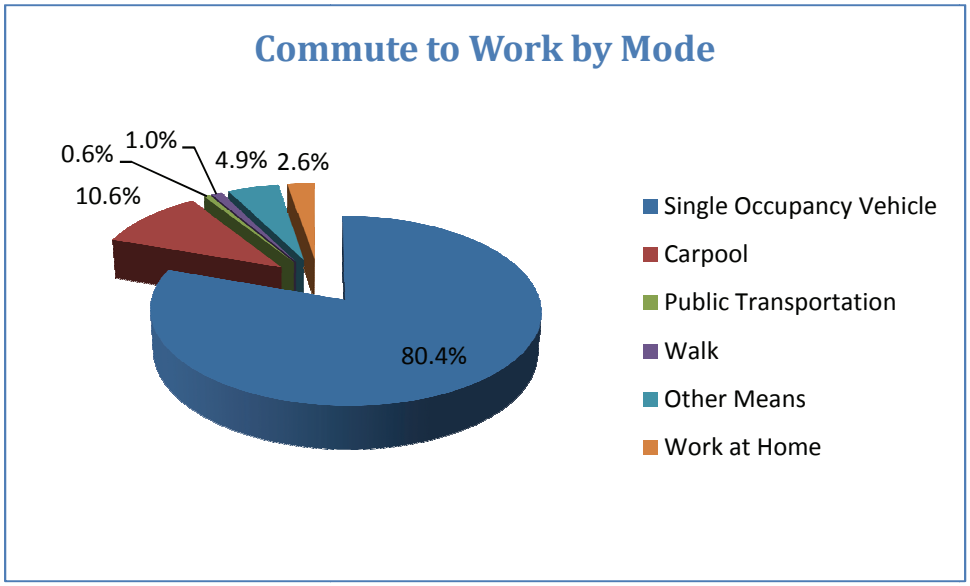
Chapter 5

Roads and Highways

5.1 Introduction

The predominant mode of transportation for people living in the HTMPO study area is by single-occupancy vehicle travel. The chart below shows the percentage of travel by different transportation modes.



Source: Census Bureau, 2008 American Community Survey of Terrebonne and Lafourche Parishes

Region roadways also provide right of way for buses making the roadway network an integral part of the public transit system. In addition, roadways are used for bicycle travel in the region. Despite the need to emphasize multi-modal transportation system and travel demand management (TDM) strategies to reduce vehicular demand to improve air quality and reduce congestion, roadways remain a primary component in addressing the region's transportation needs.

Planning for the future transportation system improvements start with the evaluation of the existing transportation system and its needs. This chapter identifies the conditions of the existing transportation system, determines the system's needs through deficiency analysis of current and future conditions, and recommend a planned improvement program to address those needs.

5.2 Existing (2007) Transportation Network

5.2.1 State and Federal Highways

The Houma-Thibodaux Metropolitan Area is the only metropolitan area in Louisiana with no interstate highway mileage. The study area is served by several other Federal and State highways. These facilities constitute the main network of roadways in the area. The most significant facilities are:

US 90 — This four-lane expressway provides a four-lane route from Lafayette to New Orleans and could ultimately be upgraded as an extension of I-49.

LA 182 (Old US 90) — Prior to the construction of the Interstate Highway System, this Federal Highway was the major east/west route through the southern United States. It now primarily serves local trips in south Louisiana.

LA 24 — Most of the length of this north/south arterial is a couplet on either side of Bayou Terrebonne.

LA 3040 — In the early 1960's the completion of a tunnel on this highway provided access across the Intracoastal Waterway (ICWW) unrestricted by marine operations. Later extensions of this highway provided an alternate route to LA 24.

LA 1 — This north-south highway traverses the entire State of Louisiana from the Arkansas state line to Grand Isle. It parallels Bayou Lafourche through the City of Thibodaux.

The study area is divided by the ICWW. Routes crossing the ICWW are LA 315; LA 3040; LA 24; LA 659; LA 3087; LA 316; LA 1 and LA 308.

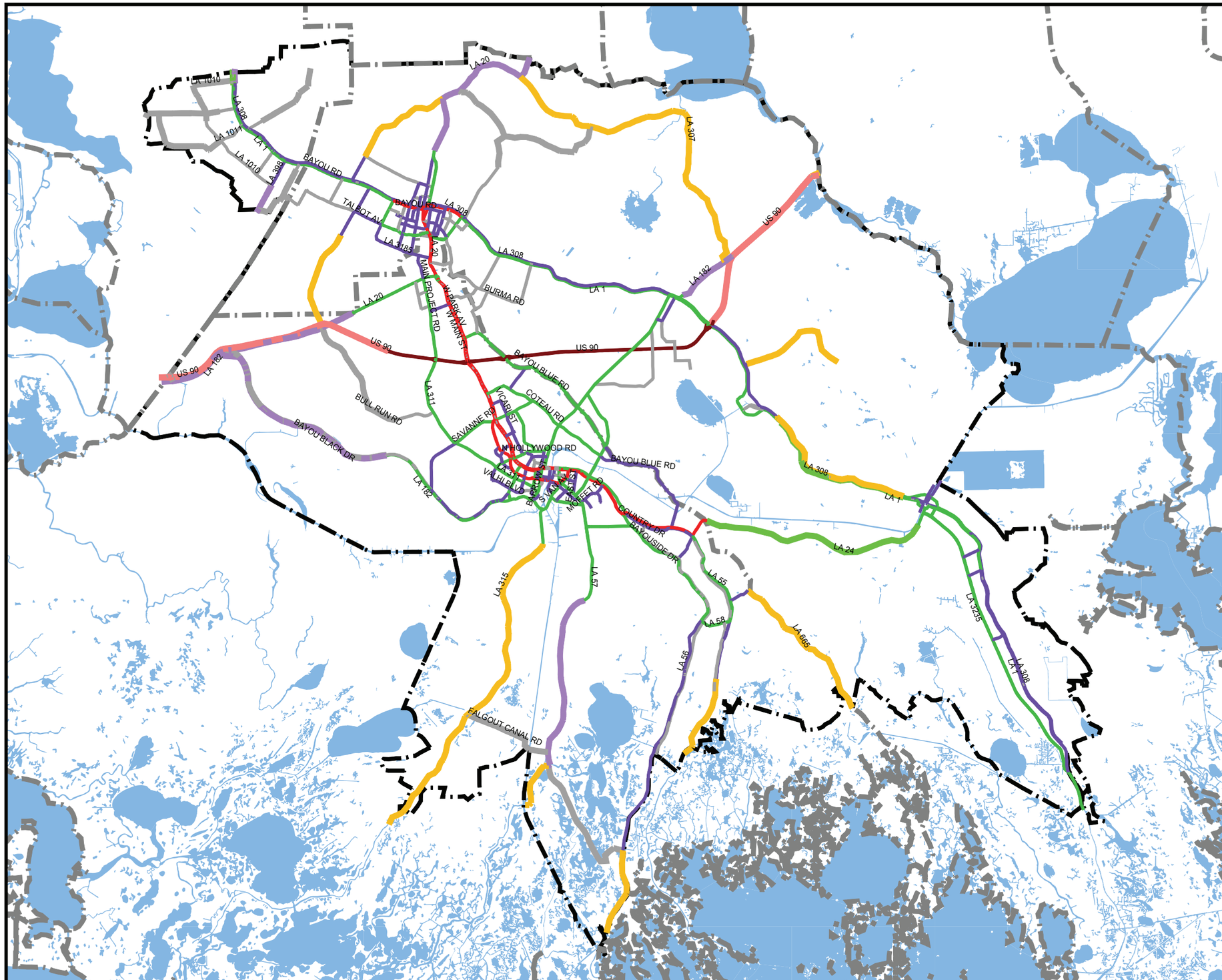
5.2.2 Existing Street and Highway Functional Classifications

In developing the TransCAD model the street and highway network was based on the functional classification system (Figure 5-1) prepared by the LADOTD. The system was updated in 2003 to reflect the expanded urbanized area defined by the 2000 census. The components of this network are freeways, principal arterials, minor arterials, and collectors. The distribution of mileage in these categories is shown in Table 5-1.

Table 5-1

Study Area Roadway Network Mileage by Functional Class

Classification	Total Miles	%
Expressway	17.45	2.9
Principal Arterial	78.20	12.8
Minor Arterial	215.13	35.3
Collector	299.34	49.0
Total	**610.11**	**100.0**



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2035

Figure 5-1

Functional Classification

LEGEND

- Study Area
- Parish Lines

Classes

- Rural Principal Arterial
- Rural Minor Arterial
- Rural Major Collector
- Rural Minor Collector
- Rural Local
- Urban Expressway
- Urban Principal Arterial
- Urban Minor Arterial
- Urban Collector
- Urban Local

Source: LADOTD
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As mentioned previously, the Houma-Thibodaux area is the only urbanized area in the state with no interstate, but is made up of expressways, arterials, collectors, and local roads.

Each type of facility provides separate and distinct traffic service functions and is best suited for accommodating particular demands. Their designs also vary in accordance with the characteristics of traffic to be served by the facility.

Expressways: These facilities provide for movement of large volumes of traffic at relatively high speed and are primarily intended to serve long trips. Expressways have some grade-separated intersections while the majority of the intersections are widely spaced and signalized.

