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COVINGTON BICYCLE PLAN AND COMPLETE STREETS POLICY

FEASIBILITY STUDY

FINAL REPORT

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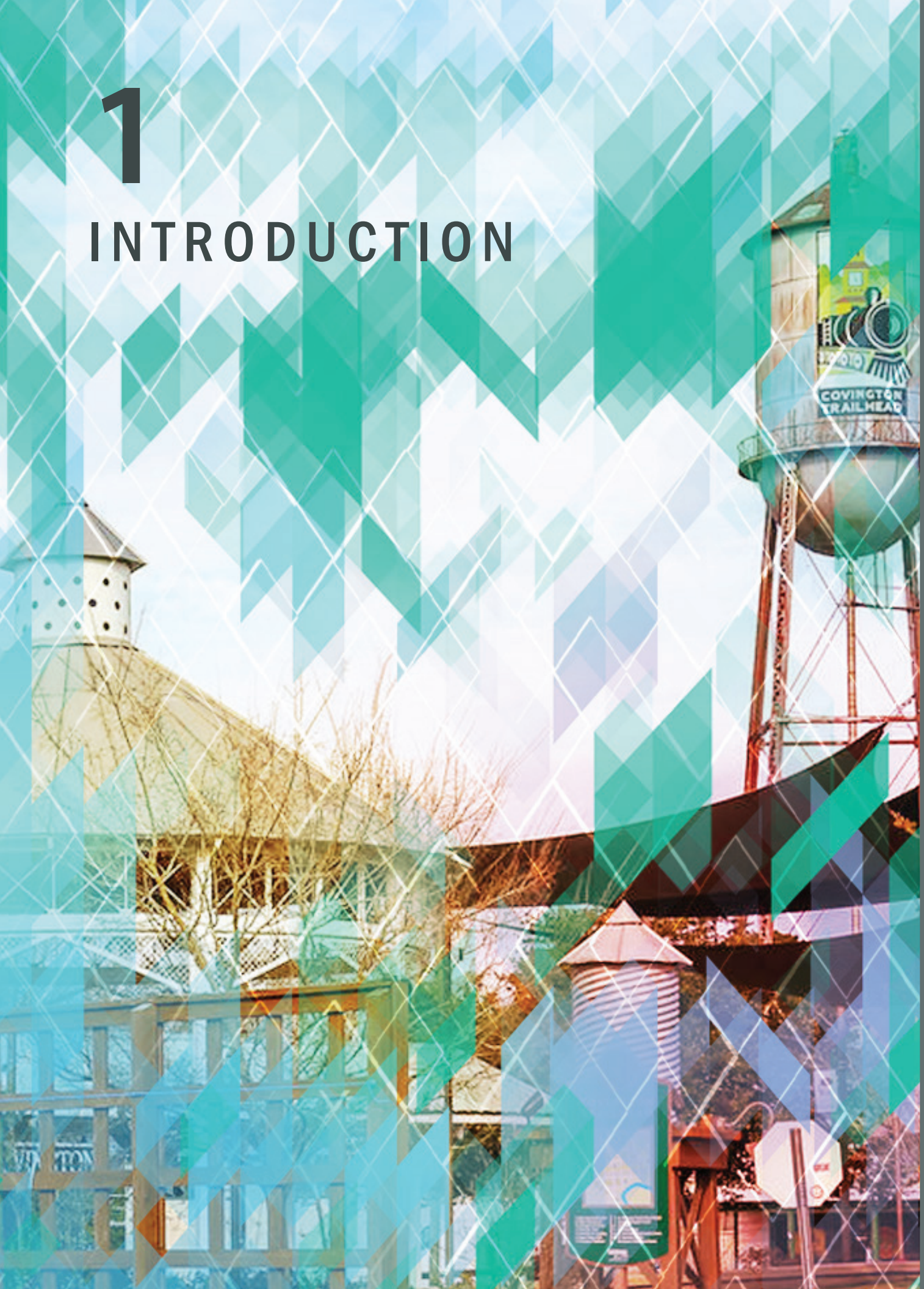
1 INTRODUCTION



1. INTRODUCTION

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) and Dana Brown & Associates (DBA) to perform a Bicycle Plan Feasibility Study, and to develop a city-wide Complete Streets Policy. This includes a Stage 0 Environmental Checklist and a Stage 0 Preliminary Scope and Budget Checklist for short and long-term recommendations.

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 and Planning Departments, 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 and contains 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*

Project Description

The scope of work for the Bicycle Plan Feasibility Study 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.

• Existing and Proposed Land Use - Prepare a generalized land use map of the study area showing major existing and proposed land uses. Review any previous planning studies, reports, etc. provided by the PMC used as the basis for identifying proposed land use changes within the study area. The land use information (existing and future) will be used in part to analyze connectivity issues, needs, and opportunities for improved bicycle and pedestrian access between neighborhoods, downtown, and public places.

• Conduct Deficiency Analysis - Conduct a complete field visual inspection of all candidate roadways in the study area. This examination will include an assessment of roadway and sidewalk width and condition as well as a review of handicap ramps for compliance with current Americans with Disabilities Act (ADA) design standards. Both the land use and field data will be used to identify target areas that have an interest in or experience issues regarding bicycle and pedestrian accessibility and connectivity.

• Conceptual Planning and Design - Prepare overall bicycle master plan using site design elements such as new or upgraded sidewalks, signage, striping, landscaping, bike racks, and other measures to enhance downtown Covington as a bike friendly town center destination. Prepare overall visualizations of the proposed improvements and conceptual design alternatives, helping the community understand the design intent by using before and after graphic perspectives for important nodes and before and after graphics in plan view for selected study corridors.

• Complete Streets Policy - Assist the City of Covington by preparing a draft Complete Streets Policy document for review by the Mayor and PMC membership. Based on comments received, make revisions to the document and resubmit to the PMC for final review and further consideration by the Mayor and Council.

• Prepare Preliminary Plans - Prepare the initial draft of the Bicycle Master Plan and related improvements for review by the PMC. The PMC members will review and comment on study findings and draft recommendations, including project priorities, which are appropriate and feasible for implementation.

• Draft and Final Reports - Upon review and approval of the draft submission, the Final Stage 0 Feasibility Study Report will be provided to the RPC and the PMC members.

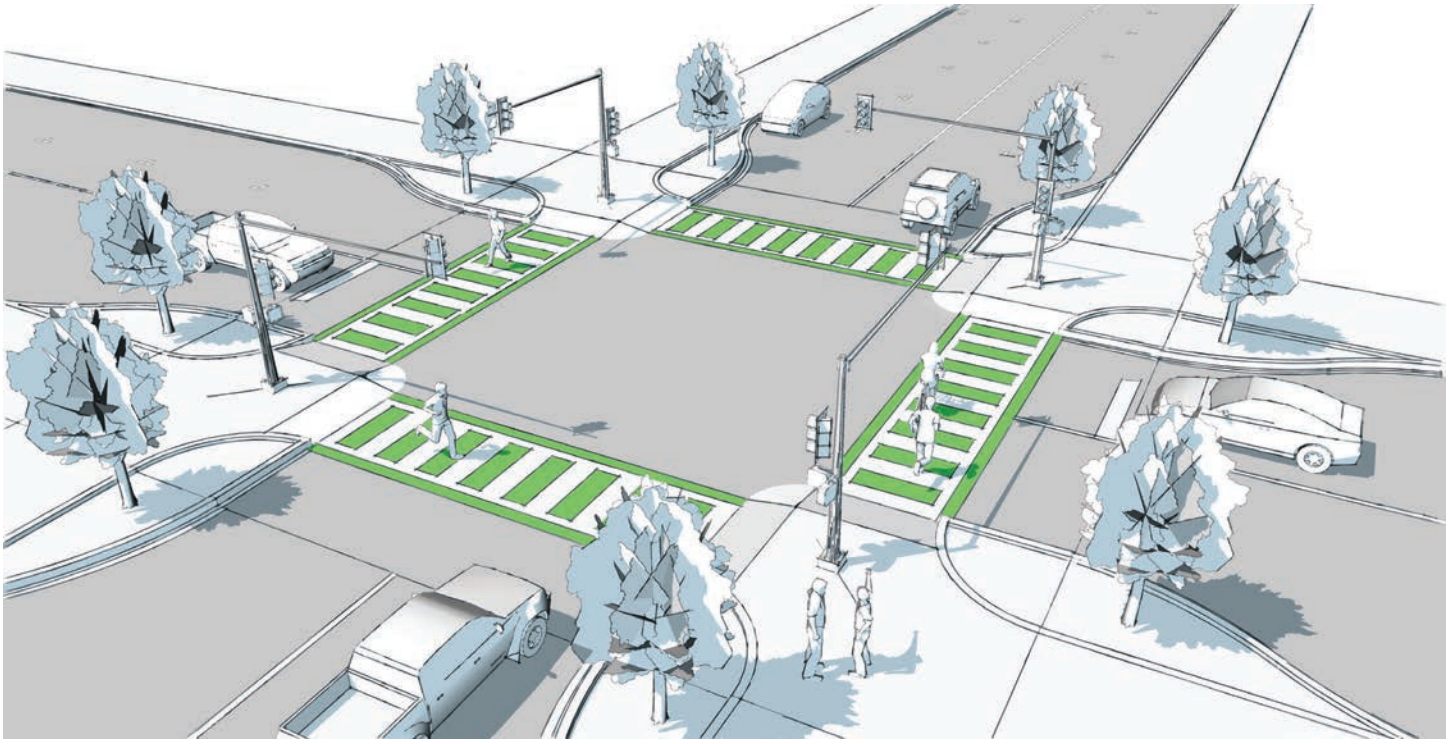


Figure 1.1: Intersection Pedestrian Safety Improvement Study (Source: Dana Brown & Associates)

Background

The Regional Planning Commission in coordination with the City of Covington determined a feasibility study for a bicycle master plan is needed for the purpose of linking neighborhoods with downtown Covington, schools, parks, commercial centers, and other public facilities. The study also inventories sidewalk conditions on selected federal-aid eligible routes to identify new or missing sections necessary to comply with the American Disabilities Act (ADA) standards. The geographic boundaries of the scope are the City of Covington limits with emphasis placed on potential bicycle routes which can be incorporated into a regional or locally significant travel network.

The City and RPC goal is to develop a comparative analysis of alternative bicycle routing concepts and in determining priority routes by facility type within the City. In addition, data on sidewalk types and condition, ADA ramps and deficiencies, and opportunities for landscaping at key node points are identified. This data is used by the City of Covington in preparing an application for capital project assistance under DOTD's Transportation Alternatives Program and similar programs for bicycle, pedestrian, and related facilities.

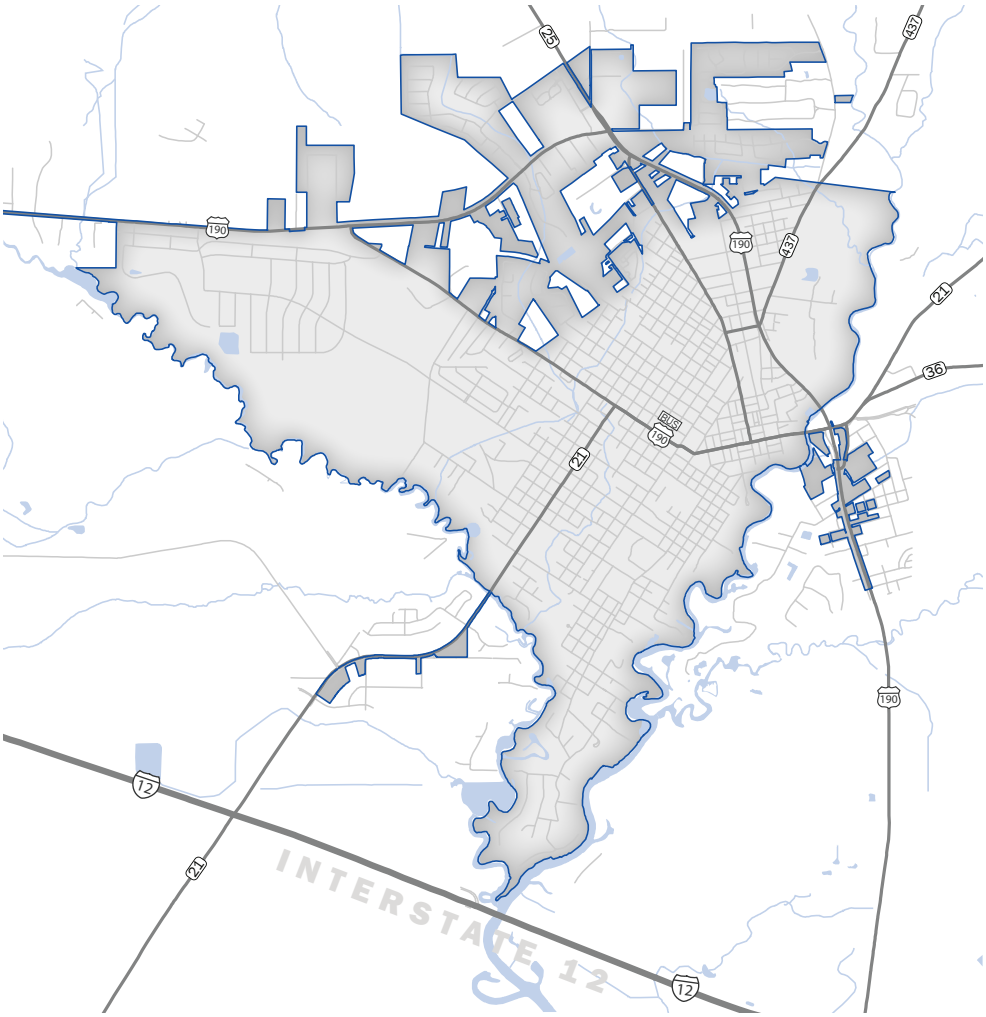


Figure 1.2: Project Study Area Context Map (Sources: Imagery – ESRI; Boundary - Covington)

In order to assist in the implementation of the goals and objective of this project, Digital Engineering and Dana Brown & Associates assisted Covington and the RPC in drafting a Complete Streets Policy for the City. This policy which is discussed in greater detail later in this report ensures that appropriate, multi-modal transportation facilities are provided both within the public right-of-way and private development based on a number of factors such as surrounding land use, proximity to landmarks, or traffic volume.

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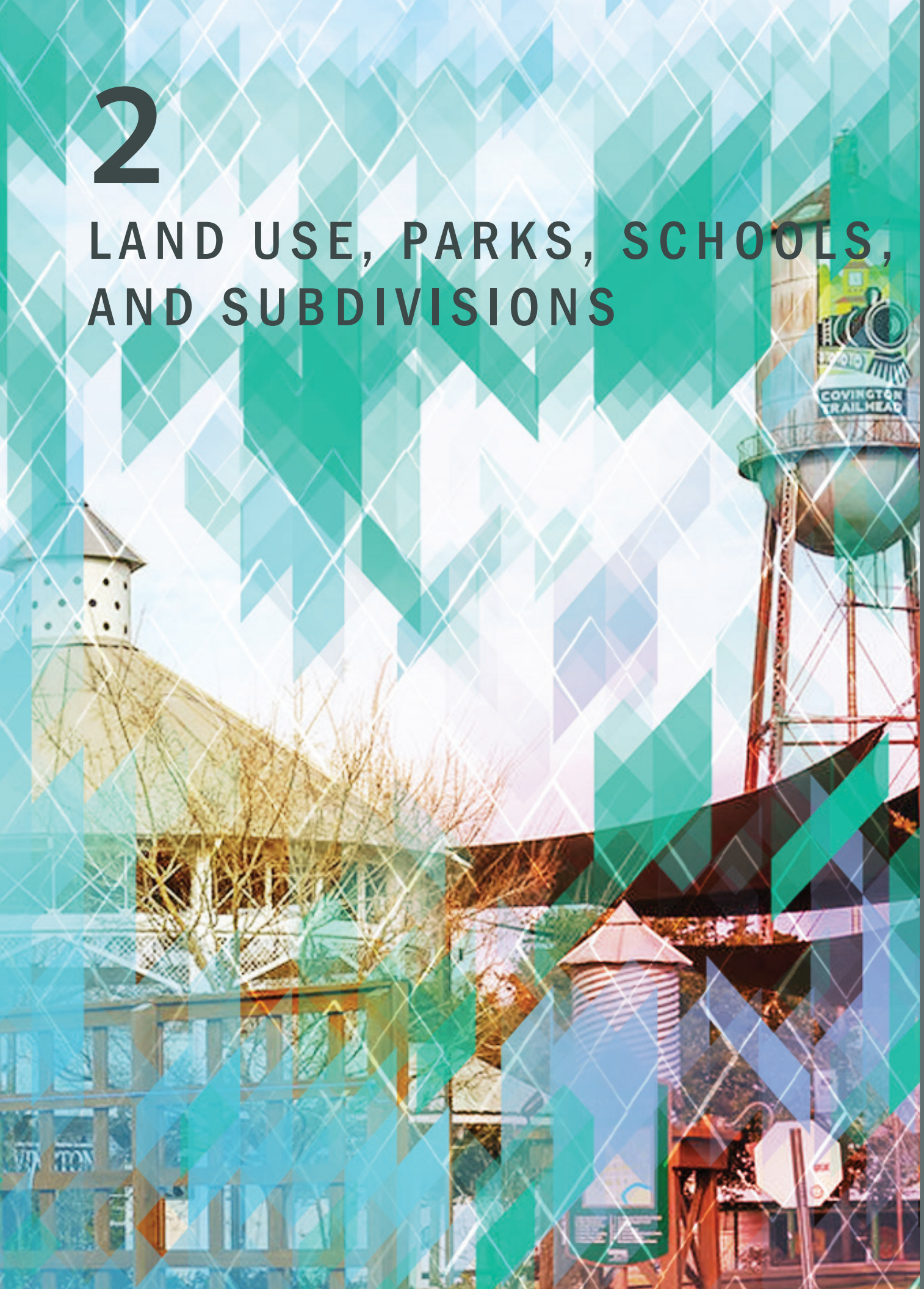
LAND USE, PARKS, SCHOOLS, AND SUBDIVISIONS



2. LAND USE, PARKS, SCHOOLS, AND SUBDIVISIONS

Land Use

The City of Covington has several types of land use typologies that must be addressed while performing a bicycle feasibility study. As noted in the city's Comprehensive Plan, the city is home to a historic revitalized Downtown and well-loved historic neighborhoods. Outside of its vibrant and relatively dense core, Covington has experienced decades of exclusively auto-oriented development with commercial, residential, and civic uses which are primarily accessed by car. However, there are still a significant amount of undeveloped areas within and around Covington. These lands lend to Covington's small town impressions in which its residents take pride.

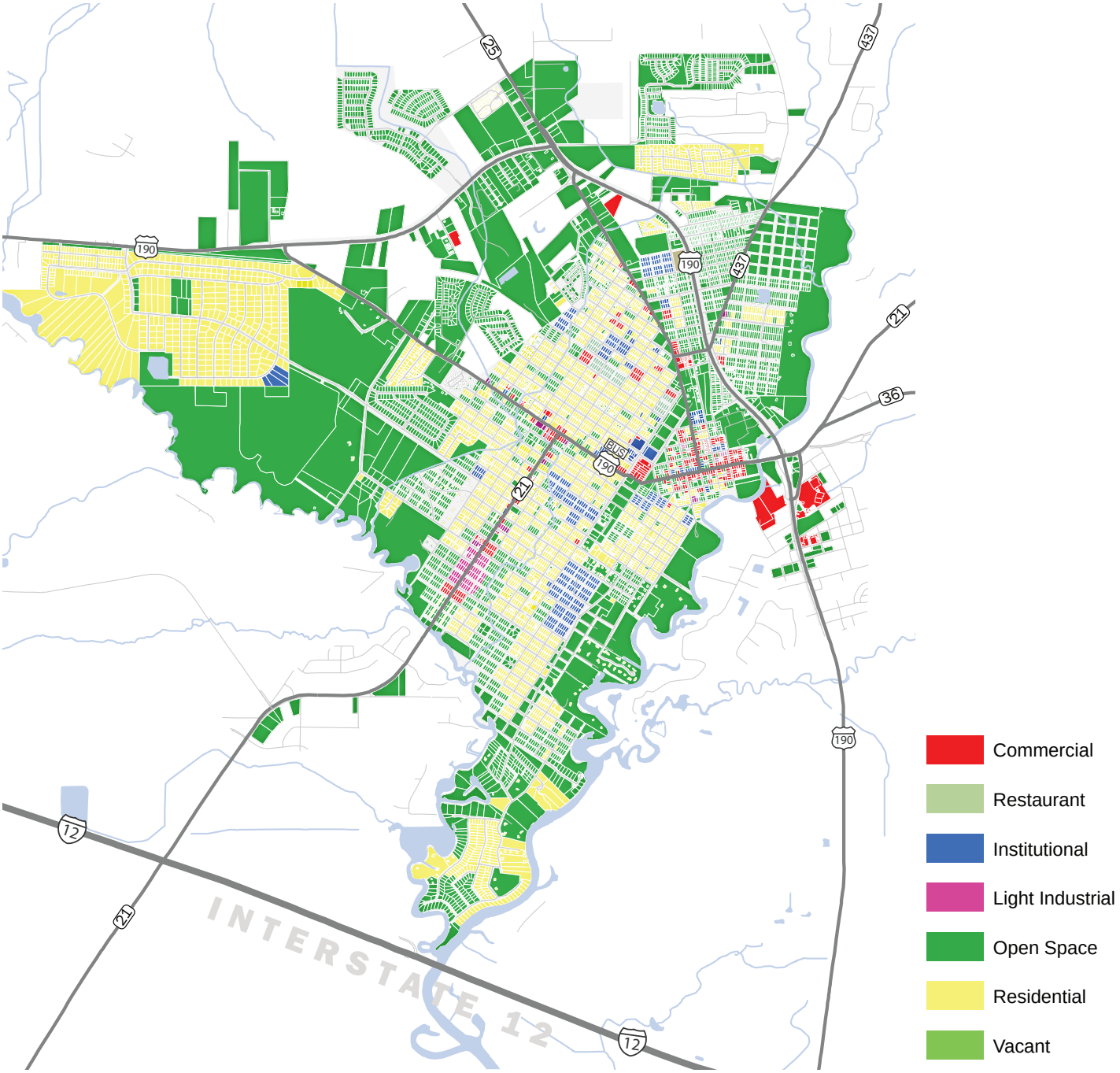


Figure 2.1: Land Use Map (Sources: Imagery – ESRI; Land Use – Covington)

The City of Covington has several documents that guide the development of the city. The study team reviewed the comprehensive plan, comprehensive zoning ordinance, subdivision ordinance, and historic district guidelines when developing proposed alternatives for bicycle, pedestrian, and complete streets facilities. The data in these documents was used to analyze connectivity issues, needs, and opportunities for improved bicycle and pedestrian access between neighborhoods, downtown, and public places. The land use map on the previous page illustrates the current patterns within the city.

