



Less driving. More living.

**Lafayette MPO
Transportation Policy Committee**

South LA Community College

July 12, 2010

HNTB Team

Agenda

- Project History
- Project Description
- Purpose and Need
- Corridor Alternatives
- Open Road Tolling
- Preliminary Cost Estimates
- Traffic & Revenue
- Financing Options
- Next Steps
- Future

HNTB Team

Project History

- **1996** - Lafayette Consolidated Government identified
 - North/South Beltway project as a priority
- **2001** - Joint Metropolitan Planning Organization (MPO) formed
 - Reviews North/South Beltway studies and options
- **2002** - MPO Subcommittee stated
 - A "limited access interstate highway design standard" expressway was desirable
 - Due to funding shortfall, pursue as a 4-lane divided roadway using existing roads
- **2003** - Lafayette Metropolitan Expressway Commission formed (Act No. 893)
 - *Mission: Study highway loop around Lafayette using toll and other revenue streams for financing*

Project History

- **2005** - Lafayette Metropolitan Expressway Feasibility Study
 - Completed June 2005
 - Purpose and Need drafted
 - Corridor Alternatives identified
 - Preliminary Traffic and Revenue completed
 - Potential Financing identified
 - Preliminary Cost Estimate prepared
- **2006** - Act No. 306 of Louisiana Legislature
 - LTA authorized to enter into P3 agreements
 - Construct toll facility projects

Project History

➤ 2007

- Tier 1 EIS Kickoff

➤ 2008

- Public Information Meetings
- Pre-Draft EIS reviewed by agencies

➤ 2010

- Revised Pre-Draft EIS

Project Description

➤ West Loop - Controlled Access Toll Road

➤ Major Interchanges

- I-49; I-10; US 167 (Johnston St.); US 90
- Other cross streets as identified

➤ 4-lane facility

- Provision to expand to 6-lanes

Purpose and Need

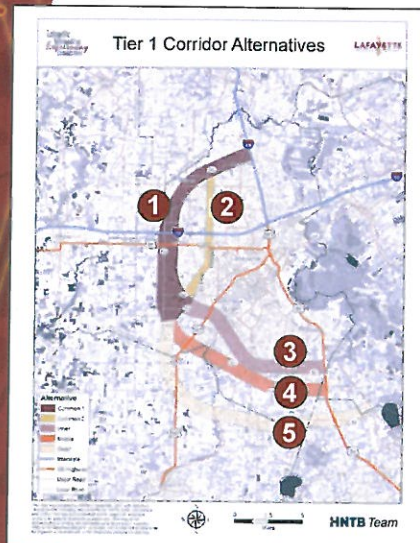
➤ Purpose

- Enhance the regional and national transportation system by:
 - Improving system linkage,
 - Increasing capacity and accommodating transportation demand, and
 - Responding to economic development within the greater Lafayette area.

