GOODBEE/WEST ST. TAMMANY LA 1077 CORRIDOR

LAND USE AND TRANSPORTATION STUDY

RPC TASK MC-1.21: FY-21 UPWP

STATE PROJECT NO. H.972382.1

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STATE OF LOUISIANA
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ST. TAMMANY PARISH GOVERNMENT

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EXECUTIVE SUMMARY

PROJECT OVERVIEW

The Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. Tammany, and Tangipahoa Parishes (RPC), in coordination with St. Tammany Parish Government (STPG) and Louisiana Department of Transportation and Development District 62 (DOTD), contracted a consultant team comprised of Digital Engineering (DE), in association with ITS Regional, LLC and The Solutient Corporation to perform an analysis of the existing LA 1077 Corridor, and provide recommendations to improve operational effectiveness, accessibility to adjacent land uses by vehicular and non-vehicular modes, and the safety of the corridor in western St. Tammany Parish.

EXISTING CONDITIONS AND DATA COLLECTIONS

(full information can be found in Section 2 and Section 3)

LA 1077 (Turnpike Rd.) is a State-owned highway running from LA 21 in Madisonville north to LA 25 south of Folsom through a quickly developing area of West St. Tammany Parish. LA 1077 is the only major roadway west of LA 21 allowing north/south travel between Madisonville, Covington, Goodbee and Folsom, as well as providing these areas access to I-12, LA 1085, and US Hwy 190. The LA 1077 corridor also serves as an important throughway for several existing and developing activity generators and public places including: schools, parks, subdivisions, commercial/medical/industrial/hospitality services.

This Stage 0 Feasibility Study is focused on the LA 1077 corridor which is terminated by Seymour Myers Drive to the south and Old U.S. 190 to the north, an approximate distance of 3.1 miles. The corridor is classified by the DOTD as a minor rural arterial roadway north of LA 1085, and a minor urban arterial roadway south of LA 1085. The majority of the roadway is two lanes, with little to no shoulder, and a posted 55 mph speed limit that was observed in the field to generally be lower than the speed of the motoring public. Limited shoulder space, deep ditches, no curbs, and no lighting creates a dangerous road corridor for travelers.

Sidewalks and crosswalks are nearly non-existent throughout the LA 1077 corridor making this roadway extremely unfriendly to pedestrians and cyclists.

The team collected data and information related to the LA 1077 corridor from field visits and data requests for the study area site analysis. The team prepared an existing conditions inventory including land use, trip generation, zoning, census data, traffic volumes, turning counts, non-vehicular facilities, crash data, public transportation, utilities, and right-of-ways. Critical drainage areas and environmental considerations were also studied.

RECOMMENDED DESIGN IMPROVEMENTS, PHASING, AND COSTS

(full information can be found in Section 5 and Section 6)

LA 1077 is a minor arterial roadway running in a north/south direction through western St. Tammany Parish. Currently the corridor facilitates close to 15,000 vehicles per day between I-12 and LA 1085, and approximately 6,000 to 9,000 vehicles per day north of LA 1085. The corridor lacks safety features for motorists, as well as any facilities for non-vehicular travel. The two-lane highway has quickly become inadequate to keep up with the accelerated growth and development of the Parish. It was determined by the Project Management Committee

(PMC) that the concepts for the corridor should take highway capacity and operational efficiency, ADA compliant pedestrian facilities, right-of-way needs and utility relocation, and environmental concerns into consideration during the design of the proposed improvements.

As part of the study the consultant team was tasked with developing two near-term and two long-term conceptual alternatives for the LA 1077 corridor with a design year of 2048.

LONG TERM ALTERNATIVES

Both long term alternatives recommended the expansion of the entire LA 1077 corridor from just south of the I-12 eastbound off ramp to just north of US Hwy 190 into a four-lane highway with a 12-foot grass or concrete median separating both directions of traffic as well as 8-foot shoulders on the outside lanes. North of Hannan High School the 12-foot median would shift to a 12-foot asphalt median level with the roadway containing diagonal striping. This choice has been made to reduce the maintenance and cost of the median. Median left turn lanes implemented north of Hannan High School would have a raised concrete curb constructed to separate those in the turn lane from traffic flowing in the opposite direction. Expansion of LA 1077 would require the reconstruction of the I-12 overpass to allow for four lanes of travel. Both long term alternatives also included the same modifications to the roundabout at LA 1077 and LA 1085. A through-lane would be added to the roundabout in all directions to facilitate more traffic traveling directly through the roundabout. The PMC also determined that the potential inclusion of slip lanes to the roundabout would allow vehicles taking a right turn at the intersection to avoid entering the roundabout, reducing the potential for vehicular crashes in the roundabout and allowing the roundabout to perform more efficiently. The remaining differences between both long-term alternatives were related to the four intersections along the corridor. These were:

- I-12 Eastbound and Westbound Off-Ramps – Both alternatives proposed widening the off/on ramps for the interstate to two-lanes as well as well as the addition of a second through lane for both northbound and southbound flows of traffic. Alternative 1 proposed the inclusion of a third lane to the off-ramp to create a dedicated right turn lane. Alternative 1 also proposed the addition of a second median left-turn lane for vehicles attempting to get onto I-12. Alternative 2 proposed two-lane roundabouts at each off-ramp that would be designed to prohibit vehicles from accidentally entering an on/off ramp in the wrong direction.

- Macdonald Rd. and Railroad Ave. – Both alternatives proposed the addition of a second through lane for both northbound and southbound flows of traffic. Alternative 1 proposed turning this abnormal intersection into a controlled intersection with traffic signals. Left-turn lanes would be added to allow vehicles turning left onto Macdonald or Railroad the ability to get out of the flow of traffic and provide vehicles with a protected left turn. A right turn would be added for northbound vehicles turning onto Railroad Ave. Railroad Ave would be expanded near LA 1077 to create separate left and right turn lanes. Signalization is important in this alternative to allow vehicles safe opportunities to enter or exit LA 1077. Alternative 2 proposed the development of a roundabout.

- US Hwy 190 – Both alternatives proposed the addition of a second through lane for both northbound and southbound flows of traffic. Alternative 1 proposed creating dedicated left turn and right turn lanes in all four directions that would have protected movements via updated traffic signals. Alternative 2 proposed the development of a two-lane roundabout at the intersection.

With the two long-term alternatives selected the PMC analyzed the effects of the improvements on the LA 1077's vehicle capacity and the LOS for the design year of 2048 utilizing the same data used for the "no build" scenario. The analysis showed that both long-term alternatives produced acceptable capacity ratings for the design year, as well as acceptable intersection LOS ratings. It was the decided by the PMC to develop Alternative 1 into near-term and long-term conceptual plans as it was determined to be more feasible as Alternative 2 required the construction of four roundabouts which would require significantly more right-of-way acquisition and a higher cost than Alternative 1.

NEAR TERM ALTERNATIVES

The analysis of the existing traffic conditions for LA 1077 highlighted the current need for capacity and intersection improvements for the area between the I-12 eastbound off-ramp to just north of LA 1085. The PMC determined that it would be most beneficial to implement the proposed long-term improvements for the corridor from the I-12 westbound off-ramp to just north of Northpointe Ct. in the near-term to alleviate current issues while constructing improvements designed for the future. The following improvements were selected to be implemented in the near-term:

- I-12 Eastbound Off-Ramp – the addition of a second lane for the on-ramp as well as the addition of a second median left-turn lane for southbound traffic attempting to enter I-12.

- I-12 Westbound Off-Ramp – the addition of a second lane for the on-ramp as well as the addition of a second median left-turn lane for northbound traffic attempting to enter I-12. East of this intersection would begin the implementation of the four-lane roadway with a center median to the roundabout. The additional second northbound lane east of the intersection would give motorists taking a right onto LA 1077 their own lane and would likely eliminate the issue of traffic backing up to shoulder of eastbound I-12. The right turn lane of the off-ramp would also be extended closer to the exit of the interstate to allow for more vehicle storage. The additional southbound lane would terminate at the intersection and act as a right turn lane for southbound traffic looking to enter eastbound I-12.

- LA 1077/LA 1085 Roundabout – An additional through lane would be implemented from all four directions of travel. As part of the near-term improvements the roundabout would be reconstructed without the designated right turn lanes. The inclusion of slip lanes could reduce safety for non-motorists utilizing the pedestrian facilities near the roundabout, and it was determined by the consultant that the performance of the roundabout would not suffer in the near-term without the slip lanes. After the implementation of near-term improvements, the roundabout's effectiveness would be re-analyzed to determine if slip lanes would need to be installed during the long-term improvements. Bootlegger Rd. would be expanded from two lanes to four lanes between the roundabout and Joe Koepp Blvd. LA 1085 would be expanded from two lanes to four lanes between the roundabout and Winward Drive.

- North of the roundabout the LA 1077 corridor would continue to be converted into a 4 lane roadway with a center median containing left turn lanes at intersecting local roads. A few hundred feet north of Northpointe Ct. the additional southbound lane would be tapered to return southbound traffic back to a single lane. The additional northbound lane would continue until the Tuscany West subdivision, where the additional lane would be terminated as a right turn lane. The near-term alternative improvements would be terminated near Joiner Wymer Rd., returning the corridor to a two-lane roadway with no median.

NON-VEHICULAR FACILITIES

It is important that future improvements developed throughout the Parish attempt to adhere to Complete Streets policies to ensure that non-motorists have a means of travel through the Parish. STPG has not adopted a Complete Streets policy, but Complete Streets compliance is required for projects on a State route. Due to the inclusion of 8-foot shoulders on the outside of all proposed lane widening for the corridor, LA 1077 would technically be Complete Streets compliant in accordance with the DOTD Minimum Design Guidelines (2017). 8-foot shoulders are deemed acceptable accommodations for both pedestrians and cyclists. However, in addition to the shoulder a 12-foot shared-use path is proposed along the entire corridor from Seymour Myers Dr. to US Hwy 190.

COST ESTIMATES

Estimated opinions of probable construction costs for the chosen conceptual options were derived from approximating roadway and related infrastructure quantities based on average unit prices provided by LA DOTD. Design refinements that must account for difficult locations such as variable or deficient public right-of-way availability, conflicts with utility locations, placement across driveways, and thorough connectivity to other corridors through way-finding signage, and other design features will be pursued and determined during the engineering phase.

The construction of the highway capacity improvements as well as the bicycle/pedestrian facilities would likely require financial commitment from St. Tammany Parish Government as well as other public and quasi-public entities that may contribute to the improvements along the LA 1077 corridor.

The implementation of the near-term roadway improvements would cost an estimated $11,469,999.84 and the implementation of the long-term roadway improvements would cost an estimated additional $21,024,726.72. Installation of all bicycle/pedestrian facilities and features along the LA 1077 corridor would cost an estimated $2,984,858.16. All improvements proposed inside of this study would cost an estimated $35,479,584.72. The estimated cost of engineering design for the proposed improvements would cost $2,664,000, with an additional $685,500 for construction engineering and inspection services. The grand total for the design and construction of all improvements included in this study would cost an estimated $38,829,084.72.

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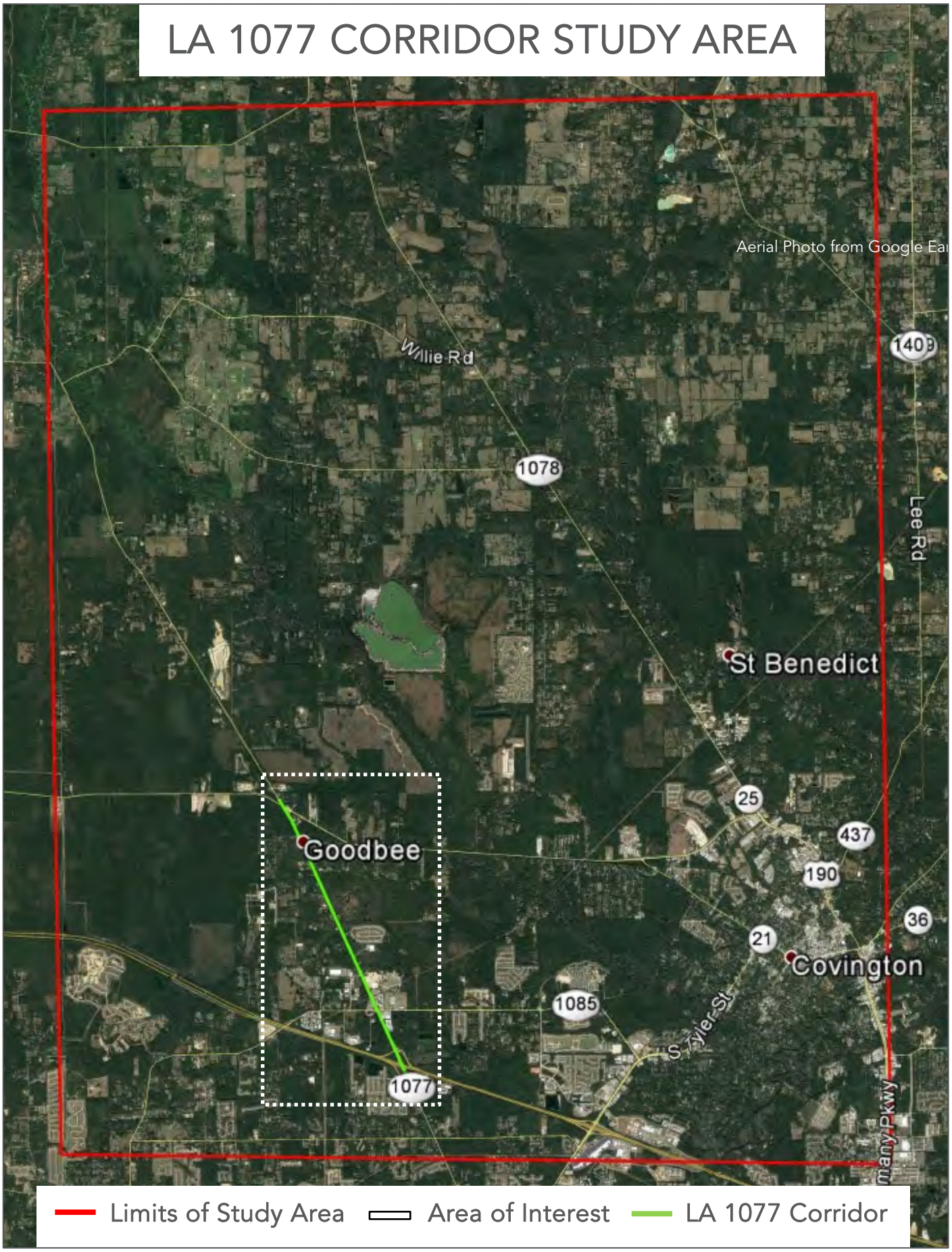


SECTION 1

INTRODUCTION

1.1 PROJECT OVERVIEW
1.2 PROJECT DESCRIPTION
1.3 BACKGROUND

INTRODUCTION

Figure 1.1
LA 1077 looking south, near LA 190

1.1 PROJECT OVERVIEW

The Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. John the Baptist, St. Tammany, and Tangipahoa Parishes (RPC), in coordination with St. Tammany Parish Government (STPG) and Louisiana Department of Transportation and Development District 62 (DOTD), has contracted a consultant team comprised of Digital Engineering (DE) in association with ITS Regional LLC (ITS) and The Solutient Corporation (Solutient) to perform an analysis of the existing LA 1077 corridor, and provide recommendations to improve operational effectiveness, accessibility to adjacent land uses by vehicular and non-vehicular modes, and the safety of the corridor in western St. Tammany Parish.

LA 1077 (Turnpike Rd.) is a State-owned highway running from LA 21 in Madisonville north to LA 25 south of Folsom through a quickly developing area of West St. Tammany Parish. LA 1077 is the only major roadway west of LA 21 allowing north/south travel between Madisonville, Covington, Goodbee and Folsom, as well as providing these areas access to I-12, LA 1085, and US Hwy 190. The LA 1077 corridor also serves as an important throughway for several existing and developing activity generators and public places including: schools, parks, subdivisions, commercial/medical/industrial/hospitality services.

Working in consultation with STPG, RPC has identified the project limits for the analysis of the study area as follows: LA 40 to the north, LA 21 to the east, Brewster Rd. to the south, and the Tangipahoa Parish line to the west. In total the study area contains nearly 111 square miles of St. Tammany Parish. The LA 1077 corridor study area is located approximately 6.5 miles west of the City of Covington, LA. The 3.1 mile segment of the LA 1077

corridor from Seymour Meyers Dr. south of I-12 to Old US 190 north of US Hwy 190 has been identified by RPC and STPG as the portion of LA 1077 where proposed capacity improvements could provide increased mobility to the study area and Parish.

