

LAND USE AND TRANSPORTATION STUDY

"New Covington" Sub-Area Analysis

Prepared for

Regional Planning Commission for Jefferson, Orleans, Plaquemines,
 St. Bernard, St. Tammany, and Tangipahoa Parishes
 (RPC Task MC-1.17, FY-17 UPWP)

June 2017





Prepared By and Project Team Leads:



Walter Brooks, Executive Director
Chris Laborde, Senior Transportation Planner
New Orleans Regional Planning Commission
10 Veterans Memorial Boulevard
New Orleans, LA 70124
P: 504-483-8500



Mike Cooper, Mayor
317 N. Jefferson Ave.
Covington, LA 70433
P: 985-892-1811



Ross Liner, AICP, PTP, Director of Planning
David Lebreton, P.E., PTOE, Senior Project Manager
527 W. Esplanade Ave., Suite 200
Kenner, LA 70065
P: 504-468-6129



Dana Brown, ASLA, AICP
Andrew Doyle, ASLA, Associate
1836 Valence St.
New Orleans, LA 70115
P: 504-345-2639

"The contents of this report reflect the views of the author(s) who is (are) responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the RPC, the State or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation."

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409. Contact the Traffic Safety Office at (225) 379-1871 before releasing any information.



Table of Contents

Executive Summary	1
1.0 Introduction	6
2.0 Data Collection	9
3.0 Environmental Conditions	38
4.0 Recommended Improvements	43
5.0 Opinion of Probable Cost and Implementation Phasing	61
6.0 Conclusion	64

List of Figures and Tables

Figure 1.1: Study Area.....	8
Figure 2.1: W. 15th Ave. Street View	10
Figure 2.2: W. 17th Ave. Typical Street.....	11
Figure 2.3: S. Tyler St.....	12
Figure 2.4: Poor Sidewalk Condition.....	13
Figure 2.5: W. 19th Ave. and S. Jackson St. Intersection near Covington Elementary	14
Figure 2.6: Street signs behind overgrown vegetation.....	15
Figure 2.7: Street sign blocked by Stop sign	15
Figure 2.8: Parking within Right-of-Way	16
Figure 2.9: Traffic Count Locations Map.....	18
Figure 2.10: 15th Ave. west of S. Tyler St. Traffic Data.....	19
Figure 2.11: 15th Ave. east of S. Tyler St. Traffic Data.....	19
Figure 2.12: 17th Ave. east of S. Tyler St. Traffic Data.....	20
Figure 2.13: 19th Ave. east of S. Tyler St. Traffic Data.....	20
Figure 2.14: "New Covington" Study Area Crash Data	21
Figure 2.15: "New Covington" Crash Data Map	22
Figure 2.16: S. Tyler St. (LA 21) Corridor Crash Data	23
Figure 2.17: S. Tyler St. (LA 21) Corridor Crash Data Map.....	24
Figure 2.18: Study Area and S. Tyler St. Crash Comparison	25
Figure 2.19: "New Covington" Study Area Road Classifications.....	26
Figure 2.20: 15th Ave. at S. Tyler St. Average Daily Traffic.....	28
Figure 2.21 EDSM and MUTCD Warrants	29
Figure 2.22: Crash Experience.....	30
Figure 2.23: Crash Experience Illustrations.....	30
Figure 2.24: Crash Experience at 15th Ave. and S. Tyler St.	31
Figure 2.25: Land Use for Study Area.....	32



Figure 2.26: Land Use for S. Tyler St. corridor.....	33
Figure 2.27: Zoning for Study Area.....	34
Figure 2.28: Population for Census Tracts	35
Figure 2.29: Map of US Census Tracts.....	36
Figure 2.30: Identification of Utilities	37
Figure 3.1: Community Element Locations.....	38
Figure 3.2: Proximity of Bogue Falaya Scenic River to Study Area.....	40
Figure 3.3: Population Estimates Below Poverty Level	42
Figure 4A.1: MUTCD Figure 3B-19: Crosswalk Marking Types.....	43
Figure 4A.2: Temporary Crosswalk Signage.....	44
Figure 4A.3: Pedestrian Facility Improvement Plan.....	45
Figure 4A.4: MUTCD Figure 9C-9 Shared Lane Marking	46
Figure 4A.5: Bicycle Facility Improvement Plan	47
Figure 4A.6: Bicycle and Pedestrian Facility Improvement Plan.....	48
Figure 4A.7: Typical Intersection Improvement Plan	50
Figure 4B.1: S. Tyler St. at 15th Ave. Short-term Improvements	52
Figure 4B.2: S. Tyler St. at 17th Ave. Short-term Improvements	53
Figure 4B.3: S. Tyler St. at 19th Ave. Short-term Improvements	53
Figure 4B.4: S. Tyler St. at 15th Ave. Short-term Improvements (section view)	54
Figure 4B.5: S. Tyler St. at 15th Ave. Additional Turning Lanes	56
Figure 4B.6: S. Tyler St. at 15th Ave. Additional Turning Lanes (Section View).....	56
Figure 4B.7: S. Tyler St. at 15th Ave. Three-Lane Facility.....	57
Figure 4B.8: S. Tyler St. at 15th Ave. Three-Lane Facility (Section View)	57
Figure 4B.9: S. Tyler St./S. Polk St. Couplet (Plan View).....	59
Figure 4B.10: S. Tyler St./S. Polk St. Couplet (Section View)	60
Figure 5.1: Opinion of Cost for Bicycle Improvement Plan.....	61
Figure 5.2 Opinion of Cost for Pedestrian Improvement Plan	62
Figure 5.3: Opinion of Cost for S. Tyler St. Two-lane Facility Rehab.....	62
Figure 5.4: Opinion of Cost for 4 S. Tyler St. Couplet.....	63

Appendices

Appendix A – Meeting Presentations and Minutes	A1
Appendix B – Stage 0 Environmental Checklist and Stage 0 Scope and Budget Forms	A53
Appendix C – Traffic Counts Data	A63
Appendix D – Crash Data Maps	A97
Appendix E – LA DOTD and RPC Complete Streets Policies.....	A115



Executive Summary

Project Overview

The Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes (RPC) in coordination with the City of Covington (City) has contracted Digital Engineering (DE) in association Dana Brown & Associates (DBA) to perform a Land Use and Transportation Study: “New Covington” Sub-Area Analysis. The purpose of this project is to conduct a comprehensive study of the area, collecting and analyzing land use, traffic, crash, and related data to recommend new or improved policies to enhance traffic circulation, signage/stripping/signals, and safety for all transportation modes. The study team also further examined S. Tyler St. which also serves a major thoroughfare for the city.

The New Covington neighborhood, which is generally bounded by West 22nd Ave., West 12th Ave., S. Jefferson Ave., and S. Filmore St., is undergoing land use changes and economic growth which is contributing to increasing vehicle congestion, a demand for consideration of alternative means of transportation, and ADA access improvements to schools, recreational sites, and public facilities

The Project Management Committee (PMC) includes members from the RPC, the City of Covington Mayor’s Office, City Council, and Engineering Department, and the LA DOTD District 62.

Data Collection

The consultant team made numerous visits to the project study area for data collection and site analysis. The data collection visits included collecting traffic data for Average Daily Traffic (ADT), which are further discussed in Section 2.3 Traffic Counts and Crash Data. As a result of site visits and PMC meetings the team was able to prepare an existing conditions inventory that included land use, traffic volumes, parking, signage information, utility types, and civic and cultural resources. The information concerning the environmental investigations is included in Section 3.0 Environmental Conditions.

Crash data were analyzed for a 3-year period (2013-2015) and the team concentrated on three locations within the “New Covington” study area. One location is 15th Ave. at S. Tyler St. which will be covered in the signal warrant analysis section below. The other two locations are the entire study area and the S. Tyler St. corridor and are detailed in Section 2.3.

S. Tyler St. (LA 21) travel lanes are narrow, rutted, and in need of signage and striping. It is reasonable to suggest the condition of the roadway is contributing to crashes. Land use in the S. Tyler St. corridor and St. Tammany Parish Hospital area appears to be changing to a more commercialized use. As the hospital expands its operations the demand for doctor’s offices and medical land uses increases. The change to a more intensive land use will generate additional traffic.

Recommended “New Covington” Improvements

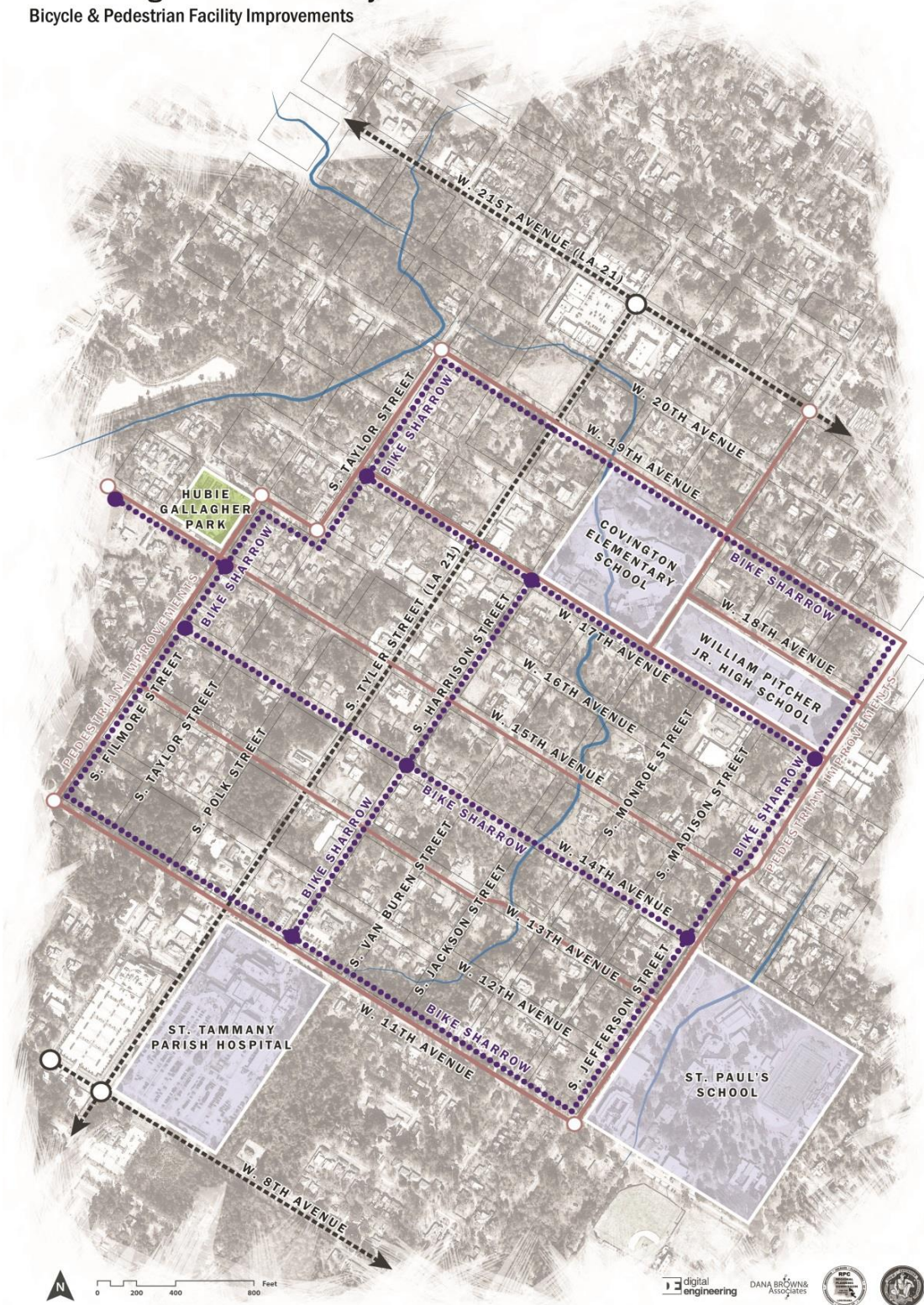
Short-term Improvements

Short-term improvements can be more easily initiated due to lower construction costs and by utilizing available right-of-way. Pedestrian and bicycle improvements can be found in Section 4A. The New Covington study area has several schools and parks. The pedestrian improvements for the area include sidewalks, crosswalks, and signage. Pavement markings such as advanced stop bars for vehicles at stop



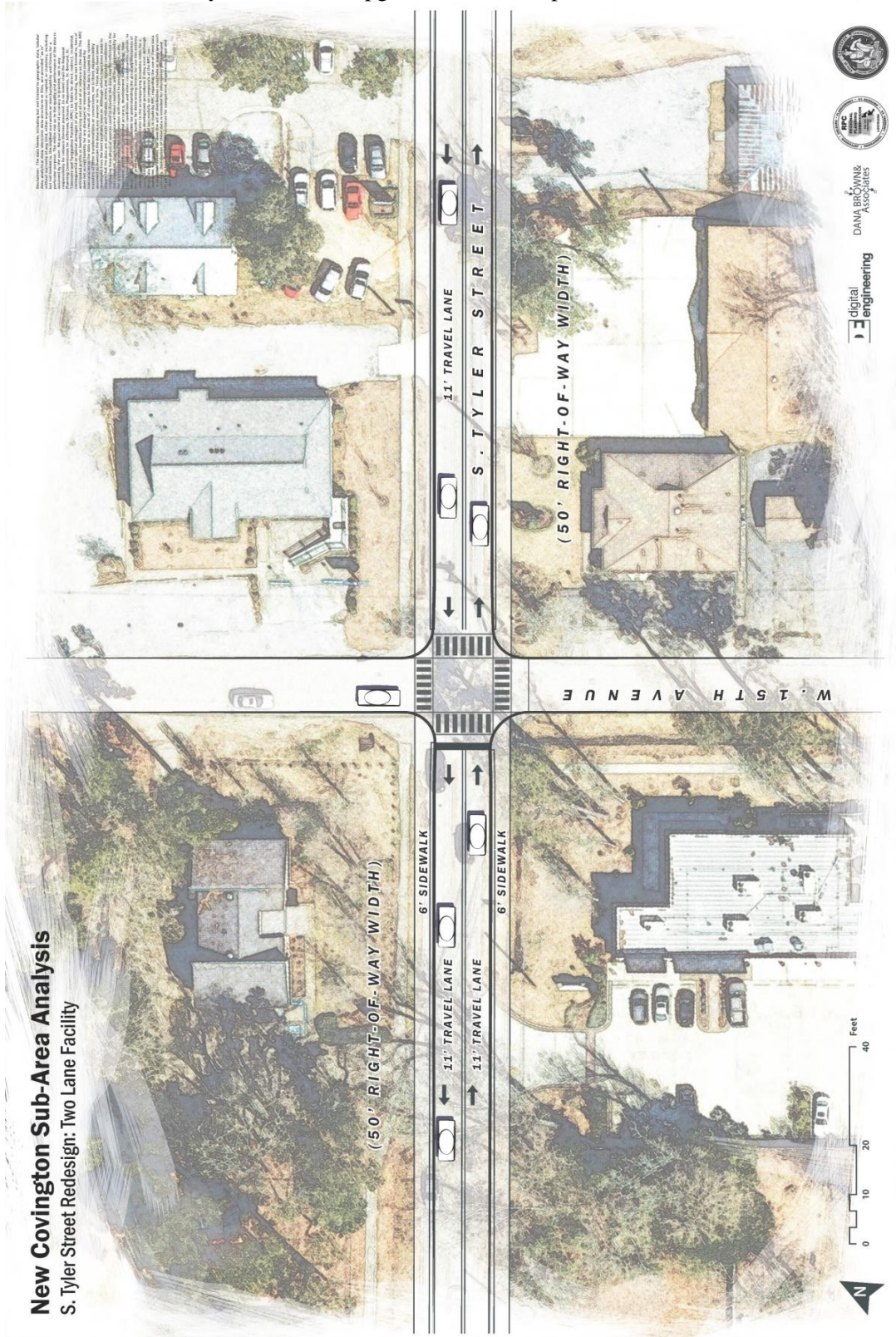
signs will also increase safety for pedestrians. Bicycle enhancements include sharrows (pavement markings) and signage to help direct bicyclists and to provide awareness to vehicular drivers.

New Covington Sub-Area Analysis Bicycle & Pedestrian Facility Improvements





S. Tyler St. (LA 21) is a minor arterial with approximately 16,000 vehicles traveling along it daily. The PMC concluded the roadway is in need of upgrades as soon as possible (as seen in Section 4A).





Long-term Improvements

The PMC determined the couplet concept as a viable alternative for a long-term improvement for the S. Tyler St. corridor, as illustrated below. Long-term options often include higher construction costs and the potential for right-of-way acquisition. The details are included in Section 4B.





Conclusion

The implementation of any of the proposed alternatives will have a positive impact on the efficiency and safety of the "New Covington" study area. The addition of signage, crosswalk striping, advanced stop bars, and sidewalks will provide a safer "New Covington" for all users, residents and visitors alike. The recommendations offer alternative transportation choices, access to recreation facilities and schools, and expanded public access to the surrounding areas through modal means other than motorized vehicles. The S. Tyler St. (LA 21) short-term recommendations will provide a safer and more efficient corridor. In addition, no environmental impacts were discovered to impede any of the recommendations. Detailed budgets for concepts are included in Section 5 and the project conclusion is in Section 6.



1.0 Introduction

1.1 Project Overview

The Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes (RPC) in coordination with the City of Covington (City) has contracted Digital Engineering (DE) in association Dana Brown & Associates (DBA) to perform a Land Use and Transportation Study: “New Covington” Sub-Area Analysis, including a Stage 0 Environmental Checklist and a Stage 0 Preliminary Scope and Budget Checklist for short and long-term recommendations. The purpose of this project is to conduct a comprehensive study of the area, collecting and analyzing traffic, crash, and related data to recommend new or improved policies to enhance traffic circulation, parking, signage/striping/signals, and safety for all transportation modes. The study team also further examined S. Tyler St. which also serves a major thoroughfare for the city.

Short and long-term comprehensive conceptual designs have been developed for the study area including plan layouts, typical sections, visual renderings, traffic control and calming features, and bicycle and pedestrian improvements. The short and long-term alternatives were developed in a collaborative effort of the Project Management Committee (PMC) with members from the RPC, City of Covington Mayor’s Office, City Council, and Engineering Department, and the Louisiana Department of Transportation and Development District 62 (LA DOTD). The short and long-term alternatives are presented in detail in Section 4.0 Recommended New Covington Improvements and may contain the following information:

- Complete streets approach
- Pedestrian crosswalks and/or other safety improvements
- Bicycle lanes and/or other safety improvements
- Conceptual plan of vehicular travel lanes
- Typical striping policies
- Traffic circulation and management short and long-term options

1.2 Project Description

The scope of work for the Land Use and Transportation Study: “New Covington” Sub-Area Analysis includes the following:

- Project Management Committee (PMC) – Assist the RPC in establishing and supporting a PMC to guide the technical work effort and to review the proposed concepts. The PMC includes members of the City of Covington Mayor’s Office, City Council, and Engineering Department, and the LA DOTD District 62.
- Site Investigation, Data Collection, & Analysis - Site visits were conducted and data was collected in order to gather and record information regarding the physical, engineering, land-use, and environmental features of the study area. The data and information included traffic counts, parking, sidewalks, crash data, and land use.
- Sidewalk, ADA Review, Signage, and Parking Analysis - The team prepared an inventory of sidewalk types and condition, ADA ramps and deficiencies, on-street parking, and opportunities for pedestrian improvements, lighting and landscaping. This data will be used by the RPC to document missing or replacement sidewalks, ADA ramps, opportunities for new bicycle and pedestrian linkages, and improved traffic circulation, signage and parking in the study area.
- Traffic Circulation Plan – The team developed, evaluated, and compared various alternatives for improving traffic circulation and safety within the study area. The evaluation considered the use



of possible couplets, use of road “diets” to enhance pedestrian, and bicycle safety, improved signage, signals, sidewalks, and parking options. The short and long-term alternative were developed in consultation with the PMC and presented to the PMC in draft form for review and comment prior to development of the detailed conceptual plan. The short-term alternatives include the use of Transportation Systems Management measures to improve the functionality and safety of the existing street grid through the use of improved signage, striping, and parking controls.

- Conceptual Development and Evaluation – We prepared a detailed conceptual plan for the short and long-term alternatives including typical sections, identifying measures to enhance traffic safety and operations, including roadway and geometric improvements, parking modifications, crosswalks, signal timing, signage, and other complete streets measures to reduce traffic conflicts and enhance modal safety. The report identifies potential utilities, environmental constraints, or other issues that could influence the concept’s feasibility, timing, and impact on the physical, natural and human environment. The team developed quantities and unit cost estimates for each short and long-term conceptual plan alternatives as well as future project design costs, recommended project phasing, and potential funding sources for project implementation.
- Draft and Final Reports - Upon review and approval of the draft submission, the Final Stage 0 Feasibility Study Report was provided to the RPC and the PMC members.

1.3 Background

The Regional Planning Commission in coordination with the City of Covington is undertaking a land use and transportation study of the New Covington neighborhood area which is generally bounded by West 22nd. Ave., West 12th. Ave., S. Jefferson Ave., and S. Filmore Street. Street rights-of-way are limited due to the age and historic character of the area. Travel lanes are generally narrow with adjacent parking and minimal sidewalks. The neighborhood area is undergoing land use changes and economic growth which is contributing to increasing vehicle congestion and a demand for consideration of alternative means of transportation, i.e., bike/pedestrian use, ADA access improvements to schools, recreational sites and public facilities, and low cost traffic management measures such as parking and signage controls.

“New Covington” is home to the St. Tammany Parish Hospital, as well as several schools and parks which results in increased traffic flows. New business and residential growth in the area is also contributing to increased demands for parking and related traffic management and safety improvements.