➤ Need

- Increase Roadway Capacity
- Provide North-South Mobility

LRX Corridor Alternatives



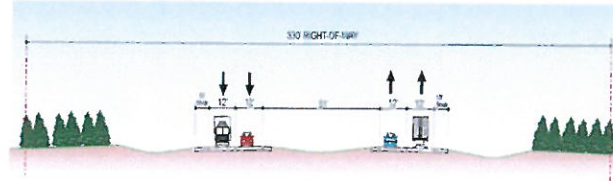
➤ North Corridors

1. Common 1
2. Common 2

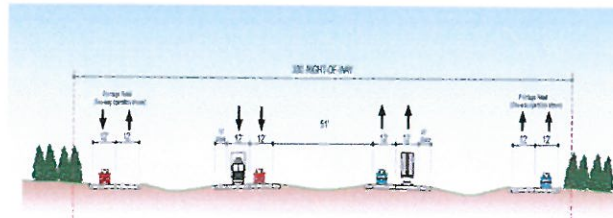
➤ South Corridors

3. Inner
4. Middle
5. Outer

LRX Corridor Alternatives



4-LANE TOLL ROAD

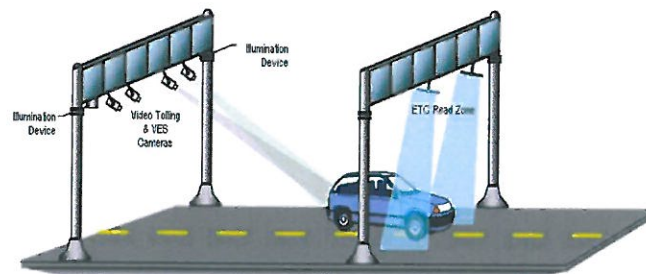


4-LANE TOLL ROAD WITH FRONTAGE ROADS

Typical Sections

(Median width allows for future lanes)

Open Road Tolling (ORT)



Electronic Toll Collection (ETC)

Open Road Tolling (ORT)

➤ Advantages

- No stopping/slowng down at toll collection point
- Automatically deducts toll fee
- ORT processes 2000 vehicles/hr vs.
Toll Booth processes 400 vehicles/hr
- Reduced congestion
- Only charges the user for portion of road traveled
- Reduces maintenance & operations cost

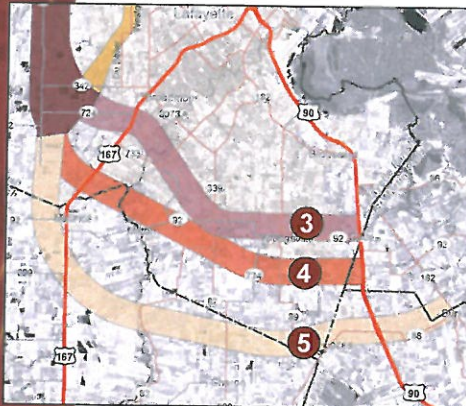
Preliminary Cost Estimate



North Corridors

- 1. Common 1
 - \$399 M - \$604 M
 - \$27 M - \$40 M / mile
 - 15.1 miles
- 2. Common 2
 - \$411 - \$613 M
 - \$29 M - \$43 M / mile
 - 14.2 miles

Preliminary Cost Estimate



South Corridors

➤ 3. Inner

\$589 M - \$678 M

\$46 M - \$53 M / mile

12.7 miles

➤ 4. Middle

\$565 M - \$655 M

\$40 M - \$46 M / mile

14.2 miles

➤ 5. Outer

\$620 M - \$651 M

\$30 M - \$31 M / mile

20.8 miles

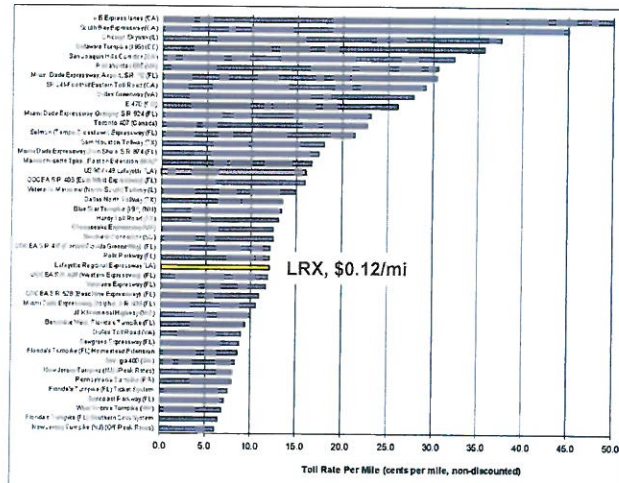
Traffic & Revenue

Population Forecast

MODEL TOTAL POPULATION	2008	2005
2003 MPO Estimate	240,025	231,872
2009 Level 2 Estimate	245,528	231,872