1.2 PROJECT DESCRIPTION

The purpose of this land use and transportation study is to determine the high-level costs, feasibility, and potential environmental concerns of a roadway capacity project for LA 1077 from US 190 south to I-12 in the Covington and Goodbee areas of St. Tammany Parish. The scope of this report shall consist of reviewing the existing and projected future conditions of the corridor, and collecting data to provide a conceptual design and cost estimate for roadway capacity/safety improvements, non-vehicular travel improvements, environmental considerations, and other proposed physical improvements consistent with the latest RPC/DOTD Access Management and Complete Streets policies.

Figure 1.2
Area of Interest for Conceptual Improvements

The scope of work for the Stage 0 Feasibility Study included the following tasks:

Project Management Committee (PMC) – Assist the RPC in establishing and supporting a PMC to guide the technical work effort and review the consultant's work products. The PMC includes members of the RPC, STPG, and the DOTD District 62. The consultant team organized the project kick-off meeting and developed a project schedule indicating major milestones to be presented and agreed upon by the PMC through a meeting. There were a total of four (4) PMC meetings over the course of the study. In addition, the consultant team organized two (2) meetings for the general public to provide comments regarding the study, as well as organizing meetings with local stakeholders in the area to discuss their concerns for the corridor as well. All presentation materials, meeting minutes, and general public/local stakeholder feedback can be found in Appendix E.

Existing Conditions/Data Collection – The consultant team organized field visits to develop an inventory of existing roadway and site conditions for the LA 1077 corridor. Data collected during the site visits included, but not limited to the following:

- Land use adjacent to the corridor and trip generation characteristics of the same
- Crash data and analysis in the corridor
- Environmental conditions

- Utility types, locations, and ownership relative to the roadways
- Areas of potential environmental or cultural resource concern

The consultant was also responsible for the collection of Average Daily Traffic (ADT) at six (6) points along the corridor selected by RPC to determine peak AM and PM traffic hours. Turning movement counts were also collected during the peak hours at five (5) intersections selected by RPC. Analysis of the collected data was used to establish baseline traffic volumes (existing conditions) and existing levels of service (LOS) for each intersection. The consultant created standalone reports for the analysis of the existing corridor and traffic conditions to be included in the appendix of the final report.

Planning and Design Development – RPC provided the consultant with a 2048 Existing + Committed roadway network to be used for analysis of a "no-build" scenario along the corridor. Utilizing the analysis of the existing and design year "no-build" conditions, the consultant developed two (2) build scenarios for the design year of 2048 that RPC used to create model outputs showing the effects of the build scenarios on traffic volumes along the corridor. The data provided by RPC was used by the consultant to analyze the effectiveness and feasibility of each build scenario to determine a single build scenario that would be used as the basis for final conceptual recommendations. A standalone report was developed for the analysis of design year build scenarios to be included in the appendix of the final report.

The consultant team proposed near-term and long-term conceptual plans for the LA 1077 corridor incorporating operational effectiveness, safety improvements, land use consequences, and economic/environmental feasibility for PMC consideration. The overall design criteria for the project included roadway geometry, utility and drainage considerations, roadway capacity improvements, non-vehicular travel facilities, striping, signage, crosswalks, ADA compliance, and shall be consistent with DOTD's latest Safety and Design policies, including the EDSM, Complete Streets Policy, and Access Management Policy. As part of the planning and design development, the consultant team prepared typical sections for the proposed concepts along the LA 1077 corridor. The typical sections were based upon design criteria and roadway functional classification and shall meet the current design criteria as required by DOTD.

Stage 0 and Environmental Documentation – DOTD's Stage 0 Budget and Environmental Checklist (Appendix C) were utilized to document the results of the preliminary environmental review. The consultant team assessed any potential mitigation cost that could possibly be incurred in future stages of the development of the project for the proposed concept studied in the report. All field investigations to assess environmental issues or impacts shall be accomplished by conducting a field survey and researching internet websites.

Opinion of Probable Cost – The consultant team developed preliminary itemized quantities and unit cost estimates for work proposed within the near-term and long-term alternatives.

Draft and Final Reports – The report includes conceptual layouts and descriptions of the proposed improvements in a format suitable for transmittal by RPC to DOTD and STPG. DOTD Stage 0 and Environmental Checklists are included in the draft and final report. Following review and approval by the PMC of the draft submission, the consultant will provide RPC with ten (10) bound copies and ten (10) disks in electronic format of the Final Land Use and Transportation Scenario Planning Study for distribution.

1.3 BACKGROUND

Several Transportation System Management (TSM) projects have been implemented in the area that have improved localized traffic congestion. The West St. Tammany area has experienced rapid continuous population growth and development within the last ten to fifteen years that appears to be outpacing localized improvement efforts, warranting a long-term analysis for a capacity project. Planned capacity projects for US 190 (Collins Blvd) east of LA 25 (US 190B to LA 25) have received a FONSI per the NEPA process and are going to be implemented in phases. Potential improvements to US 190 west of LA 25, and this LA 1077 capacity study represent the next step in accommodating the forecasted and planned growth of West St. Tammany.

SECTION 2

EXISTING AND FORECASTED CONDITIONS

EXISTING AND FORECASTED CONDITIONS

2.1 LA 1077 CORRIDOR OVERVIEW

This Stage 0 Feasibility Study is focused on the LA 1077 corridor which is terminated by Seymour Myers Drive to the south and Old U.S. 190 to the north, an approximate distance of 3.1 miles. The corridor is classified by the DOTD as a minor rural arterial roadway north of LA 1085, and a minor urban arterial roadway south of LA 1085. The majority of the roadway is two lanes, with little to no shoulder, and a posted 55 mph speed limit that was observed in the field to generally be lower than the speed of the motoring public. Limited shoulder space, deep ditches, no curbs, and no lighting creates a dangerous road corridor for travelers. North of the LA 1077/LA 1085 roundabout, there are edge-line and center-line rumble strips to deter drivers from exiting the roadway or crossing into the opposite travel lane.

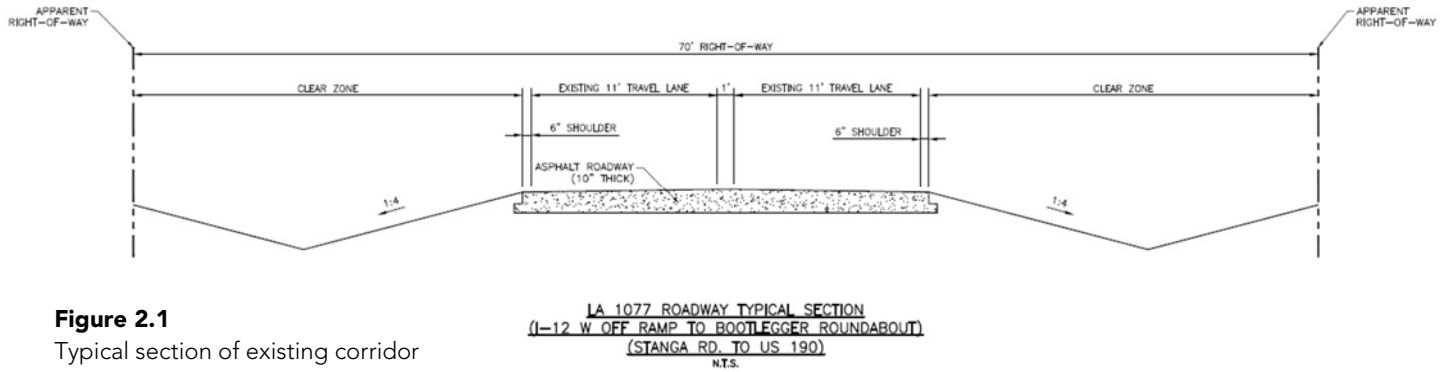


Figure 2.1
Typical section of existing corridor

Sidewalks and crosswalks are nearly non-existent throughout the LA 1077 corridor making this roadway extremely unfriendly to pedestrians and cyclists. A major area of pedestrian safety concern is at the roundabout at the location of Hannan High School and Coquille Park at LA 1077 and LA 1085. The study team observed students crossing the road in this area, with no safety measures in place from oncoming traffic.

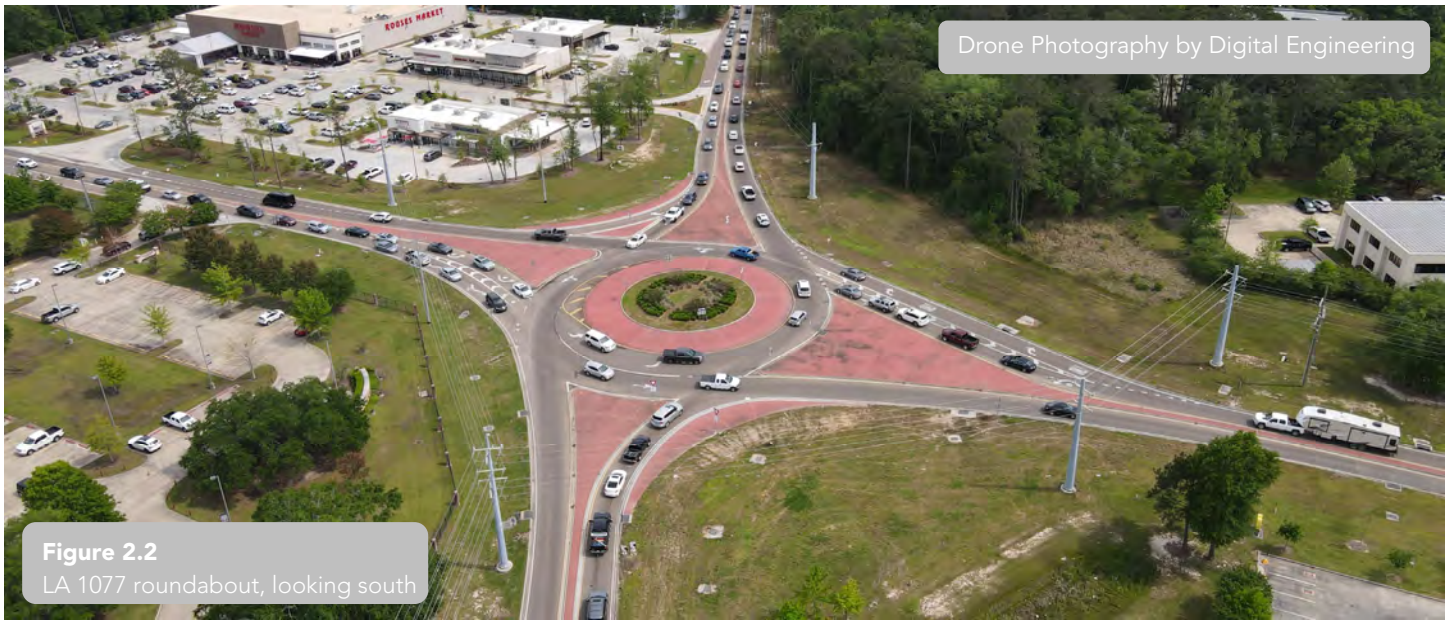


Figure 2.2
LA 1077 roundabout, looking south

The LA 1077 corridor is the only north/south roadway providing access to the quickly developing LA 1077 and LA 1085 intersection as well as access to I-12. Peak hours volumes and congestion on LA 1077 between I-12 and Northpointe Ct. are intensified in the area as vehicles are funneled onto LA 1077 to access numerous subdivisions on LA 1085, Archbishop Hannan High School, Coquille Parks and Recreation, and a high concentration of commercial/retail/industrial businesses near the roundabout. As this area is only expected to continue growing and developing, it is apparent that the corridor needs to be expanded to facilitate the existing volume of vehicles as well as the expected future growth.

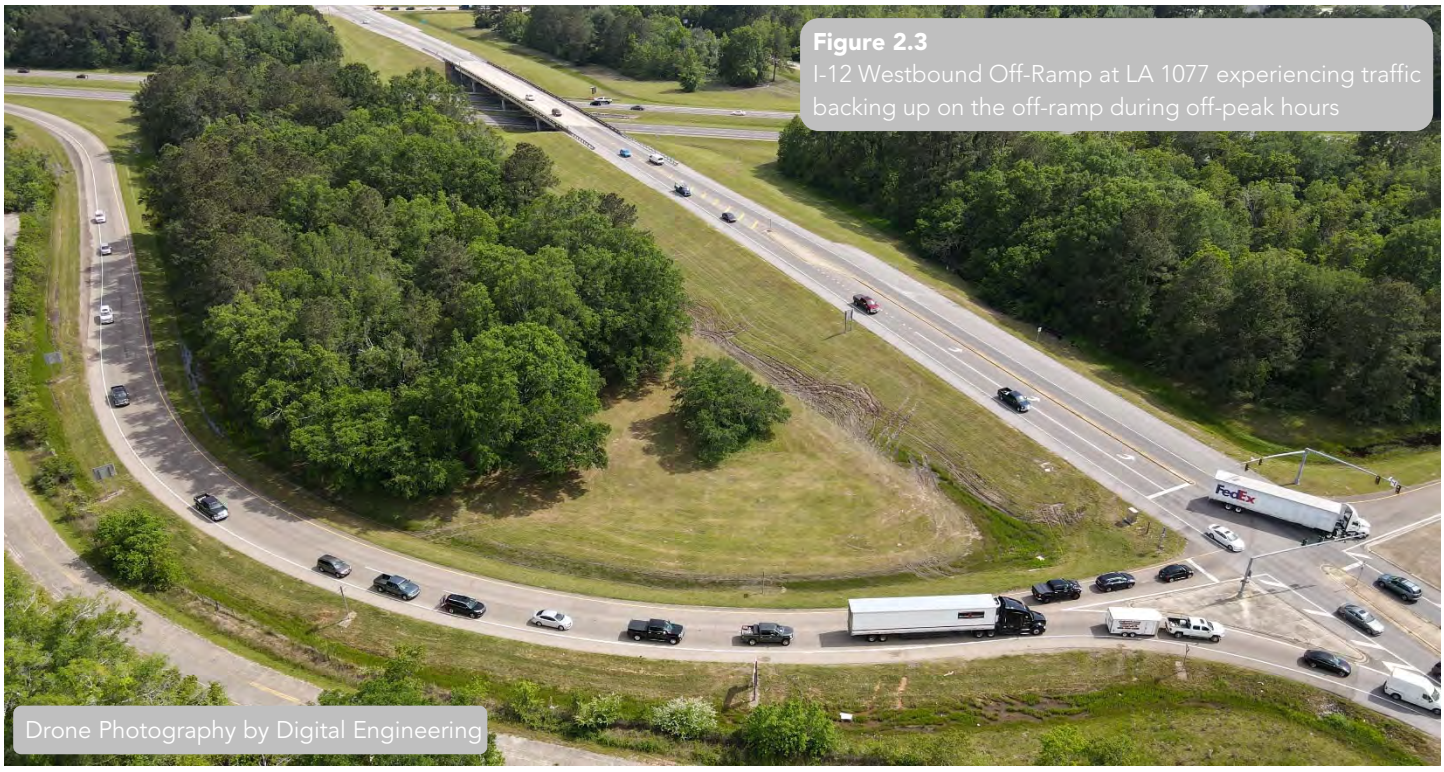


Figure 2.3
I-12 Westbound Off-Ramp at LA 1077 experiencing traffic backing up on the off-ramp during off-peak hours

There are three signal-controlled intersections for this corridor at both I-12 off ramps, and the intersection of LA 1077 and US Hwy 190. The signals and timings for these intersections are maintained by the DOTD District 62 Traffic Operations Engineer (DTOE). All recommendations on adjustments at these intersections must be reviewed by the DTOE.

Like many Louisiana Highways, LA 1077 has significant drainage issues and requires upgrades. During site visits the consultant observed standing water in several locations along the LA 1077 study corridor, especially north of Stanga Rd, and again as 1077 proceeds northward and approaches US Hwy 190. Most of the corridor resides within a St. Tammany Parish "Designated Critical Drainage" area, and there are known issues with runoff from adjacent land and the roadway discharging into both residential and commercial property.

The development of the Ochsner Blvd. Connector Road accessing LA 1077 between I-12 and LA 1085 has been ongoing for years with a separate traffic study completed in 2015 to determine the effects of the connector road being constructed. The traffic study related to the Connector Road was reviewed for trip generation characteristics and was considered during the development of the design alternatives. The copy of the 2015 study completed for the Ochsner Blvd. extension's connection to LA 1077 can be found in **Appendix F**.

A more in-depth overview of the LA 1077 corridor and its features, apparent deficiencies, and storm water/flood management can be found in Section 1.4 of the Existing Conditions Report found in Appendix A.

