

Fairfield Strategic Plan



WESTBANK, JEFFERSON PARISH, LOUISIANA



Prepared For:

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Executive Summary

Stakeholder Engagement and Plan Development

Based on input from the Project Management Committee (PMC), stakeholder meetings and interviews, and the assessment of existing conditions, the consultant team developed three growth scenarios showing different intensities and mixes of land uses within the study area using smart growth principles. The Regional Planning Commission (RPC) and Jefferson Parish (JP) along with the study team conducted additional meetings and interviews with stakeholders and PMC meetings to discuss the implications of each scenario and forge consensus for a preferred option, which could have been one of the three initial alternatives, but turned out to be a hybrid based on additional stakeholder input. The RPC, JP, and the consultant team realize the real estate market will change over time and as such the strategic plan in this document should be considered dynamic and responsive to any such changes.

The preferred scenario is not a zoning plan, but addresses the mix and intensity of land uses, as well as strategies to ensure compatible transitions between different development patterns (e.g., building and site design standards, transitions in scale and intensity, use-based buffering standards, transportation access and connectivity standards), how to efficiently move travelers in all modes of transportation, the projected demands for water and wastewater, and how to utilize the available raw land in an efficient and cost effective manner for stormwater management. Based on the preferred scenario, the consultant team provides in this strategic plan the land-use goals for the area, measurable objectives, area specific policies for development and a work program to achieve the plan's land-use goals and objectives, as well as for transportation, utilities, and stormwater management objectives. The work program within this document identifies implementation tasks, responsible entities, and projected timeframe for each task.

Selected Preferred Alternative

The preferred growth scenario as envisioned by the stakeholders is detailed in Exhibit 8: Future Land Use Map. It calls for a mix of uses and development patterns capitalizing upon the growth in the eastern portion of Fairfield along Nicolle Blvd. The mix of land uses recommended in this Strategic Plan are based on seven Future Land Use categories that each allow for a variety of land uses. While there remains uncertainty about the precise arrangement of land uses, the following elements reflect a shared vision for Fairfield's future:

- A distinctive area within Jefferson Parish that embraces smart growth principles;
- A vibrant economic engine that builds on existing recreational, business and educational amenities to attract tourists, businesses and residents;
- High quality development that is more livable, resilient and sustainable through the integration of green infrastructure;
- A collection of stable mixed-use neighborhoods that accommodate a diverse residential base;
- Enhanced multi-modal mobility through better integration of residential, institutional, recreational, commercial, and other land uses; and
- A safe and attractive gateway to the natural resources of Jefferson Parish



that lie outside the hurricane protection levee.

Preferred Scenario Land Use, Transportation, Utility and Stormwater Management Implications

Achieving the purposes of this strategic plan requires a unique approach to the development of Jefferson Parish's last large greenfield area, one that provides the flexibility to respond to evolving markets and land use demands, while ensuring that future development will result in the creation of sustainable residential, non-residential, and mixed-use neighborhoods that will attract regional investment and growth. The future land use categories are intended to provide both flexibility and predictability for property owners to ensure that development will be compatible within and between developments. Each future land use category includes one or more uses and a range of intensities. Average intensities for each future land use category were used to analyze the development potential and demands for infrastructure. Site specific intensities may vary based on site constraints, property owner preferences, and the need to ensure internal and external land use compatibility. The total daily population for Fairfield at build-out based on the preferred scenario would be over 150,000 people. Residents could be approximately 50,000 with approximately 21,000 housing units. The additional 100,000 is based on employment projections for the study area.

Identifying the magnitude and locations of traffic demands through trip generation analysis is the first step in determining the need for future transportation system improvements. The strategic plan defines the locations of different future land use categories and their intensities, which is the basis for the projected trip demands. The focus of this analysis is to establish the general alignment of the arterial system needed to serve the area, the phasing of improvements, the costs of transportation facilities, and the potential funding sources for the arterial network. At build-out the average daily traffic based on land use intensities and trip generation could top 230,000 vehicles per day. The AM/PM peak hour could generate over 65,000 vehicles per hour. The arterial system has been designed to provide for phased construction as development occurs and for internal and external connectivity for all modes of transportation.

Before significant additional development can occur in the Fairfield planning area, Jefferson Parish will need to establish a preferred strategy to increase wastewater treatment capacity and to convey wastewater from the study area to the existing wastewater treatment plant. In addition, the success of planned development will require the assessment of the best ways to supply sufficient potable water to meet projected water demands, which entails providing additional water treatment and conveyance capacity to supply water at adequate pressures to meet normal and emergency fire flow demands.



Through the implementation of green infrastructure, Fairfield will be able to successfully manage the first hour of rain in a 10-year design storm. By achieving this, flooding as a result of the frequent storms seen in the region will be mitigated. It is the goal of this strategic plan to establish a green infrastructure conceptual design and implementation system that will improve water quality, reduce localized flooding, reduce long term infrastructure and maintenance costs, and create desirable spaces for recreation, nature, and public use.

Plan Implementation Program

The action plan is intended to be a dynamic tool to coordinate public and private actions within the Fairfield area. The initial action plan is focused on short-term, non-recurring actions to implement this plan. Subsequent revisions, which should occur on an annual basis, would document public and private commitments to continually improve the vitality and desirability of living and doing business in the Fairfield planning area.



Chapter 1: Plan Overview

This plan is a portion of the Jefferson Parish Comprehensive Plan that focuses on the specific needs of the Fairfield planning area, the largest green field area remaining within Jefferson Parish’s hurricane protection levee system. The Fairfield study area, which is shown in **Exhibit 1**, generally includes the area bounded by U.S. Highway 90 to the north, Bayou Segnette to the east, and the hurricane protection levee to the south and west. This area excludes the Alario Center and Bayou Segnette State Park.

1.1 Project Description

The following study evaluates and makes recommendations for development scenarios for the Fairfield area of the Westbank of Jefferson Parish, Louisiana. The project area is bounded by the US Hwy 90 to the north, Lake Cataouatche levee to the south, Bayou Segnette State Park to the east, and St. Charles Parish to the west. With the \$1.2 billion widening of the Huey P. Long Bridge, the area is expected to experience substantial development. The following strategic plan consists of land use, transportation, and stormwater management sections, which will help to manage expected growth through smart growth principles and best practices.

The consultant team provided planning, outreach, and engineering assistance to the Regional Planning Commission (RPC) and Jefferson Parish (JP) to develop three different development scenarios and a preferred scenario for the Fairfield area.

1.2 Scope of Work

The tasks performed by the consultant team in conjunction with the RPC and JP include:

- Conduct Project Management Committee (PMC) meetings
- Complete site investigations, data collections, and analyses
- Facilitate stakeholder interviews and meetings
- Define and review three development scenarios
- Assist with selecting a preferred alternative scenario
- Develop transportation goals, objectives, and policies
- Develop stormwater management and green infrastructure principles
- Report on demands for water and wastewater utilities
- Create a strategic plan

1.3 Purpose

This Strategic Plan is intended to outline the policies, tasks, and standards required to facilitate the development of the remainder of the study area in a manner consistent with the following principles developed by the Smart Growth Network, which is a group of non-profit and government organizations organized by the Environmental Protection Agency in response to increasing community concerns about the need for new ways to grow that boost the economy, protect the environment, and enhance community vitality:

1. Mix land uses;
2. Take advantage of compact building design
3. Create a range of housing opportunities and choices;
4. Create walkable neighborhoods;



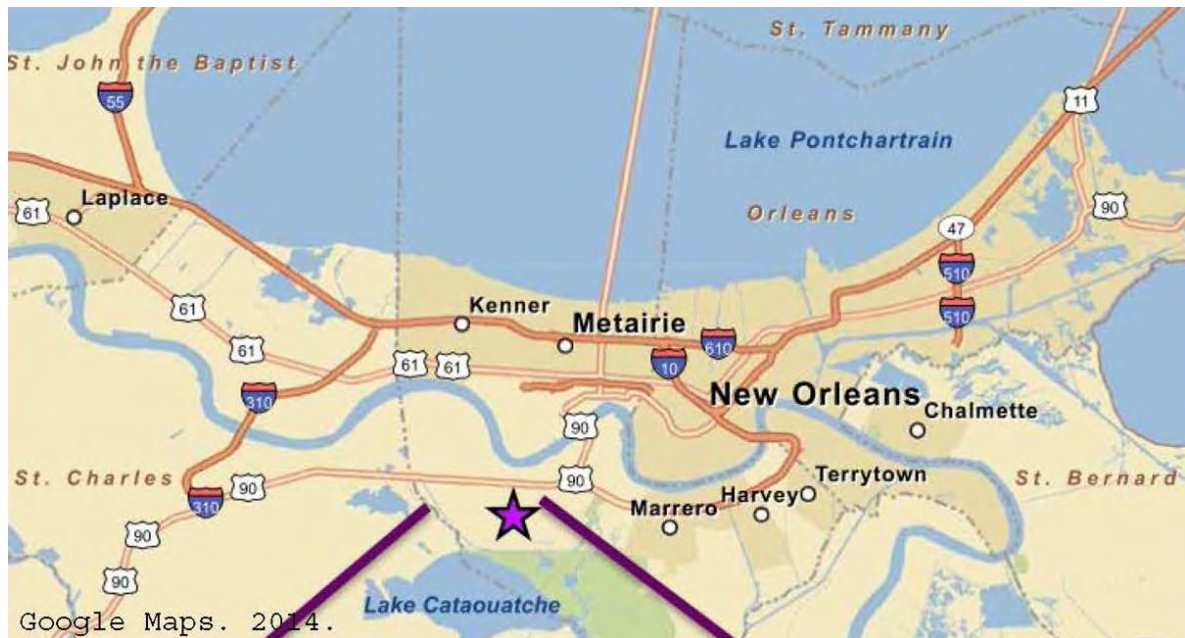
5. Foster distinctive, attractive communities with a strong sense of place;
6. Preserve open space, natural beauty and critical environmental areas;
7. Strengthen and direct development towards existing communities;
8. Provide a variety of transportation choices;
9. Make development decisions predictable, fair, and cost effective; and
10. Encourage community and stakeholder collaboration in development decisions¹.

