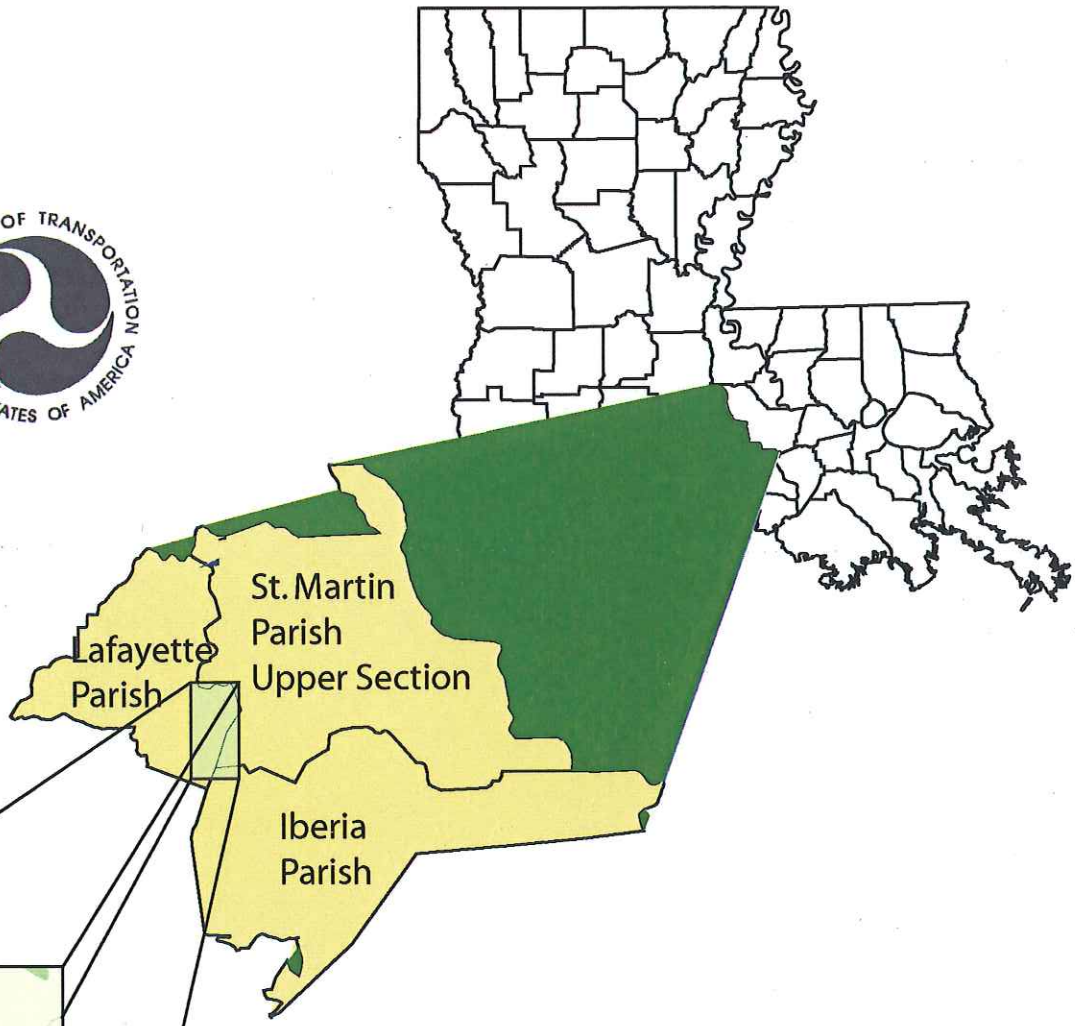
Final Environmental Impact Statement

I-49 South
Route US 90



April 2005

Lafayette Regional Airport to Route LA 88

State Project No. 700-99-0230
Federal Aid Project No. I-49-1(057)
Iberia, Lafayette and St. Martin Parishes

Lead Agencies:
Federal Highway Administration
Louisiana Department of Transportation and Development

Cooperating Agency:
U.S. Army Corps of Engineers

FHWA-LA-EIS-03-01-F

State Project No. 700-99-0230
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I-49 South
Lafayette Regional Airport to Route LA 88
Route US 90
Lafayette, St. Martin, and Iberia Parishes
Louisiana

FINAL
ENVIRONMENTAL IMPACT STATEMENT

Submitted pursuant to 42 USC 4332(2)(c), 23 CFR 711,
and CEQ regulation (40 CFR 1500-1508)
by the
U.S. Department of Transportation
Federal Highway Administration (FHWA)
and the
Louisiana Department of Transportation and Development (LDOTD)

Cooperating agency:
U.S. Army Corps of Engineers (USACE)

April 15, 2005
Date of Approval — **For LDOTD**

4/18/05
Date of Approval — **For FHWA**

The following persons may be contacted for additional information concerning this document:

Vincent G. Russo Jr. P.E.
Environmental Engineer Administrator
Louisiana Department of Transportation
P.O. Box 94245
Baton Rouge, Louisiana 70804-9245
Phone (225) 242-4502

William C. Farr
Program Operations Manager
Federal Highway Administration
5304 Flanders Dr., Suite A
Baton Rouge, Louisiana 70808
Phone (225) 757-7615

This Final EIS proposes the upgrade of this portion of US 90 on its existing alignment to a six-lane control of access freeway meeting all interstate standards with two-lane, one-way frontage roads. Also included in the project are seven interchanges with regional roadways, the provision for one of these to be upgraded to a full-directional interchange, the relocation of LA 92 east of US 90, and the realignment of portions of Southpark Road (LA 89) and Verot School Road at their interchanges with the proposed project. Comments on this Final EIS are due by Monday, June 13, 2005 and should be sent to Mr. Vincent G. Russo, P.E. at the above address.

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Summary

S.0 Summary

S.1 Description of the Proposed Action

The Louisiana Department of Transportation and Development (LDOTD) in cooperation with FHWA, proposes to upgrade US 90 in Lafayette, St. Martin, and Iberia Parishes to a full control of access facility meeting interstate highway design standards as a segment of I-49 South. The project would upgrade US 90 to a six-lane control of access highway, having ramps to two-lane one-way frontage roads. The frontage roads would provide access to grade-separated major connecting roads and local destinations. This roadway section would separate through traffic from slower moving local traffic. To the extent possible, project activity would take place within the existing US 90 right-of-way in conformance with the objectives as stated in Figure S-1.

Lafayette, St. Martin and Iberia Parishes

I-49 South
Lafayette Regional Airport to LA 88

Project Objectives

Convert Route US 90 to a full Control of Access highway meeting current interstate standards (I -49), while providing the:

- Least disruption to local, business, and through traffic during construction;
- Least impact to the natural and human environment;
- Best access for local and business traffic in the completed project;
- An improved hurricane evacuation route.

Figure S-1

The proposed action that is the subject of this Final Environmental Impact Statement (FEIS), known herein as "the project," is a segment of proposed I-49 South that would extend from just south of Kaliste Saloom Road near Lafayette Regional Airport to the LA 88 interchange in Iberia Parish, a distance of 10.8 miles. Exhibit S-1 provides a view of the project area. Connecting roadways include:

- (Relocated) Verot School Road, Lafayette, Planned by others
- (Relocated) Southpark Road (LA 89), Lafayette, Planned by others
- Morgan Street (Existing), Broussard
- Eola Street (Existing), Broussard
- Albertson's Parkway (Existing), Broussard
- LA 182 (Existing), Broussard
- Ambassador Caffery Parkway (Future), Lafayette Parish, Planned by others
- LA 92 West (Existing), Lafayette Parish
- LA 92 East (Future), St. Martin Parish, Planned as part of this project

The project limits were defined on the merits of two complementary purposes, namely to further the development of I-49, and to address local traffic demand and safety issues on a discrete and rapidly growing suburban section of US 90. As described in Section 1.2.1.2, the project would connect two adjacent pieces of proposed I-49, one known as "the Connector" and the other extending from LA 88 to Wax Lake Outlet. The former is currently in design, while the latter is under construction.

However, regardless of the I-49 initiatives, the project limits have been defined by traffic issues that are, in part, the result of local area growth: existing and future capacity concerns, conflicting cross-street movements, and a need to enhance hurricane evacuation capabilities. The suburbanized character of the project corridor is relatively uniform throughout. In contrast, the densely urbanized City of Lafayette lies beyond the northern limit of the project, and rural agricultural land use characteristics dominate the US 90 corridor to the south of LA 88. The localized traffic demand and safety issues, described in Sections 1.2.1.3, 1.2.3, 1.2.4 and 1.2.5 affirm the project's logical termini and demonstrate the independent utility of the project.

S.2 Need for the Project

Within the City of Lafayette, the current average daily traffic (ADT) on US 90 ranges from 35,000 to 47,000 vehicles per day (VPD). In the rural areas, traffic on US 90 averages 29,000 VPD. Projected year 2030 traffic ADT for I-49 under the build condition ranges from 47,000 VPD at project start north of LA 88 to 106,000 VPD north of the Verot School Road interchange.

Conversion of US 90 to I-49 as herein described in the purpose and need, Chapter 1, and the alternatives analysis, Chapter 2, would provide demonstrated benefits as follows:

- System Linkage – Via I-49 the State of Louisiana would continue to implement a major transportation system linkage improvement that serves a substantial portion of the State's population and economy. The improvement is consistent with federal, state and local planning efforts.

- Hurricane Evacuation - The State would upgrade a critical corridor utilized for hurricane evacuation with demonstrated benefits in evacuation clearance times.

- Regional Mobility - The Lafayette Metropolitan Planning Area would experience a substantial benefit in transportation network mobility, resulting in improved vehicle trip times as well as reduced network and link congestion, with associated benefits in air quality and fuel consumption over the no-build condition.

- Safety – The existing US 90 corridor currently experiences motorist safety problems consequent to intersection conflicts, high traffic volumes, and roadway geometry. This project would convert existing US 90, operating as an urban roadway, to I-49 operating as a control of access facility. The change in roadway geometry would reduce the potential for future accidents.

S.3 Analysis of Alternatives

Several build alternates have been examined during the preparation of this Final EIS, as well as the no-build alternate. This Final EIS describes the conceptual engineering and environmental aspects of the alternates, and their impacts on the natural and human environments. Only the existing US 90 corridor was considered for upgrade.

For planning purposes, the project corridor was divided into three subsegments that have been designated A, B, and C as noted on Exhibit S-1. Subsegment A extends from just north of the LA 88 intersection to a point just south of Bercegeay Road. Subsegment B extends from the northern terminus of Subsegment A to the vicinity of Bernard Road. Subsegment C extends from the northern terminus of Subsegment B to just north of the intersection of US 90 and Perimeter Road.

The terms "segment" and "subsegment" have been utilized throughout this EIS and the public involvement process to identify discrete portions of the project corridor. Each segment or subsegment was defined by specific sets of traffic, land use, and environmental issues that distinguish one portion from another. This approach enabled the alternatives analysis to have a high degree of flexibility to focus on specific corridor issues. Further discussion of these terms is provided in Section 2.5. The reader is cautioned that the use of the terms segment and subsegment has no relation to the NEPA concept of "segmentation," which is the arbitrary division of a very large project into smaller component projects without regard for logical termini or independent utility.

The three subsegment limits were defined by specific sets of traffic, land use, and environmental issues that distinguish one subsegment from another. This approach enabled the alternatives analysis to have a high level of flexibility to focus on specific corridor issues. Alternates could be developed, refined, or eliminated in one subsegment while not affecting the same process in another subsegment. In all subsegments, it is proposed that the mainline highway would be a six-lane facility with two-lane, one-way frontage roads.

Within a structured public participation program, the development and examination of project alternates was undertaken as part of an iterative process which:

- Identified engineering concepts, which could be applied to meet the project purpose and need.
- Developed engineering line and grade alignments in conformance with appropriate design criteria.

- Modified line and grade alternates in response to environmental constraints and public comment.

The planning process followed to undertake the I-49 South project is presented in Figure S-2:

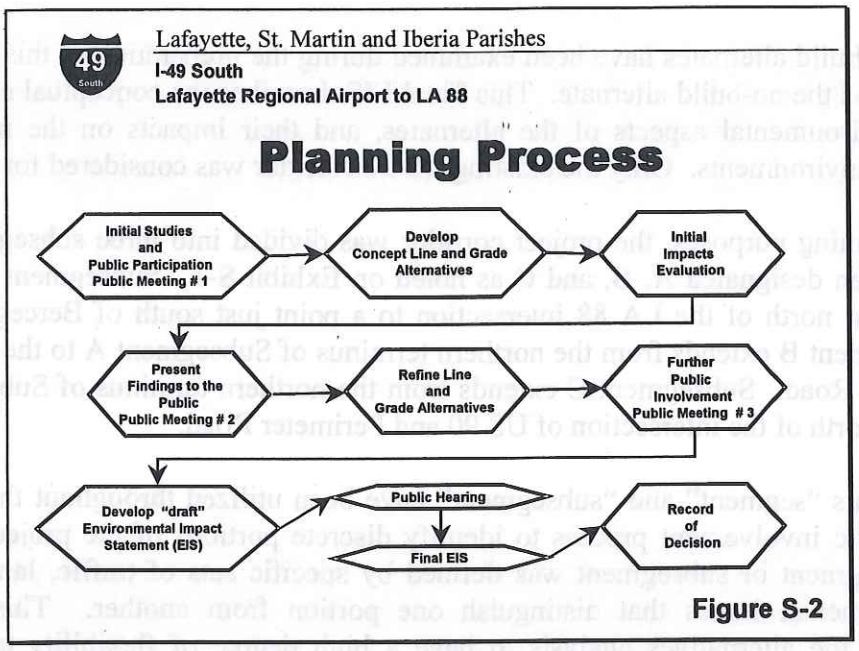


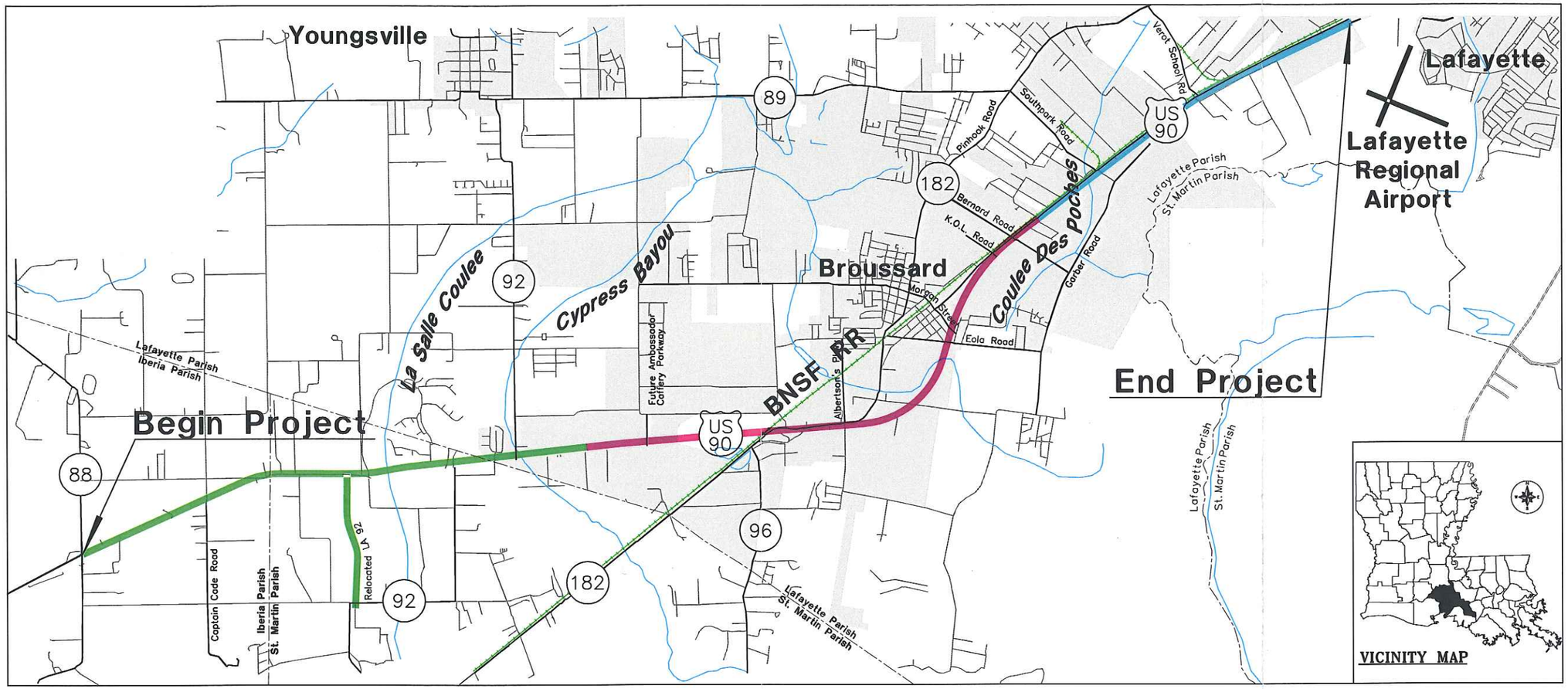
Figure S-2

The build alternates are fully discussed in Chapter 2.0, which also includes a Project Atlas (Section 2.7). The Project Atlas presents details of the build alternate and associated environmental features.

The Proposed Action for the Lafayette Regional Airport to LA 88 corridor consists of the alternates as presented in the Public Involvement Program considered as a combined route. These include:

- Alternate A-1, which also provides for extension of LA 92 to the east.
- Alternate B-3 at Ambassador Caffery Parkway. An initial build condition and a build-out utilizing full directional ramps are both considered.
- Alternate B-3 at Albertson's Parkway
- Alternate B-1 at Eola Drive/Morgan Street
- Alternate C-7, including the realignment of Southpark Road (LA 89) and Verot School Road.

The initial I-49 build condition provides for an interchange connection with Ambassador Caffery Parkway. The initial build geometry of the north bound frontage at Ambassador Caffery is not typical. It has been modified to provide right-of-way located east of the I-49 mainline, which will be required to accommodate the construction of future directional ramps.



SUB-SEGMENT A
SUB-SEGMENT B
SUB-SEGMENT C

49 South

LEGEND

US ROUTE
STATE ROUTE
LOCAL ROAD
INCORPORATED AREA
BNSF RAILROAD

5000 2500 0 5000 10000
SCALE: 1" = 5000'

I-49 SOUTH
LAFAYETTE REGIONAL AIRPORT
TO ROUTE LA 88
EXHIBIT S-1
PROJECT LOCATION MAP

PREPARED BY: DMJM+HARRIS (SEPT. 24 2001)

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This Final EIS also includes the environmental clearance for the acquisition of additional right-of-way located west of the I-49 mainline associated with the eventual build-out of the directional ramps connecting I-49 to Ambassador Caffery Parkway. The additional right-of-way located west of I-49 will be acquired utilizing a right-of-way preservation program, which will be funded separately from I-49.

S.4 Right-of-Way Acquisition

The Project Atlas notes areas where additional right-of-way would be acquired. The entire project would include the acquisition of approximately 54.9 acres of right-of-way under the initial build condition, and 15.3 additional acres of right-of-way to accommodate the build out of directional ramps at Ambassador Caffery Boulevard.

S.5 Project Costs

Costs have been developed for the entire route for construction, right-of-way acquisition, and mitigation. The construction costs include the cost of at-grade roadway and roadway on structure with associated drainage improvements and utility relocations. The right-of way acquisition costs include the cost of the land, the value of associated improvements and relocation costs. Mitigation costs include the cost of wetlands mitigation and the cost associated with the construction of noise mitigation barriers. Costs are provided for initial build-out and the full build-out. The full build-out costs include the costs for the initial build-out. Anticipated project costs are summarized in Figure S-3.

Lafayette, St. Martin and Iberia Parishes
I-49 South
Lafayette Regional Airportto LA 88

Cost Estimates (in Millions)

Combinations of Alternates

	Initial Build-Out	Full Build-Out
Construction Cost	$312	$337
ROW Acquisition Cost	$7	$9
Mitigation Cost	$2	$2
TOTAL	$321	$348

Figure S-3

Currently, the project is not included on the State Transportation Improvement Program, and no funds have been designated for construction.

S.6 Project Impacts

Chapter 4.0 presents a detailed analysis of the Environmental Consequences associated with the Proposed Action, and the recommended mitigation.

Key issues as identified in Chapter 4.0 follow:

S.6.1 Relocation and Control of Access Impacts

Figure S-4 presents a summary of relocation and control of access impacts associated with the right-of-way acquisition. Control of access impacts potentially occur at locations where entrance/exit ramps meet frontage roads (Section 2.3, Figure 2-7). Compensation will be provided to property owners affected by the project in accordance with LDOTD policy.

Lafayette, St. Martin and Iberia Parishes
I-49 South
Lafayette Regional Airport to LA 88

Relocation and Control of Access Impacts
Combinations of Alternates

	Initial Build-Out	Full Build-Out
Residential Relocation	None	None
Commercial/Industrial Relocation	9 Businesses	11 Businesses
Control of Access Impacts	2 Locations	2 Locations

Figure S-4

S.6.2 Impacts to Wetlands

Total anticipated wetland impact by the proposed action would be 6.3 acres, and would be subject to obtaining a Section 404 permit from the United States Corps of Engineers (USACE). Potential mitigation measures to offset unavoidable wetland impacts would be considered on an as needed basis during the permitting process.

TABLE S-1 WETLAND CLASSIFICATIONS

Wetland Classification	Acres	Percent of Total
Wet Ditches	4.1	65%
Bottomland Hardwoods	1.2	19%
Other Waters of the U.S.	1.0	16%
Total	**6.3 acres**	

The Selected Alternative avoids wetland impacts to the greatest extent practicable. Where unavoidable, project impacts on wetlands have been minimized and are subject to Section 404 permitting requirements. As a consequence, the project is compliant with the implementing regulations of Executive Order No. 11990 which prescribe the protection and enhancement of wetlands.

S.6.3 Traffic Noise Impacts

The FHWA Noise Abatement Criteria (NAC) and LDOTD Highway Traffic Noise Policy were used to analyze potential project-related noise impacts. One hundred and sixteen (116) residences (including apartment units) would be impacted in the 2030 build alternate. In addition to these residential impacts, the first and second row campground and RV parking spots along Mereline Drive in Maxie's Campground are also impacted.

An evaluation of potential noise mitigation strategies was undertaken in relation to the impacted noise receptors. Construction of noise barriers was indicated in two locations where such mitigation was determined to be both reasonable and feasible (Figure S-5).

At the Cote Gelee Apartments, a barrier is proposed that would run along the right-of-way line (Project Atlas, Plate 8). The noise barrier would vary in height from 10 to 12 feet with an average height of 11.2 feet. At Maxie's Campground, a barrier is proposed to protect the camping locations and RV parking slots (Project Atlas, Plate 9). The noise barrier at Maxie's would be 20 feet in height.

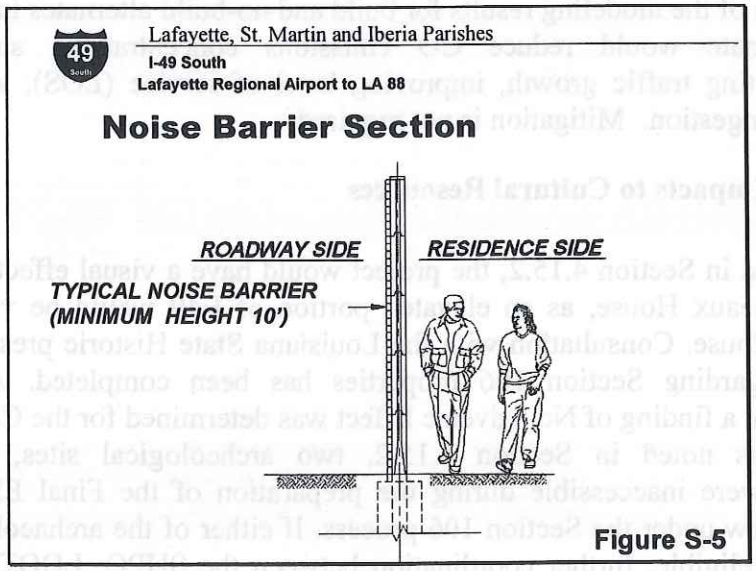


Figure S-5

S.6.4 Air Quality Impacts

The primary pollutants from motor vehicles are carbon monoxide (CO), volatile organic compounds (VOCs), and nitrogen oxides (NOx). VOCs and NOx are pollutants of regional concern that are analyzed by the regional air quality planning agency to determine conformity with the State Implementation Plan (SIP) for air quality. CO is a pollutant of concern near roadways and intersections. Traffic congestion and low operating speeds, as can occur during peak traffic periods, tend to result in elevated CO emissions. Conversely, roadway improvements that relieve traffic congestion and improve intersection operations tend to reduce CO emissions.

