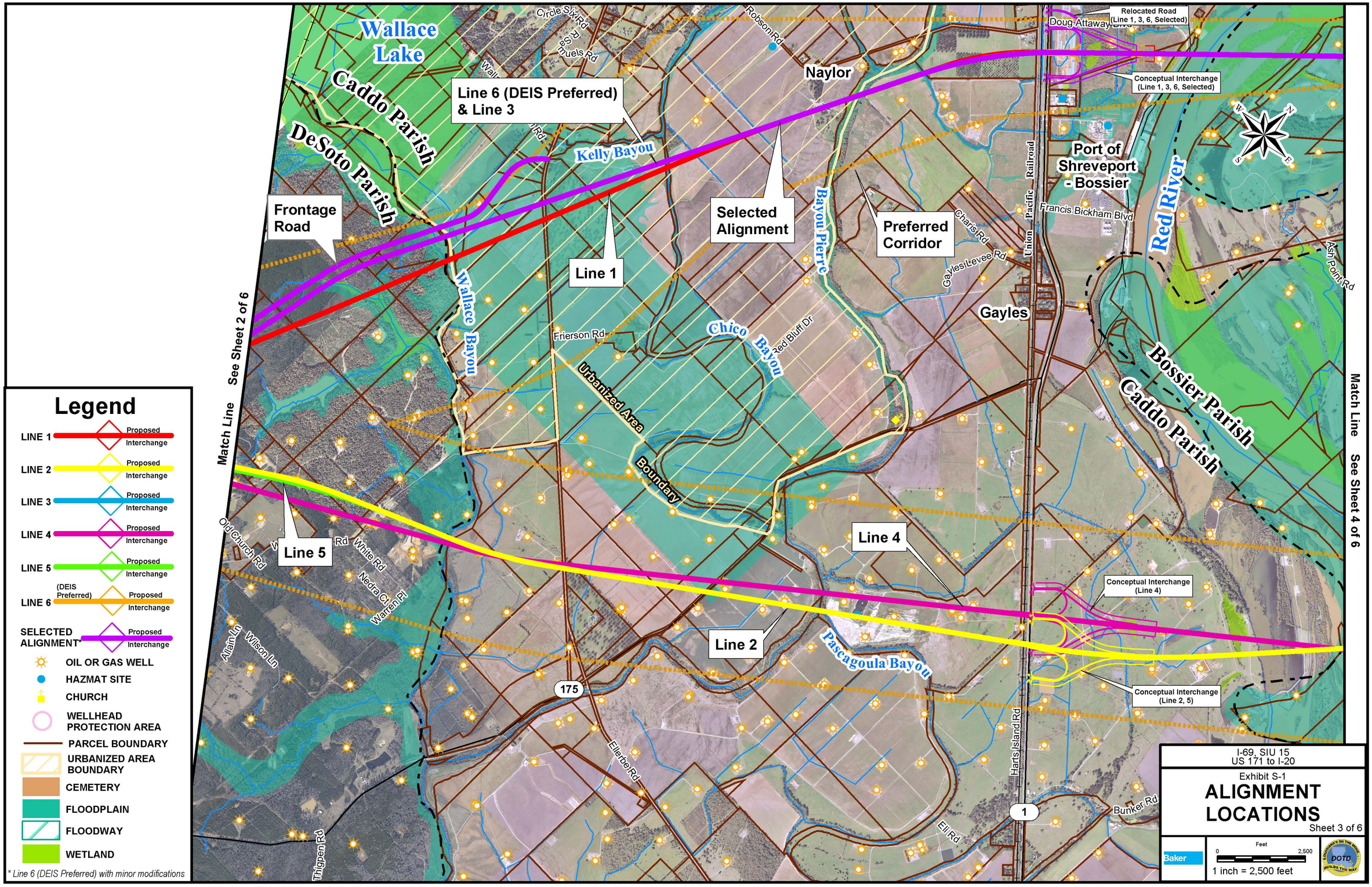


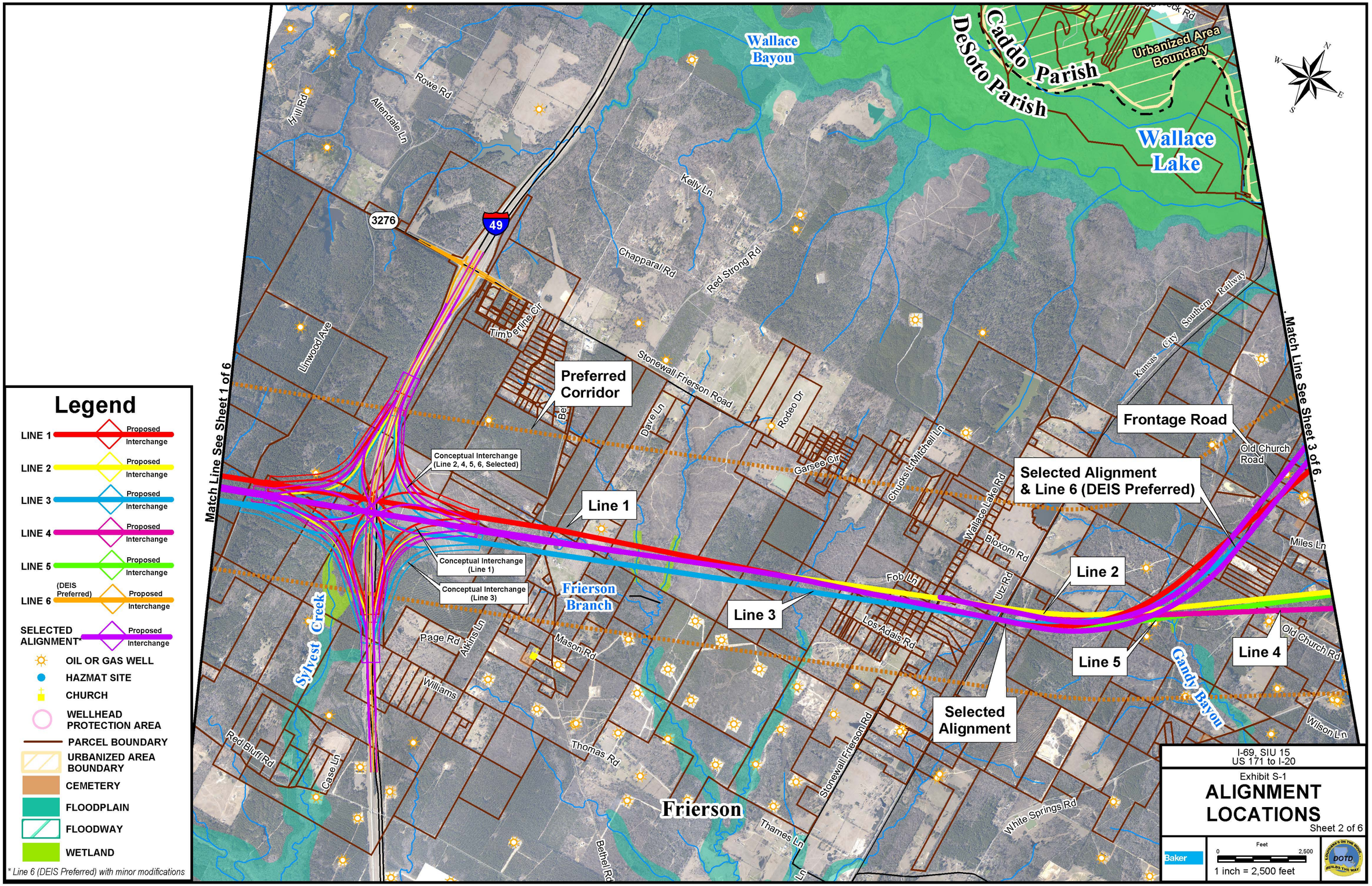
I-69, SIU 15
US 171 to I-20

Exhibit S-1

ALIGNMENT LOCATIONS

Sheet 2 of 6


Wallace Lake
Caddo Parish
DeSoto Parish
Line 6 (DEIS Preferred) & Line 3
Kelly Bayou
Frontage Road
Line 1
Selected Alignment
Preferred Corridor
Naylor
Robson Rd
Circle Six Rd
R S Samuels Rd
Wallace Bayou
Bayou Pierre
Chico Bayou
Red Bluff Dr
Frierson Rd
Urbanized Area Boundary
Gayles
Charis Rd
Gayles Levee Rd
Union Pacific Railroad
Port of Shreveport - Bossier
Francis Bickham Blvd
Red River
Ash Point Rd
Bossier Parish
Caddo Parish
Relocated Road (Line 1, 3, 6, Selected)
Doug Attaway Blvd
Conceptual Interchange (Line 1, 3, 6, Selected)
Conceptual Interchange (Line 4)
Conceptual Interchange (Line 2, 5)
Line 4
Line 2
Line 5
Pascagoula Bayou
Old Church Rd
White Rd
Nedra Ct
Warren Pl
Allain Ln
Wilson Ln
Thigpen Rd
175
Ellerbe Rd
Harts Island Rd
Eli Rd
Bunker Rd
1
Match Line See Sheet 2 of 6
Match Line See Sheet 4 of 6
Legend
LINE 1 Proposed Interchange
LINE 2 Proposed Interchange
LINE 3 Proposed Interchange
LINE 4 Proposed Interchange
LINE 5 Proposed Interchange
LINE 6 (DEIS Preferred) Proposed Interchange
SELECTED ALIGNMENT* Proposed Interchange
OIL OR GAS WELL
HAZMAT SITE
CHURCH
WELLHEAD PROTECTION AREA
PARCEL BOUNDARY
URBANIZED AREA BOUNDARY
CEMETERY
FLOODPLAIN
FLOODWAY
WETLAND
* Line 6 (DEIS Preferred) with minor modifications
I-69, SIU 15
US 171 to I-20
Exhibit S-1
ALIGNMENT LOCATIONS
Sheet 3 of 6
Baker
Feet
0
2,500
1 inch = 2,500 feet
DOTD