1.4 Setting

The study area encompasses approximately 9,000 acres and is shown in **Exhibit 1**. The area is primarily undeveloped and comprises the last large greenfield site within the levee system in Jefferson Parish. Existing developments within the study area include the Churchill Technology Park, NOLA Motorsports and the TPC Louisiana golf course. The Avondale Homes South subdivision and a variety of highway-oriented commercial developments are located along the northern boundary of the study area. The Alario Center and Bayou Segnette State Park border the property on the east. The south and west sides of the property are bounded by a hurricane protection levee and Lake Cataouatche. To the northwest of the site are several landfills.

¹ http://www.epa.gov/smartgrowth/about_sg.htm
8/26/2015

Exhibit 1: Fairfield Strategic Planning Area



1.5 Process

To achieve the above purposes, Jefferson Parish, in coordination with the Regional Planning Commission, initiated a strategic planning process to:

- Review existing conditions, plans and regulations;
- Develop alternative growth scenarios that could achieve the smart growth principles listed above;
- Analyze the relative impacts of the growth scenarios on land use compatibility,



- transportation system requirements, utility requirements, stormwater management systems and other factors;
- Select a preferred growth scenario; and
- Develop a strategy to facilitate development that is consistent with the preferred scenario.

The consultant team conducted a review of existing conditions and plans and regulations, which is described in **Chapter 2** of this Strategic Plan, under the guidance of a Project Management Committee, working group and area stakeholders (see **Appendix A**). The resulting findings shaped the development of the scenarios based on known wetlands, available floodplain information, existing land uses, existing utilities and the transportation network. This Strategic Plan anticipates the need to make adjustments to road alignments, utility plans and, potentially, land uses when the results of the wetlands and floodplain delineation projects in progress are completed. However, these studies are unlikely to affect the key findings of the initial analysis of constraints and opportunities.

Based on the findings of the initial analysis, the consultant team developed a set of future land use categories that incorporate smart growth principles for a variety of settings ranging from very low intensity environmental mixed uses to moderate intensity mixed use neighborhoods to more intensive commercial and industrial settings. These future land use categories incorporate existing uses and the range of land uses anticipated by property owners. Following the vetting of these future land use categories, three growth scenarios were created to reflect distinct futures within the study area.

As described in **Chapter 2** of this Strategic Plan, there is great uncertainty about future market demands affecting the Fairfield area. While existing anchor developments including the Churchill Farms Business and Technology Park, the TPC Golf Course, NOLA Motorsports and Bayou Segnette State Park, establish clear constraints and opportunities, future development of vacant lands in the Fairfield area will depend on a wide range of market forces as well as public and private investment decisions. To better understand the market, Jefferson Parish expanded the scope of its ongoing West Bank Revitalization Study to analyze the relative viability of the proposed development patterns. The findings of this study, which is included as **Appendix B**, show that the greatest demands locally and regionally are for developments that incorporate the features embedded into the proposed future land use categories.

After vetting the three growth scenarios and analyzing the impacts of the scenarios (see **Appendix C**) with the working group, stakeholders, and the Project Management Committee, the consultant team developed a preliminary preferred scenario. A revised version of the preliminary preferred scenario, which reflects comments from the three review bodies, serves as a basis for the development of this Strategic Plan.

A record of meetings and sign in sheets for each of the meetings is included in **Appendix D**.

1.6 Fairfield Area Vision

While there remains uncertainty about the precise arrangement of land uses, the following elements reflect a shared vision for Fairfield's future.

- A distinctive area within Jefferson Parish that embraces smart growth principles;
- A vibrant economic engine that builds on existing recreational, business and educational amenities to attract tourists, businesses and residents;
- High quality development that is more livable, resilient and sustainable through the integration of green infrastructure;
- A collection of stable mixed-use neighborhoods that accommodate a diverse residential



- base;
- Enhanced mobility through better integration of residential, institutional, recreational, commercial and other land uses; and
- A safe and attractive gateway to the natural resources of Jefferson Parish that lie outside the hurricane protection levee.

1.7 Plan Directives

The directives identified in **Chapters 3** and **4** of this Strategic Plan are intended to guide actions by the Parish in coordination with the private sector (e.g., the business community, property owners and residents). The specific tasks listed in **Chapter 4** are not intended to be an exclusive list of initiatives; they are intended to establish an initial work program that should be updated on an annual basis to reflect achievements, available public and private resources, changing needs and emerging opportunities.

1.8 Plan Success

The above vision will not happen overnight or even over the course of a few years. The success of this Strategic Plan will rely on long-term commitment from a number of parties. The Jefferson Parish Council and Administration will need to continue to support efforts to upgrade infrastructure, enforce codes, facilitate private investment and guide Fairfield property owners. JEDCO, the Jefferson Business Council, the Jefferson Chamber of Commerce and other business entities should encourage the state and local governments, as well as private property owners to invest in public and private improvements. Finally, property owners, residents, and business owners are encouraged to stay informed, set priorities for area-wide improvements, and work together to resolve the resultant funding and logistical challenges.



Chapter 2: Context for Strategic Plan

2.1 Land Use

2.1.1 Existing Land Uses

As highlighted in Chapter 1 of this Strategic Plan, the Fairfield area encompasses approximately 9,000 acres, which is largely undeveloped, but includes the following land uses:

- Churchill Technology Park is currently home to JEDCO and the Patrick F. Taylor Science and Technology Academy. Delgado Community College anticipates the establishment of a campus within the park in the coming year.
- NOLA Motorsports is a privately owned track that has primarily served private racing clubs, individuals, and various auto industry tests. The owners hope to expand operations to include several Indy events per year. The site includes conference facilities for corporate meetings, on-site lots for garages and residences, and kart racing facilities.
- TPC Louisiana golf course is a stand-alone eighteen-hole golf course that is capable of hosting tournament play.
- At the northeast corner of the study area is a site that is currently used for auto salvage operations and outdoor industrial storage.
- To the east of the northeast corner of the study area is the Alario Center and Bayou Segnette State Park.
- The south and west sides of the property are bounded by a hurricane protection levee and Lake Cataouatche.

2.1.2 Comprehensive Plan Directives

Jefferson Parish places a high priority on ensuring that its growth decisions are consistent with its adopted Comprehensive Plan as evidenced by the fact that it adopted the Plan by ordinance and codified the requirement that growth and development be consistent with the Plan in its Unified Development Code which is part of the Jefferson Parish Code (JPC). As shown in the current future land use map (see **Exhibit 2**), the western half of the Fairfield planning area is designated for resource conservation, which is a transitional category. The eastern half of the planning area is designated for a combination of business park, recreation, residential and community mixed use. The Comprehensive Plan includes numerous directives that should continue to guide planning and development of the Fairfield area.

Vision. The Comprehensive Plan’s vision for the future includes the following specific provisions, which are directly related to this area:

“Jefferson Parish commits to planning and developing as a diverse community with a rich quality-of-life by enhancing the integrity, value and character of its neighborhoods and businesses. Enhancing the quality of life is the central theme of Envision Jefferson 2020. The key initiatives to achieve this are established in the plan goals, objectives, policies, and tasks that will:

- *Expedite critical transportation improvements, such as the Huey P. Long Bridge widening and the completion of I-49;*
- *Capitalize on TPC by promoting high quality planned developments on the Westbank that will attract residents from throughout the region and stimulate business growth;*



- *Capitalize on the Tournament Players Club golf course by promoting development of high quality planned developments on the West Bank that will attract residents from throughout the region and stimulate business growth;*
- *Strengthen and diversify commercial areas to offer goods and services for residents throughout the region in attractive commercial and mixed use centers;*
- *Protect and expand economic development opportunities by improving services to existing industrial areas, protecting those areas from incompatible encroachment and planning for industrial area expansions; [and]*
- *Create new economic development opportunities in a new technology park that will be jointly developed by the public and private sectors; ...” (JPC Section 25-101)*

Several of these objectives, which directly affect the Fairfield area, have been completed or are in the process of completion:

- The widened Huey P. Long Bridge provides quick access across the Mississippi River to the study area.
- The TPC golf course has been developed since adoption of the Comprehensive Plan and holds potential for greater resource capitalization.
- Many of the proposed future land use categories of this strategic plan are intended to facilitate the development of mixed-use centers.
- The proposed strategic plan has the potential to both protect the economic development opportunities related to Churchill Technology Park and NOLA Motorsports and to create new opportunities for the future.