Arterials: Arterial streets are important components of the total transportation system. They serve both as feeders to freeways and expressways, and as principal travel ways between major land use concentrations within the study area. Arterials are typically divided facilities (undivided where right-of-way limitations exist) with relatively high traffic volumes and traffic signals at major intersections. The primary function of arterials is moving traffic, and they are the main means of local travel. A secondary function of arterials is land access.

Collectors: These facilities provide both land service and traffic movement functions. Collectors serve as intermediate feeders between arterials and local streets and primarily accommodate short distance trips. Since collector streets are not intended to accommodate long through trips, they are generally not continuous for any great length.

Local Streets: The sole function of a local street is to provide access to adjacent land. Within the local street classification, three subclasses are established to indicate the type of area served: residential, industrial, and commercial. These streets are not included in the computer network.

5.2.3 Base Year (2007) Travel Demand Model Development

The determination of future transportation needs in the HTMPO planning area requires the ability to accurately forecast travel demand based on estimates of future population and employment. The objective of the transportation planning process is to provide the information necessary for making decisions on when and where improvements should be made to the transportation system to meet the forecasted travel demand.

For this purpose, a travel demand model capable of testing various roadway improvements with various land use growth scenarios was developed. The HTMPO travel demand model is based upon the conventional trip-based four-step modeling approach.

Broadly, the main model components fall within the following four categories:

- ***Trip Generation*** - The process of estimating the number of person trip productions and attractions at each traffic analysis zone (TAZ).

- ***Trip Distribution*** - The process of creating joined person trips, (i.e., Origin-Destination trips), by linking trip productions and attractions across the region.
- ***Modal Choice*** - The process of estimating the number of person trips using a particular mode for each Origin-Destination interchange. Because of the low frequency of transit, pedestrian, and bicycle trips in the modeling area, this step was not performed.
- ***Trip Assignment*** - The process of accumulating auto and truck trips onto specific highway facilities in the region.

The following trip purposes were used in the development of the HTMPO model. Table 5-2 summarizes daily study area trips by trip purpose.

- Internal Trip Purposes
  - Home-Based Work (HBW)
  - Home-Based Other (HBO)
  - Non Home-Based (NHB)
  - Commercial Vehicle Trips (CMVEH)
  - Truck Trips (TRK)
- External Trip Purposes
  - External-Internal Auto Trips (EIAUTO)
  - External-Internal Truck Trips (EITRK)
  - External-External (Through) Auto Trips (EEAUTO)
  - External-External (Through) Truck Trips (EETRK)

There was a significant discussion about truck traffic within and through the study area during the vision process. The Study Team considered these discussions and included a Truck trip purpose in the model development using the procedures outlined in “Quick Response Freight Manual II, U.S. Department of Transportation”. In addition, the model was developed using Multi-Modal Multi-Class Assignment (MMA) procedure which allows analysis of truck only lanes.

Table 5-2 Daily Study Area Trips by Trip Purpose		
Trip Purpose	**Trips**	**Type**
HBW	132,971	Person Trips
HBO	391,759	Person Trips
NHB	176,381	Person Trips
CMVEH	63,635	Vehicle Trips
TRK	24,156	Vehicle Trips
Internal Trips Total	***788,902***	
EI AUTO	38,335	Vehicle Trips
EI TRUCK	24,993	Vehicle Trips
EE AUTO	10,667	Vehicle Trips
EE TRUCK	4,484	Vehicle Trips
External Trips Total	***78,479***	
Total Daily Trips	**867,381**	

The gravity model was used to distribute the trips between Origin-Destination (O-D) pairs to develop a region wide O-D matrix to use in trip assignment. Traffic assignment models are used to estimate the traffic flows on a network. TransCAD's Multi-Modal Multi-Class Assignment (MMA) with User Equilibrium (UE) as the assignment type and the Bureau of Public Roads (BPR) Volume-Delay function was used for HTMPO model. The MMA model is a generalized cost assignment that assigns trips by individual modes or user classes to the network simultaneously. Each mode or class can have different network exclusions, congestion impacts (passenger car equivalent values), values of time, and toll costs.

A travel demand model needs to be validated to ensure that the model is performing within the limits that define an acceptable range of deviation from observed "real-world" values. Validation of the HTMPO travel demand model was assessed first at the area wide scale, then by roadway classification, Average Daily Traffic (ADT) range and screenlines/cutlines. In the final stage of the validation process the accuracy of the model with respect to specific routes and roadway groups was analyzed. At each level an appropriate degree of accuracy was defined in terms of the maximum tolerable deviation from base-year vehicular volumes, i.e., estimated annual average daily traffic and Root Mean Square Error (RMSE).

Overall, the cumulative model volume for all network links associated with LADOTD and MPO traffic count locations (2,584,949 vehicles) differed from total model estimated ADT (2,619,766 vehicles) by only 1.35 percent compared to an allowable error limit of five percent.

Validation results by ADT group, functional class and by screenlines/cutlines are shown in Table 5-3, Table 5-4 and Table 5-5 respectively. Base year (2007) link Volume/Capacity (VOC) maps are shown in Figure 5-2 (Study Area) and Figure 5-3 (Houma).

Table 5-3

Validation of Base-Year Model by ADT Group

ADT Range	Total Count[1]	Total Model Volume[2]	% Dev Limit[3]	% Dev	% RMSE Limit[4]	% RMSE
ADT < 5,000	199,227	188,644	+/- 50.0	-5.3	115.0	48.6
5,000<= ADT < 10,000	584,963	607,336	+/- 25.0	3.8	43.0	27.2
10,000<= ADT < 20,000	1,448,678	1,485,418	+/- 20.0	2.5	28.0	17.7
ADT >= 20,000	352,081	338,369	+/- 15.0	-3.9	25.0	10.8
Total	2,584,949	2,619,766	+/- 5.0	1.3	40.0	22.0

Table 5-4

Validation of Base-Year Model by Roadway Functional Class

Functional Class	Total Count[1]	Total Model Volume[2]	% Dev Limit[3]	% Dev	% RMSE Limit[4]	% RMSE
PRINCIPAL ARTERIALS	956,600	1,002,053	+/- 10.0	4.8	25.0	14.9
MINOR ARTERIALS	1,237,511	1,274,136	+/- 15.0	3.0	30.0	20.8
COLLECTORS	346,633	309,765	+/- 25.0	-10.6	43.0	37.1
LOCAL STREETS	44,205	33,812	+/- 25.0	-23.5	115.0	72.5
Total	2,584,949	2,619,766	+/- 5.0	1.3	40.0	22.0

Table 5-5

Validation of Base-Year Model by Screenlines/Cutlines

Screenline ID	Total Count[1]	Total Model Volume[2]	% Dev Limit[3]	% Dev	% RMSE Limit[4]	% RMSE
S1	50,920	57,336	+/- 15.0	12.6	30.0	15.2
S2	103,799	111,532	+/- 15.0	7.4	30.0	13.9
S3	46,366	45,648	+/- 15.0	-1.5	30.0	10.2
S4	28,619	29,617	+/- 15.0	3.5	30.0	19.2
S5	58,991	53,339	+/- 15.0	-9.6	30.0	25.2
S6	67,286	67,001	+/- 15.0	-0.4	30.0	23.8
S7	39,638	35,322	+/- 15.0	-10.9	30.0	21.6
S8	47,281	52,042	+/- 15.0	10.1	30.0	12.8

(1) Total Count represents the sum of average daily traffic estimates for all LADOTD count locations (area wide), all count locations on principal arterials, all locations on minor arterials, all on major/minor collectors.

(2) Total Model Volume is the sum of model-generated traffic volumes for all network links associated with LADOTD count locations (area wide), all links associated with count locations on principal arterials, all links associated with locations on minor arterials, and all links associated with count locations on collectors.

(3) % Dev Limit is the maximum acceptable plus/minus percentage deviation from estimated base-year (2007) average daily traffic (ADT) based on counts conducted by the LADOTD Planning Division.

(4) % RMSE Limit is the maximum acceptable magnitude of the error relative to that of the counts conducted by the LADOTD Planning Division.

From the results of the validation effort, it was concluded that the HTMPO study area travel demand forecasting model performs well within the established limits of acceptable deviation from base-year estimated volumes.