S.6.4.1 Transportation Conformity

Lafayette Parish is designated as an ozone attainment area with a limited maintenance plan requirement. In a letter of May 10, 2004, LDOTD found that Lafayette Parish demonstrated conformity according to EPA's policy memorandum on limited maintenance plan options for non-classifiable areas, dated November 16, 1994. Accordingly, in a letter of May 20, 2004, the FHWA concurred with the determination that Lafayette Parish meets the criteria for making a conformity determination provided in the Clean Air Act of 1990 and complies with all conformity provisions of the Louisiana State Implementation Plan.

S.6.4.2 Intersection Analysis

An analysis of the potential for localized air quality impacts due to the project was undertaken using US Environmental Protection Agency Guideline for Modeling Carbon Monoxide from Roadway Intersections.

Comparison of the modeling results for build and no-build alternates indicates that the build alternate would reduce CO emissions concentrations substantially by accommodating traffic growth, improving level of service (LOS), and eliminating points of congestion. Mitigation is not required.

S.6.5 Impacts to Cultural Resources

As discussed in Section 4.15.2, the project would have a visual effect on an element of the Comeaux House, as an elevated portion of I-49 would be visible from the Comeaux House. Consultation with the Louisiana State Historic preservation Office (SHPO) regarding Section 106 properties has been completed. As a result of consultation, a finding of No Adverse Effect was determined for the Comeaux House. However, as noted in Section 4.15.2, two archeological sites, 16LY113 and 16LY114, were inaccessible during the preparation of the Final EIS, and require further review under the Section 106 process. If either of the archaeological sites are determined eligible, further coordination between the SHPO, LDOTD, and FHWA would be carried out in accordance with the implementing regulations of Section 106 of the National Historic Preservation Act, 36 CFR 800. It has been determined that the Marguerite St. Julien House will not be affected by the proposed project.

S.6.6 Impact to Threatened and Endangered Species

The Endangered Species Act of 1973 protects federally listed threatened and endangered species (16 USC 1531 et seq.). Any act that could jeopardize the continued existence or adversely modify the habitat of any federally listed species, requires review and consultation with the appropriate Federal and State resource agencies under Sec. 1536, Interagency Cooperation.

The U.S. Fish & Wildlife Service (USFWS) was contacted regarding the project study area. They reviewed the project area and commented via letter in accordance with the Endangered Species Act (16 USC 1531 et seq). According to the USFWS, no federally listed plant or animal species are known to exist within the project area.

S.7 Public Comment

Following the distribution of the DEIS a comment period and a public hearing was held to give the public an opportunity to comment on the proposed alternates as described in the DEIS. Written comment and every comment made on the record at the hearing have been considered and responses have been included in this Final Environmental Impact Statement (FEIS). Response to comments may include refinements in design or additional mitigation measures.

At the conclusion of the planning process, the Federal Highway Administration may issue a Record of Decision on the FEIS. The Record of Decision would allow the LDOTD to continue to be eligible for Federal funding assistance and to proceed with the engineering and construction of this segment of I-49 South.

S.8 Summary of Mitigation Measures

S.8.1 Land Use and Socioeconomics

S.8.1.1 Relocation Impacts

The 9 businesses to be relocated, and the one business with three buildings that may require relocation within their site, will be afforded all protections under the Uniform Relocation Act.

S.8.2 Noise

At the Cote Gelee Apartments, a noise barrier is proposed as part of the Selected Alternative starting at approximately Station 846+00 and running along the right-of-way line to Station 852+80. At Maxie's Campground, a noise barrier is proposed as part of the Selected Alternative starting at approximately Station 861+50 and continues along the right-of-way line to Station 872+00.

S.8.3 Wetlands

Total wetland impact by the Selected Alternative will be 6.3 acres, and will be require a Section 404 permit. Potential mitigation measures to offset unavoidable wetland impacts will be considered on an as needed basis during the permitting process. The potential mitigation measures include restoration, creation, or purchase of replacement wetlands through an approved mitigation bank.

S.8.4 Hazardous Waste Sites

In 1996, after three years of continuous assessment, LDEQ issued a no further action required letter for the Texaco gas station located near Southpark Road. However, as the project advances, soil sampling and analysis should be performed around the UST's at this site. If contamination is found, mitigation will be required to bring the site into regulatory compliance. The nature and degree of mitigation at this location can not be determined at this time. Mitigation measures, if needed, might require that the contaminated soil be hauled off to an approved disposal area. If areas of hazardous waste contamination are encountered during the construction of the Selected Alternative, construction should immediately be stopped and the policies and procedures of DOTD's PPM No. 48 (Underground Storage Tank and Contaminated Site Policy and Procedures) should be implemented.

S.8.5 Aesthetics

At Eola Road/Morgan Street, trees will be planted in the portion of the ROW between the frontage roads and the abutting properties.

S.8.6 Section 106 Statement

As discussed in Section 4.15.2, the project would have a visual effect on an element of the Comeaux House, as an elevated portion of I-49 would be visible from the Comeaux House. Consultation with the Louisiana State Historic preservation Office (SHPO) regarding Section 106 properties has been completed. As a result of consultation, a finding of No Adverse Effect was determined for the Comeaux House. However, as noted in Section 4.15.2, two archeological sites, 16LY113 and 16LY114, were inaccessible during the preparation of the Final EIS, and require further review under the Section 106 process. If either of the archaeological sites are determined eligible, further coordination between the SHPO, LDOTD, and FHWA would be carried out in accordance with the implementing regulations of Section 106 of the National Historic Preservation Act, 36 CFR 800.

It has been determined that the Marguerite St. Julien House will not be affected by the proposed project.

S.8.7 Impacts to Transportation Patterns

S.8.7.1 Vehicular Access to Businesses and Residences

Properties impacted by control of access fences will be compensated in accord with LDOTD policies and procedures.

S.8.8 Construction Impacts

S.8.8.1 Traffic and Circulation Impacts

Construction sequence, traffic maintenance criteria, and plans will be developed as part of final design to coordinate construction activities and ensure continued access to all properties. Needs for special considerations will be identified and addressed. If mitigation measures are warranted regarding traffic and circulation impacts they will be included in the construction plans and specifications.

S.8.9 Noise

Construction equipment that is operated with internal combustion engines will be properly muffled to minimize noise production. Shielding of stationary noise sources such as generators with temporary barriers will occur. As appropriate, construction noise abatement measures referenced in Section 107.15 of the Louisiana Standard Specifications for Roads and Bridges, and the FHWA Technical Advisory T 6160 2, dated March 13, 1984, will be utilized.

S.8.10 Utilities

Specific relocation plans will be developed during the final design phase of the Selected Alternative and will be completed prior to construction of the improvements. The determination of responsibility will be in accordance with LDOTD policies and procedures.

S.9 Report Organization

The Final Environmental Impact Statement report herein presented is organized as follows:

- **Chapter 1.0** documents the Purpose and Need for the proposed action.
- **Chapter 2.0** presents an analysis of the alternatives considered in the development of the proposed action.
- **Chapter 3.0** presents an inventory of the existing natural and human environmental conditions in the area of the project.
- **Chapter 4.0** Chapter 4.0 presents a detailed analysis of the environmental consequences associated with the proposed action and recommended mitigations.

- **Chapter 5.0** documents the coordination efforts undertaken as part of the planning for the proposed action.
- **Chapter 6.0** presents a listing of the preparers of the document.

Chapter One
Purpose and Need

1.0 Purpose and Need for the Proposed Action

1.1 Description of the Proposed Action

The Louisiana Department of Transportation and Development (LDOTD), in cooperation with FHWA, proposes to upgrade US 90 in Lafayette, St. Martin, and Iberia Parishes to a full control of access facility meeting interstate highway design standards as a segment of I-49. The project would upgrade US 90 to a six-lane control of access highway, having ramps to two-lane one-way frontage roads. The frontage roads would provide access to grade-separated major connecting roads and to local destinations. This roadway section would separate through traffic from slower moving local traffic. To the extent possible, project activity would take place within the existing US 90 right-of-way.

The development of I-49 is a multi-state effort to provide a continuous interstate highway corridor between New Orleans, the central United States, and central Canada. I-49 would connect the interchange of I-49 and I-10 in Lafayette, Louisiana, with I-10 in New Orleans, Louisiana, by upgrading the existing US 90 corridor. For planning purposes, LDOTD has designated this segment I-49 South. The distance from I-10 in Lafayette to the Westbank Expressway in Jefferson Parish is 140 miles. From that point to I-10 in New Orleans, the US 90 corridor is completed to interstate standards. Exhibit 1-1 locates I-49 South and its various segments within the interstate highway system in Louisiana. Existing US 90/I-49 South is, and would continue to be, maintained and operated by the LDOTD.

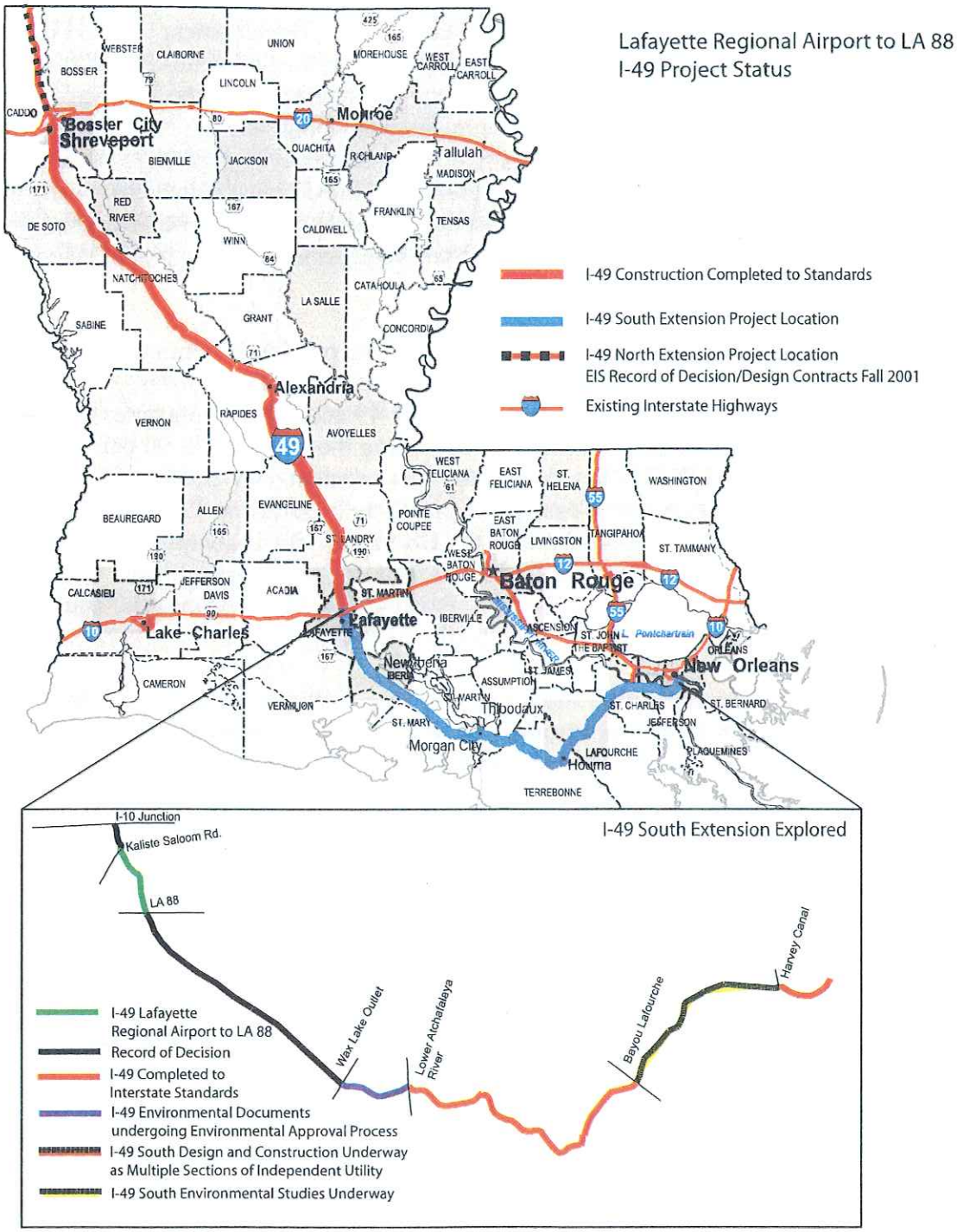
The proposed action that is the subject of this Final Environmental Impact Statement (FEIS), known herein as "the project," is a segment of proposed I-49 South that extends from just south of Kaliste Saloom Road near Lafayette Regional Airport to the LA 88 interchange in Iberia Parish, a distance of 10.8 miles (Exhibit 1-2).

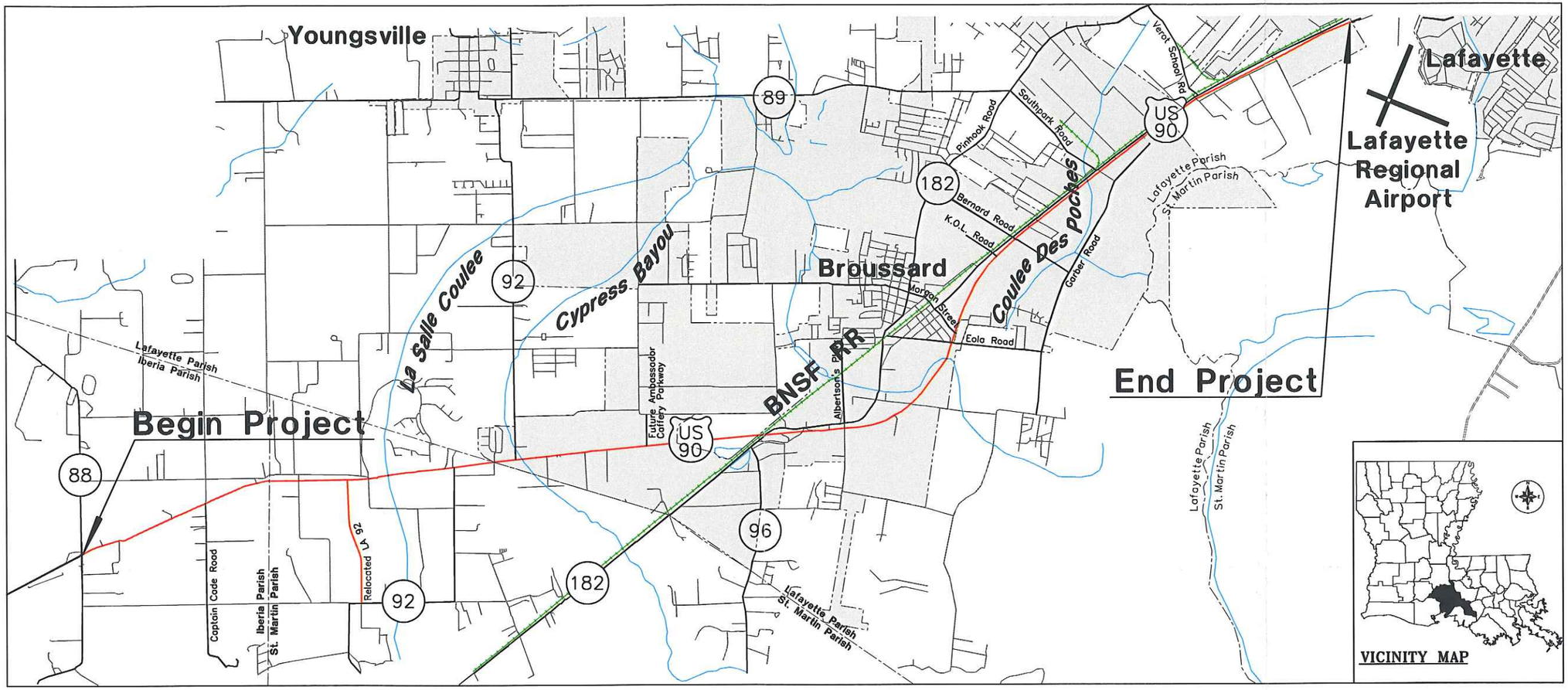
The project limits were defined on the merits of two complementary purposes, namely to further the development of I-49, and to address local traffic demand and safety issues on a discrete and rapidly growing suburban section of US 90. As described in Section 1.2.1.2, the project would connect two adjacent pieces of proposed I-49, one known as "the Connector" and the other extending from LA 88 to Wax Lake Outlet. The former is currently in design, while the latter is under construction.

However, regardless of the I-49 initiatives, the project limits have been defined by traffic issues that are, in part, the result of local area growth: existing and future capacity concerns, conflicting cross-street movements, and a need to enhance hurricane evacuation capabilities. The suburbanized character of the project corridor is relatively uniform throughout. In contrast, the densely urbanized City of Lafayette lies beyond the northern limit of the project, and rural agricultural land use characteristics dominate the US 90 corridor to the south of LA 88. The localized

traffic demand and safety issues, described in Sections 1.2.1.3, 1.2.3, 1.2.4 and 1.2.5 affirm the project's logical termini and demonstrate the independent utility of the project.

EXHIBIT 1-1





LEGEND

- US ROUTE
- STATE ROUTE
- LOCAL ROAD
- INCORPORATED AREA
- BNSF RAILROAD

5000 2500 0 5000 10000

SCALE: 1" = 5000'

I-49 SOUTH
LAFAYETTE REGIONAL AIRPORT
TO ROUTE LA 88
EXHIBIT 1-2
PROJECT LOCATION MAP

PREPARED BY: DMJM+HARRIS (SEPTEMBER 2002)

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Several build alternates have been examined during the preparation of this Final EIS, as well as the no-build alternate. The alternates are fully discussed in Chapter 2.0, which also includes a Project Atlas. The Project Atlas presents details of the build alternate and associated environmental features. This Final EIS was prepared for the LDOTD and FHWA to describe the conceptual engineering and environmental aspects of the alternates, and their impacts on the natural and human environments.

Only the existing US 90 corridor was considered for upgrade. Previous planning for I-49 focused on alternate corridors. Alternate alignments for I-49 through Lafayette were studied in the *Lafayette North-South Corridor Study: Path to Progress*, 1993. One route to the west of the existing US 90 alignment and two routes to the east of the existing alignment were examined. The western route carried approximately half of the future year 2012 traffic demand and the eastern routes averaged roughly 20%. Both eastern routes resulted in the existing US 90 exceeding capacity in the range of 26% to 31%. The 1993 *Path to Progress Study* documented the fact that certain transportation requirements could not be met by utilizing alternate routes for I-49. Consequently, only the upgrade of the existing US 90 corridor to I-49 was considered in the analysis of alternates.

1.2 Need for the Project

US 90 is an integral component of the federal highway network, serving as an element of the National Highway System (NHS). US 90 serves an important role by linking local and regional transportation networks. However, the portion of existing US 90 in the project area does not provide the geometry or infrastructure to adequately accommodate local and regional transportation demand in the safest manner possible, both now and in the future. Thus, the purpose of the proposed project is to upgrade this highway segment to increase capacity, and to improve safety and efficiency during normal operations as well as during a coastal evacuation event.

1.2.1 System Linkage

Upgrading the highway to interstate status would be compatible with national, regional, and local plans for system linkage.

1.2.1.1 National Plans

The Federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) established the NHS, naming 21 corridors including I-49. The National Highway System Designation Act of 1995 refined this list by identifying High Priority Corridors (HPC). I-49 is known as HPC 37; however, I-49 is ranked first among HPC's as the most important planned corridor in the NHS. I-49 would provide a transcontinental highway linking the coastal ports of Louisiana to the entire central United States and central Canada. I-49 would augment the Interstate system serving the midwestern and central states, promoting both trade and tourism, and in Louisiana I-49 South would relieve congestion on I-10 between Lafayette and New Orleans.

This would result in the improvement of access throughout the southern area of the state.

Figure 1-1

Federal highway legislation, passed by the U.S. Congress in 1998, contained in the Transportation Equity Act for the 21st Century (TEA-21), which designated the route of US 90 between Lafayette and New Orleans as "Future I-49." This designation was provided under a stipulated written agreement between the State of Louisiana and the Secretary of the US Department of Transportation, with the understanding that the route would be improved to interstate standards within 12 years of the date of the agreement. Signs identifying US 90 and the route for "Future I-49" were installed shortly thereafter, in 1998 (Figure 1-1).

Finally, improving the capacity and operation of US 90 is also important to national security. The I-49 project would enhance access from the west to several active-duty and National Guard facilities in the New Orleans region, including the US Navy Port of Embarkation and the Belle Chasse Naval Air Station, which are in close proximity to the eastern terminus of the corridor.

1.2.1.2 State Transportation Plans

I-49 has widespread support throughout Louisiana. The current Governor and administration of Louisiana have pledged support and funding to construct "Future I-49" from Lafayette to New Orleans over a 10-year period. The lead state agency is the Louisiana Department of Transportation and Development (LDOTD). To further the effort to meet the deadline for completion of the project, Governor Foster appointed the I-49 Regional Task Force. Their report, *The I-49 Regional Task Force Report* (LDOTD, 1998) succinctly defines the following justifications for I-49 South:

- *"The area of Louisiana south of Lafayette to New Orleans has sustained the greatest economic growth in the state within the most recent 25 years;*
- *"An improved transportation system would stimulate tourism development and additional economic growth for the area;*
- *"The Louisiana Offshore Oil Platform (LOOP) and other oil-related and marine industries would be more accessible;*
- *"A more suitable hurricane evacuation route for the coastal regions of Louisiana would be provided;*

- [Statistics show that] *"US 90 from Lafayette to New Orleans is one of the most dangerous highways to travel on in the State of Louisiana; and*
- [I-49 would] *"increase the accessibility to five major ports in the Louisiana port system, which is one of the largest port systems in the world."*

Other interested parties, including state legislators and local elected officials representing jurisdictions served by US 90 and I-10, the Lafayette Consolidated Government in its role as the Metropolitan Planning Organization (LCG/MPO), Metropolitan Planning Organizations in Houma, Thibodaux, New Orleans and the private sector, have come together in the I-49 Coalition to promote the project.

Pre-construction activities are under way for other segments of I-49, including other Environmental Studies for:

- The segment of I-49 between I-220 in Shreveport and the Arkansas state line that has received a Record of Decision. Engineering and right-of-way acquisition has been initiated for this segment;
- The Evangeline Thruway Corridor in Lafayette from I-10 to Kaliste Saloom Road, customarily referred to as the Connector;
- The segment of I-49 South between Wax Lake Outlet and Berwick in St. Mary Parish; and
- Several grade-separations over connecting roadways along the US 90 between LA 88 and Wax Lake Outlet.
- Feasibility planning and environmental analyses have been initiated for the segment between Bayou Lafourche and the West Bank Expressway.

Construction is on-going on the grade-separations at connecting roadways along the US 90 alignment between LA 88 and Wax Lake Outlet as each receives environmental clearance. In July 1999, a 43-mile segment of US 90 was opened as a control of access facility between Berwick and Bayou Lafourche.

Of these, the Connector project, ending at Kaliste Saloom Road in Lafayette, meets the northern terminus of this project area, and the interchange at LA 88 meets the southern terminus of this project area.

At the state level, extending I-49 according to the federal legislation would greatly increase efficiency in the movement of goods and services, thereby serving as an economic catalyst for southern Louisiana and the state as a whole. I-49 South is also considered vital to alleviating congestion on I-10 between Lafayette and New Orleans.

The project is presently included in the state's master plan for economic development, "Louisiana: Vision 2020" *Application for Fiscal Year 2001 Discretionary Funds Under the National Corridor Planning and Development Program*, LDOTD 2000, and is considered vital to enhancing Louisiana's position in the domestic and international marketplaces, supporting the offshore oil and gas

industry in the Gulf of Mexico, and increasing hurricane evacuation capabilities in the south central and southeast regions of the state.