Goals. The Comprehensive Plan’s Land Use element includes numerous goals worth considering when evaluating the scenarios, which are summarized by the following excerpts:

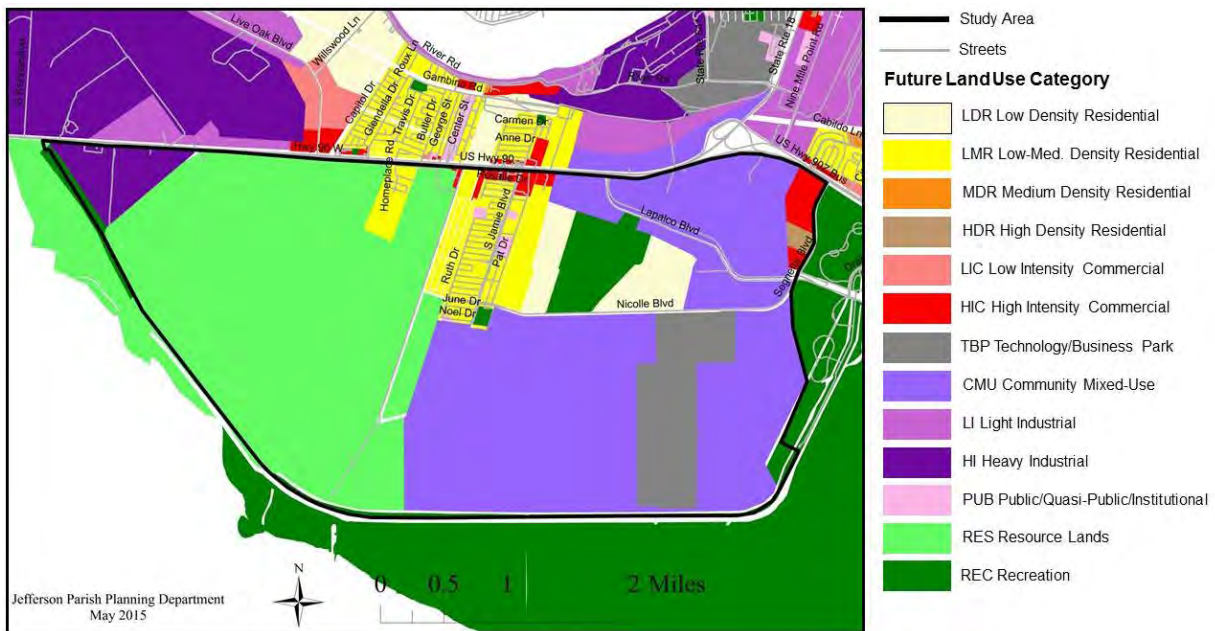
- *Provide for a sustainable urban environment that will support and enhance neighborhoods and businesses, and accommodate their growth. (JPC Section 25-273)*
- *Improve the visual quality of Jefferson Parish. (JPC Section 25-274)*
- *Provide suitable and adequate opportunities for commercial and industrial development that is convenient, visually pleasing and environmentally sound. (JPC Section 25-276)*
- *Accommodate a diverse range of housing types and densities in a manner well suited to surrounding uses. (JPC Section 25-277)*
- *Provide abundant park, recreational and cultural facilities and access to natural resources to satisfy the recreational needs of the residents of Jefferson Parish. (JPC Section 25-279)*
- *Maintain Jefferson Parish’s environment and high quality of life. (JPC Section 25-287)*
- *Achieve development patterns that balance the natural and built environments. (JPC Section 25-288)*

During the preparation of this Strategic Plan, the Project Management Committee recommended that in achieving these goals, the preferred scenario should:

- Incorporate mixed-use development to improve mobility, offer additional lifestyle options, improve property values and improve infrastructure efficiency.
- Ensure that planned development is resilient, offering protection and expediting recovery

from natural hazards and adaptability to market/demand changes.

Exhibit 2: Existing Future Land Use Map



See **Appendix E** for detailed descriptions of future land use categories.

2.1.3 Zoning Directives

As shown in Exhibit 3, most of the undeveloped property within the Fairfield planning area has unrestricted or U-1 zoning, which allows buildings or property to be “used for any purpose whatsoever not in conflict with any ordinance of the Parish of Jefferson, with the exception of hazardous, radioactive or nuclear waste treatment, storage, or disposal facilities, and uses described in section 40-612(2) ...” With minimal site development standards other than a 300 ft. separation from residential property for the more intensive uses, this district is inconsistent with the smart growth principles cited in Chapter 1 of this Plan. During the preparation of this Strategic Plan, Jefferson Parish established interim development standards for the area that include the application of the regulations of the mixed-use corridor district (MUCD) to property within the Fairfield area, which allow a mix of residential and commercial uses subject to Parish Council review and approval. This district comes closer achieving the Plan’s purposes for the area, but is better suited to arterial corridors with a mix of uses than the creation of neighborhoods in which a mix of uses is compatibly integrated. The Parish’s zoning ordinance currently lacks the tools necessary to foster the development of internally compatible, walkable, mixed-use neighborhoods other than the overlay districts developed specifically for the Fat City area.



Exhibit 3: Existing Zoning Map



See **Appendix F** for detailed descriptions of zoning districts.

2.1.4 Key Land Use Challenges

Unrestricted Zoning. The existing zoning map is inconsistent with the Strategic Plan purposes and the Proposed Future Land Use map. The prevalence of U-1 zoning, while valued by some property owners for the use flexibility that it offers, has the potential to reduce property values and deter desired investment in the Fairfield area. NOLA Motorsports development highlights both the strength and weaknesses of this district. NOLA Motorsports would have been extraordinarily difficult if not impossible to develop under the Parish’s other zoning districts; so U-1 zoning was valuable to the project’s developer. However, the fact that such an intensive use that has extraordinary off-site impacts could be developed as a use by right that only required public hearings for the subdivision process illustrates the district’s potential to enable one use to significantly alter development options for nearby properties.

Addressing Noise from NOLA Motorsports. NOLA Motorsports racing events generate noise that can be heard throughout the planning area. While no noise studies have been provided for this facility’s operations, noise studies for tracks hosting similar events generate noise levels exceeding

60 to 65 DBA at distances ranging from 3,000 feet to 1 mile, depending on vegetation and intervening structures. These noise levels are generally considered to be the threshold for residential development suitability. While Louisiana building codes would generally mitigate these noise levels for interior space, outdoor noise levels would be noticeably high during races. For these reasons, the Parish should restrict residential development within 3,000 feet of the track. Additionally, because noise levels and the frequency of events could potentially increase, residential development within one mile of the track should be required to demonstrate how noises are to be mitigated (e.g., intervening structures, vegetation or other methods).



Facilitating Mixed-Use Development. While the MUCD allows for multiple uses in proximity to one another, the Parish’s zoning ordinance needs a tool to facilitate mixed-use neighborhood development that is consistent with the smart growth principles that are the fundamental purpose of this Strategic Plan. As described later in this plan, the Parish will need to adopt flexible zoning procedures and standards for development of internally compatible and interconnected mixed-use neighborhoods as envisioned by the future land use map on which this plan is based.

Avondale Homes. The Avondale Homes subdivision, which overlaps the Fairfield planning area, will impact surrounding development and has shaped the proposed transportation network discussed in Chapter 3. Currently, the only connection between this subdivision and adjoining properties is along Nicolle Blvd. To avoid traffic increases through this subdivision, this Strategic Plan proposes the creation of an alternative east-west arterial connection between Nicolle and Avondale Garden Road.

2.1.5 Land Use Opportunities

With most of the planning area being vacant, there is no shortage of land use opportunities. These include but are not limited to:

Capitalizing on NOLA Motorsports. While its noise impacts create development challenges, NOLA Motorsports is becoming a regional attraction for driving and racing enthusiasts. The availability of kart racing and a conference center makes this a potential attraction for corporate retreats and family vacations for those with older children. This Plan’s Future Land Use Map includes opportunities for regional retail, restaurants, and hotels that are essential to more fully capitalize on existing facilities. Additionally, the track offers a potential market for industries developing racing and more conventional auto parts and cars, which this Plan recognized through the designation of land for industrial park development in close proximity to NOLA Motorsports.

Creating Additional Tourism Draws. NOLA Motorsports, TPC and the Alario Center are insufficient draws on their own to support full-time hospitality facilities mentioned above. The creation of additional tourism draws could improve the viability of these uses. For instance, regional recreation facilities (e.g., ball fields or soccer fields that could attract regional tournaments) or amusements (e.g., water park or other facilities) could draw families for multi-day stays that would support hotels, restaurants and regional retail facilities. The increasing tourism industry around “shop-cations” should not be ignored.

Improving Access to Lake Cataouatche. There is potential to provide direct access to Lake Cataouatche from within the hurricane protection levee at the northwest corner of the planning area or at the southern terminus of Avondale Garden Rd. While such access would need to be coordinated with the U.S. Army Corps of Engineers, it could stimulate investment in marine facilities for fishing and ecotourism as a gateway to bayou country. This would serve both local residents and visitors due to the close proximity of the planning area to the Louis Armstrong International Airport and Downtown New Orleans. The development of boat access from within the levee has the potential to stimulate private investment in marine facilities, waterfront residential development, and sports-related commercial development.

Incorporating Water Features and Greenways into Development Patterns. Whether internal access is provided to Lake Cataouatche or not, residents of southern Louisiana can benefit by living with water, rather than treating it as a constant threat. Water levels will need to be maintained to minimize subsidence within the planning area. The use of open systems in the form of amenities increases the value of nearby property, increases the potential capacity of stormwater systems to accommodate severe rainfall, creates the potential for greenway amenities and reduces the costs



of more conventional closed stormwater improvements. This Plan includes tableaus which illustrate potential ways of achieving this objective for each future land use category.

Expanding Educational Opportunities. Quality educational facilities attract growth. Proximity to Patrick F. Taylor Science and Technology Academy will attract some residential development. Proximity to Delgado Community College’s new campus will attract both students and potentially allied industries that can benefit from access to the students. Continued public/private coordination could identify additional educational facilities that would create a symbiotic relationship with planned residential and business park growth.