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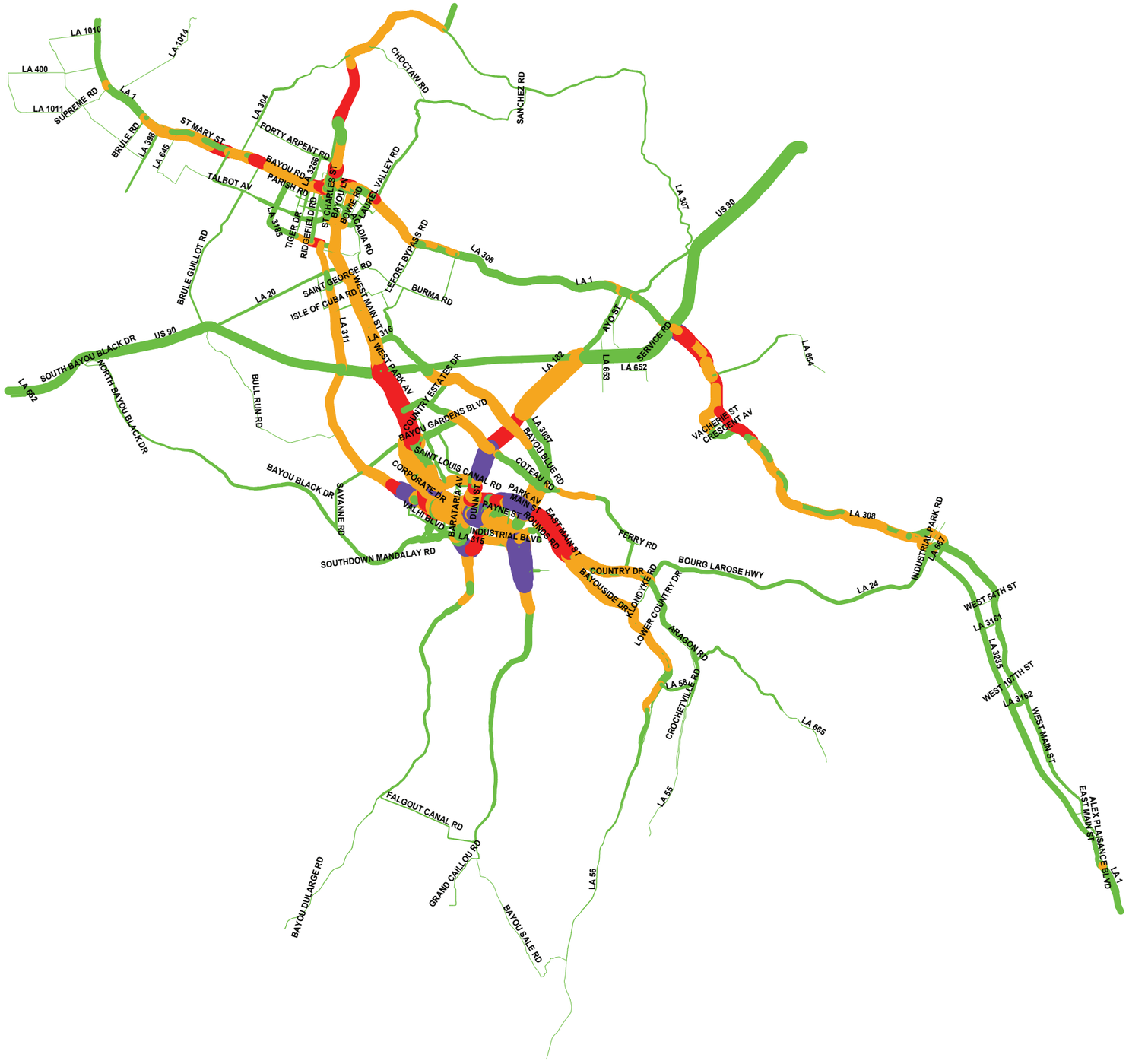
Figure 5-2

2007 Deficiency Map

Study Area



LEGEND

Volume/Capacity

- 0.00 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

Vehicle Flows

30000 15000 7500

0 3 6 9

Miles

2007 Network

Source: NSI

N W E S

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Figure 5-3
2007 Deficiency Map
Houma Area

LEGEND

Volume/Capacity
- 0.00 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

Vehicle Flows

30000 15000 7500
0 .33 .67 1
Miles

2007 Network

Source: NSI

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5.3 Deficiency Analysis of Roadway Network

The first step in determining the roadway network needs of the Study Area was the assignment of the target year trips to the Existing plus Committed (E+C) Network. Committed projects are improvements for which construction has been completed or begun since the base year (2007), a contract for construction has been awarded, or projects for which funding has been dedicated, such as through Legislative approval of the Proposed Construction Program. The Committed Projects are listed in Table 5-6 and shown in Figure 5-4 and Figure 5-5.

Table 5-6

Existing Plus Committed (E+C) Projects

Project	Parish	Route Name	Location	Improvement
100	Lafourche	Acadia Dr (LA 648)	Cardinal Dr to Percy Brown Rd	Widen to 4 Lanes
101	Terrebonne	Westside Blvd Phase A	Alma St to St Louis Canal Rd	New 4 Lane
102	Terrebonne	LA 3087 (Prospect St)	Bayou Terrebonne	Bridge Replacement
103	Terrebonne	Hollywood Rd	LA 3040 to LA 311 (Tunnel Blvd to Little Bayou Black Dr)	Widen to 4 Lanes
104	Terrebonne	LA 660 (Coteau Rd)	Bayou Terrebonne	Bridge Replacement
105	Lafourche	LA 1	US 90 south 1.4 miles	Center Turn Lane
106	Lafourche	LA 1 NB & SB	@ Canal Blvd (LA 20)	Turn Lane
107	Lafourche	LA 1 NB & SB	@ Tiger Dr	Turn Lane
107	Lafourche	LA 308 NB	@ Tiger Dr	Turn Lane
108	Lafourche	LA 1 NB & SB	@ Audubon Dr	Turn Lane
108	Lafourche	LA 308 NB	@ Audubon Dr	Turn Lane
109	Lafourche	LA 1 NB & SB	@ Jackson St (LA 20)	Turn Lane
111	Terrebonne	Corporate Dr	@ MLK (LA 3040)	Turn Lane
112	Terrebonne	LA 182	@ 6th St	Turn Lane
113	Terrebonne	Country Estates Dr	@ LA 660 (Coteau Rd)	Turn Lane
114	Terrebonne	Hollywood Rd	@ Main St (LA 24)	Turn Lane

Table 5-6 Existing Plus Committed (E+C) Projects				
Project	**Parish**	**Route Name**	**Location**	**Improvement**
115	Terrebonne	MLK (LA 3040)	@ Hollywood Rd	Turn Lane
116	Terrebonne	Bayou Gardens Blvd	@ W Park Ave (LA 659)	Turn Lane
117	Terrebonne	Polk St	@ LA 311 (Little Bayou Black Dr)	Turn Lane
118	Terrebonne	Coteau Rd (LA 660)	@ W Park Ave (LA 659)	Turn Lane
119	Terrebonne	LA 182	@ Barrow St Ext	Turn Lane
120	Terrebonne	Westside Blvd Phase B	LA 24 to LA 3040 (Main St to MLK)	New 4 Lane Roadway
121	Terrebonne	LA 664 (St Charles St)	Bayou Terrebonne	Bridge Replacement
122	Terrebonne	LA 57 (Grand Caillou Rd)	Industrial Dr to Thompson Rd	Widen to 4 Lanes
123	Lafourche	LA 20	Grand Bayou	Bridge Replacement
124	Lafourche	Acadian Rd	Canal St (LA 20) to LA 3185	New 2 Lane Roadway
125	Terrebonne	LA 24	Company Canal	Bridge Replacement
126	Terrebonne	Country Dr	LA 24 to St Anne Bridge	Reconstruction
127	Terrebonne	St Anne Bridge	Bayou Terrebonne	Bridge Replacement
128	Terrebonne	LA 24	US 90 to Prospect St (LA 3087)	ITS Corridor
129	Terrebonne	Enterprise Dr	Corporate Dr to LA 311 (Little Bayou Black Dr)	New 2 Lane Roadway
130	Terrebonne	Woodlawn Ranch Rd	LA 56 west for 1.2 Miles	Remove from network
131	Terrebonne	Thompson Rd Ext	LA 57 to LA 56	New 2 Lane Roadway
132	Terrebonne	Thompson Rd Ext bridge	Bayou Terrebonne (LA 56 to Bayou side Dr)	New 2 Lane Bridge
133	Terrebonne	Reservation Bridge	Bayou Terrebonne	New Pedestrian Bridge
135	Lafourche	LA 308	Bayou Lafourche (LA 657/LA 308 to LA 1)	New 2 Lane Bridge