US 90 is a designated State Highway of Significance (SHS) in the *Statewide Intermodal Transportation Plan* (LDOTD, 1995). The project embodies the following goals of the *Statewide Intermodal Transportation Plan* (in italics):

- *To develop and maintain an innovative, balanced, equitable, integrated system of transportation facilities and services.* I-49 is intended to be part of a network of interstate, state, and local highways that serve Louisiana and the southern region of the country. Locally, the project focus is on connectivity between localized and regional travel routes and needs.

- *To provide essential passenger-transportation services at reasonable public expense that meet the diverse needs of the people of Louisiana regardless of their geographic location, physical condition, or economic status.* The project has been examined from many engineering and environmental aspects, including cost to ensure reasonable public expenditure while meeting the project purpose and need.

- *To provide a transportation system that fosters diverse economic and job growth, international and domestic commerce, and tourism through prudent investment in facilities and services that improve mobility and access.* The LDOTD recognizes a need to improve vehicular mobility across south-central Louisiana and to provide relief to the congestion on I-10 between Lafayette and New Orleans. I-49 South is intended to provide the interstate connectivity required to foster local and regional economic growth and improve mobility.

- *To improve safety in all transportation modes through timely maintenance of existing infrastructure, development of new infrastructure, enhancement of operational controls of both passenger and freight movements, and through expanded public education and awareness.* An element of the project purpose and need is enhanced safety.

- *To develop an efficient transportation system that limits air, water, and noise pollution to acceptable levels as defined by regulatory standards, reduces dependency on foreign energy sources, preserves historic, cultural, and environmentally sensitive sites, and promotes the natural beauty of the state.* As this Final EIS is intended to demonstrate, the project would be implemented so as to avoid adverse environmental impacts wherever possible, and minimize those impacts that cannot be avoided.

1.2.1.3 Local Plans

US 90 currently serves as a local travel corridor and has direct connections to the local roadway network. Residents, businesses, schools, and public services rely on

US 90 for access. Upgrading US 90 to interstate status necessitates accommodating local access needs. The parallel one-way frontage roads are proposed to serve this purpose and meet the stated transportation goals of the plans of Lafayette, Broussard, and St. Martin Parish.

Businesses serving the oil industry are an important sector in the local economy. These businesses require good highway access and generate frequent trips. The US 90 corridor is projected to continue to be an attractive location for this important sector of the regional economy. It provides both available land for development and the best access currently available. Business success in this sector of the corridor, contributes to the need for additional roadway capacity (I-49 South Website, I49south.org).

Specific local projects in the US 90/I-49 corridor with which this project has been coordinated include:

- The future Ambassador Caffery Parkway alignment extends west from US 90 around the southwest quadrant of the Lafayette metropolitan area. This roadway would function as a bypass for northbound trips in the corridor with destinations to the west. Within the project corridor, it would provide access to areas that are currently primarily rural for commercial, industrial, and residential development. This development would contribute to trip demand within the corridor. The plans for Ambassador Caffery have advanced to the point that right-of-way acquisition by Lafayette Parish has been initiated. The design for its interchange with I-49 has been coordinated with the local planning process to assure that adequate right-of-way outside of the I-49 right-of-way would be defined and included in a right-of-way preservation program for the construction of directional ramps as traffic demand warrants it.

- An on-going upgrade project for Verot School Road between US 90 and the upgraded segment near Pinhook Road has been changed in scope to coordinate with the plans for construction of a grade-separation at its interchange with I-49. As the grade-separation would be constructed on a different alignment than existing Verot School Road, Lafayette Parish would acquire the new right-of-way and improve Verot School Road to operate as a couplet in the interim prior to construction of I-49 to relieve existing congestion.

- The Town of Broussard has plans to extend both Morgan Street and Young Street (LA 92 west) from their current terminations on the west side of US 90 with new alignments to the east. These are not included in this project, but their proposed alignments are indicated on the Atlas in Chapter 2.0 and the project has been designed to avoid any impediments to their future construction.

- The *St. Martin Parish Strategic Plan for Economic Development* cites I-49 South as an opportunity for the parish. The Plan calls for parish transportation and development programs to build upon the I-49 South transportation asset to

encourage business and industrial development. Arising from this plan is the development of an industrial park on US 90 located at an appropriate location for a connecting road for I-49. Therefore, a roadway for this development has been incorporated in this project as the future alignment of the relocated LA 92 east.

1.2.2 Economic Development

The conversion of US 90 to interstate status is expected to enhance the economy of Louisiana by improving accessibility into, and mobility through, the southern part of the state between Lafayette and New Orleans along both the I-49 and I-10 corridors. This is the single most important benefit to the regional economy. As documented in the *I-49 Task Force Report*, the combined I-49 and I-10 corridors have the following characteristics:

- 15 water ports (5 deep draft ports, 10 shallow draft ports);
- Nine airports all having fixed base operations, including three with scheduled commercial flights;
- The US 90/I-49 corridor alone includes the following economic resources:
- Over 36% of the population of Louisiana is served by US 90/I-49 South;
- The most important industrial corridor (both in labor and in capital investment) in Louisiana;
- One of the top ten industrial corridors in terms of jobs per capita in the U.S.;
- More navigable water miles than any other region of its size in the U.S.;
- The unique heritage and traditions of Acadiana; and,
- A prime natural resource base for tourism, including some of the finest hunting, fishing, and water recreation to be found anywhere.

Ports and maritime industries are among the state's most important economic engines given Louisiana's geographic location at the terminus of the Mississippi River on the Gulf of Mexico. The Louisiana port system serves as a major gateway to Louisiana and the central area of the United States. The improved system of I-49 and I-10 would improve these ports, as well as the other Louisiana port facilities, serve international cargo movements, create a large economic opportunity in ship servicing, and attract warehousing and manufacturing activities that use the ports as conduits to acquire raw materials and export finished products. Exhibit 1-3 shows the location of Louisiana water ports in relationship to US 90/Future I-49 and I-10.

Table 1-1 tabulates the tonnage throughput of the top 10 US ports. Four of the ports are served by the I-10/I-49 corridors.

TABLE 1-1
TONNAGE OF TOP 10 U.S. WATER PORTS, RANKED BY TOTAL TONS[A]
(MILLIONS)

	1999		1990		
	Rank	Total tons	Rank	Total tons	% change 1990-99
South Louisiana, LA	**1**	**214.2**	**1**	**194.2**	**10.3**
Houston, TX	2	158.8	3	126.2	25.9
New York, NY and NJ	3	133.7	2	140.0	-4.5
New Orleans, LA	**4**	**87.5**	**6**	**62.7**	**39.5**
Corpus Christi, TX	5	78.1	7	62.0	25.9
Beaumont, TX	6	69.5	23	26.7	160.0
Baton Rouge, LA	**7**	**63.7**	**5**	**78.1**	**-18.5**
Plaquemine, LA	**8**	**62.4**	**8**	**56.6**	**10.3**
Long Beach, CA	9	60.9	10	52.4	16.2
Valdez, AK	10	53.4	4	96.0	-44.3

Sources:
1990: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States, Calendar Year 1990, Part 5, National Summaries* (New Orleans, LA :1993), table 5-2
1999: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States, Calendar Year 1998, Part 5, National Summaries* (New Orleans, LA :2000), tables 1-1 and 5-2.

Many of the shipments within, to, from, and through Louisiana are associated with national and international trade via Louisiana water ports and related shipping industries. While important to Louisiana's economy, these industries contribute significantly to the national economy. Nearly half of the total value of truck shipments utilizing Louisiana's roadways consisted of shipments passing through Louisiana to other states and/or countries. Improvements to I-49 would have a positive effect on the shipping industry at local, state, regional, and national levels. (*Highway Statistics*, FHWA, 1993, 1998).

TABLE 1-2
TRUCK MOVEMENTS WITHIN LOUISIANA

Value of Truck Shipments by State: 1993
(Millions of dollars)

Total	Within	To	From	Through
157,121	26,217	30,427	22,122	78,355

Ton-Miles of Truck Shipments by State: 1993
(In millions)

Total	Within	To	From	Through
15,786	5,393	2,131	2,495	5,767

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, 1997.

EXHIBIT 1-3
PORTS SERVED

Economic development is expected to contribute to traffic growth rates in this I-49 corridor. For example, commercial vehicle volumes at Louisiana's weigh stations at state boundaries increased from approximately 5.2 million in 1993 to over 6.8 million in 1998, an increase of 32 percent. Commercial vehicle traffic on the arterial highway system within Louisiana is estimated to have increased from 3.76 billion truck-miles traveled in 1993 to 4.64 billion truck-miles traveled in 1998, an increase of over 23 percent. Commercial vehicle volumes at weigh stations throughout the state increased over 27 percent from approximately 9.3 million in 1993 to approximately 11.8 million in 1998. These rates of growth far exceed the forecasts contained in the state's long-range transportation plan (*Highway Statistics*, FHWA 1993, 1998).

In addition to serving as a transportation route for business and industry, I-49 South would facilitate travel through the heart of Acadiana, or "Cajun Country", with its unique food, music, and heritage. Facilitating access and mobility within Acadiana would stimulate the tourism industry in Louisiana.

1.2.3 Evacuation Planning

Due to its close proximity to the Gulf of Mexico, Southern Louisiana is vulnerable to the threat of a hurricane strike. The region sustained significant damage in 1992 from Hurricane Andrew and experienced a brush with Hurricane Georges in 1998. In

addition, the region received major impacts from Tropical Storms Danny in 1997, Frances in 1998, and Allison in 2001. Table 1-3 summarizes the hurricane frequency in Louisiana by storm category.

TABLE 1-3
HURRICANE FREQUENCY IN LOUISIANA

	Lake Charles	New Orleans
Category 1 storm	8 years	8 years
Category 2 storm	19 years	19 years
Category 3 storm	35 years	32 years
Category 4 storm	72 years	70 years
Category 5 storm	210 years	180 years

Source: I-49 Task Force Website www.i49south.com

The threat of a hurricane is exacerbated by the large population of residents and tourists in the low-lying coastal areas of the region that are susceptible to storm surge inundation and freshwater flooding. Inland urban population centers such as Lafayette also are susceptible to flooding and the affect of hurricane force winds. These communities can suffer considerable impacts well before the system makes landfall and starts to decay. Consequently, the American Red Cross policy is to open shelters only in areas north of I-10 in Lafayette Parish, which would not be affected by a Category 4 storm surge.

It is imperative that a reliable regional roadway network be available to evacuate these highly vulnerable populations. Unfortunately, due to the topography of the Atchafalaya Basin, evacuees are funneled to only a few northbound escape routes. The vast majority of evacuating vehicles from Terrebonne, St. Mary, Iberia, St. Martin, and Lafayette Parishes must use US 90 as their primary northbound escape route. Moreover, this roadway must support, not only the evacuees, but also the non-evacuating public attempting to gather food and supplies for their homes.

The two improvements required to achieve this reliability are the elimination of the threat of flooding and the increase in highway capacity.

Flooding

The construction of this project would provide continuous access during hurricane events as the finished grade of the mainline would be situated above the 100-year flood elevation as defined by the Federal Emergency Management Agency. At present, the evacuation process can be stymied if the US 90 corridor is inundated with rainfall in advance of a storm. This was clearly confirmed during Tropical Storm Allison in 2001 when several sections of US 90 were impassable due to flooding.

Capacity

At present the hurricane evacuation capabilities of existing US 90 are limited, specifically through Lafayette Parish. Insufficient capacity at critical sections of US 90 results in major bottlenecks that choke efficient traffic flow.

In an effort to improve the hurricane preparedness, the U.S. Army Corps of Engineers, New Orleans District, recently sponsored a transportation analysis as part of its Southwest Louisiana Hurricane Evacuation Study-2000. The report, *Hurricane Evacuation Transportation Analysis*, U.S. Army Corps of Engineers, 2000 identified regional and local critical roadway segments encumbering the efficient movement of evacuating vehicles.

Based on the category of the storm and the anticipated behavioral responses and participation rate of the population, the study calculated the evacuating vehicles to service volume ratio for each roadway segment by storm category. Segments with the highest ratios were considered critical segments, since these congested areas control the flow of traffic. The report listed US 90 through St. Mary, Iberia, St. Martin, and Lafayette Parishes as a regional critical roadway segment restraining the flow of evacuating traffic (U.S. Army Corps of Engineers, 2000).

An important product of the report's transportation analysis was the development of Clearance Times for each critical segment by storm category for the year 2000. Clearance Time is defined as the time required to clear the roadway of all vehicles evacuating in response to a hurricane situation, beginning when the first evacuating vehicle enters the segment and ending when the last vehicle exits. Clearance Times were calculated for variables including Storm Categories, levels of background traffic, rapidity of evacuees' response, and visitor occupancy.

Estimates of the Year 2000 Clearance Times for various intensity storms are shown in Table 1-4. The variables used in the study to estimate Clearance Times included "medium response time", "light background traffic", and "high visitor occupancy". These Clearance Times reflect the no-build condition as they utilize existing land use and roadway characteristics. In the urban area of Lafayette, the report stated, "congestion will be widespread"(U.S. Army Corps of Engineers, 2000).

TABLE 1-4
YEAR 2000 CLEARANCE TIMES (IN HOURS)
FOR CRITICAL I-49/US 90 PLANNING SEGMENTS

Critical Segments	Storm Category 1	Storm Category 2	Storm Category 3	Storm Categories 4&5
This Project				
Lafayette Parish Line to LA 89 (Southpark Road)	6.0	9.8	11.0	11.9
LA 89 (Southpark Road) to LA 728	6.6	10.9	13.1	15.9
1-49 Connector				
LA 728 to US 167 (Johnston Street)	6.7	11.2	13.4	18.4
US 167 (Johnston Street) to Southern Pacific Railroad	7.4	12.3	15.2	26.5
I-49 North of I-10	5.1	7.6	10.0	24.6

Source: U.S. Army Corps of Engineers, 2000

In Category 1, 2 and 3 storm events, evacuees are primarily from areas south of Lafayette. In Category 4/5 storm events many residents of Lafayette are also expected to evacuate, causing a substantial increase in the required clearance times on critical roadway segments. Clearly, upgrading US 90 to I-49 for this project would not provide evacuation benefits, unless improvements are also made to the I-49 Connector.

Upgrading US 90 to a full control of access facility meeting interstate standards as proposed for this project would increase capacity both by adding lanes and eliminating intersections. The frontage roads would also provide a separation of local traffic from evacuating vehicles, especially in Category 1 and 2 storm events.

As part of the Evacuation Study deliverables to the Corps of Engineers, the consultant also developed an abbreviated transportation model in spreadsheet format. The abbreviated model allows for variance of land use and roadway characteristics. The model was utilized to evaluate the potential benefit that would accrue from building this project and the I-49 Connector. An assumption was also made that all four lanes of I-49 north of I-10 would be opened to northbound traffic. Land use assumptions were not modified.

Table 1-5 presents the results of this analysis. Build/no-build clearance times for peak critical segments associated with this project, the I-49 Connector and I-49 north of I-10 operating with four-lane northbound capacity are documented. Substantial benefits in the form of decreased clearance times are indicated.

TABLE 1-5
CRITICAL SEGMENTS
COMPARISON BUILD/NO-BUILD (IN HOURS)
YEAR 2000

Critical Segments	Storm Category 1	Storm Category 2	Storm Category 3	Storm Category 4 & 5
No-Build*				
This Project	6.6	10.9	13.1	15.9
I-49 Connector	7.4	12.3	15.2	26.5
I-49 north of I-10	5.1	7.6	10.0	24.6
Build**				
This Project	4.5	6.6	7.7	9.1
I-49 Connector	4.9	7.3	8.7	14.2
I-49 north of I-10	3.8	5.1	6.2.	13.6

Source: * Corps of Engineers, 2000
** DMJM+HARRIS and Corps of Engineers abbreviated model

Should improvements be made to the I-49 Connector and to I-49 northbound of I-10 without implementing this project, the segment proposed for improvement in this project would then pose the critical time constraint to evacuees (15.9 hours).

The abbreviated model could be utilized to modify land use assumptions to reflect future year conditions. The extent of the data requirements to undertake such an analysis as part of this project was prohibitive. However, traffic volumes are expected to increase considerably over the next 30 years. Unless improvements are implemented in the existing roadway network, these clearance times would drastically increase with the growth of population.

1.2.4 Transportation System Benefits

The demand on Louisiana's interstate system, similar to national trends, has continued to increase, especially near metropolitan areas. According to the Bureau of Transportation Statistics, between 1993 and 1996, the driving-age population of Louisiana had increased 4 percent, to approximately 3,326,000 million drivers, and the annual vehicle miles traveled increased 11 percent to 40,326,000 VMT. Between 1993 and 1996, the total road and street mileage grew by only 2 percent to 60,747 miles.

1.2.4.1 Existing Conditions

From Lafayette Regional Airport to LA 88, existing US 90 is a four-lane divided roadway section with 12-foot lanes and 6 to 10-foot paved shoulders. US 90 is paralleled by a two-way frontage road on the east side from Perimeter Road on the south of the airport to Fouet Road just south of Verot School Road and by a two-way frontage road on the west side from Kaliste Saloom Road, just north of the project

area, to K.O.L. Road. South of K.O.L. Road, the frontage road leaves the highway right-of-way and becomes Second Street in Broussard. There are other short segments of two-way frontage road throughout the corridor, notably on the east side at Morgan Street, on the west side between St. Nazaire Road and the LA 182 interchange, and on the west near Melancon Road. US 90 is classified as an urban major arterial north of LA 182 and as a rural major arterial south of LA 182.

Existing and planned connecting roadways include:

- (Relocated) Verot School Road, Lafayette, Planned by others
- (Relocated) Southpark Road (LA 89), Lafayette, Planned by others
- Morgan Street (Existing), Broussard
- Eola Street (Existing), Broussard
- Albertson's Parkway (Existing), Broussard
- LA 182 (Existing), Broussard
- Ambassador Caffery Parkway (Future), Lafayette Parish, Planned by others
- LA 92 West (Existing), Lafayette Parish
- LA 92 East (Future), St. Martin Parish, Planned as part of this project

Within the City of Lafayette, the current average daily traffic (ADT) on US 90 ranges from 35,000 to 47,000 vehicles per day (VPD). In the rural areas, traffic on US 90 averages 29,000 VPD. On the frontage roads, the ADT ranges from 600 to 2,413 VPD.

The posted speed limit on US 90 varies throughout the corridor. It is posted at 55 mph within the incorporated limits of Lafayette. South of LA 182 the posted speed limit increases to 65 mph, which continues to the end of the project corridor. The frontage roads are not posted, and a speed limit of 35 mph is assumed. Posted speeds also vary on the major connecting roads. They range from 55 mph on Southpark Road to 25 mph on Morgan Street.

There are four noteworthy travel characteristics in the project area that contribute to existing operating conditions.

- The Burlington Northern Santa Fe Railroad (BNSF) runs parallel and adjacent to the right-of-way on the west from the northern terminus to Broussard. Approximately 20-25 trains utilize this railroad per day and the number is expected to increase in the future. There are twelve grade crossings of connecting roads in the project area, four of which are unsignalized, presenting geometric, capacity, and safety issues.

- US 90 between Lafayette and New Iberia is an attractive location for businesses related to the petroleum industry. This generates substantial truck traffic. Peak hour classification counts indicate that trucks make up 8.5% of peak hour traffic.

- Worktrip commuter demand is increased by student commuter demand between smaller communities to the south and east and the University of Louisiana – Lafayette.
- The relocation of US 90 in the 1970's and 1980's from the LA 182 right-of-way to the current alignment encouraged growth that generated new trips between these areas and Lafayette.

1.2.4.2 Traffic Forecast

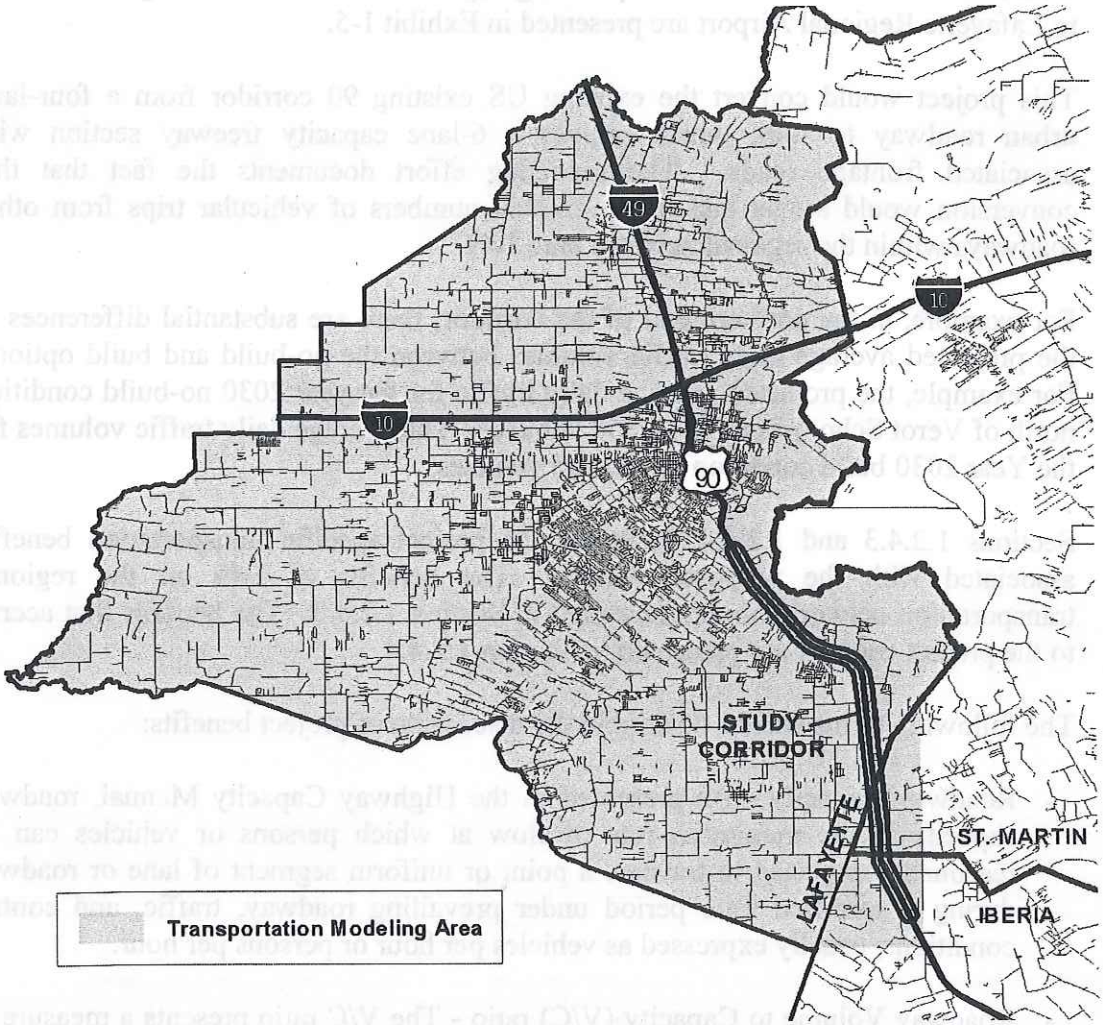
The planning for this project involved the projection of future year traffic flows for the planning corridor utilizing the Lafayette Urban Area TRANPLAN Model maintained by the LCG/MPO. The TRANPLAN incorporates future population, land use and employment assumptions. Based on these assumptions, it forecasts future trips and allocates them to the roadway transportation network.

Because the existing Urban Area Model did not provide coverage in St. Martin and Iberia Parishes, the model was expanded to incorporate traffic generated in St. Martin and Iberia Parishes as far south as LA 88 (See Exhibit 1-4).

For a proposed improvement program, a transportation model is typically used to forecast traffic from a base year condition over a 20-year planning cycle. It is anticipated that this project would require at least a 10-year implementation schedule. Consequently, the base year for this project is determined as 2010 and the forecast design year is projected to be 2030. Both the proposed action (the build option) and the future conditions without the proposed improvements (the no-build option) were modeled using the MPO's expanded TRANPLAN model.