Schools and Park/Recreation Locations

The City of Covington in association with the St. Tammany Parish School Board and other organizations can work together to ensure safe and efficient walking and bicycling to school and parks is available. Education and awareness programs by schools and recreation departments that teach safety help students and families develop safe walking and biking habits for a lifetime. Enforcement of the laws and engineering safety improvements near schools help minimize risk to students as they travel to school. The study team reviewed the detailed base map of schools and parks to ensure that proposed bicycle facilities address the need of the students. We strive to develop routes for children with the lowest speeds and volumes of moving vehicles hile minimizing the number of intersections. Walking and bibking routest to school are never completely free from safety risks. However, recognizing and evaluating a concern is the first step in addressing it.

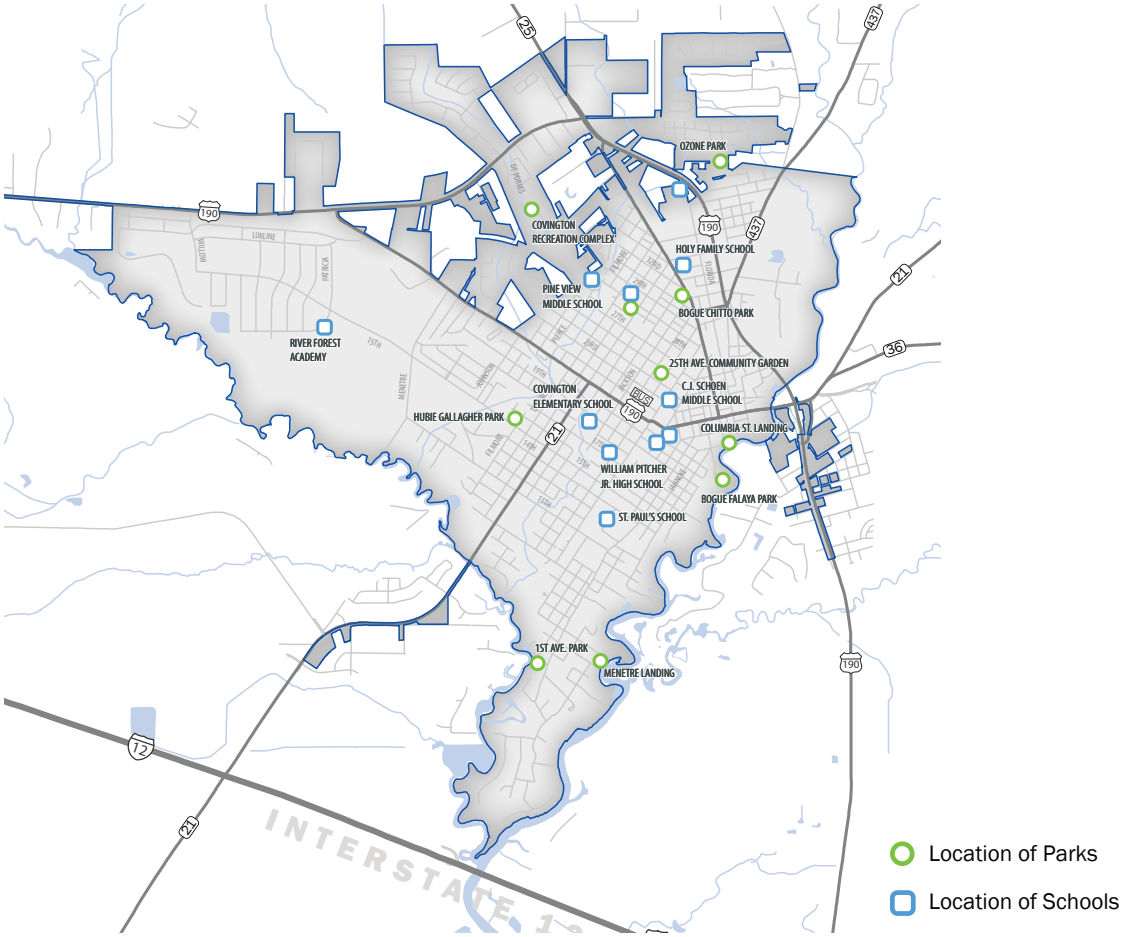


Figure 2.2: Schools and Parks (Source: Imagery – ESRI; GIS Data – Covington)

Many bicycle and pedestrian design techniques can reduce traffic volumes, decrease speed, reduce crossing distances, and improve safety. While these measures can often be costly, several engineering solutions don't require large expenditures, such as posting signs, re-timing lights, or repainting crosswalks, stop bars, and bike lanes.

Subdivisions

Land use substantially influences a person's walking and bicycling habits. Someone living near a variety of land uses is more likely to run an errand on foot or with their bike than someone living in a large residential subdivision. Complete streets principles create more livable communities by promoting variety, preserving the environment, and making alternative modes of transportation viable.

The team identified numerous subdivisions within Covington and analyzed potential north-south and east-west bicycle and pedestrian linkages and routes through various subdivisions, as a means to provide users multiple routes to reach various destinations. This analysis will encourage bicyclists and pedestrians to increase their usage among multiple routes.

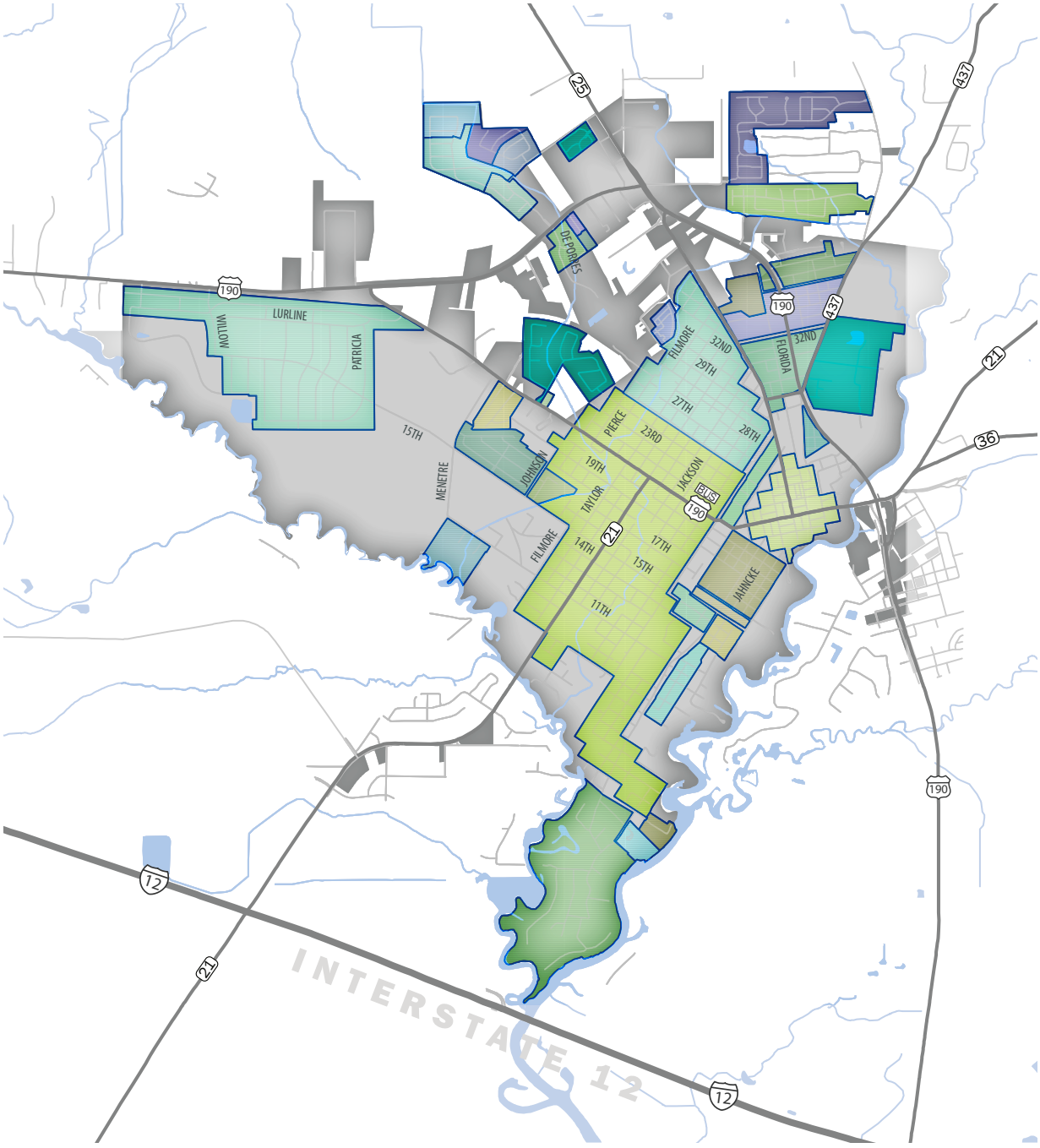


Figure 2.3: Subdivisions (Sources: Imagery – ESRI; Land Use – Covington)

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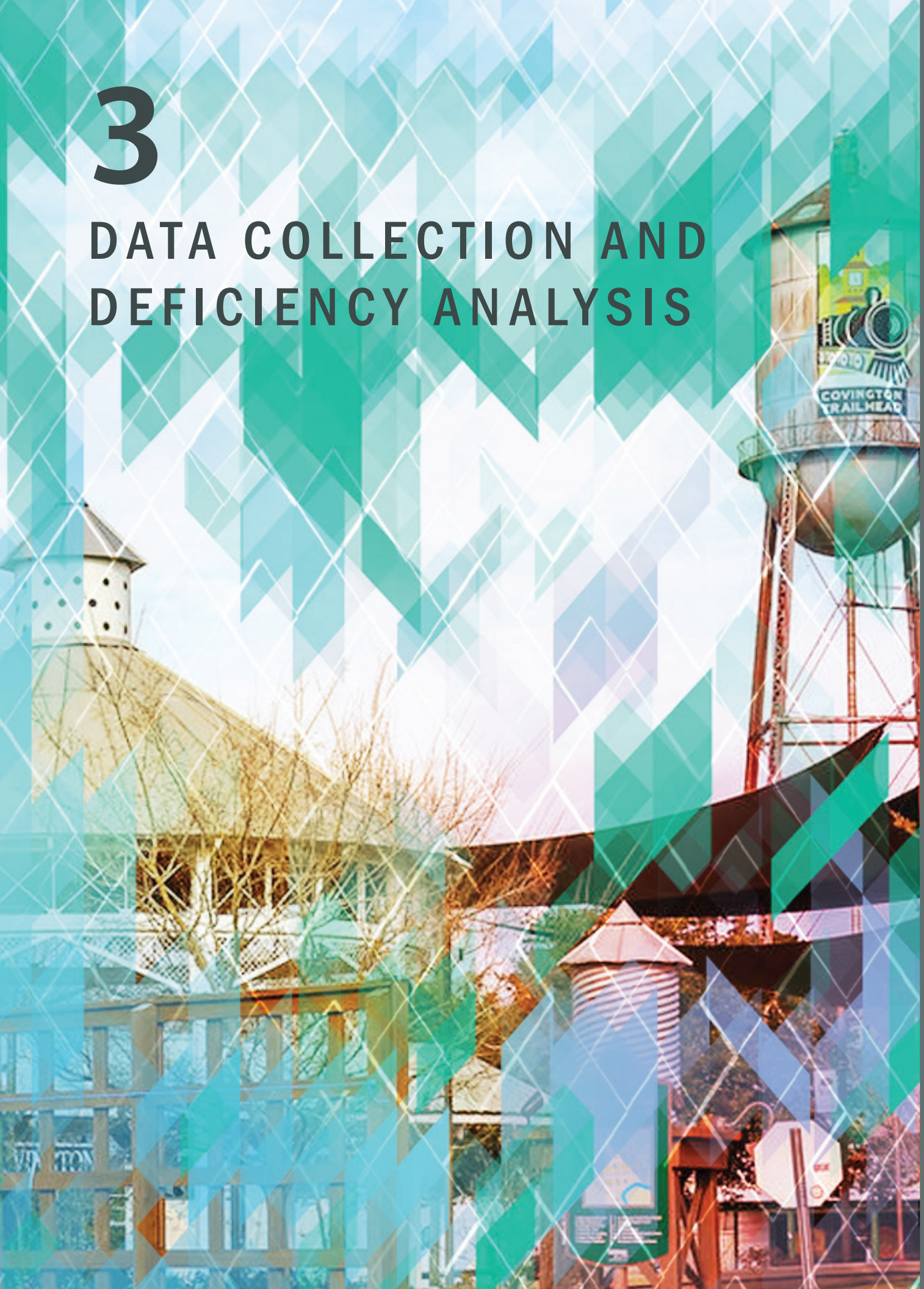
DATA COLLECTION AND DEFICIENCY ANALYSIS



3. DATA COLLECTION AND DEFICIENCY ANALYSIS

Overview of Data Collection Effort

The study team collected data and information related to the Covington study area from various sources including the RPC, the City, and LA DOTD. The RPC and Covington provided relevant studies and technical information needed to develop the geo-referenced aerial mapping and conceptual designs. The City provided Geographic Information Systems (GIS) data including, land use, zoning, streets, parks, schools, and other relevant files for 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. RPC provided crash data for vehicles, bicycles, and pedestrians.

Several meetings for the purposes of developing the existing conditions analysis and the conceptual designs were conducted between the RPC, Covington, and the study team (DE and DBA). The study team made numerous 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 identified streets, as well as creating a photographic catalogue. As a result of these meetings and investigations, the team was able to prepare an existing conditions inventory that included land use, zoning, traffic volumes, parking, traffic signal and signage information, community elements, and cultural resources. The summary information concerning the environmental investigations is included in Section 3.7 Environmental Conditions and in full in the appendix.

Figure 3.1: View of existing crosswalks and curb ramps at North Columbia and East Gibson Streets

During the course of this project, the consultant team reviewed previous studies relevant to the study area. Overviews of the components relevant to the Bicycle Plan Feasibility Study from each study are included below.

The City of Covington completed the Comprehensive Master Plan Update (2007). The plan's vision states: *"The City of Covington will continue to preserve its natural and created environment while fostering its small-town wholesomeness and its family centeredness. To preserve its distinct identity, the citizens of Covington will accept the challenge of creating a safe, united, and identifiable community that enhances the quality of life for all residents. Covington will embrace its historic and environmental assets and recognize the needs of its diverse community. An improved quality of life will be accomplished by providing and protecting housing, recreation, employment, and transportation choices that meet the needs of all ages, incomes, and backgrounds. The City will create balanced economic development by utilizing its cultural, geographical, and social assets to achieve sustainable economic opportunities for its citizens. Covington's built environment will be one in which regulation and design is used to guide development in a safe, connected, fair, and balanced manner, while preserving, emulating, and respecting its existing identity, architecture, and trends. As its community and families grow, Covington will preserve the lifestyle that its citizens enjoy, desire, and deserve."*

Within the plan are community concerns as it relates to bicycle and pedestrian safety. Of note, traffic calming and enhancing bicycle and pedestrian safety and mobility are primary issues stressed in Section II: Consensus. These are not sufficiently expounded upon within the transit and transportation recommendations.

The LA DOTD completed the Statewide Bicycle and Pedestrian Master Plan in 2009. According to the plan, statewide 0.6% of the workforce traveled by bicycle to work. Bicycle-friendly communities, like walkable communities, have elements such as a mix of land uses in relative proximity, allowing for shorter trips; a connected system of streets and trails which facilitates getting between origins and destinations efficiently. Communities with higher rates of bicycling often provide bicycle infrastructure, such as bike lanes, parking and signage, which makes it safer and more comfortable for bicyclists to ride side-by-side with vehicular traffic. Some higher ranked communities have limited bicycle infrastructure in place, as is the case with the City of Covington which ranked #13 on the top 20 list. The vision for the plan is *"to enable people to regularly walk and bike safely and comfortably along and across Louisiana's roads to access schools, jobs, social services, shopping, and transit and for health and recreation."*

Bike lanes are the preferred facility on urban and suburban arterials and collectors. The bicycle facility policy states: *"The provision of bicycle paths separated from the roadway will require an agreement between the respective local government(s) and the Department whereby the maintenance of the path becomes the responsibility of the local government(s) in perpetuity."*The vision and policy were relied upon when making facility recommendations.

In 2015 the LA DOTD released Bicycle Suitability Maps. These maps are for state routes only and don't adequately address the needs of the city and its users.

Analysis of Data Collected

This report provides a summary of the development and methodology to arrive at potential concepts for each corridor. The goal of this report is not to provide a final design or details of the design but to determine feasibility of implementing a shared lane (sharrow), bicycle lane, and/or shared use trail conceptual design considerations. Impacts and feasibility to determine a preliminary concept for each corridor was developed by analyzing the data throughout this section.

Criteria that were reviewed included existing street width, travel lane width, sidewalk width, lane assignments, presence of bike facilities, parking characteristics, curb and gutter characteristics, proximity to generators and attractors, traffic volume, posted speed, and other elements.

The objective of the analysis is to provide a high-level evaluation of the feasibility of bicycle facilities on corridors in the City of Covington. Each corridor was segmented (if applicable) based on street widths, parking characteristics; and sections with similar features. For each segment, the street width, daily traffic (if available), parking, and state or local route classification were documented, as well as land use context and connectivity to complete a network. Based on each segment's characteristics, different to create a bicycle facility were explored.

Utilizing the data gathered in the collection effort, including the existing conditions and an understanding of the alternatives acceptable to the RPC and City of Covington, the next step was to identify the strengths, weaknesses, opportunities, and threats associated with the development of bicycle facilities.

Figure 3.2: View of existing crosswalks and curb ramps on North Florida and East Gibson Streets.

Existing Conditions

Roadway Facilities

The study area geographic boundaries are the city limits of Covington (~8 sq mi) as detailed in Section 1. The study area includes newly developed commercial nodes, a vibrant historic downtown, and a mix of older and newer residential developments. As such, the road network is a mix of facility types to service different development patterns and land uses. Presented below are the road classifications. North-South streets (president streets) typically have fifty feet (50') of right-of-way and have posted speed limits of 25 mph. East-West streets (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 to twenty feet (18-20').