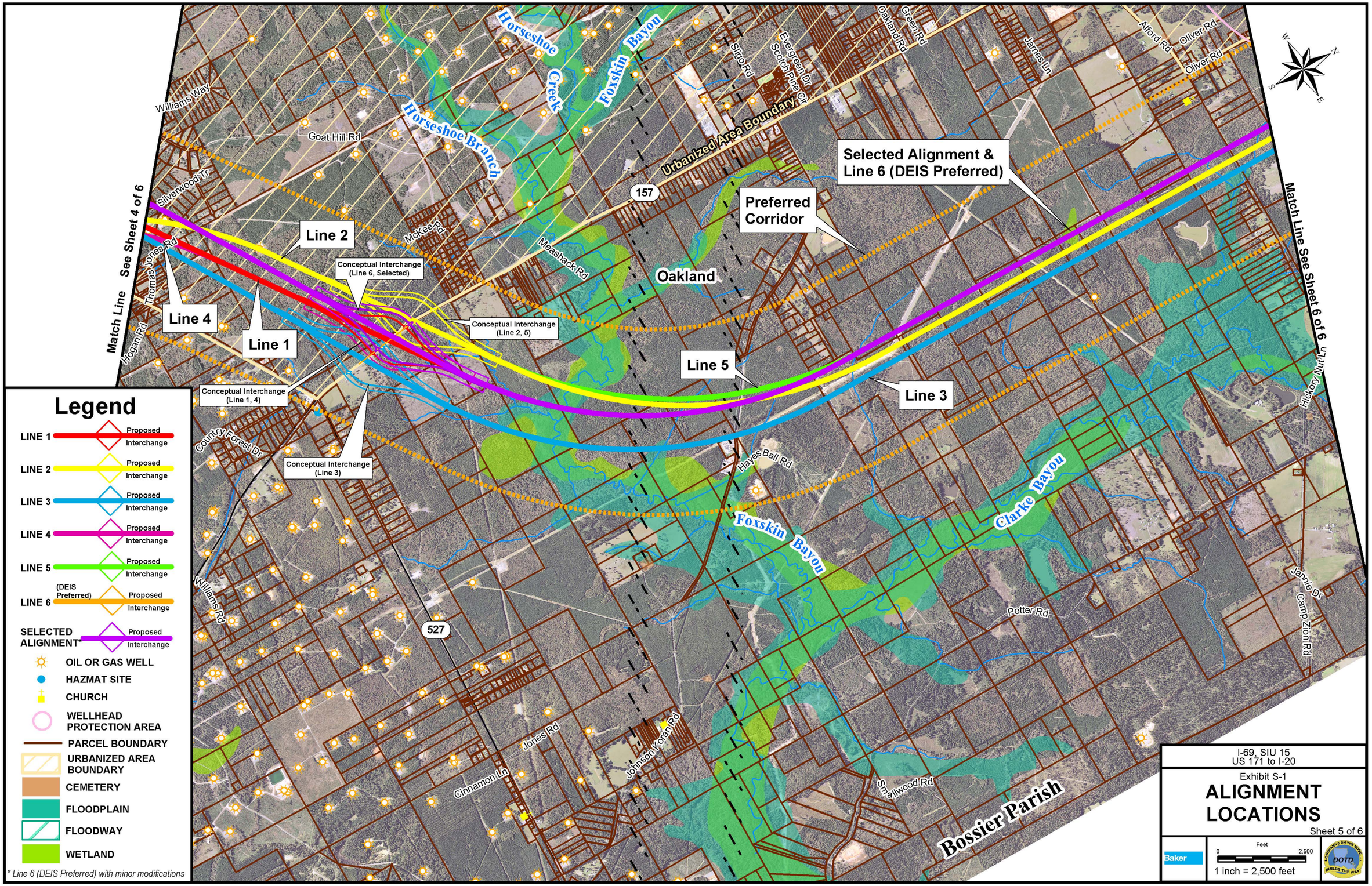


I-69, SIU 15
US 171 to I-20

Exhibit S-1

ALIGNMENT LOCATIONS

Sheet 2 of 6


Selected Alignment & Line 6 (DEIS Preferred)
Preferred Corridor
Line 1
Line 2
Line 3
Line 4
Line 5
Conceptual Interchange (Line 6, Selected)
Conceptual Interchange (Line 2, 5)
Conceptual Interchange (Line 1, 4)
Conceptual Interchange (Line 3)
Urbanized Area Boundary
Oakland
Bossier Parish
Horseshoe Creek
Horseshoe Branch
Foxskin Bayou
Clarke Bayou
157
527
Williams Way
Goat Hill Rd
Silverwood Tr
Thomas Jones Rd
Hogan Rd
McKee Rd
Meashack Rd
Sligo Rd
Evergreen Dr
Scotch Pine Cir
Oakland Rd
Green Rd
James Ln
Alford Rd
Oliver Rd
Hickory Nut Ln
Hayes Ball Rd
Country Forest Dr
Williams Rd
Jones Rd
Cinnamon Ln
Johnson Koran Rd
Smallwood Rd
Potter Rd
Jannie Dr
Camp Zion Rd
Match Line See Sheet 4 of 6
Match Line See Sheet 6 of 6
Legend
LINE 1 Proposed Interchange
LINE 2 Proposed Interchange
LINE 3 Proposed Interchange
LINE 4 Proposed Interchange
LINE 5 Proposed Interchange
LINE 6 (DEIS Preferred) Proposed Interchange
SELECTED ALIGNMENT* Proposed Interchange
OIL OR GAS WELL
HAZMAT SITE
CHURCH
WELLHEAD PROTECTION AREA
PARCEL BOUNDARY
URBANIZED AREA BOUNDARY
CEMETERY
FLOODPLAIN
FLOODWAY
WETLAND
* Line 6 (DEIS Preferred) with minor modifications
I-69, SIU 15
US 171 to I-20
Exhibit S-1
ALIGNMENT LOCATIONS
Sheet 5 of 6
Baker
Feet
0
2,500