The extension of Ambassador Caffery Parkway to existing US 90 was included in both the no-build and build model runs. For the no-build model run, both the existing Acadian Throughway (US 167 and US 90 through Lafayette) and existing US 90 (from Lafayette Regional Airport to LA 88) were assumed to remain in their current roadway configuration. For the year 2030 build model run, it was assumed that the I-49 Connector through Lafayette was constructed and that the Selected Alternative as herein described in Chapter 2 was also constructed and in place.

EXHIBIT 1-4
I-49 TRANPLAN MODEL STUDY AREA



The transportation modeling included assumptions about the future regional economy. Within the Lafayette metropolitan area, the US 90/I-49 corridor is expected to continue as a major area of employment growth in all sectors. In 2000, approximately 20% of the employment was located in the corridor. By 2030, almost 29% of the total employment is forecast to be in the corridor. While employment in the Lafayette area is projected to rise by 49% in 30 years, employment in the corridor would increase 112%.

Both the no-build and the build model runs result in an allocation of future year 2030 trips to the entire expanded roadway network. This allows for analysis of user benefits both to the I-49 project corridor and to other roadways throughout the expanded LCG/MPO network.

Year 2030 traffic forecasts for the planning segment of US 90 extending from LA 88 to Lafayette Regional Airport are presented in Exhibit 1-5.

This project would convert the existing US existing 90 corridor from a four-lane urban roadway to I-49, which utilizes a 6-lane capacity freeway section with associated frontage roads. The modeling effort documents the fact that this conversion would attract and route sizeable numbers of vehicular trips from other roadways within the regional network onto I-49.

For example, at the northern end of the corridor, there are substantial differences in the projected average daily traffic volumes between the no-build and build options. For example, the projected average daily traffic for the year 2030 no-build condition north of Verot School Road is 51,859 vehicles. The average daily traffic volumes for the Year 2030 build condition is 106,135 vehicles.

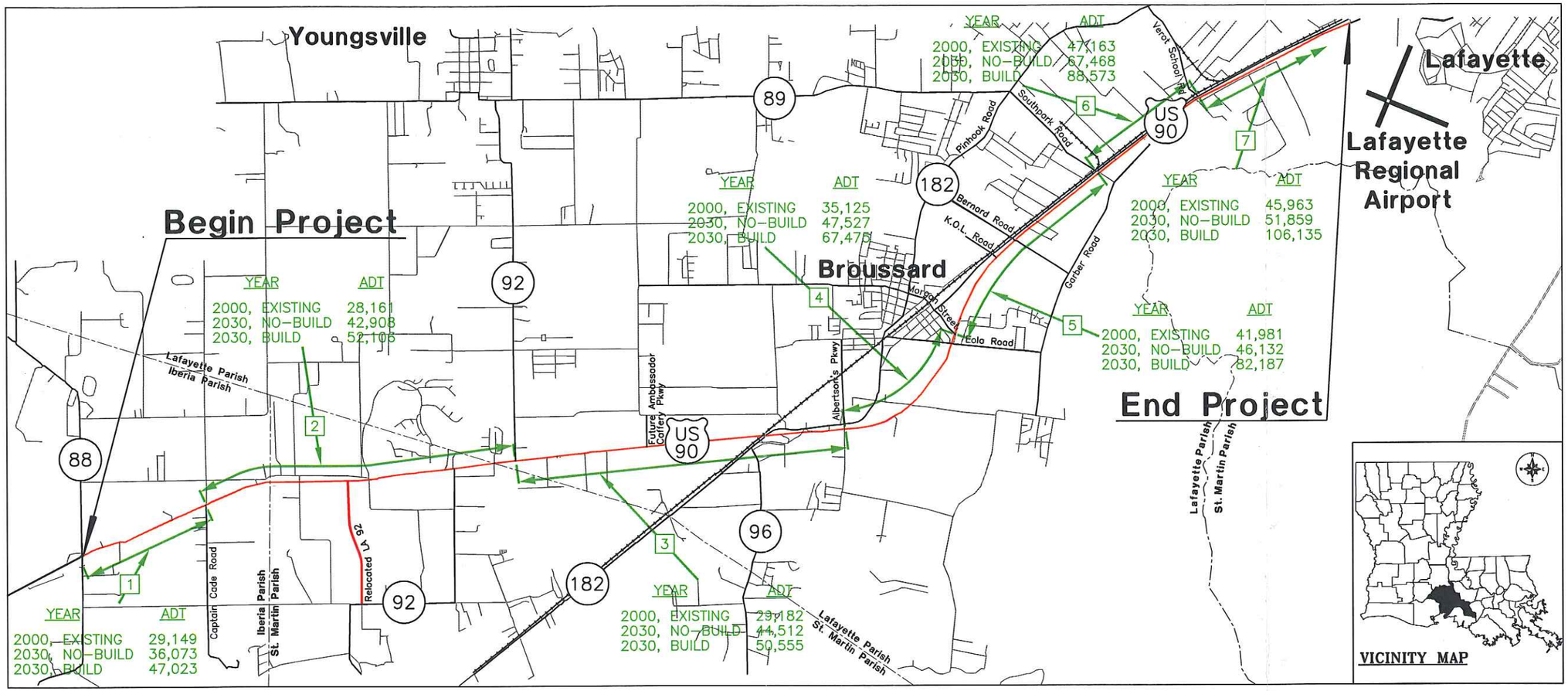
Sections 1.2.4.3 and 1.2.4.4 document the project specific transportation benefits associated with the proposed action. The benefits of I-49 on the regional transportation network are demonstrated in Section 1.2.4.3. The benefits that accrue to the project corridor are presented in Section 1.2.4.4.

The following terms will be utilized in the discussion of project benefits:

- Roadway Capacity - As presented in the Highway Capacity Manual, roadway capacity is the maximum rate of flow at which persons or vehicles can be reasonably expected to traverse a point or uniform segment of lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions, usually expressed as vehicles per hour or persons per hour.

- Roadway Volume to Capacity (V/C) ratio - The V/C ratio presents a measure of actual or projected flow rate in relationship to the roadway capacity. A V/C ratio greater than 1 indicates that a roadway has insufficient capacity for the number of vehicles traveling on it.

- Roadway Level of Service - Levels of Service is a qualitative measure of operating conditions and their perception by motorists. These conditions include travel time, freedom to maneuver, traffic interruption, comfort, convenience, and safety. The six Levels of Service are given letter designations, from A to F, with LOS A representing the best operating conditions and LOS F representing the worst. A roadway having a V/C ratio greater than 1 will operate at an LOS F.



US 90/I-49 MAINLINE

1. LA 88 TO CAPTAIN CADE ROAD
2. CAPTAIN CADE ROAD TO LA 92 (WEST)
3. LA 92 (WEST) TO ALBERTSON'S PARKWAY
4. ALBERTSON'S PARKWAY TO EOLA ROAD
5. EOLA ROAD TO LA 89
6. LA 89 TO VEROT SCHOOL ROAD
7. NORTH OF VEROT SCHOOL ROAD

LEGEND

US ROUTE
STATE ROUTE
LOCAL ROAD
ADT – AVERAGE DAILY TRAFFIC
BNSF RAILROAD

5000 2500 0 5000 10000
SCALE: 1" = 5000'

I-49 SOUTH
LAFAYETTE REGIONAL AIRPORT
TO ROUTE LA 88
EXHIBIT 1-5
AVERAGE DAILY TRAFFIC
US 90/I-49 MAINLINE

PREPARED BY: DMJM+HARRIS (SEPTEMBER 2002)

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1.2.4.3 Benefits to the Regional Roadway Network

The regional TRANPLAN model also provides measures which describe the performance of the entire regional network. Table 1-6 presents network performance measures for the existing year 2000 network, the year 2030 no-build network and the year 2030 build network. The benefits associated with the year 2030 build condition over the no-build condition include:

- An 8.5 mph increase in average speed,
- A 57,015 hour decrease in vehicle hours traveled,
- A substantial reduction in the network V/C ratio, and
- A 27.4% reduction in the percent of vehicles miles traveled on links with V/C ratios less than 1. The percent is lower in 2030 under build conditions than it is in both year 2000 and for the 2030 no-build alternate. This represents a major improvement in traffic conditions in the region

TABLE 1-6
NETWORK CHARACTERISTICS
COMPARISON OF YEAR 2000, NO-BUILD 2030, AND BUILD 2030

	Vehicles Miles Traveled (VMT)	Vehicles Hours Traveled (VHT)	Average Speed (mph)	Volume to Capacity Ratio (V/C)	% of VMT on links with V/C greater than 1
Existing Year 2000	4,467,928	110,756	40.3	.51	33.9
No-build Year 2030	7,411,654	260,878	28.4	.83	56.1
Build Year 2030	7,530,219	203,863	36.9	.71	28.7

Source: DMJM+HARRIS/Neel-Schaffer, Inc.

Exhibit 1-6 presents year 2030 build and no-build V/C ratios at selected locations for roadway links, which either parallel or connect with existing US 90. Exhibit 1-6 further demonstrates that the upgrade of US 90 to I-49 would provide an opportunity for vehicle trips to move from more congested local or state routes to the control of access roadway. The results are the improved V/C ratios for the selected links and intersections as follows:

- LA 92 V/C ratio drops from 1.08 to .43
- Garber Road V/C ratio drops from 1.45 to .59
- Southpark Road (LA 89) V/C ratio drops from .94 to .69
- Pinhook Road (LA 182) @ Southpark Road V/C ratio drops from 1.11 to .79
- Verot School Road V/C ratio drops from 1.70 to .85
- Pinhook Road (LA 182) @ Verot School Road V/C ratio drops from 1.46 to 1.0

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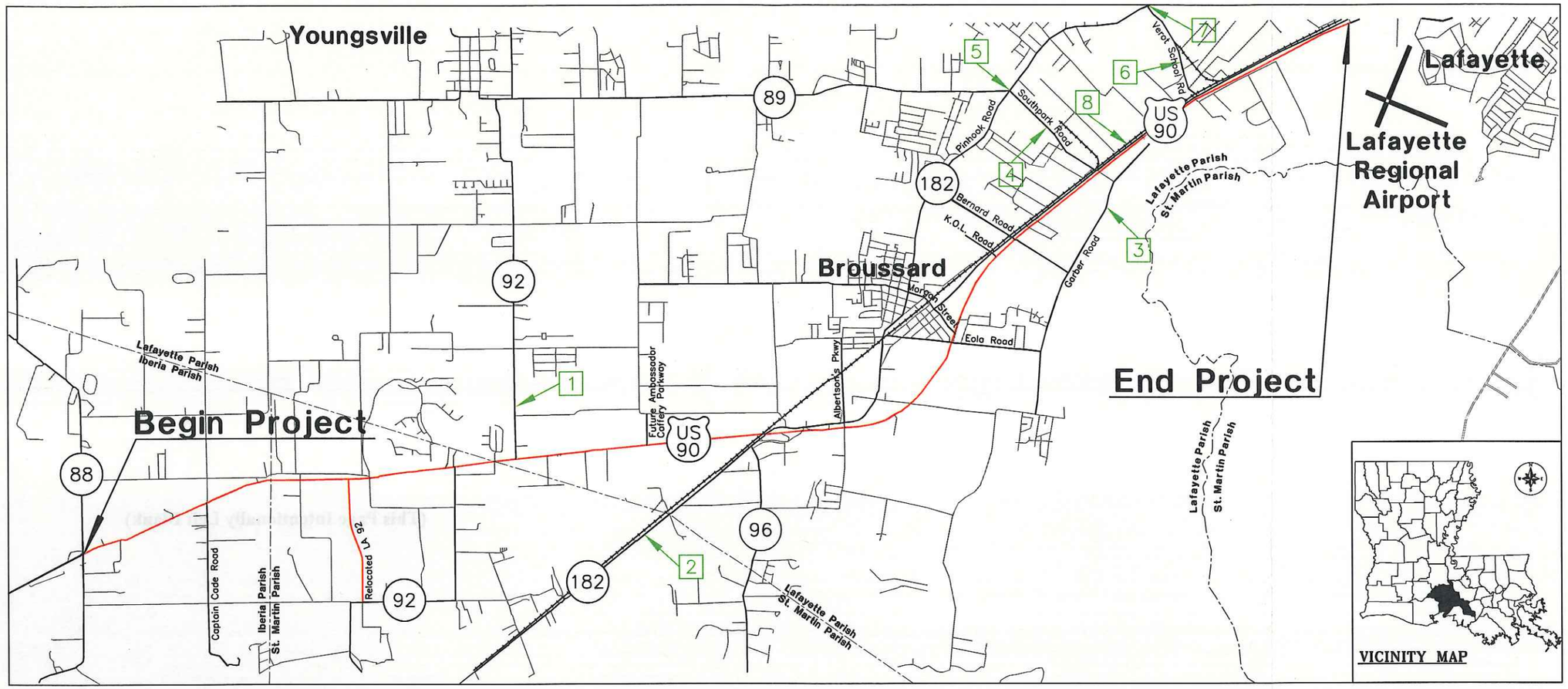

NETWORK LINK OR INTERSECTION	NO-BUILD V/C RATIO	BUILD V/C RATIO
1 YOUNG STREET (LA 92 WEST)	1.08	0.43
2 LA 182 EAST OF US 90	1.58	1.49
3 GARBER ROAD	1.45	0.59
4 SOUTHPARK ROAD (LA 89)	0.94	0.69
5 PINHOOK ROAD (LA 182) AT SOUTHPARK ROAD (LA 89)	1.11	0.79
6 VEROT SCHOOL ROAD	1.70	0.85
7 PINHOOK ROAD (LA 182) AT VEROT SCHOOL ROAD	1.46	1.04
8 EXISTING 2-WAY FRONTAGE ROAD ON WEST SIDE OF US 90 FROM KALISTE SALOOM ROAD TO K.O.L. ROAD	1.00	N/A

2030 VOLUME/CAPACITY RATIOS
NO-BUILD COMPARED TO BUILD
FOR SELECTED NETWORK LINKS AND INTERSECTIONS

LEGEND

US ROUTE
STATE ROUTE
LOCAL ROAD
BNSF RAILROAD

5000 2500 0 5000 10000
SCALE: 1" = 5000'

I-49 SOUTH
LAFAYETTE REGIONAL AIRPORT
TO ROUTE LA 88
EXHIBIT 1-6
2030 V/C RATIOS
SELECTED LINKS AND INTERSECTIONS

PREPARED BY: DMJM+HARRIS (SEPTEMBER 2002)

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1.2.4.4 Benefits to the US 90/I-49 Corridor

The line and grade engineering developed as part of this project in association with the previously noted traffic modeling has provided a sufficient base of information to support estimates of the level service (LOS) for critical intersections and mainline roadway links.

Exhibit 1-7 presents a graphic overview of the relationship between intersection and link level of service (LOS) on rural, urban and controlled access roadway networks.

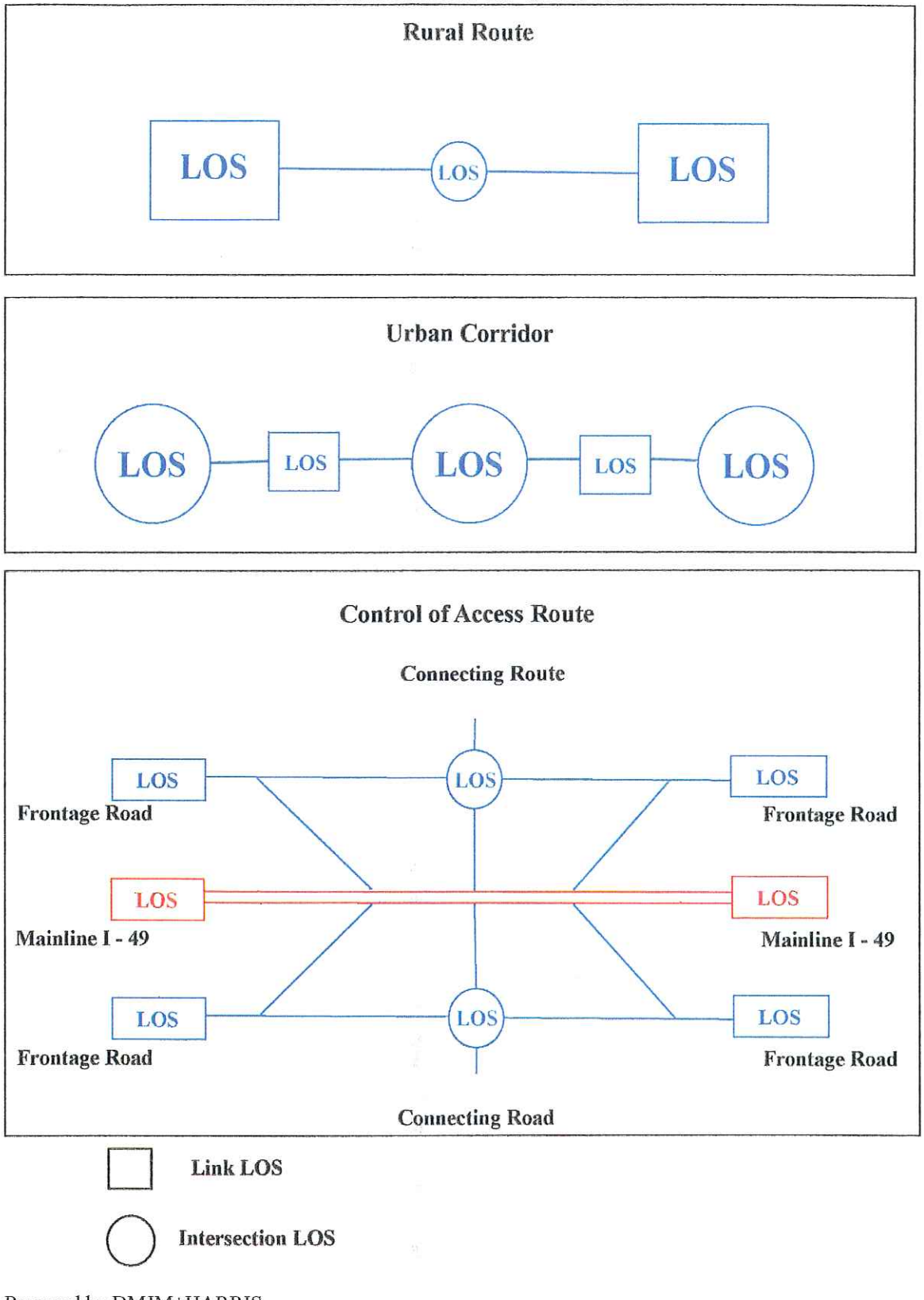
Rural Routes - Along rural routes, because intersections are spread out over substantial distances, there are few stop conditions imposed by intersecting roadways that would limit the overall traffic flow on the mainline roadway. For rural roadway routes, the link LOS is an appropriate measure of roadway performance. If the link LOS of the main line roadway was C or better, it would be a representative description of roadway performance even if the LOS at an intersecting roadway was deficient (i.e. LOS E or LOS F). In terms of the US 90 corridor, this view is indicative of US 90 south of the BNSF Railroad under existing conditions. However, by 2030, the entire corridor under consideration would take on an urban setting.

Urban Corridors – The second view presents the interrelationship between intersection and link level of service on an urban roadway. Because roadway intersections are located in close proximity along the corridor, the urban roadway is characterized by numerous stop conditions at intersecting roadways. In terms of the US 90 corridor, this view is indicative of US 90 north of the BNSF Railroad under existing conditions and of the entire corridor in year 2030 under the no build alternate. The intersection LOS will influence the performance of the roadway and it is a better indicator of overall roadway performance than the link LOS.

Control of Access Route – Under the build alternate, the project would upgrade US 90 to a six-lane control of access route, having ramps to two-lane one-way frontage roads. The frontage roads would provide access to grade-separated major connecting roads and to local destinations. The control of access route differs from both the rural route and the urban corridor. The mainline roadway functions separately from the network of frontage roads and connecting roads. The frontage roads function in a manner similar to an urban corridor. Under most operating conditions, traffic on the mainline roadway should not be affected by the operation of the frontage roads or connecting roads. Hence, the link LOS of the mainline roadway serves as best indicator of the performance of that roadway.

Exhibit 1-8 presents the level of service for critical corridor intersections under existing, 2030 no-build, and 2030 build conditions. Exhibit 1-9 provides levels of service for links along the mainline roadway for the same conditions.

EXHIBIT 1-7
NETWORK LEVEL OF SERVICE



Prepared by DMJM+HARRIS

Year 2030 Frontage Road Level of Service - For the frontage road between Southpark Road and Verot School Road, the frontage road operates at level of service LOS C. All other frontage roads operate at LOS B or better.

Year 2030 Intersection Level of Service- Table 1-7 presents a comparative summary of the projected intersection level of service for year 2030 under no-build and build conditions. Under the build condition for I-49 all critical intersections exhibit an operational LOS of C+ or better. If US 90 remains in operation as an urban corridor, all intersections, except for the intersections of US 90 with relocated LA 92 east and of Albertson's Parkway with LA 182, operate at a LOS of F.

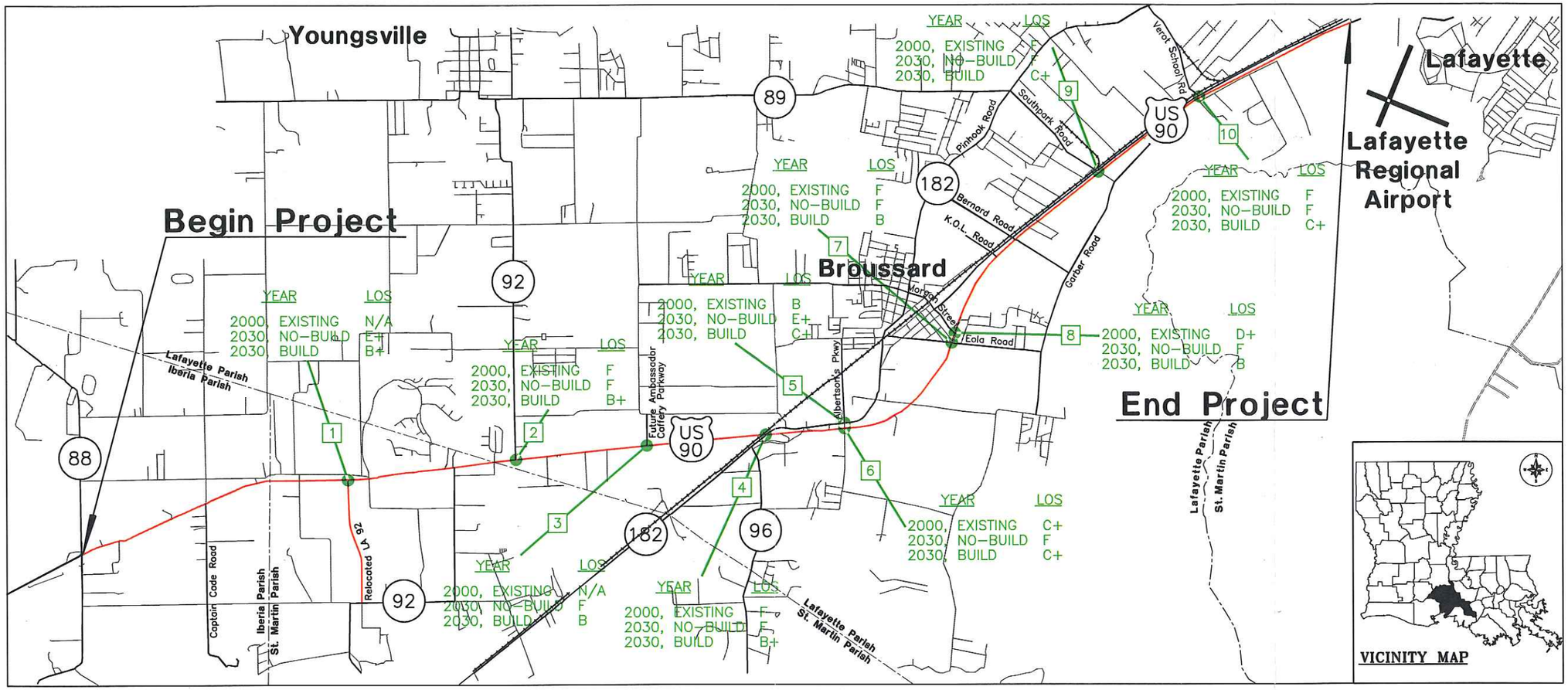
TABLE 1-7
YEAR 2030 INTERSECTION LEVEL OF SERVICE

Connecting Roadway	I-49 Frontage Roads, Build	US 90, No-Build
LA 92 east	B+	E+
LA 92 west	B+	F
Ambassador Caffery Parkway	B	F
LA 182	B+	F
Albertson's Parkway	C+	F
Albertson's Parkway at LA 182	C+	E+
Eola Road	B	F
Morgan Street	B	F
Southpark Road	C+	F
Verot School Road	C+	F

Main Line Level of Service - Table 1-8 provides a summary of the projected LOS for the I-49 mainline in year 2030. South of the Morgan Street/Eola Road interchange, the I-49 mainline would operate at LOS C, or better. Between Morgan Street and Verot School Road the mainline I-49 would operate at LOS D. North of Verot School Road, I-49 would operate at LOS E.