2.2 Mobility

2.2.1 Existing Transportation Facilities

Primary access to the Fairfield planning area is provided by:

- **US 90**, which follows the northern boundary of the planning area, is a 4-lane, divided major arterial with a posted speed limit of 45 MPH, and a daily traffic volume of over 22,000 vehicles.² This corridor has been identified as the future Interstate 49 corridor.
- **Lapalco Blvd**, which extends from US 90 to the southeast through the study area is a 4-lane, divided roadway with a posted speed limit of 40 MPH and a daily traffic volume of over 10,000 vehicles.
- **Segnette Blvd**, which extends from the Westbank Expressway south to Lapalco Blvd along the northeastern edge of the planning area, is a 4-lane divided road with a posted speed limit of 40 MPH and daily traffic volumes of approximately 5,000 vehicles.

Internal connectivity is currently limited to the northeastern quadrant of the study area along Lapalco Blvd, Segnette Blvd and Nicolle Blvd, which extends from Lapalco Blvd to S. Jamie Blvd in the Avondale Homes subdivision. Nicolle Blvd is a 2-lane, undivided facility with a posted speed limit of 40 MPH and an average daily traffic volume of over 4,500 that serves JEDCO, NOLA Motorsports, and Patrick F Taylor Academy. On the western side of the study area adjacent to the Avondale Garden Canal is Avondale Garden Rd. It is a north/south unimproved shell road that extends from US 90 to the hurricane protection levee (pumping station).

None of these existing streets include bicycle or pedestrian enhancements. Jefferson Transit’s W1 Avondale route currently has one stop near the study area at US 90 and Jamie Blvd, which offers service Monday-Friday between 6AM and 7PM every 69 minutes. Jefferson Transit also offers a transfer point to the W10 Huey P. Long route at Westbank Expressway and Drake Ave. This transfer point operates Monday-Friday between 6AM to 7PM every 69 minutes.

2.2.2 Transportation System Challenges

Transportation system design presents a variety of challenges to provide efficient access and a level of interconnectivity required to achieve this Strategic Plan’s mobility goals.

Arterial System Alignment. The arterial system must be aligned to avoid interfering with NOLA Motorsports and TPC. Additionally, the arterial system should avoid increasing traffic on the internal street system of the Avondale Homes subdivision and minimize costs associated with navigating around and over wetlands and canals. The current wetlands delineation project for the non-delineated portion of the study area (about 4,000 acres in the western and northern sections) may result in the need to adjust proposed arterial alignments. Final alignments and

² Daily traffic volumes for this study were provided by LA DOTD.
8/26/2015



right-of-way acquisition in this area should not occur until the wetlands are delineated and needed environmental studies are completed.

Internal Connectivity. While this Strategic Plan will recommend the general alignment and phasing of arterial road improvements, this system will need to be connected to and through future developments. To enhance mobility, the transportation requirements for different types of development should require complete street designs, maximum block lengths for mixed-use development patterns and a system of sidewalks, bike lanes and multi-purpose trails to serve the needs of bicyclists and pedestrians. These connectivity requirements also should apply to the portions of the Churchill Business and Technology Park that serve Patrick F. Taylor Academy and Delgado Community College’s Riverside Campus.

Addressing Traffic Increases. Delgado Community College’s River City Campus in the Churchill Technology Park will generate traffic from up to 3,000 students per week. Coupled with the continued growth of Patrick F. Taylor Academy, there will be a need for additional Jefferson Transit stops, bicycle and pedestrian enhancements. When combined with NOLA Motorsports events, there will be a demand to increase capacity along Nicolle Blvd. Opportunities may arise to increase capacity through the creation of turn lanes into Churchill Business and Technology Park and NOLA Motorsports.

Funding Arterial System Improvements. Funding of arterial roadway construction within the study area will take a commitment from Jefferson Parish working with the property owners, private entities, the Regional Planning Commission, LA DOTD, and LA Legislature. While federal funds may be available to help fund some of the improvements, arterial improvements to serve future demands will require private, local, and state participation.

2.2.3 Transportation System Opportunities

Greenfield Development. The relatively sparse development of the Fairfield area means that traffic demands are relatively low and the obstacles to planning and preserving needed right-of-way are minimal. Smart Transportation proposes to manage capacity by better integrating land use and transportation planning. The desire to go “through” a place must be balanced with the desire to go “to” a place. Roadways have many purposes, including providing local and regional mobility, offering access to homes and businesses, and supporting economic growth.³ Smart Transportation designs work best when implemented as development occurs because there are fewer physical obstacles to laying out a transportation system and ensuring that transportation system, utilities, water management systems and development designs are well integrated – enabling the transportation system to more effectively serve the full range of demands from future development.

Phasing. The concentration of development demands along Nicolle Blvd and the presence of a compacted base along Avondale Garden Road suggest that these roads would be the first portions of the arterial network to improve. Consequently, phasing is likely to begin with turn lanes on Nicolle Blvd at current developments followed by the extension of Nicolle Blvd to Avondale Garden Road and improving Avondale Garden Road from US 90 to the Nicolle Blvd Extension. Subsequent phasing decisions should be based on demands and available funding.

³ Smart Transportation Guidebook, New Jersey and Pennsylvania Departments of Transportation, 2008.
8/26/2015 12 RPC Project H.010170JP
DOTD Project No. H.010170



2.3 Water and Wastewater Utilities

2.3.1 Existing Utilities in the Planning Area

Growth affects costs of water infrastructure, demand for water, and efficiency of water delivery. However, the relationship is a dynamic one: water policies influence growth decisions and outcomes—which in turn affect infrastructure and water resources. Smart growth practices promote development that enhances the community, economy, public health, and the environment. The existing Jefferson Parish water and wastewater (w/ww) infrastructure for the Fairfield study area contains water lines, gravity lines, force mains, and lift stations. The water infrastructure is generally located along the existing road network. Water lines along US 90 vary in size from 12 to 24” in diameter, along Lapalco Blvd is a large 36” diameter water line, and along Nicolle Blvd there is a water line of varying sizes that stretches from Lapalco Blvd. to S. Jamie Blvd. then along S. Jamie to US 90. The existing water infrastructure is only able to serve development within the eastern half of the study area. Sewer lines, force mains, and lift stations are located in a varying dotted pattern within mostly the eastern portion of the study area as shown in **Exhibit 4**.



Exhibit 4: Existing Utility Infrastructure





2.3.2 Existing Utility Systems and Challenges

Water and Wastewater System Planning. Jefferson Parish, like many communities across the country, faces several challenges related to providing clean and safe drinking water and wastewater collection and treatment services. Recognizing these challenges, the Parish should initiate a long-term planning process for a water and wastewater infrastructure system that can meet future demand and support the strategic plan's goals to add a mix of land uses and encourage development in the Fairfield study area.

Utility System Phasing. This Strategic Plan provides a framework for designing a system that best serves the new housing and businesses in the largely undeveloped Fairfield area. This Plan projects demands based on the development projected by the proposed future land use map; system designs and phasing plans will need to reflect more specific demands from future development projects as they are planned. Given the transitional nature of the environmental mixed-use future land use category that applies to much of the western half of the planning area, the Parish will need to consider potential demands from more intensive development of this area when developing utility phasing and improvement plans.

Wastewater System Capacity. The Bridge City wastewater treatment plant average daily flow is approximately 7.23 MGD. No additional capacity is currently available at this plant but there is room for future expansion, which will be required to serve planned development. Additionally, interceptor improvements will be needed to convey wastewater from the planning area to the treatment plant.

Water System Capacity. The Westbank water treatment plant average daily production is approximately 23.5 MGD, which produces good water quality discharged into the distribution system. There is some additional capacity available but approaching 30 to 35 MGD production, water quality produced by the plant will begin to decline. It is beyond the scope of this project to determine treatment plant expansion requirements to meet the needs of the proposed future land use map, but some treatment plant capacity expansion may be needed and pumping, elevated storage and conveyance improvements will be needed to supply water to and throughout the planning area.

2.4 Stormwater & Open Space

The 9,000 acres comprising the Fairfield area present a distinct opportunity for sustainable and regionally-unique development on the Westbank of Jefferson Parish. Remaining largely undeveloped and natural, Fairfield has the ability to incorporate popular and enduring development, including mixed-use development, connectivity, walkability, and recreational amenities, and avoid retrofits similar to those currently taking place in other areas of Jefferson Parish and the Greater New Orleans region. Fairfield, as a greenfield site, also offers a unique opportunity to mitigate flooding and manage stormwater using and mimicking natural systems that reduce long-term development and infrastructure expenses and enhance development assets and aesthetics.

2.4.1 Stormwater Overview

Under natural conditions, rainfall primarily percolates into the ground and flows as groundwater. It is then held and absorbed by trees and other vegetation and evaporated into the atmosphere to begin the cycle anew. Minimal amounts of rainwater flow as runoff, reducing the likeliness of flooding. Current development practices clear the land of a majority of existing vegetation, and cover much of the ground with impervious surfaces: rooftops, roads, parking lots, and plazas. Consequently, stormwater runoff is increased and results in localized flooding.



Jefferson Parish is predominantly developed using traditional drainage methods, or **gray infrastructure**—the use of pipes and concrete to quickly collect, direct, and dispose of stormwater. Gray infrastructure has a specific limited capacity it is designed to handle a set amount of water. When the volume of stormwater runoff exceeds the drainage capacity, backflooding occurs. At this point, the drainage system cannot take on additional stormwater because it has reached its designed capacity. As the rainfall persists, stormwater is incapable of entering the strained drainage system and begins to flow along impervious surfaces to low-lying areas, where it collects and eventually causes flooding. Moreover, as stormwater flows over impervious surfaces, it collects pollutants such as heavy metals, pesticides and fertilizers, oil, bacteria, and sediment. These pollutants ultimately result in costly damage to property, public health, economic functions, and the environment.