1 inch = 2,500 feet
DOTD

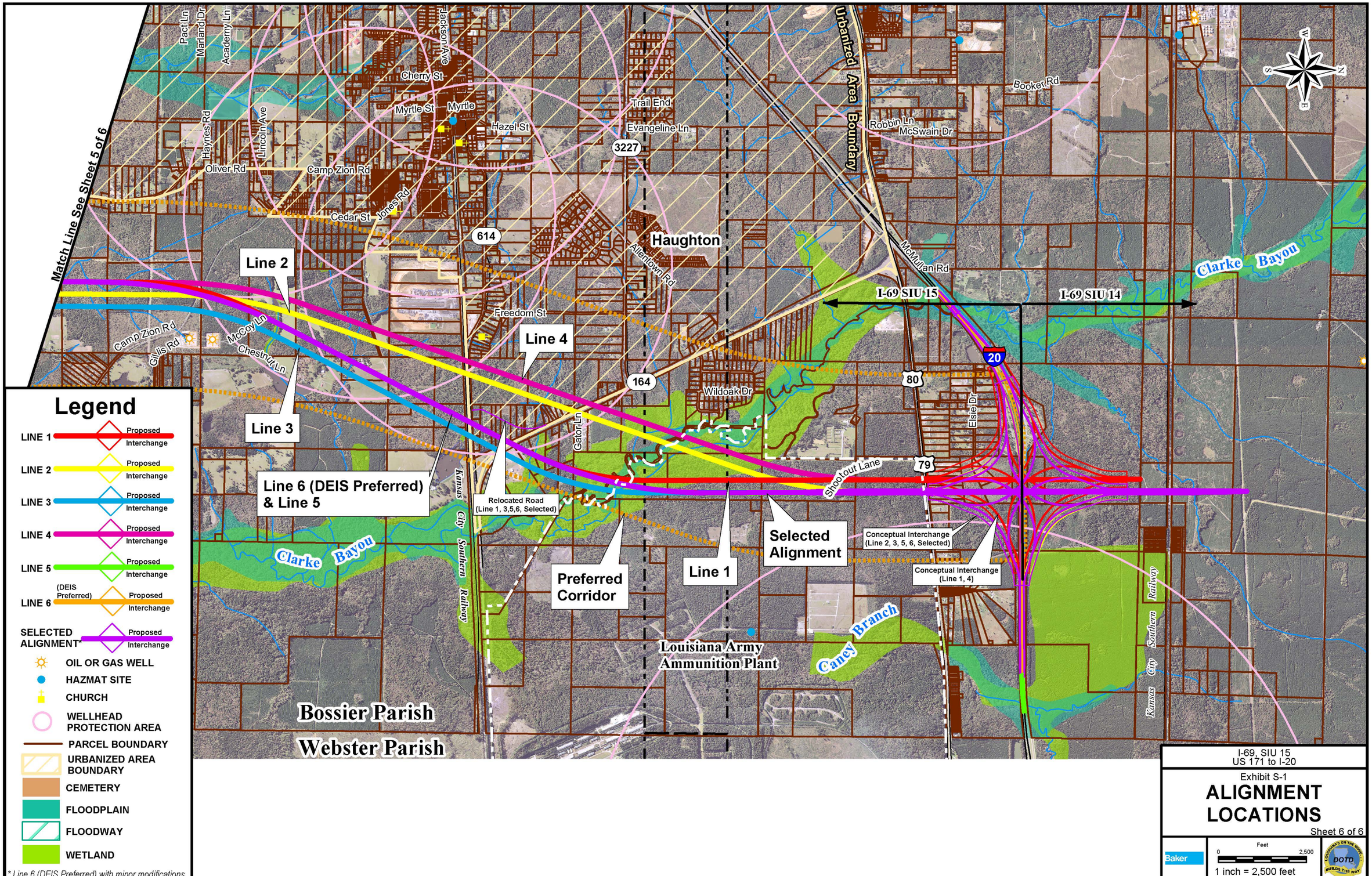

Match Line See Sheet 5 of 6
Pact Ln
Mariand Dr
Academy Ln
Jackson Ave
Cherry St
Myrtle St
Myrtle
Hazel St
Trail End
Evangeline Ln
Haynes Rd
Lincoln Ave
Oliver Rd
Camp Zion Rd
Jones Rd
Cedar St
3227
614
Haughton
Allentown Rd
Urbanized Area Boundary
Robbin Ln
McSwain Dr
Booker Rd
McMullan Rd
Clarke Bayou
I-69 SIU 15
I-69 SIU 14
Line 2
Line 4
Line 3
Line 6 (DEIS Preferred) & Line 5
Freedom St
Camp Zion Rd
McCoy Ln
Chestnut Ln
Gills Rd
164
80
20
Wildoak Dr
Gator Ln
Elsie Dr
79
Shootout Lane
Relocated Road (Line 1, 3,5,6, Selected)
Kansas City Southern Railway
Selected Alignment
Conceptual Interchange (Line 2, 3, 5, 6, Selected)
Conceptual Interchange (Line 1, 4)
Preferred Corridor
Line 1
Caney Branch
Louisiana Army Ammunition Plant
Bossier Parish
Webster Parish
Legend
LINE 1 Proposed Interchange
LINE 2 Proposed Interchange
LINE 3 Proposed Interchange
LINE 4 Proposed Interchange
LINE 5 Proposed Interchange
LINE 6 (DEIS Preferred) Proposed Interchange
SELECTED ALIGNMENT* Proposed Interchange
OIL OR GAS WELL
HAZMAT SITE
CHURCH
WELLHEAD PROTECTION AREA
PARCEL BOUNDARY
URBANIZED AREA BOUNDARY
CEMETERY
FLOODPLAIN
FLOODWAY
WETLAND
* Line 6 (DEIS Preferred) with minor modifications
I-69, SIU 15
US 171 to I-20
Exhibit S-1
ALIGNMENT LOCATIONS
Sheet 6 of 6
Baker
Feet
0
2,500
1 inch = 2,500 feet
DOTD