TABLE 1-8
I-49 YEAR 2030 MAINLINE LEVEL OF SERVICE

US 90/I-49 Mainline	Build
LA 88 to Captain Cade Road	B
Captain Cade Road to LA 92 west	B
LA 92 west to Albertson's Parkway	C
Albertson's Parkway to Eola Road	C
Eola Road to LA 89	D
LA 89 to Verot School Road	D
North of Verot School Road	E



CRITICAL INTERSECTION

1. US 90/I-49 AT FUTURE LA 92 (EAST)
2. US 90/I-49 AT LA 92 (WEST)
3. US 90/I-49 AT AMBASSADOR CAFFERY PARKWAY
4. US 90/I-49 AT LA 182
5. ALBERTSON'S PARKWAY AT LA 182
6. US 90/I-49 AT ALBERTSON'S PARKWAY
7. US 90/I-49 AT EOLA ROAD
8. US 90/I-49 AT MORGAN STREET
9. US 90/I-49 AT SOUTHPARK ROAD
10. US 90/I-49 AT VEROT SCHOOL ROAD

LEGEND

- US ROUTE
- STATE ROUTE
- LOCAL ROAD
- LOS – LEVEL OF SERVICE
- BNSF RAILROAD

5000 2500 0 5000 10000

SCALE: 1" = 5000'

I-49 SOUTH
LAFAYETTE REGIONAL AIRPORT
TO ROUTE LA 88

EXHIBIT 1-8

PEAK PERIOD LEVEL OF SERVICE AT CRITICAL INTERSECTIONS

PREPARED BY: DMJM+HARRIS (SEPTEMBER 20002)

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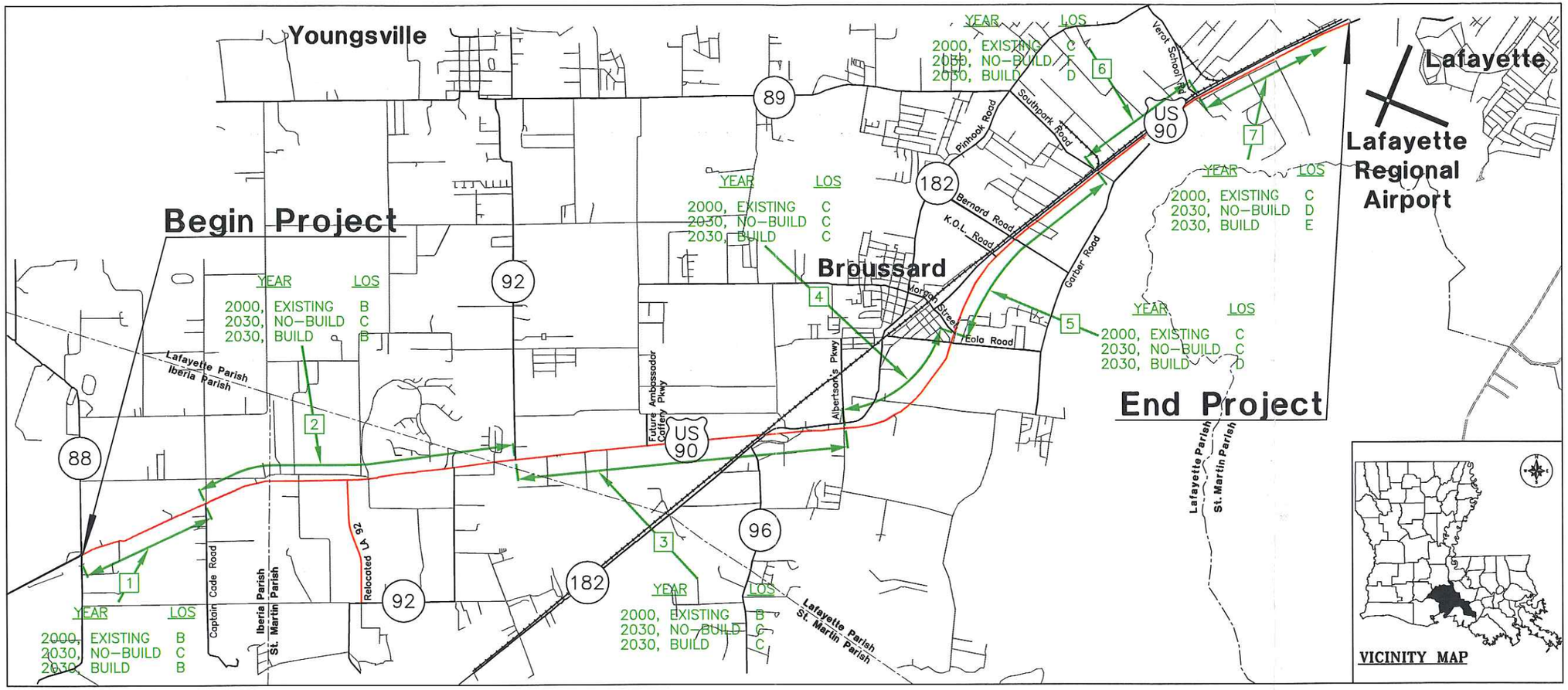

US 90/I-49 MAINLINE

1. LA 88 TO CAPTAIN CADE ROAD
2. CAPTAIN CADE ROAD TO LA 92 (WEST)
3. LA 92 (WEST) TO ALBERTSON'S PARKWAY
4. ALBERTSON'S PARKWAY TO EOLA ROAD
5. EOLA ROAD TO LA 89
6. LA 89 TO VEROT SCHOOL ROAD
7. NORTH OF VEROT SCHOOL ROAD

49 South

LEGEND

US ROUTE
STATE ROUTE
LOCAL ROAD
LOS – LEVEL OF SERVICE
BNSF RAILROAD

5000 2500 0 5000 10000
SCALE: 1" = 5000'

I-49 SOUTH
LAFAYETTE REGIONAL AIRPORT
TO ROUTE LA 88
EXHIBIT 1-9
PEAK PERIOD LEVEL OF SERVICE
US 90/I-49 MAINLINE

PREPARED BY: DMJM+HARRIS (SEPTEMBER 2002)

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1.2.5 Safety Benefits of the Proposed Action

Recognizing the dual role of US 90 as a regional and local transportation corridor, the state recognizes the need to accommodate these separate and often conflicting travel patterns as well as provide for greater safety in the corridor. This project would achieve this objective by converting US 90 to I-49 South. Of any class of highways, interstate freeways provide the greatest levels of efficiency, safety, and reliability in the movement of people and goods.

The project also would reduce train/car conflicts associated with the BNSF Railroad. New grade separations would be provided at Southpark Road (LA 89) and Verot School Road, which would eliminate three at-grade crossings. Also, the roadway geometry approaching the other at-grade crossings would be improved.

1.2.6 Summary

Conversion of US 90 to I-49 as herein described in the purpose and need, Chapter 1, and the alternatives analysis, Chapter 2, would provide demonstrated benefits as follows:

- System Linkage – Via I-49 the State of Louisiana would continue to implement a major transportation system linkage improvement serving a substantial portion of the State's population and economy. The improvement is consistent with federal, state and local planning efforts.

- Hurricane Evacuation – The State would upgrade a critical corridor utilized for hurricane evacuation with demonstrated benefits in evacuation clearance times.

- Regional Mobility – The Lafayette Metropolitan Planning Area would experience a substantial benefit in transportation network mobility, resulting in improved vehicle trip times as well as reduced network and link congestion, with associated benefits in air quality and fuel consumption over the no-build condition.

- Safety – The existing US 90 corridor currently experiences motorist safety problems consequent to intersection conflicts, high traffic volumes, and roadway geometry. This project would convert existing US 90 operating as an urban roadway to I-49 operating as a control of access facility. The change in roadway geometry would provide safer conditions in the corridor.

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Chapter Two
Alternatives Analysis

2.0 Alternatives Analysis

2.1 Project Criteria

The following technical requirements and design goals were developed as guidelines for applying the design concepts to the corridor:

1. The roadway Louisiana Department of Transportation and Development (LDOTD) design criteria for the main line and connecting roadways are presented in Table 2-1 and Table 2-2. Design speeds for the freeway and for the arterial roads vary with individual routes, depending on whether they are considered rural or urban routes.

2. Interchange locations should be selected based on traffic patterns and service needs, spacing requirements, physical constraints, community input, and practicality.

3. Vertical clearance of elevated sections is 16.5 feet over roadways and 23 feet above railroads.

4. The proposed action should avoid or minimize adverse environmental impacts. Where impacts are unavoidable, the design should consider permit and mitigation feasibility.

5. Drainage should meet state and federal guidelines. An evaluation of the flooding associated with Tropical Storm Allison was undertaken. Roadway grades and the hydraulic capacities of major drainage structures were adjusted in response to this storm event.

6. The proposed action should be sensitive to the community context and consider opportunities for visual enhancement.

7. Community needs and concerns, as expressed during the public participation program, should be addressed in the proposed action.

8. Local access and circulation needs should be addressed in the proposed action by maintaining or enhancing existing mobility.

9. The proposed action should be compatible with BNSF railroad requirements where right-of-way crossings and encroachments are unavoidable. Improving safety at railroad/cross-street crossings should be considered where appropriate.

10. The proposed action should consider requirements for pedestrian and bicycle access.

11. Relocation of utilities, as required, should be considered in the proposed action and included in the estimation of project costs.

12. The proposed action should address constructibility issues: minimize new right-of-way acquisition, maintain traffic flow during construction, be permitable, be compatible with other transportation plans, and require reasonable construction means to implement.

Table 2-1
Roadway Design Criteria
Freeways

		Roadway Classification		
Item No,	Design Item	F-1	F-2	F-3
1	Design Speed (M. P. H.)	50 ⓪	60	70
2	Level of Service	C ①	C ①	B ②
3	Number of Travel Lanes (Minimum)	4	4	4
4	Width of Travel Lanes (Ft.)	12	12	12
5	Width of Shoulders (Where used) (Ft.)			
	(A) Outside	10 ③	10 ③	10 ③
	(B) Median	6 ④	6 ④	6 ④
6	Type of Shoulders	Paved	Paved	Paved
7	Width of Median (Ft.)			
	(A) Depressed	50(Min.)	60(Min.) - 90(Des.)	60(Min.) - 90(Des.)
	(B) Continuous Barrier (4 Lane)	14 ⑤	14 ⑤	14 ⑤
	(C) Continuous Barrier (6 Lane)	26 ⑤	26 ⑤	26 ⑤
8	Fore Slope - Ratio	4:1(Min.) - 6:1(Des.)	6:1	6:1
9	Back Slope - Ratio	4:1	4:1	4:1
10	Pavement Cross Slope (Ft. / Ft.)	0.025 ⑥	0.025 ⑥	0.025 ⑥
11	Stopping Sight Distance	400 - 475 ⑦	525 - 650 ⑦	625 - 850 ⑦
12	Maximum Superelevation (Ft. / Ft.)	0.1	0.1	0.1
13	Maximum Horizontal Curvature (degree) ⑩	8	5	3
14	Maximum Grade (%)	4 ⑧	3 ⑧	3 ⑧
15	Minimum Vertical Clearance (Ft.)	16 ⑨	16 ⑨	16 ⑨
16	Width of Right of Way (Ft.)			
	(A) Depressed Median	As Needed	300	300
	(B) Median Barrier	As Needed	As Needed	As Needed
	(C) Minimum From Edge of Bridge Structure	15 - 20	15 - 20	15 - 20
17	Bridge Design Load	HS - 20	HS - 20	HS - 20
18	Width of Bridges (Minimum) (Face to Face Bridge Rail)	40'	40'	40'
19	Guardrail Required at Bridge Ends	Yes	Yes	Yes
20	Horizontal Clearance (Ft.) (From Edge of Travel Lane)			
	(A) 4:1 Foreslope	30	N / A	N / A
	(B) 6:1 Foreslope	22	32	34

⓪ For Use in Urban Areas Only
① Level of Service D Permissible For Heavily Developed Urban Areas.
② Level of Service C Permissible For Urban Conditions and Auxiliary Facilities in Rural Areas.
③ 12' Paved Required With Truck DDHV Greater Than 250
④ 4' To Be Paved -- 10' To Be Paved on 6 Lane Facilities -- 12' To Be Paved on 6 Lane Facilities With DDHV Greater Than 250.
⑤ 32' Maximum
⑥ 2% Permissible
⑦ Minimum Values Shown Permissible for Rehabilitation Projects.
⑧ Maximum Values Shown to Be Used Where Conditions Permit. Grades 1% and Higher May Be Used in Special Cases.
⑨ 6" Additional To Allow For Future Surfacing -- 17' Required for Trusses and Pedestrian Overpasses.
⑩ It May Be Necessary To Flatten The Degree of Curve And/Or Increase The Shoulder Width (Maximum 12') To Provide Adequate Stopping Sight Distance On Structure.

Source: Louisiana Department of Transportation and Development

Table 2-2
Arterial Roadway Design Criteria

Item No,	Design Item	Roadway Classification			
		Rural		Urban⑩	
		Two Lane	Four Lane		
		RA-1	RA-3①	UA-1	UA-2
1	Design Speed (M. P. H.)	60	60	35	45
2	Design Hourly Volume	0 - 600②	601 - 2300	N/A	N/A
3	Level of Service	B	B	C③	C③
4	Number of Travel Lanes	2	4④	2 Min. - 4 Typ.	2 Min.- 4 Typ.
5	Width of Travel Lanes (Ft.)	12	12	8 - 12	12
6	Width of Parking Lanes (Where used) (Ft.)	N / A	N / A	10 - 12	10 - 12
7	Width of Shoulders (Where used) (Ft.)				
	(A) Outside	8(Min.) - 10(Des.)	10	N / A	N / A
	(B) Median	N / A	6⑤	N / A	N / A
8	Type of Shoulders	Paved	Paved	N / A	N / A
9	Width of Median (Ft.)				
	(A) Depressed	N / A	40(Min.) - 60(Des.)	N / A	N / A
	(B) Raised	N / A	N / A	4(Min.) - 30(Des.)	4(Min.) - 30(Des.)
	(C) Two way Left Turn Lanes	N / A	N / A	8(Min.) - 14(Typ.)	8(Min.) - 14(Typ.)
10	Width of Sidewalk (Where Used)				
	Offset From Curb (Ft.)	N / A	N / A	4	4
	Adjacent From Curb (Ft.)	N / A	N / A	6	6
11	Fore Slope - Ratio	6:1	6:1	3:1(Min.) - 4:1(Des.)	3:1(Min.) - 4:1(Des.)
12	Back Slope - Ratio	4:1	4:1	3:1	3:1
13	Pavement Cross Slope (Ft. / Ft.)	0.025⑥	0.025⑥	0.025⑥	0.025⑥
14	Stopping Sight Distance	525 - 650⑦	525 - 650⑦	275 - 325⑦	325 - 400⑦
15	Maximum Superelevation (Ft. / Ft.)	0.1	0.1	0.04	0.04
16	Maximum Horizontal Curvature⑧	8	5	3	
	Without Superelevation (+0.025)	N / A	N / A	1000	N / A
	Without Superelevation (-0.025)	N / A	N / A	800	N / A
17	With Superelevation (degree⑨	5	5	4	7.5
18	Maximum Grade (%)	3⑨	3⑨	7	6
19	Minimum Vertical Clearance (Ft⑩	16	16	16	16
20	Minimum Horizontal Clearance (Ft.)				
	(A) From Edge Of Travel Lane	30	32	N / A	N / A
	(B) Outside From Back of Curb	N / A	N / A	5(Min.) - 15(Des.)	6(Min.) - 15(Des.)
	(C) Median (Where Used) (From Back of Curb)	N / A	N / A	4(Min.) - 15(Des.)	4(Min.) - 15(Des.)
21	Minimum Width of Right of Way (Ft⑪				
	(A) From Centerline	75	As Needed	N / A	N / A
	(B) From Edge of Travel Lane	N / A	N / A	3(Min.) - 17(Des.)	3(Min.) - 17(Des.)
22	Bridge Design Load	HS - 20	HS - 20	HS - 20	
23	Width of Bridges (Minimum) (Face to Face Bridge Rail)	Shoulder Width	40	Rdwy. + 8⓬	Rdwy. + 8⓬
24	End Treatment Required at Bridges	Yes	Yes	Yes	Yes

Source : Louisiana Department of Transportation and Development.. Roadway Classifications RA-2 and RA-4 not shown

⑩ Applies to Curbed Sections Only. For uncurbed Sections use Rural Standards.

① Used When Adding Two Lanes to Existing Facility.

② For Rolling Terrain. Limiting Passing Sight Distance and High Percentage Trucks, 4 Lanes may be Required When DVH is Above 400.

③ Level of Service D Permissible in Highly Developed Areas.

④ Consider Increasing to Six Lane Facility When DVH is Above Figure Shown in Item No. 2.

⑤ 4' Paved.

⑥ 2% Permissible for Rehabilitation Projects.

⑦ Minimum Values Shown Permissible for Rehabilitation Projects. Maximum Values Shown to be Used Where Conditions Permit.

⑧ It May Be Necessary to Increase the Radius of the Curve and/or the Shoulder Width (Maximum of 12') to Provide Adequate Stopping Sight Distance on Structure.

⑨ 4% Permissible on Rolling Terrain.

⑩ 6" Additional to Allow for Future Surfacing.

⑪ Minimum Required for New Location and as Needed for Existing Alignment. Obtain Additional Right of Way for Future Lanes Where Justified.

⓬ For Approach Roadways Without Curbs, Use Shoulder Width. 6' Sidewalk Behind Curb to be Carried Across Bridge When Justified By Pedestrian Traffic.

2.2 Planning Process

The study process for this project was undertaken to carry forward the conversion of route US 90, which provides continuous access to abutting properties, to a control of

access interstate highway, I-49, served by access ramps to frontage roads and grade-separated interchanges.

Within a structured public participation program, the development and examination of project alternates was undertaken as part of an iterative process which:

- Identified engineering concepts, which could be applied to meet the project purpose and need.
- Developed engineering line and grade alignments in conformance with appropriate design criteria.
- Modified line and grade alternates in response to environmental constraints and public comment.

The planning process followed to undertake the I-49 South project is presented in Figure 2-1:

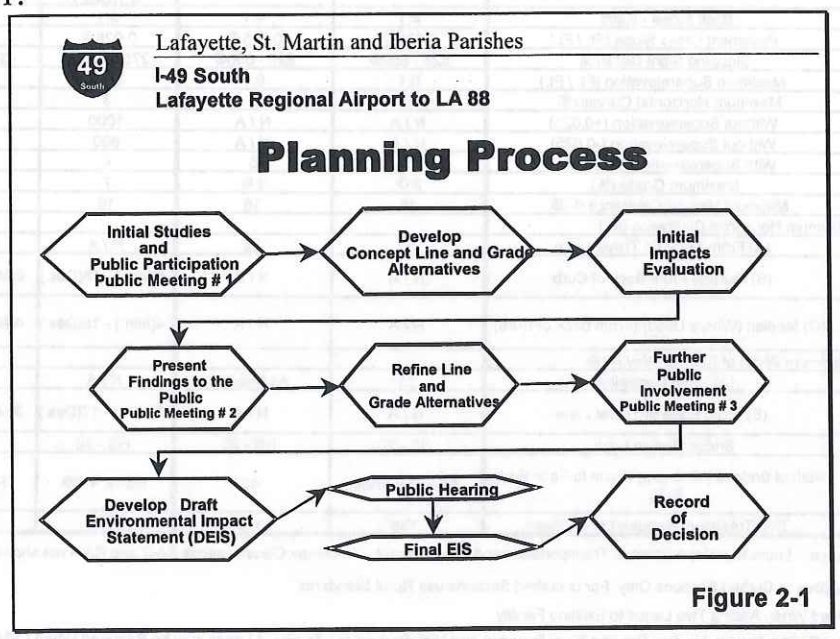
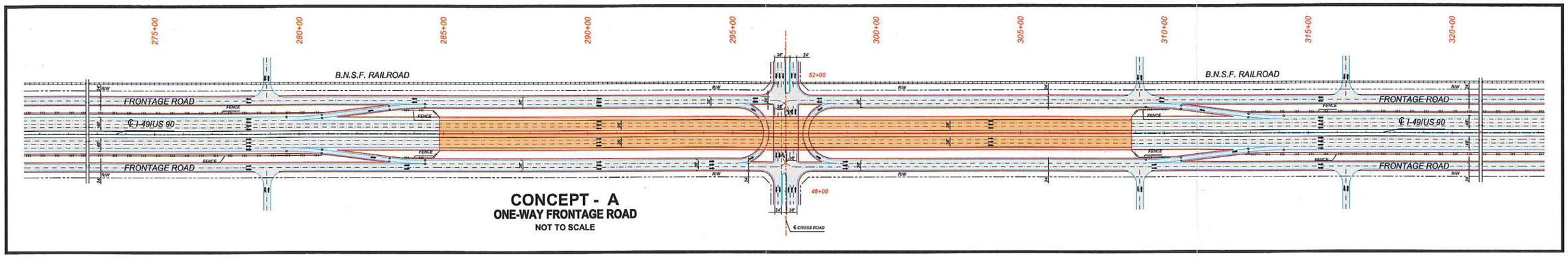


Figure 2-1

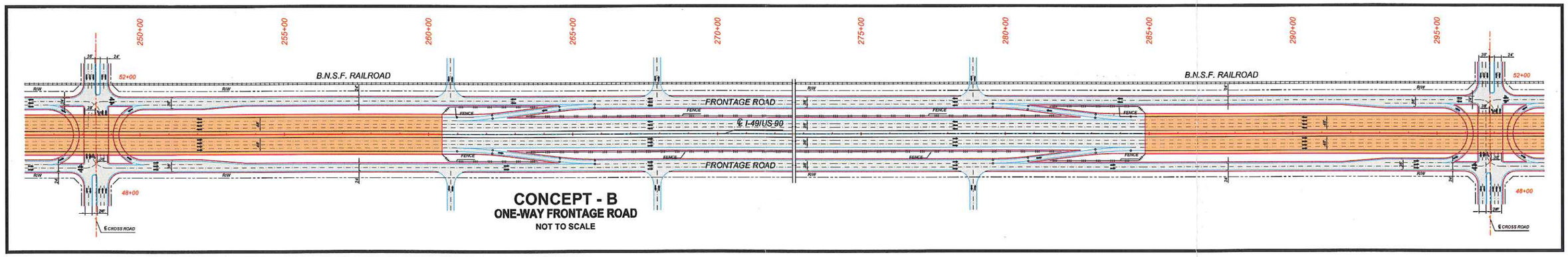
2.3 Conceptual Engineering

At the point of the First Public Meeting, which was held in October 2000, generic design concepts were developed that would place the mainline and/or frontage roads at-grade or grade-separated with numerous ramp configurations. At this conceptual level, focus was placed on meeting broad engineering and traffic requirements.