Green infrastructure is an alternative to traditional drainage systems that imitates natural processes to filter and slow stormwater in the built environment to nearly the same levels that occur in a natural ecosystem. Green infrastructure retains existing mature trees and minimizes impervious surfaces. It preserves the banks of water bodies in their natural state and uses designed drainageways to mimic natural water bodies and serve as neighborhood recreation corridors. Green infrastructure is designed to be an open system, with limited constrictions like pipes and subsurface drainageways. This open, porous design creates places where stormwater is absorbed or temporarily stored, reducing the stress on the existing drainage system and therefore the frequency and severity of localized flooding.

Green infrastructure is a key strategy in environmentally sensitive land development and has lasting benefits to the built environment. When designed and implemented correctly, it can reduce flooding, land subsidence, pollution, and infrastructure costs over time while enhancing water and air quality, neighborhood aesthetics, and even real estate values.

2.4.2 Stormwater Opportunities

Fairfield is a greenfield site and therefore has the opportunity to fully capitalize on green infrastructure while a typical redevelopment site would use green infrastructure to complement existing gray infrastructure. The use of green infrastructure would minimize the impact of the Fairfield development on the existing Jefferson Parish drainage system and would create a regionally unique and progressive identity for businesses and families that invest in the area.

Differing land uses and development patterns could be unified by green infrastructure strategies that could physically and visually link one site to another. Each future land use category has the potential to employ strategies modified to suit the land use and space available in each area. Densely developed areas with roughly 20 percent pervious cover should dedicate around 85 percent of the required open space to green infrastructure strategies. Moderately dense areas with roughly 40-65 percent pervious cover should dedicate around 50 percent of required open space to green infrastructure. The least dense areas with roughly 95 percent pervious cover should dedicate approximately 20 percent of open space to green infrastructure.

2.4.3 Consistency with 'Envision Jefferson 2020'

The stormwater component of the Jefferson Parish Westbank Strategic Plan is consistent with the following goals, objectives, and policies of 'Envision Jefferson 2020':

Goal 2: Improve the visual quality of Jefferson Parish.

- **Objective 2.1:** *Preserve and enhance the Parish tree canopy and natural vegetation.*

Policy 2.1.1: *Create voluntary incentives to preserve canopy trees wherever feasible*



through landscaping credits, flexible design, pervious pavement and innovative construction practices.

Policy 2.1.2: *Increase the awareness of the benefits of trees and natural vegetation through various educational efforts.*

Goal 3: Implement orderly development and redevelopment consistent with the Parish's social, economic, physical, and natural environments.

- **Objective 3.3:** *Increase public access to public facilities along Lake Pontchartrain and other water resources through appropriate water-oriented development in Jefferson Parish.*

Policy 3.3.2: *Implement open space/public access plans to provide public access to Parish scenic water bodies, including the Lake Pontchartrain shoreline, Lake Salvador, Lake Cataouatche, and the Mississippi River and ensure coordinated, functional parks and transportation systems that are compatible with existing development.*

Policy 3.3.5: *Preserve access to public facilities and views of water-based amenities for all residents and visitors of the community.*

Policy 3.3.7: *Provide a coordinated system of pedestrian trails through appropriate public access along canal levees and other drainage features.*

Goal 6: Provide abundant park, recreational and cultural facilities and access to natural recreational resources to satisfy the recreational needs of the residents of Jefferson Parish.

- **Objective 6.1:** *Provide community facilities according to need, population density, land use continuity, natural resource sustainability, compatibility with historic resources, user safety, and the optimum allocation of public funds.*

Policy 6.1.1: *Coordinate natural resource and historic resource protection efforts with future Parish Park, open space, and recreational land use opportunities.*

Policy 6.1.5: *Design and construct community facilities with sufficient flexibility to adapt to the changing needs of the community.*

Goal 12: Maintain Jefferson Parish's environment to promote a high quality of life.

- **Objective 12.1:** *Cooperate with appropriate State and Federal Agencies to retain valuable natural resources and conserve or enhance environmental quality within Jefferson Parish.*

Policy 12.1.3: *Establish development standards that contribute to maintaining the environmental quality of Jefferson Parish.*

Goal 13: Achieve development patterns that balance the natural and built environments.

- **Objective 13.1:** *Adopt voluntary incentives for development to incorporate construction methods and designs that minimize environmental impacts.*

Policy 13.1.2: *Allow for development standards that permit cluster developments, minimum impact development, and nature-oriented developments.*

- **Objective 13.2:** *Take a proactive role in the environmental regulatory process to assist development of the Parish according to the Comprehensive Plan.*

Policy 13.2.1: *Coordinate drainage and storm water quality requirements in new developments with improvements required for existing and future development.*

Policy 13.2.2: *Coordinate wetland mitigation requirements with coastal and wetland restoration opportunities and projects in Jefferson Parish.*

Goal 15: Promote development and redevelopment practices that minimize the potential risks from natural and man-made hazards.

- **Objective 15.1:** *Maintain a strategic plan to minimize threat to life and property caused by coastal storms and other natural and man-made hazards.*

Policy 15.1.3: *Continue programs and projects that reduce flood hazards in Jefferson Parish.*



Chapter 3: Strategic Plan

3.1 Land Use

The proposed future land use descriptions recommended in this Strategic Plan allow for a mix of uses and densities within the study area, and can be used to guide the creation of development patterns aligned with such future land use categories to be administered at the site plan review stage. This Land Use section provides guidance for the creation of the future land use categories and development patterns and describes how the development patterns should be implemented through revisions to the Parish's zoning ordinance and unified development code.

As per Section 25-251 of the Comprehensive Plan of Jefferson Parish,

"The future land use element is a guide for future development and redevelopment within Jefferson Parish. It designates the general distribution, location and extent of the uses of land for residential, commercial, industrial, recreation, resource, and other categories of the public and private uses of land."

Future land use is mapped on land within the Parish in anticipation of future development, and the future land use categories as mapped often encompass many development sites.

In the context of this Strategic Plan, development patterns are alternative forms of development that may be approved by right, as conditional uses, or within a planned development district if authorized in the UDC. Development patterns are applied to a particular site and are effectuated through the site plan review process. The development pattern utilized for a site should be consistent with the future land use designation of the property.

3.1.1 Future Land Uses

Achieving the purposes of this Strategic Plan requires a unique approach to the development of Jefferson Parish's last large greenfield area, one that provides the flexibility to respond to evolving markets and land use demands, while ensuring that future development would result in the creation of sustainable residential, non-residential and mixed-use neighborhoods that would attract regional investment and growth.

The future land use categories in **Exhibit 5** are intended to provide both flexibility and predictability for property owners to ensure that development will be compatible within and between developments. Each future land use category includes one or more uses and a range of densities or intensities. **Exhibit 6** shows the average intensities for each future land use category that were used to analyze the development potential and demands for infrastructure. Site specific intensities may vary based on site constraints, property owner preferences and the need to ensure internal and external land use compatibility.

These future land uses may be used to guide the creation of development patterns. The relationships between future land use categories in the comprehensive plan, development patterns, and zoning are illustrated in **Exhibit 7**. Just as each future land use category allows for one or more zoning districts for implementation, each zoning district allows for a range of uses. Each development pattern may be authorized within one or more zoning districts just as specific uses are authorized. See examples in the text box on the next page.





Future Land Use – Zoning – Development Pattern Examples

Example 1: The Neighborhood Mixed-Use future land use category may be implemented by a variety of zoning districts, such as the most of the residential (R) districts or the neighborhood commercial district (C-1). Each of these districts allows a range of uses and many would be appropriate for the Neighborhood Mixed-Use development pattern.

Example 2: The Community Mixed-Use future land use category may be implemented by the townhome (R-1TH), condominium (R-1CO), multiple-family residential (R-3), various commercial (C) and the mixed-use-corridor (MUC) districts. Each of these districts allows a range of uses and many would be appropriate to allow the Community Mixed-Use development pattern by right or as a conditional use.




Exhibit 5: Future Land Use Descriptions

Future Land Use	Description	Intensity	Example photos
<p>Environmentally-Based Mixed Use</p>	<p>Allows for a variety of development options that range from conservation subdivisions to low intensity recreational and low intensity hospitality uses in support of eco-tourism. Some recreational uses may serve as transitional uses prior to conversion to higher intensity land uses.</p>	<p>Average Density: 1 dwelling unit (du)/net acre 0.2 du/gross acre (note: clustering to allow for smaller lot sizes)</p>	
<p>Low Density Neighborhoods*</p>	<p>Single family and attached residential lots that receive full urban services.</p>	<p>Average Density: 6 du/net acre 4 du/gross acre</p>	


*Low Density Neighborhoods are a sub-category of the existing Low Density Residential Future Land Use category



Future Land Use	Description	Intensity	Example photos
<p>Neighborhood Mixed Use</p>	<p>Permits a medium density mix of residential unit types and neighborhood-based commercial development with residential densities of 12 dwellings per acre or less. Commercial and civic areas are generally 1-2 stories and comprise not more than 10% of the gross acreage. Typically developed following TND principles. Parks and open spaces generally occupy at least 20% of the site area.</p>	<p>Average Density: 8 du/net acre; 5.6 du/gross acre</p> <p>Average FAR⁴: 0.3 net; 0.03 based on gross acre</p>	

⁴ FAR is an abbreviation for floor area ratio, which is calculated by dividing gross non-residential floor area by the net acreage of the non-residential area