Table S-1
IMPACT SUMMARY

Section	Alignment	Length (miles)	Construction Costs[1] 2011 Base Year (in 000s)	ROW & Utility Costs[1] 2011 Base Year (in 000s)	Structures[2]: Houses	Structures[2]: Mobile Homes	Structures[2]: Apartment Buildings	Structures[2]: Businesses	Structures[2]: Churches	Structures[2]: Public Facilities	Cemeteries	Total Noise Impacts	Natural Resources: Wetlands #	Natural Resources: Wetlands ac	Natural Resources: Known T&E Species Locations #	Natural Resources: 100-Year Floodplains[2] ac	Natural Resources: Floodways[2] ac	Cultural Resources: NRHP Listed Sites # Caddoan	Cultural Resources: Recorded Potentially Eligible Sites # Caddoan	Cultural Resources: Recorded Ineligible Sites # Caddoan	Prehistoric Archaeology Probability Areas: High ac RRAV Upland	Prehistoric Archaeology Probability Areas: Medium ac RRAV Upland	Prehistoric Archaeology Probability Areas: Low ac RRAV Upland	Wellhead Protection Areas	Known Haz Mat Sites	Water Wells[2]	Producing Oil and Gas Wells[2] Oil / Gas
1	Line 1	9.1	$236,406	$12,426	4	5	-	-	-	-	-	16	9	10.7	-	11.8	-	- -	- -	- -	- -	- 16.7	- 539.1	-	-	-	- -
	Line 2	9.1	$235,602	$12,797	6	3	-	-	-	-	-	17	17	13.5	-	14.2	-	- -	- -	- -	- -	- 16.7	- 532.2	-	-	-	- -
	Line 3	9.1	$238,702	$12,652	5	6	-	-	-	-	-	19	18	16.0	-	12.8	-	- -	- -	- -	- -	- 16.7	- 567.7	-	-	-	- -
	Line 4	9.1	$235,612	$12,797	6	3	-	-	-	-	-	17	17	13.5	-	14.2	-	- -	- -	- -	- -	- 16.7	- 532.2	-	-	-	- -
	Line 5	9.1	$235,675	$12,426	4	5	-	-	-	-	-	16	11	10.5	-	15.2	-	- -	- -	- -	- -	- 18.2	- 569.0	-	-	-	- -
	Line 6 (DEIS Preferred)	9.1	$235,961	$12,426	4	5	-	-	-	-	-	16	11	10.5	-	15.2	-	- -	- -	- -	- -	- 18.5	- 569.3	-	-	-	- -
	Selected Alignment[3]	9.1	$235,961	$12,426	4	5	-	-	-	-	-	15	11	10.5	-	15.2	-	- -	- -	- -	- -	- 18.5	- 569.3	-	-	-	- -
2	Line 1	15.9	$364,358	$21,323	6	10	-	-	1	-	-	28	10	10.4	-	127.8	44.5	- -	- -	- -	26.6 13.9	242.9 12.3	124.6 230.6	-	-	4	- 15
	Line 2	15.5	$359,733	$46,055	2	1	-	-	-	1	-	8	9	13.6	-	118.0	58.4	- -	1 1	- -	27.1 14.3	188.1 19.2	157.2 217.9	-	-	2	- 17
	Line 3	15.9	$364,702	$18,659	4	9	-	-	1	-	-	28	11	9.5	-	120.8	39.2	- -	- -	- -	30.5 16.1	230.5 12.1	123.9 225.4	-	-	2	- 7
	Line 4	15.4	$360,950	$48,496	6	2	-	-	-	1	-	8	9	18.0	-	127.5	60.2	- -	1 -	- -	24.5 15.3	206.8 21.3	150.6 214.9	-	-	3	1 22
	Line 5	15.6	$359,588	$46,521	3	-	-	-	-	1	-	12	8	13.7	-	114.6	58.4	- -	1 1	- -	27.1 14.3	188 19.2	157.3 217.1	-	-	2	- 18
	Line 6 (DEIS Preferred)	15.9	$361,786	$19,057	3	12	-	-	1	-	-	27	11	11.0	-	123.4	44.6	- -	- -	- -	25.3 16.4	231.5 12.5	122 231.3	-	-	3	- 9
	Selected Alignment[3]	15.9	$411,111	$19,242	2	11	-	-	-	-	-	28	16	10.2	-	150.2	49.8	- -	- -	- -	25.8 16.4	225.1 12.5	122 231.3	-	-	2	- 11
3	Line 1	10.6	$202,265	$11,393	1	8	-	-	-	-	-	5	4	31.0	-	12.0	-	- -	- -	- -	- 12.8	- 16.6	- 410.8	4	-	2	- -
	Line 2	10.4	$204,595	$11,592	2	4	-	1	-	-	-	4	4	20.9	-	8.5	-	- -	- -	- -	- 9.2	- 26.2	- 407.9	4	-	-	- -
	Line 3	10.8	$214,676	$11,549	1	6	-	1	-	-	-	1	4	30.1	-	14.3	-	- -	1 -	- -	- 15	- 23.2	- 413.9	3	-	1	- -
	Line 4	10.5	$202,562	$11,090	-	5	-	-	-	-	-	5	4	26.7	-	11.0	-	- -	- -	- -	- 8.7	- 17.8	- 418.1	4	-	2	- -
	Line 5	10.8	$204,845	$11,384	1	5	-	-	-	-	-	5	4	22.5	-	9.0	-	- -	1 -	- -	- 11.4	- 25.7	- 390	4	-	1	- -
	Line 6 (DEIS Preferred)	10.6	$204,734	$11,384	1	5	-	-	-	-	-	5	4	22.3	-	11.3	-	- -	1 -	- -	- 11.4	- 16.3	- 408.7	4	-	1	- -
	Selected Alignment[3]	10.6	$204,734	$11,384	1	5	-	-	-	-	-	5	4	22.3	-	11.3	-	- -	1 -	- -	- 11.4	- 16.3	- 408.7	4	-	1	- -
TOTALS	No-Action	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- -	- -	- -	- -	- -	- -	-	-	-	- -
	Line 1	35.6	$803,029	$45,142	11	23	-	-	1	-	-	49	23	52.1	-	151.6	44.5	- -	- -	- -	26.6 26.7	242.9 45.6	124.6 1180.5	4	-	6	- 15
	Line 2	35.0	$799,930	$70,444	10	8	-	1	-	1	-	29	30	48.0	-	140.7	58.4	- -	1 1	- -	27.1 23.5	188.1 62.1	157.2 1158.0	4	-	2	- 17
	Line 3	35.8	$818,080	$42,860	10	21	-	1	1	-	-	48	33	55.6	-	147.9	39.2	- -	1 -	- -	30.5 31.1	230.5 52.0	123.9 1207.0	3	-	3	- 7
	Line 4	35.0	$799,124	$72,383	12	10	-	-	-	1	-	30	30	58.2	-	152.7	60.2	- -	1 -	- -	24.5 24.0	206.8 55.8	150.6 1165.2	4	-	5	1 22
	Line 5	35.5	$800,108	$70,331	8	10	-	-	-	1	-	33	23	46.7	-	138.8	58.4	- -	2 1	- -	27.1 25.7	188.0 63.1	157.3 1176.1	4	-	3	- 18
	Line 6 (DEIS Preferred)	35.6	$802,481	$42,867	8	22	-	-	1	-	-	48	26	43.8	-	149.9	44.6	- -	1 -	- -	25.3 27.8	231.5 47.3	122.0 1209.3	4	-	4	- 9
	Selected Alignment[3]	35.6	$851,806	$43,052	7	21	-	-	-	-	-	48	31	43.0	-	176.7	49.8	- -	1 -	- -	25.8 27.8	225.1 47.3	122.0 1209.3	4	-	3	- 11
	Frontage Road	4.2	$17,729	$1,885	2	-	-	-	-	-	-	-	5	0.7	-	16.2	-	- -	- -	- -	1.9 4.4	- 0.8	13.8 55.9	-	-	-	- 1