Traffic & Revenue

➤ Level 2 - Comparative Toll Rates



Total trip = \$3.50 - \$4.00

LAFAYETTE
REGIONAL EXPRESSWAY

HNTB Team

Traffic & Revenue

➤ Level 2 - Preliminary LRX Toll Revenue

- 30 Year Revenue (2012 – 2041)

LRX ALTERNATIVE	TOLL RATE	TOTAL REVENUE (\$2009)
Common 1 / Middle Corridors	\$0.12/mi	\$1,000 Million
Common 1 / Outer Corridor (I-10 to US 90)	\$0.12/mi	\$660 Million

HNTB Team



LAFAYETTE
REGIONAL EXPRESSWAY

Traffic & Revenue

2030 Level of Service

- LRX Corridor - LOS D or Better
- Signalized intersections in vicinity of LRX have improved LOS including:
 - US 167 (Johnston St.)
 - LA 182 (University Ave.)
 - LA 724 (Fieldspace Rd.)
 - LA 93

Preliminary Financing

➤ Financing A Solution

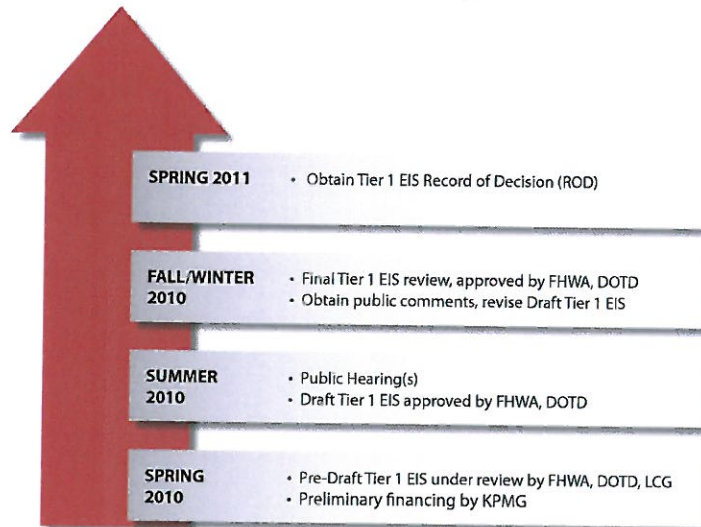
TRADITIONAL MUNICIPAL BOND MARKET	PUBLIC PRIVATE PARTNERSHIP*
Tax Exempt Toll Bonds	Private Activity Bonds
TIFIA Loans	TIFIA Loans
Transportation Mobility Fund	Transportation Mobility Fund
Tax Increment Financing	Tax Increment Financing
Federal Earmarks	Federal Earmarks
Local Contribution / Other	Local Contribution / Other
	Private Partner Equity
	Private Debt (Commercial Banks)

*In partnership with LTA

Tier 1 EIS . . . Next Steps

- MPO Committee Meeting(s)
- Complete preliminary financing analysis
- Stakeholders Meetings
 - Civic Advisory Group
 - Stakeholders/Agency Group
- Distribute Draft EIS
- Public Hearing(s) for Draft EIS
- Tier 1 Final EIS
- Tier 1 Record of Decision
- List on MPO TIP FY 2010-2013