Land Use and Transportation Study: "New Covington" Sub-Area Analysis

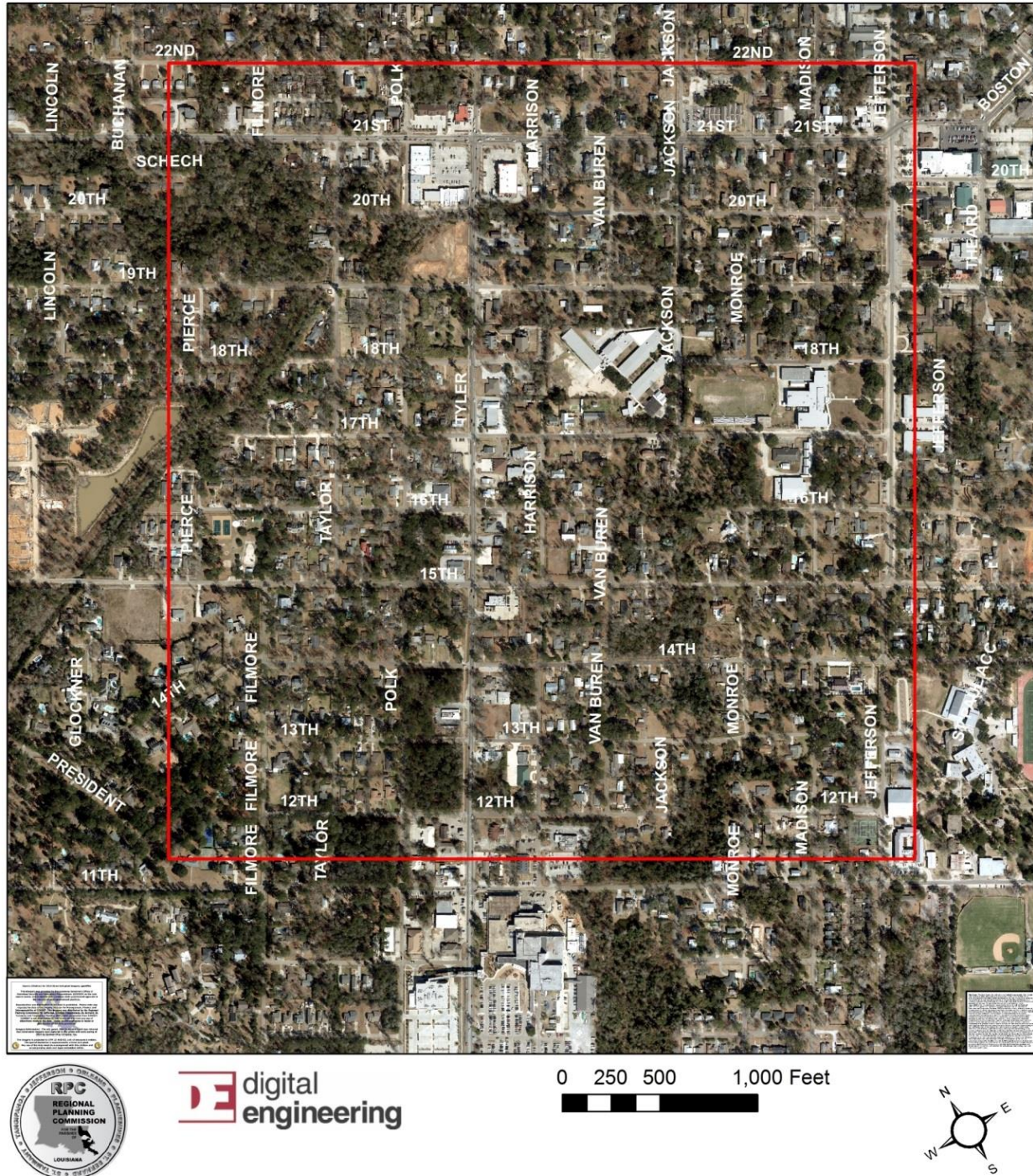


Figure 1.1: Study Area (Source Imagery: RPC)



2.0 Data Collection

2.1 Overview of Data Collection Effort

The study team collected data and information related to the “New Covington” study area from various sources including the RPC, the City, and LA DOTD. The RPC provided relevant studies, complete streets guides, crash data, imagery, and technical assistance needed to develop the geo-referenced aerial mapping and conceptual designs. The City provided Geographic Information Systems (GIS) data including, land use, zoning, streets, and utilities within the study area. LA DOTD provided the stage 0 environmental checklist and preliminary scope and budget forms, as well as instructions and information related to completing the forms and landscaping guidelines.

Several meetings for the purposes of developing the existing conditions analysis and the conceptual designs were conducted between the RPC and the study team (Digital Engineering and Dana Brown & Associates). The study team made numerous field visits to the project site for data collection and site analysis. The data collection visits included collecting traffic data for Average Daily Traffic (ADT) and level of service; these are further discussed in Section 2.3 Traffic Counts and Crash Data. As a result of these meetings and investigations, the team was able to prepare an existing conditions inventory that included land use, traffic volumes, parking, signage information, utility types, and civic and cultural resources. The information concerning the environmental investigations is included in Section 3.0 Environmental Conditions.

2.2 Typical Sections and Existing Conditions

Roads

“New Covington” was designed in a grid layout of north/south bound streets named for past U.S. Presidents and east/west bound streets that are numerically named as detailed above (Figure 1.1 Study Area). The north/south streets include S. Filmore. St., S. Taylor St., S. Polk St., S. Tyler., S. Harrison St., S. Van Buren St., S. Jackson St., S. Monroe St., S. Madison St., and S. Jefferson St. The east/west streets are numerically ordered and W. 12th Ave. to W. 22nd Ave.

The President streets typically have fifty feet (50’) of right-of-way and have posted speed limits of 25-35 mph. The numerical streets typically have eighty feet (80’) of right-of-way and have posted speed limits of 25 mph. The typical roadway width for all streets in the study area is approximately eighteen feet (18’). After visiting the site and reviewing the aerial photography, the team concluded that it appeared no buildings or other obstructions were encroaching into the right-of-way. However, there are numerous instances of private businesses utilizing the right-of-way for parking.

In Figure 2.1 below, a typical street view of the study area roadway shows a narrow right-of-way width and in generally good condition. The suburban and historical character of the city’s development demonstrate a right-of-way that is lined with open swales, utility poles, and utility lines but due to tree canopy height and proximity to the street the utility lines are incorporated into the streetscape and out of the sight for drivers and pedestrians.



Figure 2.1: W. 15th Ave. Street View (facing west to S. Harrison St.)

Streets are not striped for vehicular travel lanes (Figure 2.2 below) with the exception of S. Tyler St. as seen in Figure 2.3 below. S. Tyler St. is the LA DOTD state route LA 21. In addition, intersection pavement markings, such as stop bars and crosswalks, and signage are either absent or improperly placed.



Figure 2.2: W. 17th Ave. Typical Street (facing west to S. Jackson St.)

The roadway was field measured on S. Tyler St. (Figure 2.3 below) from gutter to gutter in selected locations from W. 12th Ave to W. 20th Ave. The approximate measurements, conditions, and street features include:

- Vehicular travel lane from gutter to inside double yellow: 9'9"
- Double yellow stripe with middle reflectors (outside strip to outside stripe): 1'6"
- Vehicular travel lane from outside of double yellow to gutter: 9'9"
- The pavement condition is poor and the travel lanes have wheel ruts
- Larger vehicles increasingly move to the edge of the travel lane creating a rut in the gutter
- Discontinuous sidewalks on both sides of the street
- Improperly placed signage
- No crosswalk pavement markings to support signage
- Larger vehicles increasingly move to the edge of the travel lane creating a rut in the gutter



Figure 2.3: S. Tyler St. (facing north to W. 17th Ave.)

Sidewalks and Crosswalks

The purpose of this element of the study was to evaluate the current pedestrian sidewalk and crosswalk system conditions throughout "New Covington" and provide recommendations to improve the safety of pedestrians. As per Louisiana Revised Statute 32:212, pedestrians have the right-of-way in crosswalks, marked and unmarked. Most intersections in the study area do not have marked crosswalks.

The sidewalk conditions in the "New Covington" area vary and many streets do not have sidewalks. The picture below (Figure 2.4) illustrates a sidewalk adjacent to Pitcher Jr. High School in poor condition.



Figure 2.4: Poor Sidewalk Condition (W. 18th Ave. facing east to S. Jefferson Ave.)



Another example of poor sidewalk connections and no crosswalks are near the Covington Elementary and Pitcher Jr. High schools as shown in Figure 2.5 below. Pedestrians attempting to cross from all sides of the W. 19th Ave./S. Jackson St. intersection to the schools have to cross the street with no crosswalk striping and no sidewalk connections. Potentially dangerous conflicts exist for pedestrians during peak times when drop off and pick up volumes are the greatest. Several intersections in the study are similar to this situation. Careful attention should be placed on intersections that are adjacent to schools and parks.

Pedestrian Needs Assessment and Enhancements

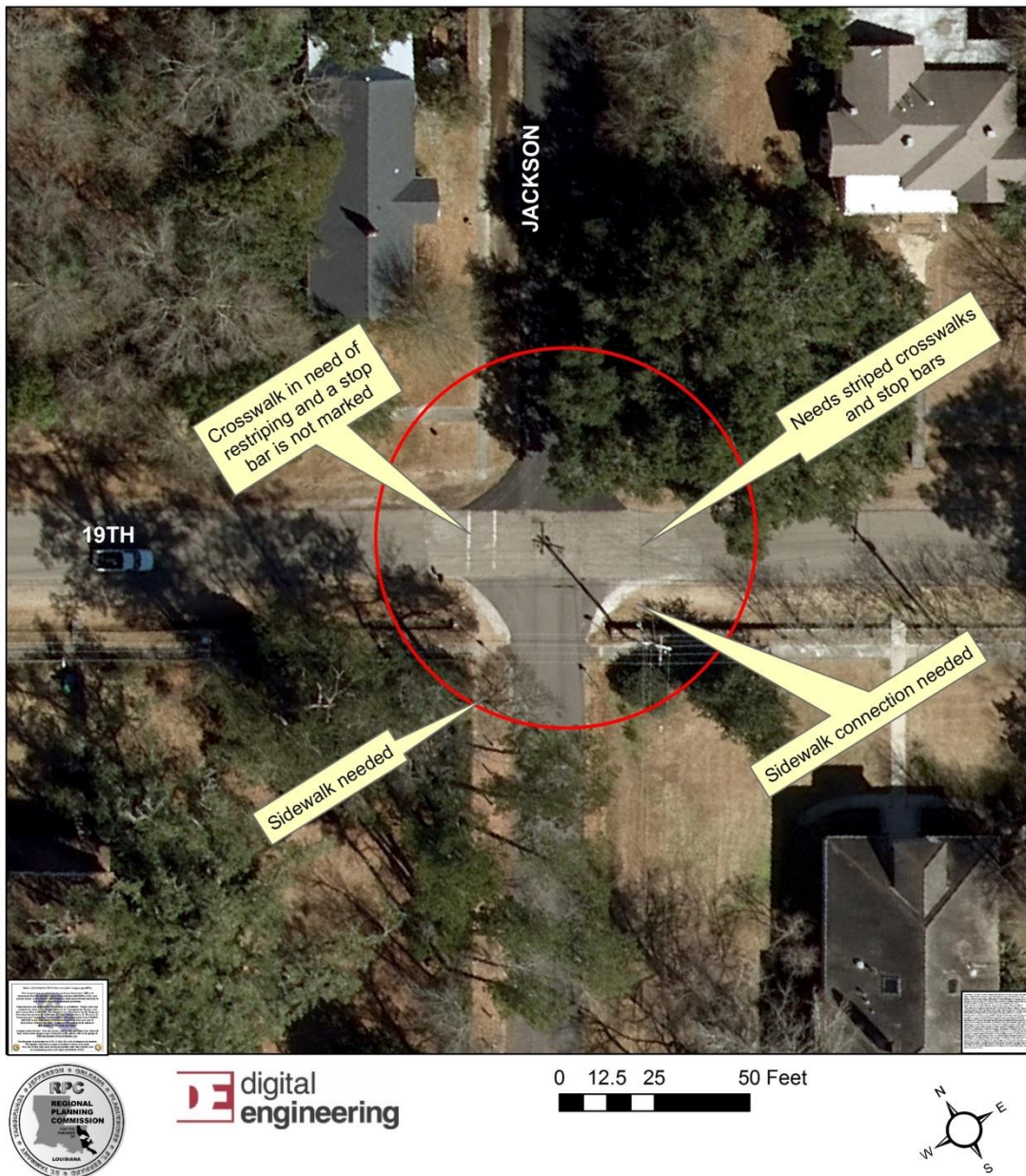


Figure 2.5: W. 19th Ave. and S. Jackson St. Intersection near Covington Elementary
(Source Imagery: RPC)

Signage

Another essential element of safety, traffic management, and wayfinding is signage in the ‘New Covington’ study area. Accurate signage helps direct drivers, bicyclists, and pedestrians safely. Below are examples of signage within the study area that needs replacement or upgrades. Figure 2.6 below shows a street sign that is blocked by overgrown vegetation. The sign shown in Figure 2.6 is in the medical business corridor which may have an increased traffic volume of clients not familiar with the area. Figure 2.7 below, demonstrates a street sign that is incorrectly placed and blocked by the stop sign.



Figure 2.6: Street signs behind overgrown vegetation

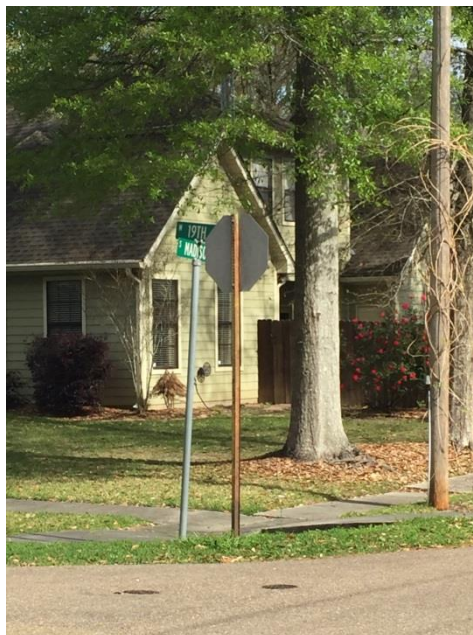


Figure 2.7: Street sign blocked by Stop sign

Parking

The purpose of this data collection effort was to evaluate the current public parking conditions throughout "New Covington" but especially in the S. Tyler St. corridor due to the St. Tammany Parish Hospital. The study area serves many different types of drivers, from local business owners and their clients, patrons of restaurants and other entertainment, or providing access to Downtown Covington, City Hall and the St. Tammany Parish Justice Center. The S. Tyler St./S. Polk St. corridor is undergoing land use changes in response for medical offices in support of the growing St. Tammany Parish Hospital. In addition there are also residences in the area that must compete with the daily influx of visitors. Figure 2.8 shows cars parked in the right-of-way.



Figure 2.8: Parking within Right-of-Way (W. 16th Ave. facing east to S. Tyler St.)



2.3 Traffic Counts, Crash Data, and Warrant Analysis

Traffic and Turning Counts

Traffic count data is a vital component of the transportation alternatives selection process because traffic count numbers can assist in determining transportation project needs. Average Daily Traffic (ADT) is the average 24-hour traffic volume at a given location for a period of time less than one year. The data is used to determine road performance, establish a change in classification or use, and prepare benefit-cost analyses. It is essential to know the average daily traffic, average vehicles per hour, and heavy truck volume for the study area when determining potential improvements and enhancements. Heavy truck volume that exceeds 10% is considered a truck route and this data is necessary since we are in a residential area with several schools, bicyclists, and pedestrians.

The RPC, City, and the consultant team determined it was important to analyze the movements of vehicular traffic in the “New Covington” study area due to the number of schools, parks, and burgeoning medical office land uses.

Traffic counts were conducted at the following locations listed below and as shown in Figure 2.9 below:

- 15th Ave. east of S. Tyler St. (LA 21)
- 15th Ave. west of S. Tyler St.
- 17th Ave. east of S. Tyler St.
- 19th Ave. east of S. Tyler St.



"New Covington" Sub-Area Analysis Traffic Count Locations

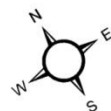
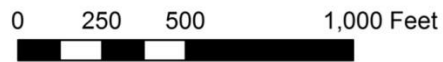
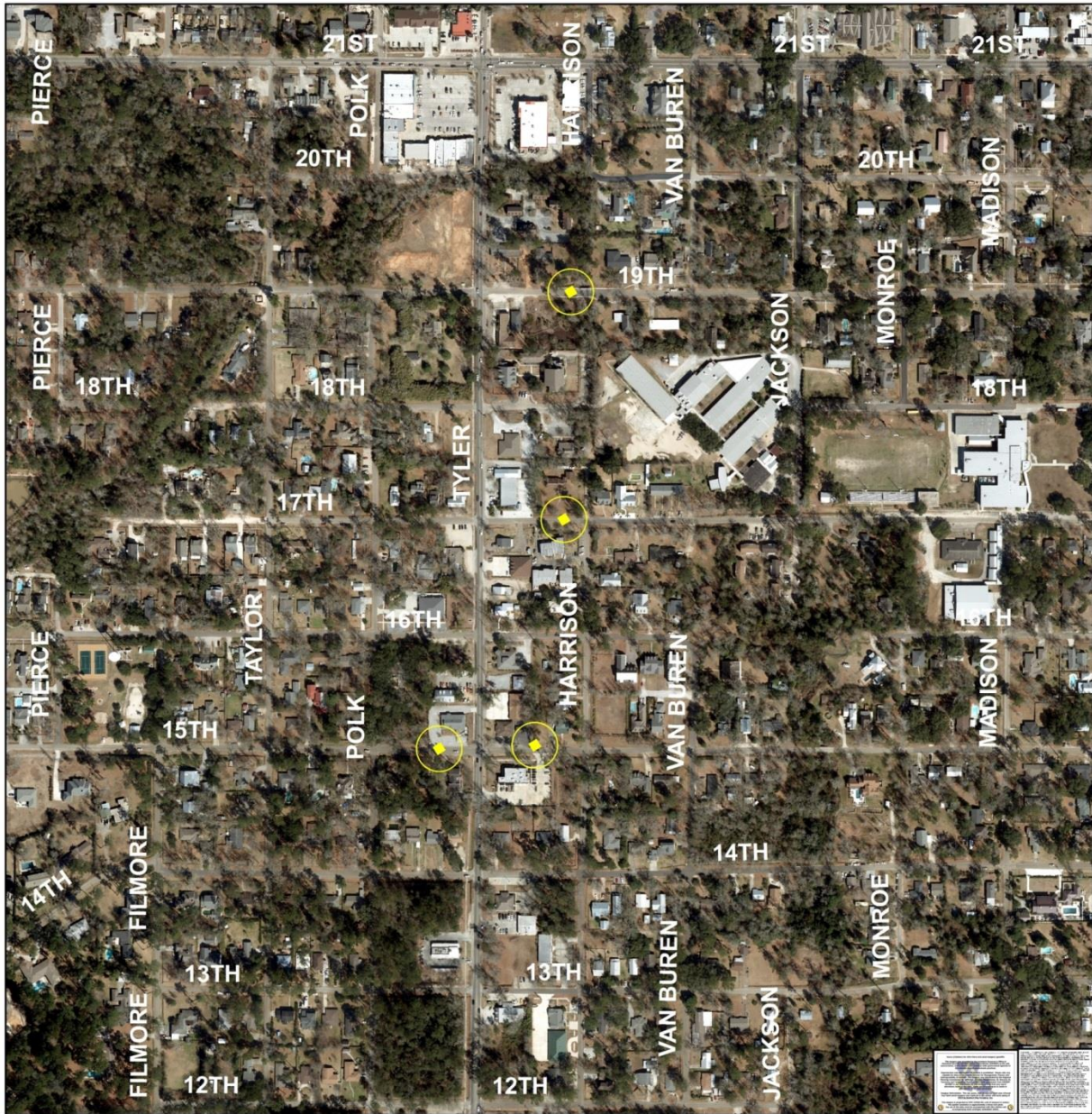


Figure 2.9: Traffic Count Locations Map (Source: RPC Imagery)



15th Ave. west of S. Tyler St. (LA 21) 7-day and 3-day Traffic Counts

15th Ave. is an east-west federal aid major collector road that links several neighborhoods to schools and businesses. In Figure 2.10 below the 7-day (February 9 -16, 2017) traffic count is combined for both east and west bound traffic and the total for both directions is 5,317 vehicles. The ADT is 760, the maximum 24-hour count is 884, and the vehicles per hour is 32. It is important to note that two sections on the west side of 15th Ave. were not in service during the time of the counts, the Mile Branch bridge and an approximate 30 feet section near Menetre Drive. The total heavy truck volume is 1%.

15th Ave. west of S. Tyler St. (LA 21) Traffic Counts	
7-day Counts	5,317
Average Daily Traffic (ADT)	760
Max 24 Hour Count	884
Average Vehicles Per Hour	32
Heavy Volume (Truck Traffic)	1%
3-day Counts	2,487

Figure 2.10: 15th Ave. west of S. Tyler St. Traffic Data

15th Ave. east of S. Tyler St. Traffic Counts

The 7-day traffic count survey (February 9 -16, 2017) in Figure 2.11 below traffic count is combined for both east and west bound traffic and the total for both directions is 4,513 vehicles. The ADT is 645, the maximum 24-hour count is 790, and the vehicles per hour is 26. The total heavy truck volume is very low 1%.

15th Ave. east of S. Tyler St. (LA 21) Traffic Counts	
7-day Counts	4,513
Average Daily Traffic (ADT)	645
Max 24 Hour Count	790
Average Vehicles Per Hour	26
Heavy Volume (Truck Traffic)	1%
3-day Counts	2,177

Figure 2.11: 15th Ave. east of S. Tyler St. Traffic Data



17th Ave. east of S. Tyler St. Traffic Counts

The 7-day traffic count (February 9 -16, 2017) for 17th Ave. east of S. Tyler St. in Figure 2.12 below is listed for both east and west bound traffic separately and the total for both directions is 4,226 vehicles. The ADT is 604, the maximum 24-hour count is 867, and the vehicles per hour is 24. The total heavy truck volume on 17th Ave. is 1%.

17th Ave. east of S. Tyler St. (LA 21) Traffic Counts	
7-day Counts	4,226
Average Daily Traffic (ADT)	604
Max 24 Hour Count	867
Average Vehicles Per Hour	24
Heavy Volume (Truck Traffic)	1%
3-day Counts	2,316

Figure 2.12: 17th Ave. east of S. Tyler St. Traffic Data

19th Ave. east of S. Tyler St. Traffic Counts

The 7-day traffic count (February 9 -16, 2017) for 19th Ave. east of S. Tyler St. in Figure 2.13 below is listed for both east and west bound traffic separately and the total for both directions is 5,912 vehicles. The ADT is 845, the maximum 24-hour count is 1,028, and the vehicles per hour is 33. The total heavy truck volume is 2%.