Source: Michael Baker Jr., Inc.

[1] Updated 2012, construction costs include design engineering, mitigation and construction engineering/inspection

[2] Updated 2010

[3] Selected Alignment is Line 6 (DEIS Preferred) with minor modifications

- Selected Alignment

RRAV - Red River Alluvial Valley

Upland - Upland Areas

Caddoan - Sites with Caddoan Components

PROJECT IMPLEMENTATION

A project implementation plan developed for the Selected Alignment consists of five implementation segments that can be constructed independently and provide a reasonable schedule and funding level for planning purposes. The five implementation segments for the Selected Alignment are separated by the six project interchanges at US 171, I-49, LA 1, US 71, LA 157 and I-20 with five sections of highway connecting those interchanges (see Exhibit S-2). The Northwest Louisiana Council of Governments Shreveport-Bossier City area Metropolitan Planning Organization (MPO) established the implementation phase priority that would best meet the future travel demands of the Region. On November 7, 2011, the MPO Transportation Policy Committee agreed with the Technical Advisory Committee's (TAC) recommendation that the Red River bridge be constructed first, followed by the segment between I-49 and LA 1, then US 71 to LA 157, LA 157 to I-20, and finally US 171 to I-49.

For planning purposes, an implementation schedule was developed by implementation segment and phase. The project is anticipated to take 12 years to design and construct; starting in 2014 and extending through 2026 (see Table S-2).

The Year 2011 preliminary cost estimates were converted to year of expenditure (YOE) costs through applying a forecasted four-percent annual inflation rate to account for the time period that a particular segment and phase is being implemented. The implementation schedule includes the total estimated cost in YOE dollars per construction year (see Table S-2).

OTHER PROPOSED MAJOR ACTIONS IN THE REGION

Other proposed federal and state actions in the Project Area include:

The National I-69 Corridor – SIU 14. A Notice of Intent (NOI) was issued by the Federal Highway Administration (FHWA) in March 2003 to prepare an EIS on a proposal to construct SIU 14 of the National I-69 Corridor from I-20 near Haughton in Bossier Parish, Louisiana to U.S. Highway 82 near El Dorado in Union County, Arkansas. SIU 14 lies to the north of, and connects with, the I-69 Project. A Draft Environmental Impact Statement (FHWA LA-EIS-05-01-D) was approved for circulation and public review in March 2005. The Final EIS was distributed for public review in September 2011 and FHWA issued the Record of Decision (ROD) on April 27, 2012. For more information visit, http://www.i69arkla.com/.

Interstate 69/Trans-Texas Corridor. A NOI was issued by the FHWA in January 2004 to prepare a Tier One EIS to determine the location of an I-69/Trans-Texas Corridor. The Corridor Study includes SIU 16 of the National I-69 Corridor from U.S. Highway 171 near Stonewall in DeSoto Parish, Louisiana to U.S. Highway 59/U.S. Highway 259 near Nacogdoches in Nacogdoches County, Texas. SIU 16 lies to the south of, and connects with, the I-69 Project. After the Tier

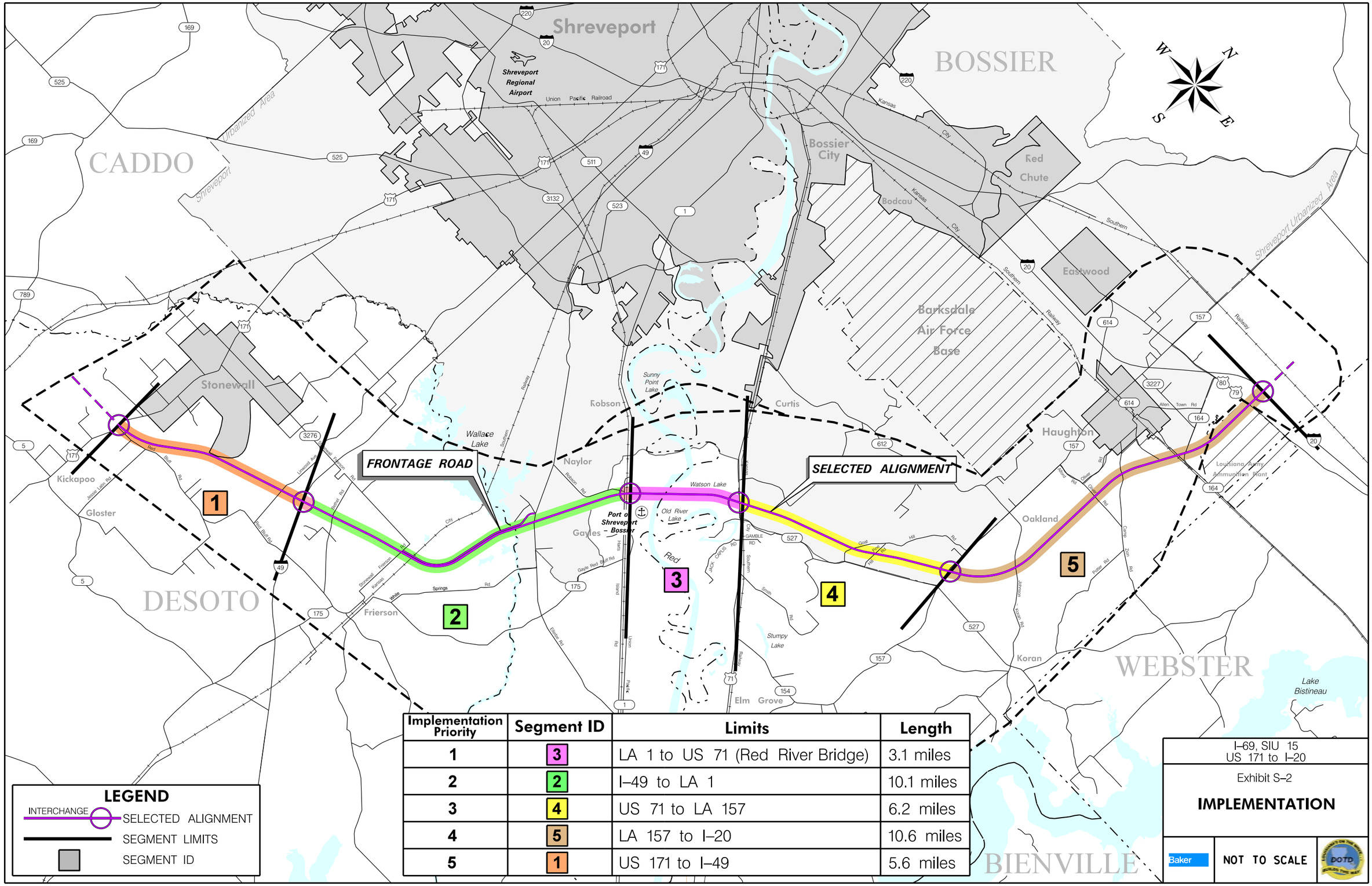
One decision was made, the FHWA would proceed with the I-69 highway component by performing project-level studies in a Tier Two decision process. Other federal, state, and/or local agencies would pursue project decisions for the non-highway modes after the Tier One decision. The Tier One Draft EIS was approved for circulation and public review in November 2007. In 2009, the Texas Department of Transportation (TxDOT) decided to phase out the all-in-one corridor concept in favor of developing separate rights-of-way for road, rail, and other infrastructure using more traditional corridor widths for those modes. FHWA rescinded the NOI in 2011 because the joint I-69/TTC concept described in the 2004 NOI was no longer under consideration. The National I-69 Corridor SIUs in Texas and into Louisiana will be advanced through the NEPA process as Federal and State funding becomes available.