Tier 1 EIS . . . Next Steps



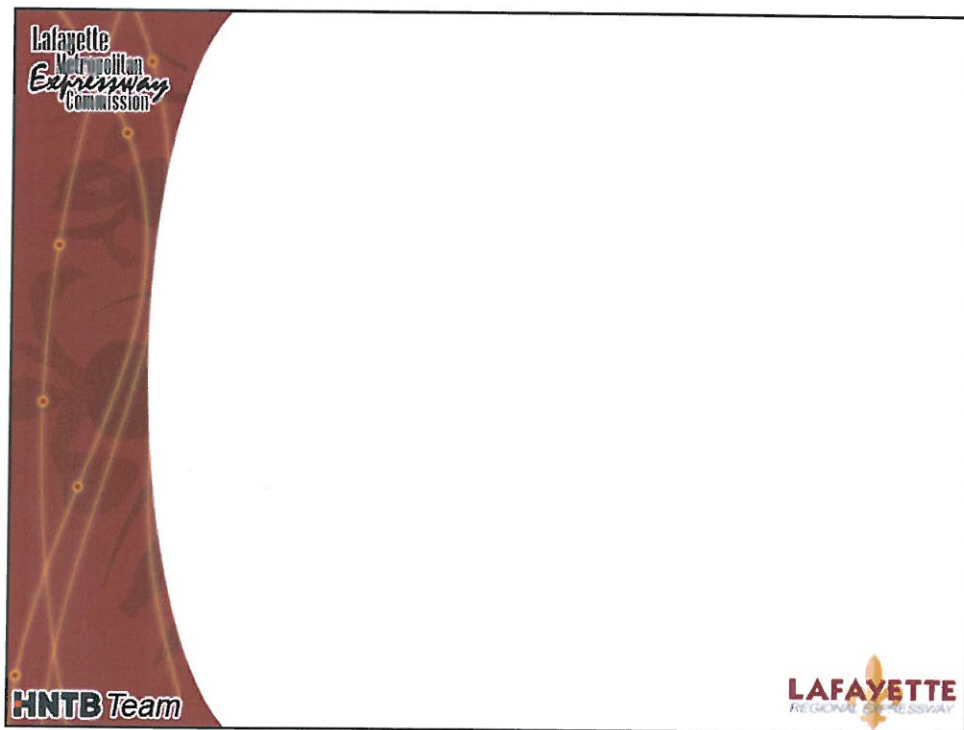
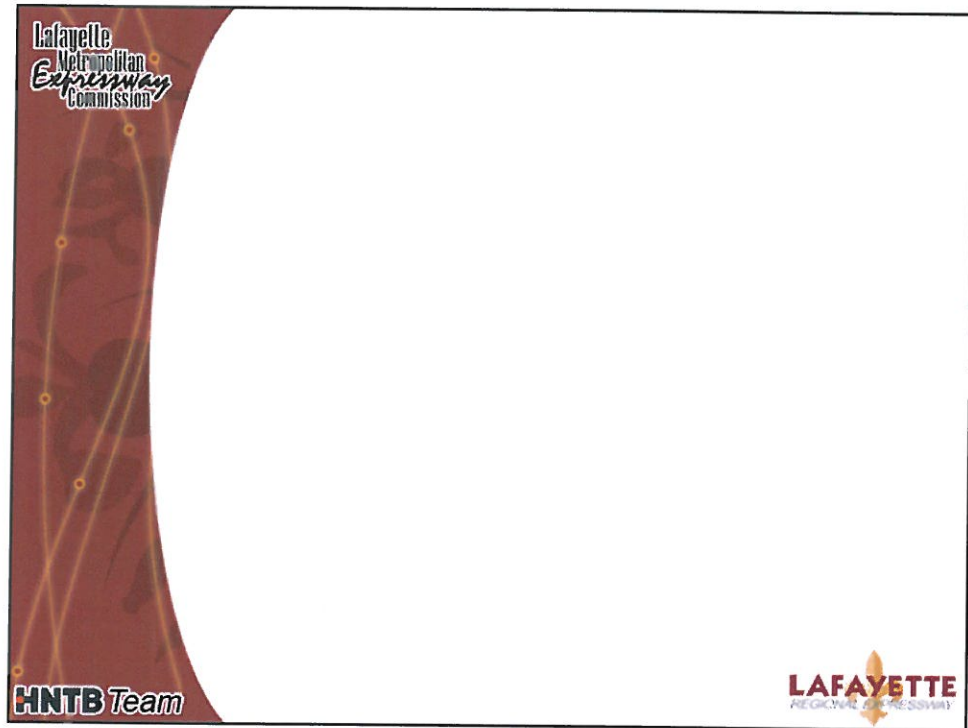
Tier 2 EIS . . . Future