2.2 LAND USE, ZONING, AND CENSUS DATA

2.2.1 Land Use and Trip Generation Overview

The existing land use and rapid development of the areas adjacent to the LA 1077 corridor are intimately connected to trip generation and the current traffic issues along LA 1077. When a land use is determined for a piece of land, typically the number of daily trips generated by that property can be estimated. The consultant team received existing land use data (2010) from STPG and utilized site visits to create an inventory showing the current apparent land use along the corridor.

Most of the existing land use adjacent to the corridor north of Northpoint Ct. consists of either single family residential uses or the land is undeveloped. Single family residential land use is important to maintain the character of the area as a conservational watershed and to assist with drainage in the area. In comparison to the condensed population located in subdivisions, these single family residential units spread throughout the area would generate a low intensity of daily trips in the area. There is also small concentration of commercial and industrial land use near the LA 1077 and US Hwy 190 intersection which would generate a moderate number of daily trips through the intersection. Two corners at the intersection are currently undeveloped.

However, from Northpoint Ct. south to the Seymour Myers Dr. on the south side of I-12 nearly all of the land has been developed. Two large industrial land use areas hold business parks on the west side of LA 1077 that will generate a high intensity of trips throughout the day. The northwest and southeast corners of LA 1077 and LA 1085 are predominately commercial land use containing retail, dining, and other commercial services. These two corners will also generate a high intensity of trips throughout the day, even on the weekends. The land use on the northeast corner of the intersection is predominantly institutional, containing Archbishop Hannan High School and Coquille Parks and Recreation. Hannan is a high intensity trip generator for the area in the AM and PM peak as school lets in and out, while Coquille is a major trip generator in the afternoon and the weekend.

South of I-12 the LA 1077 corridor is flanked by commercial and industrial land use, as there are two large industrial and commercial business parks located near the eastbound off ramp. These two parks will generate a high intensity of trips during weekdays, but trip generation from these business parks would be moderate on weekends.

At the time of this report only two subdivisions are located within the designated study area with their only access points connecting to LA 1077. One subdivision is between LA 1085 and US Hwy 190 while the other is south of I-12. These two subdivisions are fully developed and produce moderate to high intensity trip generation depending on the day of the week. A number of large subdivisions are located on LA 1085 east and west of LA 1077 that produce a high intensity of trips each day along the corridor, as residents have few other options than LA 1077 to arrive at their desired destination.

STPG is in the process of producing New Directions 2040 (ND 2040) that will present a comprehensive future land use plan update and recommendations for future land use throughout the entire Parish. In 2000 STPG developed ND 2025, creating future land use maps that were last updated in 2011. As ND 2040 is currently planned to be released near the end of 2021 with updated future land use data and recommendations, it was

decided by RPC to have the study focus on future land use adjacent to the corridor that is currently under development.

Currently there are few areas adjacent to the corridor that are under development, with most of the development occurring between Northpoint Ct. and I-12. The remaining undeveloped land on the northeast corner of LA 1077 and US Hwy 190 is currently in development to become a commercial land use area will likely generate a moderate number of trips throughout the day. The remaining undeveloped land on the northwest corner of LA 1077 and LA 1085 is currently planned to become commercial land use with more retail, dining, and office space that will generate a moderate to high intensity of trips throughout the week. Coquille is currently developing the land north of Hannan High School to Northpointe Ct. This expansion of Coquille will increase the number of trips generated by the park, as well as provide a potential second access point to the park on LA 1077.

Figure 2.4
LA 1077 roundabout looking north, showing congestion approaching the roundabout as well as development occurring on the northwest corner

A more detailed breakdown of the existing and future land use adjacent to the corridor as well as the existing and future trip generation can be found in Sections 1.2.2, 1.2.4, and 1.2.8 of the Existing Conditions Report found in **Appendix A**.

2.2.2 Existing Zoning

STPG provided the existing zoning classifications from 2020 to the consultant team to show how land adjacent to the LA 1077 corridor is classified. The current zoning classifications help to determine how undeveloped land could be developed in the future. Almost all the undeveloped land between Northpointe Ct. and US Hwy 190

is currently zoned as suburban or single family residential. This follows in line with what is currently developed in that area, and it is likely that once developed the land use will likely be residential. The undeveloped land on the northwest corner of the westbound I-12 off ramp is currently zoned for highway commercial, so it is also likely that once developed that the land use would also be commercial and would generate traffic at a similar rate to the neighboring properties. A breakdown of the zoning along the corridor and a map showing the existing zoning classifications can be found in Section 1.2.3 of the Existing Conditions Report in Appendix A.

2.2.3 Census Data

According to the U.S. Census Bureau, in 2020 St. Tammany Parish had a population of 264,570, an increase of 13.2% compared to the population of 233,740 in 2010. A detailed breakdown of the 2020 Decennial Census data is currently unavailable for the study area but estimates from the U.S. Census Bureau for 2019 show the study area also experiencing growth with a population of 38,645 in 2010 and an estimated population of 49,071 in 2019. This is an approximate 27.0% increase in the study area. Both growth rates are higher than the national average of 7.4%, and St. Tammany Parish is currently one of the fastest growing parishes in the State of Louisiana. The median age of residents in the study area is 39.5 years of age, with 12,456 residents under the age of 18, and 36,615 residents over the age of 18. Seniors 65 years of age and older make up 8,120 total residents. Half of the households in the study area have two vehicles available per household, with 97.2% of all households in the study area having at least one vehicle. The population increase, in conjunction with high vehicle ownership rates and a high level of driving age individuals, creates an influx of traffic volume in the study area that is overwhelming the existing roadways.

In Section 1.2.1 of the Existing Conditions Report found in Appendix A there are nine tables presenting estimates for various demographic features broken down into the census tracts included in the study area, as well as St. Tammany Parish as a whole.

2.3 NON-VEHICULAR FACILITIES AND PUBLIC TRANSPORT

Currently there are no pedestrian or cyclist facilities existing along any portions of the LA 1077 corridor study area. This presents safety concerns as Hannan High School and Coquille Park have many high school and elementary school aged children that have nowhere to safely travel to school or the park. There are also no crosswalks anywhere along the corridor raising driver awareness to pedestrians and providing a designated area for pedestrians to cross the road. The lack of pedestrian facilities also creates an unsafe environment for disabled citizens who will likely have no choice but to use the roadway to travel within the study area. STPG does provide an on demand public transport service that will bring residents to a desired location within the Parish. This service is non-emergency and provides curb-to-curb service on a call-in, first come first served basis and provides reduced rate or even free rides for those over 60 or with disabilities. A sidewalk running from Coquille Park to White Chapel Rd. will soon be constructed on the north side of Bootlegger Rd. Due to LA 1077 being a State-owned route, non-vehicular facilities will be required as part of the concepts proposed within this project.

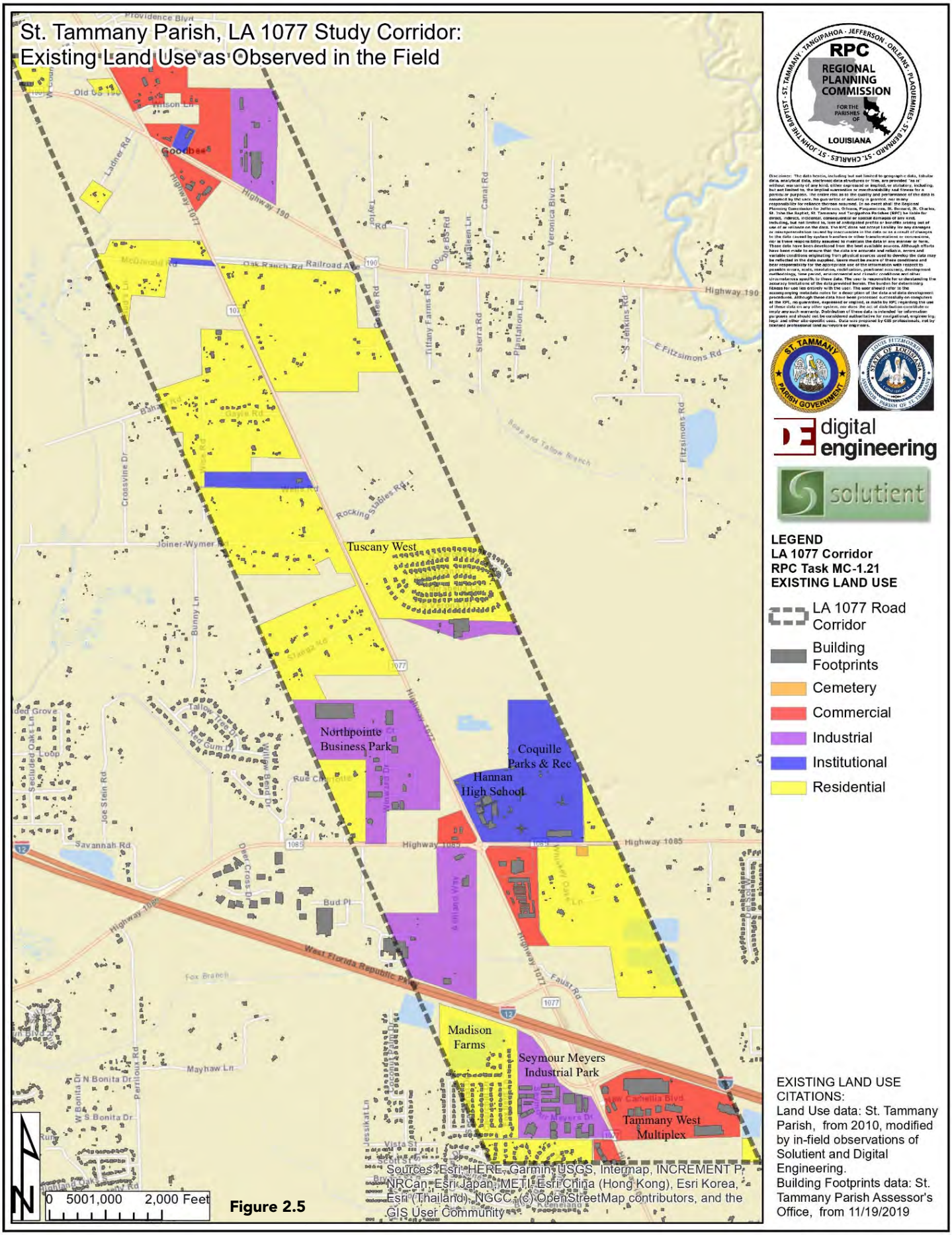
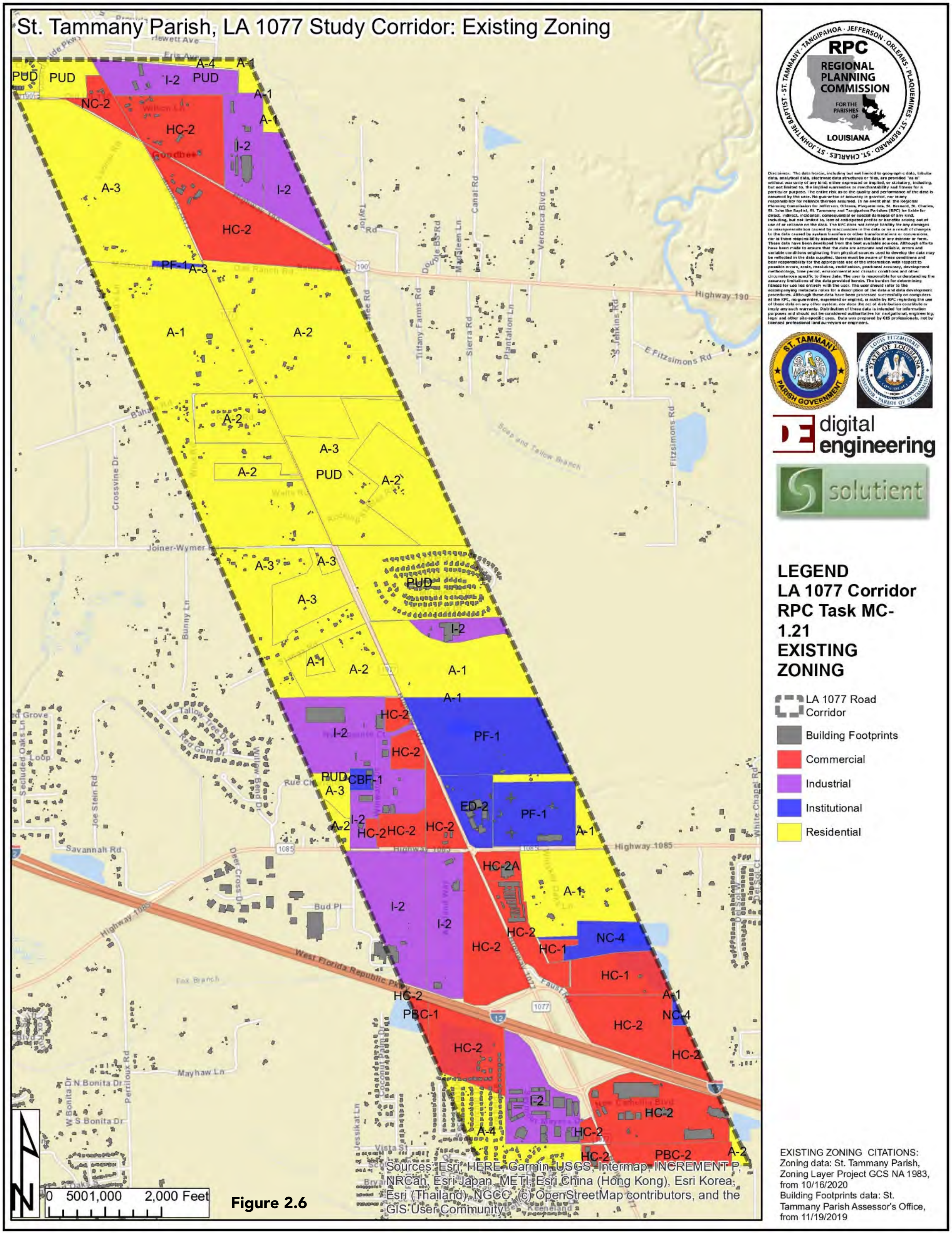

St. Tammany Parish, LA 1077 Study Corridor:
Existing Land Use as Observed in the Field
RPC
REGIONAL PLANNING COMMISSION
FOR THE PARISHES OF
LOUISIANA
digital engineering
solutient
LEGEND
LA 1077 Corridor
RPC Task MC-1.21
EXISTING LAND USE
LA 1077 Road Corridor
Building Footprints
Cemetery
Commercial
Industrial
Institutional
Residential
Tuscany West
Northpointe Business Park
Coquille Parks & Rec
Hannan High School
Madison Farms
Seymour Meyers Industrial Park
Tammany West Multiplex
Highway 190
Highway 1085
Highway 1077
Railroad Ave
Oak Ranch Rd
E Fitzsimons Rd
Savannah Rd
Joiner-Wymer Rd
Rocking Stables Rd
Mayhaw Ln
Faust Rd
West Florida Republic Pkwy
0 5001,000 2,000 Feet
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
EXISTING LAND USE CITATIONS:
Land Use data: St. Tammany Parish, from 2010, modified by in-field observations of Solutient and Digital Engineering.
Building Footprints data: St. Tammany Parish Assessor's Office, from 11/19/2019

Figure 2.5


St. Tammany Parish, LA 1077 Study Corridor: Existing Zoning
RPC REGIONAL PLANNING COMMISSION FOR THE PARISHES OF LOUISIANA
LEGEND
LA 1077 Corridor
RPC Task MC-1.21
EXISTING ZONING
LA 1077 Road Corridor
Building Footprints
Commercial
Industrial
Institutional
Residential
digital engineering
solutient
EXISTING ZONING CITATIONS:
Zoning data: St. Tammany Parish, Zoning Layer Project GCS NA 1983, from 10/16/2020
Building Footprints data: St. Tammany Parish Assessor's Office, from 11/19/2019
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
0 500 1,000 2,000 Feet
Highway 190
Highway 1085
West Florida Republic Pkwy
E Fitzsimons Rd
Joiner-Wymer Rd
Savannah Rd
Mayhaw Ln
PUD
I-2
NC-2
HC-2
A-1
A-2
A-3
A-4
PF-1
CBF-1
ED-2
HC-2A
HC-1
NC-4
PBC-1
PBC-2
Figure 2.6

2.4 UTILITIES AND RIGHT-OF-WAY

The consultant team investigated utility types, locations, and ownership relative and adjacent to the LA 1077 corridor. The utility types present include sewer and water, electric, natural gas, and communications/ fiber optic infrastructure. STPG maintains the sewer and water systems in the area, with water main lines, sewer discharge lines, and water wells throughout the study area. Cleco is the provider of electricity in the area adjacent to the corridor, with power poles running down the sides of the LA 1077 corridor and seven metal power poles with foundations circling the roundabout. Natural gas is provided by Atmos Energy in the study area, with one gas main running beneath the roundabout as well as a gas line present along the LA 1077 corridor. The City of Madisonville also recently installed a 23,000' gas line that runs along the west side of the LA 1077 corridor. AT&T maintains buried fiber optic cables that appear to be within proximity of the LA 1077 corridor. STPG, Cleco, Atmos, and the City of Madisonville have provided the consultant team with the approximate locations of their utilities in the area, and they will need to be taken into consideration during the implementation of roadway improvements. AT&T stated that they could not provide the location of their lines, and 811 would need to be called during construction to locate the buried lines. The approximate locations for existing utilities adjacent to the corridor can be found in **Appendix A**.