The DOTD and the FHWA – Louisiana Division have consulted and coordinated with the FHWA Arkansas and Texas Division offices, the Arkansas State Highway and Transportation Department, and the Texas Department of Transportation throughout the project development process.

High Priority Corridor 1. Congressionally-designated High Priority Corridor (HPC) 1 connects Shreveport Louisiana with Kansas City, Missouri. Within Louisiana, HPC 1 was divided into two separate studies, I-49 North (formerly known as the North-South Expressway) from I-220 to the Arkansas state line; and the I-49 Inner City Connector from I-20 to I-220. I-49 North is in various stages of final design and construction. Feasibility studies were completed on the I-49 Inner City Connector and the NEPA process initiated in late-2011.

LA 3132 (Inner Loop Extension). The Shreveport-Bossier Metropolitan Area Transportation Plan (NLCOG 1989) identified the future extension of LA 3132 (Inner Loop) as part of the orderly development of the regional transportation system to meet future traffic demands. LA 3132 currently terminates at LA 523 (Flournoy-Lucas Road) approximately 1.2 miles from the LA 1 – LA 523 intersection. DOTD is currently evaluating the feasibility of extending the Inner Loop to LA 1 and I-69. The feasibility study is expected to be completed in mid-2012 and the NEPA process initiated at the conclusion of the feasibility study.

US Air Force Global Strike Command. The U.S. Air Force Global Strike Command (AFGSC) at the Barksdale Air Force Base (BAFB) is the Air Force's newest command and is responsible for the nation's three intercontinental ballistic missile wings, two B-52 Stratofortress wings and the only B-2 Spirit wing. A new entrance into BAFB south of the existing I-20/I-220 interchange is under evaluation. An Interchange Justification is being prepared for DOTD and FHWA approval. There currently is no schedule for preparing a NEPA document.



Implementation Priority	Segment ID	Limits	Length
1	3	LA 1 to US 71 (Red River Bridge)	3.1 miles
2	2	I–49 to LA 1	10.1 miles
3	4	US 71 to LA 157	6.2 miles
4	5	LA 157 to I–20	10.6 miles
5	1	US 171 to I–49	5.6 miles

Table S-2
Implementation Schedule and Estimated Costs

Segment ID	Length	Phase		2011 Base Costs	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
3 (Red River Crossing)	3.1 miles	Preliminary Engineering		$9,870,100	12 months												
		Mitigation		$1,568,200	6 months												
		Final Design		$18,456,300		18 months											
		Utilities		$558,600		15 months											
		Right of Way		$5,319,200		12 months											
		Construction	Earthwork	$18,774,300			6 months										
			Bridges & Interchanges	$204,295,700				30 months									
			Base and Paving	$16,237,000						9 months							
2 (I-49 to LA 1)	10.1 miles	Preliminary Engineering		$6,379,300		15 months											
		Mitigation		$1,325,500			6 months										
		Final Design		$10,465,700				18 months									
		Utilities		$1,209,600				15 months									
		Right of Way		$9,507,800				18 months									
		Construction	Earthwork	$34,563,200					18 months								
			Bridges & Interchanges	$79,122,800						18 months							
			Base and Paving	$33,754,600							18 months						
2 Frontage Road (2-lane)	4.2 miles	Preliminary Engineering		$716,200			6 months										
		Mitigation		$517,800			3 months										
		Final Design		$993,000				6 months									
		Utilities		$592,200				6 months									
		Right of Way		$1,292,200				6 months									
		Construction	Earthwork	$6,697,400						6 months							
			Bridges	$3,000,400							6 months						
			Base and Paving	$5,804,400							12 months						
4 (US 71 to LA 157)	6.2 miles	Preliminary Engineering		$3,243,500					12 months								
		Mitigation		$302,000						6 months							
		Final Design		$4,894,200							18 months						
		Utilities		$716,800							15 months						
		Right of Way		$6,978,800							15 months						
		Construction	Earthwork	$24,126,200								12 months					
			Bridges & Interchanges	$28,106,700								12 months					
			Base and Paving	$20,856,500								12 months					
5 (LA 157 to I-20)	10.6 miles	Preliminary Engineering		$7,815,600							15 months						
		Mitigation		$2,736,500								6 months					
		Final Design		$12,913,100								18 months					
		Utilities		$1,514,800								12 months					
		Right of Way		$9,869,300								18 months					
		Construction	Earthwork	$42,446,100									18 months				
			Bridges & Interchanges	$94,548,300										18 months			
			Base and Paving	$44,274,400											15 months		
1 (US 171 to I-49)	5.6 miles	Preliminary Engineering		$4,979,100									12 months				
		Mitigation		$1,465,400										6 months			
		Final Design		$8,651,200											12 months		
		Utilities		$749,000											9 months		
		Right of Way		$6,628,100											12 months		
		Construction	Earthwork	$16,455,300												12 months	
			Bridges & Interchanges	$79,420,800													6 months
			Base and Paving	$19,758,800													18 months
				Estimated YOE Cost by Year	$12,866,500	$20,738,800	$66,610,700	$123,124,600	$145,288,700	$136,519,200	$121,452,800	$118,668,700	$68,541,200	$115,290,500	$165,058,300	$204,813,400	$23,485,800
																TOTAL:	$1,322,459,200

Source: Michael Baker Jr., Inc., 2012

Southwest Arkansas Navigation Study. Authority for the feasibility is contained in Section 402 of the Water Resources Act of 1996 (P.L. 104-303) as a follow-on to a reconnaissance study that was completed in November 1995 to determine the feasibility of extending the navigation along the Red River above Shreveport-Bossier City, Louisiana into southwest Arkansas. The study is being conducted by the U.S. Army Corps of Engineers – Vicksburg District in cooperation with the Arkansas Red River Commission.