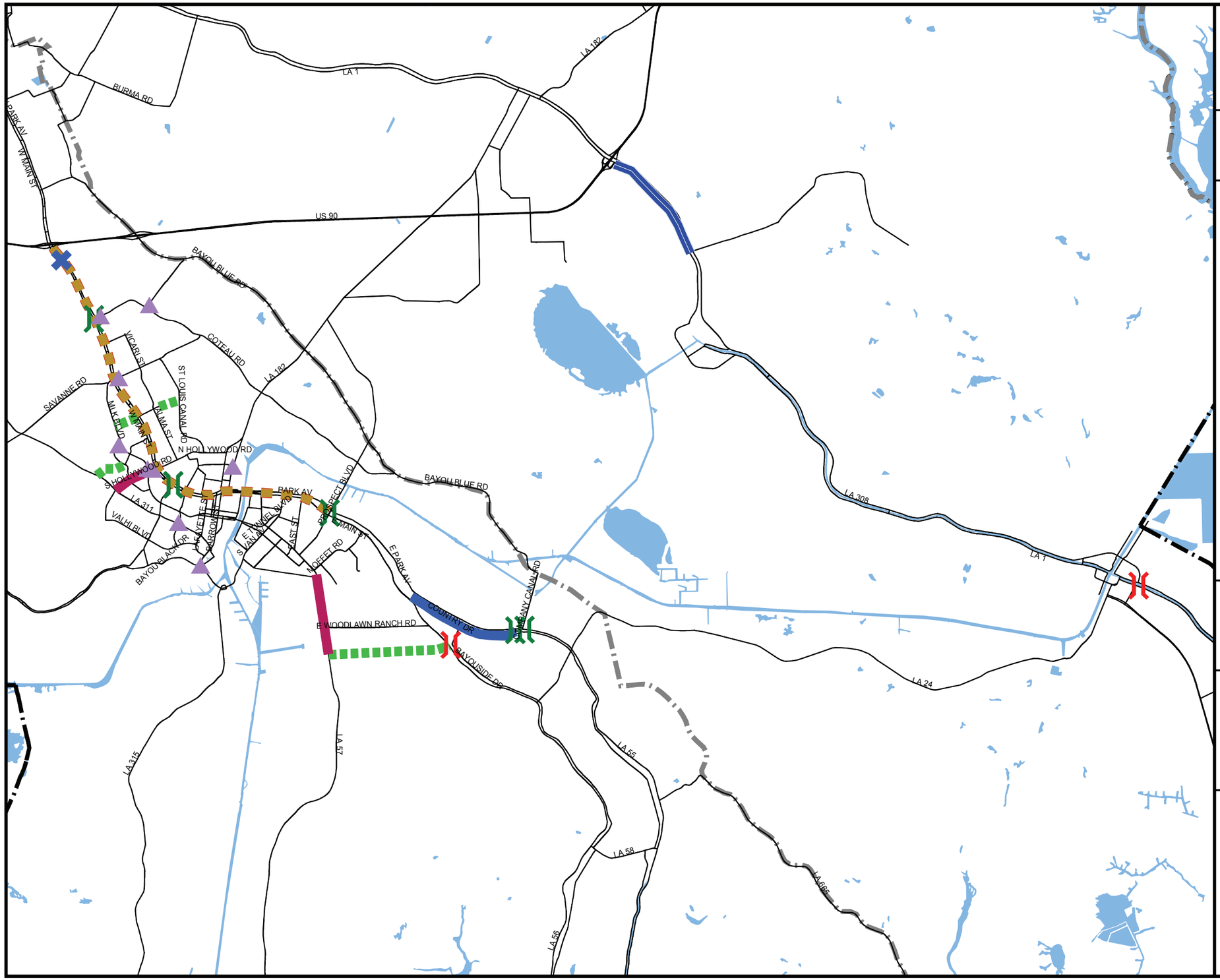

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Figure 5-4
Committed Projects
Houma Area

LEGEND

- Study Area
- Parish Lines

Impvt_code

- Widen Add 2 Lanes
- New Roadway
- Reconstruction
- Center Turn Lane
- ITS Corridor
- New Bridge
- Replace Bridge
- Turn Lane
- Pedestrian Bridge

Source: LADOTD
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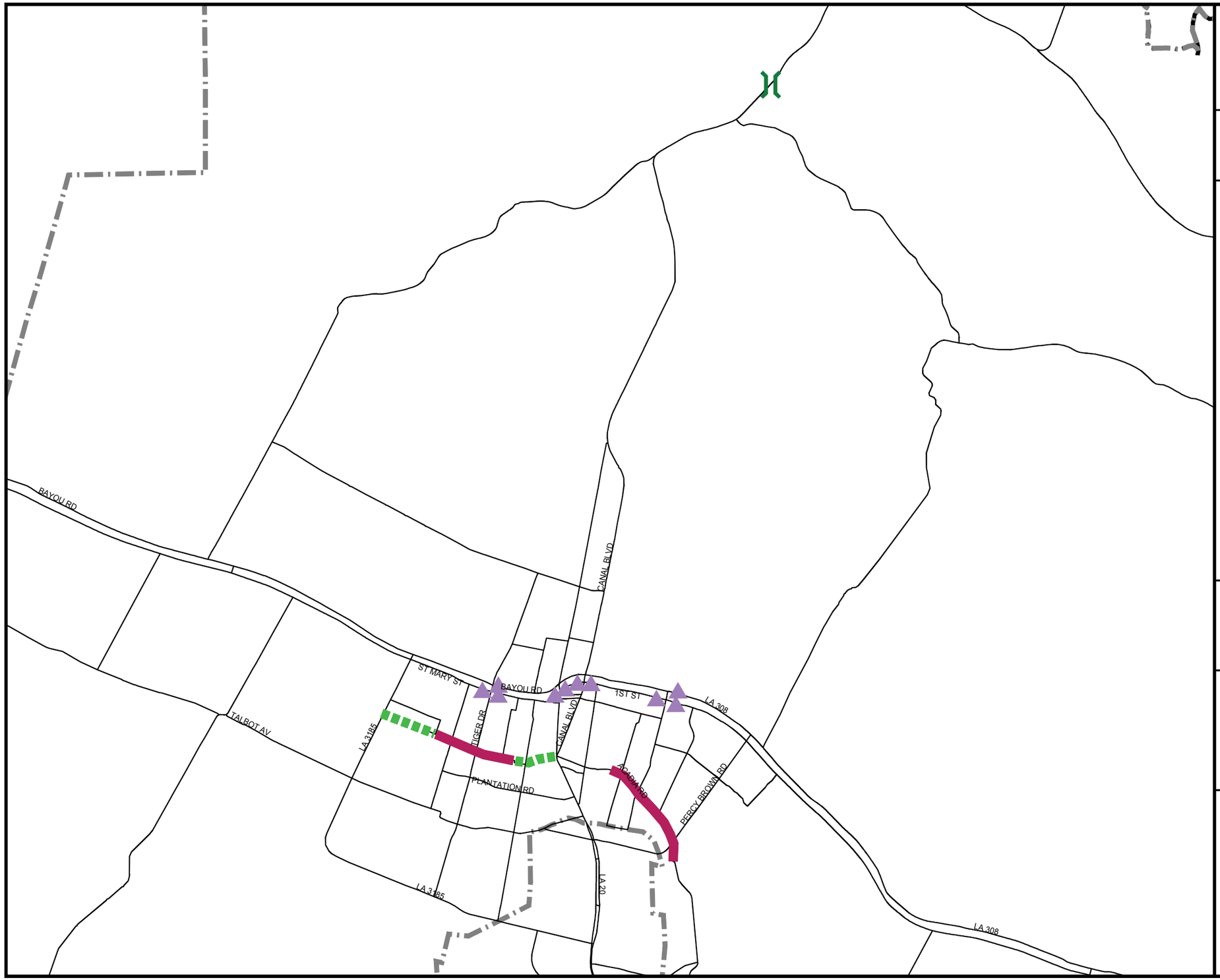

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Figure 5-5
Committed Projects
Thibodaux Area

LEGEND

- Study Area
- Parish Lines

Projects

- Widen Add 2 Lanes
- New Roadway
- Replace Bridge
- Turn Lane

Source: LADOTD
HTMPO

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Using the travel demand estimation models developed during the base year calibration process, the forecast planning data, external trip forecasts and the E+C Network were used as input to predict link traffic volumes and volume-over-capacity (VOC) ratios for the years 2015, 2025 and 2035. It is recommended that those facilities which show a projected VOC ratio of greater than 0.75 should be considered deficient. It is also recommended that emphasis be placed on those areas where the VOC ratio is greater than 1.00 or in terms of Level of Service (LOS), any facilities which have an LOS of E and higher based on those ratios.

The roadway facilities estimated to be deficient by 2035 are listed below and are also shown in Figures 5-6 and 5-7.

Major corridors forecast to be deficient by the year 2015 are:

- LA 308 from Bridge Rd to US 90.
- LA 1 from LA 654 to US 90.
- LA 20 from St Patrick St to Choctaw Rd.
- LA 308 from St Patrick Bridge to Tiger Dr Bridge.
- LA 20 from Belmont Dr to Melrose Dr.
- LA 308 from LA 20 to Laurel Valley Rd.
- LA 3185 from N Main Project Rd to Ridgefield Rd.
- W Main St from LA 316 to Tommy Bridge.
- W Park St from Michelle Bridge to Tommy Bridge.
- LA 316 from Country Estates Dr to US 90.
- LA 316 from Savoie St to LA 182.
- LA 182 from N Hollywood Blvd to LA 3087.
- N Hollywood Rd from St Louis Canal Rd to Williams Ave.
- E Park Ave from Lafayette Woods to LA 661.
- Park Ave from LA 57 to Barrow St.
- E Main St from LA 182 to LA 57.
- W Park Ave from Bayou Gardens Blvd to Merlin Bridge.
- W Main St from Merlin Bridge to Bayou Gardens.
- LA 311 from S Hollywood Blvd to Lake Crescent Ct.
- LA 3040 from Beatrice St to Lee Ave.
- LA 661 from S Industrial Blvd to LA 315.
- LA 315 from LA 661 to Concord Bypass Rd.
- LA 3040 from Saint Charles St to S Hollywood Rd.
- Hollywood Rd from LA 3040 to Park Ave.

In addition to those listed above, major corridors forecast to be deficient by the year 2025 are:

- LA 1 from LA 645 to LA 304.
- LA 1 from Brandywine Rd to Percy Brown Rd.
- LA 648 from Audubon Rd to West Park Ave.
- W Park Ave from St George Bridge to LA 311.
- W Main St from St George Bridge to LA 311.
- W Park Ave from Price School Bridge to Waterplant Rd.
- W Main St from Waterplant Rd to Price School Bridge.
- W Park Ave from LA 311 to Merlin Bridge.
- W Main St from Merlin Bridge to LA 311.
- LA 3040 from Savanne Rd to West Main St.
- LA 3040 from Corporate Dr to Westside Blvd.
- Barrow from School St to Tunnel Blvd.
- LA 57 from Evelyn Ave to Prospect Blvd.
- LA 57 from James St to Industrial Blvd.
- LA 316 from LA 182 to Savoie St.
- LA 316 from C Poincot Ln to Country Estates Dr.
- E Park Ave from Odelia St to LA 3087.
- W Park St from LA 182 to Barrow St.
- LA 311 from Ellendale Ct to S Hollywood Rd.
-

In addition to those listed in 2015 and 2025, major corridors forecast to be deficient by 2035 are:

- LA 316 from T John Ln to Lynette Heights.
- LA 311 at US 90.