Figure 2.7
Existing electrical and gas utilities along LA 1077

DOTD supplied the consultant team with plans for the roundabout at LA 1077 and LA 1085 with which approximate right-of-way widths were determined for the corridor. For most of the corridor between major intersections the State-owned right-of-way appears to be 35' from the center of the roadway (70' total). The State owns all right-of-way between the two I-12 off ramps. In the roundabout the plans supplied by the DOTD show the right-of-way width varying form 70' to 325'. The right-of-way maps can be seen in **Appendix F**.

SECTION 3

DATA COLLECTION AND ANALYSIS

DATA COLLECTION AND ANALYSIS

3.1 OVERVIEW OF DATA COLLECTION EFFORT

The collection of data for this Stage 0 report was a combined effort of the consulting team, RPC, STPG, and DOTD using existing data from previous sources, projects/studies, and new data collected during field visits. At the kickoff meeting it was determined what data the Consultant would be responsible for collecting in the field, and what existing data could be used.

St. Tammany Parish Government (STPG) and the New Orleans Regional Planning Commission (RPC) provided geospatial data for the corridor study area including zoning, land use (existing and future), building footprints, utilities, environmental and cultural resources, and other data relevant to the study. Current DOTD and STPG access management policies and permitting policies were reviewed to determine how the policies may affect the project.

The consultant team collected in-field data for ADT, AM and PM peak hours, turning movement counts, and vehicle classifications along the LA 1077 corridor. Prior to the beginning of the project, the PMC determined the six (6) locations where ADT counts would be collected (three consecutive days at each location), as well as the five (5) locations where peak hour turning movement counts would be collected.

The consultant team received a SELATRAM v9 model run showing current (2020) and future (2048) traffic data from RPC.

RPC provided crash data to the consultant team for analysis. Crash data from RPC was crossed with the DOTD Crash 1 database to disclose more information about crashes on the LA 1077 corridor. The crash data analyzed for this study spanned from January 1st, 2017 to December 31st, 2019.

The consultant team made several field visits to the study area for data collection and site analysis. The data collection visits included collecting roadway, traffic, and right-of-way data for the identified LA 1077 study corridor, as well as creating a photographic catalogue. Following the in-field data collection the consultant team prepared an Existing Conditions Report that can be found in **Appendix A**.

3.2 EXISTING TRAFFIC COUNTS AND ANALYSIS

A full report can be found in **Appendix D** that was created by the consultant team to analyze the existing traffic conditions along the corridor as well as the existing Level of Service (LOS) for intersections within the study area. The following is a summary of the traffic data collected and the analysis performed on the data.

The consultant team was tasked with collecting average daily traffic (ADT) counts and vehicle classifications, which would be used to determine the AM and PM peak hours and the existing LOS for the LA 1077 corridor. From December 1st through December 10th the consultant collected ADT and turning movement counts (TMC) along the corridor. The data collected during this period may not fully represent the peak ADT and turning movement counts along the corridor due to lower traffic volumes overall caused by the COVID-19 pandemic. However, the PMC agreed that no correction factor would be used to account for this decrease in traffic as the collected data was able to reveal portions of the corridor that are currently insufficient.

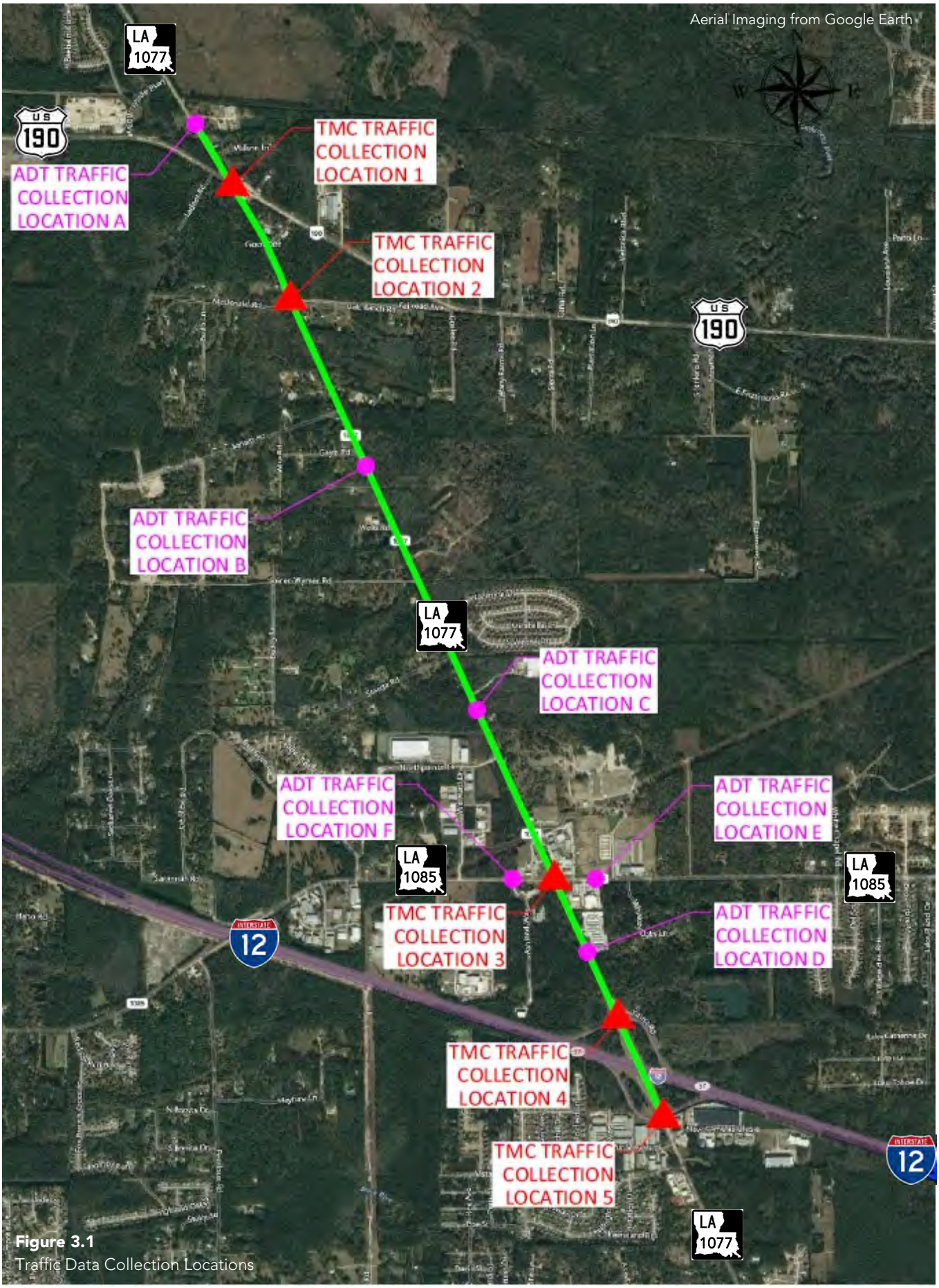


Figure 3.1
Traffic Data Collection Locations

The PMC selected six locations where three-day, twenty-four hour, bidirectional automated traffic counts would be collected. The locations and dates of collection were as follows:

A. LA 1077 at 500' north of US Hwy 190 (Wilson Ln.) (12/1 - 12/3)
B. LA 1077 between US Hwy 190 / Joiner Rd. (12/1 - 12/3)
C. LA 1077 between Joiner Rd. / LA 1085 (12/8 - 12/10)
D. LA 1077 between LA 1085 / I-12 (12/1 - 12/3)
E. LA 1085 between LA 1077 / Whiskey Oaks Ln. (12/8 - 12/10)
F. LA 1085 between LA 1077 / Ashland Way. (12/1 - 12/3)

The ADT for each location was calculated using the collected data and can be seen in **Table 3.1**. The AM peak hour was determined to be 8:15 – 9:15, and the PM peak hour was determined to be 5:00 – 6:00. ADT data would be used to perform a capacity analysis for the corridor. Further analysis of the traffic counts showed that the breakdown of vehicles on the LA 1077 corridor was almost uniform at each count location, with the following percentages representing the breakdown of vehicles using the corridor: Cars & Trailers – 94.4%, 2 Axle Long – 2.8%, Buses – 1.3%, Other – 1.0%.

Table 3.1 ADT COUNTS

LOCATION	NB	SB	EB	WB
A	3,095	3,151		
B	5,523	5,483		
C	4,021	5,169		
D	8,804	7,070		
E			2,106	3,379
F			6,038	7,008

To accelerate the data collection operation, the PMC determined a 3 to 4 hour range in the AM and PM that would likely contain the peak hours and collected turning movement counts (TMCs) at the same time ADT counts were collected. Once the peak hours were determined the TMC data was analyzed to find the peak hour counts at the five selected intersections. The data for peak hour TMCs would be utilized to determine the level of service (LOS) for the intersections along the corridor. An example of the turning movement counts can be seen in **Figure 3.2**. The location and dates of collection for the five intersections where TMC data was collected are as follows:

1. US Hwy 190 at LA 1077 (12/1)
2. LA 1077 at Railroad Ave./McDonald Rd. (12/1)
3. LA 1077 at LA 1085 (roundabout) (12/3)
4. LA 1077 at I-12 WB Ramp (12/2)
5. LA 1077 at I-12 EB Ramp (12/2)

ADT data was processed through Highway Capacity Software (HCS) to perform the capacity analysis of the corridor at the six ADT collection points. Capacity analysis for the existing conditions of the corridor can be seen below. Highway capacity is graded on a scale from "A to F", with each succeeding grade representing a higher expected delay for a vehicle to traverse the segment of roadway. The area between I-12 and LA 1085 is the segment of existing roadway that appears to be the most overcapacity with only a "C" and "D" ratings in the AM and PM. In general, the other existing segments of the corridor appear to be able to facilitate current

Figure 3.2
Turning movement counts at the LA 1077/LA 1085 roundabout

traffic volumes, with only the afternoon peak of eastbound LA 1085 receiving a rating lower than a "C". This data shows that the segment of LA 1077 from I-12 to LA 1085 is currently the most in need of capacity improvements.

The metric for analyzing the existing LOS for five intersections in the study area was Intersection Capacity Utilization (ICU). ICU determines the LOS for an intersection by comparing the intersections volume of traffic with the intersection's capacity. This metric is also compatible with the Highway Capacity Manual's delay-based metric. This means the ICU metric will also determine expected delays for vehicles processing through the intersection. A detailed explanation of the rating system for the ICU metric can be found in the Existing Traffic Analysis Report found in **Appendix D**. The rating scale for the ICU metric runs from "A" to "H", with "A" and "B" representing little or no congestion, "C" and "D" representing moderate congestion, "E" and "F" representing severe congestion, and "G" and "H" representing excessive congestion. It should be noted that an LOS rating of "C" or "D" is typically the average rating of an intersection and is deemed acceptable. Ratings of "A" and "B" can be achieved but can also mean that the intersection is overdesigned, and a more economical or simplified design could have been utilized.

For the AM and PM peak hours the majority of the intersections provide favorable results with the roundabout at LA 1077 and LA 1085 proving to be the intersection with the lowest overall rating. According to the analysis the southbound (SB) traffic entering the roundabout experiences a vastly higher delay in moving through the intersection than any other intersection. In the PM peak hour the SB traffic experiences difficulty getting through the intersection, but the northbound (NB) thru traffic and the westbound (WB) thru traffic also experience significant delays. These delays would cause congestion in the NB, SB, and WB lanes, while the eastbound (EB) lanes experience no congestion. A point of emphasis in the conceptual designs should be facilitating the NB,

SB, and WB travel lanes in the roundabout to remove congestion in the peak hours. The I-12 off-ramps have also received poor ratings and would currently benefit from improvements.

3.3 FUTURE TRAFFIC DATA COLLECTION

As part of the study RPC agreed to produce model run data to predict traffic volumes along the LA 1077 corridor for a "no build" scenario and two "build" scenarios for the design year of 2048. The "no build" data would represent data if nothing was done to the LA 1077 corridor by 2048, and the "build" scenarios would show the effects that potential improvements would have on the predicted volumes. All models contain RPC determined expected growth patterns and social-economic inputs for St. Tammany Parish that help predict future traffic volumes. Prior to the creation of the model run data, RPC provided the consultants with an expected growth rate of 2.21% for traffic in the area that could also be used to analyze future conditions. The consultant also applied this growth rate to the traffic data that was collected in the field to predict traffic volume on the corridor in 2048. The ADT counts determined by the model runs for 2048 were all similar no matter the scenario. This shows that no matter the improvements on the corridor the expected traffic generated in the area would appear to remain consistent. However, the predicted ADT counts based on the growth of the consultant collected data show significantly more traffic volume growth between I-12 and LA 1085. LA 1085 west of the roundabout also shows increased traffic volume. North and east of the roundabout predict traffic volumes in line with the model runs. With the growth of this area occurring at higher rates than the national average, the choice was made by the consultant to proceed with future traffic analysis utilizing the consultant projected volumes as this represents a worst-case scenario for the corridor. The Ochsner Blvd Connector Road was included in RPC's model run data for 2048. The short-term effects of the connector road will not increase volume on LA 1077. However, as the connector road properties come into commerce a Traffic Impact Analysis (TIA) may be required to determine if mitigation is necessary.

3.4 ANALYSIS OF NO-BUILD SCENARIO FOR 2048

The consultant utilized the same methods of analysis for the corridor in the design year of 2048 as were used for the existing conditions. A full report on the future "no-build" analysis can be found in Appendix D. The Final Traffic Analysis Report also details the projected turning movement counts at all the intersections based on the same expected growth provided by RPC.

The consultant performed the analysis for the design year of 2048 to create a baseline for how the corridor would perform if no improvements were made. When compared to the existing conditions analysis, the data is clear that the entire corridor for I-12 to US Hwy 190 would be overcapacity and the four major intersections would be at failure. Average rating for intersection LOS in the "no-build" scenario was an "F" and the overall capacity rating for the corridor was closer to a "D" or "E." The analysis proves that a "no-build" scenario is not an option and improvements will be needed throughout the corridor.

3.5 CRASH DATA

The RPC provided crash data to the consultant team for the period from January 2017 to December 2019. The crash data from this three-year period was analyzed by type, frequency, and severity. Bicycle, pedestrian, and vehicular crashes in the Goodbee/St. Tammany LA 1077 Corridor study area continue to be studied and mitigated through analysis and enhancements such as this effort. This corridor is heavily automobile oriented due to the lack of pedestrian facilities; however, Hannan High School and Coquille Parks and Rec increase the

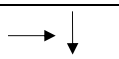
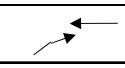
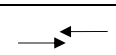
opportunity for pedestrians or cyclists to come into conflict with vehicles as students and park users walk across the road to the local retail areas. With proper street design (i.e. implementation of crosswalks and complete streets design) and behavior change amongst all road users, the overwhelming majority of bicycle, pedestrian, and vehicle crashes are preventable.