19th Ave. east of S. Tyler St. (LA 21) Traffic Counts	
7-day Counts	5,912
Average Daily Traffic (ADT)	845
Max 24 Hour Count	1,028
Average Vehicles Per Hour	33
Heavy Volume (Truck Traffic)	2%
3-day Counts	2,931

Figure 2.13: 19th Ave. east of S. Tyler St. Traffic Data

The study team did not take traffic counts on S. Tyler St. (LA 21). The LA DOTD website traffic count portal did show an ADT of 16,431 for S. Tyler St. just south of 21st Ave. (US 190 B) in 2015. All traffic count related data can be found in Appendix C.



Crash Data

Transportation planning takes safety considerations into account by identifying strategies for reducing crashes. There are economic costs associated with crashes, incurred both by those involved and by other travelers affected by the traffic delay caused by crashes. Improving the safety of the transportation system is one of the planning factors that should be considered in the transportation planning process. The team included safety as part of the transportation systems assessment for short and long-term alternatives.

The team concentrated on three locations within the “New Covington” study area. One location is 15th Ave. at S. Tyler St. which will be covered in the signal warrant analysis section below. The other two locations are the entire study area and the S. Tyler St. corridor. Crash data was provided by the RPC, analyzed by the study team, and detailed in the Figures below.

Types and Number of Crashes in the "New Covington" Study Area		
Year	Crash Type	Number of Crashes
2013	Rear End	42
	Right Angle	31
	Left Turn	13
	Sideswipe	4
	Right Turn	4
	Head-on	2
	Total 2013 Crashes	96
2014	Rear End	66
	Right Angle	31
	Left Turn	13
	Sideswipe	6
	Right Turn	1
	Head-on	4
	Total 2014 Crashes	121
2015	Rear End	55
	Right Angle	41
	Left Turn	14
	Sideswipe	8
	Right Turn	1
	Head-on	1
	Total 2015 Crashes	120

Figure 2.14: “New Covington” Study Area Crash Data

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409. Contact the Traffic Safety Office at (225) 379-1871 before releasing any information.

"New Covington" Crash Type and Location 2013 - 2015

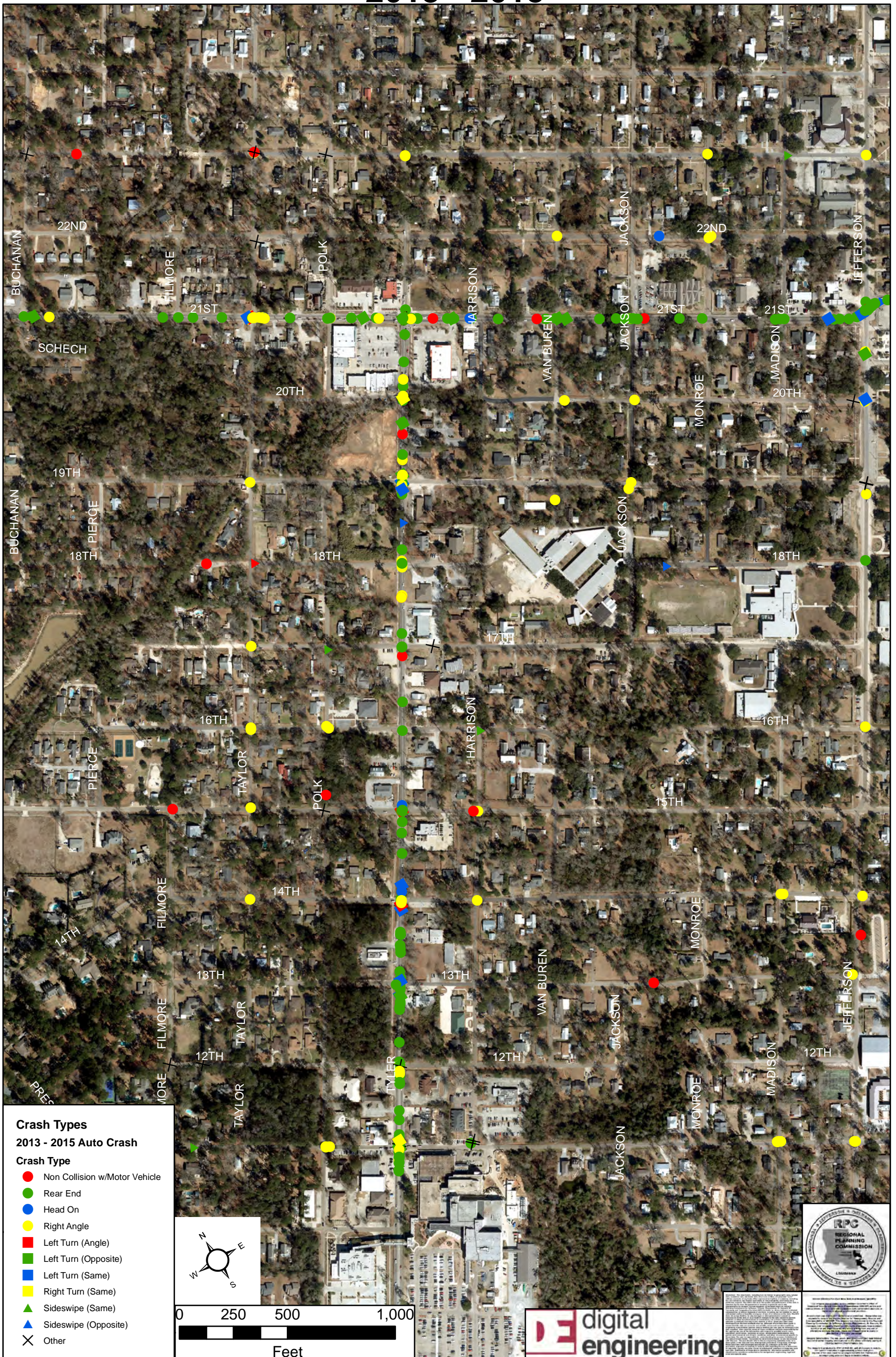


Figure 2.15: "New Covington" Crash Data Map

Source: Image and Crash Data: RPC

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409. Contact the Traffic Safety Office at (225) 379-1871 before releasing any information.



Types and Number of Crashes in the S. Tyler St. (LA 21) Corridor		
Year	Crash Type	Number of Crashes
2013	Rear End	22
	Right Angle	11
	Left Turn	6
	Sideswipe	1
	Right Turn	3
	Head-on	2
	Total 2013 Crashes	45
2014	Rear End	34
	Right Angle	10
	Left Turn	11
	Sideswipe	2
	Right Turn	0
	Head-on	0
	Total 2014 Crashes	57
2015	Rear End	35
	Right Angle	9
	Left Turn	9
	Sideswipe	2
	Right Turn	0
	Head-on	1
	Total 2015 Crashes	56

Figure 2.16: S. Tyler St. (LA 21) Corridor Crash Data

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409. Contact the Traffic Safety Office at (225) 379-1871 before releasing any information.



"New Covington" Study Area (S. Tyler St.) Crash Type and Location 2013 - 2015



Figure 2.17: S. Tyler St. (LA 21) Corridor Crash Data Map

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409. Contact the Traffic Safety Office at (225) 379-1871 before releasing any information.

RPC Task MC-1.17
 FY-17 UPWP



As noted in existing conditions S. Tyler St. is a substandard minor arterial state route. The travel lanes are narrow, the pavement condition is substandard, the ADT is ~ 16,000, and the posted speed limit is 35 mph. There are no signalized intersections from 11th Ave. to 21st Ave. increasing the potential for crashes along S. Tyler St. The S. Tyler St. corridor crashes reflect a large majority compared to the overall study area with 47% of crashes in years 2013, 2014, and 2015.

Types and Number of Crashes			
Year	Type	Study Area Crashes	S. Tyler St. Crashes
2013	Rear End	42	22
	Right Angle	31	11
	Left Turn	13	6
	Sideswipe	4	1
	Right Turn	4	3
	Head-on	2	2
	Total 2013 Crashes	96	45
2014	Rear End	66	34
	Right Angle	31	10
	Left Turn	13	11
	Sideswipe	6	2
	Right Turn	1	0
	Head-on	4	0
	Total 2014 Crashes	121	57
2015	Rear End	55	35
	Right Angle	41	9
	Left Turn	14	9
	Sideswipe	8	2
	Right Turn	1	0
	Head-on	1	1
	Total 2015 Crashes	120	56

Figure 2.18: Study Area and S. Tyler St. Crash Comparison

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409. Contact the Traffic Safety Office at (225) 379-1871 before releasing any information.



15th Ave. at S. Tyler St. Signal Warrant Analysis

S. Tyler St. (LA 21) in "New Covington" is a north-south alignment that connects 21st Ave. (US 190 B) and I-12. The S. Tyler St. corridor from 11th Ave. to 21st Ave. is a non-signalized 35 mph posted minor arterial facility and 15th Ave. is an east-west major collector facility as shown in Figure 2. __ below. Land use changes and economic growth have contributed to increased vehicle congestion, especially related to the growth of the St. Tammany Parish Hospital and the widening of S. Tyler St. from Bootlegger Rd. to 11th Ave. The "New Covington" study area is in need of improvements to allow for alternative means of transportation for bicyclists and pedestrians, improved roadways, potential for traffic signals, and clearer signage and striping. This section summarizes the cursory review for meeting the MUTCD requirements for a signal warrant for the 15th Ave. at S. Tyler St. intersection. All data can be reviewed in Appendix C.

"New Covington" Study Area LA DOTD Functional Classification

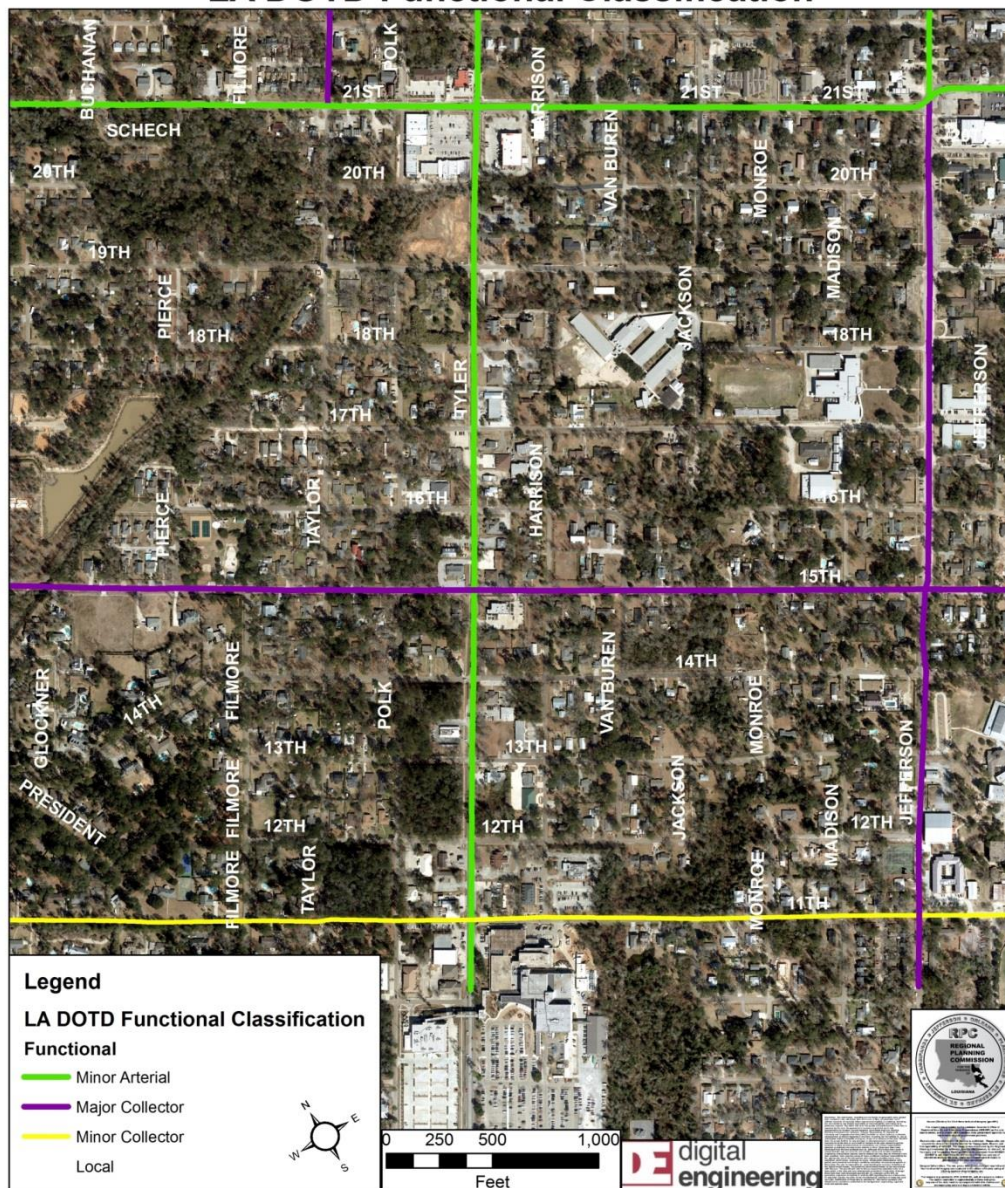


Figure 2.19: "New Covington" Study Area Road Classifications (Source: LA DOTD)



The study intersection is a four legged intersection with 15th Ave. forming the east/west minor approach and S. Tyler St. forming the north/ south major approach of the intersection. Vehicles on 15th Ave. stop and yield to the major street traffic on S. Tyler St. The speed limit on S. Tyler St. is 35 mph and the speed limit on 15th Ave. is 25 mph. A traffic signal warrant analysis provides a procedure to determine input into the decision of whether or not conditions warrant the installation or the continued operation of a traffic signal. A warrant is a set of criteria which can be used to define the relative need for, and appropriateness of, a particular traffic control device.

Seven-day 24-hour counts were conducted on the 15th Ave. approaches of the study intersection from Thursday, February 9th to Thursday, February 16th, 2017 (Figure 2.20).

The traffic signal warrant analysis was performed in accordance with the guidelines and procedures outlined in the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 4C as defined by Federal Highway Administration (FHWA). The MUTCD states: Traffic control signals that are properly designed, located, operated, and maintained will have one or more of the following advantages:

- A. They provide for the orderly movement of traffic.
- B. They increase the traffic-handling capacity of the intersection
- C. They reduce the frequency and severity of certain types of crashes, especially right-angle collisions.
- D. They are coordinated to provide for continuous or nearly continuous movement of traffic at a definite speed along a given route under favorable conditions.
- E. They are used to interrupt heavy traffic at intervals to permit other traffic, vehicular or pedestrian, to cross.

The MUTCD continues guidance and states a traffic control signal should not be installed unless one or more of the factors described in this Chapter are met. Those factors are the warrants of which there are nine.

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour
- Warrant 4, Pedestrian Volume
- Warrant 5, School Crossing
- Warrant 6, Coordinated Signal System
- Warrant 7, Crash Experience
- Warrant 8, Roadway Network
- Warrant 9, Intersection Near A Grade Crossing

Due to the unique nature of each road facility and/or network, not all warrants will be applicable. The applicable warrants relevant to 15th Ave. at S. Tyler St. are listed in Figure 2.21 below and whether the criteria were met is noted.

DOTD has set their own policy regarding signal warrant analysis and it is defined in Engineering Directives and Standards Manual (EDSM) No. VI.3.1.6. The EDSM states that crash history and traffic volumes should be studied using MUTCD Warrants 1A 100% and Warrant 7 for seven consecutive days. If the study shows that either warrant is met then further investigation would follow. Warrant 1A 100% and Warrant 7 did not meet due to less than defined vehicular volume on 15th Ave. (minor approach), as seen in the figure below. It is important to note that the intersection does meet the crash experience criterion for Warrant 7. Additional study and engineering judgment may be requested by the city to LA DOTD to determine if safety enhancements and improvements for the intersection.



"New Covington" Sub-Area Analysis 15th Ave./S. Tyler St. Intersection

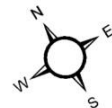
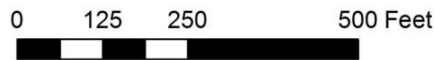


Figure 2.20: 15th Ave. at S. Tyler St. Average Daily Traffic



15th Ave. at S. Tyler Warrant Analysis

	EDSM			MUTCD		
	Engineering Directives and Standards Manual, LA			Manual on Uniform Traffic Control Devices, FHWA		
	Yes	No	N/A	Yes	No	N/A
Warrant 1A, Eight-Hour Vehicular Volume						
Warrant 1B, Eight-Hour Vehicle Volume						
Warrant 2, Four-Hour Vehicular Volume						
Warrant 3, Peak Hour						
Warrant 4, Pedestrian Volume						
Warrant 5, School Crossing						
Warrant 6, Coordinated Signal System						
Warrant 7, Crash Experience						
Warrant 8, Roadway Network						
Warrant 9, Intersection Near a Grade Crossing						
Signal Criteria	Must meet Warrant 1 A 100% or Warrant 7 *Does not meet Warrant 7 criteria due to minor approach traffic volume.			A traffic control signal should not be installed unless one or more of the factors described in this Chapter are met.		

Figure 2.21 EDSM and MUTCD Warrants (15th Ave. at S. Tyler St.)

Crash history is a required criterion when performing a warrant analysis as detailed in the MUTCD and EDSM. Crash history of the site with a chart/sketch illustrating the number of correctable crashes that occurred within a consecutive 12 month period of the last three years is detailed in Figure 2.22 below. The prevalent type of crash for the intersection is the right angle crash. Other types of include sideswipes, rear ends, and right turns. Illustrations are provided below in Figure 2.23. Yearly totals include the following:



Crashes at 15th Ave./S. Tyler St. Intersection		
Year	Crash Type	Number of Crashes
2013	Rear End	4
	Head On	1
	Right Angle	1
2014	Rear End	1
2015	Rear End	1
	Right Angle	1
	Left Turn (Angle)	1
	Left Turn (Opposite)	1
	Total Crashes	11

Figure 2.22: Crash Experience (Source: RPC)

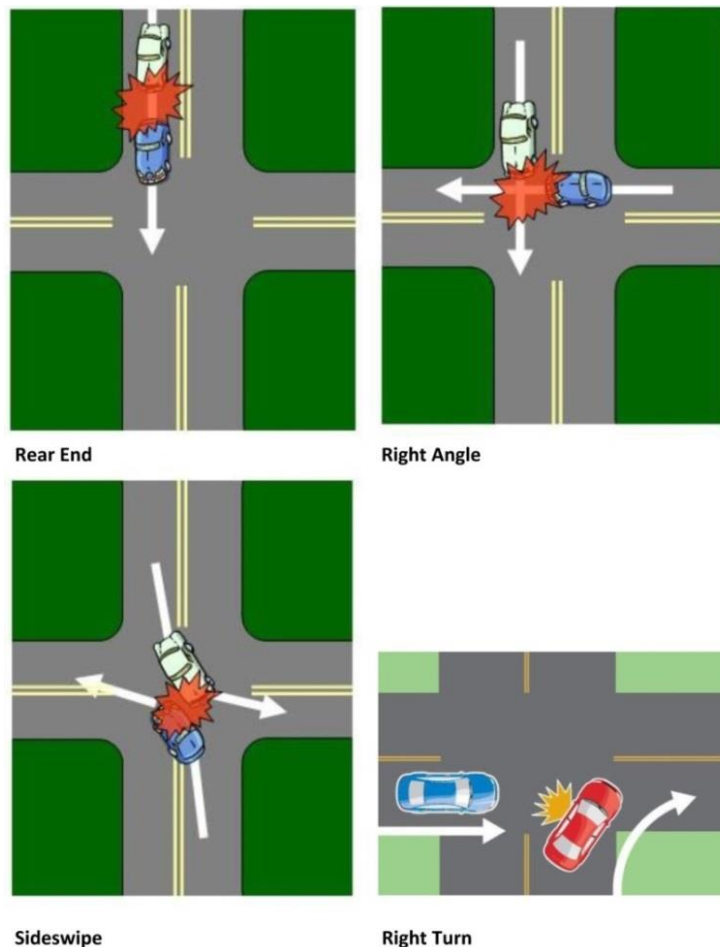


Figure 2.23: Crash Experience Illustrations (Source: FHWA)

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409. Contact the Traffic Safety Office at (225) 379-1871 before releasing any information.



"New Covington" Study Area 15th Ave./S. Tyler St. Intersection Crashes 2013 - 2015

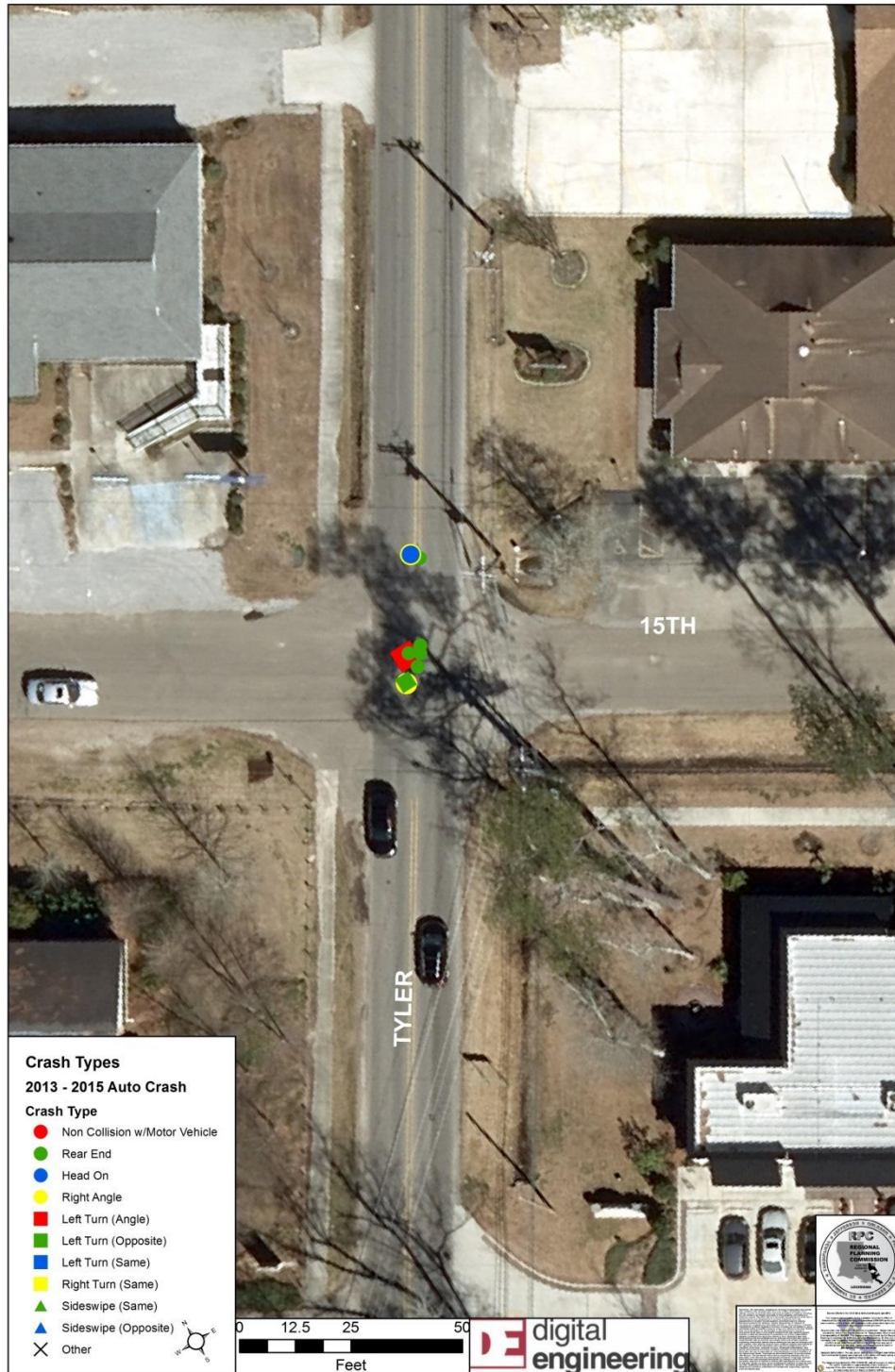


Figure 2.24: Crash Experience at 15th Ave. and S. Tyler St.