➤ Tier 2 EIS Phase

- Detailed examination of impacts
- Alternative alignments within the selected corridor
- Detailed facility design
- Right of way requirements
- Context Sensitive Solutions
- Avoidance, minimization, mitigation
- Environmental clearance and commitments
- Tier 2 ROD

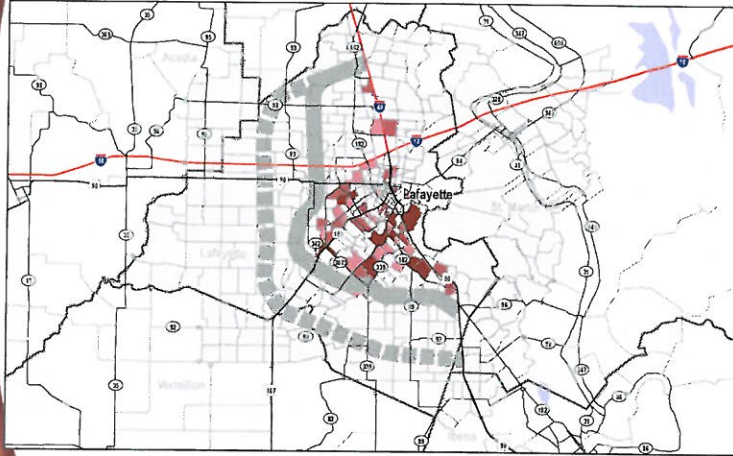
Questions or Comments?

For more information, visit:
www.lrxpressway.com



Traffic & Revenue

➤ LEVEL 1 – 2005/2008 Toll System (WSA)

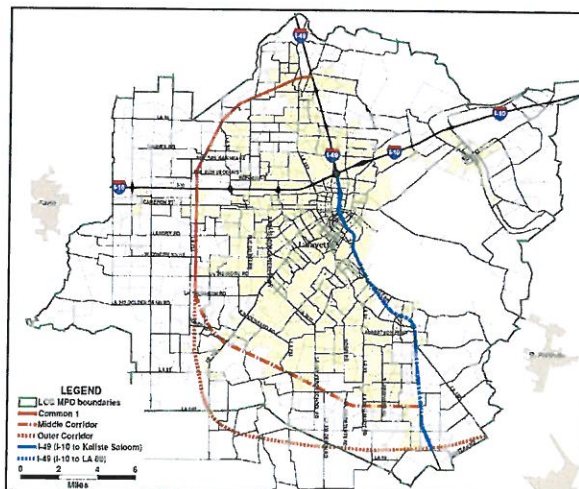


HNTB Team

LAFAYETTE
REGIONAL EXPRESSWAY

Traffic & Revenue

➤ LEVEL 2 – 2010 Toll System (Stantec)



HNTB Team

LAFAYETTE
REGIONAL EXPRESSWAY

Traffic & Revenue

➤ Historical Data - MPO / WSA / Stantec

Table 2-1 Updated Population Estimates vs. 2003 MPO Estimates and WSA Adjustments

Model Total Population	2008	2007	2006	2005
2003 MPO Estimate	240,025	237,276	234,559	231,872
2008 WSA Estimate	243,725	240,976	238,259	231,872
➔ Updated	245,528	242,550	240,796	231,872

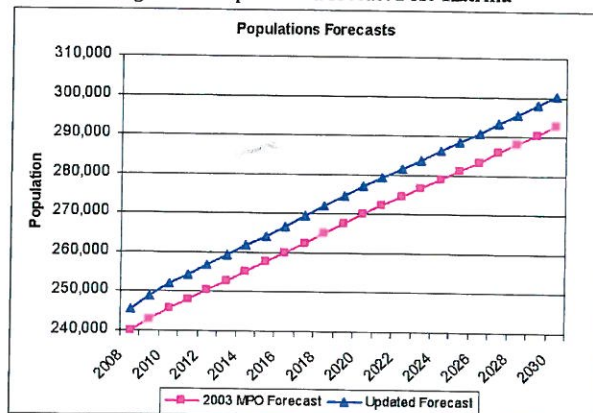
Table 2-3 Updated Employment Estimates vs. MPO 2003 Estimates and WSA Adjustments