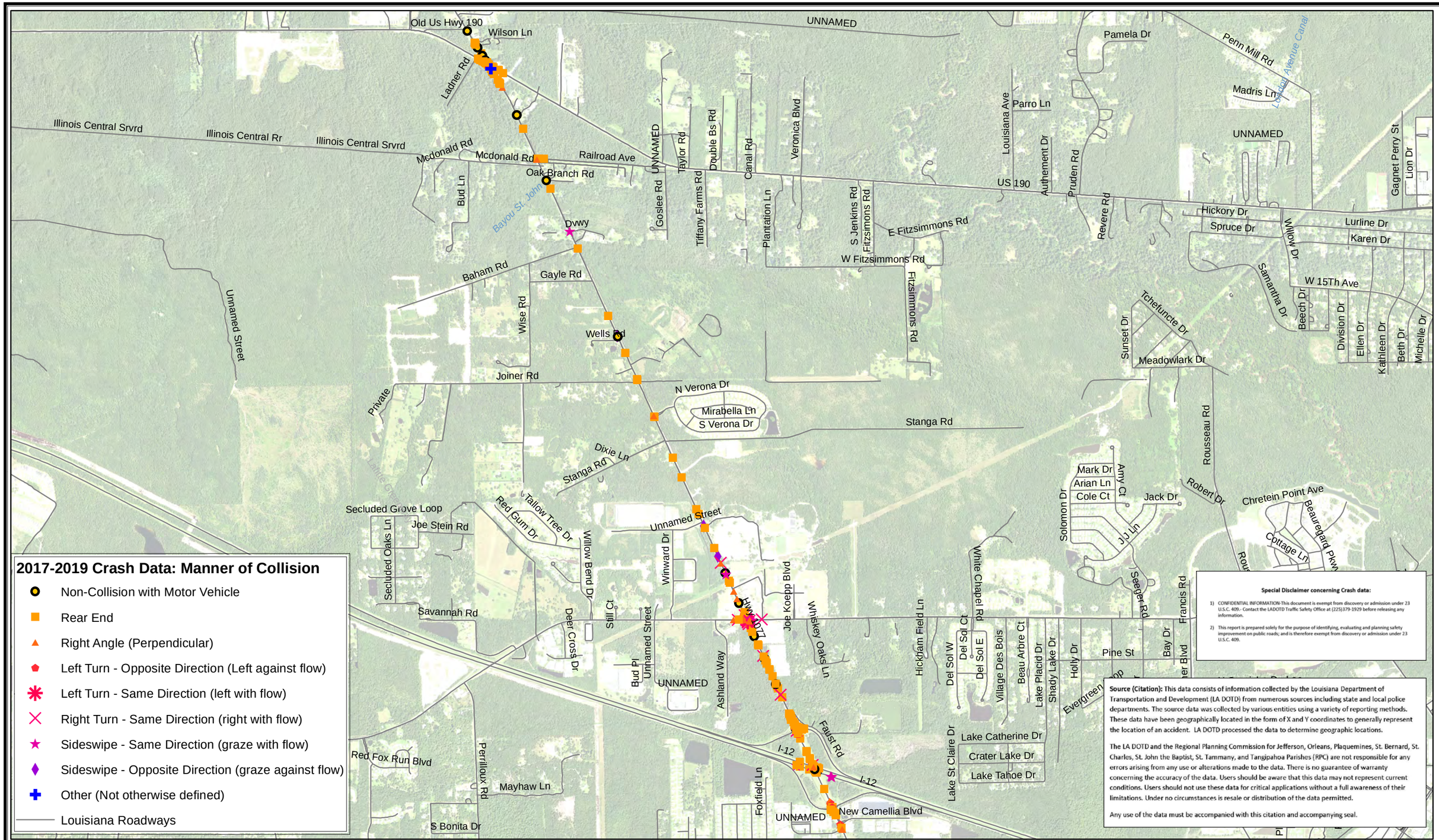
In total, there were 180 total crashes that occurred along the LA 1077 corridor from the I-12 Eastbound off/on ramps to the intersection of LA 1077 and Old US 190 (900' north of LA 1077/US Hwy 190). When compared to other roadways in the Parish with similar classifications and usage, the crash totals appear to be lower than average. Section 1.3.1 of the Existing Conditions Report in **Appendix A** shows detailed analysis of crash data for the corridor as well as breakdowns of crash numbers and crash severity for LA 1077 compared to four other roadways in the Parish.

Crash analysis showed that the two I-12 off ramps and the roundabout are the three areas with the highest concentration of crashes, as vehicles crash while attempting to navigate through the intersections. Nearly half of all crashes in the three-year period were rear-end crashes, likely caused by driver unawareness during congestion, or vehicles coming to a stop in the roadway as they attempt to turn into intermittent driveways/local roads along the corridor. Fortunately, there were no reported fatalities along the corridor within the three-year period. There were also not crashes involving a vehicle and a pedestrian/cyclist over this three-year period. There were six instances of drivers crossing the centerline and sideswiping oncoming traffic as well as five instances of vehicles running off the road, but there were no recorded head-on collisions. 29 of the 180 crashes resulted in injuries.

Table 3.2 below shows crash data on the corridor based on crash type, while **Figures 3.3** and **3.4** show the location of crashes based on the manner of collision and crash frequency.

Table 3.2 LA 1077 (I-12 EB Off-Ramp To Old US 190)

Manner of Collision	Description of Movement	Number of Collisions	Property Damage Only	Collisions Involving Injuries	Number of Injuries
Rear End		85	73	12	25
Head on		0	0	0	0
Right Angle		30	22	8	13
Left Turn		0	0	0	0
Left Turn		18	13	5	5
Left Turn		2	2	0	0
Right Turn		17	16	1	1
Right Turn		0	0	0	0
Side Swipe		8	8	0	0
Side Swipe		3	3	0	0
"Other"		1	1	0	0
Non-Collision		16	13	3	4
Totals		**180**	**151**	**29**	**48**



2017-2019 Crash Data: Manner of Collision

- Non-Collision with Motor Vehicle
- Rear End
- Right Angle (Perpendicular)
- Left Turn - Opposite Direction (Left against flow)
- Left Turn - Same Direction (left with flow)
- Right Turn - Same Direction (right with flow)
- Sideswipe - Same Direction (graze with flow)
- Sideswipe - Opposite Direction (graze against flow)
- Other (Not otherwise defined)
- Louisiana Roadways

N

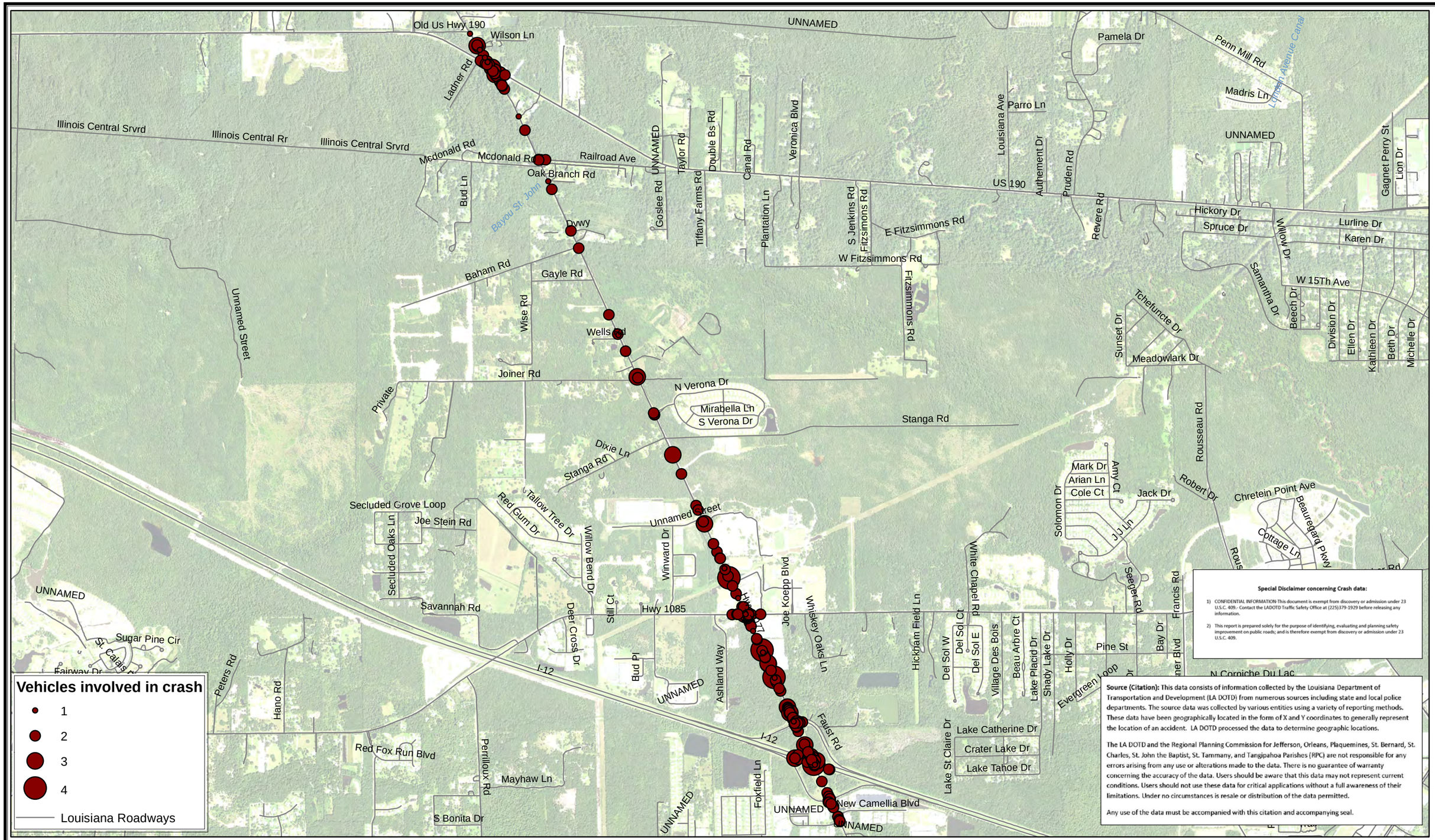
0 0.5 1 2 Miles

LA1077 Corridor
Old US190. - Seymour Meyers Blvd.
Manner of Collision 2017 - 2019
St. Tammany Parish, Louisiana

Figure 3.3

Prepared by
Regional Planning Commission for
Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles,
St. John the Baptist, St. Tammany and Tangipahoa Parishes
April 2021

RPC Task: UPWP MC-03.21



LA1077 Corridor

Old US190 - Seymour Meyers Blvd.

Vehicles involved in crash 2017 - 2019

St. Tammany Parish, Louisiana

Figure 3.4

DESTINATION ZERO DEATHS

Prepared by
Regional Planning Commission for
Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles,
St. John the Baptist, St. Tammany and Tangipahoa Parishes
April 2021

RPC Task: UPWP MC-03.21

3.6 STAKEHOLDER & PUBLIC OUTREACH

Over the course of the project a series of project stakeholder meetings were conducted between the consultant team and local stakeholders LA 1077 Corridor to hear their concerns/ideas for the future of the corridor. Stakeholder meetings were vital to assist the consultant team in understanding development happening in the area. Local stakeholders were contacted prior to the development of concepts to gather information on the corridor, and then once again after concepts were developed to allow them the opportunity to provide feedback.

In addition, two public meetings were held where the public was invited to learn, discuss, and provide input on the existing condition of the LA 1077 corridor as well as the analysis and conceptual design of the corridor. The first public meeting was held April 27th, 2021 at Coquille Parks and Recreation from 5:30 to 7:30 PM. This meeting was advertised by RPC and STPG to encourage attendance. The venue was fully accessible to persons with disabilities, and a virtual call-in option was provided for those who wanted to view the presentation but could not physically attend the meeting or would rather the virtual format due to the COVID-19 pandemic. At the meeting the consultant team, in conjunction with RPC and STPG, performed a presentation that explained the scope of the project and presented their findings on the existing conditions of the LA 1077 corridor. Throughout the presentation the consultant team took received questions/comments from the public pertaining to the corridor. After the presentation was completed members of the consultant team, RPC, and STPG were available for discussion of the corridor. Handouts, anonymous comment forms, and a map showing the corridor were available for the public to keep or return to the consultant to be accepted into the public record.

The second public meeting to present the proposed concepts to the public was also held at Coquille Parks and Recreation on July 1st, 2021 from 6:30 to 8:00 PM. This meeting was set up in a more informal open house setting, with optional brief rolling presentation explaining the proposed concepts, as well as multiple stations with the existing corridor, the near-term improvements, and the long-term improvements on display. Members of the consultant team, as well as RPC and STPG, were available near the stations to discuss the concepts with the attendees and receive any comments/concerns/ideas related to the proposed improvements. No virtual element was available for this meeting as the open house format did not provide an effective means for a virtual element. Similar to the first meeting there were handouts for the public to keep showing the proposed concepts and analysis, as well as anonymous comment forms that would be entered into the public record.

All meeting materials prepared by the consultant team and received comment forms are provided in **Appendix E**. Summary notes have also been included in **Appendix E** for the local stakeholder meetings, verbal comments during the public meetings, comments left in the virtual presentation chat box, and emails that the consultant team received regarding the study.

SECTION 4

ENVIRONMENTAL CONSIDERATIONS

ENVIRONMENTAL CONSIDERATIONS

It is important that as the study area and St. Tammany Parish continue to see an influx of development that environmental protection of the area be an objective, balanced with management and accommodation of projected growth. The retention of storm water to minimize flood destruction and risk to life safety; long-term maintenance of recreational land-uses – both active and passive (including such activities as hunting, fishing, and birdwatching); enhancement of stream and lake water quality, again for public health purposes; and the preservation of wildlife habitat are important to many in the Parish.

Included in ND 2025 were recommendations on how to best develop future land use while working to maintain the existing environmental conditions. It is likely that with the release of ND 2040 that these recommendations will be updated to recommend more environmental protections for the Parish.

A Stage 0 Environmental Checklist is required by the DOTD during the development of feasibility studies to guide research into potential environmental issues related to the project. The checklist and related documents can be found in **Appendix C**. Section 1.2.5 of the Existing Conditions Report found in **Appendix A** gives details on items included in the Stage 0 Checklist such as wetlands inventory, Native American tribal lands, Section 4(f) issues, endangered species, the Louisiana Scenic Rivers Act, significant trees, navigable waterways, hazardous materials/underground storage tanks, and environmental justice.

Figure 4.1
Drainage ditch along LA 1077 holding water after a rain event

The majority of the LA 1077 study corridor is within critical drainage areas identified by St. Tammany Parish and at times, can be subject to storm water flooding. A critical drainage area is an area determined by the STPG Department of Engineering, after careful consideration of the available data, to be of critical importance for its role in the conveyance, moderation, or storage of stormwater. Examples of locations that would qualify as a critical drainage area are areas anticipated to be inundated by a 100-year storm event, areas of concentrated storm water flow, areas designated by FEMA as Flood Hazard Area A, V, or the equivalent, and areas defined as wetlands by the US Army Corps of Engineers. A large portion of the land north of 1085 falls in the 100-year flood plain/FEMA Flood Zone A. These areas include the following general locations:

- The east and west sides of LA 1077 between LA 1085 and Stanga Rd.
- The east and west sides of LA 1077, north of Oak Branch Rd.

North of Stanga Rd. the land surrounding the LA 1077 corridor is no longer in the 100-year flood plain, but the area from Stanga Rd. to Baham Rd. was determined by St. Tammany Parish as a critical drainage area. Some of the Parish determined critical drainage area overlaps the 100-year flood plain. LA 1077 south of LA 1085, and a small portion of LA 1077 north of Baham Rd. do not fall in either of the 100-year flood plain or the Parish defined critical drainage area. It is suggested that the Parish develop systems to assist the "natural" drainage systems of the area as the development of the Parish reduces the effectiveness of these "natural" systems. Increased regulations should also be put in place for water management on new developments depending on land use and zoning. The existing naturally occurring wetlands and drainage channels should be monitored and preserved by Parish regulation and enforcement, even where such channels are privately owned or pass-through incorporated areas. An analysis of existing drainage facilities should be undertaken by the Parish to determine where existing culverts and drainage ditches have been rendered inadequate due to land development. Finally, flood protection strategies should be developed and implemented prior to permitting new development, as this is more cost effective than future remediation.

As defined by STPG, "any development within the 100-year floodplain (as currently defined by the Federal Emergency Management Agency - FEMA), or as may be updated with more accurate information in the future (by FEMA or other reputable source), or within areas of flat topography and 'very wet' (hydric) soils, shall be required to use low impact development – site and structure design and construction – techniques." Most of the land adjacent to the LA 1077 corridor is located within a 100-year floodplain as well as having portions of "very wet" soils. Building within these areas will require permits to be approved prior to construction, and mitigation efforts must be brought on to reduce the impact that construction may have on these areas. With a greater percentage of the soils adjacent to the corridor being "mixed wet with some non-wet soils" it is possible that heaving could occur depending on how much precipitation has fallen recently. The soil can absorb precipitation in rainy periods and swell, or it could release water from the soil during dry periods and sink. The foundation of any structure or roadway developed on these soils will need to be designed with this swelling and shrinking in mind. Materials, such as #57 stone, should also be considered for use in the roadway foundation because the gaps in the material allow for better drainage than crushed aggregates with fines (small granular particles filling the gaps between the larger crushed aggregate). Large mats may also need to be used for heavy machinery to avoid damaging the delicate ecosystems, as well as preventing the machinery from sinking into the hydric soils.