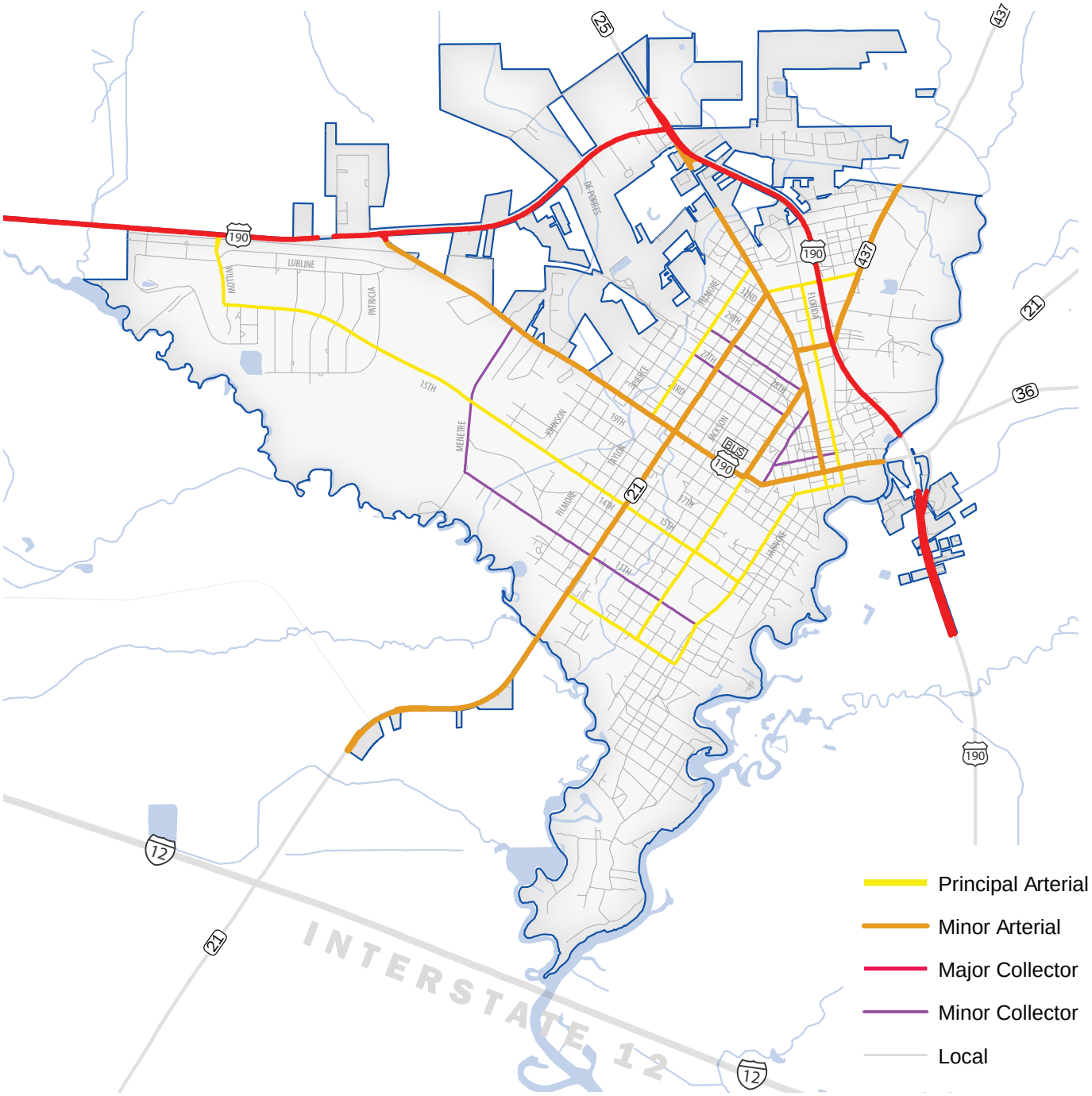


Figure 3.3 Road Classification (Sources: Imagery – ESRI and Roads – LA DOTD)

After numerous site visits and reviewing aerial imagery, the team assessed the identified roadways listed below for the following information: posted speed, width of right-of-way, average daily traffic (ADT – if known), crash data, existing bicycle facilities, existing pedestrian facilities, the presence of a school or park, and is noted whether the alignment is a north/south or east/west facility.

Where shared use lanes are recommended the City may need to investigate additional traffic calming measures to potentially establish bike boulevards/neighborhood greenways. Bike boulevards or neighborhood greenways are low volume roads where bicycle traffic is encouraged and local access is maintained for motor vehicles but through traffic is discourage by design elements. Presented below are samples of the numerous corridors and data collected from them. For full information see the appendix.

8th Avenue (Jahncke Avenue to Jefferson Avenue)

In Figure 3.4, a street view of the 8th Avenue roadway, an east/west facility, has an apparent right-of-way width of 80’ and is in generally good condition. The older design and character of the surrounding residential development demonstrate a right-of-way that is narrow and lined with utility poles and trees. 8th Avenue has no existing sidewalk on either side and open swale drainage on both. No bicycle facilities exist. Introducing a facility to this route would provide a key connection to Jefferson Avenue and access to St. Paul’s School.

Figure 3.4: 8th Ave. Street View (Source: Digital Engineering; May 2018)

8th Avenue (Jahncke Ave. to Jefferson Ave.)	
Road Condition	Appears in Good Condition
ADT	None Available
Speed Limit (mph)	25
ROW Width	80' (appoximately)
Sidewalks	Intermitten and Varying Condition
Bike Facilities	None
Access Issues	None
Existing Drainage	Open swales

8th Avenue provides an east/west movement in the study area. While the posted speed limit is 25 mph the study team witnessed vehicles traveling at a higher rate of speed. There are no sight distance issues. The corridor appears to be a good candidate for a shared lane.

11th Avenue (Jahncke Avenue to Menetre Drive)

11th Avenue roadway, an east/west facility, has an approximate right-of-way width of 80’ and is in generally good condition. The older design and character of the surrounding residential development demonstrate a right-of-way that is narrow and lined with utility poles and trees. 11th Avenue has no existing sidewalk on either side and open swale drainage on both. No bicycle facilities exist. The road has a posted speed of 25 mph. This segment could provide a missing link in the east-west circulation between the city’s parks, school, and commercial corridors.

11th Avenue (Jahncke Ave. to Menetre Dr.)	
Road Condition	Appears in Good Condition
ADT	None Available
Speed Limit (mph)	25
ROW Width	80' (appoximately)
Sidewalks	None
Bike Facilities	None
Access Issues	None
Existing Drainage	Mostly open swales with some subsurface

Figure 3.5: 11th Avenue Street View (Source: Digital Engineering; May 2018)

11th Avenue provides an east/west movement in the study area. There are no sight distance issues, and no apparent significant crash experience. The corridor appears to be a good candidate for a shared lane.

15th Avenue (Jahncke Avenue to Willow Drive)

In Figure 3.6 below, a street view of the 15th Avenue roadway, an east/west facility, has an approximate right-of-way width of 80’ and is in generally good condition. There is a mix along the corridor of older and newer design of the surrounding residential development. The older areas demonstrate a right-of-way that is narrow and lined with utility poles and trees, while the newer area has a wider R-O-W and less trees. 15th Avenue has some existing sidewalks and a combination of open swales and subsurface drainage on both. A separated bicycle lane exists from Pierce St. to Patricia Dr. The road has a posted speed of 25 mph. No apparent significant crash experience.

15th Avenue (Jahncke Ave. to Willow Dr.)	
Road Condition	Appears in Good Condition
ADT	None Available
Speed Limit (mph)	25
ROW Width	80' (appoximately)
Sidewalks	Intermitten
Bike Facilities	Intermitten
Access Issues	None
Existing Drainage	Mostly open swales with some subsurface

Figure 3.6: 15th Avenue Street View (Source: Digital Engineering; May 2018)

15th Avenue provides east/west movement in the study area, and provides access to St. Paul’s, South Tyler St., Hubie Gallagher Park, and Kehoe-France School. There are minimal sight distance issues. The corridor has two large undeveloped areas between Johnson St. and Patricia Dr. with the developed areas generally consisting of residential. The roadway is low speed with moderate traffic volume observed. 15th Avenue appears to be a good candidate for a shared lane facility.

Harrison Street (11th Avenue to 17th Avenue)

In Figure 3.7 below, a street view of the Harrison Street roadway, a north/south facility, has an approximate right-of-way width of 50’ and is in generally good condition. This route offers a safer link to Covington Elementary than the busier LA 21 (S. Tyler Street) to the east. The older design and character of the surrounding residential development demonstrate a right-of-way that is narrow and lined with utility poles and trees. Harrison Street has no existing sidewalks on either side (except near 11th Ave and St. Tammany Parish Hospital) and open swale drainage on both. No bicycle facilities exist. The road has a posted speed of 25 mph and no apparent significant crashes.

Figure 3.7: Harrison St. Street View (Source: Digital Engineering; May 2018)

Harrison Street (11th Ave. to 17th Ave.)	
Road Condition	Appears in Good Condition
ADT	None Available
Speed Limit (mph)	25
ROW Width	50' (appoximately)
Sidewalks	None (except near hospital)
Bike Facilities	None
Access Issues	None
Existing Drainage	Open swales

Harrison Street provides a north/south movement in the study area parallel to Tyler Street (LA 21). There are no sight distance issues. The corridor appears to be a good candidate for a shared lane.

Jackson Street (22nd Avenue to 29th Avenue)

In Figure 3.8 below, a street view of the Jackson Street roadway, a north/south facility, has an approximate right-of-way width of 50’ and is in generally good condition. The older design and character of the surrounding residential development demonstrate a right-of-way that is narrow and lined with utility poles and trees. Jackson Street has no existing sidewalk on either side and open swale drainage on both. No bicycle facilities exist. Introducing bicycle facilities to this corridor would provide a link from the West 20s neighborhood to the St. Tammany Parish Library.

Figure 3.8: Jackson St. Street View (Source: Digital Engineering; May 2018)

Jackson Street (22nd Ave. to 29th Ave.)	
Road Condition	Appears in Good Condition
ADT	None Available
Speed Limit (mph)	25
ROW Width	50' (appoximately)
Sidewalks	None
Bike Facilities	None
Access Issues	None
Existing Drainage	Open swales

Jackson Street provides a north/south movement in the study area, has a posted speed of 25 mph, and no apparent significant crash experience. There are no sight distance issues. The corridor appears to be a good candidate for a shared lane.

Pierce Street (23rd Avenue to 28th Avenue)

In Figure 3.9 below, a street view of the Pierce Street roadway, a north/south facility, has an approximate right-of-way width of 50’ and is in generally good condition. The older design and character of the surrounding residential development demonstrate a right-of-way that is narrow and lined with utility poles and trees. Pierce Street has no existing sidewalk on either side and open swale drainage on both. No bicycle facilities exist. Pierce Street has the ability to connection pedestrian/cyclists circulation of the West 20s neighborhood with the Tammany Trace and the Covington Recreation Center.

Figure 3.9: Pierce St. Street View (Source: Digital Engineering; May 2018)

Pierce Street (23rd Ave. to 28th Ave.)	
Road Condition	Appears in Good Condition
ADT	None Available
Speed Limit (mph)	25
ROW Width	50' (appoximately)
Sidewalks	None
Bike Facilities	None
Access Issues	None
Existing Drainage	Open swales

Pierce Street provides a north/south movement in the study area, has a posted speed of 25 mph, and no apparent significant crash experience. There are no sight distance issues. The corridor appears to be a good candidate for a shared lane.

Sidewalks and Crosswalks

The purpose of this section was to evaluate the current pedestrian sidewalk and crosswalk system conditions along potential corridors within the study area 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. Streets without safe places to walk, cross, catch a bus, or bicycle put people at risk. Pedestrian crashes are more than twice as likely to occur in places without sidewalks.

A majority of the residential areas do not have sidewalks. Illustrated below (Figures 3.10 and 3.11) are the intersections of 17th Avenue at Jefferson Street and 23rd Avenue at Jefferson Street, as seen in the encircled locations on the sidewalks no cross connections are constructed. Figure 3.12 is an example of poor conditions. Both of these types of situations constrain the mobility of all users.

Figure 3.10: Intersection of 17th Avenue and Jefferson Street sidewalks (Source: Digital Engineering; May 2018)

Figure 3.11: Intersection of 23rd Avenue and Jefferson Street sidewalks (Source: Digital Engineering; May 2018)

Figure 3.12: Intersection of 23rd Avenue and Jefferson Street sidewalks (Source: Digital Engineering; May 2018)

The image below illustrates how current sidewalk conditions, and a lack of sidewalks on many streets, forces pedestrians to utilize the roadway as means for traveling.

Figure 3.13: Pedestrians in vehicle travel lane on 15th Avenue. (Source: Digital Engineering; March 2018)

Conversely, much of the downtown core along Boston Street, also known as US-190 Business, features an extensive network of sidewalks and crosswalk markings.

Additionally, there are several areas within the City of Covington that provide ample code-compliant pedestrian routes. These are typically located adjacent to, or in close proximity to, landmarks such as school or parks. One of the goals of this study is to provide suggestions on how to link these nodes of existing pedestrians facilities through the surrounds residential street network.

Figure 3.14: View of existing sidewalks along the edge of a park near Downtown Covington.

Figure 3.15: View of existing crosswalks and curb ramps on North Florida and East Gibson Streets.

Due to the study area's large geographical size the study team couldn't catalogue and analyze every sidewalk and cross connection. However, typical sections will be presented for implementation that can be used throughout the study area.

Signage

Another essential element of safety, traffic management, and wayfinding – for all users - is signage in the study area. Accurate signage helps direct drivers, bicyclists, and pedestrians safely. Signage within the study area is generally in good condition but may be placed inaccurately and/or have an obstructed view. Adequately maintained retroreflective signs improve nighttime visibility and reduce the risk of crashes by bouncing light from vehicle headlights off of the traffic control device and back toward the vehicle and the driver's eyes. This makes signs and markings appear brighter and easier to see and read at night.

Below is an example of signage within the study area that is incorrectly installed. Illustrated in the figure below is a pedestrian crossing sign that has probably been placed where people are known to cross. However, there are no crosswalk markings and no sidewalk cross connections.

Figure 3.16: 15th Avenue signage

Due to the study area's large size the study team couldn't catalogue every regulatory traffic sign. However, when a corridor is programmed for roadway, bicycle, and/or pedestrian enhancements it is recommended that the signage and striping are reviewed and replaced as needed to comply with the latest MUTCD edition.

Figure 3.17: 15th Avenue signage near entrance to an existing separated bike lane

Crash Data

The Regional Planning Commission provided the following figures concerning crash data. Bicycle crashes in the City of Covington remain a serious concern. The presence of numerous elementary, middle, and high schools along with parks increase the number of riders and potential riders. The most important point to be made is that with proper street design and behavior change amongst all road users, the overwhelming majority of bicycle crashes are preventable.

Awareness is one of the best strategies for combatting errors from all users. Examples of vehicular or bicyclist error include:

- *Motorist drives out of controlled intersection.*
    - *Motorist and bicycle collide even though bicyclist had the right of way.*
- *Motorist overtaking bicyclist.*
    - *Car gets too close or sideswipes bicyclist causing them to overcorrect the bike to avoid a collision.*
- *Dooring*
    - *A driver opens their door in front of bicyclist and the bike can't stop in time. The bicyclist is either knocked down, knocked into or forced to swerve into traffic, often being struck or run over by another vehicle.*
- *Motorist left turn into oncoming bicyclist or right turn into path of bicyclist*
    - *Car coming towards bicyclist makes a left turn right in front or right into the bike.*
    - *Car passes bicyclist and then tries to make a right turn directly in front or right into the bike.*
- *Bicyclist rides out at a driveway or a controlled intersection.*
    - *Bicyclist enters the roadway out of a driveway or an alley and has little to no time to stop or avoid vehicle coming straight for bike.*
    - *The bicyclist proceeds across the intersection before it is safe and collides with oncoming motorist.*
- *Wrong way bicyclist.*
    - *Bicyclist rides the wrong way of oncoming traffic and is struck by motorist.*

The following figures show bicycle and pedestrian – vehicle crashes, the type of crash, and number of occurrences per location. The information provided in these maps assisted the study team to develop the proposed bicycle facilities concepts. No facility design can prevent vehicular, bicyclist, or pedestrian error.

Figure 3.18 on the following page shows the number of bike and pedestrian crashes in the study area between 2014 and 2016. Triangles indicate the location of pedestrian crashes and squares indicate the location of bicyclist crashes. You will notice that most crashes occurred on local routes and appear to be statistically random. Routes with no bike or pedestrian crashes are ideal. Many routes chosen to be in the bike plan had no bike or pedestrian crashes between 2014 and 2016. That is not to suggest or imply that future crashes won't take place.

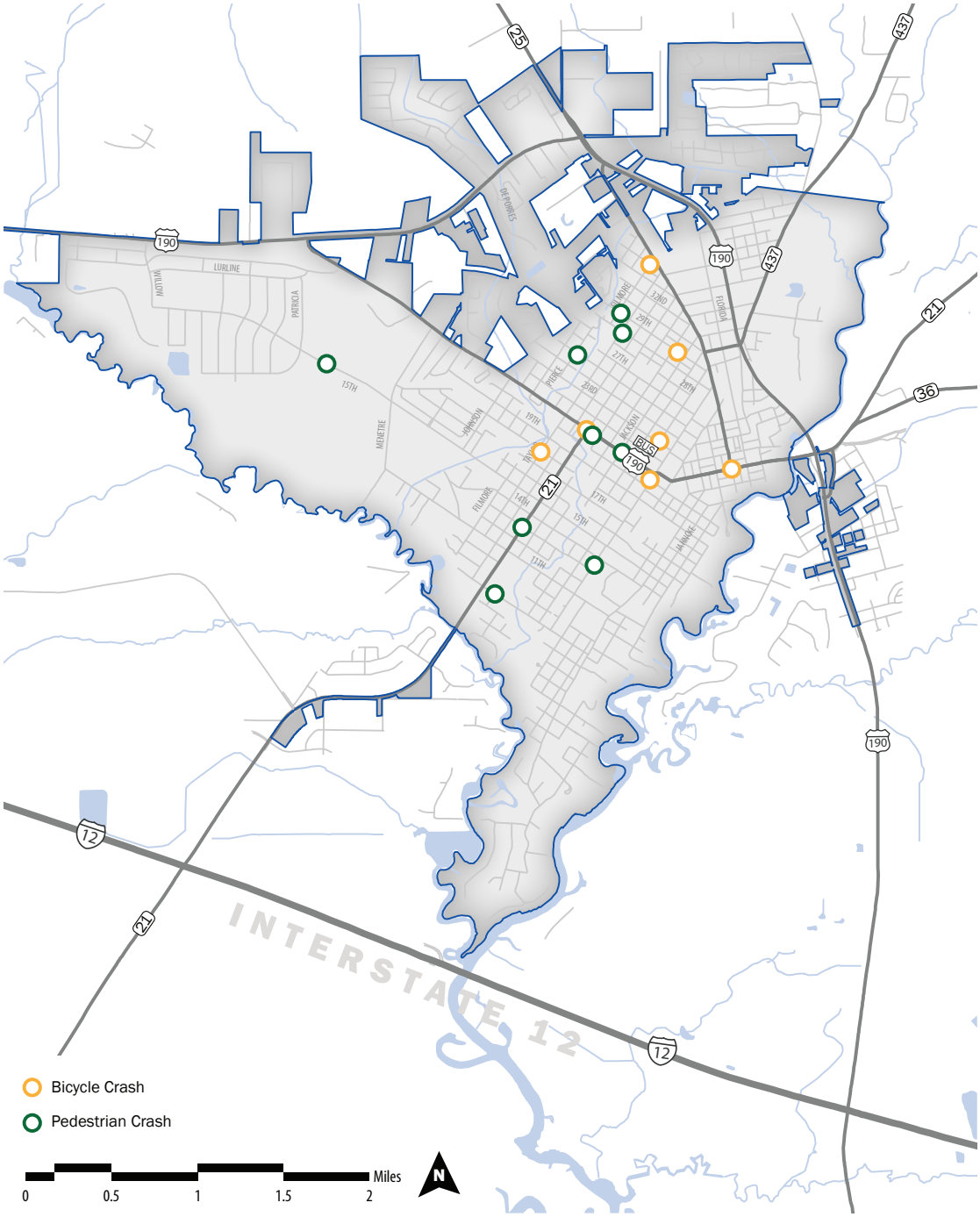


Figure 3.18: Bicycle and Pedestrian Crash Locations 2014-2016 (Source: Imagery – ESRI; Crash – RPC)

It is important to also look at auto crashes when considering the safety of potential bike routes. Figure 3.19 shows the location of auto crashes between 2014 and 2016, on selected corridors.

Crash frequency between 2014 and 2016 is shown in Figure 3.20 below. On this map the larger concentrations of yellow areas indicate the higher frequency of crashes along that corridor. This map shows the highest frequency of crashes occurring on major routes and at major intersections such as 21st Avenue (US 190 B) and S. Tyler St. (LA 21).

The bike routes chosen for this plan seek to enable bicyclers to navigate the city while avoiding the crash frequency hot spots.