Future Land Use	Description	Intensity	Example photos
<p>Community Mixed Use</p>	<p>Permits a full range of residential unit types and more intensive commercial development. Civic and commercial development generally will comprise up to 65% of the site area and may include buildings up to 6 stories in height. Sites located in close proximity to NOLA Motorsports are anticipated to have little or no residential development. Typically developed following TND principles, parks and open spaces generally occupy 20% of the site area.</p>	<p>Average Density: 12 du/net acre; 8 du/gross acre</p> <p>Average FAR: 0.5 net; 0.32 gross</p>	



Future Land Use	Description	Intensity	Example photos
<p>Corporate Campus</p>	<p>A development designed as a walkable, mix of employment and support services that often is centered around and managed by a single corporate entity, which includes offices with limited support retail and restaurants located within buildings or at the edge of the development. Limited high density residential uses may be located on the periphery of the site or on abutting parcels hotels in addition to other types of residential uses. FARs range from 0.40 to 1.0.</p>	<p>Average Density: 6 du/net acre; 0.6 du/gross acre</p> <p>Average FAR: 0.7 gross</p>	



Future Land Use	Description	Intensity	Example photos
<p>Business Park</p>	<p>Office building development of that may include limited support retail and restaurant, generally located in a park-like setting.</p> <p>FAR generally ranges from .20 to .50 depending on the size and number of buildings located within the business park.</p>	<p>Average Density: 0 dwelling units per acre</p> <p>Average FAR: 0.35 gross</p>	
<p>Industrial Park</p>	<p>A planned area that provides locations for production, warehouse/distribution, and office uses. FARs range from .10 to .50. Lower FARs are generally represented by distribution centers and light industrial office parks.</p>	<p>Average Density: 0 dwelling units per acre</p> <p>Average FAR: 0.25 gross</p>	


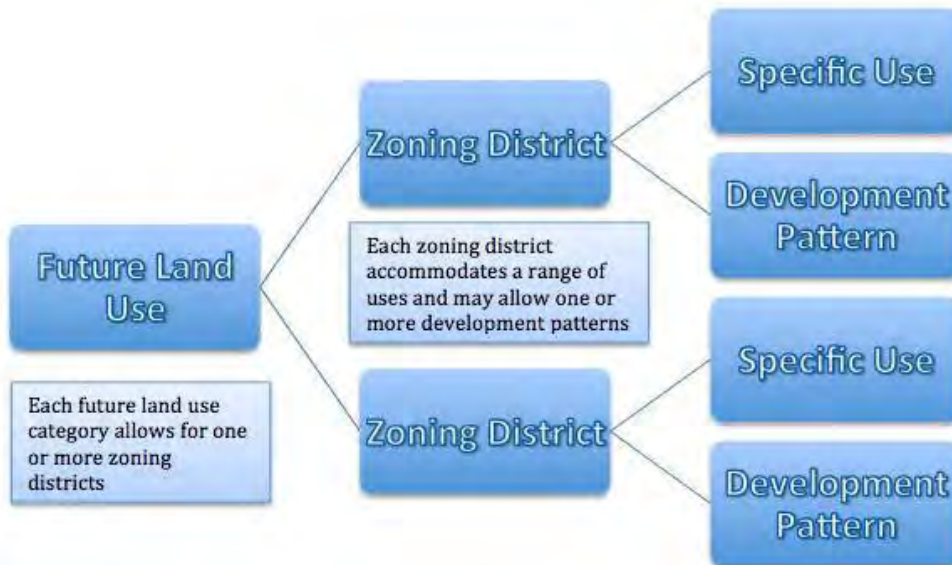
Future Land Use	Description	Intensity	Example photos
<p>Regional Recreation</p>	<p>Allows for a broad range of more intensive recreational uses, including racetracks, indoor and outdoor amusements, ATV trails and supporting uses, including hospitality uses, conference facilities, restaurants and residential uses.</p>	<p>Average FAR: 0.05 gross</p>	



Exhibit 6: Future Land Use Assumptions

Future Land Use	Average Density (dwellings per gross acre)	Dwelling Mix (detached/ attached)	Gross Floor Area Ratio (floor area/ site area)	Average Employees/ Gross Acre	Impervious Cover (percent)
Environmental Mixed Use	0.2	0.9	0	0	0.05
Regional Recreation	0	0	0.05	0.15	0
Low Density Neighborhood	4	0.8	0	0	0.4
Neighborhood Mixed-Use	5.6	0.8	0.03	5	0.5
Community Mixed-Use	8	0.1	0.32	50	0.8
Corporate Campus	0.6	0	0.7	40	0.8
Business Park	0	0	0.35	30	0.65
Industrial Park	0	0	0.25	20	0.65

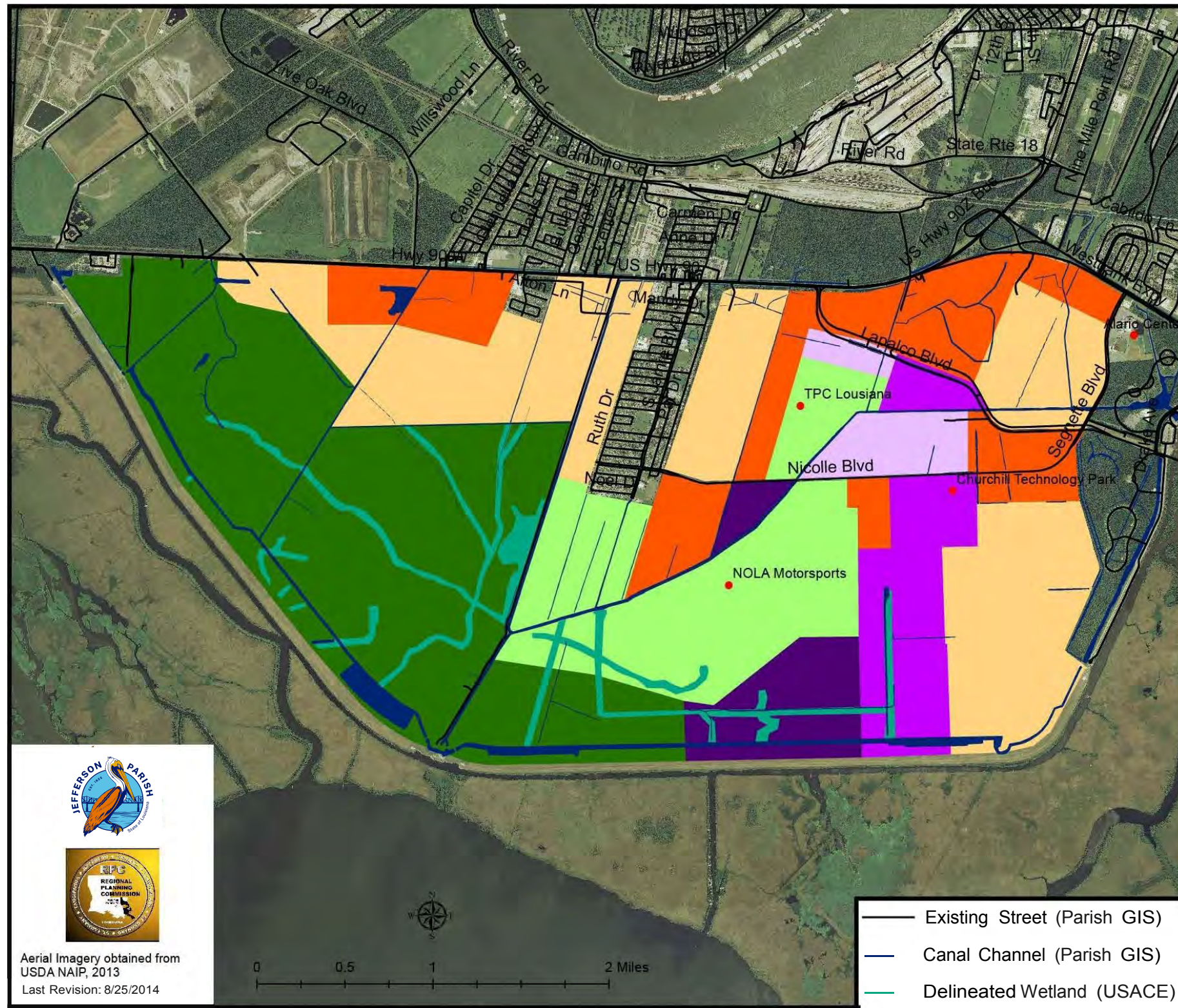
Exhibit 7: Future Land Use Categories, Zoning Districts and Development Patterns



3.1.2 Future Land Use Map

Exhibit 8 maps the desired future arrangement of development patterns within the Fairfield planning area. This map should supersede the existing future land use map for the Fairfield area and become the future land use categories that are used to guide future land use and development patterns in conjunction with the policy recommendations in following sections. The Future Land Use Map is intended to be a dynamic document that may be amended over time in response to changes in land use patterns and market demands. The UDC amendments recommended in subsequent sections describe more specific elements of the future land use map in **Exhibit 8**. The development potential resulting from this map is summarized in **Exhibits 9 through 13**. Note that while residential uses are allowed in regional recreation areas, no population has been projected because it is projected to generate insignificant traffic and utility demands for planning purposes.