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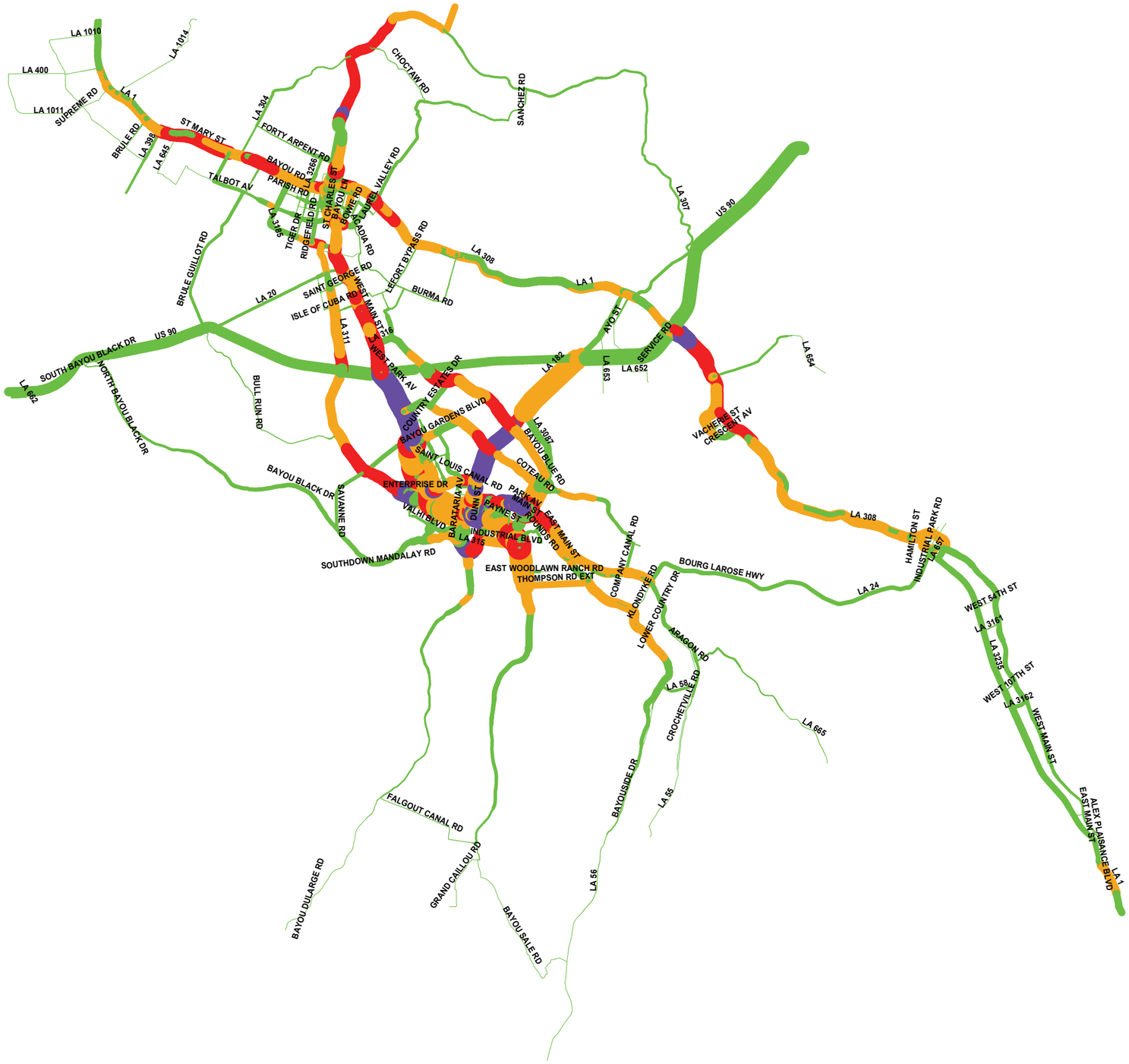
Figure 5-6
2035 Deficiency Map
Study Area



LEGEND

Volume/Capacity
- 0.00 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

Vehicle Flows
30000 15000 7500

0 3 6 9
Miles

E+C Network

Source: NSI

N W E S

Prepared for:

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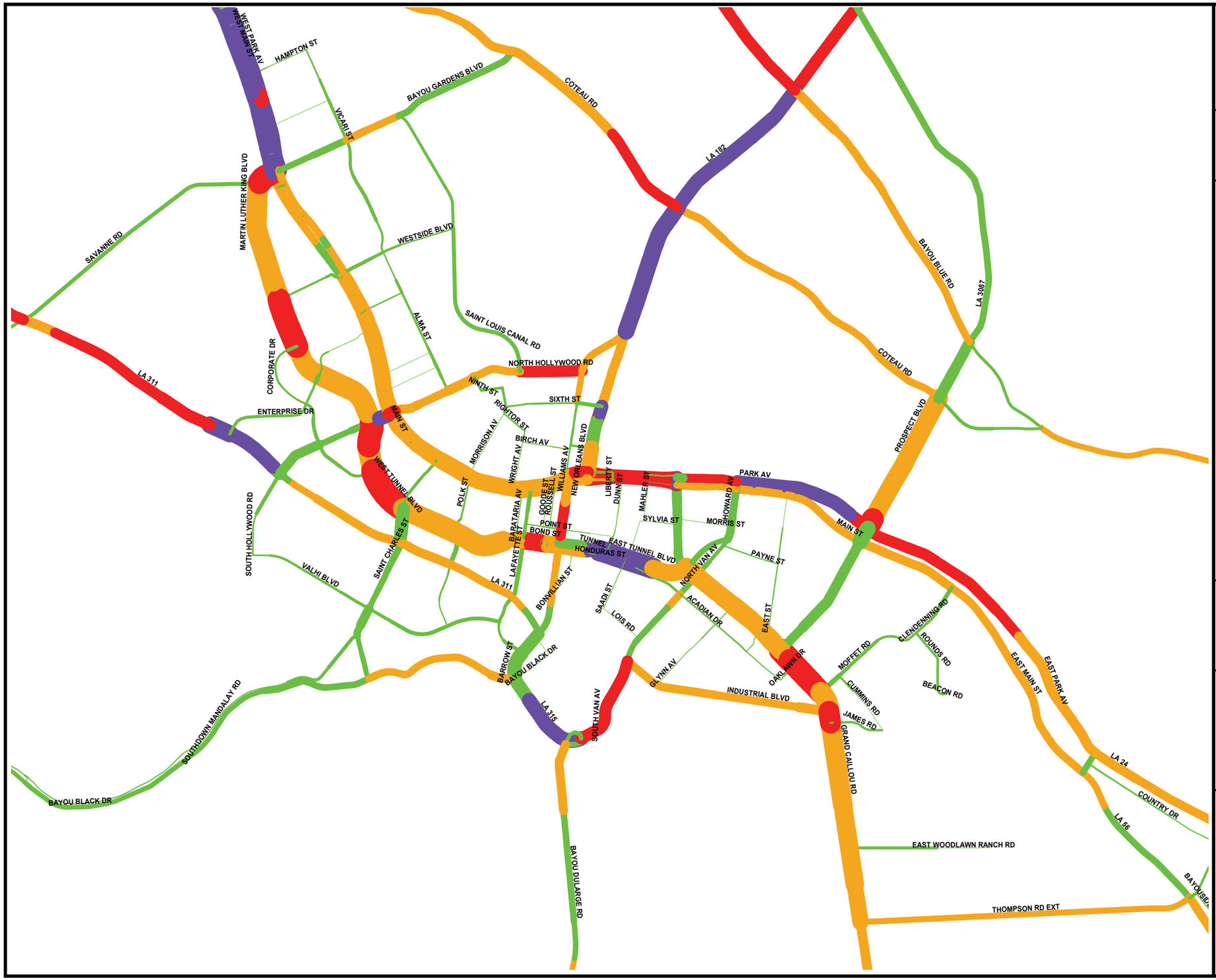
Figure 5-7
2035 Deficiency Map
Houma Area



LEGEND

Volume/Capacity
- 0.00 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

Vehicle Flows
30000 15000 7500
0 .33 .67 1
Miles

E+C Network

Source: NSI

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5.4 Strategies to Address Roadway Needs

As summarized in the previous section, the E+C scenario has significant roadway system deficiencies in the future year (2035). A number of strategies are available to address these identified deficiencies including the addition of new capacity to the roadway system.

5.4.1 Roadway Preservation and Rehabilitation

The functionally classified roadway network in the HTMPO area is more than 600 miles long and provides surface transportation to more than one quarter million people in the region. All of these roads are expected to continue to provide service throughout the planning period. Reconstruction projects, which are part of operation and maintenance, are needed to preserve and maintain the highway system. Sufficient resources must be allocated to protect the public investment as well as provide a safe and high quality travel experience. This plan gives funding priority to system preservation and allocates a sizeable portion of available revenues to this purpose.

5.4.2 Transportation Demand Management (TDM)

About 80% of the commuting trips within the study area are made in Single-Occupancy vehicles. Therefore, one cost-effective strategy is to find ways to reduce these single-occupancy vehicle trips, which will reduce congestion and improve air quality without adding any additional capacity to the roadway system.