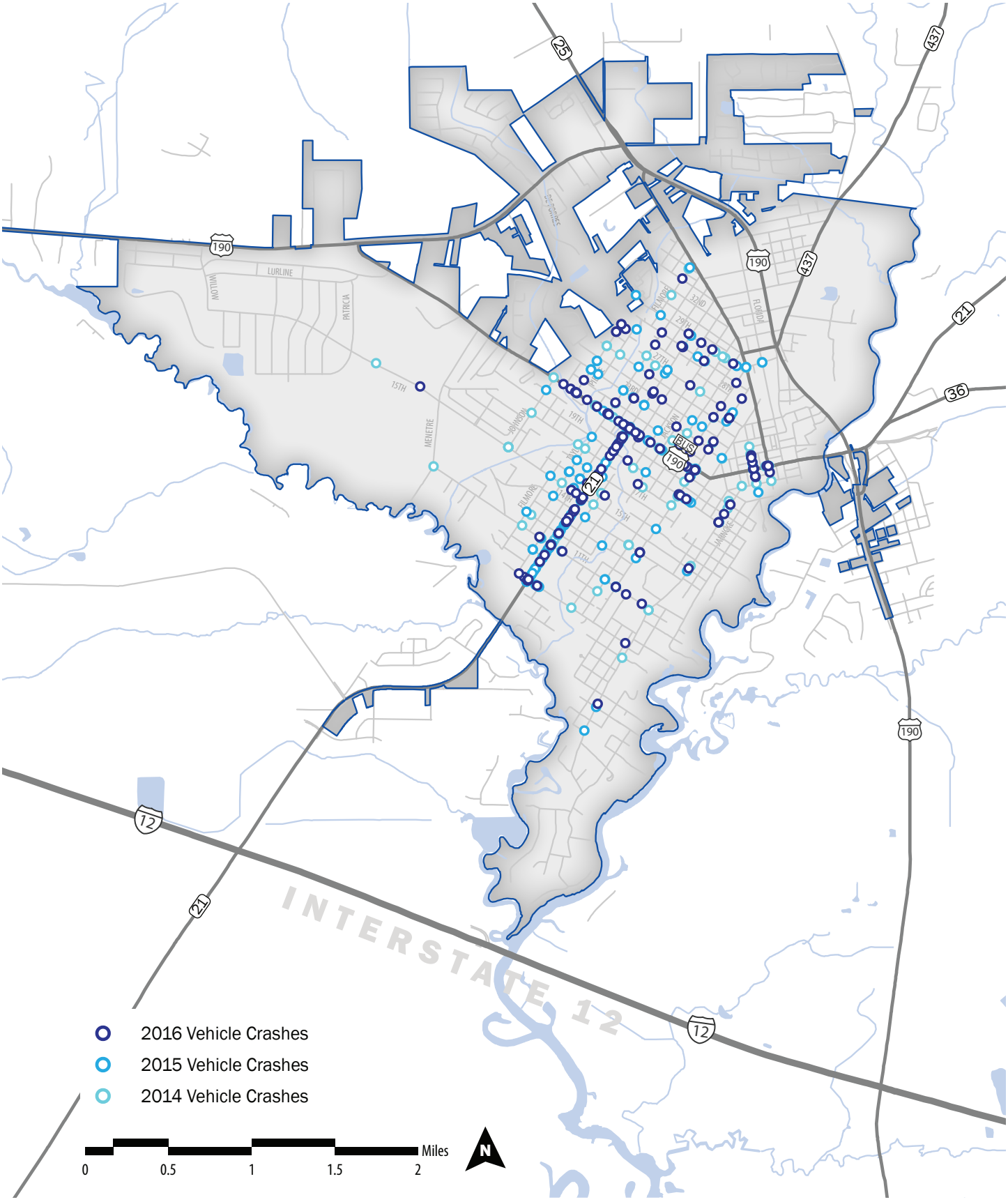


Figure 3.19: Vehicle Crash Locations 2014-2016 (Source: Imagery - ESRI; Crash Data - RPC)

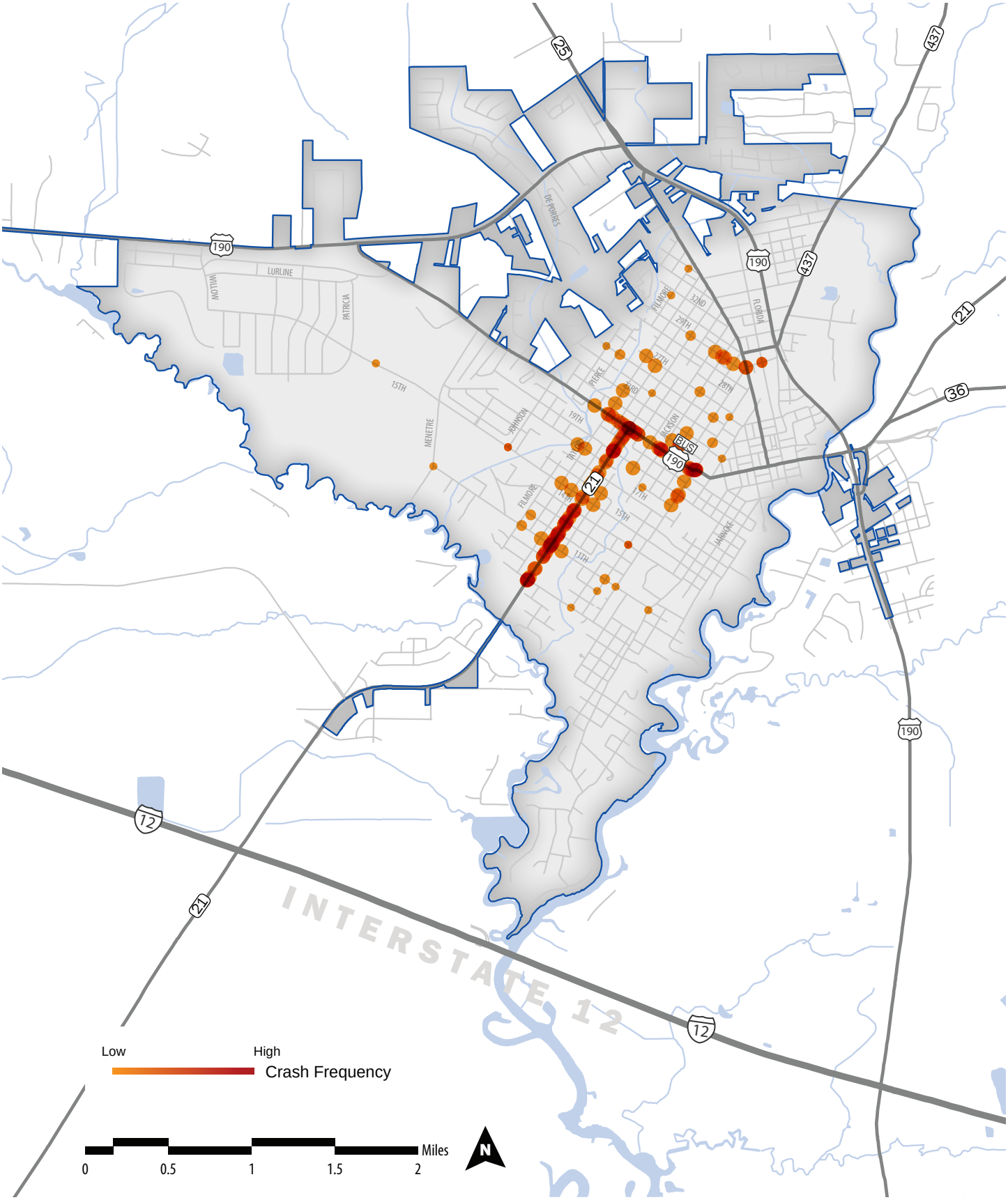


Figure 3.20: Vehicle Crash Frequency (Source: Imagery - ESRI; Crash Data - RPC)

Environmental Conditions

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

The goal of this project is to increase vehicular, pedestrian, and bicyclist's safety while enhancing access and increasing mobility options for all users. Our investigation concludes the following.

There are multiple churches and at least one cemetery that are located along corridor alternatives but none will be negatively impacted by the conceptual designs. No community elements of any type would negatively impact any proposed alternatives for bicycle and pedestrian enhancements. It is worth noting that existing rights-of-way will be utilized for all alternatives on all city owned streets.

There are many public facilities adjacent to the proposed alternatives, such as City Hall, Police Department, Fire Department, Library, and the Justice Center to name only a few. There are water towers located along some potential corridors but proposed alternatives will not negatively impact operations.

The short-term 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. The goal of this project is to increase access for these community elements for all users.

Wetlands Inventory

No jurisdictional wetlands or wetlands enrolled in the reserve program exist along any corridor in the study.

Native American Tribal Lands

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

Section 4(f) Issues

Section 4(f) issues investigated along the corridors consisted of public recreation, public parks, refuges, and historic sites. No known negative impacts of public recreation, public parks, wildlife refuges, or historic sites along any corridor.

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 Covington study area consists of a mostly developed area approximately six miles away from Lake Pontchartrain. No other known 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 the appendix.

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 Covington are the Abita, Bogue Falaya, and Tchefuncte (and its tributaries) Rivers, 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.

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 could be located within the right-of-way along certain corridors under study. However, in coordination with City of Covington and LA DOTD precautions or mitigation will be made for any trees impacted by the alternatives.

Navigable Waterways

The Covington study area contains several navigable waterways. However, none are adjacent to corridors under study.

Hazardous Materials

The corridors under study consist primarily of office, retail, and residential activities. 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 along the corridor. The complete details are located in the appendix and should be cross-referenced at which time each recommendation is being implemented.

Environmental Justice

Based on the conceptual designs, no relocations or displacements will need to take place for construction. Neither sensitive community nor cultural issues are negatively impacted along the corridors. Since the goal of the project is to provide better access and modal choice, no Environmental Justice issues exist for this Stage 0 report.

4

CONCEPTUAL PLANNING AND DESIGN

4. CONCEPTUAL PLANNING AND DESIGN

Overview

Please note that the final designation of specific routes for inclusion in the bicycle master plan or for designation as complete streets is at the discretion of the City of Covington. This includes not only the designation of the route istelf, but also the type of proposed facility for each. Therefore, any maps, illustrations, or charts included in this report are subject to change, or be updated, by the City of Covington.

The 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., bicycling and walking use. Markings on roads and signage have important functions in providing guidance and information for the road user. Currently, a majority of streets are not striped for bicyclists or pedestrian use. Enhancements such as signage and striping are needed.

Relatively low cost, high visibility alternatives for roadway, bicycle, and pedestrian facility improvements are detailed below in the following sections. If implemented, the short-term goals will increase walking, bicycling, and driving safety and increase efficiency. All signs shall be retroreflectorized for use on bikeways, including shared-use paths and bicycle lane facilities.

The short-term options 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.

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.

Pedestrian and Bicycle Improvements

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 in Figure 4.1). It is recommended that crosswalks be installed at intersections within the limits of this project study area that immediately serve schools and parks. The latest MUTCD or NACTO guidance should be used for installation.

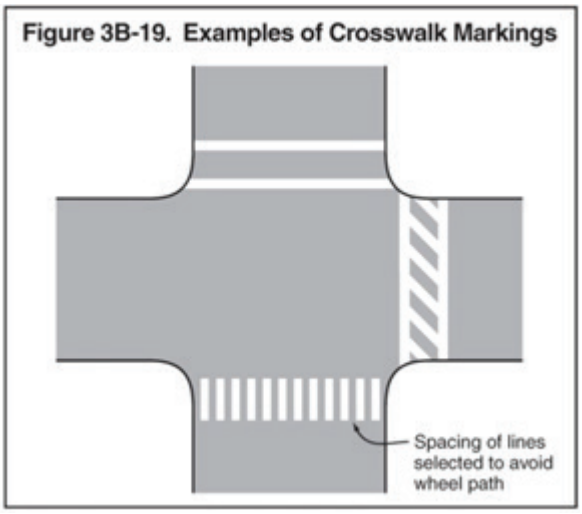


Figure 4.1: MUTCD Figure 3B-19: Crosswalk Marking Types (Source: MUTCD)

Awareness Campaign

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

> *• The driver of a vehicle shall stop and yield the right-of-way, to a pedestrian crossing the roadway within a crosswalk.*
> *• No pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle.*
> *• 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 (2009 edition) provides safety guidance in Section 2B.11. It is recommended that temporary, moveable signage such as the one illustrated in Figure 4.2 be purchased by the City of Covington and placed as per MUTCD guidance at intersection locations within the City on a regular time interval. An example would be 1-2 weeks in one location, then moved to another location for the same length of time, and it is advised that the signage can be stored for a period of time then brought out again for awareness. Studies suggest displaying and removing signage in different locations in areas similar to Covington have a more effective result.

Figure 4.2: Temporary Crosswalk Signage (Source: MUTCD)

Shared 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). Cyclists must obey traffic signals and come to a complete stop at stop signs (LA RS 32:232/32:123).

The City of Covington is experiencing economic and population growth. The City is home to a vibrant historic downtown, quaint neighborhoods, beautiful and numerous parks, and has a trailhead on the Tammany Trace. All of this activity perpetuates the need for safe modes of travel for all users. Pavement marking word messages, symbols, and/or arrows should be used on bikeways where appropriate. Consideration should be given to selecting pavement marking materials that will minimize loss of traction for bicycles under wet conditions.

It is recommended for the proposed roads that MUTCD (2009 edition) guidance be followed.

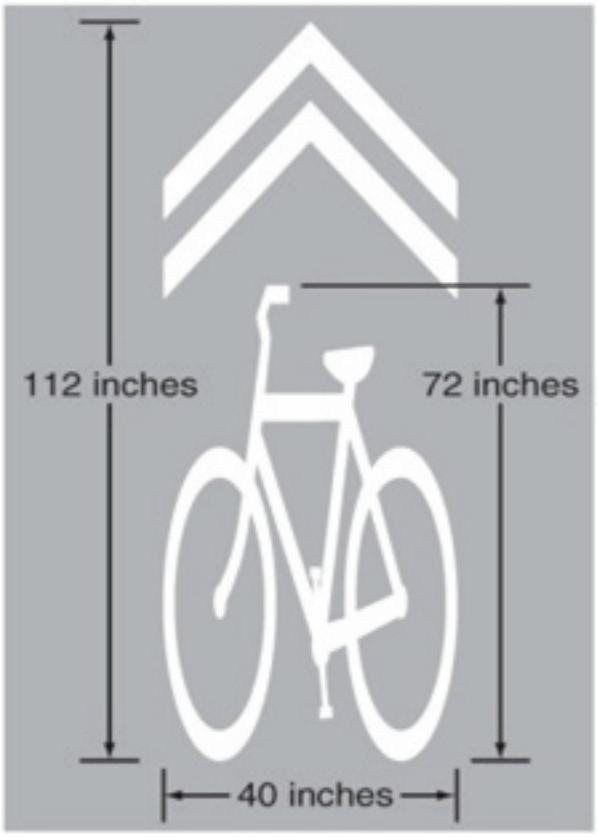


Figure 4.3: MUTCD Figure 9C-9 Shared Lane Marking

Where shared use lanes are recommended the City may investigate additional traffic calming measures to potentially establish bike boulevards/ neighborhood greenways. Bike boulevards or neighborhood greenways are low volume roads where bicycle traffic is encouraged and local access is maintained for motor vehicles but through traffic is discourage by design elements. Additional traffic calming measures are beyond the scope of this study. The Shared Lane Marking shown in Figure 4.3 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.

Bicycle Lane

Bicycle lanes are at grade and adjacent to motor vehicle traffic lane and are designated by a single solid wide stripe between the motor vehicle lane and bike lane. A width of 6 feet is recommended for a bicycle lane when designing the facility type, the minimum width for a bicycle lane is 5 feet when adjacent to curb, or 4 feet when no curb is present. Additional width is considered when higher volumes of cyclists are anticipated or when adjacent to parallel on-street parking. The latest MUTCD or NACTO guidance should be followed.

Shared Use Trail (Shared Use Path)

As per the MUTCD (2009 edition) a Shared-Use Path is a bikeway outside the traveled way and physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent alignment. Shared-use paths are also used by pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers) and other authorized motorized and non-motorized users. The combined Bicycle/Pedestrian (W11-15) sign may be used where both bicyclists and pedestrians might be crossing the roadway, such as at an intersection with a shared-use path.

Signage

The MUTCD recommends signage to be used in addition to pavement markings. Different bicycle facility types and segments require either Regulatory signage such as R3-17 or R4-11, Warning signs such as W11-1, or Guide signs D11-1 (Source: MUTCD 2009 Edition).

**A fluorescent yellow-green background color may be used for this sign or plaque. The background color of the plaque should match the color of the warning sign that it supplements.*

It is worth noting that R3-17 is not required and could contribute to sign clutter if not properly installed. Generalized signage such as D11-1 can be customized with a route name and/or wayfinding text that is more beneficial to people bicycling. The latest MUTCD or NACTO guidance should be followed.

Bicycle Rack Locations

Covington hosts a popular farmers market, numerous community events, and has bicyclists all days of the week bicycling through the city. To provide bicyclists with safe, secure bicycling parking while they shop, eat, or attend an event, it is recommended additional bicycle racks be installed throughout the study area. Right-of-way may be limited and field verification will be needed for exact placement. However, the study team suggests bike racks be placed near the following locations:

- *Parks*
- *Schools*
- *Government facilities (i.e. libraries, city hall, city court)*
- *Locations where community events are held*
- *Large scale public parking locations (Ox Lots)*
- *Locations of high density commercial activities*

Concept Development

Several concepts were developed during the project. The study team in association with the RPC and City of Covington refined the data collected into feasible bicycle route facility type alternatives. Bicycle facilities are desirable in order to provide viable mobility alternatives and for bicycle users to have the ability to access land uses that matches their needs.

Figures 4.4 and 4.5 represent the early data and concept developed. The study team also took geotagged photos while performing the data collection. A GIS file will be given to the RPC and City that will allow the user to click a link to show the picture taken at that location. The figures below show the routes considered and the exact location of the picture taken. Figure 4.4 potential routes was presented to the PMC at the April 9th meeting and Figure 4.5 was developed based on the PMC comments.

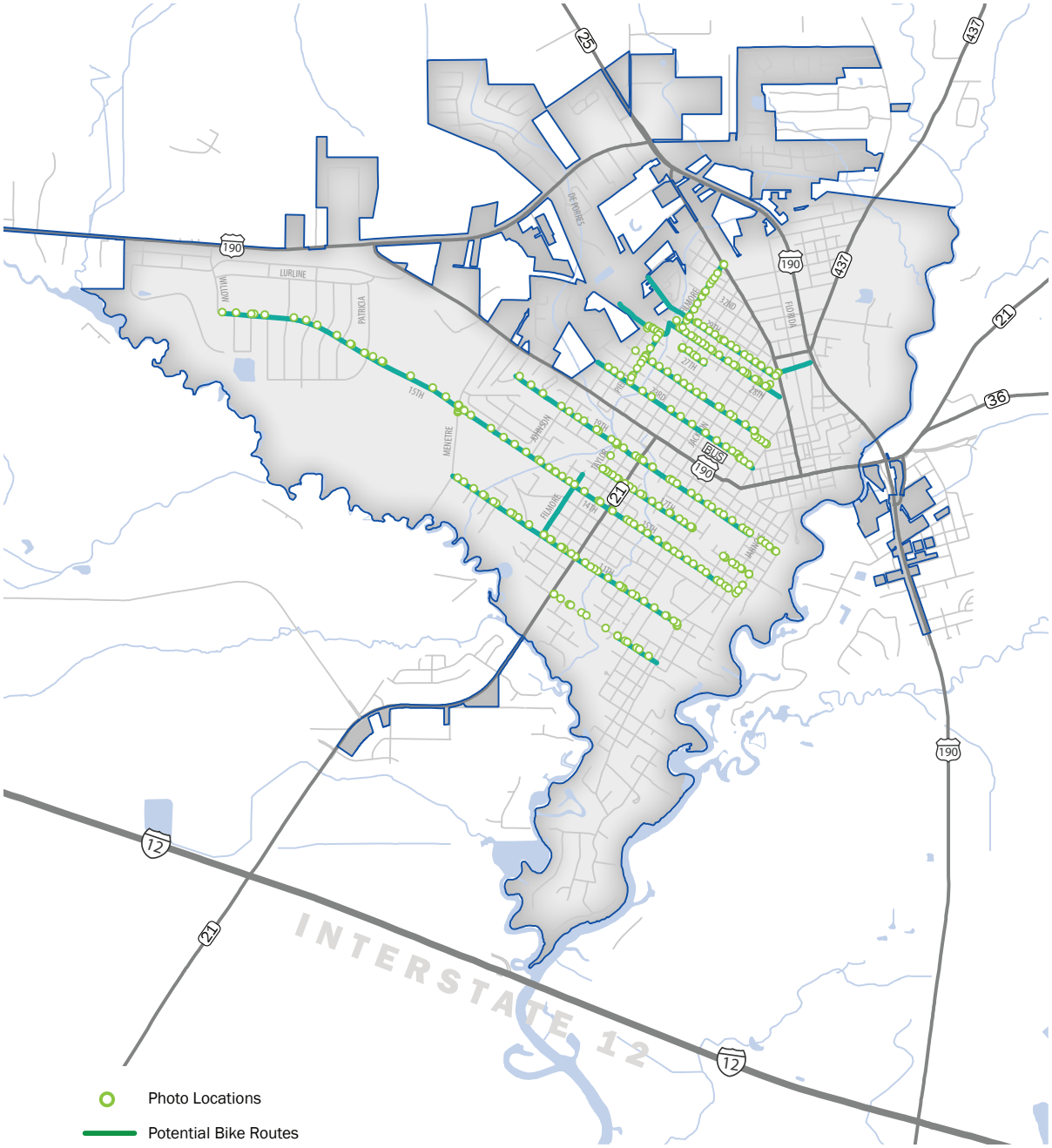


Figure 4.4: Development of Potential Bicycle Routes (Sources: Imagery – ESRI, Streets – Covington, and Pictures – Digital Engineering)