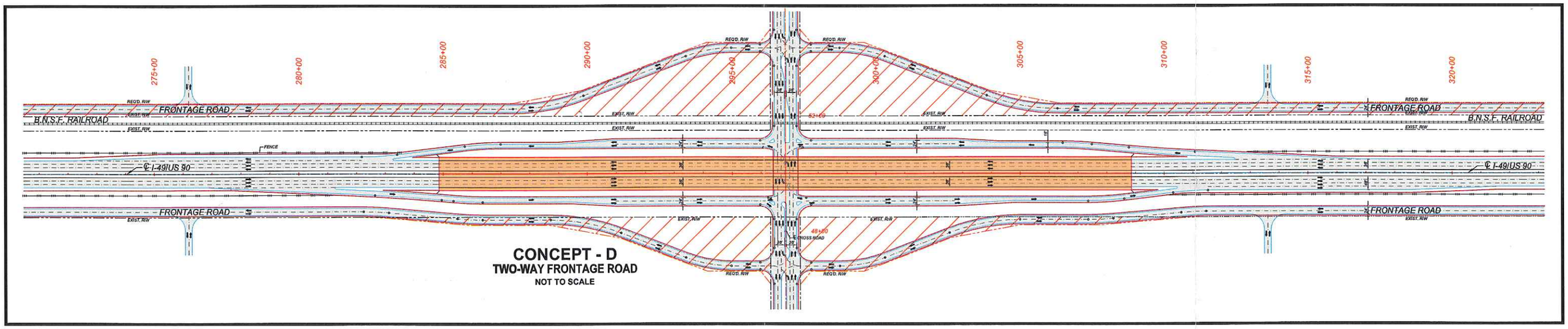
Four geometric concepts were presented at the First Public Meeting. Three of the Concepts (A, B and C) were control of access roadways with associated one-way frontage road systems. The fourth concept (Concept D) presented a mainline roadway with two-way frontage roads. Geometric details of Concepts A, B and D are presented in Exhibit 2-1.



CONCEPT - A
ONE-WAY FRONTAGE ROAD
NOT TO SCALE



CONCEPT - B
ONE-WAY FRONTAGE ROAD
NOT TO SCALE



CONCEPT - D
TWO-WAY FRONTAGE ROAD
NOT TO SCALE

LEGEND

- GRADE ROADWAY
- ELEVATED ROADWAY
- RAILROAD
- TRAFFIC FLOW
- EXISTING RIGHT OF WAY
- FENCE
- R/W TO BE AQUIRED

5000 2500 0 5000 10000

SCALE: 1" = 5000'

I-49 SOUTH
LAFAYETTE REGIONAL AIRPORT
TO ROUTE LA 88
EXHIBIT 2-1
GEOMETRIC DETAILS
OF FRONTAGE ROAD CONCEPTS

PREPARED BY: DMJM+HARRIS (SEPT. 24, 2001)

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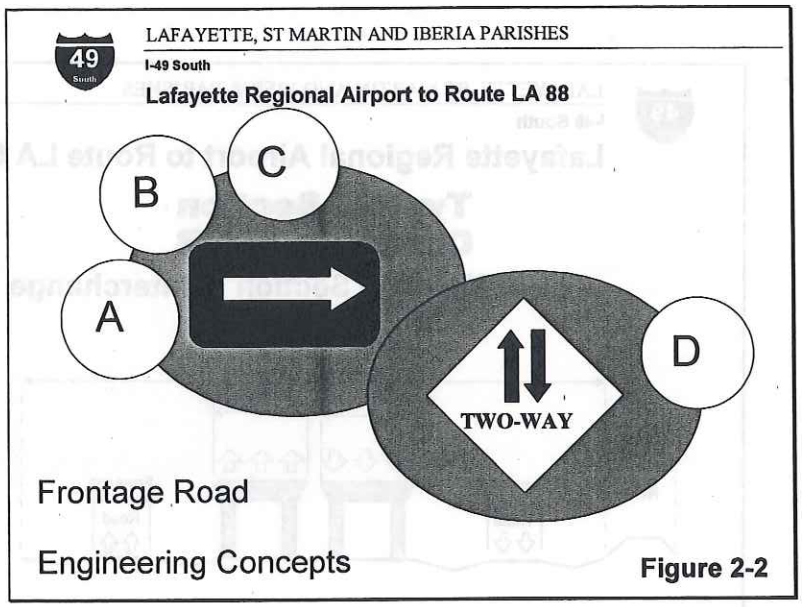


Figure 2-2

Concepts A and B vary in the location of entrance ramps in relation to connecting roadways. In Concept A, a vehicle exits in advance of the interchange. This design frequently results in relatively more traffic movements at interchanges, and tends to concentrate highway related land uses at interchanges.

In Concept B, a vehicle exits between interchanges onto the frontage roads. In comparison to Concept A, this design reduces the traffic movements at interchanges and provides equivalent access along the entire length of the frontage roads.

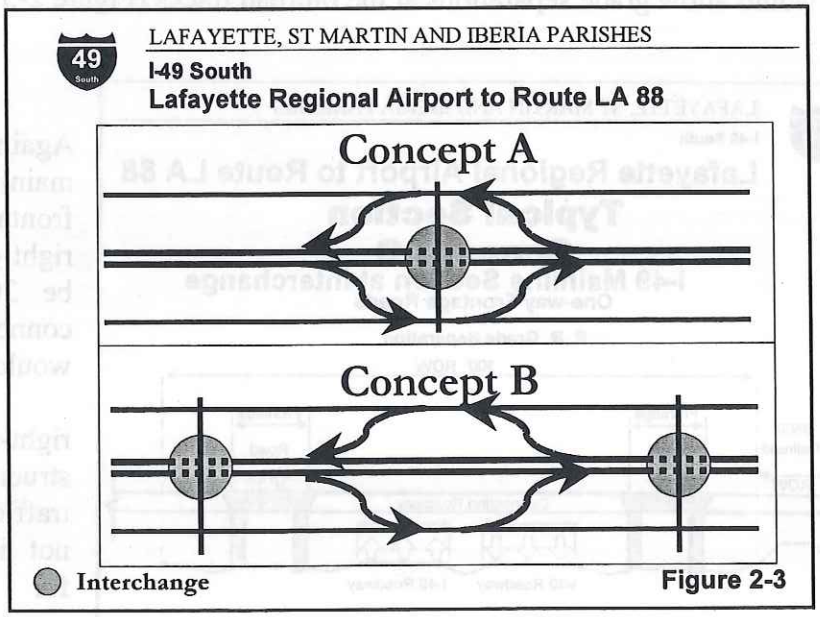


Figure 2-3

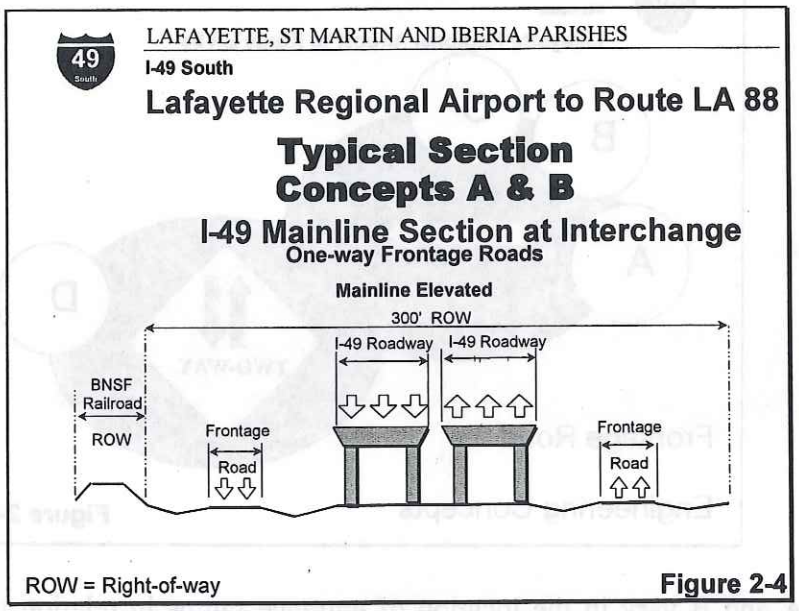


Figure 2-4

Concepts A and B typically fit within a right-of-way 300 feet in width for the highway mainline and the frontage roads (Figure 2-4). The required right-of-way width of the connecting roads was determined by traffic projections and intersection capacity analysis, and might exceed existing available right-of-way.

For a portion of the route, the BNSF railroad parallels the existing US 90. Concept C was developed to address railroad issues. Concept C would have the exit geometry of either A or B, but the connecting road would be elevated over the highway mainline, which would allow grade separations at the railroad tracks (Figure 2-5).

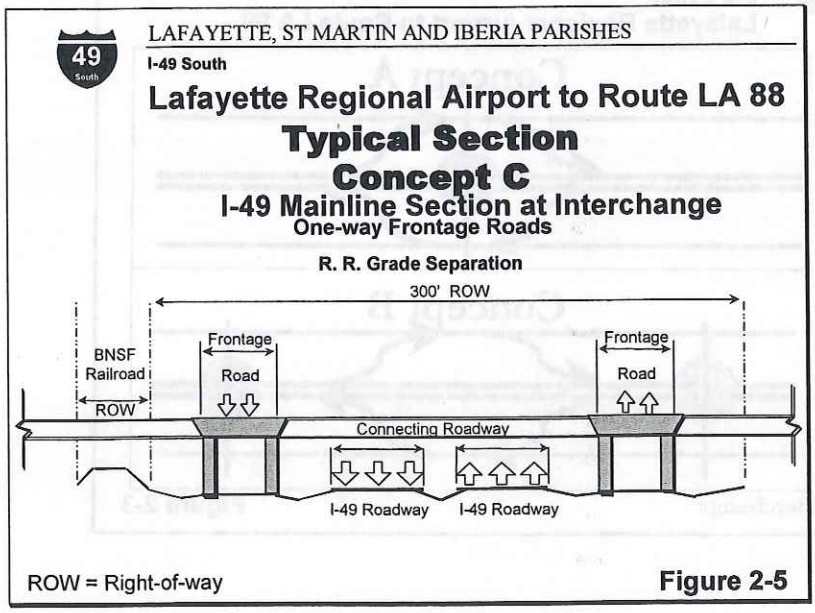


Figure 2-5

Again, the required mainline and frontage road right-of-way would be 300 feet. The connecting roads would require additional right-of-way for the structure, even if the traffic projections do not identify a need for additional capacity.

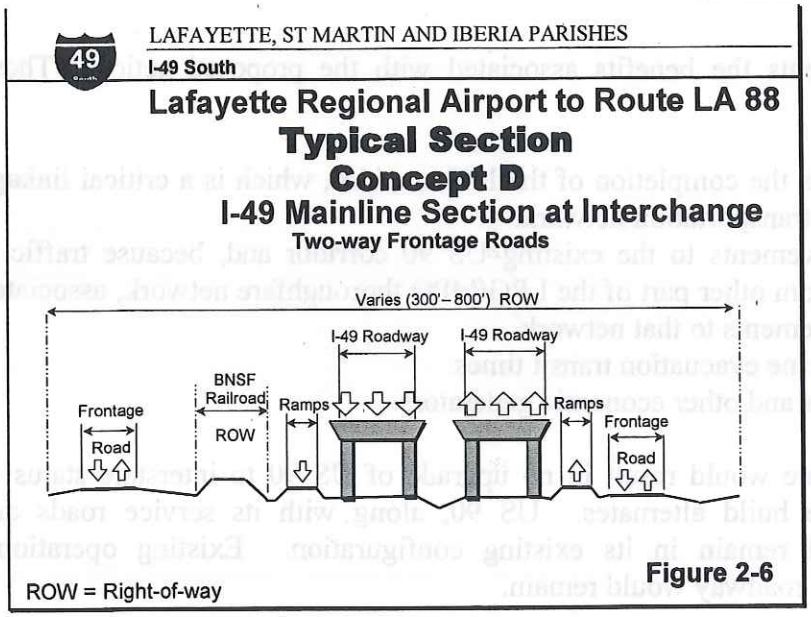


Figure 2-6

Concept D provides s conceptual view of the two-way frontage road geometry (Figure 2-6). This concept typically requires substantially more right-of-way, especially at connecting roads.

The need for control of access to frontage roads, as well as to the mainline highway, is an essential part of the design concept. To ensure safe operating conditions, driveways are typically prohibited at the points where entrance and exit ramps meet the frontage roads (Figure 2-7).

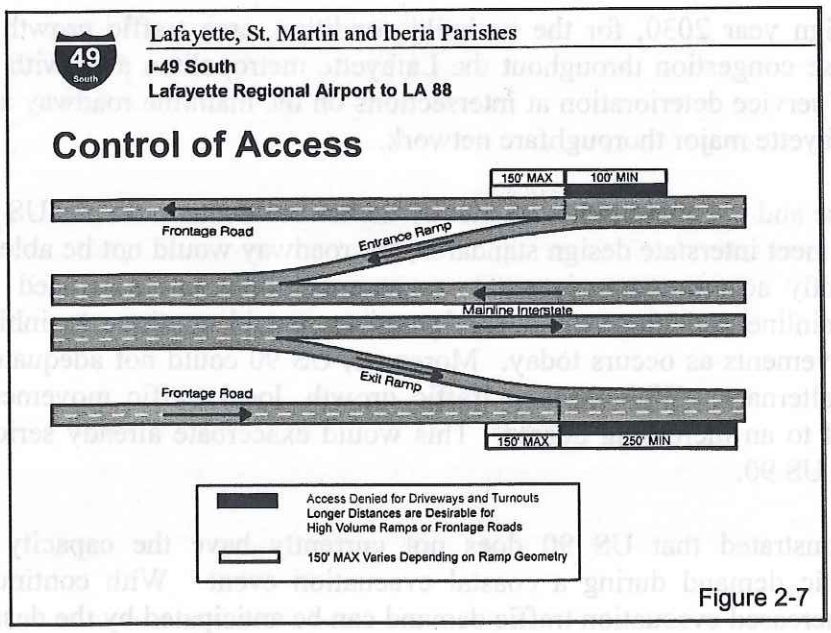


Figure 2-7

2.4 No-build Alternate

Chapter 1.0 documents the benefits associated with the proposed action. These include:

- Progress towards the completion of the I-49 corridor, which is a critical linkage within the State transportation network.
- Capacity improvements to the existing US 90 corridor and, because traffic is drawn to I-49 from other part of the LPG/MPO thoroughfare network, associated capacity improvements to that network.
- Improved hurricane evacuation transit times.
- Support for ports and other economic generators.

The no-build alternate would result in no upgrade of US 90 to interstate status as contemplated in the build alternates. US 90, along with its service roads and intersections, would remain in its existing configuration. Existing operational characteristics of the roadway would remain.

Activities under a no-build alternate would be limited to routine roadway maintenance actions that would be undertaken by the LDOTD on an as-needed basis and network improvements programmed by others.

Chapter 1.0 also documents operation of the roadway under build and no-build conditions. Other differences between the build and no-build conditions are indicated in Chapter 3.0, Affected Environment and Chapter 4.0, Environmental Consequences.

In the project design year 2030, for the no-build condition, area traffic growth is expected to increase congestion throughout the Lafayette metropolitan area with an associated level of service deterioration at intersections on the mainline roadway and throughout the Lafayette major thoroughfare network.

The project purpose and need would not be met by the no-build alternate. As US 90 does not currently meet interstate design standards, the roadway would not be able to safely and efficiently accommodate interstate commerce traffic as envisioned for I-49. Existing mainline and cross-street configurations would continue to inhibit through traffic movements as occurs today. Moreover, US 90 could not adequately serve as an I-10 alternate. With through traffic growth, local traffic movements would be inhibited to an increasing degree. This would exacerbate already serious safety concerns on US 90.

It has been demonstrated that US 90 does not currently have the capacity to accommodate traffic demand during a coastal evacuation event. With continued regional growth, increased evacuation traffic demand can be anticipated by the design year. Longer traffic delays and impaired mobility during an emergency event would result.

2.5 Line and Grade Alternates

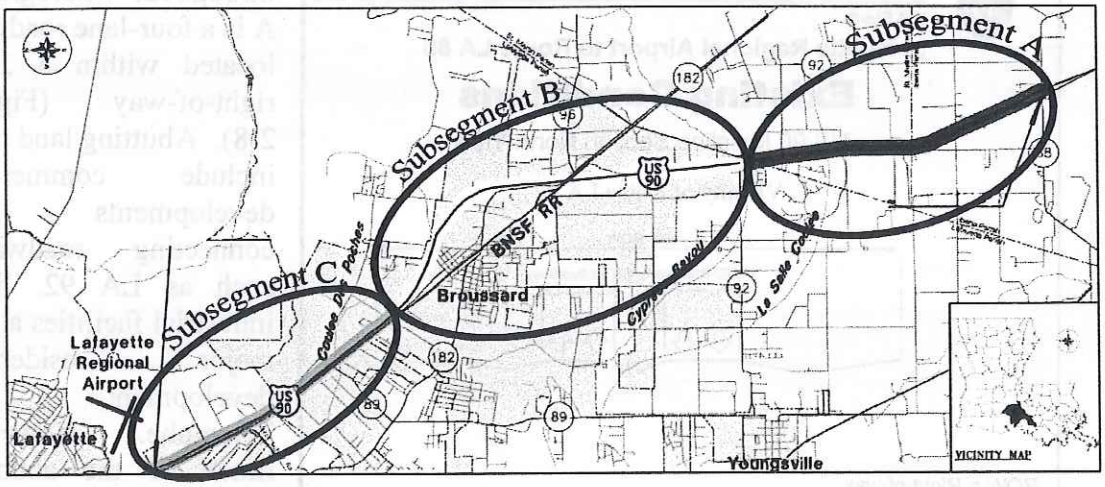
As discussed in Section 1.1, only the upgrade of the existing US 90 corridor was considered. In applying the Design Concepts, the project corridor was divided into three Subsegments that have been designated A, B, and C. Exhibit 2-2 shows the location of each of these subsegments. Subsegment A extends from just north of the LA 88 intersection to a point just south of Bercegeay Road. Subsegment B extends from the northern terminus of Subsegment A to the vicinity of Bernard Road. Subsegment C extends from the northern terminus of Subsegment B to just north of the intersection of US 90 and Perimeter Road.

The three subsegment limits were defined by specific sets of traffic, land use, and environmental issues that distinguish one from another. This approach enabled the alternatives analysis to have a high level of flexibility to focus on specific corridor issues. Alternates could be developed, refined, or eliminated in one subsegment while not affecting the same process in another subsegment. In all subsegments, it is proposed that the mainline highway would be a six-lane facility with one-way frontage roads.

Future traffic requirements for the entire project were established by modifying the Lafayette Consolidated Government TRANPLAN traffic forecast model to include the build and no-build conditions at year 2010 and year 2030 (Section 1.2.4.2).

The conceptual engineering for the proposed action is presented in the Project Atlas, Section 2.7. The Project Atlas consists of a series of aerial map plates with the proposed roadway improvements indicated in association with land use and other environmental features. Engineering typical sections keyed to the plates are also provided following the atlas plates.

EXHIBIT 2-2
PLANNING SUBSEGMENTS

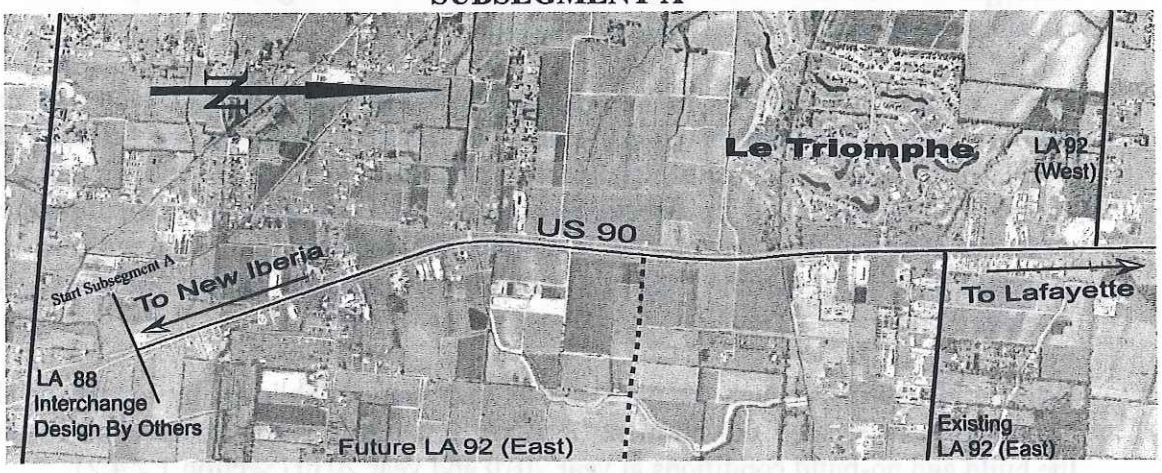


2.5.1 Subsegment A

2.5.1.1 Subsegment A – Existing Conditions

A number of issues are associated with the planning for I-49 within Subsegment A.

EXHIBIT 2-3
SUBSEGMENT A



The geometry of the proposed I-49 must tie into the geometry of the LA 88 Interchange, which is being designed by others (Exhibit 2-3). LA 92 intersects US 90 from the west on the northern end of Subsegment A, and departs from existing US 90 to the east approximately 2,000 feet to the south of the LA 92 west connection. The planning for I-49 must link LA 92 east/west at the planned I-49 interchanges.

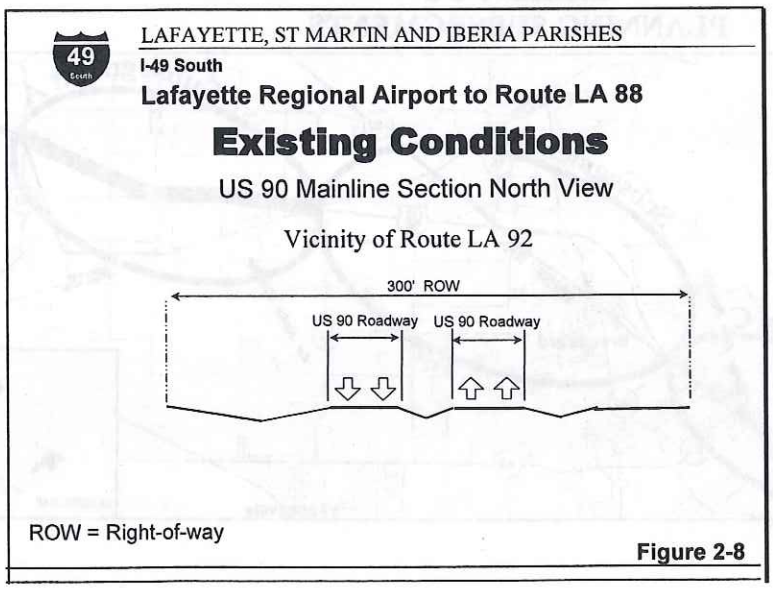


Figure 2-8

Existing US 90 throughout Subsegment A is a four-lane roadway located within a 300' right-of-way (Figure 2-8). Abutting land uses include commercial developments at connecting roadways, such as LA 92, light industrial facilities and a major residential development, Le Triomphe. However, much of the abutting property remains in agricultural use.

2.5.1.2 Line and Grade Alternates

Only one alternate, designated as Alternate A-1, was proposed for Subsegment A. The mainline highway would be a six-lane facility constructed primarily at-grade on the US 90 alignment. Two-lane one-way frontage roads would be provided at-grade on the both sides of the mainline using the Concept B geometry (See Exhibit 2-1). The frontage roads would provide direct access to businesses and residences abutting existing US 90. Details of proposed improvements are presented in the Project Atlas, Plates 1 through 4.

Proceeding from the south to the north through Subsegment A, the mainline interstate and associated frontage road geometry would link with improvements under design by others at LA 88. Two interchanges are proposed as part of Subsegment A. Both interchanges are in association with LA 92.

LA 92 East Interchange

Initially, two concepts were considered for the LA 92 approach to I-49 from the east. An evaluation was undertaken that considered a projection of LA 92 east from where LA 92 west presently intersects US 90. St. Martin Parish recommended an alternate concept, which would position LA 92 east in a manner consistent with a roadway their parish was planning. Since the St. Martin Parish concept placed LA 92 east at a point appropriate for location of an interchange, the planned St. Martin Parish roadway location was considered for the I-49 project. An alignment for LA 92 east was developed (Project Atlas, Plate 3-1), and the impacts associated with the proposed alignment have been considered as part of the I-49 South project.

Proposed LA 92 east would be a three-lane roadway connecting I-49 interchange with an existing segment of LA 92 that makes an easterly connection to Cade. The proposed 150-foot right-of-way for LA 92 east would be adequate for future expansion to a five-lane roadway. A portion of the roadway is routed through the 100-year floodplain.