Exhibit 8: Future Land Use Map



	Environmental Mixed Use 2,717 Acres
	Regional Recreation 1,222 Acres
	Neighborhood Mixed Use 2,037 Acres
	Community Mixed Use 1,121 Acres
	Corporate Campus 246 Acres
	Business Park 580 Acres
	Industrial Park 405 Acres

Aerial Imagery obtained from
USDA NAIP, 2013
Last Revision: 8/25/2014

- Existing Street (Parish GIS)
- Canal Channel (Parish GIS)
- Delineated Wetland (USACE)



Exhibit 9: Projected Dwelling Units by Future Land Use Category

Future Land Use	Dwelling Units at Build-Out
Environmental Mixed Use	543
Regional Recreation	-
Neighborhood Mixed Use	11,407
Community Mixed Use	8,968
Corporate Campus	148
Business Park	-
Industrial Park	-
Total	21,066

Exhibit 10: Projected Dwelling Units by Type

Dwelling Unit Type	Number of Dwelling Units at Build-Out
Detached	10,512
Attached	10,555
Total	21,066

Exhibit 11: Population and Employment at Build-Out

Population	51,979
Employees	101,758

Exhibit 12: Non-Residential Floor Area at Build-Out

Future Land Use	Gross FAR	Square Footage at Build-Out
Regional Recreation	0.05	2,661,516
Neighborhood Mixed Use	0.03	2,661,952
Community Mixed Use	0.32	15,625,843
Corporate Campus	0.7	7,501,032
Business Park	0.35	8,842,680
Industrial Park	0.25	4,410,450
Total		41,703,473



Exhibit 13: Employees at Build-Out by Future Land Use

Future Land Use	Employees per Acre	Employees
Regional Recreation	0.15	183
Neighborhood Mixed Use	5	10,185
Community Mixed Use	50	56,050
Corporate Campus	40	9,840
Business Park	30	17,400
Industrial Park	20	8,100
Total		101,575



3.1.3 Comprehensive Plan Policy Refinements

This section is intended to refine the policy direction of the Comprehensive Plan, clarifying how the Parish should implement the Future Land Use Map, authorize development patterns through its UDC and address existing deficiencies within the U-1 zoning district.

- **Compatibility with NOLA Motorsports.** The biggest compatibility challenges in the study area are those related to protecting the on-going success of NOLA Motorsports. As the site hosts more events, particularly Indy car and motorcycle events, separating and buffering residential uses from track noise becomes increasingly important.
 - **Separation.** Residential development should not be authorized within 3,000 feet of the primary track at NOLA Motorsports unless part of a mixed-use structure that is designed to either separate residential uses from the direct exposure to the noise or built to noise reduction standards that reduce internal noise below 60 dBA for race events.
 - **Mitigation.** Residential development located within 1 mile of the primary track at NOLA Motorsports should be designed to mitigate anticipated noise from race events. Mitigation may use any combination of structural buffers, vegetative buffers and noise reduction construction standards that will mitigate noises below 60 dBA.
- **Internal Compatibility.** Mixed-use neighborhoods should be designed so that the scale, orientation and design of uses and structures are internally compatible. These factors should be addressed in the Parish's UDC requirements for potential development patterns.
- **External Compatibility.** The Parish's UDC should foster compatible transitions between different land uses and development patterns through a combination of appropriate buffers, building design standards and site design requirements.
- **Housing Choice.** The Future Land Use map provides opportunity for a broad range of housing choices to serve a wide range of ages, family types, and income groups. Property owners should be encouraged to incorporate work force housing units into neighborhood and community mixed-use areas. Additionally, the Parish should consider providing incentives for the development of units that are designed to be accessible to older residents and individuals with disabilities.
- **Economic Vitality.** The Parish should foster economic vitality through the establishment and enforcement of minimum design standards for residential, mixed-use, and non-residential development that incorporate the smart growth principles identified in Chapter 1 of this Plan.
- **Mobility.** The ability to move people and goods throughout a community means more than expediting high volumes of cars and trucks. It includes the ability to easily get to regular destinations, such as schools, libraries, shopping, entertainment and work by walking and biking. New development should establish highly interconnected, complete streets systems that facilitate access to institutional and commercial services to reduce automobile dependency for residents. Complete streets are those that effectively serve the needs of motorists, bicyclists, pedestrians, transit riders and the uses that abut those streets.
- **Phasing and Fiscal Integrity.** Each development will generate costs for infrastructure and services that should be addressed through appropriate phasing and infrastructure funding strategies to ensure that new development will generate positive fiscal returns for the Parish and thereby enhance the Parish's ability to provide adequate public facilities and services.



- **Neighborhood Quality.** Mixed-use development standards should be applied through the UDC to promote neighborhood stability through compatible mixes in dwelling types, commercial services, and recreational amenities.

3.1.4 Zoning Text Refinements

Effective development regulation will be one of the keys to promoting and protecting private investment required to achieve this Strategic Plan’s purposes. The amendments described in this section will primarily affect the Parish’s zoning map and its Unified Development Code (UDC), though some modifications to other existing zoning sections are recommended.

U-1 Zoning District Amendments. As discussed previously, the U-1 zoning has been an asset and a liability to development in Fairfield. The use flexibility of the district can be a positive tool, particularly when developing more intensive uses. However, the lack of design standards and off-site mitigation requirements is more likely to deter investment in smart growth neighborhoods than to foster it. The Parish should consider requiring greater scrutiny of uses that are inconsistent with the Future Land Use Map for the Fairfield area.

Planned Development District. Jefferson Parish should adopt a planned development district as part of its UDC that would enable the development of specific development patterns (e.g., neighborhood mixed-use, community mixed-use, conservation subdivisions, business parks, corporate campuses, and industrial parks) if a property owner proposes deviation from the standards of a development pattern. Rezoning to a planned development district would require approval of a preliminary development plan for review by the Planning Advisory Board and Parish Council as a condition of rezoning. Final site plans for planned developments that are consistent with preliminary Council approval of the development plan could then be approved by the Planning Director to expedite the development review process and increase predictability for developers. The Planned Development process should provide the flexibility for innovative development that achieves adopted goals, while deviating from specific district or development pattern standards.

Development Pattern Standards. Good design and use management are critical to the stability of mixed-use development. In Jefferson Parish, one only needs to look to Fat City to see the results of allowing an unfettered mix of uses without design guidance for buildings, sites (including parking, landscaping, setbacks and access) and roadways. The introduction of clear design guidance and the commitment to resolve infrastructure deficiencies have given many property owners the confidence to invest in redevelopment in that area. While each development pattern will require distinct site and building development standards, each development pattern should address:

- **Use Mix.** This should address allowable uses and a range of proportions of the total development that may be devoted to each use. For instance, in Neighborhood Mixed-Use developments, parks and open spaces should comprise at least 20 percent of the development, commercial uses should comprise not more than 5 percent and civic uses may comprise up to 5 percent of the total acreage. The applicant should have the flexibility to determine the mix of residential unit types based on overall density limits.
- **Intensity.** This establishes the range of densities (dwelling units per acre) and floor area ratios (FAR or the ratio of floor area to site area) for non-residential development. Given the importance of stormwater management, this may also address the maximum percentage of impervious coverage.



- **Building Envelopes.** These standards establish the setbacks (maximum as well as minimum in some circumstances), building heights, and transitions between different land uses.
- **Building Orientation.** Where there is a mix of uses and pedestrian traffic is encouraged, building orientation is critical to minimize land use conflicts and protect pedestrians. For instance, garage bays and loading docks should be oriented so that they do not interfere with pedestrian traffic, face main streets or face residences without visual buffers.
- **Building Form.** For mixed-use developments that are pedestrian-oriented or in close proximity to residences, the Parish should address elements of building form, such as entries, windows (to avoid blank walls along commercial sidewalks), building materials, scale and rooflines. These standards can be drafted to allow for a wide range of architectural styles and building designs.
- **Parking.** Locations, orientation, design and amount of parking are important elements of the form of buildings and have a significant impact on walkability of commercial areas.
- **Landscaping and Buffering.** Landscaping standards should provide for an attractive streetscape and, where appropriate, be used to screen or buffer certain areas, such as loading docks and mechanical equipment. Landscaping design standards should be coordinated with street, parking and open space design to create safe, inviting, livable and walkable neighborhoods. In addition to the aesthetic benefits, landscaping design should be a key element of the stormwater management system discussed later in this analysis.
- **Outdoor Uses.** The Churchill Technology Park has restrictions on outdoor operations and storage that would not apply to other employment areas. Development patterns should address this for employment areas and for commercial areas to enable appropriate outdoor operations and display, and limit incompatible operations and displays.
- **Signage.** Effective sign standards for pedestrian-oriented development areas are distinct from those in commercial corridors and business park areas.
- **Lighting.** The design, orientation and brightness of lighting are critical in mixed-use areas to minimize spillover lighting. Given the relatively undeveloped nature of the area, the Parish has the opportunity to capitalize on the natural qualities of this area by establishing dark skies requirements.

3.2 Transportation

3.2.1 Arterial System Layout and Design

Projected Trip Generation. Identifying the magnitude and locations of traffic demands through trip generation analysis is the first step in determining the need for future transportation system improvements. The Strategic Plan defines the locations of different future land uses and their potential intensities, which is the basis for the projected trip demands shown in **Exhibit 14**. The focus of this analysis is to establish the general alignment of the arterial system needed to serve the area, the phasing of improvements, identify the costs, and the potential funding sources for the arterial network.