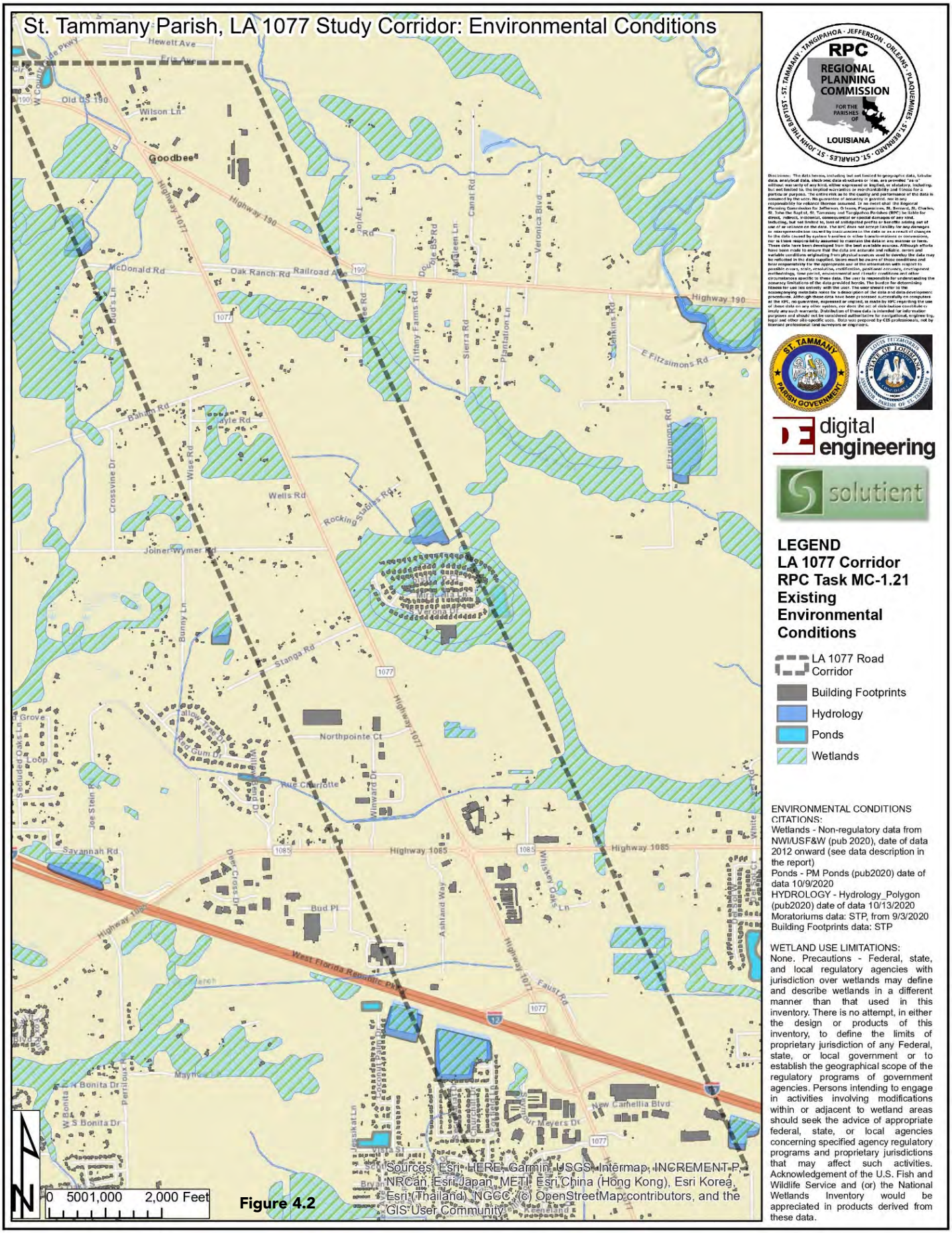

St. Tammany Parish, LA 1077 Study Corridor: Environmental Conditions
RPC
REGIONAL PLANNING COMMISSION
FOR THE PARISHES OF
LOUISIANA
LEGEND
LA 1077 Corridor
RPC Task MC-1.21
Existing Environmental Conditions
LA 1077 Road Corridor
Building Footprints
Hydrology
Ponds
Wetlands
ENVIRONMENTAL CONDITIONS CITATIONS:
Wetlands - Non-regulatory data from NWI/USF&W (pub 2020), date of data 2012 onward (see data description in the report)
Ponds - PM Ponds (pub2020) date of data 10/9/2020
HYDROLOGY - Hydrology_Polygon (pub2020) date of data 10/13/2020
Moratoriums data: STP, from 9/3/2020
Building Footprints data: STP
WETLAND USE LIMITATIONS:
None. Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities. Acknowledgement of the U.S. Fish and Wildlife Service and (or) the National Wetlands Inventory would be appreciated in products derived from these data.
digital engineering
solutient
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
0 5001,000 2,000 Feet

Figure 4.2

SECTION 5

DESIGN AND RECOMMENDED IMPROVEMENTS

DESIGN AND RECOMMENDED IMPROVEMENTS

5.1 DESIGN CONSIDERATIONS

LA 1077 is a minor arterial roadway running in a north/south direction through western St. Tammany Parish. Currently the corridor facilitates close to 15,000 vehicles per day between I-12 and LA 1085, and approximately 6,000 to 9,000 vehicles per day north of LA 1085. The corridor lacks safety features for motorists, as well as any facilities for non-vehicular travel. The two-lane highway has quickly become inadequate to keep up with the accelerated growth and development of the Parish. It was determined by the PMC that the concepts for the corridor should take highway capacity and operational efficiency, ADA compliant pedestrian facilities, right-of-way needs and utility relocation, and environmental concerns into consideration during the design of the proposed improvements. Requirements set forth in the DOTD Road Design Manual and the DOTD Minimum Design Guidelines for minor rural or urban arterial roadways will govern the design parameters of the roadway improvements. DOTD Minimum Design Guidelines also sets forth requirements necessary to be compliant with Complete Streets.

5.2 ALTERNATIVE DESIGN CONCEPTS

As part of the study the consultant team was tasked with developing two near-term and two long-term conceptual alternatives for the LA 1077 corridor with a design year of 2048. To develop the alternatives, it was decided to focus first on the long-term alternatives to create a vision for the roadway that would still be able to adequately facilitate traffic in the design year. Once the characteristics of the long-term alternatives were selected, they were analyzed to determine which of the improvements could be implemented in the near-term that would also alleviate issues the corridor is currently experiencing.

5.2.1 Long-Term Alternatives

Both long term alternatives contained the expansion the entire LA 1077 corridor from just south of the I-12 eastbound off ramp to just north of US Hwy 190 into a four-lane highway with a 12-foot grass or concrete median separating both directions of traffic as well as 8-foot shoulders on the outside lanes. North of Hannan High School the 12-foot median would shift to a 12-foot asphalt median level with the roadway containing diagonal striping. This choice has been made to reduce the maintenance and cost of the median. Median left turn lanes implemented north of Hannan High School would have a raised concrete curb constructed to separate those in the turn lane from traffic flowing in the opposite direction. Expansion of LA 1077 would require the reconstruction of the I-12 overpass to allow for four lanes of travel. Both long term alternatives also included the same modifications to the roundabout at LA 1077 and LA 1085. A through-lane would be added to the roundabout in all directions to facilitate more traffic traveling directly through the roundabout. The PMC also determined that the potential inclusion of slip lanes to the roundabout would allow vehicles taking a right turn at the intersection to avoid entering the roundabout, reducing the potential for vehicular crashes in the roundabout and allowing the roundabout to perform more efficiently. The remaining differences between both long-term alternatives were related to the four intersections along the corridor.

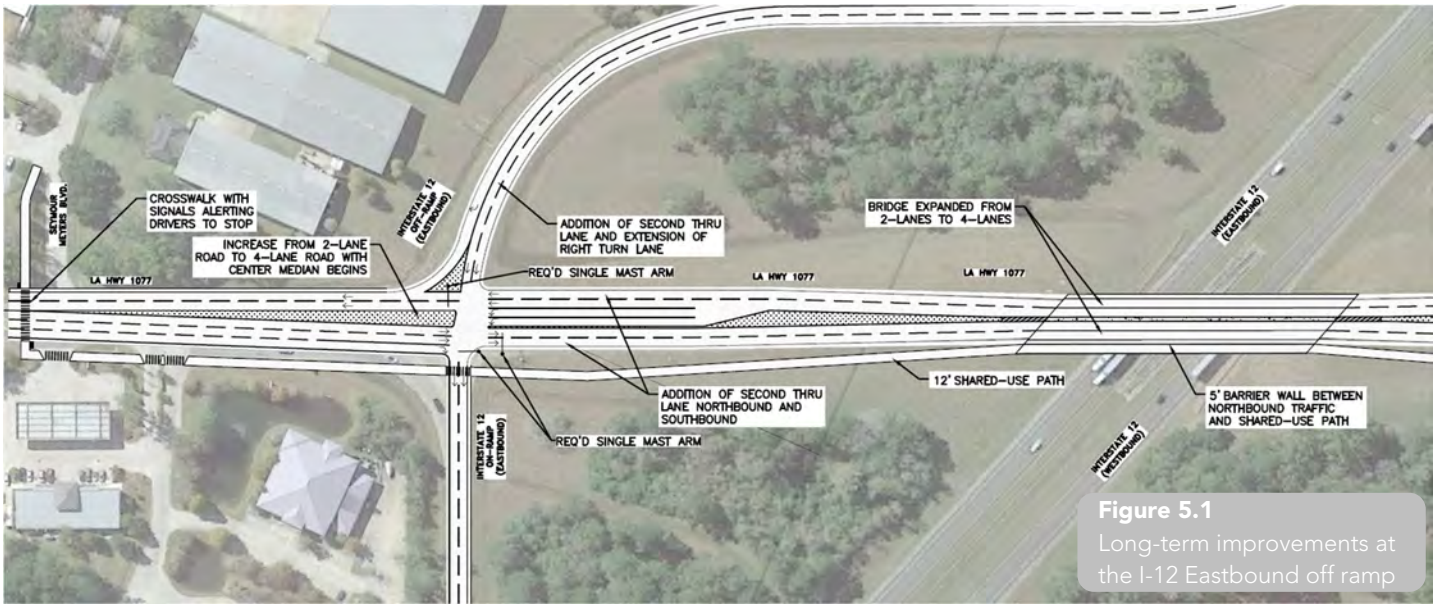
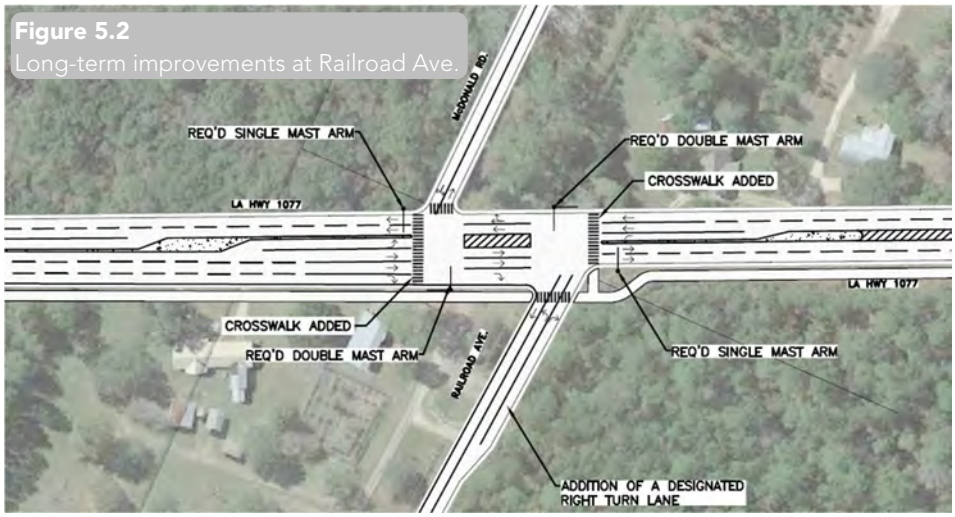


Figure 5.1
Long-term improvements at the I-12 Eastbound off ramp

- I-12 Eastbound and Westbound Off-Ramps – Both alternatives proposed widening the off/on ramps for the interstate to two-lanes as well as well as the addition of a second through lane for both northbound and southbound flows of traffic. Alternative 1 proposed the inclusion of a third lane to the off-ramp to create a dedicated right turn lane. Alternative 1 also proposed the addition of a second median left-turn lane for vehicles attempting to get onto I-12. Alternative 2 proposed two-lane roundabouts at each off-ramp that would be designed to prohibit vehicles from accidentally entering an on/off ramp in the wrong direction.

Figure 5.2
Long-term improvements at Railroad Ave.



- Macdonald Rd. and Railroad Ave. – Both alternatives proposed the addition of a second through lane for both northbound and southbound flows of traffic. Alternative 1 proposed turning this abnormal intersection into a controlled intersection with traffic signals. Left-turn lanes would be added to allow vehicles turning left onto Macdonald or Railroad the ability to get out of the flow of traffic and provide vehicles with a protected left turn. A right turn would be added for northbound vehicles turning onto Railroad Ave. Railroad Ave would be expanded near LA 1077 to create separate left and right turn lanes. Signalization is important in this alternative to allow vehicles safe opportunities to enter or exit LA 1077. Alternative 2 proposed the development of a roundabout.

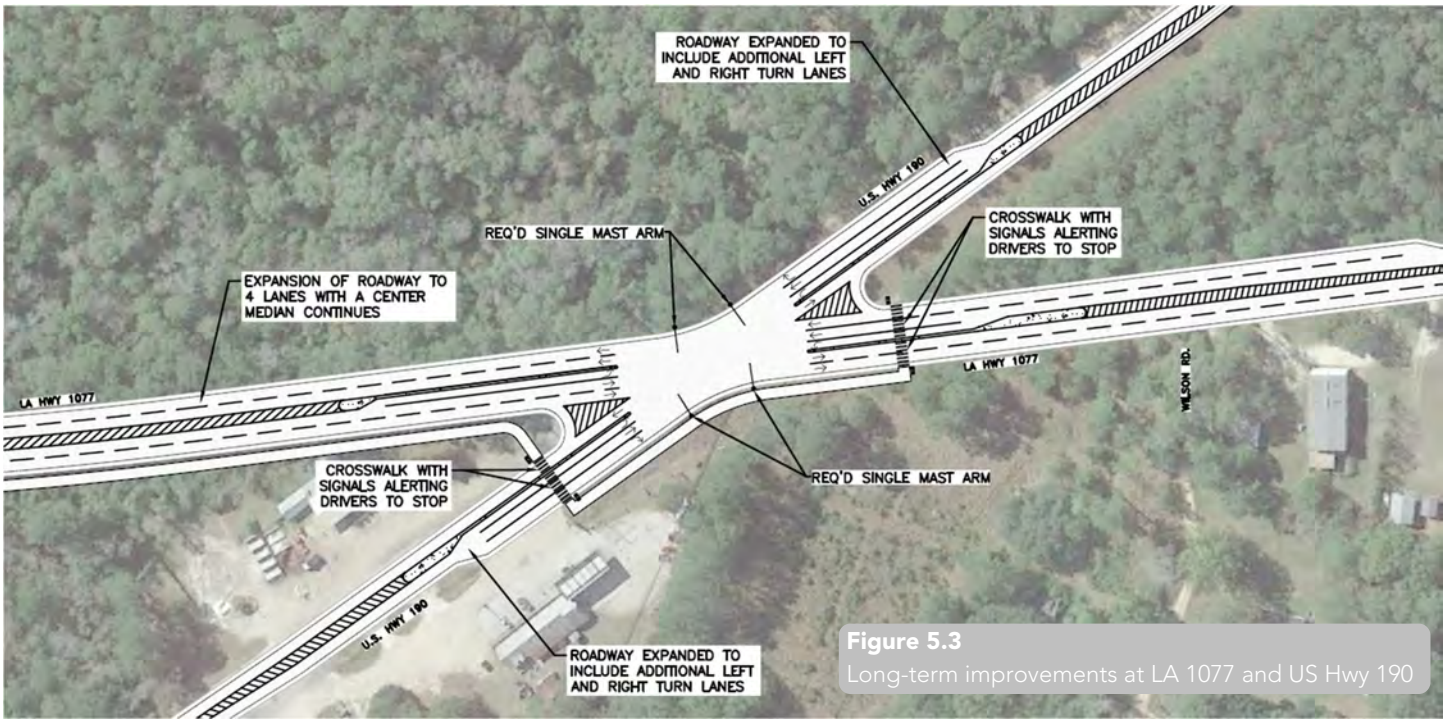


Figure 5.3
Long-term improvements at LA 1077 and US Hwy 190

- US Hwy 190 – Both alternatives proposed the addition of a second through lane for both northbound and southbound flows of traffic. Alternative 1 proposed creating dedicated left turn and right turn lanes in all four directions that would have protected movements via updated traffic signals. Alternative 2 proposed the development of a two-lane roundabout at the intersection.