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409. Contact the Traffic Safety Office at (225) 379-1871 before releasing any information.

2.4 Land Use, Zoning, and Census Data

Land Use and Zoning

Existing land use (Figure 2.25) and zoning (Figure 2.27) maps for the "New Covington" area are presented on the following pages, as well as a specific map for the S. Tyler St. corridor (Figure 2.26). The majority land use and zoning for the study area include residential use. There are also distinct sections of medical and institutional (schools) land uses in the study area and commercial/office land uses along the S. Tyler corridor.

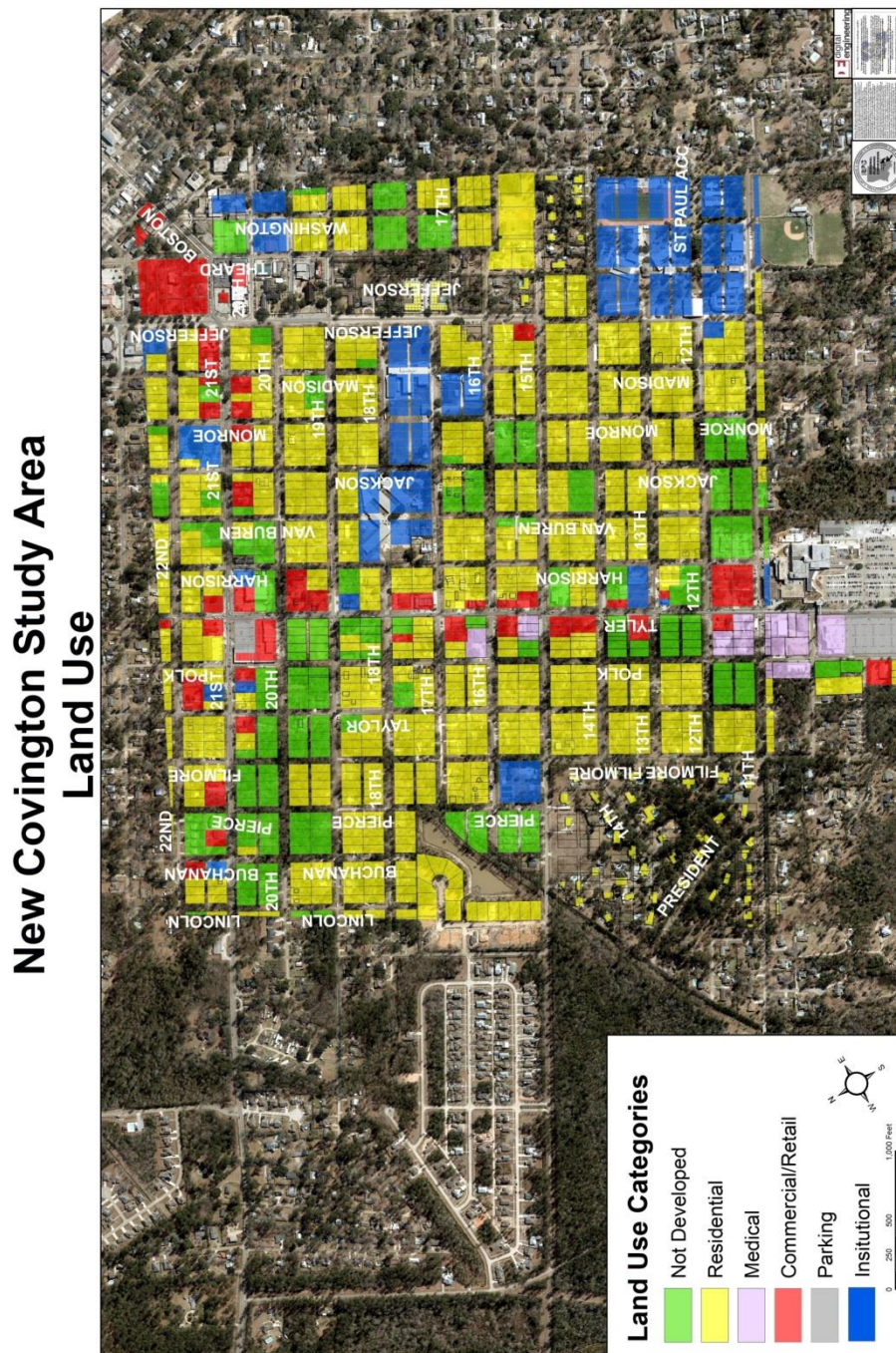


Figure 2.25: Land Use for Study Area (Source: Image - RPC; GIS Data – City of Covington)



S. Tyler/S. Polk Corridor Land Use 2017



Figure 2.26: Land Use for S. Tyler St. corridor (Source: Image - RPC; GIS Data – City of Covington)



New Covington Study Area Zoning

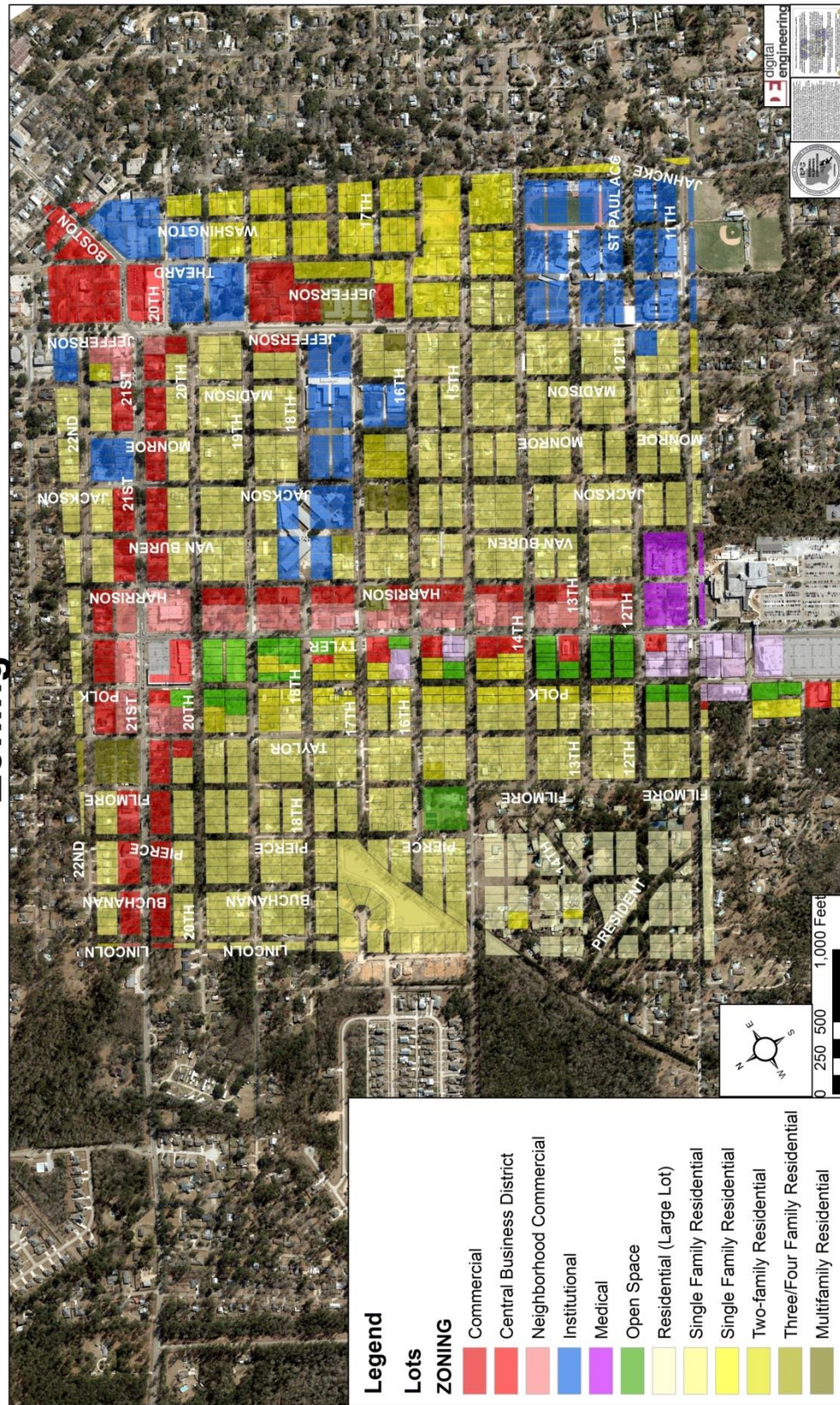


Figure 2.27: Zoning for Study Area (Source: Image - RPC; GIS Data – City of Covington)



US Census Data

The US Census information for population (Figure 2.28) and mapping for Census Tracts 404, 405.01, and 406.02 (Figure 2.29) are presented below. Additional census information is included in Section 3: Environmental Justice.

Population for Census Tract 404 St. Tammany Parish, Louisiana (2010)		
Race	Estimate of Total Population	
White	6,369	91%
Black	271	3%
American Indian	29	1%
Hispanic	257	3%
Asian	69	2%
Total	6,995	100%

Population for Census Tract 405.01 St. Tammany Parish, Louisiana (2010)		
Race	Estimate of Total Population	
White	1,536	47%
Black	1,603	49%
American Indian	5	1%
Hispanic	90	2%
Asian	15	1%
Total	3,249	100%

Population for Census Tract 406.02 St. Tammany Parish, Louisiana (2010)		
Race	Estimate of Total Population	
White	2,283	92%
Black	35	2%
American Indian	13	1%
Hispanic	132	4%
Asian	8	1%
Total	2,471	100%

Figure 2.28: Population for Census Tracts (Source: US Census)



**New Covington Study Area
 Census Tracts (2010)**

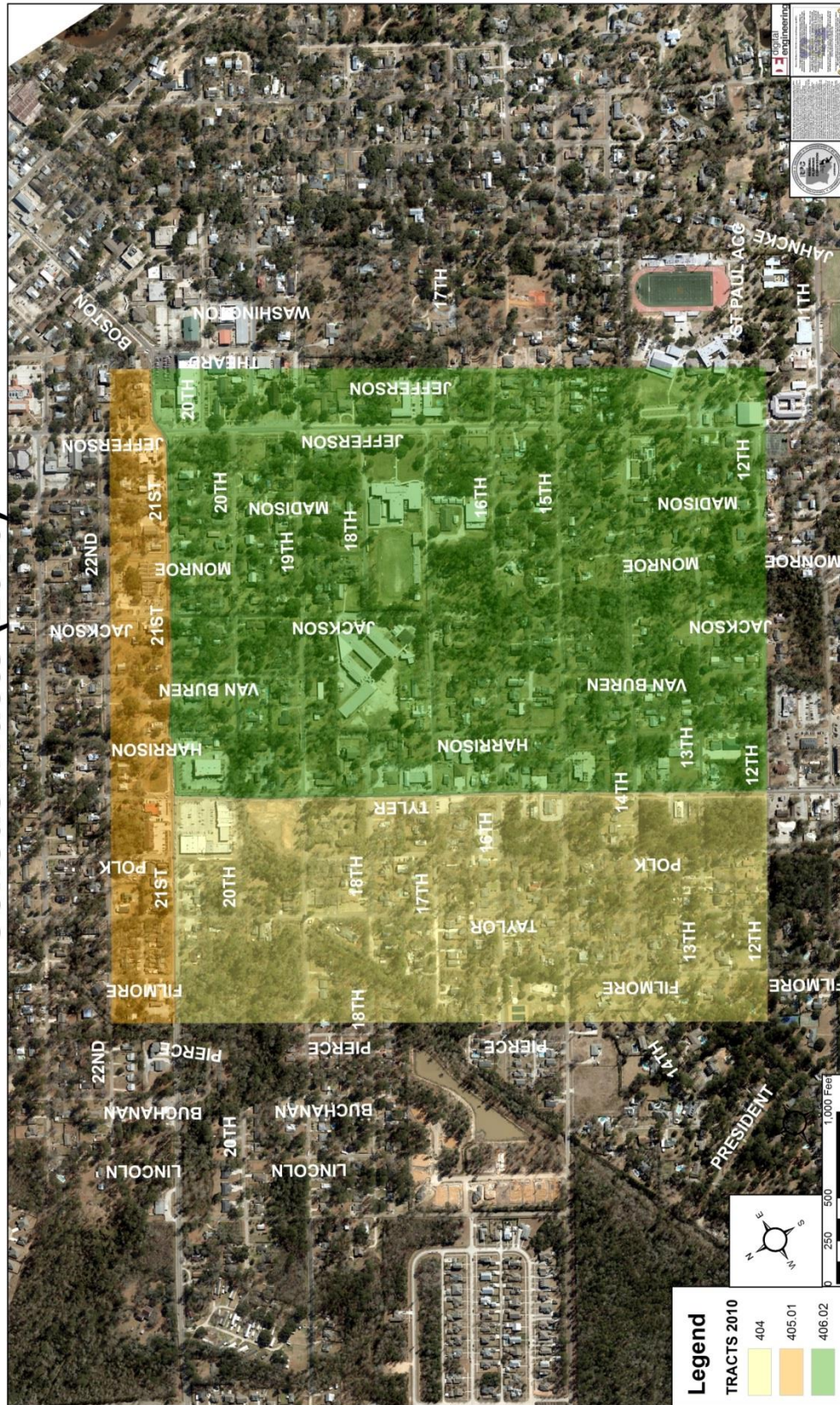


Figure 2.29: Map of US Census Tracts (Source: Image – RPC; GIS Data - US Census)



2.5 Utilities and Infrastructure

The study team identified the following utilities within the “New Covington” study area. The utility placement is shown in Figure 2.30.

- Drainage Utilities
- Sewer Utilities
- Water Utilities

“New Covington” Sub-Area Analysis Utilities and Infrastructure

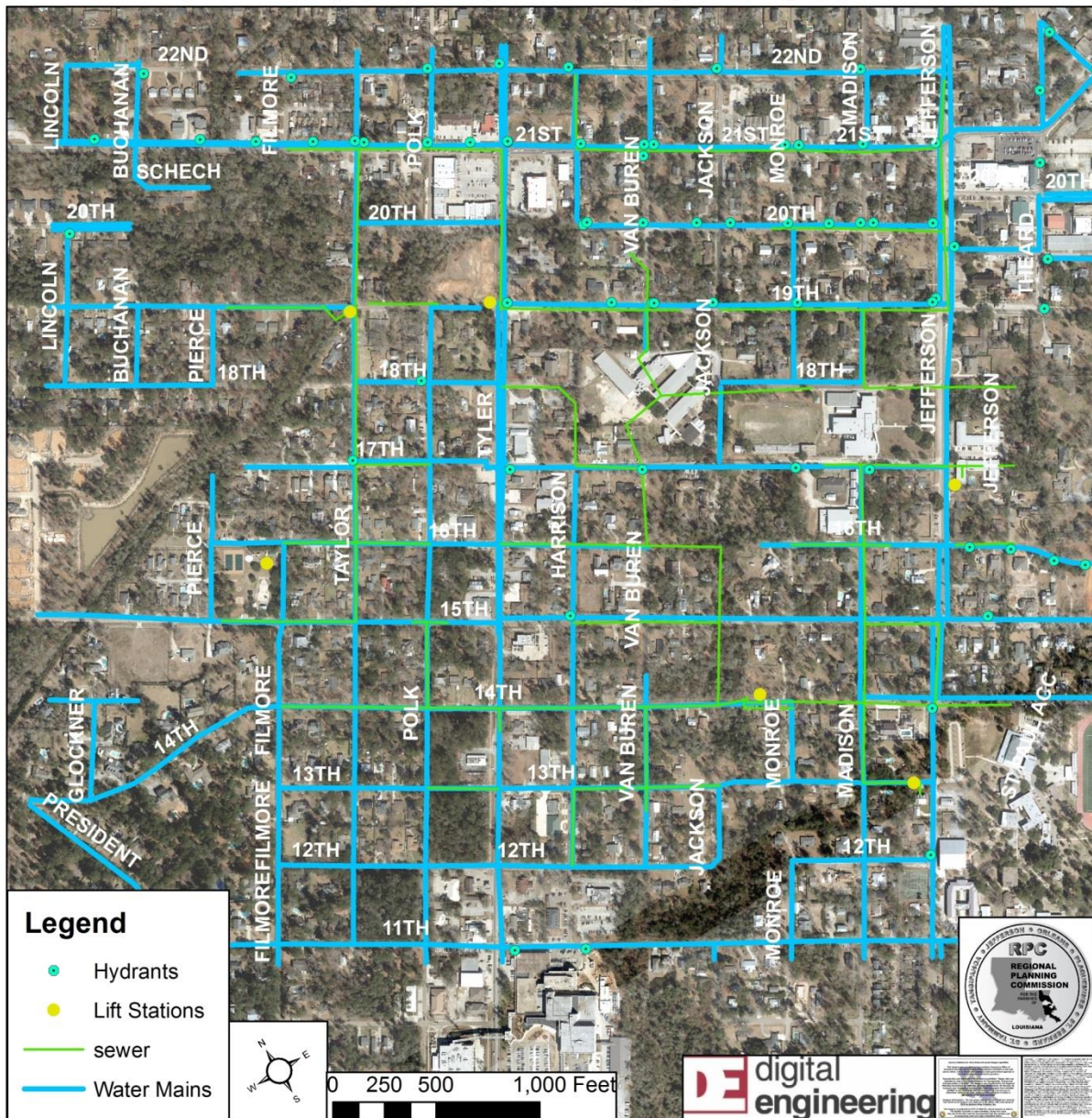


Figure 2.30: Identification of Utilities (Source: Image – RPC; GIS Data – City of Covington)

3.0 Environmental Conditions

3.1 Surrounding Community Elements

The Stage 0 Environmental Checklist inquires if the proposed alternatives are adjacent to or will impact churches, cemeteries, schools, public facilities, or water supply. Our investigation concludes the following.

While there are no churches in the study area, there are some adjacent to it, and they will not be negatively impacted due to corridor conceptual alternatives. No cemeteries, public facilities, or water supply infrastructure are in or adjacent to the study area. There are several schools and community elements within and adjacent to the study area (as seen on the map below) that will benefit from the recommendations of the study. It is worth noting that existing rights-of-way will be utilized for all alternatives on all city owned streets, as well as LA State Route 21 (S. Tyler St.). The goal of this project is no increase vehicular, pedestrian, and bicyclist's safety while enhancing access and increasing mobility options for all users.

"New Covington" Sub-Area Community and Public Facilities

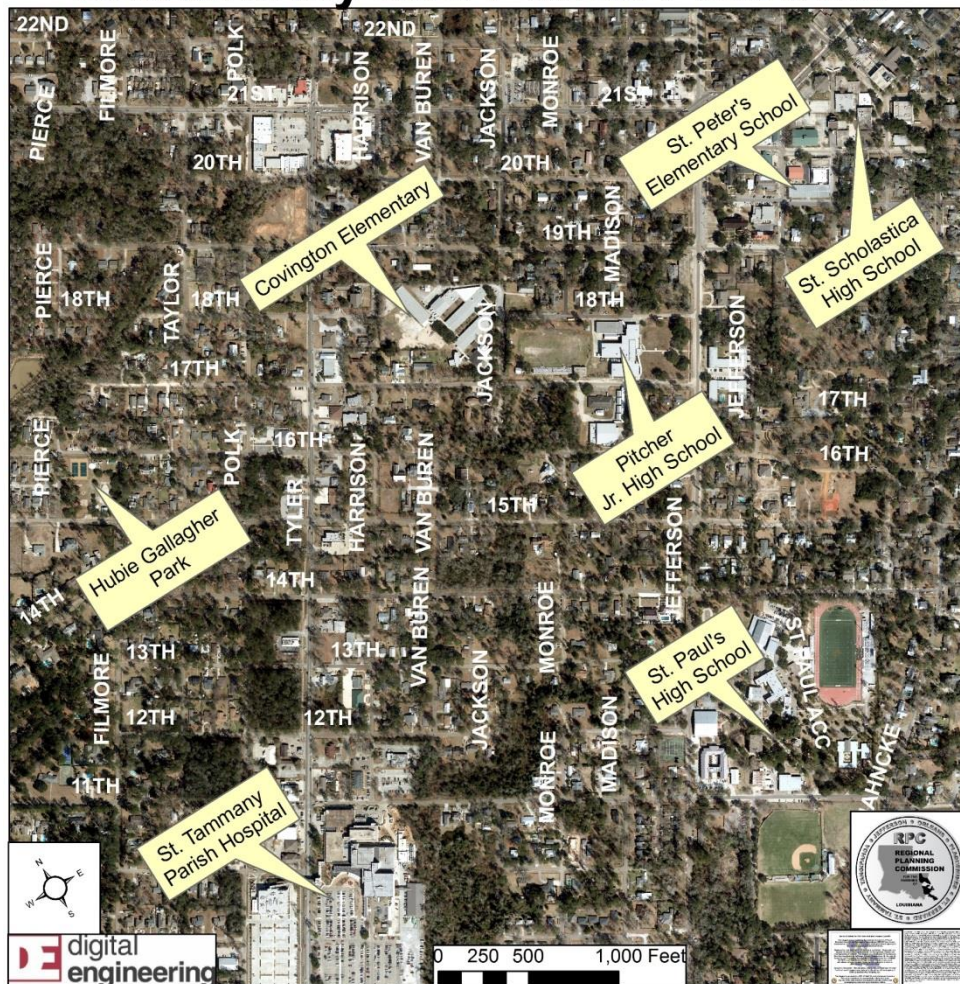


Figure 3.1: Community Element Locations



The pedestrian and bicyclist enhancement impacts will be minimal during construction as alternative routes are readily and currently available. The long-term impacts will be positive due to increased traffic efficiency, conflict reduction, and safety enhancements for all users.