Model Total Employment	2008	2007	2006	2005
2003 MPO Estimate	127,207	125,599	124,012	122,444
2008 WSA Estimate	129,207	127,599	126,012	122,444
State Employment Data	133,329	132,285	127,545	122,868
➔ Updated	132,063	131,069	126,372	121,738

Traffic & Revenue

➤ Stantec - Population Forecast

Figure 3-1 Population Forecast Post-Katrina



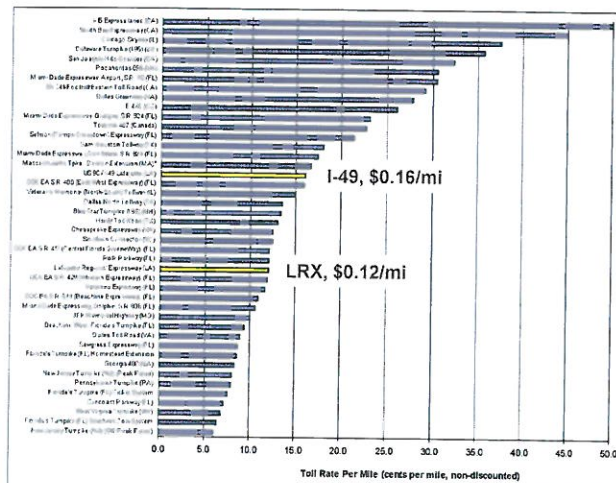
Traffic & Revenue

➤ Stantec - Truck Traffic

REGIONAL TRUCK TRAFFIC	
US 90/Future I-49 South	20%
I-49 North of I-10	15%
I-10 West of I-49	35%

Traffic & Revenue

➤ Level 2 - Comparative Toll Rates



Traffic & Revenue

➤ Level 2 - Preliminary LRX Toll Revenue:

▪ 30 Year Revenue (2012 – 2041)

T&R ANALYSIS	LRX ALTERNATIVE	TOLL RATE	TOTAL REVENUE (\$)
Level 1	Common 1 / Middle Corridors	\$0.10/mi	\$800 Million
Level 2	Common 1 / Middle Corridors	\$0.12/mi	\$1,000 Million
Level 2	Outer Corridor (I-10 to US 90)	\$0.12/mi	\$660 Million
Level 2	Future I-49 (I-10 to LA 88)	\$0.16/mi	\$1,500 Million

Traffic & Revenue

➤ Level of Service

TABLE 9-7. LOS (LEVEL OF SERVICE) DEFINITIONS			
LOS	Freeway (average travel speed assuming 70mph design speed)		Traffic Flow Characteristics & V/C Ratios
A	Greater than 60 mph Average spacing: 22 car-lengths		Virtually free flow; completely unimpeded Volume/Capacity (V/C) ratio less than 0.33
B	57 to 60 mph Average spacing: 13 car-lengths		Stable flow with slight delays; reasonably unimpeded Volume/Capacity (V/C) ratio 0.33 to 0.62
C	54 to 57 mph Average spacing: 9 car-lengths		Stable flow with delays; less freedom to maneuver Volume/Capacity (V/C) ratio 0.62 to 0.81
D	46 to 54 mph Average spacing: 6 car-lengths		High Density, but stable flow Volume/Capacity (V/C) ratio 0.81 to 1.13
E	30 to 46 mph Average spacing: 4 car-lengths		Operating conditions at or near capacity; unstable flow Volume/Capacity (V/C) ratio 1.13 to 1.34
F	Less than 30 mph Average spacing: Bumper to bumper		Forced flow; breakdown conditions Volume/Capacity (V/C) ratio greater than 1.34