With the two long-term alternatives selected the PMC analyzed the effects of the improvements on the LA 1077's vehicle capacity and the LOS for the design year of 2048 utilizing the same data used for the "no build" scenario. Full analysis of the two alternatives can be found in the Final Traffic Analysis Report found in **Appendix D**. The analysis showed that both long-term alternatives produced acceptable capacity ratings for the design year, as well as acceptable intersection LOS ratings. It was the decided by the PMC to develop Alternative 1 into near-term and long-term conceptual plans. The feasibility of the alternatives became the deciding factor in which alternative to select for conceptual design. While Alternative 2 produced a slightly higher average LOS rating for the intersections, the construction of four roundabouts would require significantly more right-of-way acquisition and a higher cost than Alternative 1. This is especially true for the roundabout at US Hwy 190 in Alternative 2, which would require large amount of land acquisition to re-route US Hwy 190 so appropriate approach angles could be developed for the roundabout.

5.2.2 Near-Term Alternative

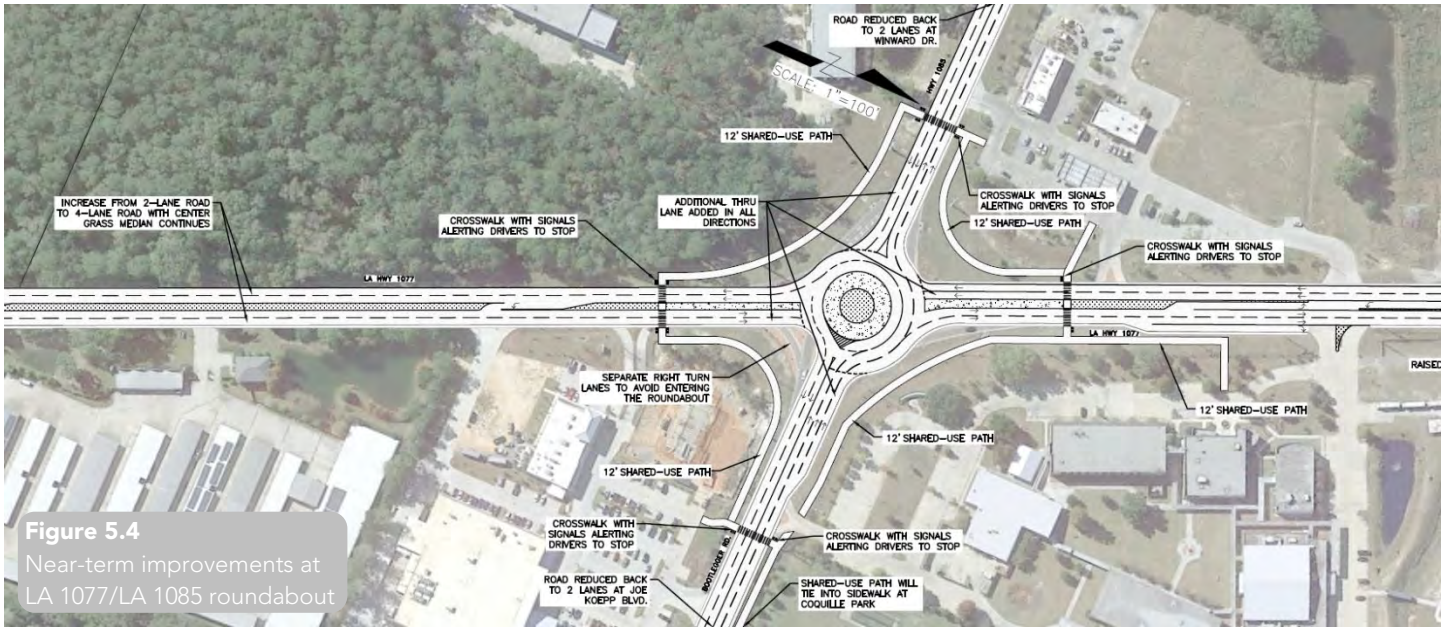


Figure 5.4
Near-term improvements at LA 1077/LA 1085 roundabout

The analysis of the existing traffic conditions for LA 1077 highlighted the need current need for capacity and intersection improvements for the area between the I-12 eastbound off-ramp to just north of LA 1085. The PMC determined that it would be most beneficial to implement the proposed long-term improvements for the corridor from the I-12 westbound off-ramp to just north of Northpointe Ct. in the near-term to alleviate current issues while constructing improvements designed for the future. The following improvements were selected to be implemented in the near-term:

- I-12 Eastbound Off-Ramp – the addition of a second lane for the on-ramp as well as the addition of a second median left-turn lane for southbound traffic attempting to enter I-12.

- I-12 Westbound Off-Ramp – the addition of a second lane for the on-ramp as well as the addition of a second median left-turn lane for northbound traffic attempting to enter I-12. East of this intersection would begin the implementation of the four-lane roadway with a center median to the roundabout. The additional second northbound lane east of the intersection would give motorists taking a right onto LA 1077 their own lane and would likely eliminate the issue of traffic backing up to shoulder of eastbound I-12. The right turn lane of the off-ramp would also be extended closer to the exit of the interstate to allow for more vehicle storage. The additional southbound lane would terminate at the intersection and act as a right turn lane for southbound traffic looking to enter eastbound I-12.

- LA 1077/LA 1085 Roundabout – An additional through lane would be implemented from all four directions travel. As part of the near-term improvements the roundabout would be reconstructed without the designated right turn lanes. The inclusion of slip lanes could reduce safety for non-motorists utilizing the pedestrian facilities near the roundabout, and it was determined by the consultant that the performance of the roundabout would not suffer in the near-term without the slip lanes. After the

implementation of near-term improvements, the roundabout's effectiveness would be re-analyzed to determine if slip lanes would need to be installed during the long-term improvements. Bootlegger Rd. would be expanded from two lanes to four lanes between the roundabout and Joe Koepp Blvd. LA 1085 would be expanded from two lanes to four lanes between the roundabout and Winward Dr.

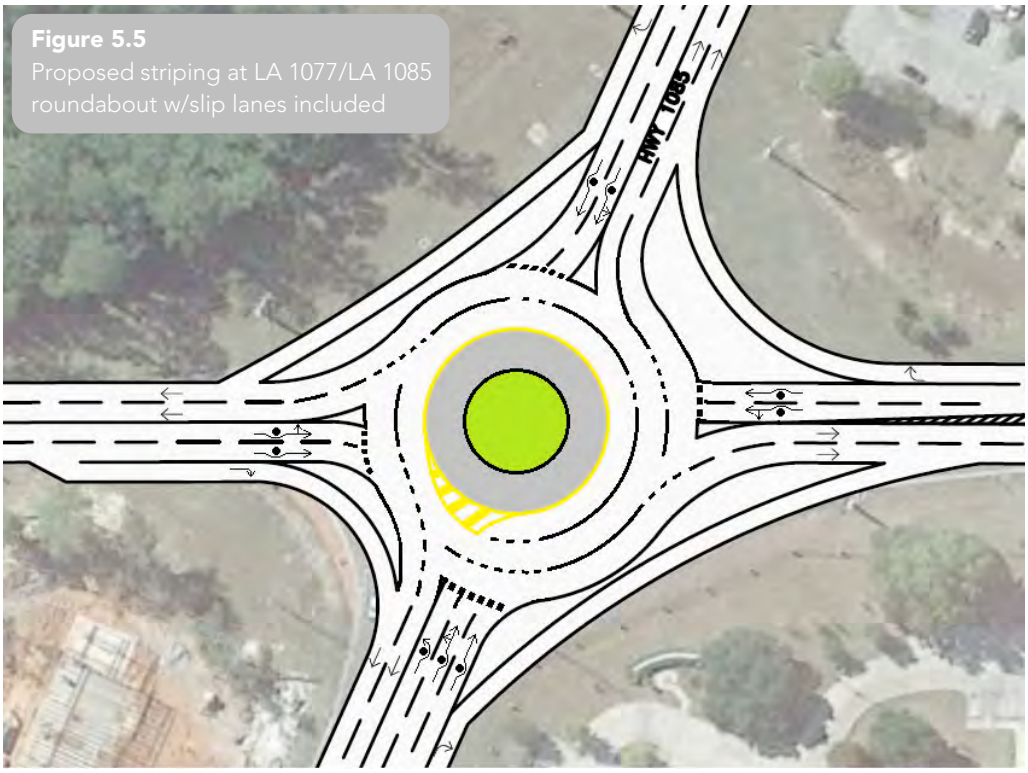


Figure 5.5
Proposed striping at LA 1077/LA 1085 roundabout w/slip lanes included

- North of the roundabout the LA 1077 corridor would continue to be converted into a 4 lane roadway with a center median containing left turn lanes at intersecting local roads. A few hundred feet north of Northpointe Ct. the additional southbound lane would be tapered to return southbound traffic back to a single lane. The additional northbound lane would continue until the Tuscany West subdivision, where the additional lane would be terminated as a right turn lane. The near-term alternative improvements would be terminated near Joiner Wymer Rd., returning the corridor to a two-lane roadway with no median.

5.3 NON-VEHICULAR FACILITIES

It is important that future improvements developed throughout the Parish attempt to adhere to Complete Streets policies to ensure that non-motorists have a means of travel through the Parish. STPG has not adopted a Complete Streets policy, but Complete Streets compliance is required for projects on a State route. Due to the inclusion of 8-foot shoulders on the outside of all proposed lane widening for the corridor, LA 1077 would technically be Complete Streets compliant in accordance with the DOTD Minimum Design Guidelines (2017). 8-foot shoulders are deemed acceptable accommodations for both pedestrians and cyclists. However, in addition to the shoulder a 12-foot shared-use path is proposed along the entire corridor from Seymour Myers Dr. to US Hwy 190.

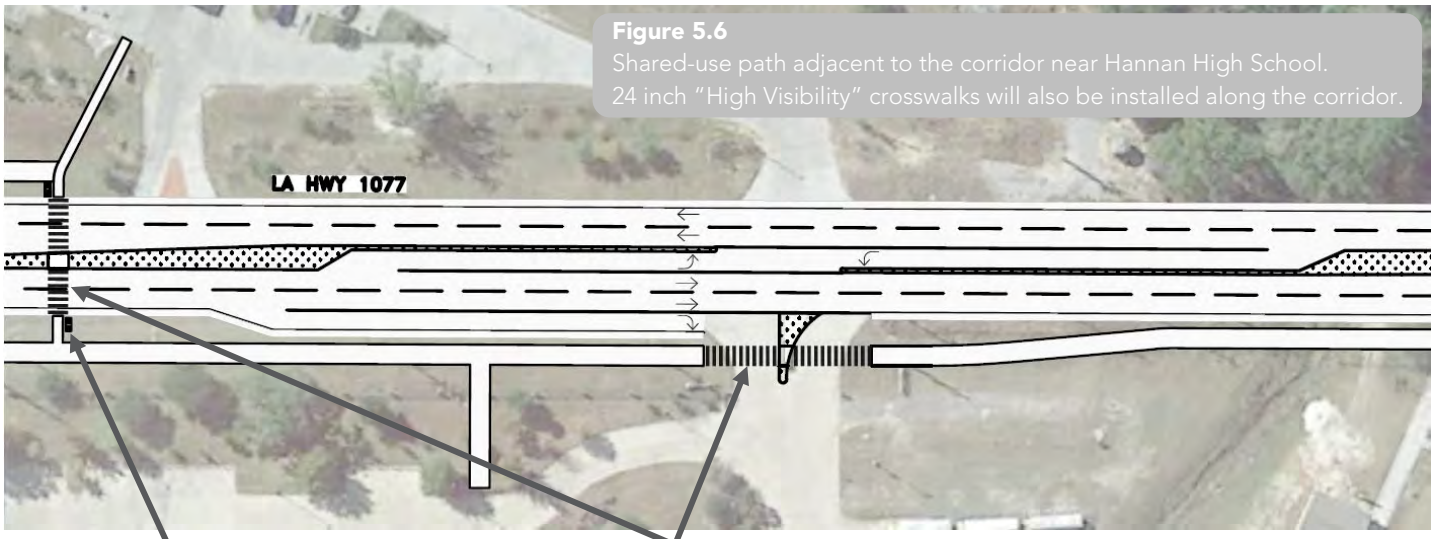


Figure 5.6
Shared-use path adjacent to the corridor near Hannan High School. 24 inch "High Visibility" crosswalks will also be installed along the corridor.

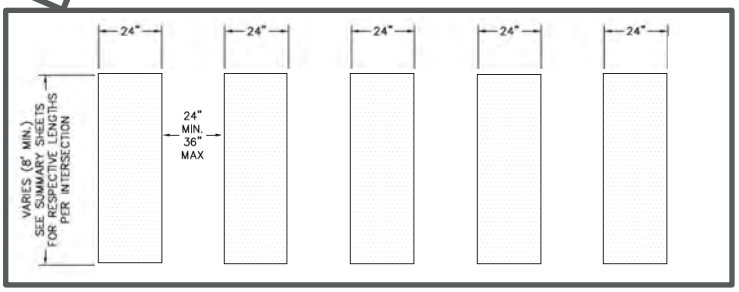


Figure 5.7
24 inch "High Visibility" crosswalks proposed along the corridor.

Figure 5.8
Example of an RRFB utilized at crosswalks near the roundabout

The shared-use path alignment would run down the entire east side of the corridor, but this could be amended to either side of the corridor if there are constraints to the buildable area along the roadway. The path would be compliant with the latest ADA and AASHTO requirements for sidewalks and shared-use paths. Crosswalks would also be implemented at all intersections of local roads and LA 1077. With approval from the DOTD District 62 DTOE the crosswalk striping could be 24" high visibility crosswalk striping, increasing driver awareness to the potential for pedestrians to cross the roadway. The shared-use path would be implemented encircling the entire roundabout providing access to all four corners of the intersection. Crosswalks for the path at the roundabout would be placed away from the entrance of the roundabout to avoid conflicts with vehicles utilizing the right turn lanes. The crosswalks near the roundabout would also be constructed with Rectangular Rapid-Flashing Beacons (RRFBs) that would give drivers warning that they must come to a stop and yield to the crossing pedestrians. The desired offset of the path from the roadway shoulder would be at least 4 feet, but in some instances such as the I-12 overpass this is not an option so a vertical barrier will be utilized to separate the roadway and the path. The shared-use path could also be constructed in segments to take advantage of programs like Safe Route to Public Places which provides funding to construct pedestrian facilities such as this path.

5.4 STORMWATER MANAGEMENT

A consistent concern of stakeholders and the public was flooding caused by rain events. St. Tammany Parish depends mostly on gravity flow for drainage in the Parish, as well as water passing over land to natural watersheds. Development of the area has increased impervious surfaces, reducing the effectiveness of the natural drainage in the area. In addition to the creating new ditches on adjacent to the roadway, the elimination of impervious surfaces should be included where possible. Instead of concrete medians, grass medians could be constructed to allow rainwater to drain directly into ground beneath the road. Additionally large concrete areas separating roadway components like slip lanes could be constructed with concrete curbs at the edge of the roadway and all pavement behind the curb replaced with soil and grass. Currently the roundabout and the surrounding area contains drainage culverts that would need to be relocated to facilitate the expansion of the roadway.

Figure 5.9
Drainage facilities next to the LA 1077/LA 1085 roundabout

5.5 CONCEPTUAL RIGHT-OF-WAY NEEDS

Based on the typical sections for the roadway it appears that for most of the improvements a total right-of-way (ROW) width of 124’ will be necessary. This would provide room for the expansion of the roadway to a four-lane roadway with a median, shoulders, and necessary clear zone from the edge of the travel lane. This requires an additional 54’ of ROW for most of the roadway assuming the existing ROW is 70’ wide for most of the corridor. If the shared-use path is constructed it would be able to fit in the 124’ ROW, but it would force new ditches to be pushed out further from the roadway to the outside of the path. The area between the shoulder and the path would need to be graded to ensure that water drains appropriately away from the roadway into the ditches.