3.2 Wetlands Inventory

Jurisdictional wetlands nor wetlands enrolled in the reserve program exist in the study.

3.3 Native American Tribal Lands

The study area does not contain any known properties owned by a Native American Tribe.

3.4 Section 4(f) Issues

Section 4(f) issues investigated within the study area consisted of public recreation, public parks, wildlife refuges, and historic sites. No known negative impacts to public recreation, public parks, wildlife refuges, or historic sites are expected in the study area.

3.5 Endangered Species

The Endangered Species Act of 1973 was designed to protect critically imperiled species from extinction as a "consequence of economic growth and development untempered by adequate concern and conservation." The Act is administered by two federal agencies, the United States Fish and Wildlife Service (FWS) and the National Oceanic and Atmospheric Administration (NOAA).

The "New Covington" area consists of a developed area almost eight miles away from Lake Pontchartrain and is approximately 1/2 of a mile from the Bogue Falaya River. No other known critical habitats are near the area; therefore, the possibility of disturbing a threatened or endangered species is unlikely. A list of threatened and endangered species relevant to the St. Tammany Parish, LA area is located in Appendix B.

3.6 Louisiana Scenic Rivers Act

In 1970, the Louisiana Legislature created the Louisiana Natural and Scenic Rivers System. The System was developed for the purpose of preserving, protecting, developing, reclaiming, and enhancing the wilderness qualities, scenic beauties, and ecological regimes of certain free-flowing Louisiana streams. Today, there are approximately 3,000 miles of Louisiana designated Natural and Scenic Rivers. Within the City of Covington the Bogue Falaya River from its headwaters to La. Hwy. 437 (Figure 3.2 below) is a Natural and Scenic River as described in Louisiana Revised Statute 56:1847. None of the alternatives considered will be adjacent to nor will impact the river.

"New Covington" Sub-Area Bogue Falaya River

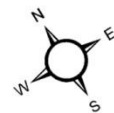
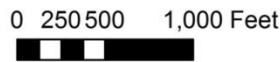
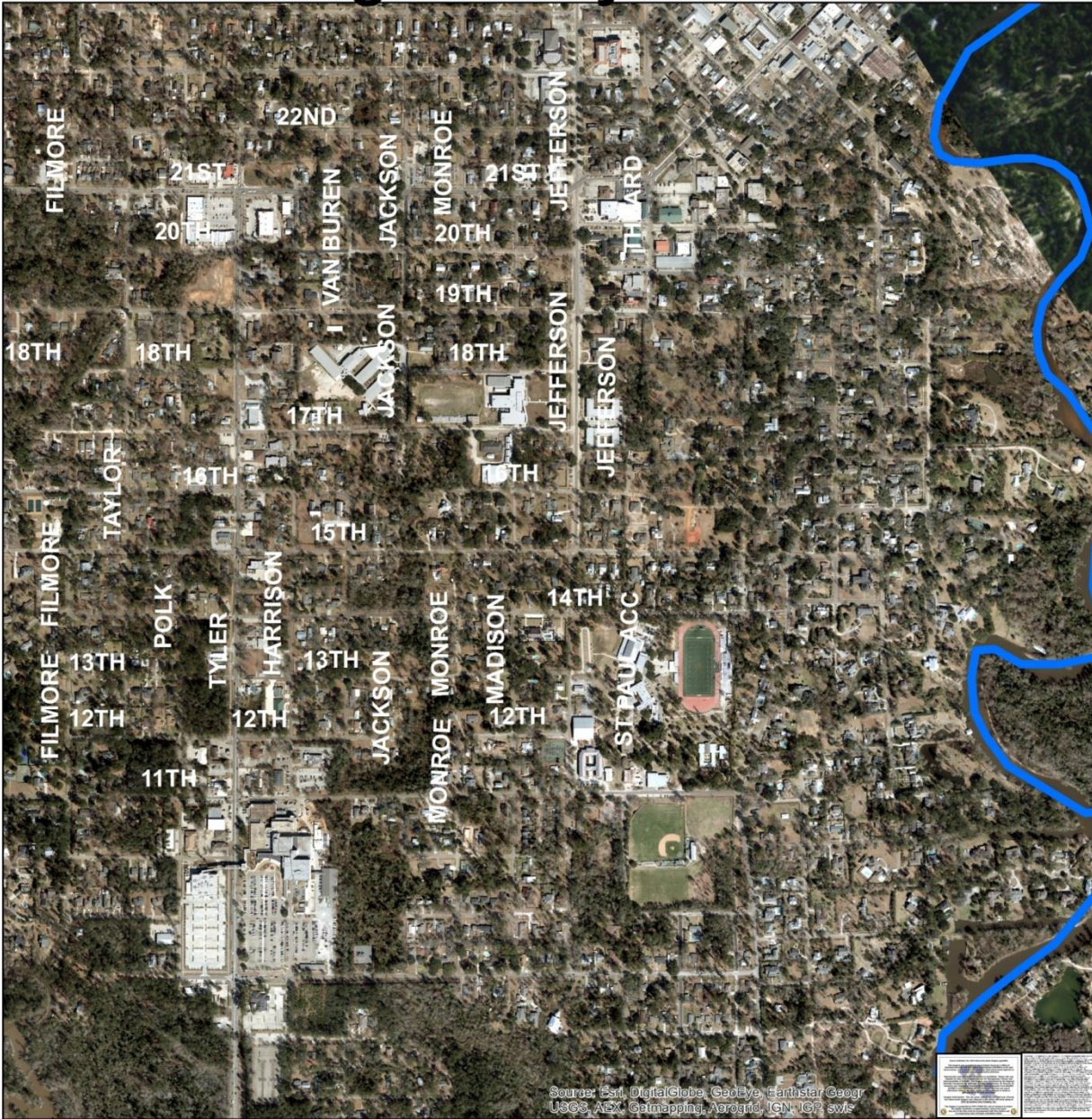


Figure 3.2: Proximity of Bogue Falaya Scenic River to Study Area
(Sources: Imagery – RPC/ESRI; GIS – Covington)



3.7 Significant Trees

DOTD in Publication EDSM No: I.1.1.21 offers directives towards significant trees. The directive establishes a general policy governing the treatment of significant trees within the highway right-of-way, zone of construction, and/or operational influence. Trees of significance may be located within the right-of-way along LA State Route 21 under study; further determination will be required in subsequent phases. In coordination with City of Covington and LA DOTD precautions will be made for any trees impacted by the alternatives.

3.8 Navigable Waterways

The “New Covington” study area does not contain any navigable waterways. The Bogue Falaya River to the east of the study area is not considered adjacent and will not be impacted.

3.9 Hazardous Materials

The corridors under study consist primarily of office, commercial, and residential. The Louisiana Department of Environmental Quality and US Environmental Protection Agency, among other relevant databases were researched for any known existence of hazardous materials, spills, or non-compliance issues within the study area. No violations were recorded in the databases. The complete details are located in Appendix B.

3.10 Environmental Justice Issues

Based on the study recommendations, no relocations or displacements will need to take place for construction. Neither sensitive community nor cultural issues exist along the corridors. “New Covington” area and the surrounding community are defined as St. Tammany Parish U.S. Census Tracts 404, 405.01, and 406.02. The percentage of minority or protected class residents and low-income residents are presented below. Since the goals of the project will provide better access and modal choice, no Environmental Justice issues exist for this Stage 0 report. The U.S. Census Bureau American Community Survey Environmental Justice fact sheet was used to make this determination as seen in the data in Figure 3.3 below.



Population for Census Tract 405.01 St. Tammany Parish, Louisiana (2011-2015)				
Race	Estimate of Total Population		Estimate Below Poverty Level	
White	1,536	47%	148	10%
Black	1,603	49%	451	28%
American Indian	5	1%	5	100%
Hispanic	90	2%	0	29%
Asian	15	1%	15	100%
Total	3,249	100%	619	19%

Population for Census Tract 404 St. Tammany Parish, Louisiana (2011-2015)				
Race	Estimate of Total Population		Estimate Below Poverty Level	
White	6,369	91%	573	9%
Black	271	3%	190	70%
American Indian	29	1%	0	0%
Hispanic	257	3%	0	0%
Asian	69	2%	0	0%
Total	6,995	100%	763	11%

Population for Census Tract 406.02 St. Tammany Parish, Louisiana (2011-2015)				
Race	Estimate of Total Population		Estimate Below Poverty Level	
White	2,283	92%	183	8%
Black	35	2%	0	0%
American Indian	13	1%	0	0%
Hispanic	132	4%	11	8%
Asian	8	1%	0	0%
Total	2,471	100%	194	8%

Figure 3.3: Population Estimates Below Poverty Level (Source: US Census)

4.0 Recommended "New Covington" Improvements

4A Bicycle and Pedestrian Improvements

The "New Covington" study area is undergoing land use changes and economic growth which is contributing to increasing vehicle congestion and a demand for consideration of alternative means of transportation, i.e., bike and pedestrian use. Signage and markings on roads have important functions in providing guidance and information for all road users. Currently, the study area streets are not striped for vehicular lanes or pedestrian uses, such as crosswalks.

Relatively low cost, high visibility alternatives for roadway, pedestrian, and bicycle facility improvements are detailed below in the following sections. If implemented, the bicycle and pedestrian goals will increase vehicular, pedestrian, and bicyclist safety and efficiency.

The bicycle and pedestrian enhancements include best practices from the Manual on Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration (FHWA) and other reputable publications from the American Association of State Highway and Transportation Officials (AASHTO), the National Association of City Transportation Officials (NACTO), and the Institute of Transportation Engineers (ITE) were reviewed for relevance.

It is important to note that the alternatives and guidance are conceptual plans only and are not to be used for MUTCD design compliance and/or construction. Americans with Disabilities Act (ADA) standards for new construction shall be followed.

Advanced Stop Bars

Advance stop bars encourage drivers to stop further back from the crosswalk and promote better visibility between pedestrians and motorists. It is recommended that advanced stop bars be installed at stop controlled intersections adjacent to schools and parks and as illustrated in the Pedestrian Facility Improvement Plan (Figure 4A.3). The MUTCD states stop bar lines shall consist of solid white lines extending across approach lanes to indicate the point at which the stop is intended or required to be made, should be 12 to 24 inches wide, and should be placed a minimum of 4 feet in advance of the nearest crosswalk line at controlled intersections. An advanced stop bar and crosswalk is detailed in Figure 4A.1 below.

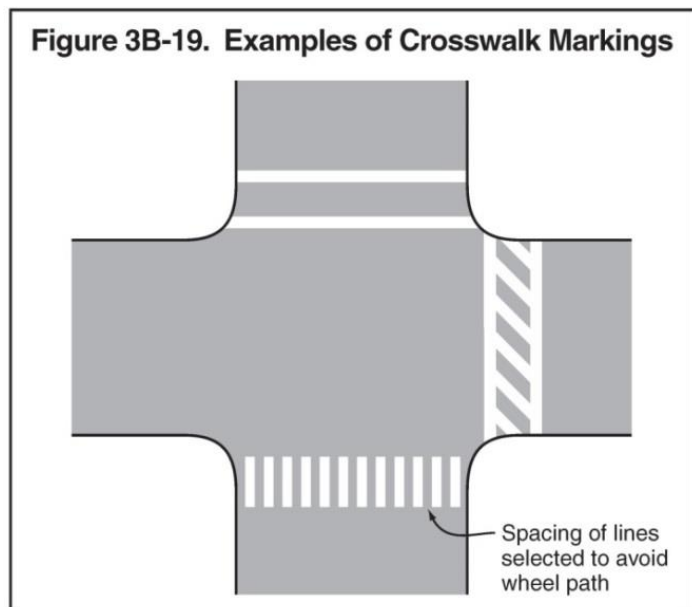


Figure 4A.1: MUTCD Figure 3B-19: Crosswalk Marking Types (Source: MUTCD)

Crosswalks

Crosswalk markings provide guidance for pedestrians who are crossing roadways by defining and delineating paths on approaches to other intersections where traffic stops. In conjunction with signs and other measures, crosswalk markings help to alert road users of a designated pedestrian crossing point across roadways (as seen above in Figure 4A.1).

It is recommended that crosswalks be installed at the intersections provided in the Pedestrian Facility Improvement Plan. MUTCD guidance states when crosswalk lines are used, they shall consist of solid white lines that mark the crosswalk. They shall not be less than 6 inches or greater than 24 inches in width. At locations controlled by stop signs, crosswalk lines should be installed where engineering judgment indicates they are needed to direct pedestrians to the proper crossing path(s). The MUTCD allows for two basic types of crosswalk designs, such as traditional parallel lines or a high-visibility crosswalk pattern, such as a ladder, continental design, or diagonal marking, as illustrated in Figure 4A.1.



Figure 4A.2: Temporary Crosswalk Signage (Source: MUTCD)

Crosswalks can be marked in paint or a longer lasting plastic or epoxy material embedded with reflective glass beads. Although more expensive, longer-lasting, high-visibility crosswalk marking materials are a better value over time as they require less maintenance. However, funding any improvement is preferred.

Best Practices and Louisiana Law

It is a best management practice that municipalities perform awareness campaigns for reminding vehicular drivers and pedestrians of state laws concerning right-of-way in crosswalks. LA R.S. 32:212 states the following in summary:

- A. The driver of a vehicle shall stop and yield the right-of-way, to a pedestrian crossing the roadway within a crosswalk.
- B. No pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle.
- C. Whenever any vehicle is stopped at a marked or an unmarked crosswalk the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle.

MUTCD provides guidance in Section 2B.11. It is recommended that temporary, moveable signage such as the one illustrated in Figure 4A.2 (above) be purchased by the City of Covington and placed as per MUTCD guidance at intersection locations within "New Covington" on a regular time interval, especially as schools come back from summer break and near parks during the summer months. Studies suggest displaying and removing signage in different locations have a more effective result.





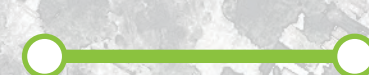

New Covington Sub-Area Analysis

Pedestrian Facility Improvement

Sidewalk Implementation Phasing Plan

Figure 4A.3: Pedestrian Facility Improvement Plan

LEGEND

-  PHASE 1
-  PHASE 2
-  PHASE 3
-  PHASE 4
-  PHASE 5
-  PHASE 6



Shared Use Lane

"Every person riding a bicycle upon a highway of this state shall be granted all the rights and shall be subject to all the duties applicable to the driver of a vehicle (LA RS 32:194 Traffic Laws Apply to Persons Riding Bicycles). The absence of a marked bicycle lane or any of the other traffic control devices recommended in this section on a particular roadway shall not be construed to mean that bicyclists are not permitted to travel on that roadway. Cyclists must obey traffic signals and come to a complete stop at stop signs (LA RS 32:232/32:123)."

Pavement marking word messages, symbols, and/or arrows should be used in bikeways as detailed on the Bicycle Facility Improvement Plan (Figure 4A.5). Consideration should be given to selecting pavement marking materials that will minimize loss of traction for bicycles under wet conditions. The Shared Lane Marking shown in Figure 4A.4 below may be used to: Assist bicyclists with lateral positioning in a shared lane with on-street parallel parking in order to reduce the chance of a bicyclist's impacting the open door of a parked vehicle; assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane; alert road users of the lateral location bicyclists are likely to occupy within the traveled way; encourage safe passing of bicyclists by motorists; and reduce the incidence of wrong-way bicycling.

Shared Lane Markings should be placed so that the centers of the markings are at least 11 feet from the face of the curb, or from the edge of the pavement where there is no curb. If used on a street without on-street parking that has an outside travel lane that is less than 14 feet wide, the centers of the Shared Lane Markings should be at least 4 feet from the face of the curb, or from the edge of the pavement where there is no curb. If used, the Shared Lane Marking should be placed immediately after an intersection and spaced at intervals not greater than 250 feet thereafter. A, Bicycles May Use Full Lane, sign may be used in addition to or instead of the Shared Lane Marking to inform road users that bicyclists might occupy the travel lane. For state owned facilities the EDSM Section 3B.2 should be reviewed.

Figure 9C-9. Shared Lane Marking

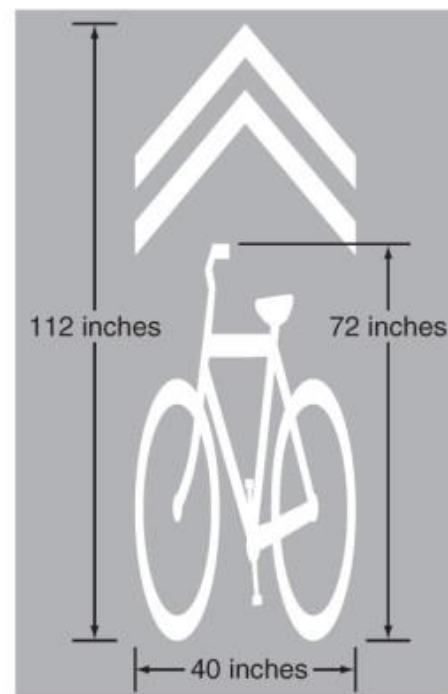


Figure 4A.4: MUTCD Figure 9C-9 Shared Lane Marking (Source: MUTCD)