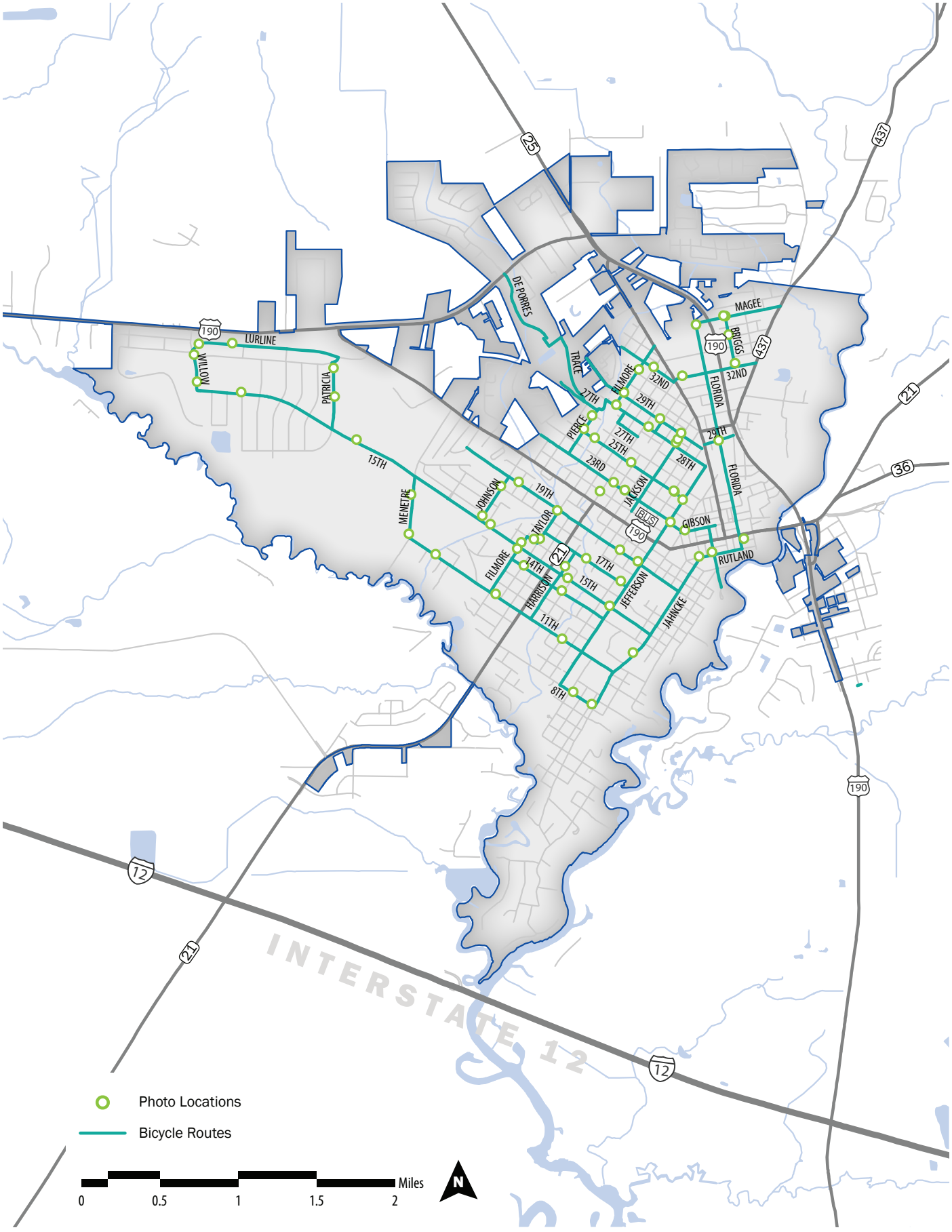


Figure 4.5: Covington Bicycle Plan Routes (Sources: Imagery – ESRI, Streets – Covington, and Pictures – Digital Engineering)

Conceptual Facilities

As bicycling continues to grow in popularity for all age groups, the need for clarity and safety along roads for both vehicles and cyclists, becomes a priority. Conceptual facility improvements within the Covington study area should be made with a conscience effort to retain the character and enhance the charm of the area. The study area is large and each road facility is unique to its paved sections/ intersections, streetscape/tree cover, and ridability/ walkability. However, a number of specific roadways were selected for a detailed study of their existing condition and how the introduction of bicycle and pedestrian facilities may impact their overall character. It was determined that two specific situations offer a comprehensive representation of the large majority of specific situations present in the City of Covington. The first being East-West corridors which are typically numerical avenues (such as 17th Ave, 19th Ave, etc.). These streets feature wider rights-of-way at approximately 80 feet. While the second scenario is the North-South corridor which are most often named after a former US president (such as Madison St, Jefferson St, etc). These roadways were found to have more narrow rights-of-way ranging around 50 feet in width.

Specific criteria for selection is discussed in greater detail in Chapter 5 of this report. The following illustrations are conceptual for planning purposes only, field verification, and construction designs shall be needed for installation. The following conceptual renderings are the proposed routes and facility types as recommended by the PMC.

Typical Corridor with 80' Right-of-Way - Example 1

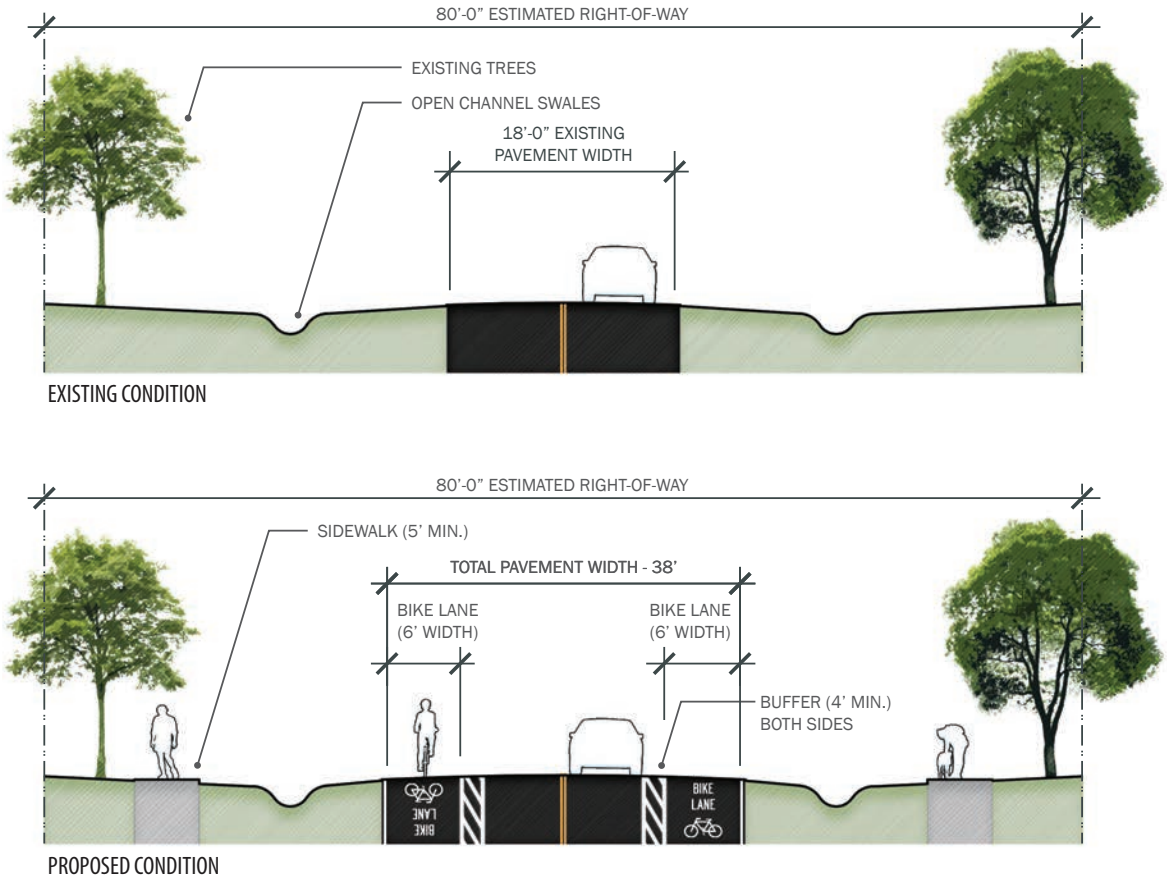


Figure 4.6: Cross-section study of existing and proposed conditions of typical corridor with 80' right-of-way

Typical Corridor with 80’ Right-of-Way - Example 2

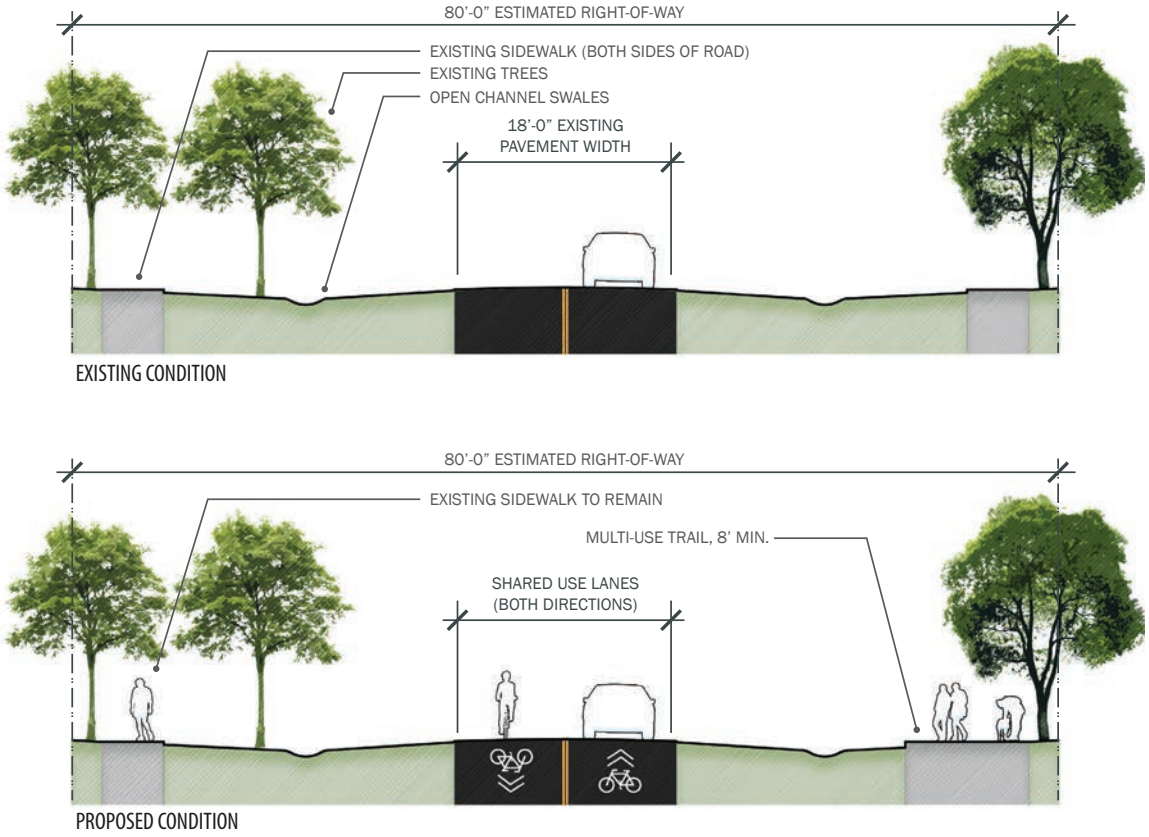


Figure 4.7: Cross-section study of existing and proposed conditions of typical corridor with 80’ right-of-way

Typical Corridor with 80’ Right-of-Way - Example 3

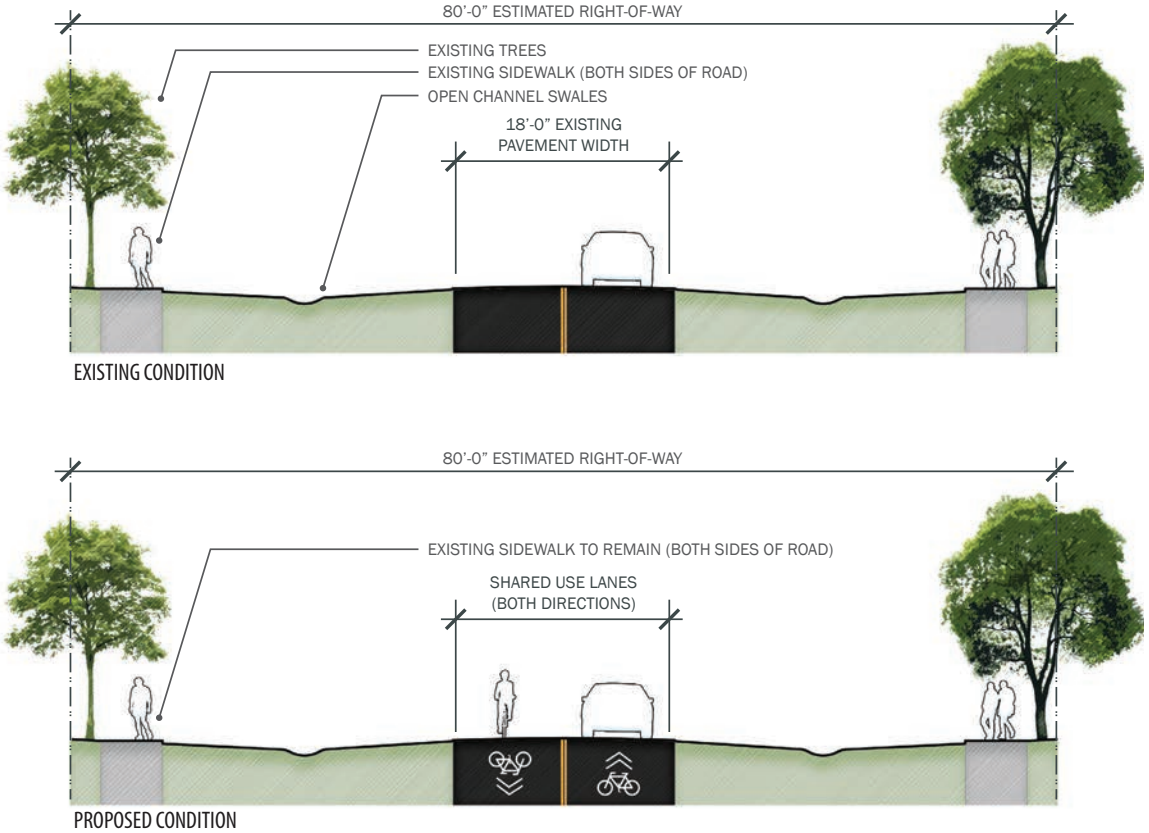


Figure 4.8: Cross-section study of existing and proposed conditions of typical corridor with 80’ right-of-way

Typical Corridor with 50’ Right-of-Way - Example 1

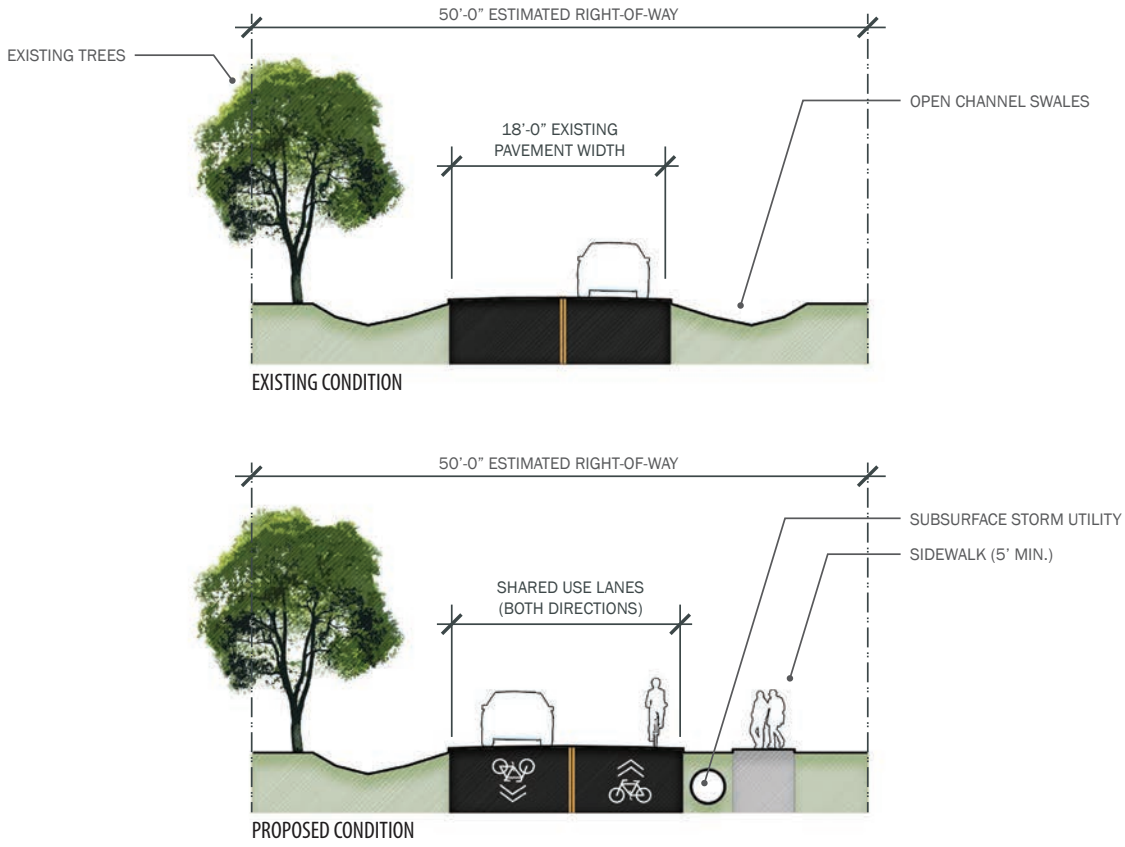


Figure 4.9: Cross-section study of existing and proposed conditions of typical corridor with 50’ right-of-way

Typical Corridor with 50’ Right-of-Way- Example 2

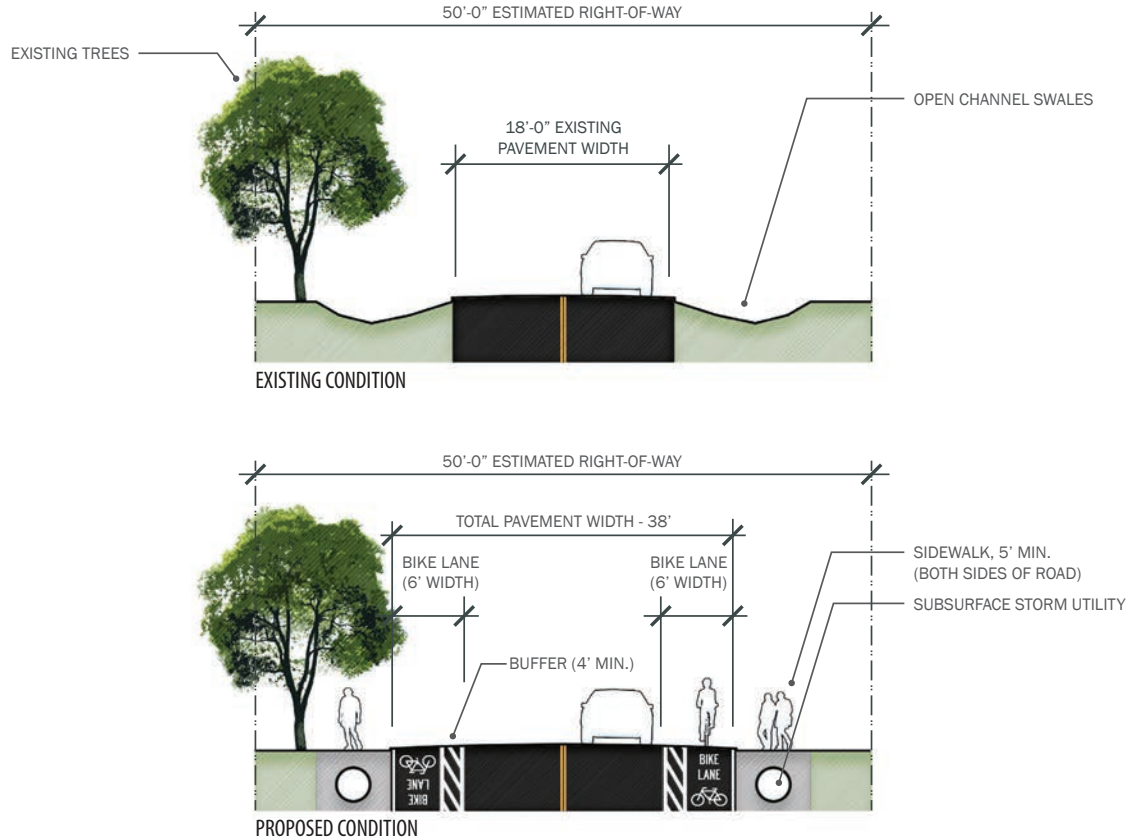


Figure 4.10: Cross-section study of existing and proposed conditions of typical corridor with 50’ right-of-way

Planned Bike Route Phasing

The corridor specific studies done by the project team, in addition to the a thorough inventory of conditions across the City of Covington by conducting a series of site visits allowed for the creation of a suitable network of bicycle routes. Once implemented, this network will allow for safe and convenient connectivity between various amenities within Covington ranging from commercial development to schools and parks.