TDM focuses on strategies to reduce future travel volumes within the roadway network. This can be accomplished by:

- Increasing the number of high-occupancy vehicle trips by promoting carpooling, shuttle buses to major employment centers, etc.
- Supporting Flex-time work schedules with employers to reduce congestion at peak times.
- Support for efforts to allow employees to telecommute when possible.
- The establishment of Park and Ride facilities.
- Providing a community education program on the costs and benefits of high-occupancy trips and options available to the public.

5.4.3 Traffic Operational Improvements

Traffic operational improvements increase efficiencies within the roadway network. It is anticipated that these will include:

- Signal Improvements, including New Traffic Signals, Signal Synchronization, Signal Interconnect).
- Access Management (Driveway consolidation, Driveway spacing/design, Left-turn restrictions, Elimination of on-street parking, Intersection/signal spacing, Frontage Roads, Turn lanes, Roadway Modification (geometry, medians, sight distance)

- One-way/Reversible Streets (Streets that are modified from two-way to one-way; this strategy modifies roadway capacity during peak hours to increase number of lanes in peak direction by changing a non-peak direction to a peak direction).
- Intersection Improvements.
- Improvements to Traffic Control (Regulatory Signs, Warning Signs, Informational Signs to limit driver confusion).
- Turn Prohibitions (Limit conflicting movements in peak hours, Make pedestrian crossings safer).

5.4.4 Public Transportation and Non-Traditional Modes

Chapter 6 presents an overview of how of Public Transit is integrated into the Plan. Chapter 7 reviews the goals, objectives and methods for inclusion of pedestrian and bicycle facilities in the regional plan.

5.4.5 Intelligent Transportation System (ITS)

There has been a recent emergence of cost effective Intelligent Transportation Systems technologies, which can be integrated within the transportation network. The cost/benefit of applying these technologies is frequently related to the travel characteristics of the roadway network, with urban networks more likely benefiting. ITS technologies being applied within the HT-MPO follow, and as the cost of technology applications decline, other ITS venues will be considered.

Traffic Incident Management – A Traffic Incident Management Coordinator has been employed by DOTD to work with the MPO and the LADOTD District Office to coordinate incident management. Because there are no interstate highways in the MPO study area there are no associated issues with interstate incidents. The ITS system in the area consists of traffic cameras and two variable message signs that are routed to a local Traffic Management Center (TMC). Although it is only staffed part time, the state TMC manages local ITS activities during other hours. An Incident Management Committee meets as needed with local responders, usually on a quarterly basis. Efforts are underway to increase the number of traffic cameras and variable message boards in the MPO study area.

Travel Information Services and Roadway Weather Information– LADOTD provides traveler information for a variety of areas in Louisiana, including Houma. There is a link from the Houma-Thibodaux MPO webpage to the state's 511 Traveler Information page. Information is offered via low or high bandwidth (five-minute updates compared to real-time updates). Visitors to the page can find information regarding crash locations, closures (lane and road) as well as sections under construction. Those using the high-bandwidth access can view images from traffic cameras in Houma and view information regarding closures due to weather. There is also a link on the Houma-Thibodaux MPO webpage allowing people to view text messages regarding road closures. Citizens also have the option of signing up to receive instant messages via Twitter.

Work Zone Management – LADOTD coordinates all work zones in the MPO study area. It is anticipated that ITS technologies will be applied within work zones.

Emergency Response and Homeland Security – The six parish South Central Planning & Development Commission is served by a liaison from the Governor's Office of Homeland Security and Emergency Preparedness. During a monthly task force meeting the laison confers with representatives from the Office of Emergency Preparedness, the Sherriff's office, the Louisiana State Police, and the Louisiana Department of Health. At these meetings they discuss potential grant funding, interoperability, and items relevant to all attendees. It is anticipated that ITS technologies will emerge in support hurricane evacuations.

5.4.6 Roadway Capacity Improvements

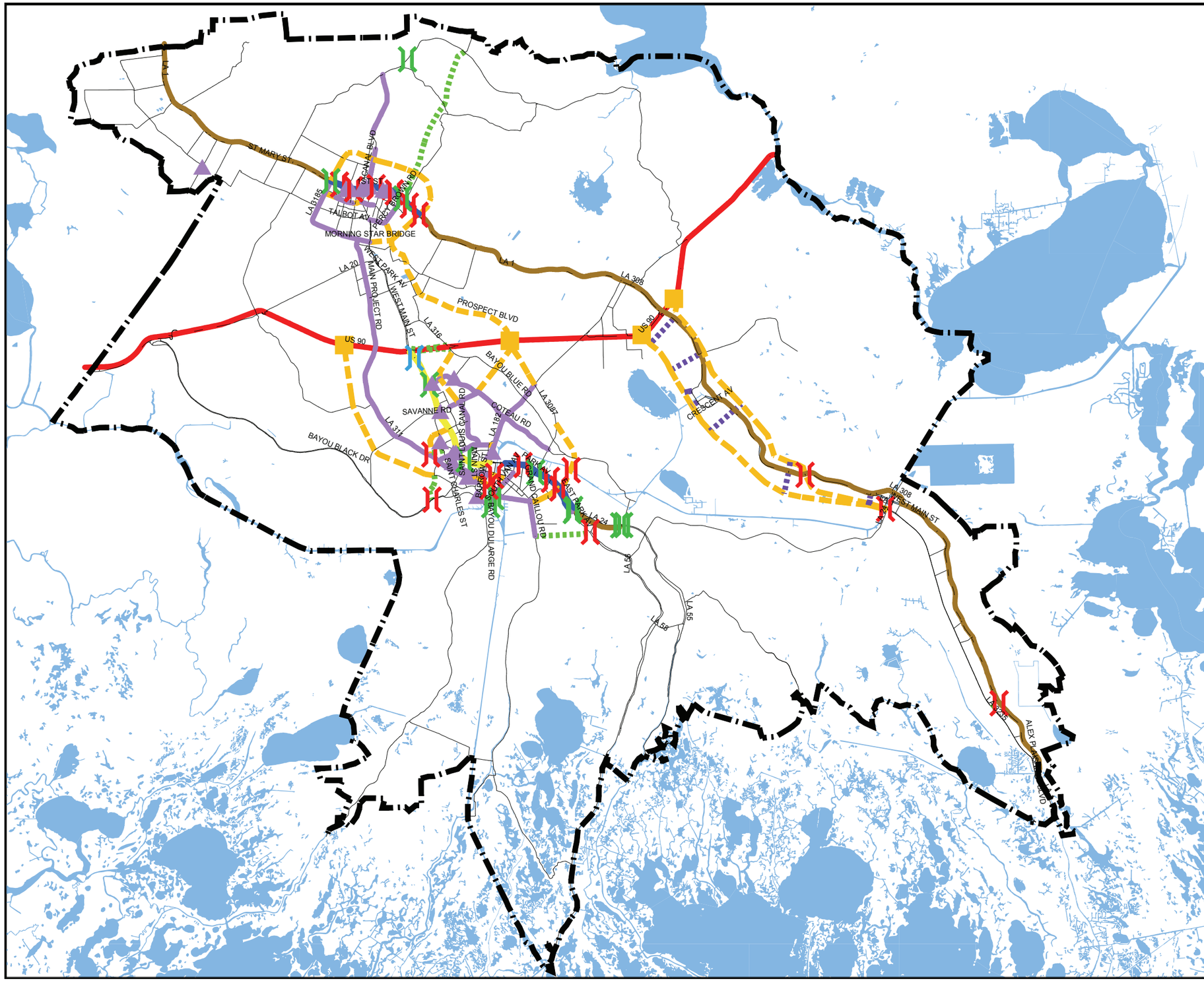
The plan also identifies the need for roadway capacity improvements based on forecasted capacity deficiencies in the year 2035. These projects are classified in two ways; committed projects (see section 5.2), for which funding has been allocated due to inclusion in the fiscal years 2010 to 2014 Transportation Improvement Program (TIP); and, recommended long range roadway capacity improvement projects. The remainder of this section describes the process used to develop the list of potential capacity improvement projects, analysis of projects and the project selection process to keep the plan financially constrained.

Development of Roadway Improvement Test Projects

Throughout the plan development process, the Study Team gathered information on test projects from the public, local government agencies and MPO committee members. Along with these test projects, a non-financially constrained roadway network was developed which also included the remaining projects in the current MTP and the committed roadway projects. Figure 5-8 shows all the test projects evaluated in the non-financially constrained roadway network plan.

Houma-Thibodaux
Metropolitan Transportation Plan
2035

Figure 5-8
Test Projects



LEGEND

Projects
- Widen Add 2 Lanes
- New 2 Lane
- New 4 Lane
- Reconstruction
- Upgrade to I-49
- One Way Couplet
- Local Connection
- ITS Corridor
- New Bridge
- Replace Bridge
- Pedestrian Bridge
- Turn Lanes
- New Interchange

Source: NSI

N W E S

Prepared for:

Louisiana's On the Move. DOTD Builds the Way

Houma-Thibodaux MPO

Prepared by:

NEEL-SCHAFFER
Solutions you can build upon

In Association with:

ALLIANCE Transportation Group, Inc.

TBS T. BAKER SMITH, INC.
PROFESSIONAL CONSULTANTS SINCE 1913

Analysis of Roadway Projects

As part of the region wide visioning process, the Study Team collected information to develop the transportation system goals and project selection criteria. Table 5-7 summarizes the ranking of these project selection criteria.