New Covington Sub-Area Analysis

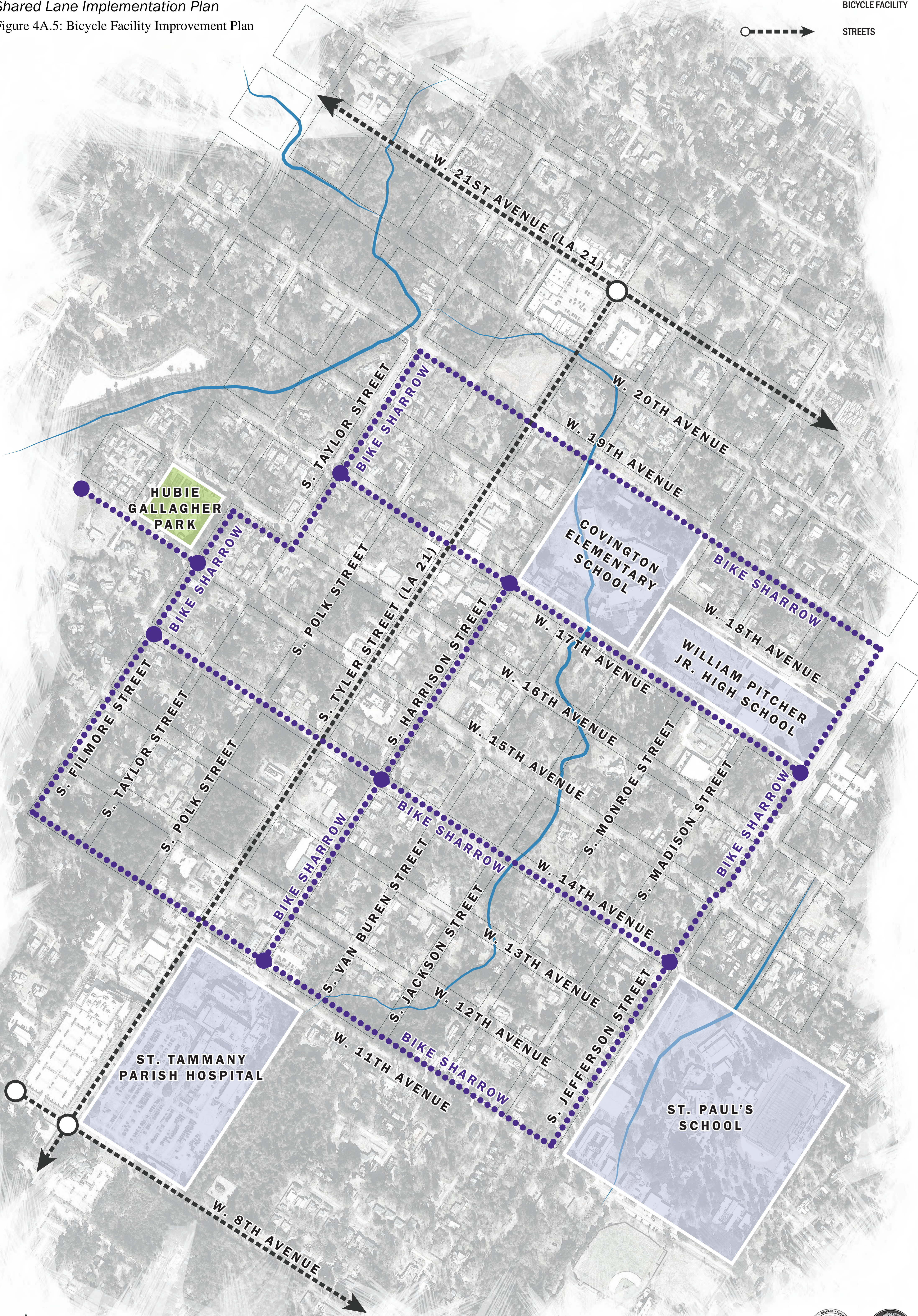
Bicycle Facility Improvement

Shared Lane Implementation Plan

Figure 4A.5: Bicycle Facility Improvement Plan

LEGEND

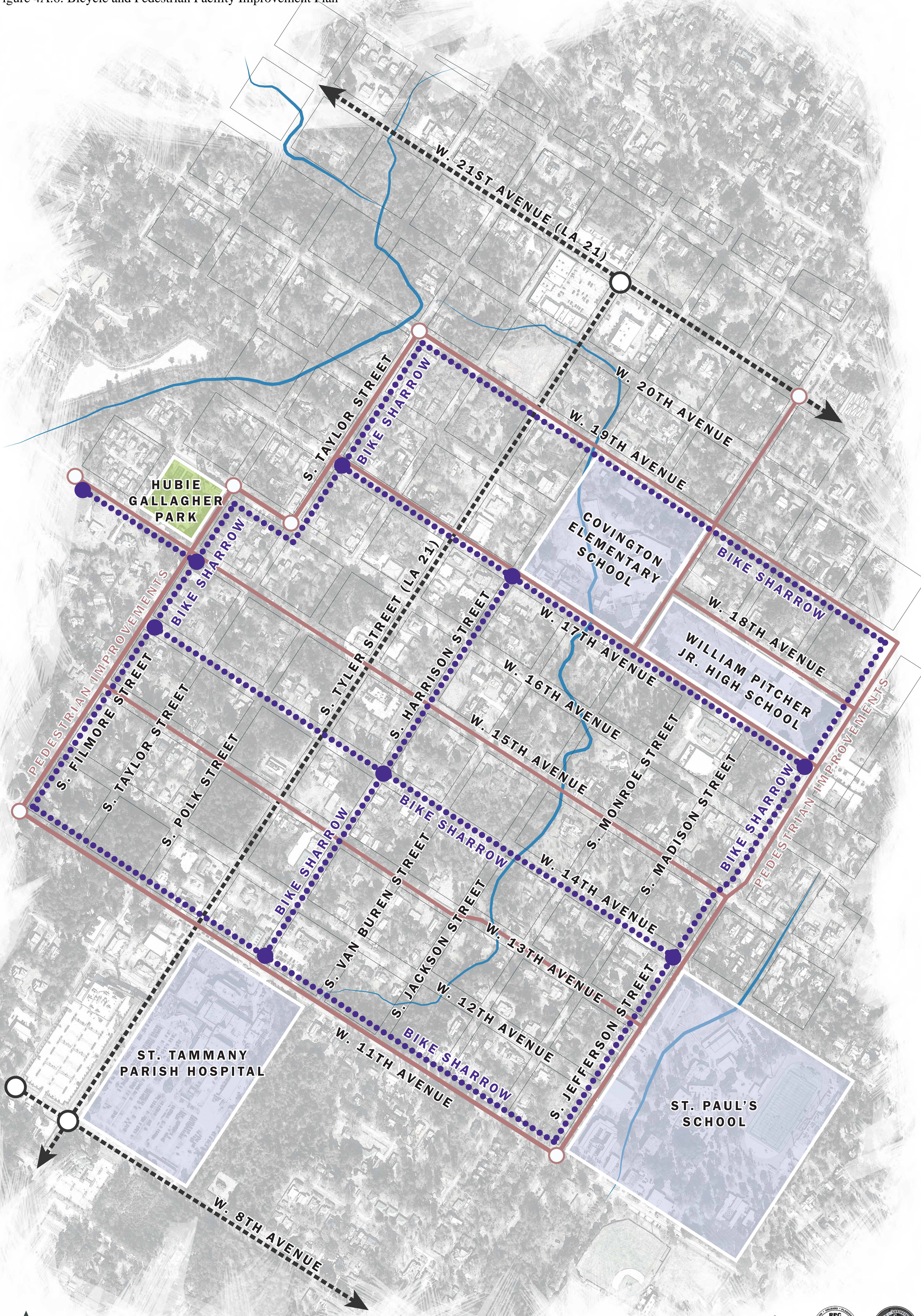
- PROPOSED BICYCLE FACILITY
- > STREETS



New Covington Sub-Area Analysis

Bicycle & Pedestrian Facility Improvements

Figure 4A.6: Bicycle and Pedestrian Facility Improvement Plan





Conceptual Streetscape Design

As alternatives means of transportation continues to grow in popularity, the need for clarity and safety for vehicles, cyclists, and pedestrians becomes a priority. Design improvements within “New Covington” should be made with a conscience effort to retain the character and enhance the charm of the area. Adding consistent pedestrian and bicycle streetscape enhancements, with the addition of extended greenspace at the corners, the study area would be a safer environment for all users.

Typical Streetscape and Intersection Improvements

The following illustration is conceptual for planning purposes only, field verification and construction designs shall be needed for installation.

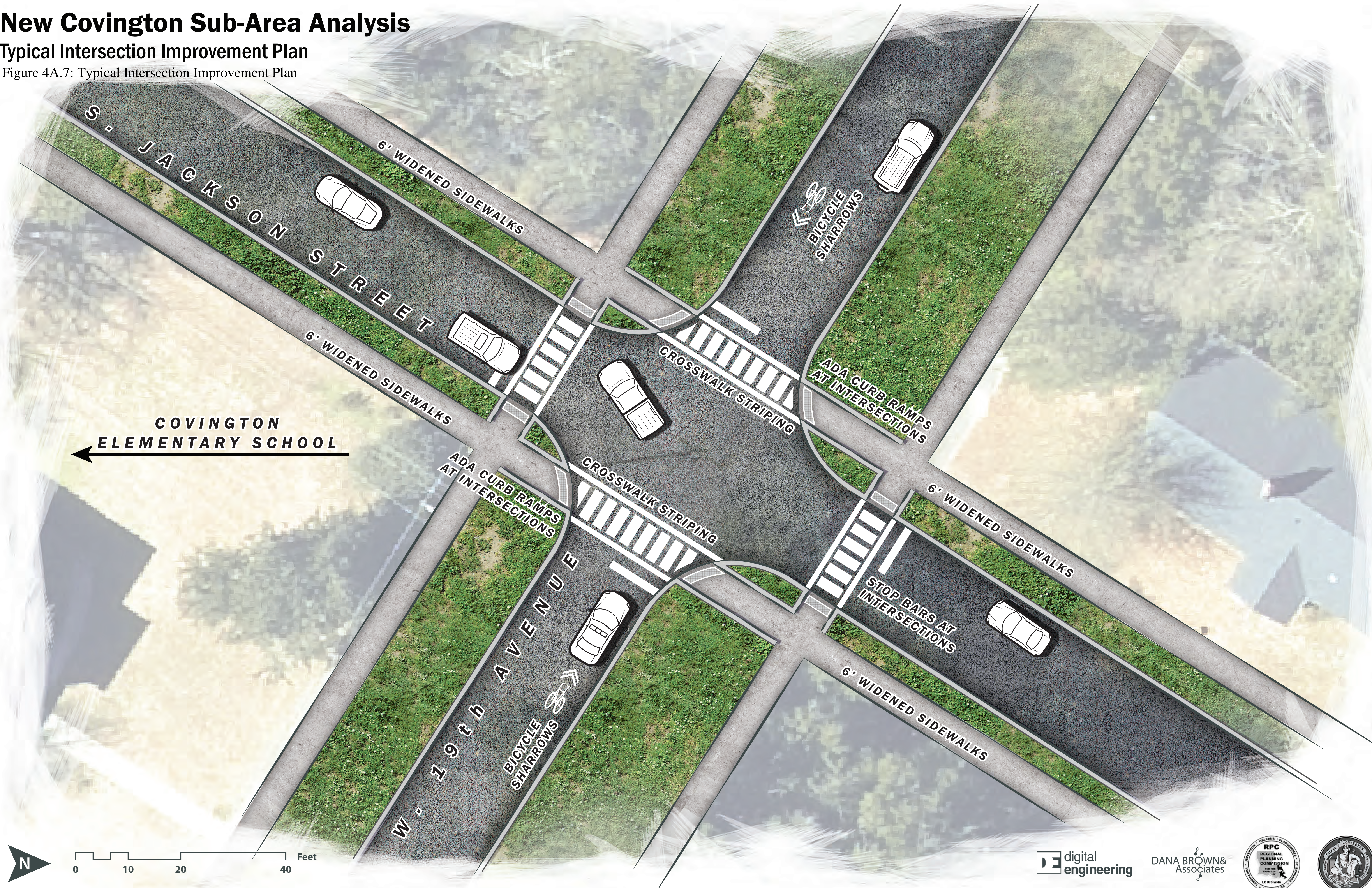
S. Jackson St. and 19th Ave. Recommendation (Sidewalks, Signage, and Striping)

As detailed in the following rendering (Figure 4A.7) the recommendations include sidewalks, signage, and striping to be installed. Items include crosswalks, advanced stop bars, crosswalk, street name, and stop signs, and sidewalks as needed. It is important to note that sidewalks are illustrated on both sides of the street. However, to save money and still provide the pedestrian safety enhancements it is feasible to install sidewalks on one side of the street. This conceptual plan is feasible for all local street intersections in the “New Covington” study area.

New Covington Sub-Area Analysis

Typical Intersection Improvement Plan

Figure 4A.7: Typical Intersection Improvement Plan





4B S. Tyler St. Improvements

Short-term Improvements

S. Tyler St. (LA 21) from 12th Ave. to 21st Ave. (US 190 B) is in need of short-term improvements. As noted in the existing conditions section of this report the vehicular travel lanes are narrow and in poor condition, sidewalks are intermittent, and signage and striping are incorrectly placed. The capacity and safety issues noted in this report may be exacerbated with the nearing completion of the widening of S. Tyler St. (LA 21) from Bootlegger Rd. to 11th Ave. At a minimum, short-term improvements, needed on S. Tyler St. include pavement overlay, pavement markings, and signage. S. Tyler St. is a state-owned road (LA 21) and the City of Covington should request LA DOTD to improve the deficiencies. The illustrations below (Figure 4B.1 – 4B.4) reflect the opinions of the City and the PMC for the short-term improved roadway from 12th Ave to 21st Ave. (US 190 B).

It is important to note that all concepts for the S. Tyler St. (LA 21) corridor were evaluated in a Stage 0 analysis. Feasible concepts may need additional programming through the RPC and/or LA DOTD process.

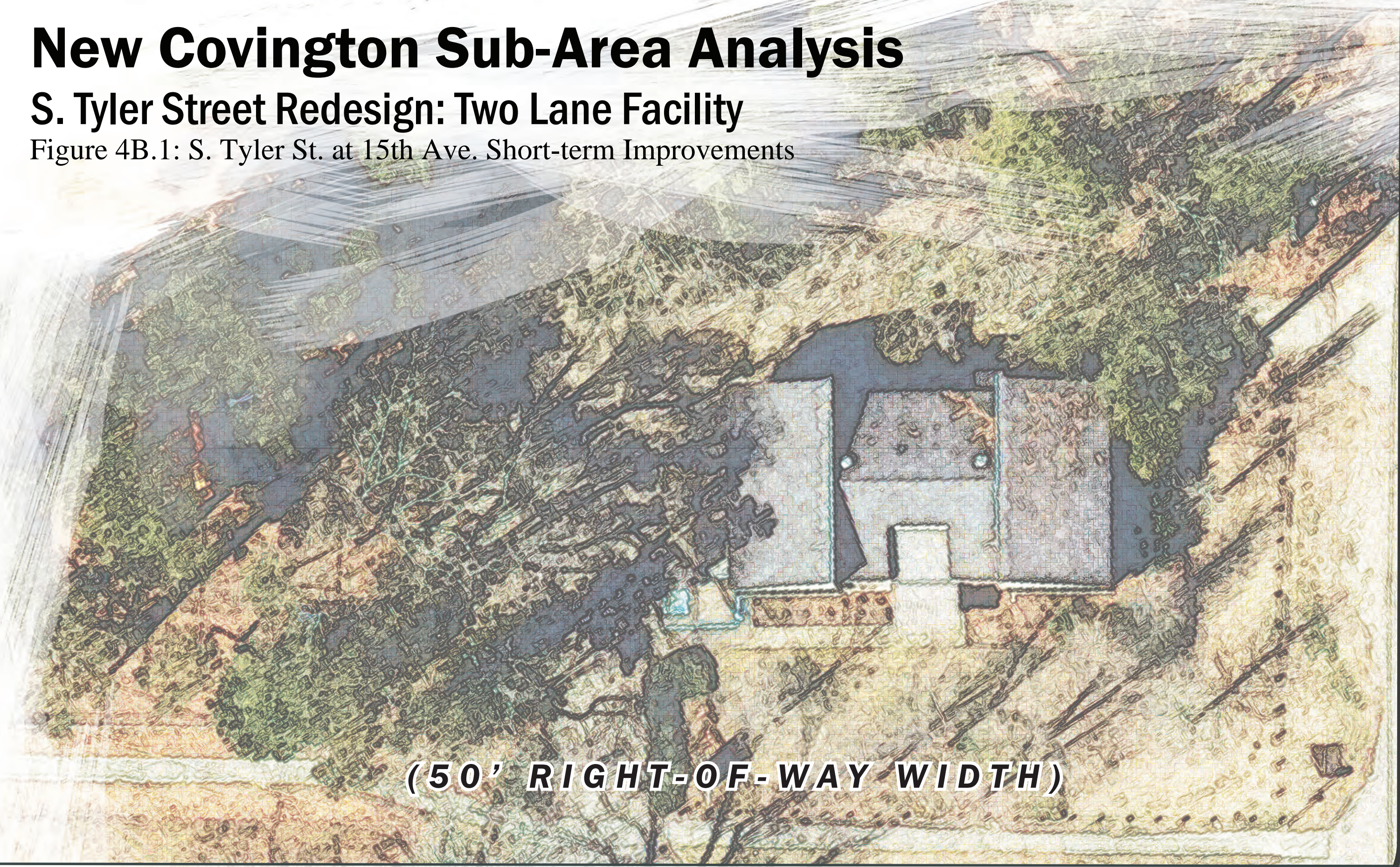
It is important to note that the alternatives and guidance are conceptual plans only and are not to be used for MUTCD design compliance and/or construction. Americans with Disabilities Act (ADA) standards for new construction shall be followed.

New Covington Sub-Area Analysis

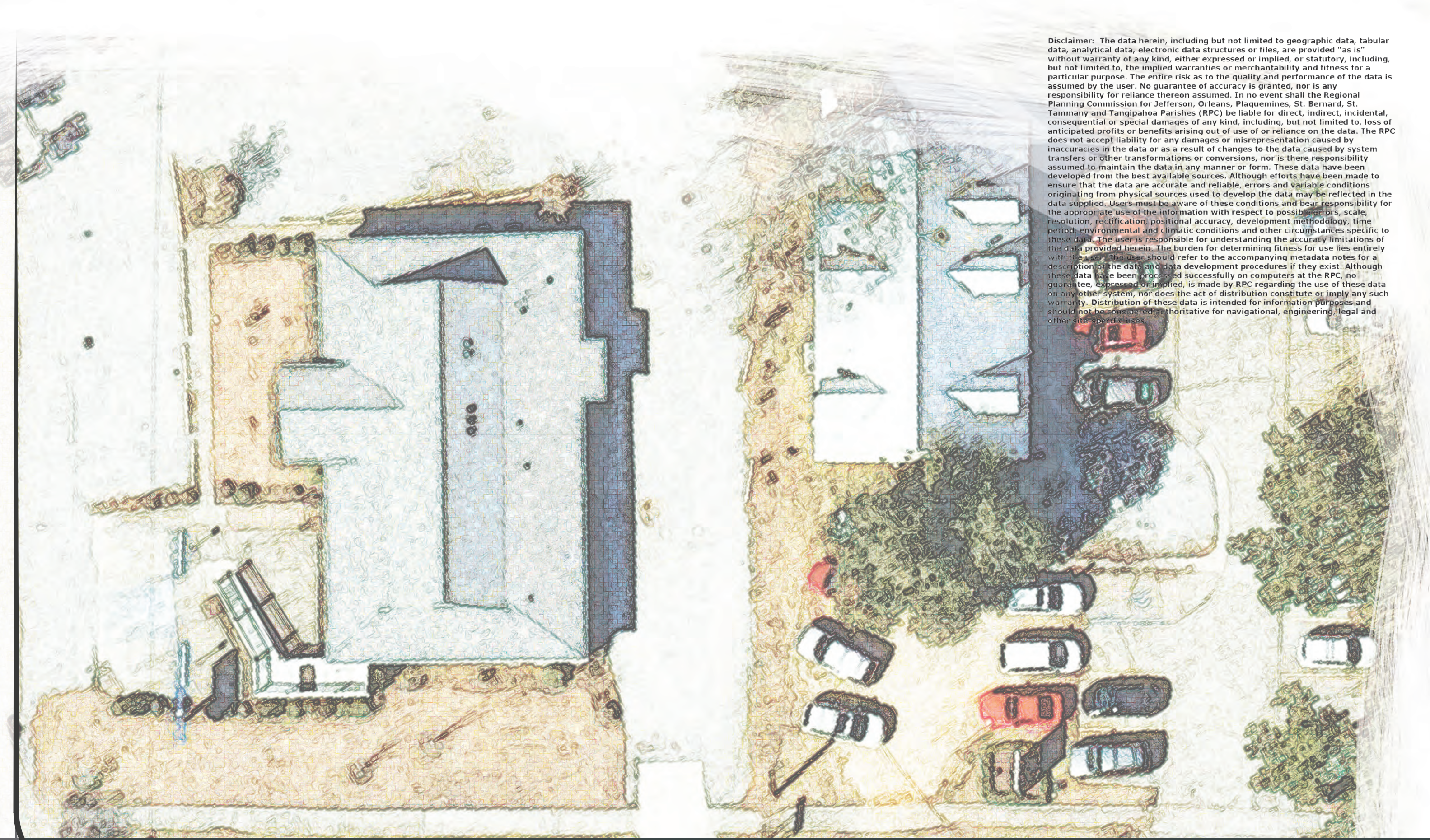
S. Tyler Street Redesign: Two Lane Facility

Figure 4B.1: S. Tyler St. at 15th Ave. Short-term Improvements

Disclaimer: The data herein, including but not limited to geographic data, tabular data, analytical data, electronic data structures or files, are provided "as is" without warranty of any kind, either expressed or implied, or statutory, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the data is assumed by the user. No guarantee of accuracy is granted, nor is any responsibility for reliance thereon assumed. In no event shall the Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes (RPC) be liable for direct, indirect, incidental, consequential or special damages of any kind, including, but not limited to, loss of anticipated profits or benefits arising out of use of or reliance on the data. The RPC does not accept liability for any damages or misrepresentation caused by inaccuracies in the data or as a result of changes to the data caused by system transfers or other transformations or conversions, nor is there responsibility assumed to maintain the data in any manner or form. These data have been developed from the best available sources. Although efforts have been made to ensure that the data are accurate and reliable, errors and variable conditions originating from physical sources used to develop the data may be reflected in the data supplied. Users must be aware of these conditions and bear responsibility for the accuracy of the data used. These data should be used for informational purposes only. Resolution, positional accuracy, development methodology, time to develop, environmental and diurnal conditions and other circumstances specific to these data are not intended for use in navigation. The user is responsible for understanding the accuracy limitations of the data provided herein. The burden for determining fitness for use lies entirely with the user. Users should refer to the accompanying metadata notes for a description of the data and data development procedures if they exist. Although these data have been processed successfully on computers at the RPC, no guarantee, expressed or implied, is made by RPC regarding the use of these data on any other system, nor does the act of distribution constitute or imply any such warranty. Distribution of these data is intended for informational purposes and should not be used for authoritative for navigational, engineering, legal and other purposes.

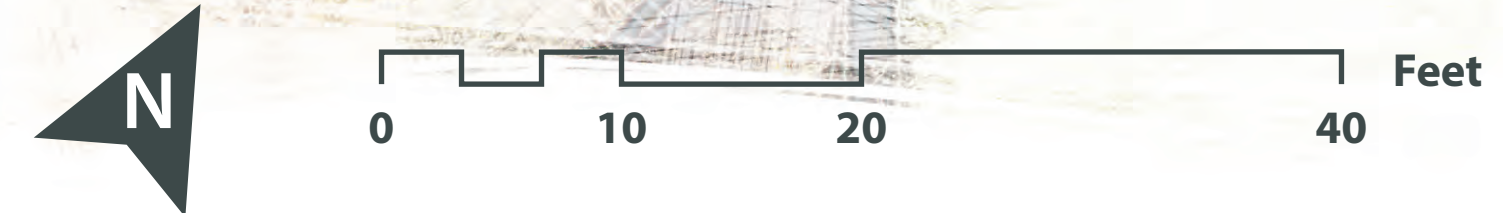


(50' RIGHT-OF-WAY WIDTH)



W - 1 5 T H A V E N U E

(50' RIGHT-OF-WAY WIDTH)