In order to facilitate in the timely and organized implementation of the proposed bicycle network a phasing plan was developed:

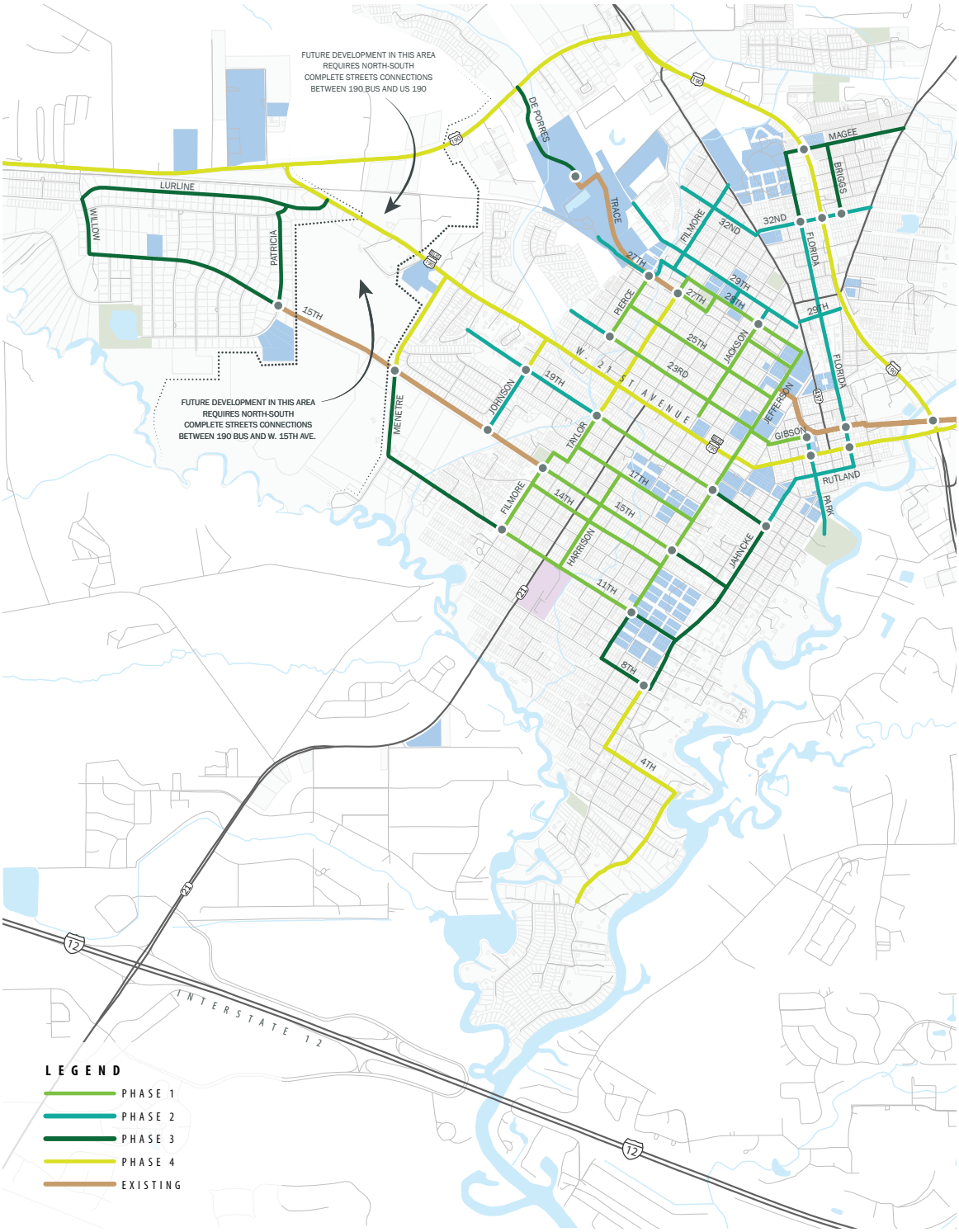


Figure 4.11: City of Covington Bicycle Facility Network Phasing Plan - Overall Plan

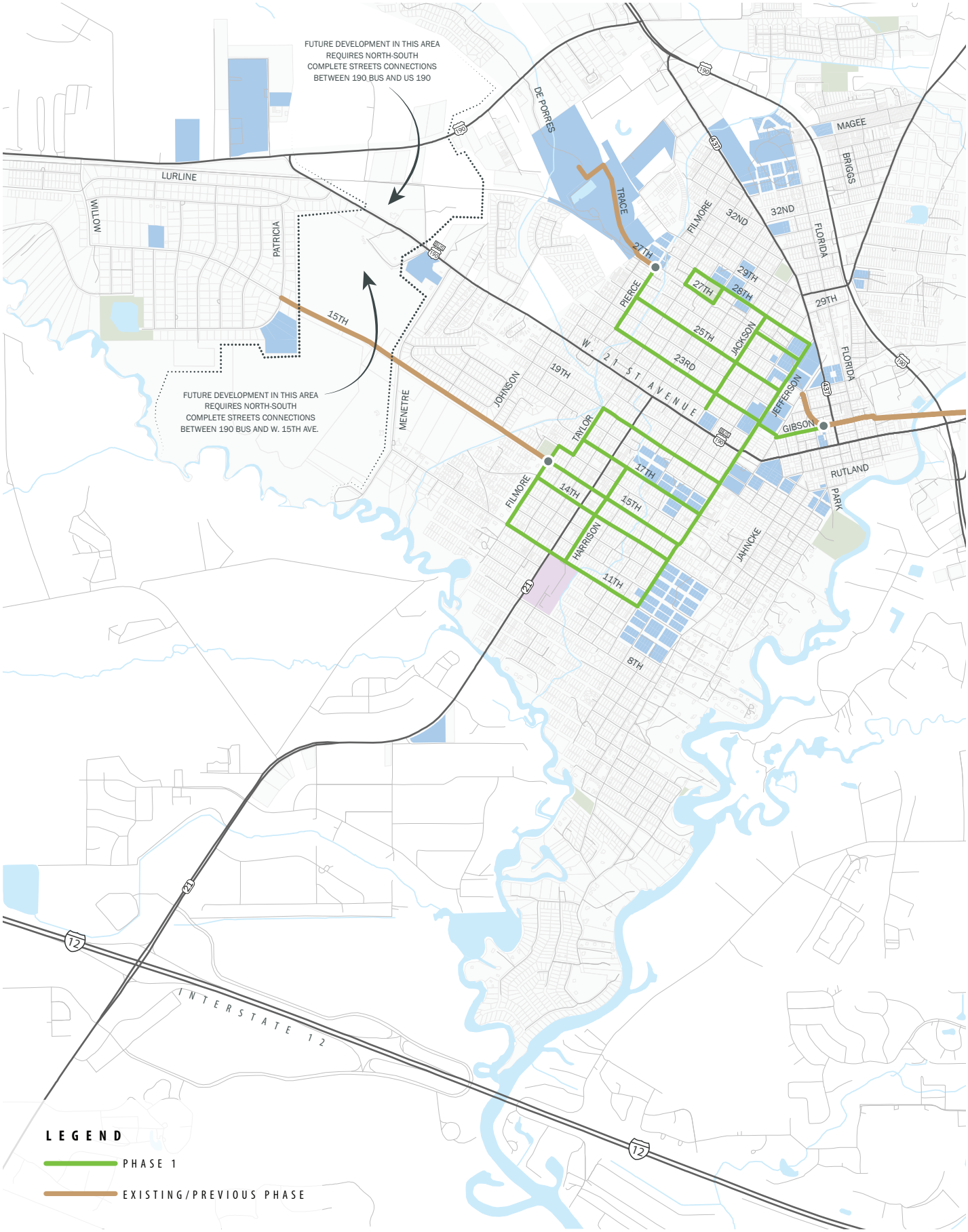


Figure 4.12: City of Covington Bicycle Facility Network Phasing Plan - Phase 1

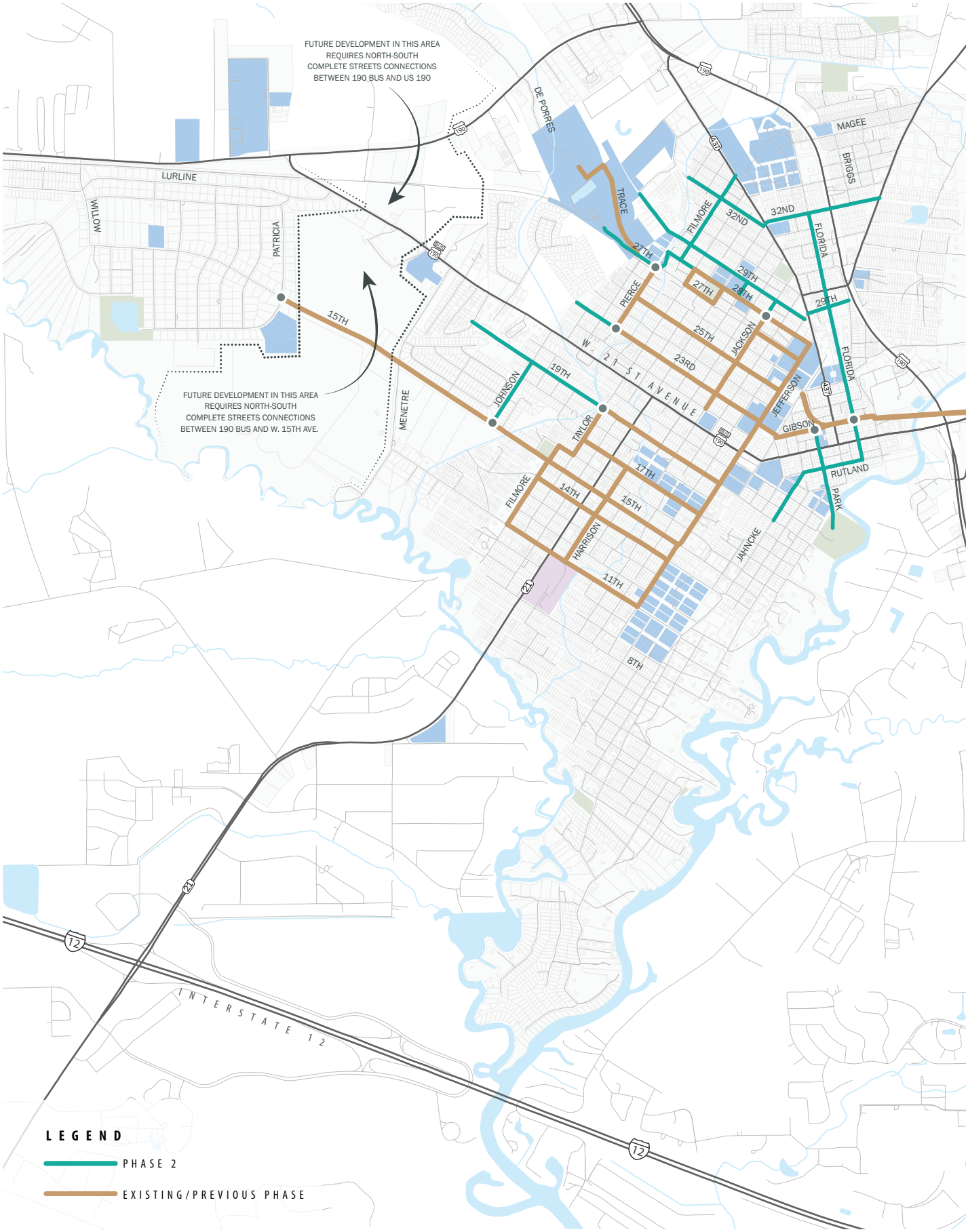


Figure 4.13: City of Covington Bicycle Facility Network Phasing Plan - Phase 2

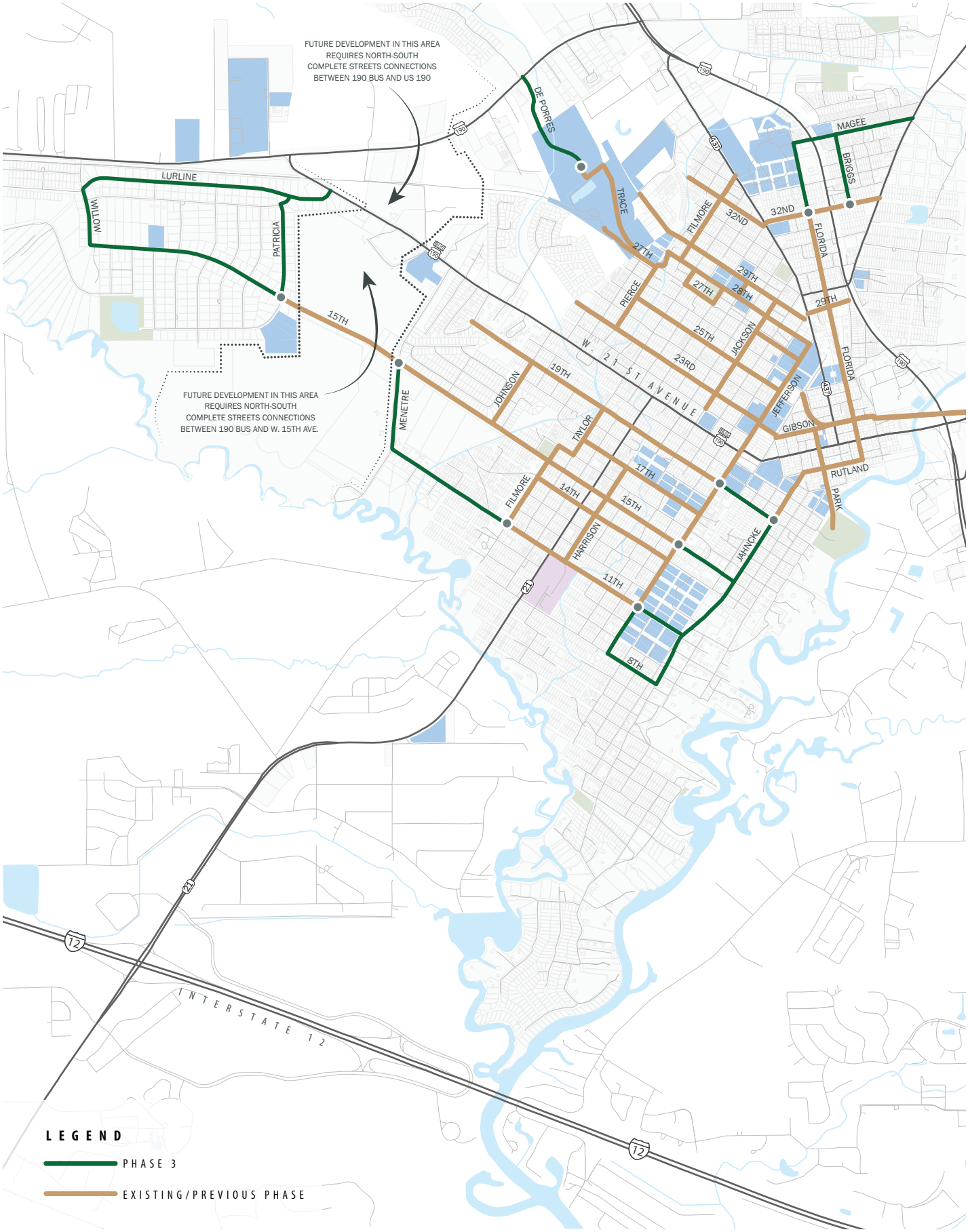


Figure 4.14: City of Covington Bicycle Facility Network Phasing Plan - Phase 3

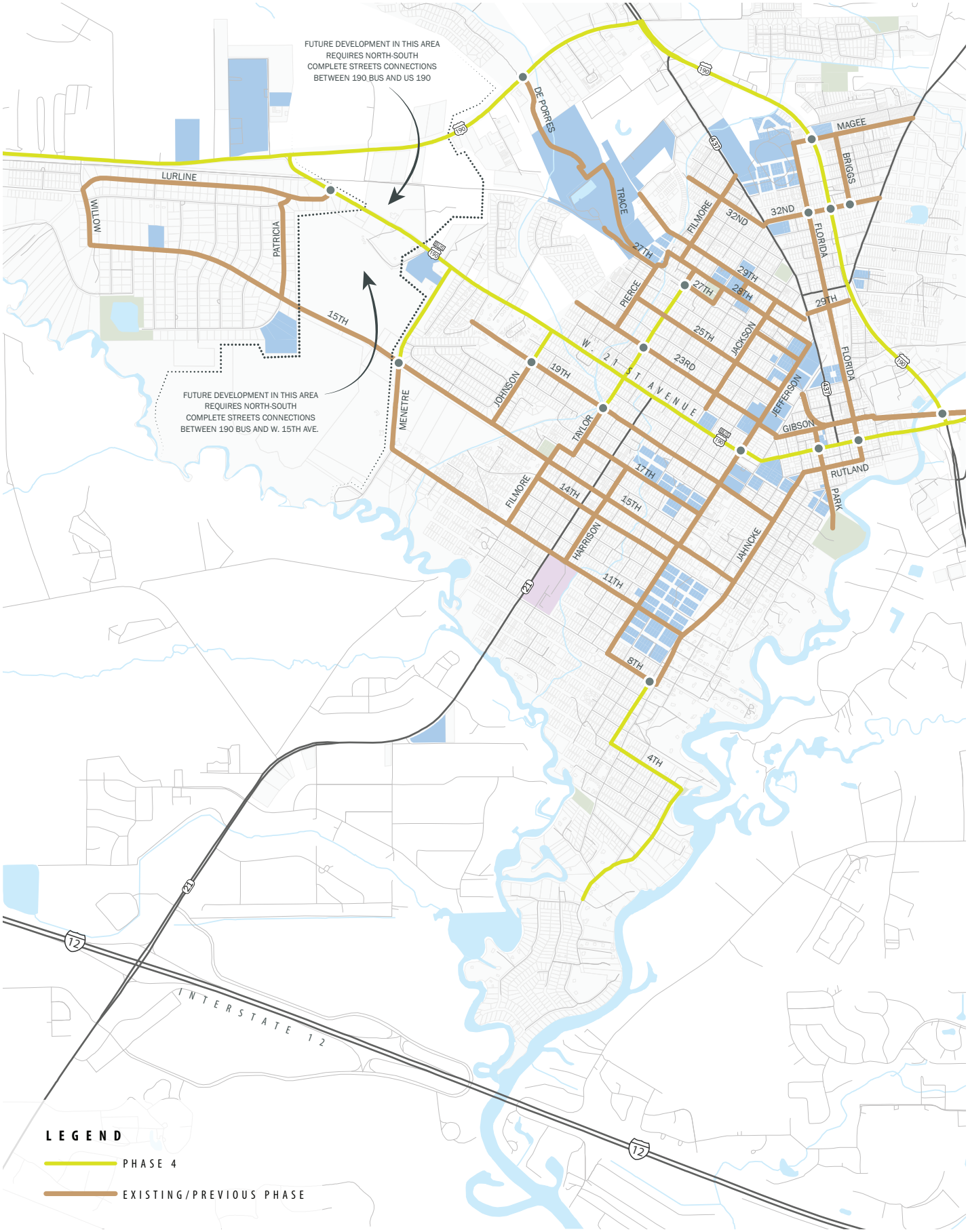


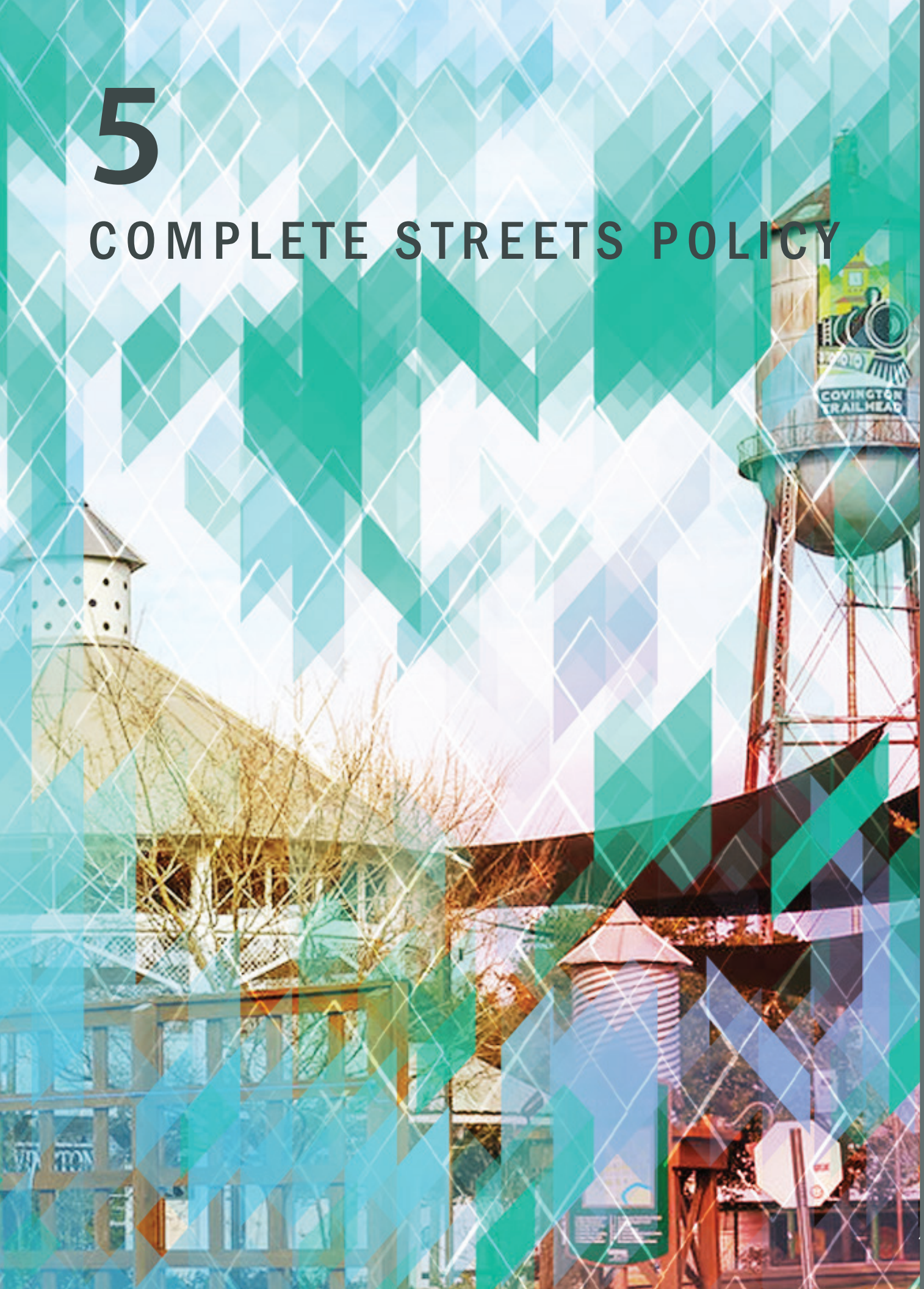
Figure 4.15: City of Covington Bicycle Facility Network Phasing Plan - Phase 4

The following table is meant to supplement the previous phasing maps in illustrating how the proposed bicycle master plan network can be implemented. This includes the approximate lengths of each facility as well as notes about any unique conditions that may need to be considered when implementation occurs.