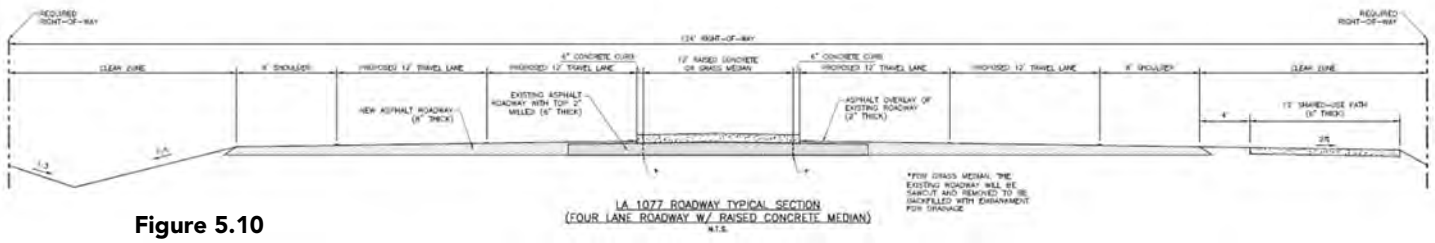


Figure 5.10
Typical section of the LA 1077 Corridor

It does not appear that ROW would need to be acquired to complete proposed improvements at the interstate off ramps or most of the roundabout. The northeast corner of the roundabout could require ROW acquisition if the roundabout is built with the slip lanes and the shared use path. Only including the slip lane or the path would allow the improvements to fit in the existing ROW. The choice to remove slip lanes could be decided in later stages of plan development if it is determined that removing them will not change the LOS rating for the intersection a significant amount.

5.6 ACCESS MANAGEMENT POLICIES AND RECOMMENDATIONS

Due to LA 1077 being a State-owned route, current DOTD access management policies must be followed when creating an access point along the corridor. The DOTD currently has two different access management policies, explained in the Access Connections Policy (December 2013), depending on whether a new access point is created or an existing access connection is being re-evaluated. There are currently no access points proposed to be added or removed as a part of this project. If an access point was to be added or re-evaluated in the future, it would need to go through an approval process before DOTD allow the access point to be constructed.

The most relevant section of the Access Connection Policy would be Chapter 5 which states that "where a driveway crosses a bicycle facility, the driveway and bicycle facility should be designed so as to accommodate the safe crossing of bicycles." That note is important depending on if the shared-use paths are constructed along the corridor. DOTD policy would require those driveways to be modified if it is determined that the driveway creates unsafe conditions for cyclists crossing the drive. The DOTD Access Connection Policy can be found at the following link:
http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Traffic_Engineering/Access%20Connections%20To%20Other%20State%20Highways/Access%20Connections%20Policy%20(December%202013).pdf

Figure 5.11
Example of a Parish approved subdivision access point under Chapter 125 Article III

Chapter 125 Article III of the Land Development Code created by St. Tammany Parish details the requirements for the development of streets throughout subdivisions as well as the access point of the subdivision. Chapter 125 Article VI of the Land Development Code also details when subdivisions are required to develop a Traffic Impact Analysis (TIA) to determine the traffic generated by the subdivision as well as potential traffic operational problems or concerns that could arise from construction of the development. Section 1.2.4 of the Existing

Conditions Report found in **Appendix A** gives a description of these regulations and what St. Tammany expects of new developments and their access points. However, these regulations do not require new developments to attempt to create connections between other existing or future developments. There can only be so many subdivisions with an access point along LA 1077, and forcing all traffic generated from the development to use one roadway could contribute to capacity issues for the corridor.

It is recommended by the PMC that St. Tammany should look at the feasibility of requiring new developments to attempt to provide connectivity between existing developments or ensure that new developments are planned in a way to allow connections to future developments. Thoughtful planning between developers and STPG could slowly create a network of roadways throughout developing areas that would reduce the need to travel on the State and Federal highways. In 2017 STPG investigated where new arterial roadways and collectors could be located to increase connectivity and travel throughout the Parish. Developing additional east/west or north/south corridors as suggested by the Major Streets Plan Draft would potentially provide relief to existing overcapacity highways in the area, while also opening inaccessible areas for future development. A map of the proposed roadways included in the Major Streets Plan Draft can be found in **Appendix F**.

It is also recommended that St. Tammany Parish investigate the creation of policies like the DOTD's Complete Streets or create requirements for new developments to incorporate pedestrian or bicycle facilities into their plans. Ensuring that there are options for citizens to get to their destination in more ways than a vehicle helps to promote connectivity in the Parish as well. If the facilities like shared-use paths are easy to access and users feel safe while traveling on them then citizens are more likely to start and continue using the facilities.

SECTION 6

OPINION OF PROBABLE COST

6.1 ESTIMATED COSTS OF IMPROVEMENTS
6.2 POTENTIAL FUNDING SOURCES

OPINION OF PROBABLE COST

6.1 ESTIMATED COSTS

Near-Term Conceptual Improvements

Abbreviation Legend:

LS - Lump Sum
SQYD - Square Yard
LNFT - Linear Foot
CUYD - Cubic Yard

Opinion of Probable Cost for Proposed Near-Term Concepts					
Item No.	Description	Unit	Quantity	Unit Cost*	Total Cost
1	Removal of Structures and Obstructions	LS	1	$30,000.00	$30,000.00
2	Removal of Asphaltic Pavement	SQYD	1336	$8.50	$11,356.00
3	Removal of Concrete Pavement	SQYD	1516	$14.00	$21,224.00
4	Removal of Concrete Drives	SQYD	1187	$17.25	$20,475.75
5	Removal of Concrete Curbs	LNFT	1658	$9.00	$14,922.00
6	Cold Milling Asphalt Pavement (2" Thick)	SQYD	26744	$2.25	$60,174.00
7	Erosion Control	LS	1	$25,500.00	$25,500.00
8	General Excavation	CUYD	8533	$15.00	$127,995.00
9	Class II Base Course (Stone)	CUYD	16958	$40.00	$678,320.00
10	Nonplastic Embankment (Sand)	CUYD	8177	$28.00	$228,956.00
11	Geotextile Fabric	SQYD	58663	$2.75	$161,323.25
12	Superpave Asphaltic Concrete	TON	30875	$105.00	$3,241,875.00
13	6" Concrete Curb	LNFT	11406	$20.00	$228,120.00
14	Plastic Pavement Striping (4" Width)(Thermoplastic 90 mil)	MILE	8.581	$4,000.00	$34,324.00
15	Plastic Pavement Striping (4" Width)(Broken)(Thermoplastic 90 mil)	MILE	3.856	$1,450.00	$5,591.20
16	Plastic Pavement Striping (6" Width)(Thermoplastic 90 mil)	LNFT	2241	$5.00	$11,205.00
17	Plastic Pavement Striping (12" Width)(Thermoplastic 125 mil)	LNFT	2440	$5.60	$13,664.00
18	Plastic Pavement Striping (24" Width)(Thermoplastic 125 mil)	LNFT	122	$15.00	$1,830.00
19	Plastic Pavement Legends and Symbols (Arrow)	EACH	58	$300.00	$17,400.00
20	Drainage Relocation	LS	1	$315,000.00	$315,000.00
21	Construction Layout	LS	1	$210,000.00	$210,000.00
22	Temporary Signs and Barricades	LS	1	$150,000.00	$150,000.00
23	Mobilization	LS	1	$500,000.00	$500,000.00
24	Slab Sodding (Bermuda Grass)(Median)	SQYD	3842	$7.00	$26,894.00
25	Sawcutting	LNFT	5546	$4.00	$22,184.00
	Total Construction Cost				$6,158,333.20
	Relocation of Existing Overhead Utilities				$1,100,000.00
	**Relocation of Existing Underground Utilities				$2,300,000.00
	Contingency (20%)				$1,911,666.64
	Total Cost				**$11,469,999.84**

*Unit Prices are from LADOTD Weighted Averages (at time of development of report)
**If determined necessary to facilitate construction of expanded corridor

Long-Term Conceptual Improvements

Abbreviation Legend:

LS - Lump Sum
SQYD - Square Yard
LNFT - Linear Foot
CUYD - Cubic Yard

Opinion of Probable Cost for Proposed Long-Term Concepts					
Item No.	Description	Unit	Quantity	Unit Cost*	Total Cost
1	Removal of Structures and Obstructions	LS	1	$40,000.00	$40,000.00
2	Removal of Traffic Signal Equipment	LS	1	$50,000.00	$50,000.00
2	Removal of Asphaltic Pavement	SQYD	1320	$8.50	$11,220.00
3	Removal of Concrete Pavement	SQYD	658	$14.00	$9,212.00
4	Removal of Concrete Drives	SQYD	585	$17.25	$10,091.25
5	Removal of Concrete Curbs	LNFT	464	$9.00	$4,176.00
6	Cold Milling Asphalt Pavement (2" Thick)	SQYD	52053	$2.25	$117,119.25
7	Erosion Control	LS	1	$35,500.00	$35,500.00
8	General Excavation	CUYD	12588	$15.00	$188,820.00
9	Class II Base Course (Stone)	CUYD	26386	$40.00	$1,055,440.00
10	Nonplastic Embankment (Sand)	CUYD	9043	$28.00	$253,204.00
11	Geotextile Fabric	SQYD	94997	$2.75	$261,241.75
12	Superpave Asphaltic Concrete	TON	47336	$105.00	$4,970,280.00
13	6" Concrete Curb	LNFT	10946	$20.00	$218,920.00
14	Plastic Pavement Striping (4" Width)(Thermoplastic 90 mil)	MILE	11.147	$4,000.00	$44,588.00
15	Plastic Pavement Striping (4" Width)(Broken)(Thermoplastic 90 mil)	MILE	5.983	$1,450.00	$8,675.35
16	Plastic Pavement Striping (6" Width)(Thermoplastic 90 mil)	LNFT	2842	$5.00	$14,210.00
17	Plastic Pavement Striping (12" Width)(Thermoplastic 125 mil)	LNFT	5195	$5.60	$29,092.00
18	Plastic Pavement Striping (24" Width)(Thermoplastic 125 mil)	LNFT	348	$15.00	$5,220.00
19	Plastic Pavement Legends and Symbols (Arrow)	EACH	39	$300.00	$11,700.00
20	Drainage Relocation	LS	1	$430,000.00	$430,000.00
21	New Traffic Signal Equipment	LS	1	$340,000.00	$340,000.00
22	Construction Layout	LS	1	$350,000.00	$350,000.00
23	Temporary Signs and Barricades	LS	1	$250,000.00	$250,000.00
24	Mobilization	LS	1	$950,000.00	$950,000.00
25	Slab Sodding (Bermuda Grass)(Median)	SQYD	1776	$7.00	$12,432.00
26	Sawcutting	LNFT	2366	$4.00	$9,464.00
	Total Construction Cost				$9,680,605.60
	Removal and Replacement of I-12 Overpass				$4,000,000.00
	Relocation of Existing Overhead Utilities				$655,000.00
	**Relocation of Existing Underground Utilities				$3,185,000.00
	Contingency (20%)				$3,504,121.12
	Total Cost				**$21,024,726.72**

*Unit Prices are from LADOTD Weighted Averages (at time of development of report)
**If determined necessary to facilitate construction of expanded corridor
***Long-Term Conceptual Cost assumes "Short-Term Concepts" have been completed

Conceptual Shared-Use Path Construction

Abbreviation Legend:

LS - Lump Sum
SQYD - Square Yard
LNFT - Linear Foot
CUYD - Cubic Yard

Opinion of Probable Cost for Proposed Non-Vehicular Facilites					
Item No.	Description	Unit	Quantity	Unit Cost	Total Cost
1	Removal of Structures and Obstructions	LS	1	$20,000.00	$20,000.00
3	Erosion Control	LS	1	$22,000.00	$22,000.00
4	General Excavation	CUYD	7594	$15.00	$113,910.00
5	Geotextile Fabric	SQYD	27340	$2.75	$75,185.00
6	Nonplastic Embankment	SQYD	3038	$28.00	$85,064.00
7	Shared-Use Path (Concrete) (6" Thick) (12' Wide)	SQYD	27340	$60.00	$1,640,400.00
8	Handicpped Curb Ramp	EACH	42	$2,000.00	$84,000.00
9	Plastic Pavement Striping (4" Width)(Broken)(Thermoplastic 90 mil)	MILE	3.884	$1,450.00	$5,631.80
10	Plastic Pavement Striping (24" Width)(Thermoplastic 125 mil)	LNFT	4800	$13.00	$62,400.00
11	Construction Layout	LS	1	$75,000.00	$75,000.00
12	Temporary Signs and Barricades	LS	1	$90,000.00	$90,000.00
13	Mobilization	LS	1	$150,000.00	$150,000.00
14	Slab Sodding (Bermuda Grass)	SQYD	9113	$7.00	$63,791.00
15	Rectangular Rapid-Flashing Beacons (Solar Powered)	EACH	14	$4,100.00	$57,400.00
	Total Construction Cost				$2,487,381.80
	Contingency (20%)				$497,476.36
	Total Cost				**$2,984,858.16**

*Unit Prices are from LADOTD Weighted Averages (at time of development of report)

6.2 POTENTIAL FUNDING SOURCES

Due to the LA 1077 corridor being a State-owned roadway, the funding sources for projects to improve the roadway itself are somewhat limited to State and Federal funds. The phasing of improvements will depend on collaboration between the DOTD and RPC to allocate annual funds to the project through internal selection processes. If STPG is interested in progressing the development and construction of improvements at a faster pace, then there are programs with funds set aside that require a local government to accept a portion of the final cost of the project.

The project could go through a DOTD STP>200k Urban Systems Program for funding. This category of funding encompasses many different types of projects. Some of the projects that have been completed by this program include reconstruction of existing routes, overlaying existing routes, adding capacity to existing routes, computerized signal systems, construction or reconstruction of bridges and construction of sidewalks and bike paths. The MPO has great flexibility in the use of its funds under this program, and the RPC would be able to assist funding improvements with an agreement from St. Tammany Parish to an 80/20 cost share. The RPC would provide 80% of the construction cost and St. Tammany Parish would be responsible for the remaining 20% of the construction cost along with the survey and design plans. Because LA 1077 is a State-route the DOTD would perform the Construction Engineering and Inspection (CE&I) on the project if it were to move to construction.

However, the shared-use path adjacent to the corridor has the ability to access additional funding sources that could completely fund portions of the path, or also take advantage of an 80/20 local match. St. Tammany Parish could apply for funding for the shared-use path through the DOTD Safe Routes to Public Places Program (SRTPP). Should the application be accepted, a grant would be approved to fund a portion of shared-use path as well other improvements such as high-visibility crosswalks and flashing signals. This funding source pays for all engineering, surveying, and construction costs with 100% federal funds, but there is a $350,000 maximum limit of the construction cost. The SRTPP Application Guidelines can be found at the following link below:

http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Highway_Safety/SRTPPP/Safe%20Routes%20to%20School%20Application/2021%20Safe%20Routes%20to%20Public%20Places%20Program%20Guidelines%201-1.pdf

Another potential funding source is a DOTD TAP application. The DOTD Transportation Alternative Program (DOTDTAP) is a Federally funded program administered through DOTD. The goal is to work toward building a more balanced transportation system that includes pedestrians and bicyclists as well as the motoring public. Eligible projects can include bicycle and pedestrian facilities, safe routes for non-drivers, conversion of abandoned railway corridors to trails, scenic turnouts, overlooks and viewing areas, archaeological activities, storm water mitigation, wildlife management, and community improvement activities. Community improvement activities can include outdoor advertising management, historic preservation and rehabilitation of historic transportation facilities and vegetation management. Similar to the Urban Systems Project funding, there would need to be an agreement between federal and local agencies to an 80/20 cost share for the project included in the application.

SECTION 7

CONCLUSION

7.1 SUMMARY OF IMPACTS
7.2 SUMMARY OF COST ESTIMATES

CONCLUSION

7.1 SUMMARY OF IMPACTS

The implementation of the proposed alternatives (in phases) should have a positive impact on highway capacity, operational efficiency, and safety for vehicular and non-vehicular travel along the LA 1077 corridor in the present as well as the future. The improvements suggested for the corridor such as the expansion of the I-12 overpass are major undertakings, but for a vital highway like LA 1077 they are long overdue and warranted to create an efficient and safe roadway network running through western St. Tammany. The construction of bicycle and pedestrian facilities will offer users of all abilities in the area safe alternative transportation choices to access recreational facilities and exercise, schools, and expanded public access to surrounding areas through means other than motorized vehicles. In addition, no environmental impacts were discovered to impede any of the recommendations.

7.2 SUMMARY OF COST ESTIMATES

The construction of the highway capacity improvements as well as the bicycle/pedestrian facilities would likely require financial commitment from St. Tammany Parish Government as well as other public and quasi-public entities that may contribute to the improvements along the LA 1077 corridor.

The implementation of the near-term roadway improvements would cost an estimated $11,469,999.84 and the implementation of the long-term roadway improvements would cost an estimated $21,024,726.72. Installation of all bicycle/pedestrian facilities and features along the LA 1077 corridor would cost an estimated $2,984,858.16. All improvements proposed inside of this study would cost and estimated grand total of $35,479,584.72.

A consensus among the PMC, including St. Tammany Parish Government, the RPC, and the DOTD, expressed strong support for the conceptual plans. As implementation occurs the LA 1077 corridor will become safer and more efficient for transportation users of all modes and abilities.