LA 92 West (Young Street) Interchange

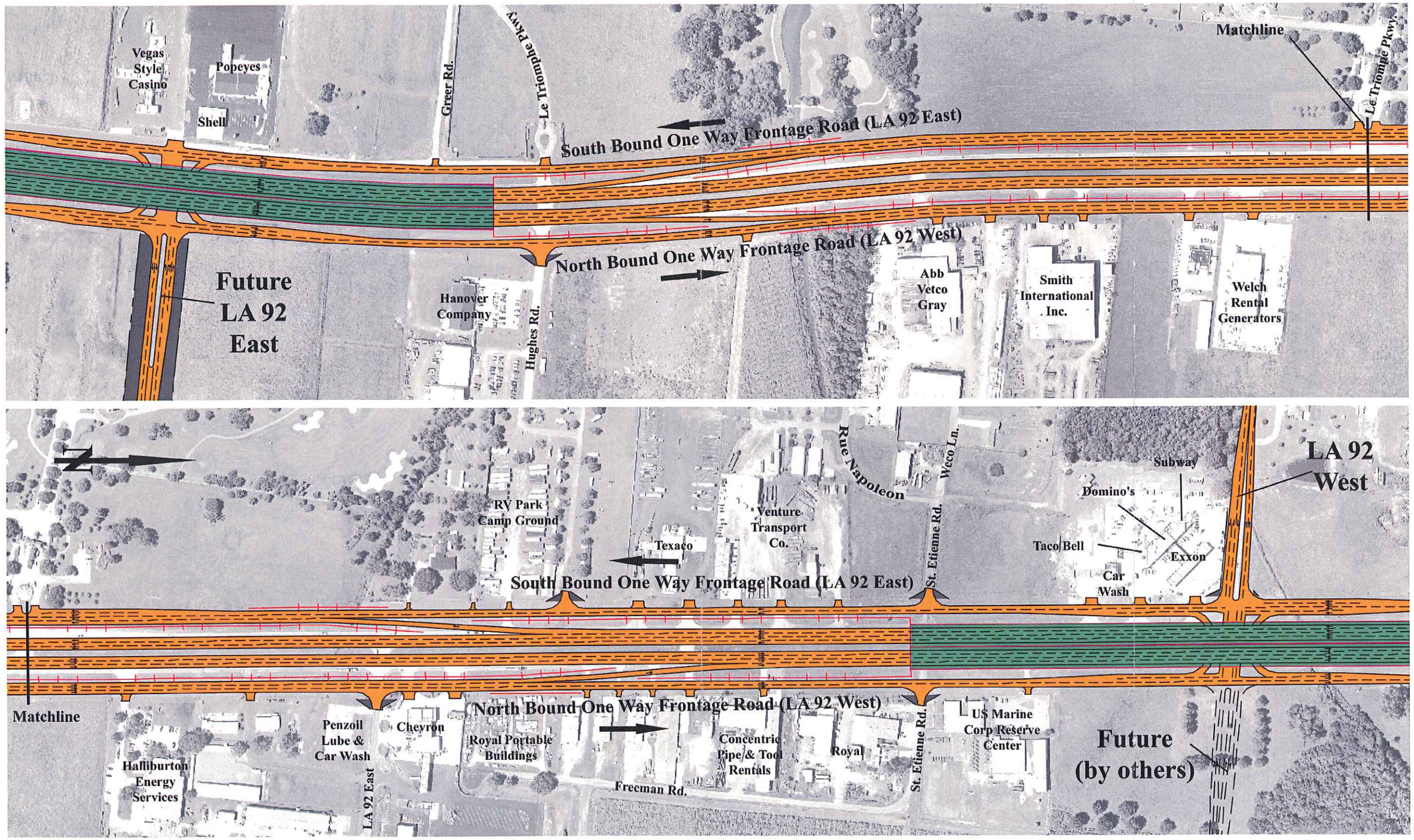
The second interchange within Subsegment A is located at Young Street where the existing LA 92 approaches US 90 from the west. The Town of Broussard recommended that a roadway extension to the east be provided from the proposed I-49/LA 92 west interchange. A conceptual alignment for such an extension is noted on Project Atlas Plate 4, but the new roadway is not planned as part of I-49.

The approaches for both LA 92 east and west would extend at-grade beneath the mainline structures tying LA 92 directly into both the northbound and southbound frontage roads. For the distance between the two LA 92 links, approximately one mile, the frontage road network would serve as LA 92. Minor roadways and driveways intersecting US 90 would be connected to the frontage roads (Exhibit 2-4).

Subsegment A Right-of-Way Requirements

The design of Subsegment A provides for the greatest portion of the proposed improvements to occur within the existing 300 foot US 90 right-of-way. Exceptions would occur at the intersections of the new frontage roads with Captain Cade Road, Melancon Road, Briar Patch Drive, Allier Road, Hughes Road, existing LA 92 east (Smede Highway), Freeman Road, Weco Lane, LA 92 west (Young Street), and Southwood Drive. Right-of-way acquisition in these areas would be minimized to the greatest extent possible, but cannot be avoided for reasons of constructibility and minimum geometrical requirements. Existing land use in the areas of proposed right-of-way acquisition includes fallow land and small, unimproved portions of developed parcels. No business or residential takings are anticipated in Subsegment A.

Entrance and exit ramps have been located so as to avoid and/or minimize control of access conflicts with abutting properties.



Roadway at grade

Roadway on structure

Exhibit 2-4
Route LA 92

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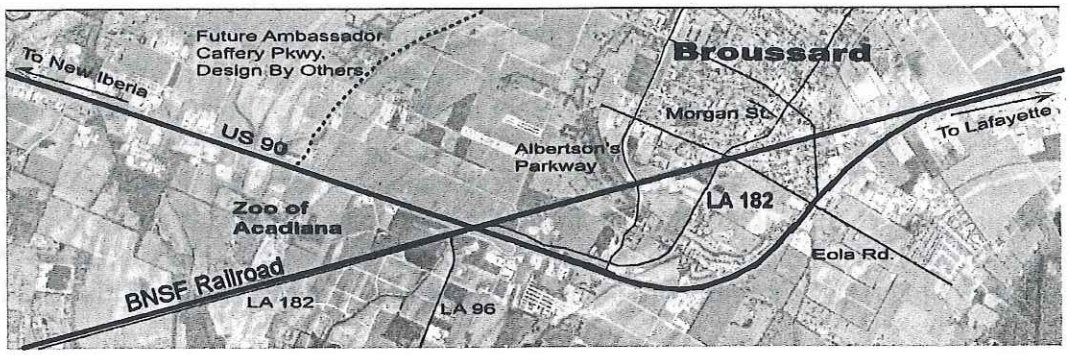
2.5.2 Subsegment B

2.5.2.1 Existing Conditions

Subsegment B extends from the terminus of Alternate A to a point near the existing intersection of US 90 and Bernard Road.

EXHIBIT 2-5
SUBSEGMENT B



Proceeding north along existing US 90 through Subsegment B, Corne Road intersects existing US 90 approximately 4,500 feet south of the BNSF Railroad (Exhibit 2-5). The Corne Road intersection with US 90 is the location of the future Ambassador Caffery Parkway extension right-of-way. The Lafayette Consolidated Government has programmed this extension of Ambassador Caffery Parkway as a four-lane major thoroughfare. The planning for I-49 was undertaken under the assumption of this future condition. Land use within Subsegment B south of the BNSF Railroad is mostly agricultural interspersed with industrial service facilities. Ambassador Caffery Parkway, however, would focus this area for future commercial development. The Zoo of Acadiana, a privately owned and operated facility, is located east of existing US 90 at Corne Road.

Between the BNSF Railroad and Albertson's Parkway, there were a number of issues of concern that affected the planning for I-49. Grade separations of the mainline and the frontage roads of I-49 over the BNSF railroad would be a requirement of the project. In crossing over the BNSF railroad, I-49 also would cross over LA 182.

Currently, LA 182 curves to the north after crossing under the existing US 90 grade separation and parallels US 90 on the west for approximately 4,000 feet through its intersection with Albertson's Parkway. The intersections of Albertson's Parkway with LA 182 and with US 90 are separated by less than 200 feet. This minimal separation between LA 182 and US 90 poses capacity constraints associated with the combined operation of the intersections. There is considerable existing commercial development associated with the LA 182/Albertson's Parkway/US 90 intersection, and additional development is planned. On the east side of existing US 90, there are

light industrial facilities that require access. Considerable effort focused on the integration and routing of LA 182, Albertson's Parkway, and I-49 frontage roads into a single roadway network which addresses the environmental, access, capacity, and geometric constraints posed by these conditions.

Moving to the northern end of Subsegment B, the principal concern is the proximity of Eola Road and Morgan Street at their intersections with the existing US 90 right-of-way. Eola Road crosses US 90 approximately 700 feet south of Morgan Street. Eola Road serves as a collector road and Morgan Street serves as the principal access to historic Broussard.

Figure 2-9 shows the existing US 90 section in the vicinity of Morgan Street. The entire US 90 corridor in the vicinity of these roadways is developed. With respect to existing conditions at the Eola Road US 90 intersection, the Broussard Station of the U.S. Post Office is located in the southwest quadrant of the intersection. Within the northwest quadrant of the intersection, residences border Eola Road. Currently, Morgan Street approaches US 90 from the west and terminates into the US 90 right-of-way. There is an existing frontage road on the east side of existing US 90 at Morgan Street, and a number of commercial properties are serviced from this road.

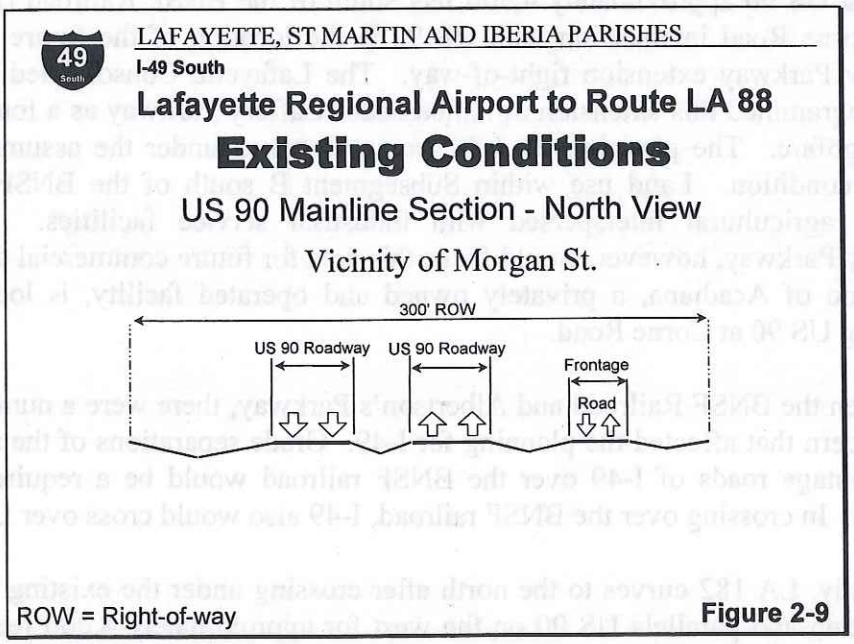


Figure 2-9

North of Morgan Street, the impact of design for I-49 on the intersection of the southbound frontage road, Second Street, and K.O.L. Road was considered in association with the BNSF Railroad.

2.5.2.2 Line and Grade Alternates

The proposed mainline highway throughout Subsegment B would be a six-lane facility constructed primarily at-grade on the US 90 alignment. Two-lane one-way frontage roads would be provided at-grade on both sides of the mainline using the Concept B geometry (Figures 2-3 and 2-10). At interchanges, the mainline would be provided on structure with the frontage roads remaining at-grade. The frontage roads provide direct access to businesses and residences abutting existing US 90. Details of proposed improvements are presented in the Project Atlas, Plates 5-9.

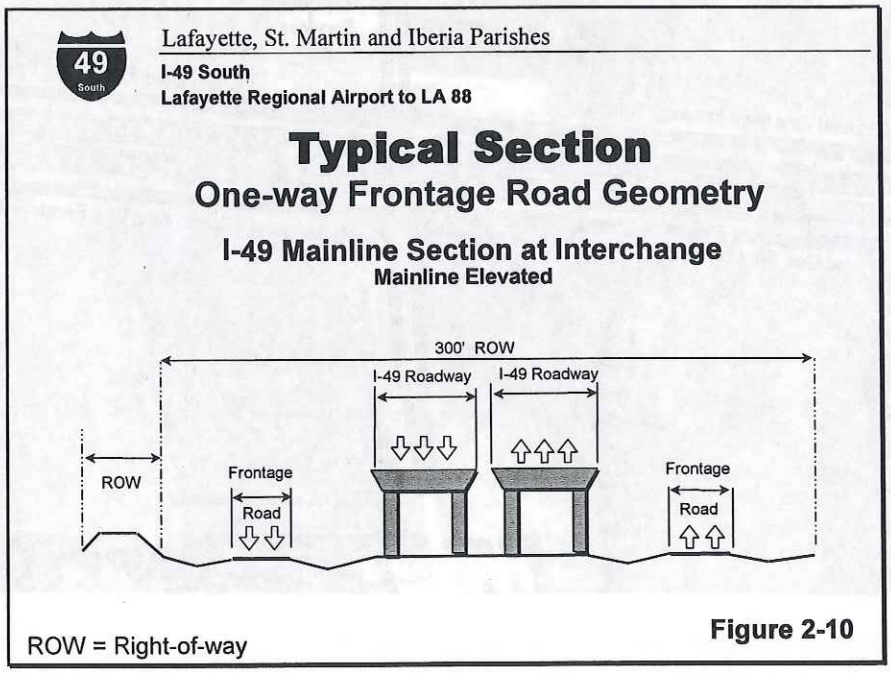
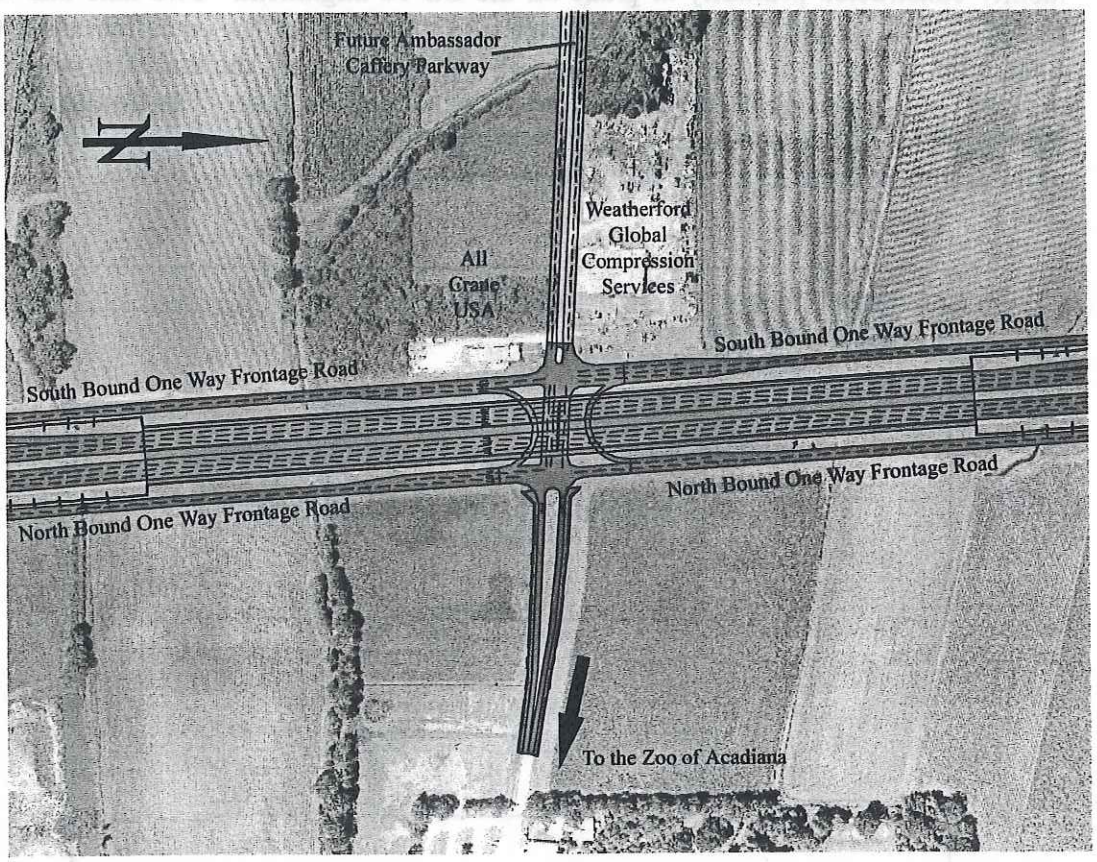


Figure 2-10

Ambassador Caffery Parkway Interchange - As previously noted (Section 1.2.4.2), future traffic requirements for the entire planning segment were established by modifying the Lafayette Consolidated Government TRANPLAN traffic forecast model to include the build and no-build conditions for US 90/I-49 in year 2030. The traffic modeling results for the proposed I-49 interchange with Ambassador Caffery Parkway indicated that approximately 21,000 vehicles per day would approach I-49 or depart from I-49 using Ambassador Caffery Parkway. Based on this traffic forecast, an interchange geometry was developed and presented to the public at the Second Public Meeting held in February 2001. The proposed geometry required that only a small amount of additional right-of-way, approximately 0.1 acre, be acquired (see Exhibit 2-6).

EXHIBT 2-6
AMBASSADOR CAFFERY PARKWAY
INITIAL BUILD PROPOSAL



Both Lafayette Consolidated Government officials and Town of Broussard officials requested that consideration be given to providing full directional ramp connections between I-49 and Ambassador Caffery Parkway. Specifically, they requested a ramp connection from northbound I-49 to westbound Ambassador Caffery; and a ramp connection from eastbound Ambassador Caffery to northbound I-49. Their concerns related to Year 2000 traffic counts along portions of Ambassador Caffery in other areas of Lafayette, which exceed 40,000 vehicles per day.

In response to the request by these governmental entities, a CORSIM model of the proposed interchange geometry and traffic controls was developed, and the forecast year 2030 traffic was entered onto the model to simulate future traffic flows through the interchange. CORSIM is a corridor microscopic simulation, a model that is a useful planning tool for evaluation of future year traffic patterns. The proposed interchange performed within acceptable delay conditions.

To test the sensitivity of the interchange geometry to additional traffic flows, the forecast flows were increased by 50% to approximately 32,000 vehicles per day.

Turning movements were maintained at the same percents as in the initial simulation. The simulation indicated that traffic movements through the intersection would experience substantial delays. Based on this analysis, the LDOTD, in association with the FHWA, determined that it would be appropriate to acquire sufficient additional right-of-way to accommodate the future construction of directional ramps as proposed. The required right-of-way would be acquired through a separate Right-of-Way Preservation Program. Should traffic demand approach the point at which congestion could result, the ramps could be constructed within the protected right-of-way.

Exhibit 2-7 presents conceptual geometry for the build-out of the Ambassador Caffery Parkway interchange with I-49. Note the inclusion of right-of-way west of St. Etienne Road. The additional right-of-way west of St. Etienne would support extension of directional ramps over St. Etienne, should future traffic conditions warrant the construction of an overpass. The proposed geometry was developed in association with representatives of the Lafayette Consolidated Government. Project details of the final build-out of the Ambassador Caffery Parkway interchange with directional ramps are also provided on Project Atlas Plate 5, Plate 5-1, and Plate 5-2.

Exhibit 2-8 presents the conceptual geometry for the revised build condition. It differs from the geometry presented in Exhibit 2-6, in that the northbound frontage road has been relocated to the eastern side of the future ramp network to provide continuous access from the frontage road to the abutting properties. Table 2-3 summarizes the ROW requirements for each build alternate.

TABLE 2-3
RIGHT-OF-WAY REQUIREMENTS FOR AMBASSADOR CAFFERY PARKWAY INTERCHANGE

ROW Requirements	Alternate B-1 Initial Build	Alternate B-3 Revised Build Without Ramps	Alternate B-3 Revised Build-out With Directional Ramps
Acres	0.1	13.0	28.3
Relocations	none	none	2 businesses

EXHIBIT 2-7
AMBASSADOR CAFFERY PARKWAY
BUILD-OUT PROPOSALWITH DIRECTIONAL RAMPS

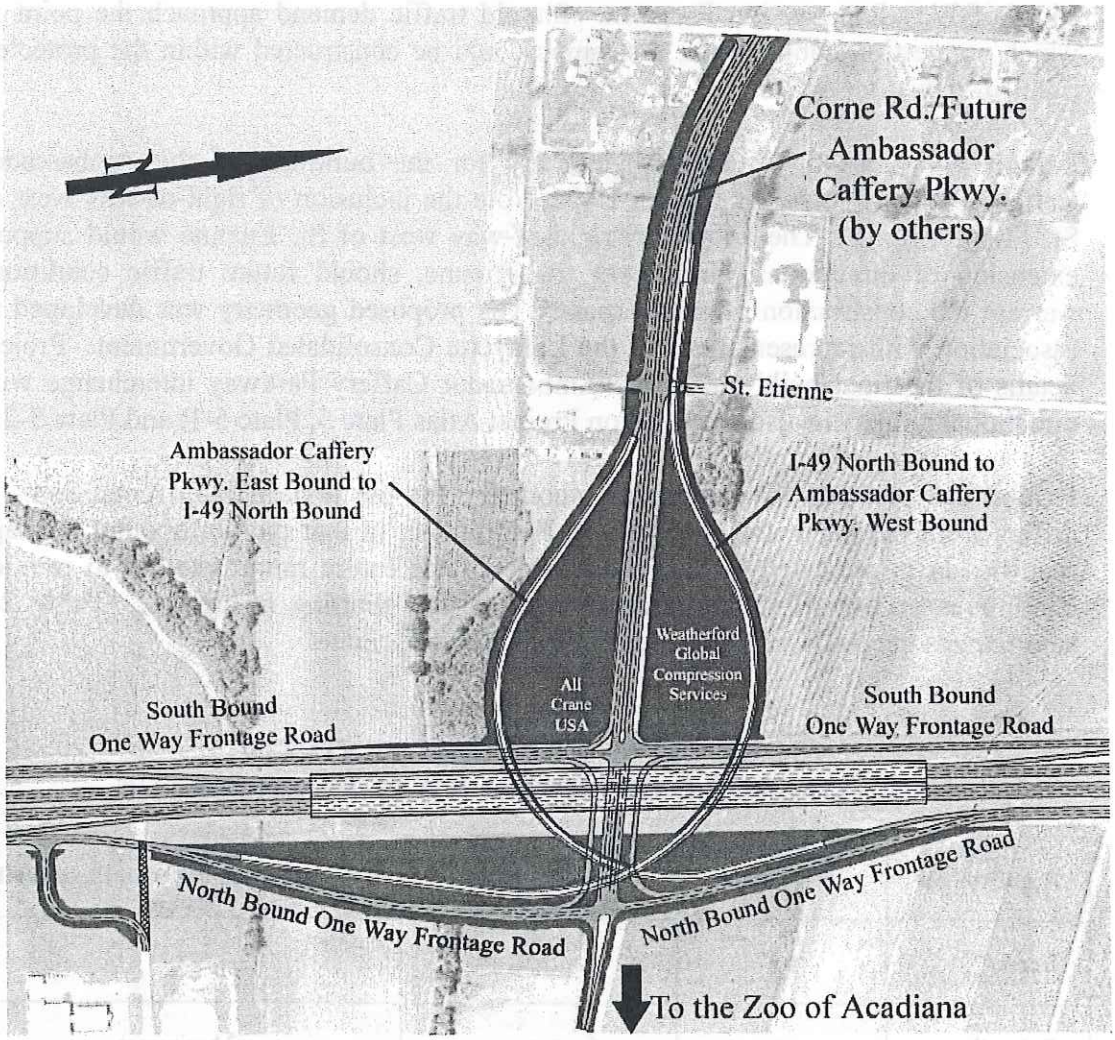
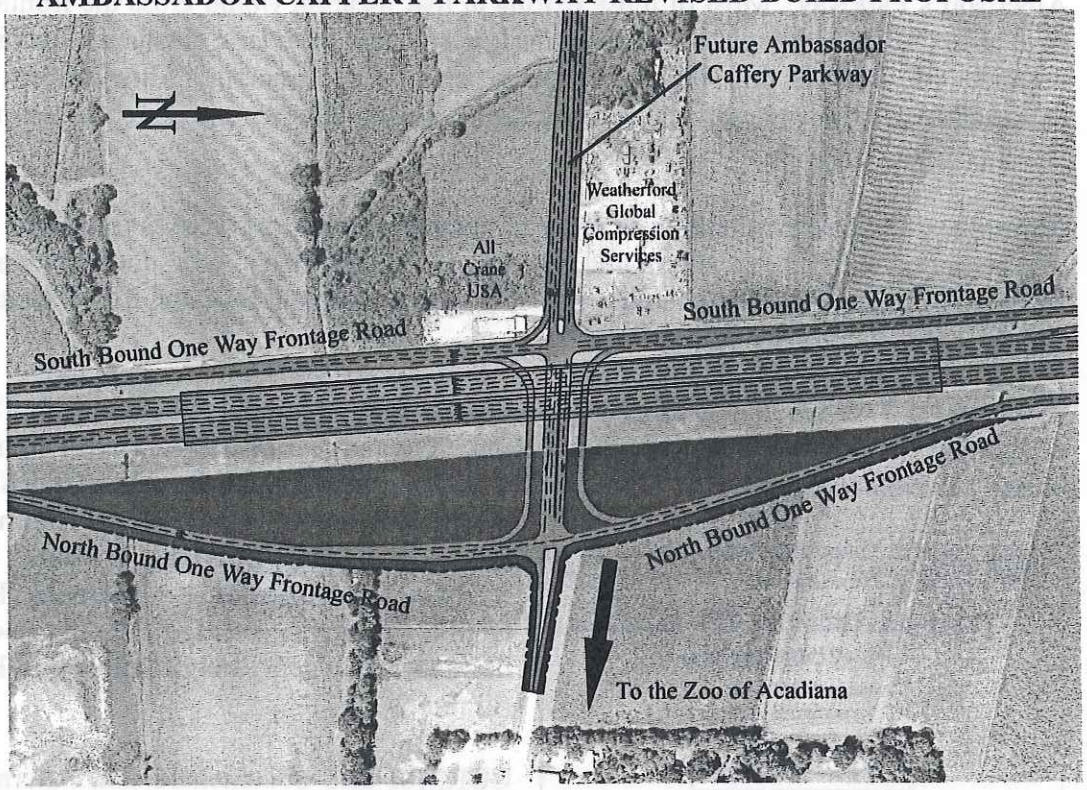


EXHIBIT 2-8
AMBASSADOR CAFFERY PARKWAY REVISED BUILD PROPOSAL



Albertson's Parkway Interchange–As previously noted, considerable effort focused on the integration and routing of LA 182, Albertson's Parkway and I-49 into a single roadway network that addresses the environmental, access, capacity and geometric constraints posed. Two alternates were considered: B-1 and B-3 (Exhibit 2-9).