Route Name	From	To	Approximate Length(Feet)	Phase	Additional Notes
W. 11th Avenue	S. Filmore Street	S. Jefferson Avenue	3,152	1	
W. 14th Avenue	S. Filmore Street	S. Jefferson Avenue	3,146	1	
W. 15th Avenue	S. Filmore Street	S. Jefferson Avenue	3,163	1	
W. 16th Avenue	S. Filmore Street	S. Taylor Street	350	1	
W. 17th Avenue	S. Taylor Street	S. Jefferson Avenue	2,840	1	
W. 19th Avenue	S. Taylor Street	S. Jefferson Avenue	2,840	1	
W. 23rd Avenue	N. Pierce Street	N. Theard Street	4,003	1	
E. Gibson Street	N. Theard Street	N. Vermont Street	405	1	
W. 25th Avenue	N. Pierce Street	S. Jefferson Avenue	3,522	1	
W. 27th Avenue	N. Taylor Street	N. Tyler Street	690	1	
W. 27th Avenue	N. Jackson Street	N. Jefferson Avenue	700	1	
W. 28th Avenue	N. Taylor Street	N. Jefferson Avenue	2,830	1	
S. Jefferson Avenue	W. 11th Avenue	W. 28th Avenue	6,470	1	
S. Harrison Street	W. 11th Avenue	W. 17th Avenue	2,315	1	
N. Jackson Street	W. 22nd Avenue	W. 28th Avenue	2,285	1	
N. Pierce Street	W. 23rd Avenue	W. 27th Avenue	1,500	1	
N. Taylor Street	W. 27th Avenue	W. 28th Avenue	375	1	
N. Tyler Street	W. 27th Avenue	W. 28th Avenue	375	1	
S. Filmore Street	W. 11th Avenue	W. 16th Avenue	1,940	1	
S. Taylor Street	W. 16th Avenue	W. 19th Avenue	1,150	1	
W. 19th Avenue	E. St Mary Drive	S. Taylor Street	3,240	2	
S. Johnson Street	W. 15th Avenue	W. 19th Avenue	1,490	2	
W. 29th Avenue	Polders Lane	N. Lee Road	5,325	2	Includes a 120-foot segment of N. Madison Street between W. 29th Avenue and N. Columbia Street
W. 32nd Avenue	N. Buchannan Street	N. Lee Road	4,240	2	Includes a 50-foot segment of N. Tyler Street between W. 32 Avenue and N. Columbia Street
N. Florida Street	W. 32nd Avenue	E. Rutland Street	5,170	2	
N. New Hampshire Street	E. Gibson Street	E. 21st Avenue	1,670	2	
W. 23rd Avenue	N. Pierce Street	N. Lincoln Street	1,000	2	Includes a dead-end section of W. 23rd Avenue that extends 288 feet past N. Lincoln Street
N. Filmore Street	W. 28th Avenue	N. Columbia Street	2,070	2	
N. Jackson Street	W. 28th Avenue	W. 29th Avenue	370	2	
N. Harrison Street	W. 28th Avenue	W. 29th Avenue	370	2	
E. Rutland Street	N. Florida Street	N. Vermont Street	1,250	2	
S. Jahncke Street	N. Vermont Street	E. 19th Avenue	1,150	2	
W. 27th Avenue	N. Pierce Street	Dead End	890	2	Route follows alignment of Tammany Trace corridor
W. 28th Avenue	N. Taylor Street	N. Pierce Street	650	2	
N. Pierce Street	W. 27th Avenue	W. 28th Avenue	490	2	
W. 19th Avenue	S. Jefferson Avenue	S. Jahncke Street	1,340	3	
W. 15th Avenue	S. Jefferson Avenue	S. Jahncke Street	1,360	3	
W. 11th Avenue	S. Jefferson Avenue	S. Jahncke Street	1,075	3	
S. Jefferson Avenue	W. 11th Avenue	W. 8th Avenue	1,135	3	
W. 8th Avenue	S. Jefferson Avenue	S. Jahncke Street	1,200	3	
S. Jahncke Street	E. 19th Avenue	E. 8th Avenue	4,200	3	
Menetre Drive	W. 15th Avenue	S. Filmore Street	4,650	3	
De Porres Street	US 190	Dead End	2,350	3	Route terminates at existing end of Tammany Trace Bike Trail
N. Florida Street	E. 32nd Street	E. Magee Street	1,480	3	
E. Magee Street	N. Florida Street	N. Lee Road	2,520	3	
N. Briggs Street	E. Magee Street	E. 32nd Street	1,450	3	
Patricia Drive	Lurline Drive	W. 15th Avenue	2,210	3	Route includes a 250-foot section of Karen Drive between Patricia Drive and Lurline Drive
Lurline Drive	Willow Drive	W. 21st Avenue	5,260	3	
Willow Drive	Lurline Drive	W. 15th Avenue	1,160	3	
W. 15th Avenue	Patricia Drive	Willow Drive	4,150	3	
S. Taylor Street	W. 19th Avenue	W. 27th Street	3,050	4	
Menetre Drive	W. 15th Avenue	W. 21st Avenue	2,275	4	
S. Johnson Street	W. 19th Avenue	W. 21st Avenue	770	4	
Massachusetts Street	E. 8th Avenue	E. 4th Avenue	1,525	4	
S. America Street	E. 4th Avenue	Luvy Lane	3,420	4	Route includes a 770-foot section of Water Street between America Street and E. 4th Avenue
E. 4th Avenue	Massachusetts Street	Water Street	1,700	4	
N. Collins Boulevard	W. 21st Avenue	US 190	11,000	4	
W. 21st Avenue	N. US 190	US 190	15,500	4	
US 190	N. Collins Boulevard	Gagnet Perry Street	9,590	4	

5

COMPLETE STREETS POLICY



5. COMPLETE STREETS POLICY

Introduction

Please note that the final designation of specific routes for inclusion in the bicycle master plan or for designation as complete streets is at the discretion of the City of Covington. This includes not only the designation of the route istelf, but also the type of proposed facility for each. Therefore, any maps, illustrations, or charts included in this report are subject to change, or be updated, by the City of Covington.

As mentioned in previous sections of this report, the availability and existence of bicycle and pedestrian transportation facilities within the City of Covington varies based on specific locations. The majority of roadways within, and in immediate proximity to, the downtown core feature both bicycle and pedestrian facilities. However, as one travels out from the center of the City a lack of these facilities becomes increasingly common. This is especially true in areas that are dominated by subdivisions and primarily residential zoning. Developing a policy that addresses the lack of pedestrian and bicycle facilities for both high density commercial areas, as well as suburban, residential ones, would improve the existing condition and future of Covington.

Precedents

In order to efficiently and effectively develop a complete streets policy for the City of Covington a series of other, similar policies were collected and studied by the project team. The specific polices chosen were selected for a number of reasons, but primarily because they best matched the particular needs, scale, and character of Covington. While numerous policies were referenced the following had the most significant impact on the proposed policy for this study:

- *St. Bernard Parish Bikeway & Pedestrian Plan Update – Complete Streets Policy*
- *Town of Agawam, MA Complete Streets Policy & Prioritization Plan*
- *Town of Bridgewater, MA Complete Streets Policy*
- *City of Wenatchee, WA Complete Streets Policy & Pedestrian Master Plan*
- *City of Muskogee, OK Complete Streets Policy*

Several of these policies were also considered due to their inclusion on “The Best Complete Streets Policies of 2016” by Smart Growth America and the National Complete Streets Coalition.

Figure 5.1: Cover of The Best Complete Streets Policies 2016 (Source: National Complete Streets Coalition)

Strategy for Implementation

Ensuring for proper implementation of a Complete Streets policy is equally important as the content of the policy itself. For this reason the project team organized the Complete Street policy in manner that mirrored the formatting of the City's existing code of ordinances. This would minimize the efforts necessary to translate portions of the policy into code, once the City Council felt those portions were congruent with the overall goals of the City.

Existing Street Network

The City of Covington has an existing street network that contains a wide variety of roadways, bicycle, and pedestrian facilities. As illustrated in section 3 of this report roadways range from principle arterial to local, and the presence of pedestrian/bicycle facilities closely mirrors this classification. Additionally, there are a number of LADOTD managed rights-of-way that transect the city. The following facility types are currently present with the City of Covington:

- *Marked Shared Lanes (Sharrows)*
- *Sidewalks, typically 4' in width*
- *Shared-use Trails (St. Tammany Trace)*

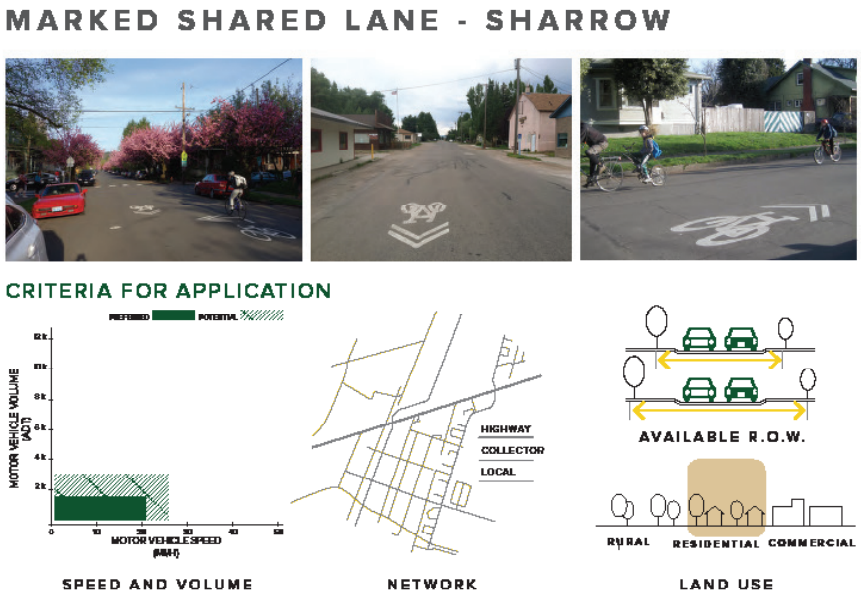


Figure 5.2: Overview of Bicycle Facility - Marked Shared Lane

Figure 5.3: Overview of Pedestrian Facility - Sidewalk

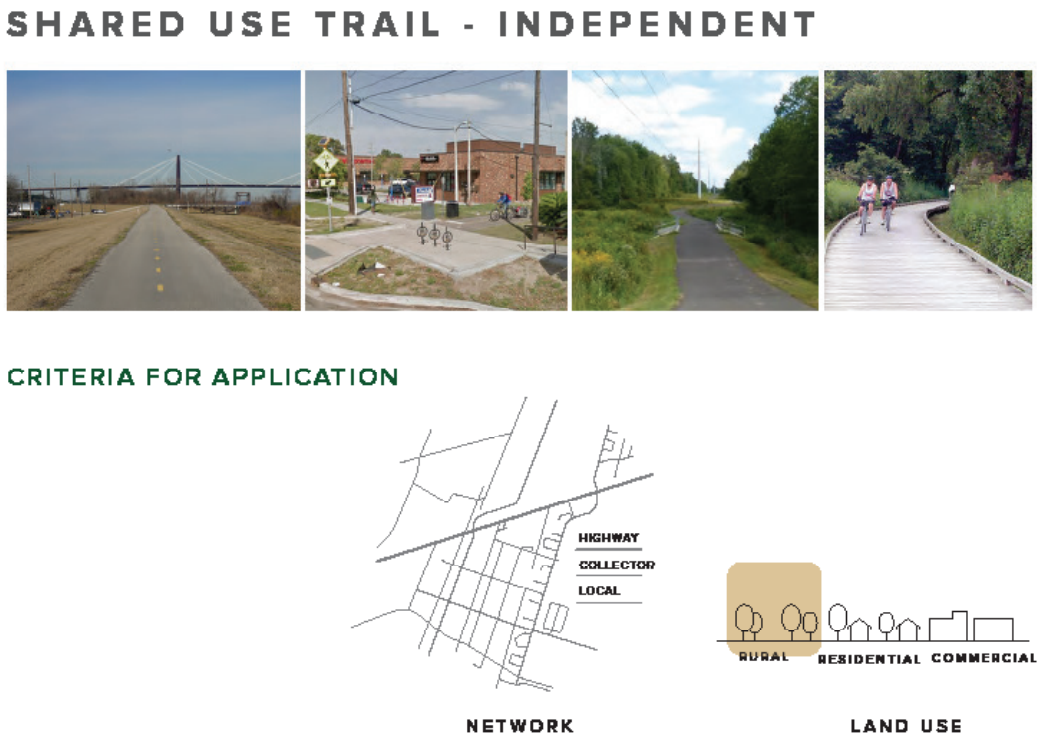


Figure 5.4: Overview of Bicycle Facility - Shared Use Trail

Policy Goals

The goal of the Complete Streets policy for the City of Covington as stated in the introduction of the policy itself is as follows: “The City of Covington, Louisiana is committed to creating a complete, connected, transportation network for all its residents and visitors using a complete streets approach. Complete Streets recognize the importance of planning and design of roadways for all ages, abilities, and modes of transportation. This Complete Streets Policy is written to ensure that the safety and convenience of all users of the transportation network are accommodated where appropriate, including pedestrians and bicyclists of all ages and experience, people with disabilities, motorists, supply trucks, and emergency vehicles.”

These goals are intended to address the shortcomings of the existing transportation network, while also ensuring that all future development, both public and private, is conducted in a manner that is responsive to the code that the policy produces.

Adoption of Policy

The Complete Streets Policy is structured in manner that reflects the City of Covington’s existing Code of Ordinances. This creates a potential to streamline implementation of the policy as it applies to specific, varying types of development. For example, major roadway reconstruction projects requires one to reference Chapter 86 of the City code, while the redevelopment of a private commercial site may require one to consult Chapter 18. This strategy for implementation guarantees that the requirements of the policy are carried out on future development and redevelopment projects while reserving the ability for City Council to adjust the code as necessary.

An example of a resolution that would be used to transition requirements of the policy into the code itself is provided in Appendix A of this report

Implementation of Complete Streets Policy

Complete Streets Priority Network

Once the policy is adopted into the City's Code of Ordinances all development, and redevelopment, within the City of Covington will be expected to adhere to its requirements. However, in order to assist in the early adoption and implementation of these concepts the project team conducted a thorough analysis of the existing street network.

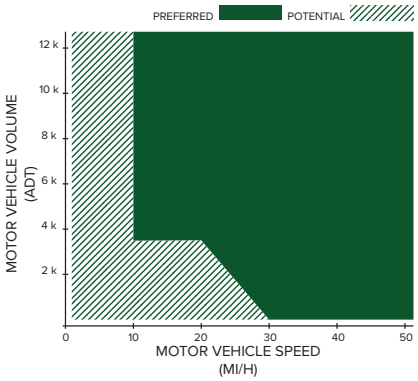
This was done to identify the optimal streets for implementation of the goals of the policy by considering a number of factors that determined each proposed corridor's suitability for the introduction of pedestrian and bicycle facilities. The suitability of these various corridors was determined based on a set of criteria that ranged from speed of vehicular travel to width of available right-of-way. The illustration below better this criteria in great detail.

SPEED & VOLUME

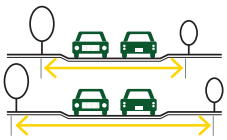
The greater speed and volume of motor vehicle traffic, the greater the amount of separation is desired for comfortable biking and walking facilities.

Where streets have low volumes and low speeds, the need for separation is less critical, and mixing modes may be more appropriate.

The chart to the right summarizes how speed and volume affect possible facility options.



AVAILABLE R.O.W.



The available roadway right-of-way width can limit the types of pedestrian and bicyle facilities that can be applied.

LAND USE

Land use describes the manner and intensity in which land is developed or modified from its natural state. Built-up areas, such as commercial districts in a small town, contain a higher density of attractions, destinations, and people, and may support a greater diversty of bicycle and pedestrian amenities.

NETWORK

Networks are interconnected pedestrian and bicycle transportation facilities that allow people of all ages and abilities to safely and conveniently get to where they want to go.

There are varying levels of comfort associated with roadways within the network ranging from low-volume, low-speed local streets to high-speed, high volume arterial roadways.

Figure 5.5: Overview of Complete Streets Priority Network selection criteria

After conducting an inventory of potential streets for the priority network, and applying the set criteria to these streets a priority network map was created.

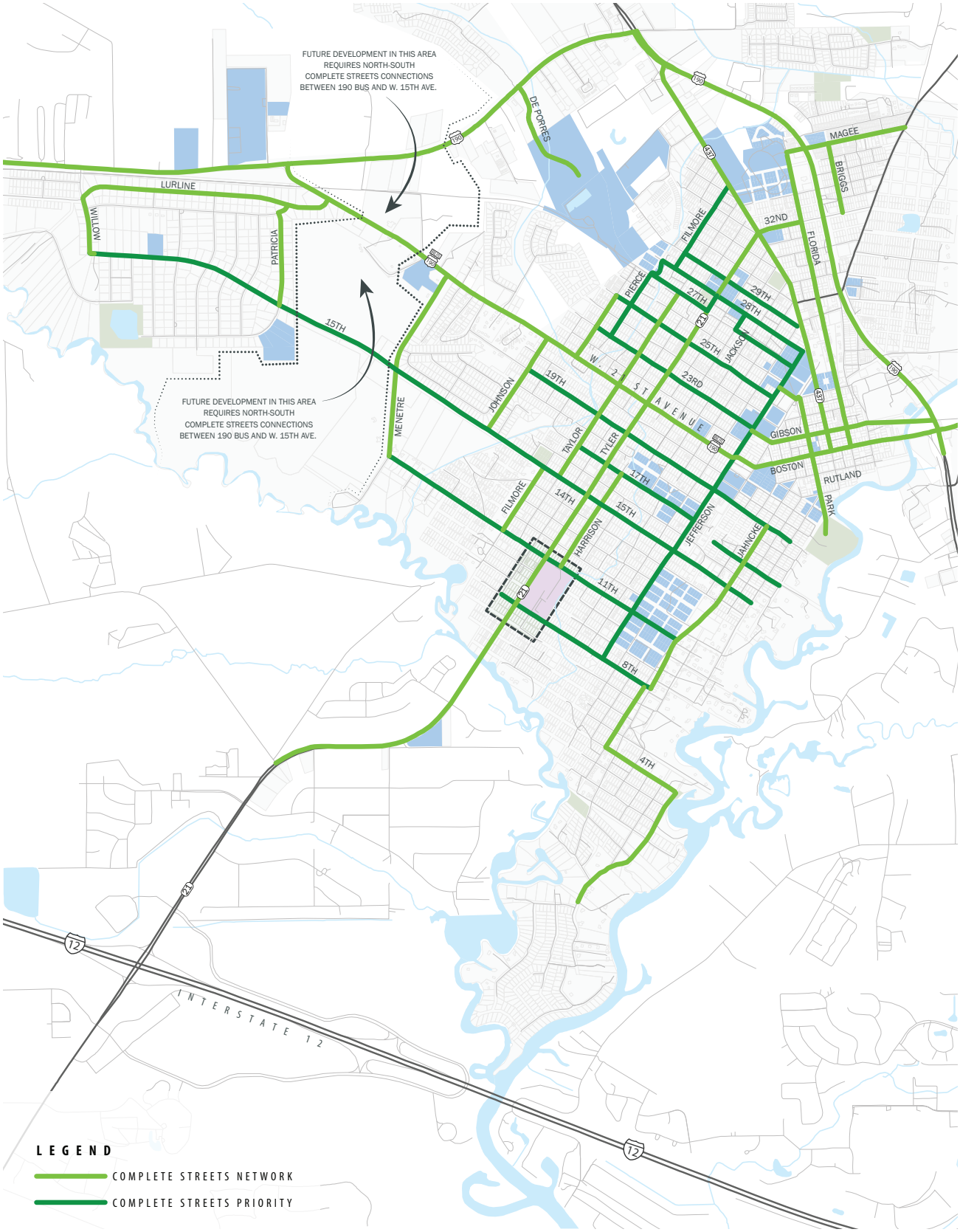


Figure 5.6: Complete Streets Priority Network Maps for the City of Covington

While this priority network aims to jump start the implementation of the Complete Street Policy, the overall goal is for this to be implemented, as determined appropriate based on each specific condition, across the entirety of Covington's transportation network..

Examples of Implementation

In order to illustrate how the implementation of complete streets may affect some of the existing conditions within Covington, two specific locations were chosen for detailed study. Detailed in the following renderings are the proposed concepts including typical pavement markings and signage to be installed. The improvements are intended to be low cost, high visibility actions that enhance the safety of vehicular, bicycle, and pedestrian users.