Traffic & Revenue

➤ Level of Service in 2015

TABLE 3-9: 2015 Level of Service On Facility Intersection Approaches - No-Build and Build Scenarios

Facility	Number of Approaches (Selected Facility Intersections)	Intersection Approach LOS	No-Build	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Johnston St.	12 (6)	E or F	5	1	1	1	1	1	1
		D or better	7	11	11	11	11	11	11
University Ave.	12 (6)	E or F	0	0	0	0	0	0	0
		D or better	12	12	12	12	12	12	12
Ambassador Caffery Pkwy.	14 (7)	E or F	6	2	2	2	2	2	2
		D or better	8	12	12	12	12	12	12
Kalistie Saloom Rd.	8 (4)	E or F	3	2	2	2	2	3	2
		D or better	5	6	6	6	6	5	6
Fieldspar Rd. (LA 724)	10 (5)	E or F	0	0	0	0	0	0	0
		D or better	10	10	10	10	10	10	10
Milton Rd. (LA 92)	8 (4)	E or F	0	0	0	0	0	0	0
		D or better	8	8	8	8	8	8	8
Verot School Rd. (LA 339)	10 (5)	E or F	3	2	2	3	3	3	3
		D or better	7	8	8	7	7	7	7
Rue de Behr (LA 93)	12 (6)	E or F	3	2	2	2	3	3	3
		D or better	9	10	10	10	9	9	9
Youngsville Hwy. (LA 89)	8 (4)	E or F	1	0	0	0	0	0	1
		D or better	7	8	8	8	8	8	7
US 90 / Future I-49	22 (11)	E or F	9	5	5	4	4	4	0
		D or better	13	17	17	18	16	18	22
LRX	10 (5)	E or F	n/a	0	0	0	0	0	0
		D or better	n/a	10	10	10	10	10	10

Notes: Toll Facility

HNTB Team

LAFAYETTE
REGIONAL EXPRESSWAY

Traffic & Revenue

➤ Level of Service in 2030

TABLE 3-9: 2030 Level of Service On Facility Intersection Approaches - No-Build and Build Scenarios

Facility	Number of Approaches (Selected Facility Intersections)	Intersection Approach LOS	No-Build	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Johnston St.	12 (6)	E or F	7	3	3	3	3	3	3
		D or better	5	9	9	9	9	9	9
University Ave.	12 (6)	E or F	3	3	3	0	0	0	0
		D or better	9	9	9	12	12	12	12
Ambassador Caffery Pkwy.	14 (7)	E or F	8	7	7	7	6	7	6
		D or better	6	7	7	7	8	7	8
Kalistie Saloom Rd.	8 (4)	E or F	3	3	3	3	3	3	3
		D or better	5	5	5	5	5	5	5
Fieldspar Rd. (LA 724)	10 (5)	E or F	5	0	0	0	0	0	0
		D or better	5	10	10	10	10	10	10
Milton Rd. (LA 92)	8 (4)	E or F	2	2	2	2	2	1	1
		D or better	6	6	6	6	6	7	7
Verot School Rd. (LA 339)	10 (5)	E or F	4	6	6	6	6	5	3
		D or better	6	4	4	4	4	5	7
Rue de Behr (LA 93)	12 (6)	E or F	5	3	3	3	3	3	3
		D or better	7	9	9	9	9	9	9
Youngsville Hwy. (LA 89)	8 (4)	E or F	2	2	2	2	2	2	2
		D or better	6	6	6	6	6	6	6
US 90 / Future I-49	22 (11)	E or F	17	14	14	10	10	11	0
		D or better	5	8	8	12	12	11	22
LRX	10 (5)	E or F	n/a	0	0	0	0	0	0
		D or better	n/a	10	10	10	10	10	10

Notes: Toll Facility

HNTB Team

LAFAYETTE
REGIONAL EXPRESSWAY