OTHER LOCAL ACTIONS

The FHWA, the DOTD, and the Caddo-Bossier Parishes Port Commission entered into a Corridor Preservation Memorandum of Agreement (MOA) to preserve Commission land, in an unimproved state, along the route of the Draft EIS Preferred Alignment (Line 6) subject to public, local officials, resource agency, and Native American tribe review and completion of the NEPA process. The route of the Selected Alignment and Draft EIS Preferred Alignment (Line 6) are identical through the Commission property. In the event that the alignment ultimately selected does not pass through Commission property, the MOA will terminate upon execution of the Record of Decision. This agreement is included in Appendix M.

ENVIRONMENTAL MITIGATION, COMMITMENTS AND PERMITS

Throughout this project, the DOTD and FHWA have consulted and coordinated with several federal and state agencies, as well as the public, regarding important issues. Many issues have been resolved throughout the course of the preparation of this Final EIS. The resolution of other issues cannot be completed until the project moves forward into the next phase of design, when additional information becomes available. These issues have been resolved by agreeing to the manner in which they will be addressed at a later date. The following summarizes the required permits, and the agreements and commitments that have been reached for this project.

Design Requirements

- The Selected Alignment will require a Design Exception because the interchange with I-49 is less than the three-mile spacing between rural interchanges specified in the AASHTO Interstate Design Standards (AASHTO 2005) and DOTD Engineering Directives (DOTD 2006). Per DOTD requirements the Design Exception would be requested during final design.
- Crossovers would be provided for emergency access. The number and location of the emergency crossovers would be determined during final design.
- Red River Bridge design requirements include:
  - The required vertical clearance is 62 feet above the normal pool elevation
  - The resulting minimum horizontal clearance for the navigation span shall

be 300 feet, measured normal to the flow of the river

- Piers shall not be placed through existing levees or foundations constructed in and around levee's toe of slope
- New facilities crossing levee systems must ensure a 15-foot minimum vertical clearance above the top of levees
- Levee armoring with riprap or revetment mats may be required in the shadowline of the proposed structure to mitigate erosion and loss of vegetation
- During final design, a comprehensive barge impact study will be conducted to ensure that piers within the 100-year floodplain are impact worthy and a detailed navigation study will be coordinated with the USCG
- The final main span unit configuration, pier sizes, and construction methods will be established during final design
- Navigation lighting will be in accordance with 33 CFR 18
- Detailed hydrology and hydraulic studies will be performed during the final design
- Engineering "No Rise" Certificates will be prepared during final design and submitted to the Parish Floodplain Administrators for review and approval

Permits

- ❑ State Water Quality Certification issued by the Louisiana Department of Environmental Quality, as required by Section 401 of the Clean Water Act.
- ❑ Clean Water Act Section 404 permit issued by the U.S. Army Corps of Engineers for the placement of dredged or fill material in waters of the United States. A draft Section 404 permit application for the Selected Alignment is included in Appendix O.
- ❑ National Pollutant Discharge Elimination System (NPDES) Permit required by Section 402 of the Clean Water Act issued by the Louisiana Department of Environmental Quality.
- ❑ Louisiana Pollutant Discharge Elimination System (LPDES) permit issued by the Louisiana Department of Environmental Quality.
- ❑ Bridge Permit issued by the U.S. Coast Guard (USCG), pursuant to the General Bridge Act of 1946, for crossing the Red River, a navigable waterway. No other USCG Bridge Permits are required.
- ❑ Levee Crossing Permit that includes letter of "no objection" from the COE, Vicksburg District and permits issued by the Bossier and Caddo Levee Districts.
- ❑ Construction and maintenance agreements will be coordinated as needed with the railroads during final design.
- ❑ No permits have been secured or permit applications submitted for the Project.

Corridor Preservation

- ❑ At this time, the DOTD has no plans to develop a management approach and prepare a formal corridor preservation plan for the Project. A joint cooperative endeavor agreement will be

entered into between DOTD, FHWA, NLCOG and/or other municipalities should future preparation of a corridor preservation plan be warranted.

Relocations

- During final design of the highway, further consideration will be given to reducing residential and business displacements. All displaced residents will be provided with relocation assistance by the DOTD and every reasonable effort will be made to relocate affected residents within their immediate community.
- The DOTD will provide relocation assistance to residences and businesses displaced during acquisition of right-of-way in accordance with the Federal Uniform Relocation Assistance and Real Property Policies Act of 1970. The DOTD is committed to assist with locating replacement housing within the occupant's financial means and within the general area of the project and when necessary providing housing of last resort. Real estate availability will be reassessed once final design of the highway has been completed. The DOTD publication, "Acquisition of Right of Way and Relocation Assistance" is included in Appendix K for further information.

Oil and Gas Resources

- In conjunction with the right-of-way acquisition process, a qualified petroleum engineer will conduct a feasibility study for each impacted well to determine the estimated reserves.
- All wells impacted by the proposed highway would be properly abandoned according to procedures established by the Louisiana Department of Environmental Quality.
- During final design of the highway, individual gas and oil collector lines would be identified. When possible, these lines would be avoided or relocated to continue service to these well sites.

Water Quality

- The DOTD will minimize non-point discharge water quality impacts and will comply with all requirements of the Clean Water Act, as amended, for the construction of this proposed highway. A Stormwater Pollution Prevention Plan will be prepared in conjunction with the NPDES permitting. This Plan will include all specifications and best management practices (BMPs) necessary for control of erosion and sedimentation due to construction-related activities.
- Mitigation measures will be implemented as part of the design and construction of the Project to reduce impacts resulting from stormwater runoff. These measures will include:
  - Implementation of a LADEQ approved Erosion and Sedimentation Control Plan
  - Use of properly sized and engineered culverts for stream crossings to minimize

impacts attributed to flood height and flood duration

- Construction of detention treatment facilities where necessary
- Perpendicular stream crossings where practicable
- Scheduling construction activities to minimize exposed areas and duration of exposure
- Prompt re-vegetation of all disturbed areas
- Minimize duration of in-stream work by heavy equipment
- Control of runoff within the right-of-way limits using temporary stormwater management ponds before discharging into receiving streams
- Use of gentle slopes and wide shallow channels for grassed swales to remove pollutants through filtration, settling, and infiltration
- Designation of impervious areas for construction equipment, vehicle storage, and fuel to minimize accidental spills.
- Storing fuels, other similar materials, and construction vehicles and equipment away from designated Well Head Protection Areas.

Floodplains

- ❑ Detailed hydrology and hydraulic studies will be performed during the final design to demonstrate that proposed encroachments would not result in any increase in flood level due to construction that would violate applicable floodplain regulations, including National Flood Insurance Program Regulations and Bossier, Caddo and DeSoto Parishes Flood Ordinances. DOTD and FHWA will review these studies to confirm that adequate measures have been taken to insure that floodplain encroachment does not increase the risk of flooding to adjacent properties. These studies, along with applicable Engineering "No Rise" Certificates, will be submitted to the Parish Floodplain Administrators for review and approval.