Example 1: North Columbia Street

One of these locations, along North Columbia Street near North Madison Street, was chosen due to its relatively high traffic volume and the presence of commercial development along the corridor.

As shown below in the existing condition image, the street currently lacks a clear distinction between pedestrian and vehicular circulation on its east side. Additionally, there are no sidewalks present on either side of the street until one travels further south.

Figure 5.7: *Existing Conditions Image - North Columbia Street*

The rendering of short term implementation illustrates how introducing a marked shared lane will allow for a more diverse user group along the corridor. The presence of cyclists would also serve to calm vehicular traffic making it safer for pedestrians visiting commercial development on corridor to cross the roadway.

Figure 5.8: *Short-term Implementation Rendering - North Columbia Street*

The long term rendering gives an example of what the corridor may look like once the construction of both bicycle and pedestrian facilities is complete. This situation optimizes level of safety and accommodation to those utilizing North Columbia Street. Sidewalks allow for pedestrians to walk along the roadway safely removed from the vehicular travel lanes, while crosswalks provide a clear means to cross the roadway. Meanwhile, the marked shared lane implemented in the short term is still present allowing for continued use for cyclists.

Figure 5.9: *Long-term Implementation Rendering - North Columbia Street*

Example 2: West 17th Avenue

Conversely, the intersection of West 17th Avenue and South Harrison Street was chosen for study due to its largely residential and low traffic volume context. That said, this specific location is within close proximity to South Tyler Street, a major thoroughfare, as well as two schools (Covington Elementary and Pitcher Junior High).

The existing conditions image shows that the street currently lacks pedestrian facilities entirely. This includes not only sidewalks and crosswalks, but also ADA compliant curb ramps, which is particularly important due to the location's proximity to schools.

Figure 5.10: *Existing Conditions Image - West 17th Avenue and South Harrison Street*

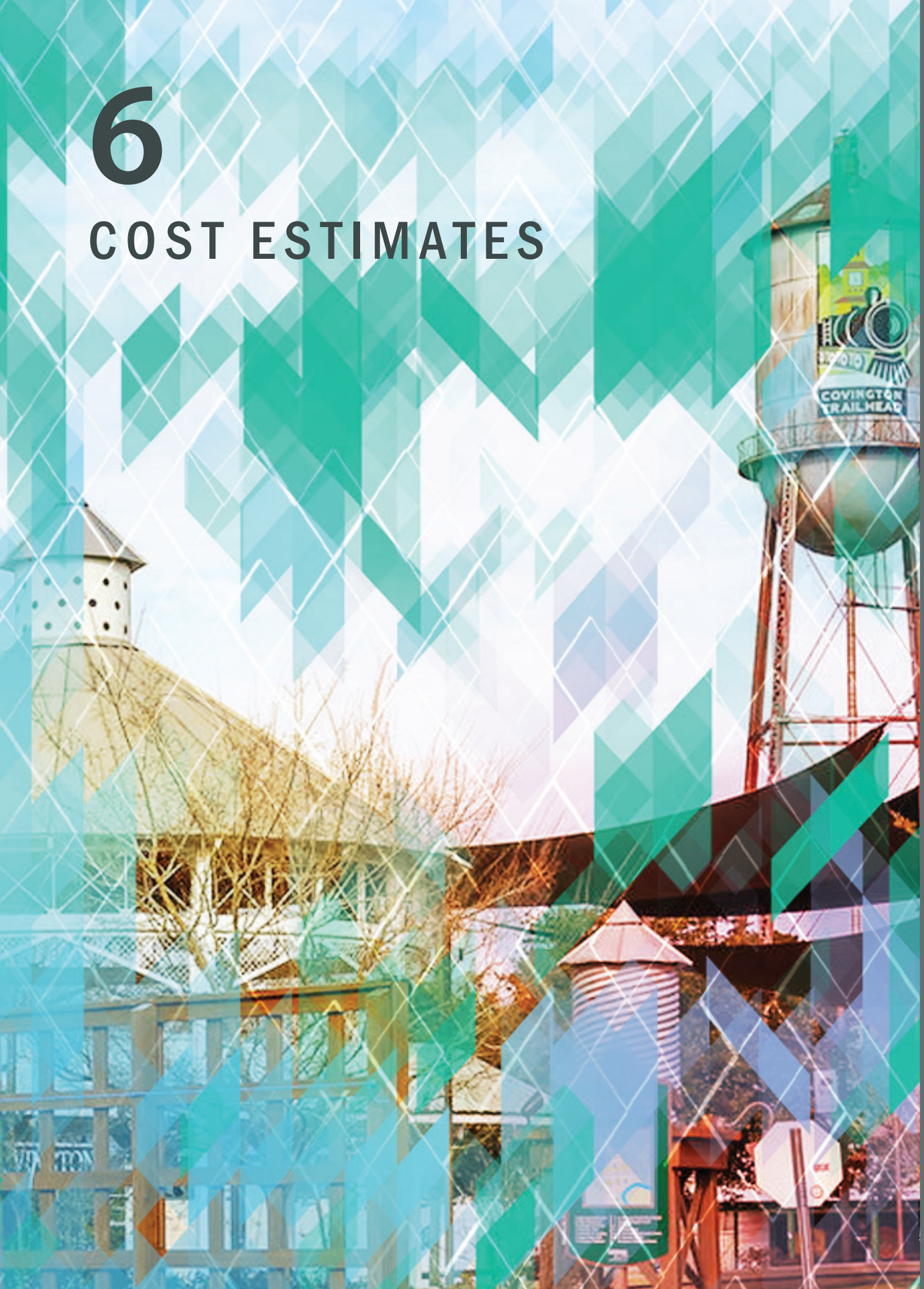
The short term rendering illustrates this corridor's suitability for a marked shared lane. As illustrated in the Complete Streets Priority Map, West 17th Avenue provides a strong east-west connection between two major roadways (South Tyler Street and South Jefferson Street) while directly connecting the network with two existing schools.

Figure 5.11: *Short-term Implementation Rendering - West 17th Avenue and South Harrison Street*

The long term implementation rendering assists in visualizing what West 17th Avenue might look like once a full suite of pedestrian and bicycle facilities is introduced to the street. The introduction of crosswalks, ADA compliant curb ramps, and sidewalks is particularly important in providing a connection between Covington Elementary and Pitcher Junior High and extensive residential neighborhoods that surround them.

Figure 5.12: *Long-term Complete Implementation Rendering - West 17th Avenue and South Harrison Street*

6
COST ESTIMATES



6. COST ESTIMATES

Methodology

Estimated opinions of probable construction costs for the marked shared lanes (sharrow) and sidewalks were derived from approximating roadway and related infrastructure quantities based on average unit prices provided by LA DOTD. Costs do not include a 15% contingency for unforeseen conditions during construction. Costs do not include professional services (i.e. topographical surveying, geotechnical engineering, design and engineering, and construction engineering and inspection).

Implementation Phasing/Estimated Cost of Improvements

Phasing and implementation of the chosen recommendations will ultimately depend upon available funding. Funding amounts and time of availability are likely to vary as well as the selection and implementation of all recommended facility enhancements. The following is proposed estimated costs and should not be construed as final.

Relatively low cost, high visibility enhancements for roadway, bicycle, and pedestrian facility improvements are detailed below in the following sections. If implemented, vehicular, bicyclist, and pedestrian safety and efficiency will be improved but user attentiveness must play a part. The scopes of the recommendations call for little interruption of service during construction. Recommendations should begin to be implemented at the earliest feasible date.

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 is 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. 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.

Opinions of Probable Cost - Bicycle Plan Implementation

The following represents expected costs for implementation of the proposed bicycle plan in accordance to phases as illustrated on Figures 4.11-4.15 in Chapter 4 of this report. The routes identified within each phase were selected in order to most effectively build off of existing infrastructure, when utilizing funds as they become available for implementation.

Phase 1 - OPC

	11th	14th	15th	16th	17th	19th	23rd	25th	27th
Sharrow ($400 each)	$11,600	$10,000	$8,000	$800	$11,200	$12,800	$6,400	$8,800	$7,200
Signs ($135 each)	$1,620	$1,620	$1,620	$270	$1,350	$1,620	$1,080	$1,080	$1,080
Stop Bars ($220 each)	$6,380	$7,920	$7,480	$440	$5,500	$6,380	$6,820	$6,600	$4,400
Mobilization (20%)	$3,920	$3,908	$3,420	$302	$3,610	$4,160	$2,860	$3,296	$2,536
Total	$23,520	$23,448	$20,520	$1,812	$21,660	$24,960	$17,160	$19,776	$15,216
	28th	**Filmore**	**Gibson**	**Harrison**	**Jackson**	**Jefferson**	**Pierce**	**Taylor**	
Sharrow ($400 each)	$11,200	$7,200	$4,000	$7,200	$9,600	$24,000	$6,400	$3,200	
Signs ($135 each)	$1,080	$810	$540	$810	$810	$2,160	$540	$540	
Stop Bars ($220 each)	$6,160	$1,980	$2,420	$3,520	$6,160	$5,280	$3,520	$1,540	
Mobilization (20%)	$3,688	$1,998	$1,392	$2,306	$3,314	$6,288	$2,092	$1,056	
Total	$22,128	$11,988	$8,352	$13,836	$19,884	$37,728	$12,552	$6,336	
Sharrow - Total	$149,600								
Signs - Total	$18,630								
Stop Bars - Total	$82,500								
Mobilization - Total	$50,146								
GRAND TOTAL	$300,876								

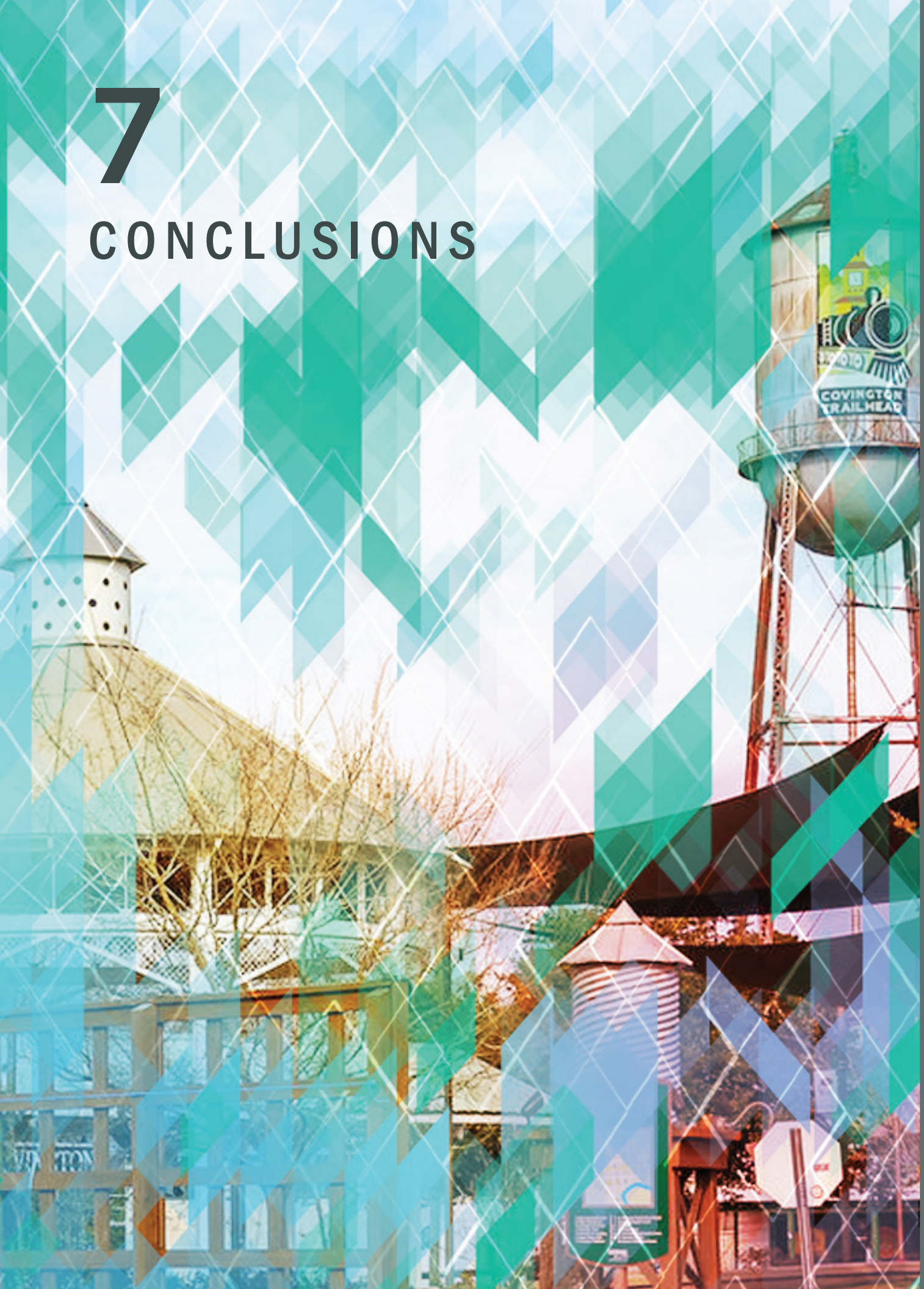
Phase 2 - OPC

	19th	23rd	27th	28th	29th	32nd	Filmore
Sharrow ($400 each)	$8,000	$2,400	$3,200	$3,200	$12,000	$11,200	$7,200
Signs ($135 each)	$810	$540	$540	$270	$1,080	$1,350	$810
Stop Bars ($220 each)	$2,580	$1,540	$880	$1,760	$6,160	$5,720	$4,180
Mobilization (20%)	$2,278	$896	$924	$1,046	$3,848	$3,654	$2,438
Total	$13,668	$5,376	$5,544	$6,276	$23,088	$21,924	$14,628
	Florida	**Jackson**	**Jahncke**	**Johnson**	**Hampshire**	**Rutland**	
Sharrow ($400 each)	$12,000	$1,600	$6,400	$4,800	$7,200	$6,400	
Signs ($135 each)	$1,080	$135	$540	$810	$540	$540	
Stop Bars ($220 each)	$8,800	$1,540	$4,400	$2,640	$3,740	$3,960	
Mobilization (20%)	$4,376	$655	$2,268	$1,650	$2,296	$2,180	
Total	$26,256	$3,930	$13,608	$9,900	$13,776	$13,080	
Sharrow - Total	$85,600						
Signs - Total	$9,045						
Stop Bars - Total	$47,900						
Mobilization - Total	$28,509						
GRAND TOTAL	$171,054						

Phase 3 - OPC

	8th	11th	15th	19th	Briggs	DePorres	Florida
Sharrow ($400 each)	$3,200	$4,000	$11,200	$4,800	$5,600	$4,000	$3,200
Signs ($135 each)	$540	$540	$1,620	$540	$810	$540	$540
Stop Bars ($220 each)	$2,640	$1,760	$7,920	$3,080	$2,640	$880	$1,540
Mobilization (20%)	$1,276	$1,260	$4,148	$1,684	$1,810	$1,084	$1,056
Total	$7,656	$7,560	$24,888	$10,104	$10,860	$6,504	$6,336
	Jahncke	**Lurline**	**Magee**	**Menetre**	**Patricia**	**Willow**	
Sharrow ($400 each)	$12,800	$5,600	$6,400	$6,400	$2,400	$1,600	
Signs ($135 each)	$1,350	$810	$810	$2,620	$540	$540	
Stop Bars ($220 each)	$4,400	$1,320	$2,860	$1,540	$660	$660	
Mobilization (20%)	$3,710	$1,546	$2,014	$2,112	$720	$560	
Total	$22,260	$9,276	$12,084	$12,672	$4,320	$3,360	
Sharrow - Total	$71,200						
Signs - Total	$11,800						
Stop Bars - Total	$31,900						
Mobilization - Total	$22,980						
GRAND TOTAL	$137,880						

7 CONCLUSIONS



7. CONCLUSION

Overview

The implementation of any of the proposed alternatives will have a positive impact on the transportation system's efficiency and safety for all users in the Covington study area. The addition of signage, and bicycle and pedestrian striping, will provide a safer experience for all users, residents and visitors alike. The recommendations offer residents of Covington alternative transportation choices, access to recreation facilities and exercise, schools, and expanded public access to the surrounding areas through modal means other than motorized vehicles.

The redesign of selected roadways and recommendations, in relation to the signage and striping, will provide a more safe and efficient corridor. In addition, no environmental impacts were discovered to impede any of the recommendations.

Implementation of Facilities

The construction of bicycle and pedestrian enhancements 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 PMC, including City of Covington officials, the RPC, and LA DOTD expressed strong support for the short-term recommendations to move forward. The recommended short-term actions include signage and striping in phases as funds are available. The long-term recommendations received strong support but pose more difficult funding and budgeting scenarios.

Complete Streets

Once implemented, the Complete Streets Policy that was developed for the City of Covington will optimize the safety and convenience for all users of the transportation network. Furthermore, by addressing requirements to comply with the policy as it applies to future development as well as redevelopment of existing infrastructure, the City has assured that the presence of complete streets will increase as Covington continues to grow.

Closing

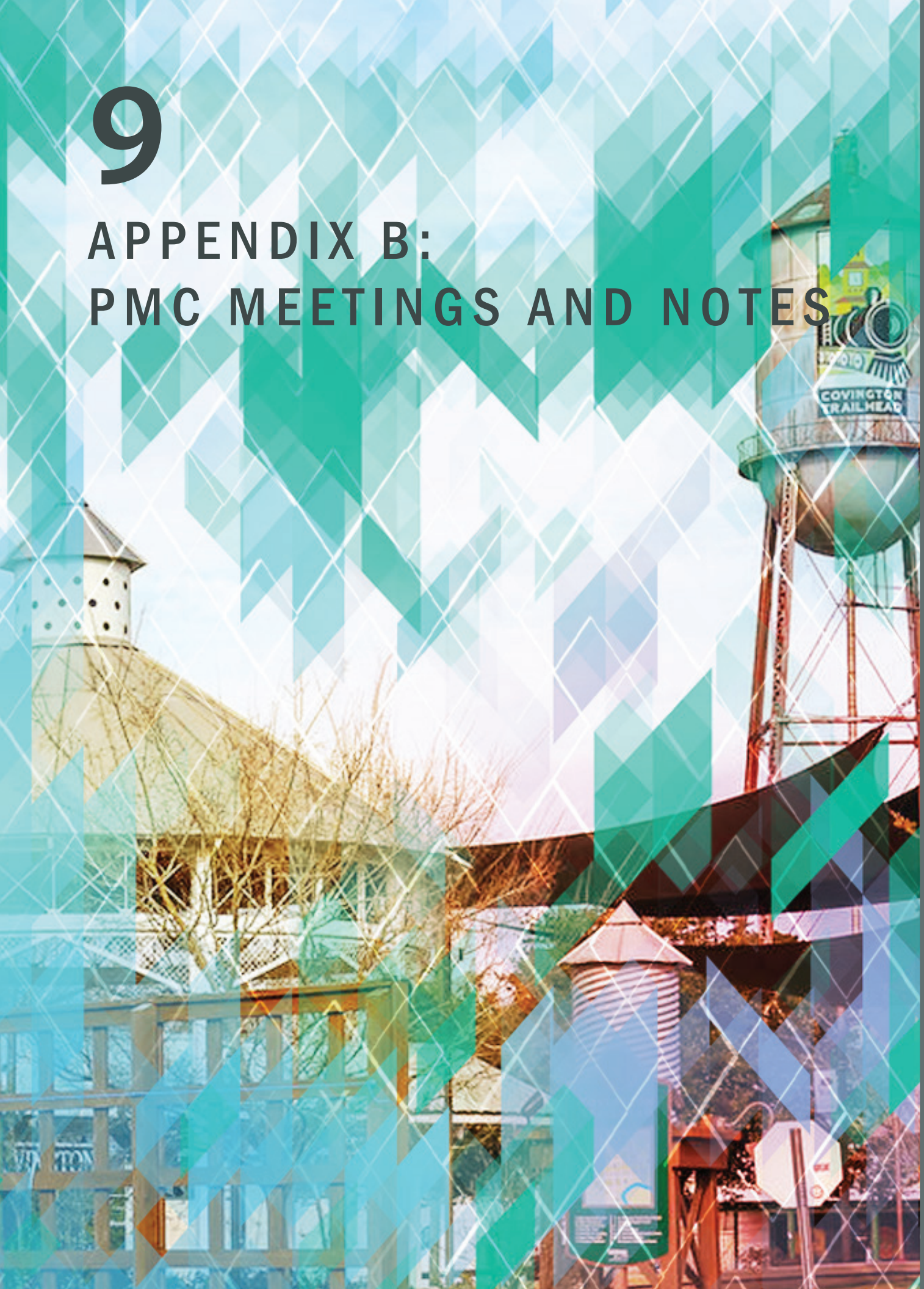
As implementation occurs, the city will become increasingly safe and efficient for transportation users of all abilities. The enhancements will increase the residents' and visitors' access to bicycling, walking, exercise, and transportation options. The Covington Bicycle Plan Feasibility project offers 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.

8

APPENDIX A: COMPLETE STREETS POLICY & SAMPLE ORDINANCES

9

APPENDIX B: PMC MEETINGS AND NOTES



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APPENDIX C: STAGE 0 ENVIRONMENTAL AND BUDGET CHECKLISTS