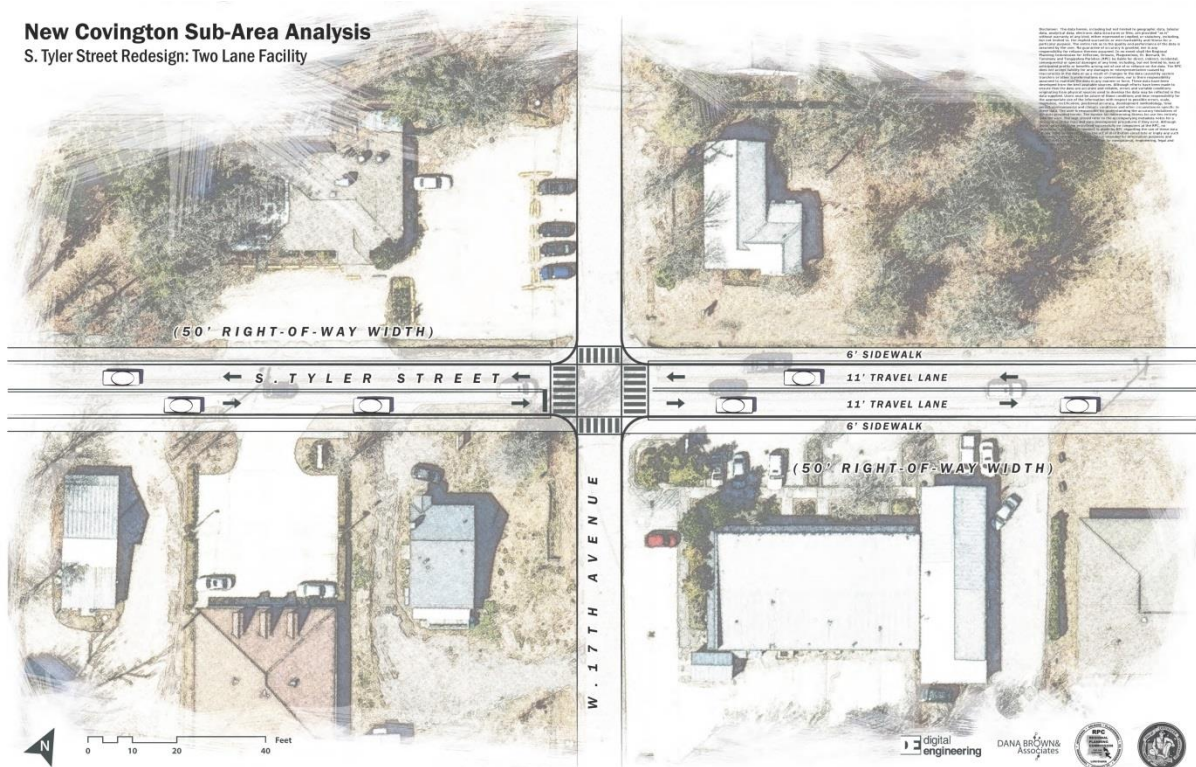


Figure 4B.2: S. Tyler St. at 17th Ave. Short-term Improvements

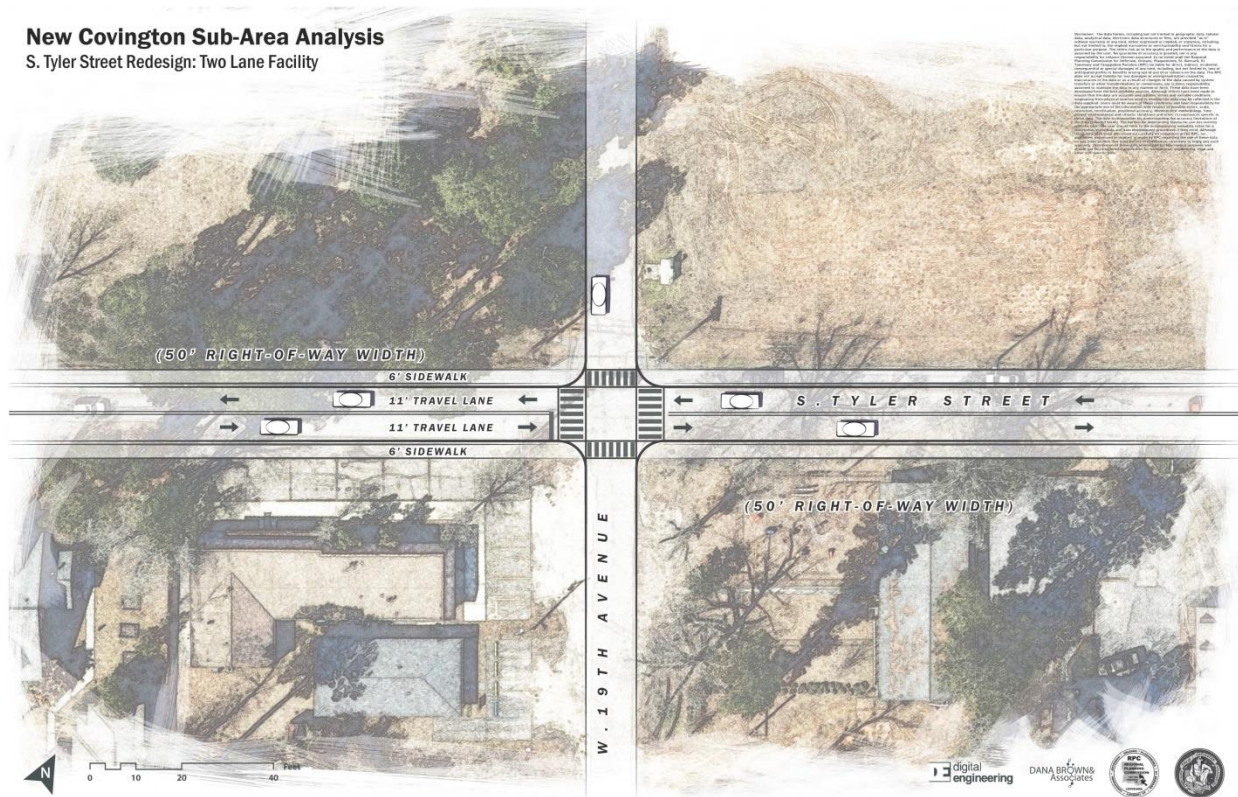
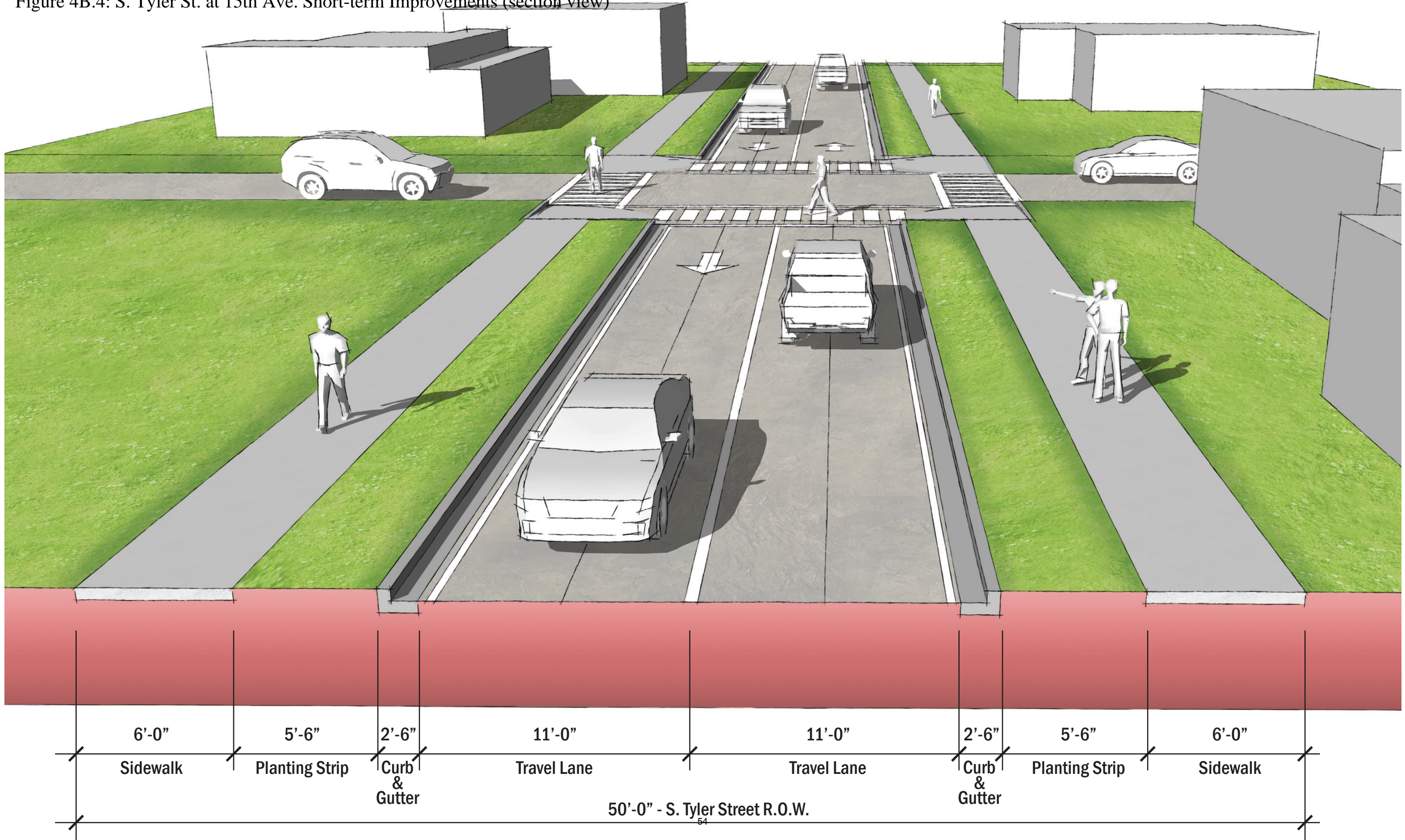


Figure 4B.3: S. Tyler St. at 19th Ave. Short-term Improvements

New Covington Sub-Area Analysis

S. Tyler Street Redesign: Two Lane Facility

Figure 4B.4: S. Tyler St. at 15th Ave. Short-term Improvements (section view)





Long-term Conceptual Plans

Additional Turning Lanes and Three-lane Facility

This section focuses on higher cost construction projects. Long-term improvements include actions such as roadway widening, intersection modifications, and couplets.

It is important to note that the alternatives and guidance are conceptual plans only and are not to be used for MUTCD design compliance and/or construction. Americans with Disabilities Act (ADA) standards for new construction shall be followed.

Several conceptual plans were developed for the S. Tyler St. corridor. As detailed in the following rendering (Figure 4B.5 – 4B.6), the roadway would be widened to create turning lanes in each direction on S. Tyler St. at 15th, 17th, and 19th Aves. This concept was determined not to be feasible as it would create additional lanes to cross for traffic originating on the side streets. A concept for a three-lane facility from 12th Ave. to 21st Ave. (Figure 4B.7 – 4B.8) was evaluated and the same safety issues were present as was for the additional turning lanes concept.

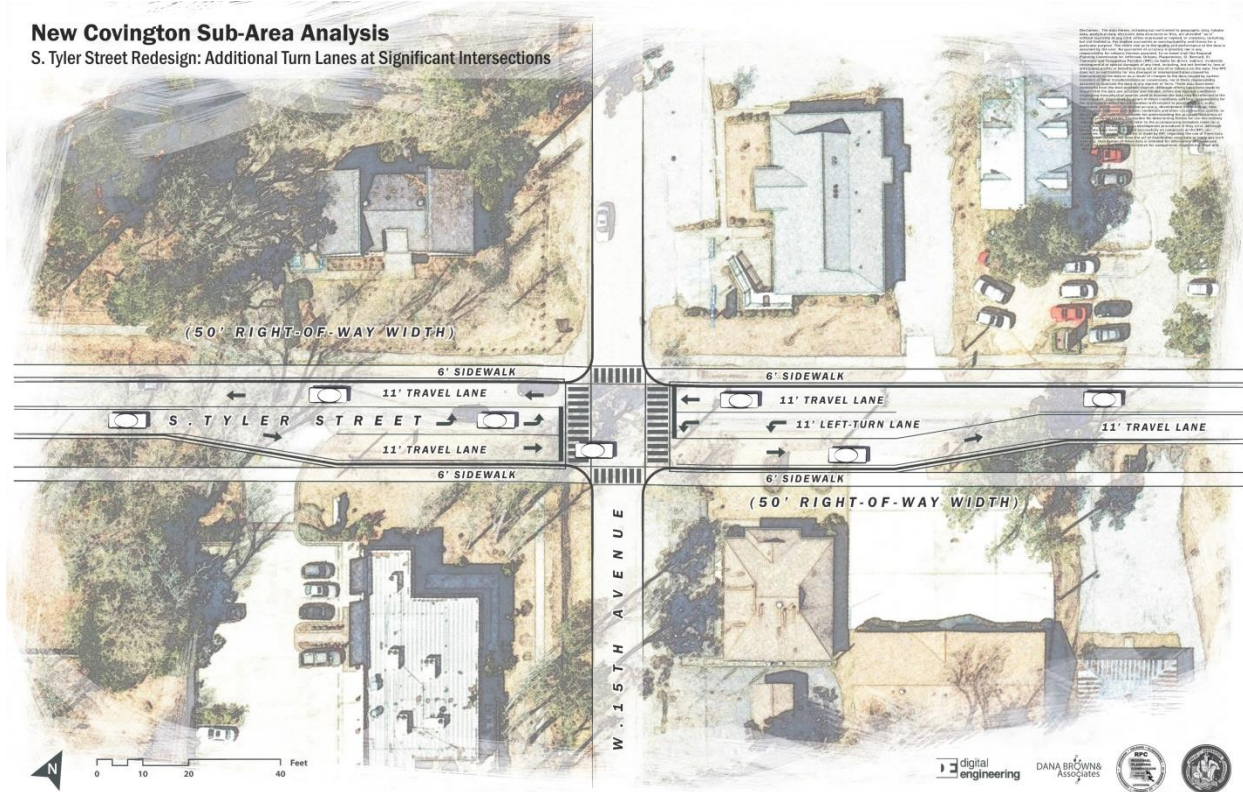


Figure 4B.5: S. Tyler St. at 15th Ave. Additional Turning Lanes (Plan View)

New Covington Sub-Area Analysis
 S. Tyler Street Redesign: Additional Lanes at Significant Intersections

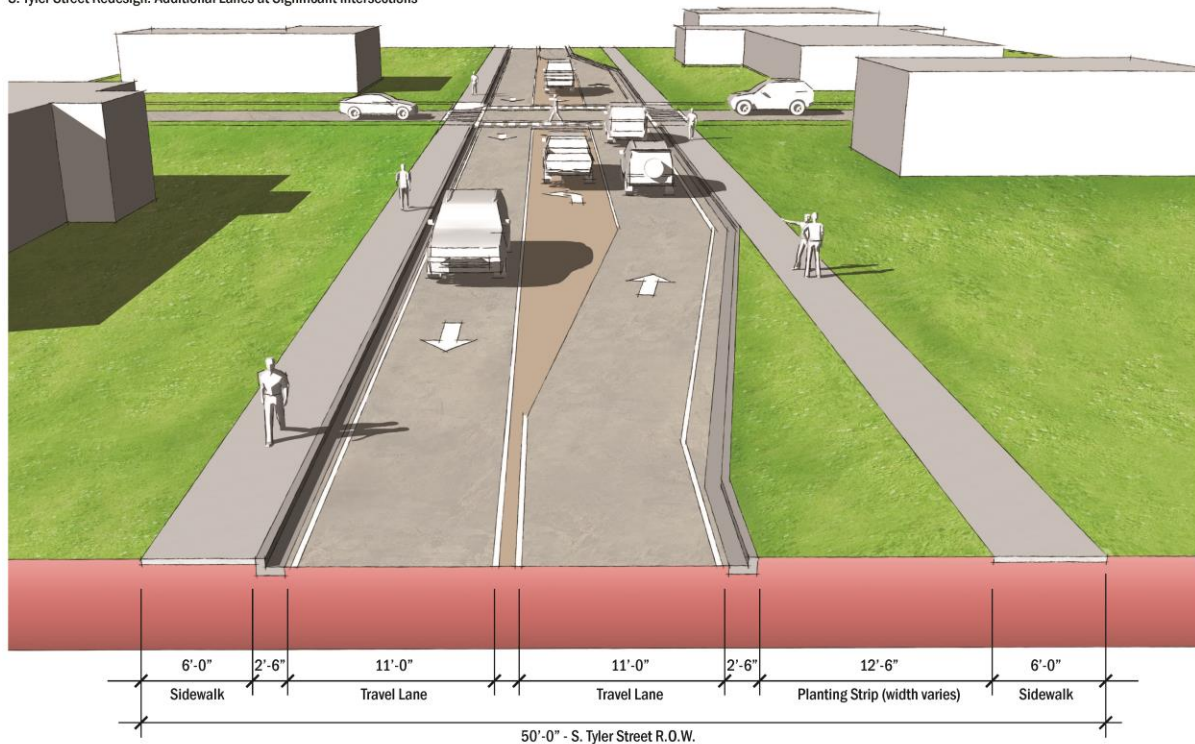


Figure 4B.6: S. Tyler St. at 15th Ave. Additional Turning Lanes (Section View)

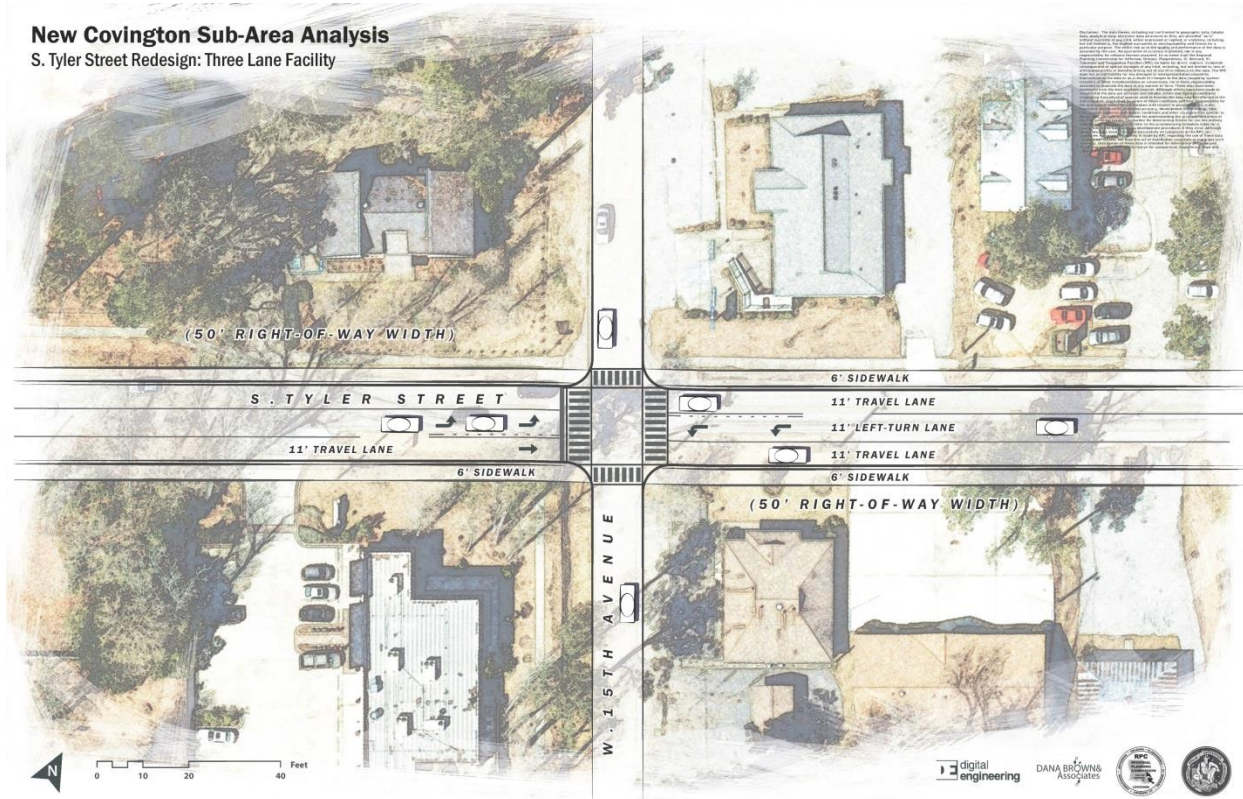


Figure 4B.7: S. Tyler St. at 15th Ave. Three-Lane Facility (Plan View)

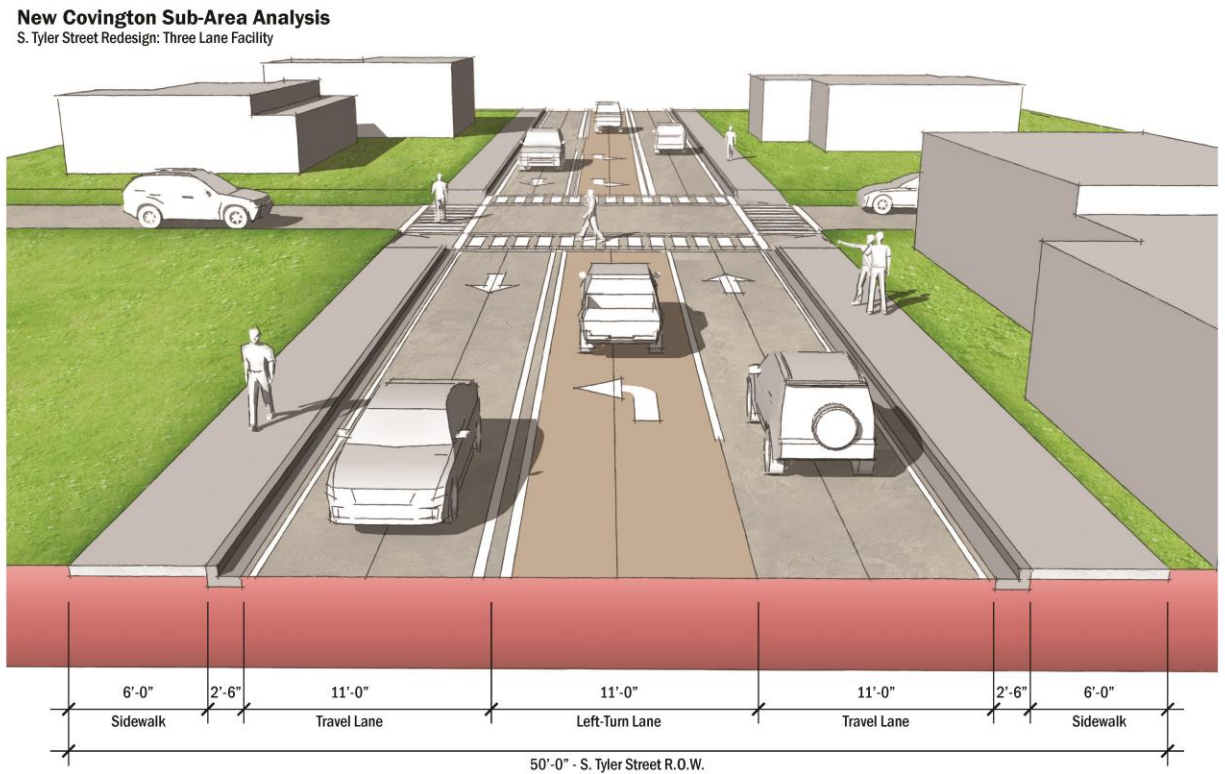


Figure 4B.8: S. Tyler St. at 15th Ave. Three-Lane Facility (Section View)



Couplet

During the conceptual development phase of the study a citizen PMC member, David Derbes, stated a couplet facility utilizing S. Tyler St. and S. Polk St. could be an alternative. Jeff Roesel (RPC) commented the RPC did complete a study years ago that looked at the feasibility of a couplet. The City of Covington PMC members stated the couplet concept was worth determining feasibility. The study team presented the couplet concept as shown in Figure 4B.9 below. The couplet concept could be implemented from 21st Ave. (US 190 B) to 12th Ave. The benefits to the couplet concept includes but not limited to no acquisition of right-of-way, eliminating conflict points, increased accessibility for pedestrians, traffic calming, and minimized congestion delay. The City of Covington should request LA DOTD to begin the feasibility of the couplet and any concept through an expanded Stage 0 project.