Table 5-7
Project Selection Criteria Ranking

Criteria	Weighted Score	Rank
Improve safety	6.59	**1**
Improve access	6.69	**2**
Reduce congestion	6.69	**3**
Improve quality of life	7.29	**4**
Promote efficiency	7.73	**5**
Support economic development goals	8.01	**6**
Conserve energy	8.51	**7**
Connect modes of travel	8.63	**8**
Protect the environment	8.95	**9**
Improve security	9.63	**10**
Support land use goals	10.61	**11**
Preserve right-of-way	10.68	**12**

Each identified test project was scored on a scale of 1-10 with 1 being the highest score for addressing a criterion and 10 being the lowest.

The HTMPO Travel Demand Model was used to rank the projects for “Reduce Congestion” criterion. For this purpose, each test project was added individually to the E+C network and the model was run to calculate the project benefits in terms of Vehicle Miles Travelled (VMT), Vehicle Hours Travelled (VHT) and Vehicle Hours of Delay (VHD). At the end of the first iteration, the project that reduced the system-wide congestion most was selected and added to the E+C network. The iterative process continued with the remaining projects by selecting one project at a time. Table 5-8 displays the project ranking based entirely on reducing the system-wide congestion.

Table 5-8

Projects Ranked by Congestion Relief

Congestion Rank	Parish	Project #	Name Limits or Location	Improvement	Length (miles)	2009 Est. Cost (000)
1	Lafourche	509	LA 3087 (Prospect Blvd Ext) LA 182 to LA 648 (Percy Brown Rd)	New 4 lane and interchange	11.85	70,865
2	Lafourche	603	LA 3235 LA 24 to US90/I-49 west of LA 1	New 4 lane, interchange & bridge	15.25	178,000
3	Terrebonne/ Lafourche	300	LA 182 (New Orleans Blvd) Legion Ave to LA 3087 (Prospect Blvd)	Widen to 4 lanes	4.50	18,000
4	Terrebonne	500	Industrial Blvd LA 661 (S Van Ave) to LA 311 (Little Bayou Black Dr)	New 4 lane & bridge	1.40	30,950
5	Terrebonne	505	St Louis Canal Rd Ext Bayou Gardens Blvd to LA 316 (Bayou Blue Rd)	New 4 lane road	2.95	12,500
6	Terrebonne	412	LA 311 (Little Bayou Black Dr) Savanne Rd to US 90/I-49	Widen to 4 lanes	4.85	19,400
7	Terrebonne	411	LA 311 (Little Bayou Black Dr) Hollywood Rd to Savanne Rd	Widen to 4 lanes	2.40	9,600
8	Terrebonne	409	Industrial Blvd LA 661 (S Van Ave) to LA 57 (Grand Caillou Rd)	Widen to 4 lanes	1.75	7,500
9	Lafourche	601	New Route (Laurel Valley Rd.) LA 308 (Bayou Dr) to LA 20	New 2-4 lane highway	8.00	34,000
10	Terrebonne	501	Industrial Blvd LA 57 (Grand Caillou Rd) to LA 659 (Park Ave)	New 4 lane & bridge	1.70	16,225
11	Terrebonne/ Lafourche	606	Industrial Blvd LA 659 (Park Ave) to LA 3087 (Prospect Blvd)	New 4 lane & bridge	3.70	36,475

Table 5-8

Projects Ranked by Congestion Relief

Congestion Rank	Parish	Project #	Name Limits or Location	Improvement	Length (miles)	2009 Est. Cost (000)
12	Terrebonne/ Lafourche	407	LA 648 (Percy Brown Dr) LA 20 (Canal Blvd) to LA 308 (Bayou Dr)	Widen to 4 lanes & bridge	2.30	11,200
13	Lafourche	600	LA 20 (N Canal Blvd) Reinzi Dr to LA 304	Widen to 4 lanes	5.40	21,600
14	Terrebonne	503	LA 311 (Little Bayou Black Dr) I-49/US 90 to Main Project Rd	Widen to 4 lanes	2.40	9,600
15	Terrebonne	506	LA 3040 (ICWW Tunnel) at Intracoastal Canal	Replace Tunnel with 4 lane high rise bridge	0.75	25,000
16	Terrebonne	507	LA 3040 (Tunnel Blvd) S Hollywood Rd to ICWW	Widen to 6 lanes	2.50	10,000
17	Terrebonne	502	LA 660 (Coteau Rd) LA 24 (Main St) to LA 3087 (Prospect Blvd)	Widen to 4 lanes & bridge	7.40	31,600
18	Terrebonne/ Lafourche	408	LA 3185 (Thibodaux Loop SW) LA 308 (Bayou Dr) to LA 20	Widen to 4 lanes & bridge	5.30	23,200
19	Terrebonne	605	Valhi Blvd Savanne Rd to US90/I-49	New 4 land & intch	5.50	64,500
20	Terrebonne	508	Valhi Blvd S Hollywood Rd to Savanne Rd	New 4 lane roadway	3.00	12,750
21	Terrebonne	405	LA 311 (Little Bayou Black Dr) Barataria Blvd to Hollywood Rd	Widen to 4 lanes	2.31	8,400
22	Terrebonne	504	Main Project Rd LA 311 (Little Bayou Black Rd) to LA 3185	Widen to 4 lanes	3.00	12,000

Table 5-8

Projects Ranked by Congestion Relief

Congestion Rank	Parish	Project #	Name Limits or Location	Improvement	Length (miles)	2009 Est. Cost (000)
23	Terrebonne	301	N Hollywood Rd LA 24 (Park Ave) to LA 182 (New Orleans Blvd)	Widen to 4 lanes and new 4 lane roadway	1.90	8,000
24	Terrebonne	410	Bayou Gardens Blvd LA 660 (Coteau Rd) to LA 316 (Bayou Blue Rd)	New 4 lane roadway	1.50	6,375
25	Lafourche	510	Bayou Gardens Blvd LA 316 to LA 3087 (Prospect St Ext)	New 4 lane roadway	1.00	4,250
26	Terrebonne	302	Bayou Gardens Blvd Vicari St to LA 660 (Coteau Rd)	Widen to 4 lanes	1.60	6,400
27	Lafourche	512	Thibodaux Loop NE LA 308 (Bayou Dr) to LA 20 (N Canal Blvd)	New 4 lane roadway	4.40	18,700
28	Terrebonne	401	LA 661 (N & S Van Ave) LA 3040 (Tunnel Blvd) to Houma Navagation Canal	Widen to 4 lanes & 2 bridges	2.15	32,000
29	Terrebonne/ Lafourche	511	Thibodaux Loop SE LA 20 to LA 308 (Bayou Dr)	New 4 lane & bridge	3.00	17,000
30	Lafourche	513	Thibodaux Loop NW LA 20 (N Canal Blvd) to LA 308 (Bayou Dr)	New 4 lane roadway	3.10	13,200
31	Terrebonne	305	St Louis Canal Rd N Hollywood Rd to Bayou Gardens Blvd	Widen to 4 lanes	2.50	10,000
32	Terrebonne	303	S Hollywood Rd LA 311 to LA 182 (Bayou Black Dr)	New 2 lane & bridge	1.35	4,225
33	Terrebonne	304	Westside Blvd LA 3040 (MLK) to LA 311 (Little Bayou Black Dr)	New 4 lane & bridge	2.40	7,332

Table 5-8

Projects Ranked by Congestion Relief

Congestion Rank	Parish	Project #	Name Limits or Location	Improvement	Length (miles)	2009 Est. Cost (000)
34	Terrebonne	406	I-49 LA 24 (Park Ave) to LA 316 (Bayou Blue Rd)	New 2 lane service roads	2.00	6,000
35	Terrebonne	404	LA 24 (Presque Isle) LA 24 (Main St) to LA 659 (Park Ave)	Widen to 4 lanes & 2 bridges	0.20	12,000
36	Lafourche	307	LA 648 (Acadian Dr) LA 20 (Canal Blvd) to Cardinal Dr	Widen to 4 lanes	0.60	2,400
37	Assumpion/ Lafourche	602	LA 308 Supreme to Lockport	Reconstruction with shoulders	54.80	109,600
38	Lafourche	607	New Road South Lafourche Airport to LA 3235	New 2 lane & bridge	0.45	6,375
39	Lafourche	306	LA1/LA 308 LA 3185 to LA 648 (Percy Brown Dr)	One way couplet & bridges	5.00	23,750
40	Terrebonne	403	LA 24 (Main St)/LA 659 (Park Ave) LA 57 (Grand Caillou Rd) to Presque Isle	One way couplet & bridges	4.40	25,900

The Study Team also evaluated each test project using the other project selection criteria shown in Table 5-9. Each criterion was assigned a score on a scale of 1 – 10, with 1 being the highest score for addressing a criterion and 10 being the lowest.

Following this evaluation process, the assigned scores of each criterion were multiplied by the corresponding weighted scores shown in Table 5-7 and summed to get one final project score. Table 5-9 displays the final project ranking.