Wetlands

- ❑ Under the combined authority of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, the COE has determined that there will be impacts to jurisdictional waters of the United States, and issued a Preliminary Jurisdictional Determination (JD) for the Selected Alignment (see Appendix N).
- ❑ The DOTD will attempt to further minimize wetland impacts during the final design phase of the project when practicable. All unavoidable wetland impacts will be mitigated for by the DOTD and the FHWA. Final mitigation ratios and requirements will be determined during an evaluation of the Project pursuant to Section 404 of the Clean Water Act. This evaluation process will take place after issuance of the Record of Decision.
- ❑ The DOTD and its contractors will not excavate, fill, or perform land clearing activities within Waters of the United States or any areas

under jurisdiction of the COE, except as authorized by the COE. The DOTD will require its contractors to comply with all local, state, and federal regulations.

- Construction-related wetland impacts will be avoided through implementation of mitigation measures, including:
  - Wetlands outside the construction limits will not be used for construction support activities (borrow sites, waste sites, storage, parking access, etc.) unless the contractor obtains Section 404 permits from the Corps of Engineers
  - Clearing of wetland vegetation will be limited to the minimum required for job completion
  - Coordination with the contractor to ensure that all appropriate measures will be taken to protect the water quality of adjacent wetlands through the use of straw bales, silt fencing, and seeding and mulching.

Threatened and Endangered Species

- Biological assessments were conducted for the Interior least tern (*Sterna antillarum*) and Red-cockaded woodpecker (*Picoides borealis)* and the FHWA determined that the project "may affect, but is not likely to adversely affect" either species. The U.S. Fish and Wildlife Service (FWS) concurred with FHWAs determinations and indicated no further Endangered Species Act (ESA) Section 7 consultation was required unless there were changes in the scope or location of the Project, or if project construction has not been initiated within one year. If the project has not been initiated within one year, follow-up consultation should be accomplished prior to construction (see Appendix D, page D-166 for the latest correspondence). The Record of Decision will document FWS concurrence with FHWAs ILT and RCW determinations, and completion of the ESA Section 7 consultation.

Cultural Resources

- A Phase I Cultural Resources Survey was conducted to identify archaeological and historic resources along the Draft EIS Preferred Alignment (Line 6) and the Selected Alignment. The Louisiana State Historic Preservation Officer concurred with the survey findings and National Register of Historic Places eligibility presented in the Final Phase I Cultural Resources Survey Report. A summary of the findings are in Section 4.14.
- An August 31, 2011 letter agreement prepared by DOTD, identifying continuing efforts for completion of the National Historic Preservation Act of 1966, Section 106 process with respect to the Project's effect on Historic Properties was accepted by the Louisiana State Historic Preservation Officer (see Appendix D, page D-169).

Hazardous Materials

- A Phase 1 Environmental Site Assessment was conducted along the Draft EIS Preferred Alignment (Line 6) and the Selected Alignment. The Selected Alignment encroaches on properties identified as known potential

hazardous waste sites, but those encroachments were in locations where plant operations did not occur and there was no evidence of contamination. If areas of hazardous materials contamination are identified, appropriate measures will be taken to remediate the areas prior to construction.

- The interchange at LA 1 for Lines 1, 3, 6 (DEIS Preferred Alignment) and the Selected Alignment is adjacent to CCS Energy Services, Inc. (formerly known as Arkla Disposal Services, Inc.), an identified hazardous materials site. The interchange ramps will be configured during final design to avoid the property.

Traffic Analysis

- The regional traffic model maintained by the North Northwest Louisiana Council of Governments (Shreveport-Bossier City area Metropolitan Planning Organization (MPO)) was expanded to include the entire Study Area, and a revised traffic analysis performed to evaluate and verify the serviceability of the highway system and the I-69 conceptual interchanges. All locations are projected to operate at an acceptable level of service. An Interchange Justification Study (IJS) engineering and operational determination was found acceptable by FHWA on January 18, 2008 for the proposed Project interchanges with I-49 and I-20 (see Appendix D, page D-140).
- The MPOs regional traffic model was subsequently revised to include additional interchange access to the Barksdale Air Force Base (BASF) and forecast traffic volumes for the I-69 Project as part of the entire National I-69 Corridor (Full Build) as well as for a stand-alone section of independent utility (Partial Build). A revised traffic analysis was performed to evaluate and verify the serviceability of the highway system and the I-69 conceptual interchanges, including the Project interchanges with I-49 and I-20. The revised traffic analysis concluded that all locations are projected to operate at an acceptable level of service, as previously determined in the IJS. The revised traffic analysis and results will be submitted to FHWA. The results are included in Section 2.
- There were no significant changes in condition therefore final approval of the IJS may be given after issuance of the Record of Decision. If the Project has not progressed to construction within eight years of receiving affirmative determination of the engineering and operational acceptability from FHWA, a re-evaluation is required.

Air Quality

- The Project is located within the Northwest Louisiana Council of Government's (the regional metropolitan Planning Organization) (MPO) planning boundaries and is in an area designated as in attainment by the

Environmental Protection Agency (see Appendix D, page D-160).

- Mitigation measures to reduce air quality construction impacts will include:
  - Specifications requiring the contractor to tune equipment/motors to manufacturer's specifications in order to reduce air emissions of construction equipment
  - Burning alternatives, such as air curtain destructors (equipment that creates nearly complete combustion of vegetative materials with little or no emissions), sending to landfills, or on-site composting, in areas where nuisance dust and particulates becomes a concern.

Noise Analysis

- The regional traffic model maintained by the North Northwest Louisiana Council of Governments (Shreveport-Bossier City area Metropolitan Planning Organization (MPO)) was expanded to include the entire Study Area and subsequently revised to include additional interchange access to the Barksdale Air Force Base (BASF) and forecast traffic volumes for the I-69 Project as part of the entire National I-69 Corridor (Full Build) as well as for a stand-alone section of independent utility (Partial Build). Receptors accounting for areas most likely affected by the Project were identified using NLCOG 2009 digital orthophotography. The predictive noise model was revised and the traffic noise reanalyzed. Noise abatement measures are not warranted for any of the Build alternatives, including the Selected Alignment, because they do not satisfy the DOTD cost effectiveness criteria. The results are included in Section 4.
- The Final EIS, containing the noise analyses, will be provided to the NLCOG, Mayors of Stonewall and Haughton, and the Bossier, Caddo, and Desoto Parish Police Juries to assist these local officials in their planning efforts to limit, to the extent possible, future land development adjacent to I-69 that is incompatible with anticipated highway noise levels.

Navigation

- In accordance with 23 USC 144(h), (23 CFR Section 650.805), FHWA determined that a USCG bridge permit is required for portions of the project spanning the Red River at RM 212.2 and that no other USCG bridge permits were required. USCG concurred with FHWAs determination (see Appendix D, page D-174).
- A Conceptual Red River Bridge Study was conducted to provide information relative to navigation and the effects the bridge will have on navigation interests using the waterway. Pier locations, horizontal and vertical clearances, and the alignment of the main channel navigation opening and approach spans were established; and hydrologic/hydraulic and scour analyses performed. The results are included in Section 2. The USCG reviewed the study in

coordination with the COE and various waterway associations, and found the study acceptable and determined that no further reviews were necessary at this time (see Appendix D, page D-177). Detailed navigation studies and collision design alternatives, and the Bridge Permit application, will be coordinated with the USCG during final design.