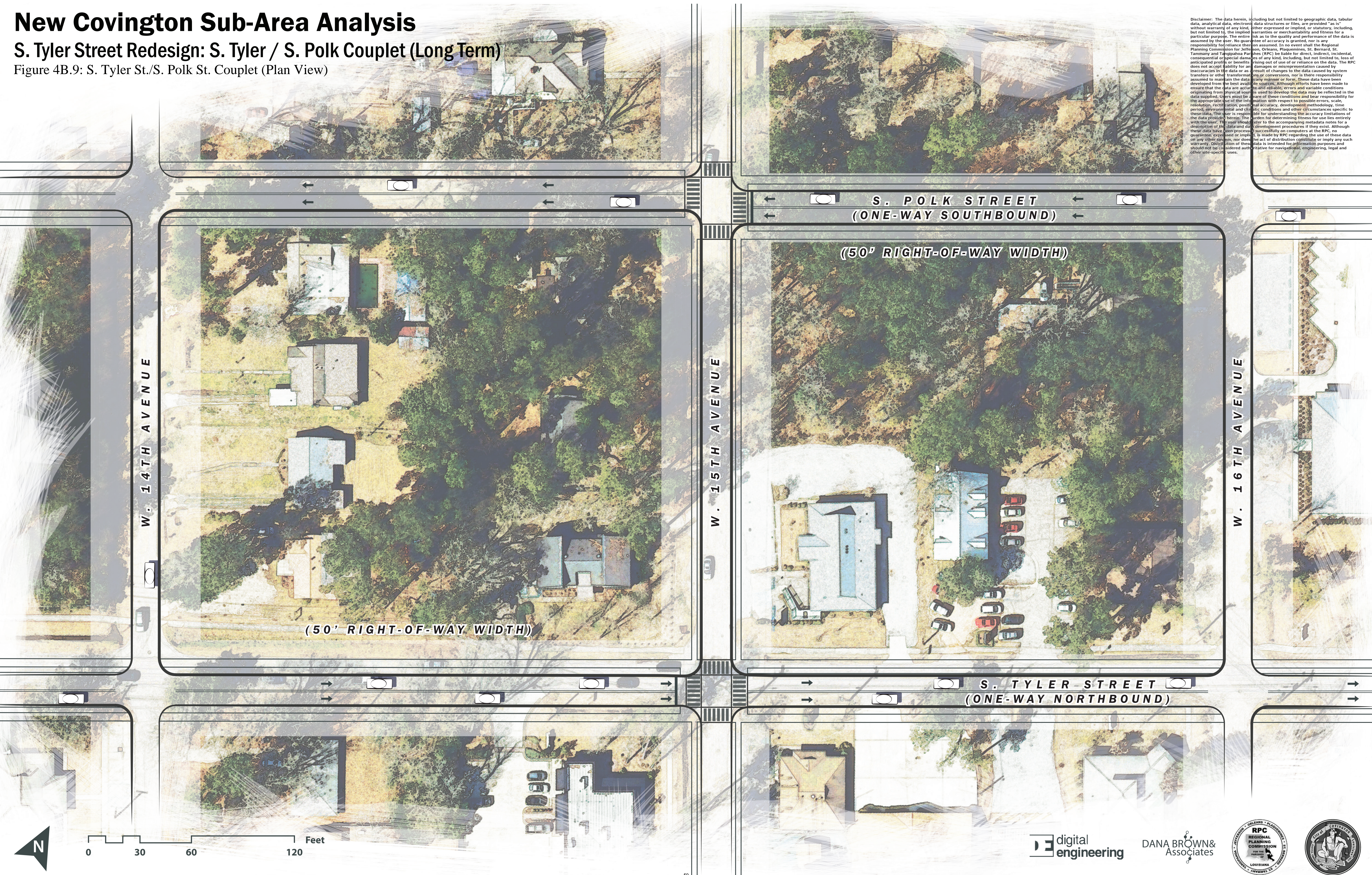
The PMC preferred the couplet concept as a long-term alternative.

New Covington Sub-Area Analysis

S. Tyler Street Redesign: S. Tyler / S. Polk Couplet (Long Term)

Figure 4B.9: S. Tyler St./S. Polk St. Couplet (Plan View)

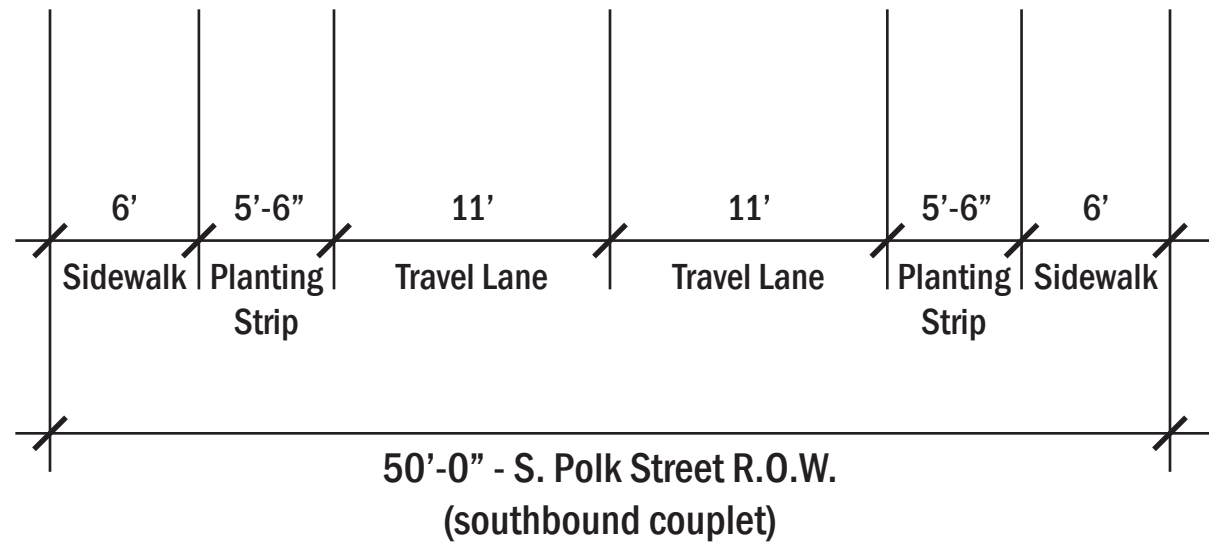
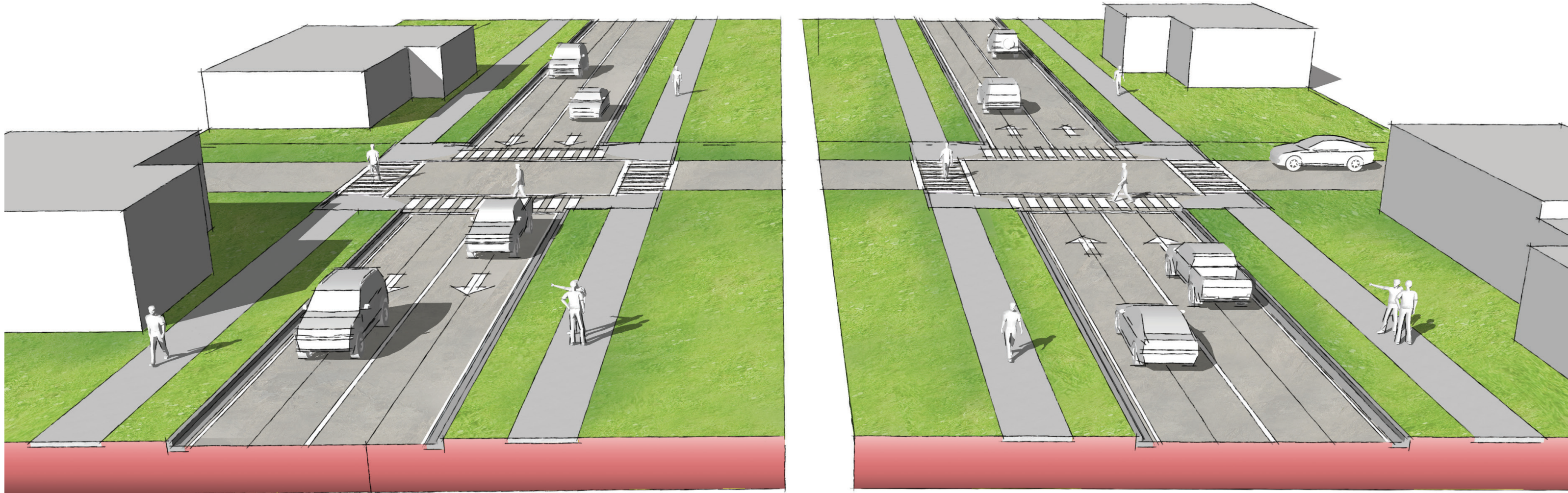
Disclaimer: The data herein, including but not limited to geographic data, tabular data, analytical data, electronic data structures or files, are provided "as is" without warranty of any kind, either expressed or implied, or statutory, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the data is assumed by the user. No guarantee of accuracy is granted, nor is any responsibility for reliance thereon assumed. In no event shall the Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes (RPC) be liable for direct, indirect, incidental, consequential or special damages of any kind, including, but not limited to, loss of anticipated profits or benefits arising out of use of or reliance on the data. The RPC does not accept liability for any damages or misrepresentation caused by inaccuracies in the data or as a result of changes to the data caused by system transfers or other transformations or conversions, nor is there responsibility assumed to maintain the data in any manner or form. These data have been developed from the best available sources. Although efforts have been made to ensure that the data are accurate and reliable, errors and variable conditions originating from physical sources used to develop the data may be reflected in the data supplied. Users must be aware of these conditions and bear responsibility for the appropriate use of the information with respect to possible errors, scale, resolution, rectification, positional accuracy, development methodology, time period, environmental and climatic conditions and other circumstances specific to these data. The user is responsible for understanding the accuracy limitations of the data provided herein. The burden for determining fitness for use lies entirely with the user. The user should refer to the accompanying metadata notes for a description of the data and data development procedures if they exist. Although these data have been processed successfully on computers at the RPC, no guarantee, expressed or implied, is made by RPC regarding the use of these data on any other system, nor does the act of distribution constitute or imply any such warranty. Distribution of these data is intended for informational purposes and should not be considered authoritative for navigational, engineering, legal and other site-specific uses.



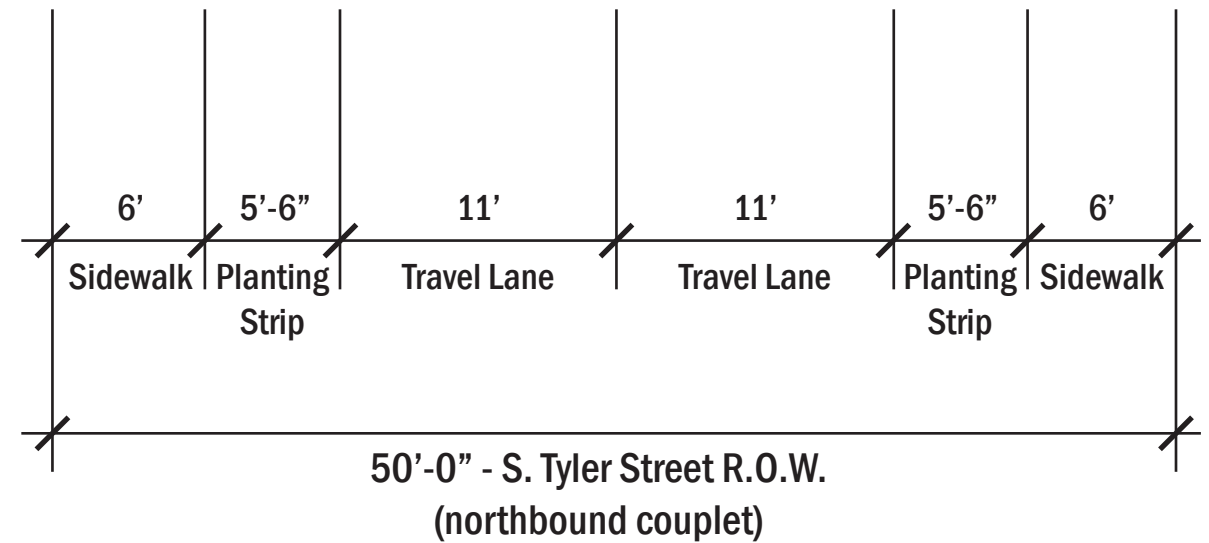
New Covington Sub-Area Analysis

S. Tyler Street Redesign: S. Tyler / S. Polk Couplet (Long Term)

Figure 4B.10: S. Tyler St./S. Polk St. Couplet (Section View)



Width Varies - 350' Typical (midblock between couplets)





5.0 Opinion of Probable Cost and Implementation Phasing

5.1 Estimated Cost Methodology

Estimated opinions of probable construction costs for the conceptual options were derived from approximating roadway and related infrastructure quantities based on average unit prices provided by LA DOTD and recent construction pricing. The alternatives breakdown of these costs are shown in Section 5.2 below and in the Stage 0 Preliminary Scope and Budget Checklist in Appendix B. Costs include a low-level estimate and 20% contingency for unforeseen conditions during construction. Costs do not include necessary professional services (i.e. topographical surveying, environmental services, geotechnical engineering, design and engineering, landscape architecture, and construction engineering and inspection).

5.2 Implementation Phasing/Estimated Cost of Improvements

Phasing and implementation of the chosen recommendations will ultimately depend upon available funding. Funding amounts and availability are likely to vary as well as the selection and implementation of all recommended facility enhancements. The following are proposed low-level estimated costs and should not be construed as final. Each recommendation listed below has detailed estimates.

Relatively low cost, high visibility alternatives for roadway, pedestrian, and bicycle facility improvements are detailed below in the following sections. If implemented, the enhancements will increase vehicular, pedestrian, and bicyclist safety and efficiency.

It is important to note that the recommendations and costs are based on conceptual plans only and are not to be used for MUTCD design compliance and/or construction. Americans with Disabilities Act (ADA) standards for new construction shall be followed.

Bicycle Facility Improvement Cost Estimates

The bicycle improvements include sharrow pavement markings and signage on the streets included in the plan. Figure 5.1 below details the opinion of costs.

Bicycle Facility Improvement							
Opinion of Cost							
Shared Lane (Sharrow)							
Unit/Street	19th	17th	14th	11th	Jefferson	Filmore	Taylor
Sharrow (\$500 each)	\$16,000	\$16,000	\$19,000	\$19,000	\$16,000	\$10,000	\$8,000
Signs (3sqft/\$28 per sqft)	\$672	\$672	\$840	\$840	\$672	\$504	\$336
U channel (\$50 each)	\$400	\$400	\$500	\$500	\$400	\$300	\$200
Total	\$17,072	\$17,072	\$20,340	\$20,340	\$17,072	\$10,804	\$8,536

Shared Lane Total Network Sub-total \$111,236
 20% Contingency \$22,247
 Shared Lane Total Network \$133,483

Figure 5.1: Opinion of Cost for Bicycle Improvement Plan



Pedestrian Facility Improvement Cost Estimates

Pedestrian Facility Improvement										
Opinion of Cost*										
ADA Compliant Sidewalks and Crosswalks										
Unit/Street	19th	18th	17th	15th	13th	11th	Jackson	Jefferson	Filmore	Taylor
5' Concrete Walk (\$60/sqyd)	\$95,000	\$36,666	\$110,000	\$106,666	\$106,666	\$106,666	\$50,000	\$101,666	\$66,666	\$95,000
ADA Ramps (\$2,500/ea)	\$20,000	\$15,000	\$40,000	\$45,000	\$45,000	\$45,000	\$10,000	\$40,000	\$30,000	\$20,000
Crosswalk (24"width/\$20 lf)	\$3,200	\$1,600	\$5,600	\$5,600	\$5,600	\$5,600	\$3,200	\$5,600	\$3,200	\$3,200
Stop Bar (24"width/\$20 lf)	\$1,280	\$640	\$2,240	\$2,240	\$2,240	\$2,240	\$1,280	\$2,240	\$1,280	\$1,280
Total	\$119,480	\$53,906	\$157,840	\$159,506	\$159,506	\$159,506	\$64,480	\$149,506	\$101,146	\$119,480

Sidewalk/Crosswalk Network Sub-total **\$1,244,356**
 20% Contingency **\$248,871**
 Sidewalk/Crosswalk Network Total **\$1,493,227**

*One sidewalk per side/per street. No swale or drainage modifications.

Figure 5.2 Opinion of Cost for Pedestrian Improvement Plan

S. Tyler St. Two-lane Facility Rehabilitation

SUMMARY OF ESTIMATED QUANTITIES					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	REMOVAL OF CONCRETE WALKS & DRIVES	SQ. YD.	320	\$15.00	\$4,800.00
2	REMOVAL OF ASPHALT PAVEMENT	SQ. YD.	9500	\$15.00	\$142,500.00
3	GENERAL EXCAVATION (NET SECTION)	CU. YD.	600	\$20.00	\$12,000.00
4	ASPHALT CONCRETE	TON	7800.0	\$110.00	\$858,000.00
5	HANDICAPPED CURBED RAMPS	EACH	36	\$2,000.00	\$72,000.00
6	TEMPORARY SIGNS & BARRICADES	LUMP	LUMP	\$30,000.00	\$30,000.00
7	MOBILIZATION	LUMP	LUMP	\$75,000.00	\$75,000.00
8	REFLECTORIZED RAISED PAVEMENT MARKERS	EACH	350	\$8.00	\$2,800.00
9	PLASTIC PAVEMENT STRIPING (4" WIDTH) (THERMOPLASTIC 90 MIL)	LIN FT	3,500	\$3.00	\$10,500.00
10	CONSTRUCTION LAYOUT	LUMP	LUMP	\$30,000.00	\$30,000.00
11	SAW CUTTING PAVEMENT (ASPHALT OR CONCRETE)	LIN FT	2,500	\$10.00	\$25,000.00
12	EROSION CONTROL	LUMP	1	\$15,000.00	\$15,000.00
CONSTRUCTION TOTAL					\$1,277,600.00
CONTINGENCY (20%)					\$255,520.00
TOTAL COST					\$1,533,120.00

Figure 5.3: Opinion of Cost for S. Tyler St. Two-lane Facility Rehab



S. Tyler St./S. Polk St. Couplet (Long-term)

SUMMARY OF ESTIMATED QUANTITIES					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	REMOVAL OF CONCRETE WALKS & DRIVES	SQ. YD.	640	\$15.00	\$9,600.00
2	REMOVAL OF ASPHALT PAVEMENT	SQ. YD.	19000	\$15.00	\$285,000.00
3	GENERAL EXCAVATION (NET SECTION)	CU. YD.	1200	\$20.00	\$24,000.00
4	ASPHALT CONCRETE	TON	17500	\$110.00	\$1,925,000.00
5	HANDICAPPED CURBED RAMPS	EACH	72	\$2,000.00	\$144,000.00
6	TEMPORARY SIGNS & BARRICADES	LUMP	LUMP	\$50,000.00	\$50,000.00
7	MOBILIZATION	LUMP	LUMP	\$75,000.00	\$75,000.00
8	REFLECTORIZED RAISED PAVEMENT MARKERS	EACH	350	\$8.00	\$2,800.00
9	PLASTIC PAVEMENT STRIPING (4" WIDTH) (THERMOPLASTIC 90 MIL)	LIN FT	7,000	\$3.00	\$21,000.00
10	CONSTRUCTION LAYOUT	LUMP	LUMP	\$45,000.00	\$45,000.00
11	SAW CUTTING PAVEMENT (ASPHALT OR CONCRETE)	LIN FT	3,750	\$10.00	\$37,500.00
12	EROSION CONTROL	LUMP	1	\$25,000.00	\$25,000.00
CONSTRUCTION TOTAL					\$2,643,900.00
CONTINGENCY (20%)					\$528,780.00
TOTAL COST					\$3,172,680.00

Figure 5.4: Opinion of Cost for 4 S. Tyler St. Couplet

5.3 Potential Funding Sources

A combination of available monies from the City of Covington general fund, bonds, grants, as well as, LA DOTD, and Regional Planning Commission involvement are the most likely source of funds. Specific LA DOTD programs to be applied for include Transportation Alternatives Program (TAP), Local Road Safety Program (LRSP), and Safe Routes to Public Places Program (SRTPPP). The City should consider working with a consultant to assist in developing applications for the funding programs. All programs and entities have different regulations for funding projects and it is possible only some elements of a recommendation may be available for funding from a specific program or entity.

5.4 Detours and Closures During Construction

The scopes of the bicycle and pedestrian recommendations call for almost no interruption of service during construction.

The roadway improvements may produce intermittent closures along the S. Tyler St. corridor. Businesses will need to have access maintained during construction. Design documents should incorporate appropriate continued traffic operations and detours which will facilitate access to all structures.



6.0 Conclusion

6.1 Summary of Impacts

The implementation of any of the proposed alternatives will have a positive impact on the efficiency and safety of the “New Covington” study area. The addition of signage, crosswalk striping, advanced stop bars, and sidewalks will provide a safer “New Covington” for all users, residents and visitors alike. The recommendations offer alternative transportation choices, access to recreation facilities and schools, and expanded public access to the surrounding areas through modal means other than motorized vehicles. The S. Tyler St. (LA 21) short-term recommendations will provide a safer and more efficient corridor. In addition, no environmental impacts were discovered to impede any of the recommendations.

The construction of a complete streets concept will require a financial commitment from the City of Covington and other public and quasi-public entities that may contribute to this project. A consensus among the stakeholders, including City of Covington officials, and the PMC expressed strong support for the short-term recommendations to move forward. The recommended short-term actions bicycle and pedestrian enhancements such as signage, striping, and sidewalks. The long-term recommendations that received strong support but pose more difficult funding scenarios include the S. Tyler St./S. Polk St. couplet.

The goal is to provide a safer more efficient “New Covington” that will improve the City of Covington residents and visitors access to transportation options. Complete streets policies and programs are largely responsible for the widespread increase of bikeway development across the city, parish, and region and best practices were consulted when designing the conceptual layout. The “New Covington” project offers a great opportunity to benefit from a complete streets design as many other communities have around the country and will continue Covington’s commitment to a safer and healthier community.

6.2 Summary of Cost Estimates

The recommendations for the “New Covington” study area would make a substantial improvement to the existing facilities, infrastructure, surrounding neighborhood, and provide a critical link to the schools and parks in the area. Design, development, and construction of the vehicular, bicycle, and pedestrian recommendations could be implemented in phased construction to reduce implementation costs.

Based on cost data and quantities estimated from preliminary layouts and typical sections, costs for reasonable contingencies, the low-level opinion of probable project costs totals are estimated for Bicycle Improvement Plan \$133,500; Pedestrian Improvement Plan \$1,500,000; and the S. Tyler Two-lane Rehab \$1,533,000. The long-term S. Tyler St./S. Polk St. couplet is estimated at \$3,200,000.