Alternate B-1 was presented at the Public Meeting held in February 2001. In response to concerns raised at the February Meeting about potential delays associated with traffic flows through the Albertson's Parkway/LA 182/southbound I-49 frontage road intersections, a CORSIM model of the entire area traffic network associated with I-49, LA 182 and Albertson's Parkway was developed, and the forecast year 2030 traffic was entered onto the model to simulate future traffic flows through the network.

The CORSIM model indicated two potential problems with Alternate B-1. Both problems are related to the minimal separation distance between the I-49 southbound frontage road and LA 182. As expected, the combined operation of the Albertson's Parkway/LA 182/southbound I-49 frontage road intersection produced queuing delays which backed up traffic through multiple traffic signal operations on to the southbound frontage road.

Another potential problem identified in the model simulation relates to traffic flows in association with the operation of the exit ramp on to the southbound frontage road, and its connection with LA 182. Traffic projections for year 2030 indicate that over

8,722 vehicles would exit the mainline interstate onto the frontage road south of Albertson's Parkway. Most of those exiting at that location would cross the frontage road to LA 182. Although the roadway design is within geometric standards, the high numbers of vehicles crossing the frontage road is of concern. This concern is exacerbated by the queuing delays associated with the left turn movements from the frontage road on to LA 182.

In response to these problems, a number of geometric concepts were investigated for the planning area in question, and an alternative geometry was developed and modeled in CORSIM. The alternate was designated Alternate B-3, and it is presented for comparison purposes on Exhibit 2-9.

Alternate B-3 varies the geometry of both the I-49 frontage road and LA 182, integrating them into a single combined route. The number of traffic control signals would be reduced from six in Alternate B-1 to three in Alternate B-3. The CORSIM model was useful in evaluating Alternate B-3 and it also provides measures of roadway performance. Alternate B-3 would improve average travel speed through the area over Alternate B-1 (Figure 2-11).

Lafayette, St. Martin and Iberia Parishes
I-49 South
Lafayette Regional Airport to LA 88

Comparison of B1 and B3 Performance

Average Peak Period Travel Speed (mph)

B-1	B-3
28.7	34.8

Figure 2-11

CORSIM also documented that Alternate B-3 would offer lower fuel consumption (Figure 2-12). Within a typical 15 minute interval during am/pm peak period operations, four gallons of fuel would be saved. Over the 20 year planning period, this represents a savings of 41,600 gallons in fuel consumption.

Because B-3 improves traffic flow, and reduces delays associated with movements through the LA 182/ Albertson's Parkway/I-49 network, B-3 is considered the selected alternate. Specific improvements proposed for Albertson's Parkway as part of Alternate B-3 are documented in the Project Atlas, Plate 6 and Plate 7.

Lafayette, St. Martin and Iberia Parishes
I-49 South
Lafayette Regional Airport to LA 88

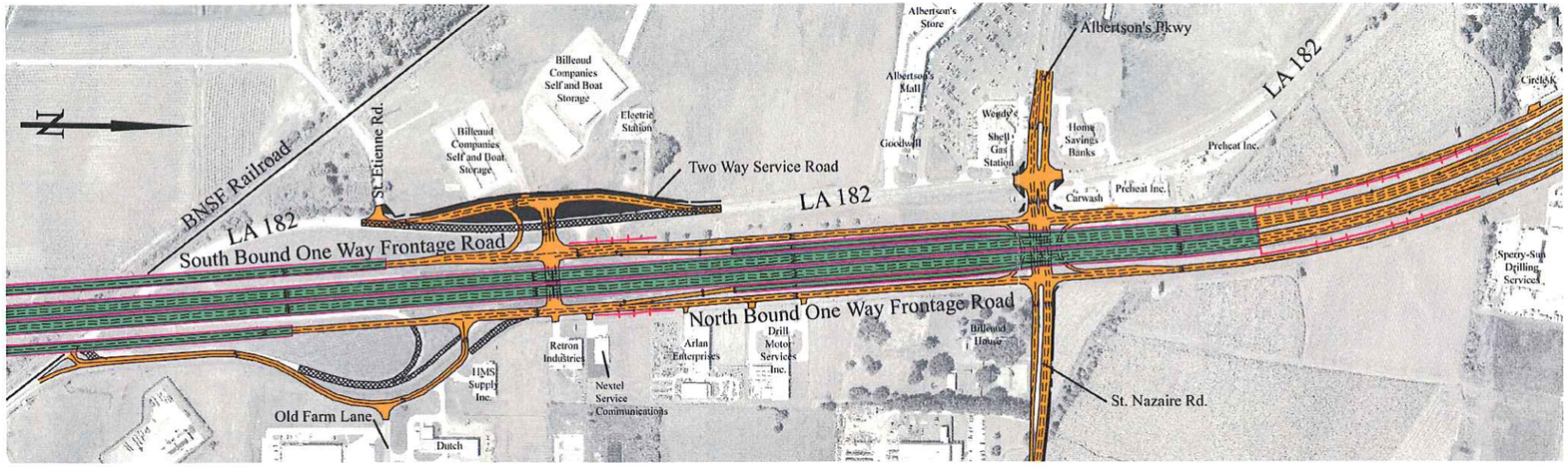
Comparison of B1 and B3 Performance

Peak Period Fuel Consumption per 15 minute am/pm peak period

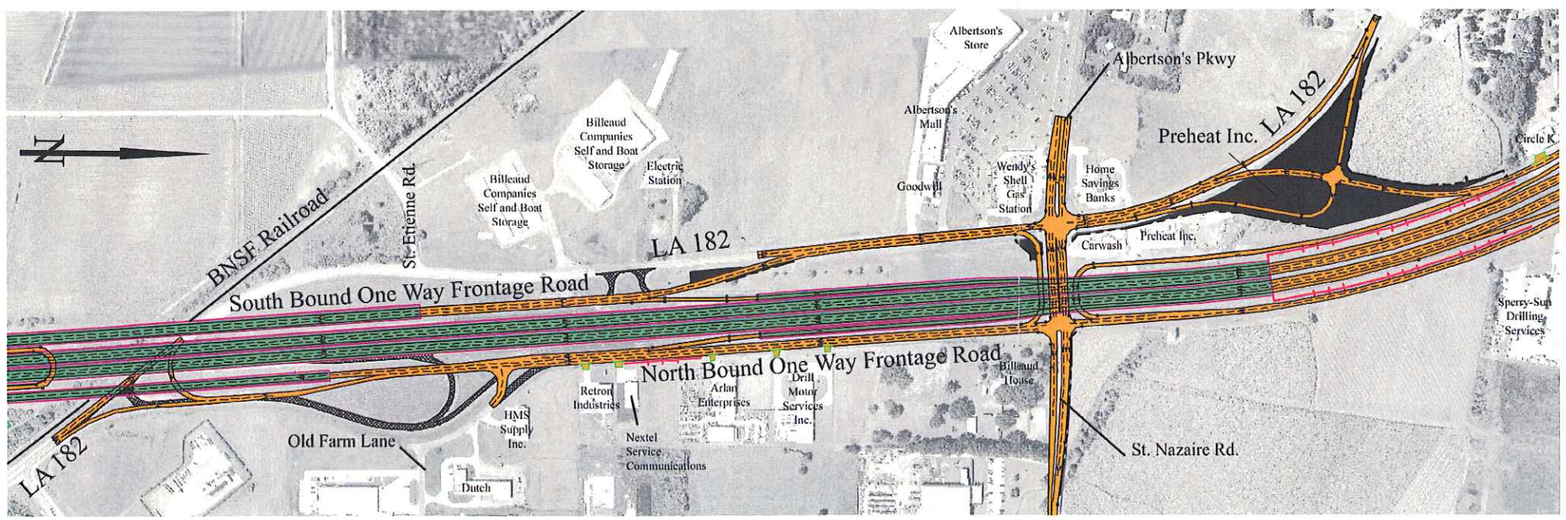
B-1	B-3
92 gallons	88 gallons

Figure 2-12

Alternate B-1



Alternate B-3



Required ROW

At-Grade Roadway

Elevated Roadway (Bridge/Overpass)

Exhibit 2-9
Comparison of Alternates at Albertson's Parkway

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Table 2-4 documents the right-of-way requirements for both alternates.

TABLE 2-4
RIGHT-OF-WAY REQUIREMENTS FOR ALBERTSON'S PARKWAY INTERCHANGE

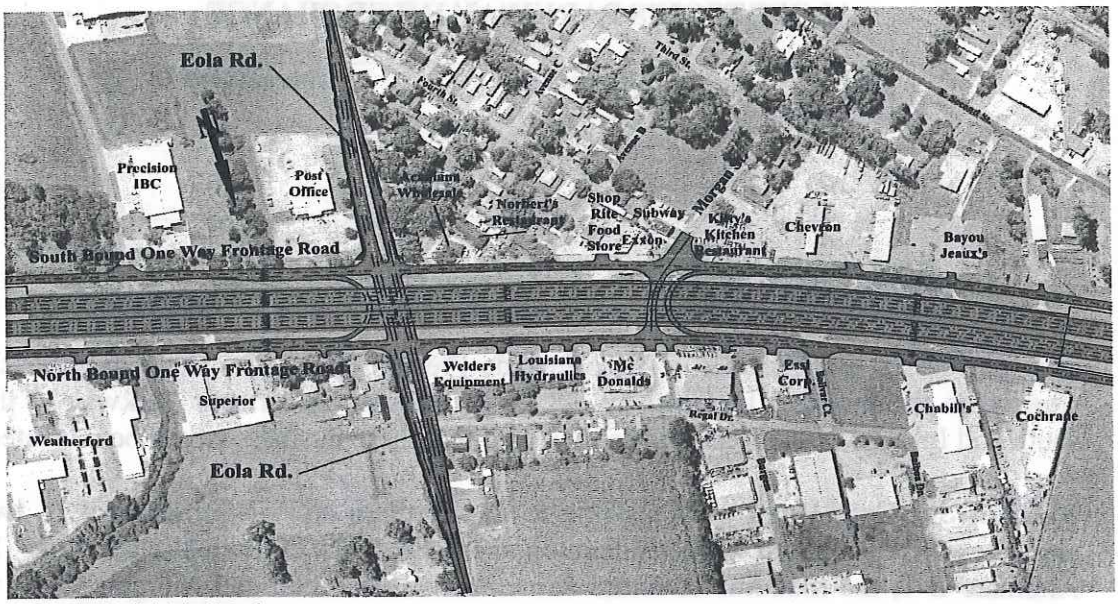
ROW Requirements	Alternate B-1	Alternate B-3
Acres	1.8	8.1
Relocations	0	2

Two businesses are impacted. These include Preheat, Inc. and a carwash currently situated in the property bounded by US 90 to the east, Albertsons Parkway to the south and LA 182 to the west. It is anticipated that these business would be relocated

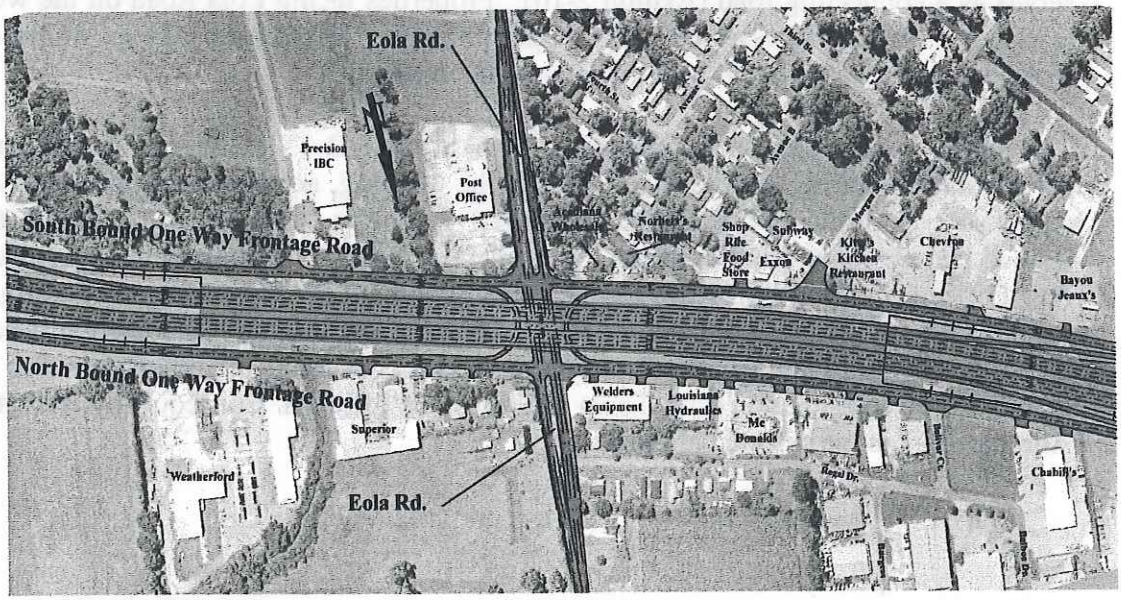
Morgan St./ Eola Road – Proceeding to the northern end of Subsegment B, two alternates were proposed for consideration at the February 2001 Public Meeting. In Alternate B-1, the mainline structure allows both Eola Road and Morgan Street to serve the Broussard community via crossings under the mainline roadway (Exhibit 2-10). In Alternate B-2, the mainline structure is not as long and only Eola Road serves as a connecting road (Exhibit 2-10). Properties facing Eola Road on the west side of I-49 would be affected under both alternates. Residential takings would be required and access to the Post Office would be impacted.

The public consensus was a preference for Alternate B-1. Between the February 2001 Public Meeting and the June 2001 Public Meeting, additional engineering was undertaken to further refine the Alternate B-1 geometry. Exhibit 2-11 presents the revised geometry, which eliminates the residential takings, minimizes impacts to the Post Office access, and provides a conceptual alignment for the extension of Morgan Street to the east of the I-49 frontage road. Alternate B-1 at Eola Road/Morgan Street is also detailed on Plate 9 of the Project Atlas. This conceptual alignment was also an outgrowth of coordination with Town of Broussard officials. Consequently, Revised Alternate B-1 is the selected alternative.

EXHIBIT 2-10
EOLA ROAD / MORGAN STREET ALTERNATES
AS PRESENTED AT FEBRUARY 2001 PUBLIC MEETING

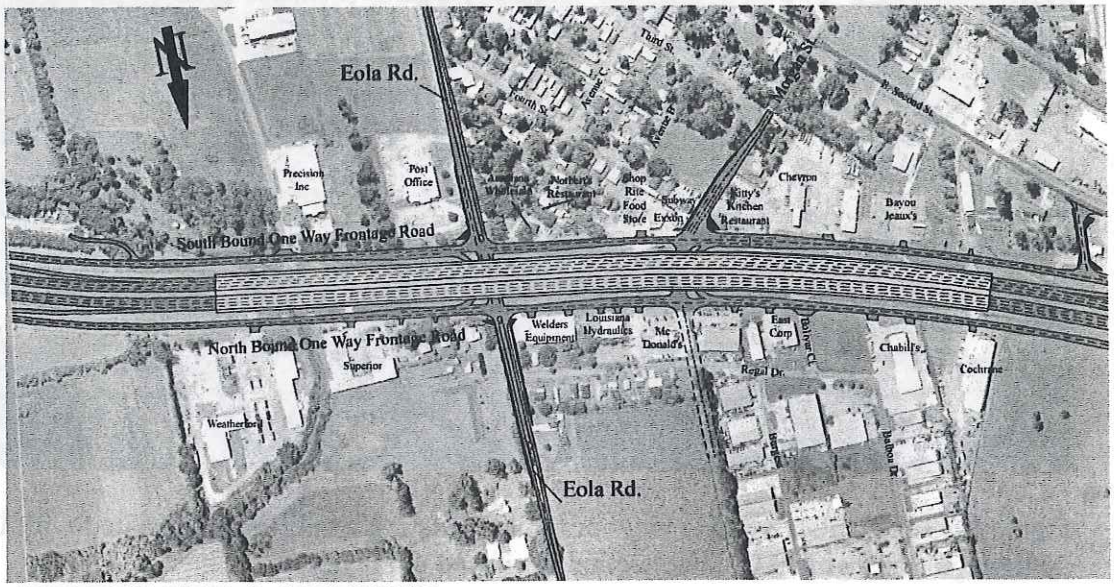


ALTERNATE B-1



ALTERNATE B-2

EXHIBIT 2-11
EOLA ROAD / MORGAN STREET
AS PRESENTED AT THE JUNE PUBLIC MEETING



ALTERNATE B-1 (REFINED)

Subsegment B Right-of-Way Requirements

The design of Subsegment B provides for the greatest portion of the proposed improvements to occur within the existing 300 foot US 90 right-of-way. Exceptions would occur at the intersections of the new frontage roads with Berceguey Road, Sugarfield Road, Ida Road, Girouard Road, Eola Road, Morgan Street, and the new connection between the southbound frontage road and Second Street. Right-of-way acquisition in these areas would be minimized to the greatest extent possible, but cannot be avoided for reasons of constructibility and minimum geometrical requirements. As discussed above, additional right-of-way also is required for the interchange at future Ambassador Caffery Parkway and for the realignment of LA 182 and the Albertson's Parkway interchange. Existing land use in the areas of proposed right-of-way acquisition includes fallow land, small unimproved portions of developed parcels, and developed property used for commercial and industrial purposes. No residential takings are anticipated in Subsegment B. It is anticipated that four businesses would be relocated, including one commercial business and three industrial businesses.

2.5.3 Subsegment C

2.5.3.1 Existing Conditions

Subsegment C extends from Subsegment B to a point near Kaliste Saloom Road and the entrance to the Lafayette Regional Airport where it joins the Connector portion of I-49 being designed by others (Exhibit 2-12).

EXHIBIT 2-12
SUBSEGMENT C

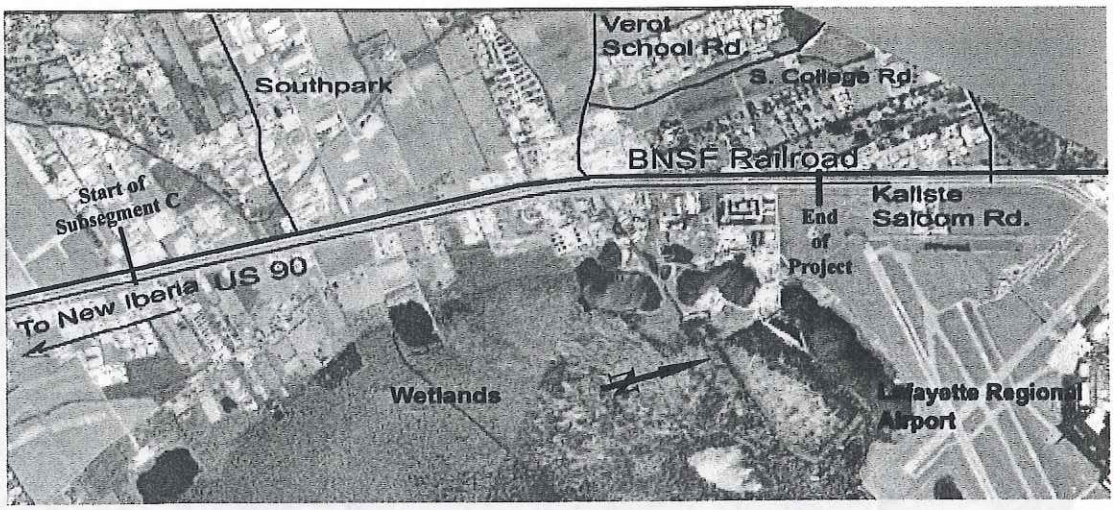


Figure 2-13 presents a section view of typical existing conditions associated with US 90 through Subsegment C. The section is viewed to the north.

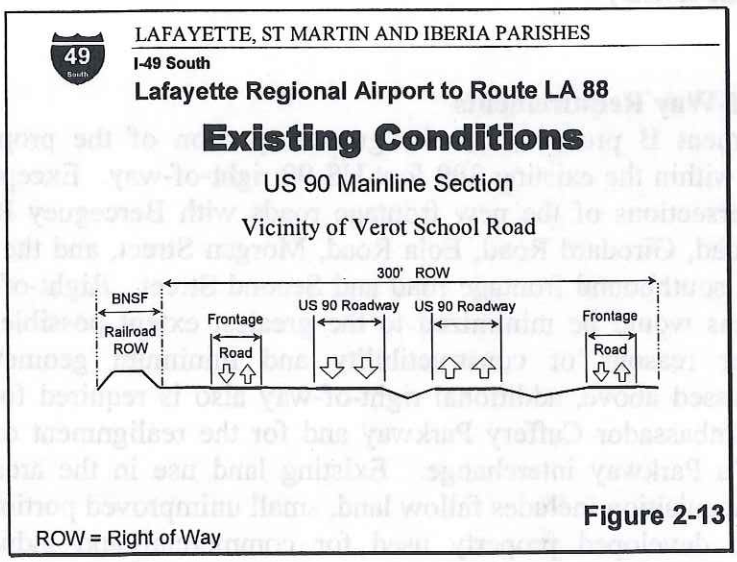


Figure 2-13

A primary issue of concern relating to Subsegment C is the location of the BNSF Railroad mainline abutting US 90 on the west. There are currently eleven locations where connecting roadways cross at-grade over the BNSF mainline to connect with the existing US 90 frontage road.

Two of the connecting roadways are major thoroughfares, Southpark Road (LA 89) and Verot School Road. Year 2000 Average Daily Traffic on Southpark and Verot School Roads near their intersections with US 90 are 8,528 and 11,183 vehicles per day, respectively. Various industrial and commercial properties abut the existing 2-way frontage road network. Also, both Southpark Road and Verot School Road service major industrial properties that generate substantial truck movements.