Table 5-9

Final Ranking of Test Projects

Final Rank	Parish	Project #	Name Limits or Location	Improvement	Length (miles)	2009 cost (000)	Improve Safety	Improve Access	Reduce Congestion	Promote Efficiency	Support Econ Devel	Conserve Energy	Connect Modes	Protect Environment	Improve Security	Total Score
1	Lafourche	509	LA 3087 (Prospect Blvd Ext) LA 182 to LA 648 (Percy Brown Rd)	New 4 lane and interchange	11.85	70,865	6	3	0	8	3	8	4	10	6	30.580
2	Lafourche	603	LA 3235 LA 24 to US90/I-49 west of LA 1	New 4 lane, intch & bridge	15.25	178,000	6	3	0.25	8	3	8	4	10	6	30.748
3	Terrebonne	500	Industrial Blvd LA 661 (S Van Ave) to LA 311 (Little Bayou Black Dr)	New 4 lane & bridge	1.40	30,950	4	4	0.75	8	7	8	6	10	4	33.436
4	Terrebonne	501	Industrial Blvd LA 57 (Grand Caillou Rd) to LA 659 (Park Ave)	New 4 lane & bridge	1.70	16,225	4	4	2.25	8	7	8	6	10	4	34.440
5	Terrebonne/ Lafourche	606	Industrial Blvd LA 659 (Park Ave) to LA 3087 (Prospect Blvd)	New 4 lane & bridge	3.70	36,475	4	4	2.5	8	7	8	6	10	4	34.607
6	Terrebonne	412	LA 311 (Little Bayou Black Dr) Savanne Rd to US 90/I-49	Widen to 4 lanes	4.85	19,400	3	6	1.25	4	6	10	6	10	10	38.033
7	Terrebonne	401	LA 661 (N & S Van Ave) LA 3040 (Tunnel Blvd) to Houma Navagation Canal	Widen to 4 lanes & 2 bridges	2.15	32,000	3	5	6.75	3	6	6	10	10	8	38.394
8	Lafourche	607	New Road South Lafourche Airport to LA 3235	New 2 lane & bridge	0.45	6,375	10	6	9.25	6	3	6	1	10	10	39.426
9	Terrebonne	503	LA 311 (Little Bayou Black Dr) I-49/US 90 to Main Project Rd	Widen to 4 lanes	2.40	9,600	3	6	3.25	4	8	10	5	10	10	40.109
10	Terrebonne	411	LA 311 (Little Bayou Black Dr) Hollywood Rd to Savanne Rd	Widen to 4 lanes	2.40	9,600	3	6	1.5	4	10	10	6	0	10	41.402
11	Terrebonne	409	Industrial Blvd LA 661 (S Van Ave) to LA 57 (Grand Caillou Rd)	Widen to 4 lanes	1.75	7,500	3	6	1.75	4	10	10	6	10	10	41.570
12	Terrebonne	302	Bayou Gardens Blvd Vicari St to LA 660 (Coteau Rd)	Widen to 4 lanes	1.60	6,400	3	4	6.25	8	4	6	10	10	10	41.581
13	Terrebonne/ Lafourche	300	LA 182 (New Orleans Blvd) Legion Ave to LA 3087 (Prospect Blvd)	Widen to 4 lanes	4.50	18,000	3	6	0.5	4	10	10	10	10	8	42.259
14	Terrebonne	506	LA 3040 (ICWW Tunnel) at Intracoastal Canal	Replace Tunnel with 4 lane high rise bridge	0.75	25,000	3	6	3.5	4	10	10	10	10	6	42.342

Table 5-9

Final Ranking of Test Projects

Final Rank	Parish	Project #	Name Limits or Location	Improvement	Length (miles)	2009 cost (000)	Improve Safety	Improve Access	Reduce Congestion	Promote Efficiency	Support Econ Devel	Conserve Energy	Connect Modes	Protect Environment	Improve Security	Total Score
15	Terrebonne	505	St Louis Canal Rd Ext Bayou Gardens Blvd to LA 316 (Bayou Blue Rd)	New 4 lane road	2.95	12,500	6	5	1	8	4	8	10	10	10	42.415
16	Terrebonne/ Lafourche	408	LA 3185 (Thibodaux Loop SW) LA 308 (Bayou Dr) to LA 20	Widen to 4 lanes & bridge	5.30	23,200	3	6	4.25	4	5	10	10	10	10	42.691
17	Assumpion/ Lafourche	602	LA 308 Supreme to Lockport	Reconstruction with shoulders	54.80	109,600	1	8	9	4	8	10	6	10	8	42.915
18	Terrebonne	410	Bayou Gardens Blvd LA 660 (Coteau Rd) to LA 316 (Bayou Blue Rd)	New 4 lane roadway	1.50	6,375	6	4	5.75	8	4	6	10	10	10	43.223
19	Lafourche	510	Bayou Gardens Blvd LA 316 to LA 3087 (Prospect St Ext)	New 4 lane roadway	1.00	4,250	6	4	6	8	4	6	10	10	10	43.390
20	Terrebonne	405	LA 311 (Little Bayou Black Dr) Barataria Blvd to Hollywood Rd	Widen to 4 lanes	2.31	8,400	3	6	5	4	10	10	6	10	10	43.744
21	Terrebonne/ Lafourche	407	LA 648 (Percy Brown Dr) LA 20 (Canal Blvd) to LA 308 (Bayou Dr)	Widen to 4 lanes & bridge	2.30	11,200	3	6	2.75	4	8	10	10	10	10	44.089
22	Lafourche	600	LA 20 (N Canal Blvd) Reinzi Dr to LA 304	Widen to 4 lanes	5.40	21,600	3	6	3	4	8	10	10	10	10	44.256
23	Terrebonne	507	LA 3040 (Tunnel Blvd) S Hollywood Rd to ICWW	Widen to 6 lanes	2.50	10,000	3	6	3.75	4	8	10	10	10	10	44.758
24	Terrebonne	502	LA 660 (Coteau Rd) LA 24 (Main St) to LA 3087 (Prospect Blvd)	Widen to 4 lanes & bridge	7.40	31,600	3	6	4	4	8	10	10	10	10	44.925
25	Terrebonne	605	Valhi Blvd Savanne Rd to US90/I-49	New 4 land & intch	5.50	64,500	6	4	4.5	8	8	10	10	10	6	45.141
26	Terrebonne/ Lafourche	511	Thibodaux Loop SE LA 20 to LA 308 (Bayou Dr)	New 4 lane & bridge	3.00	17,000	6	6	7	8	4	6	10	10	10	45.397
27	Terrebonne	504	Main Project Rd LA 311 (Little Bayou Black Rd) to LA 3185	Widen to 4 lanes	3.00	12,000	3	6	5.25	4	10	10	10	10	8	45.438
28	Lafourche	513	Thibodaux Loop NW LA 20 (N Canal Blvd) to LA 308 (Bayou Dr)	New 4 lane roadway	3.10	13,200	6	6	7.25	8	4	6	10	0	10	45.565
29	Lafourche	512	Thibodaux Loop NE LA 308 (Bayou Dr) to LA 20 (N Canal Blvd)	New 4 lane roadway	4.40	18,700	6	6	6.5	8	4	8	10	10	10	46.764

Table 5-9

Final Ranking of Test Projects

Final Rank	Parish	Project #	Name Limits or Location	Improvement	Length (miles)	2009 cost (000)	Improve Safety	Improve Access	Reduce Congestion	Promote Efficiency	Support Econ Devel	Conserve Energy	Connect Modes	Protect Environment	Improve Security	Total Score
30	Terrebonne	508	Valhi Blvd S Hollywood Rd to Savanne Rd	New 4 lane roadway	3.00	12,750	6	4	4.75	8	10	10	10	10	6	46.910
31	Terrebonne	304	Westside Blvd LA 3040 (MLK) to LA 311 (Little Bayou Black Dr)	New 4 lane & bridge	2.40	7,332	7	6	8	8	4	8	10	10	10	48.427
32	Terrebonne	301	N Hollywood Rd LA 24 (Park Ave) to LA 182 (New Orleans Blvd)	Widen to 4 lanes and new 4 lane roadway	1.90	8,000	3	8	5.5	4	10	10	10	10	10	48.868
33	Lafourche	601	New Route (Laurel Valley Rd.) LA 308 (Bayou Dr) to LA 20	New 2-4 lane highway	8.00	34,000	6	4	2	8	10	10	10	10	10	48.920
34	Terrebonne	404	LA 24 (Presque Isle) LA 24 (Main St) to LA 659 (Park Ave)	Widen to 4 lanes & 2 bridges	0.20	12,000	4	4	8.5	10	10	8	10	10	10	51.797
35	Lafourche	306	LA1/LA 308 LA 3185 to LA 648 (Percy Brown Dr)	One way couplet & bridges	5.00	23,750	6	6	9.5	6	10	8	10	10	10	52.028
36	Lafourche	307	LA 648 (Acadian Dr) LA 20 (Canal Blvd) to Cardinal Dr	Widen to 4 lanes	0.60	2,400	4	4	8.75	8	10	10	10	0	10	52.119
37	Terrebonne	403	LA 24 (Main St)/LA 659 (Park Ave) LA 57 (Grand Caillou Rd) to Presque Isle	One way couplet & bridges	4.40	25,900	6	6	9.75	6	10	8	10	10	10	52.196
38	Terrebonne	305	St Louis Canal Rd N Hollywood Rd to Bayou Gardens Blvd	Widen to 4 lanes	2.50	10,000	6	8	7.5	8	10	8	10	10	10	53.575
39	Terrebonne	406	I-49 LA 24 (Park Ave) to LA 316 (Bayou Blue Rd)	New 2 lane service roads	2.00	6,000	10	10	8.25	10	4	10	10	10	10	56.495
40	Terrebonne	303	S Hollywood Rd LA 311 to LA 182 (Bayou Black Dr)	New 2 lane & bridge	1.35	4,225	8	8	7.75	10	9	9	10	10	10	56.657
	Terrebonne/ Lafourche	400	US 90 Through Study Area	Upgrade to I-49	40.00	10,000										