Exhibit 14: Projected Trip Generation

Future Land Use	Acres	Residential Dwelling Equivalent	Commercial Area (ft ²)	AM Peak Hour			PM Peak Hour			Average Trips Generated Per Peak Hour	Average Daily Traffic
				Residential Trip Rate (per dwelling)	Commercial Trip Rate (per 1000ft ²)	Peak AM Trips Generated (VPH)*	Residential Trip Rate (per dwelling)	Commercial Trip Rate (per 1000ft ²)	Peak PM Trips Generated (VPH)*		
Environmental Mixed Use	2,717	543	-	0.75	-	407	1	-	543	475	5,303
Neighborhood Mixed Use	2,037	11,407	2,661,952	0.55	1.71	10,826	0.71	1.48	12,039	11,432	38,808
Regional Recreational	1,222	-	2,661,516	-	1.92	5,110	-	2.22	5,909	5,509	14,324
Business Park	580	-	8,842,680	-	0.82	7,251	-	0.85	7,516	7,384	28,057
Industrial Park	405	-	4,410,450	-	1.4	6,175	-	1.26	5,557	5,866	24,774
Corporate Campus	246	148	6,000,826	0.55	0.78	4,762	0.71	0.74	4,546	4,654	13,897
Community Mixed Use	1,121	8,968	15,869,997	0.55	1.71	32,070	0.71	1.48	29,855	30,962	113,597
				Total		66,601			65,964	66,283	238,760

Trip Rates Source: ITE Trip Generation 9th Edition

*Vehicles Per Hour



Recommended Arterial Street Network. The recommended arterial network, shown in **Exhibit 15 and Exhibit 16** (with Trip Generation), is based on a variety of factors. In addition to the existing and projected traffic demands resulting from build-out development consistent with the Future Land Use map, the arterial street network takes into account existing development, existing streets, ownership patterns spacing between arterial connections along US 90, wetlands and waterways. As previously mentioned, the alignment of arterials should be adjusted to reflect the results of current wetlands and floodplain studies, as well as the results of engineering studies and specific development proposals

Exhibit 15: Recommended Arterial Street Network

Existing and Proposed Arterial Street Network with Draft Preferred Future Land Use



Source (Caption)
This map was prepared by the Regional Planning Commission for Jefferson Parish, Louisiana, in partnership with the Louisiana Department of Transportation and Development (DOTD), and the United States Geological Survey (USGS). The map is intended for informational purposes only and does not constitute a contract or warranty of any kind. The map is provided as a service to the public and is subject to change without notice. The map is not to be used for any other purpose without the express written consent of the Regional Planning Commission. The map is not to be used for any other purpose without the express written consent of the Regional Planning Commission. The map is not to be used for any other purpose without the express written consent of the Regional Planning Commission.

Disclaimer
The data on this map was derived from various sources, including the Louisiana Department of Transportation and Development (DOTD), the United States Geological Survey (USGS), and other public domain sources. The data is provided as a service to the public and is subject to change without notice. The map is not to be used for any other purpose without the express written consent of the Regional Planning Commission.

USGS

Legend

<all other values>

flu

- Business Park
- Community Mixed Use
- Corporate Campus
- Env-Based Mixed Use
- Industrial Park
- Neighborhood Mixed Use
- Regional Recreational

Existing Roads

Existing Roads to be Improved Nicolle Blvd - 2 mi; Avondale Garden Rd - 2.5 mi

Proposed Roads

Live Oak- 1 mi; Avondale Garden Rd. - 2.5 mi; N/S A- 2 mi; Segnette Blvd. Ext- 4.25 mi; Nicolle Blvd. Ext- 3.5 mi

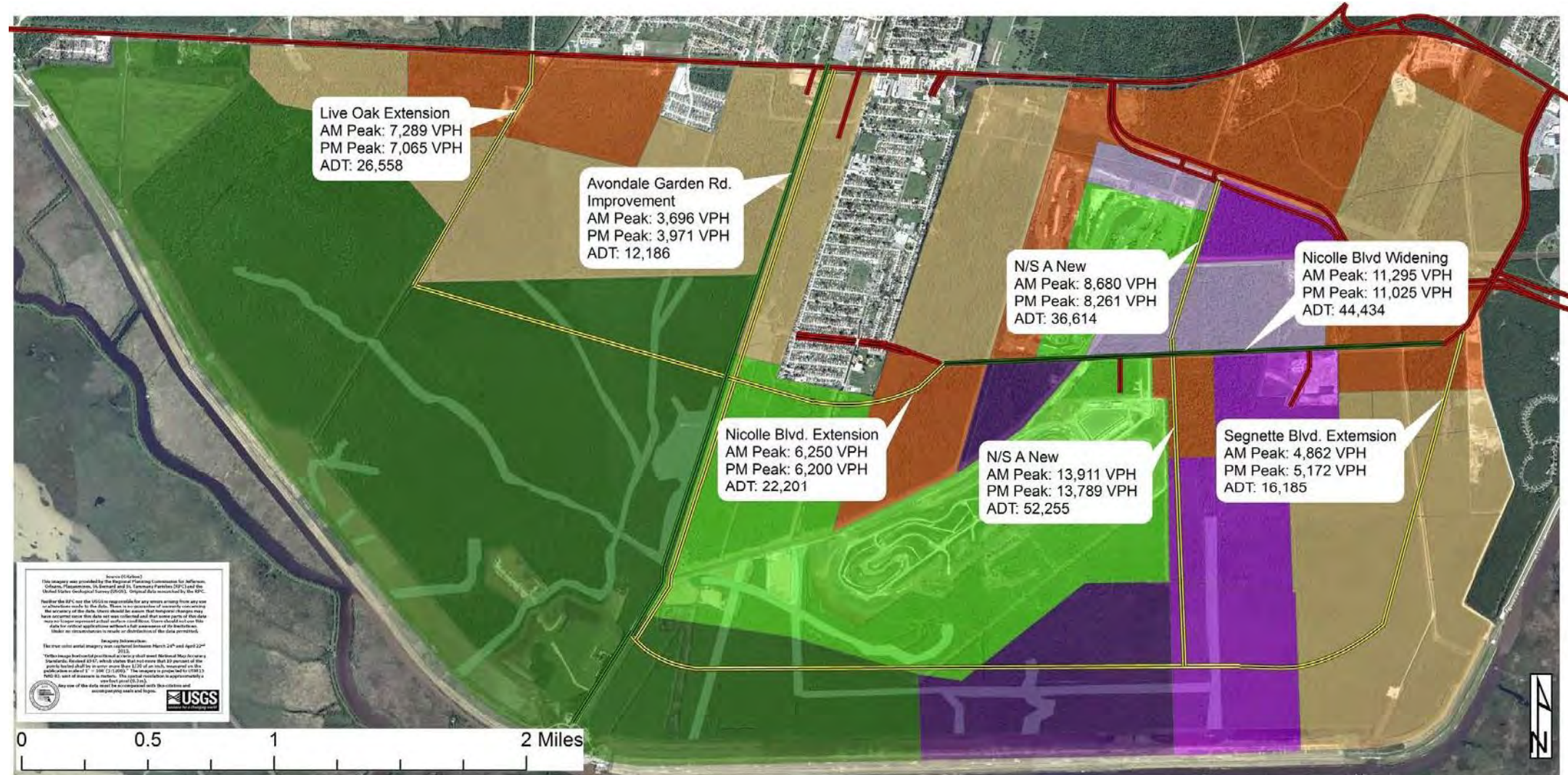
0 0.5 1 2 Miles

Data Source:
Imagery: RPC 2014
Street Centerlines/Wetlands: Jefferson Parish GIS Data 2014

Date: 9/2/2014

Exhibit 16: Recommended Arterial Street Network with Trip Generation

Trip Generation Projections for New and Improved Arterial Segments



Legend

<flu>
future land use

- Business Park
- Community Mixed Use
- Corporate Campus
- Env-Based Mixed Use
- Industrial Park
- Neighborhood Mixed Use
- Regional Recreational

Data Source:
Imagery: RPC 2014
Street Centerlines/Wetlands: Jefferson Parish GIS Data 2014
Trip Generation: ITE 9th Edition

Existing Roads

Existing Roads to be Improved Nicolle Blvd - 2 mi; Avondale Garden Rd - 2.5 mi

Proposed Roads Live Oak - 1 mi; Avondale Garden Rd. - 2.5 mi; N/S A - 2 mi; Segnette Blvd. Ext - 4.25 mi; Nicolle Blvd. Ext - 2.25 mi

Date: 9/17/2014

Future Land Use Trip Generation projections for the study area are presented in approximate AM and PM peak hour rates and projected average daily traffic. Traffic volumes are representative of the land use and development patterns trip generation demands for the identified segment. Traffic volumes are not compounded to the connecting segment.

VPH: Vehicles Per Hour
ADT: Average Daily Traffic

For Planning Purposes Only



Arterial Cross-Section Design. The arterial network should be built over time as new development increases traffic demands. Arterials should start with a two-lane (one each direction) cross-section and plan as shown in the top drawing of **Exhibit 17 and 18**, respectively. When more capacity is needed, additional lanes should be constructed inwards towards the median as shown in the bottom drawing in the exhibits. This enables a more orderly and cost-effective development of an arterial network that serves all users throughout the life of the road. The proposed cross-sections should accommodate 5,000 to 25,000 vehicles per day at a design speed of 35 to 45 miles per hour. Depending on the location and abutting uses, intersections should be separated by 300 to 1,320 feet. Note that context sensitive design may result in some modifications to needed right-of-way width, particularly to accommodate needed stormwater retention, detention or conveyance facilities.

Arterial and collector roadways will be designed to manage stormwater runoff within the rights-of-way. Boulevard medians will be designed to receive stormwater from the paved vehicular, bicycle, and pedestrian zones, and filter out pollutants through a system of bioswales designed to manage rainfall from a 24-hour 10-year storm event. Native trees along the bioswales and sidewalks will absorb stormwater, allowing them to thrive, grow and create lush shaded streets. In addition to the transportation, stormwater management and aesthetic benefits of this approach, the vegetation will help mitigate noise from traffic and individual uses.

Exhibit 17: Typical Two- and Four-Lane Arterial Cross-Sections

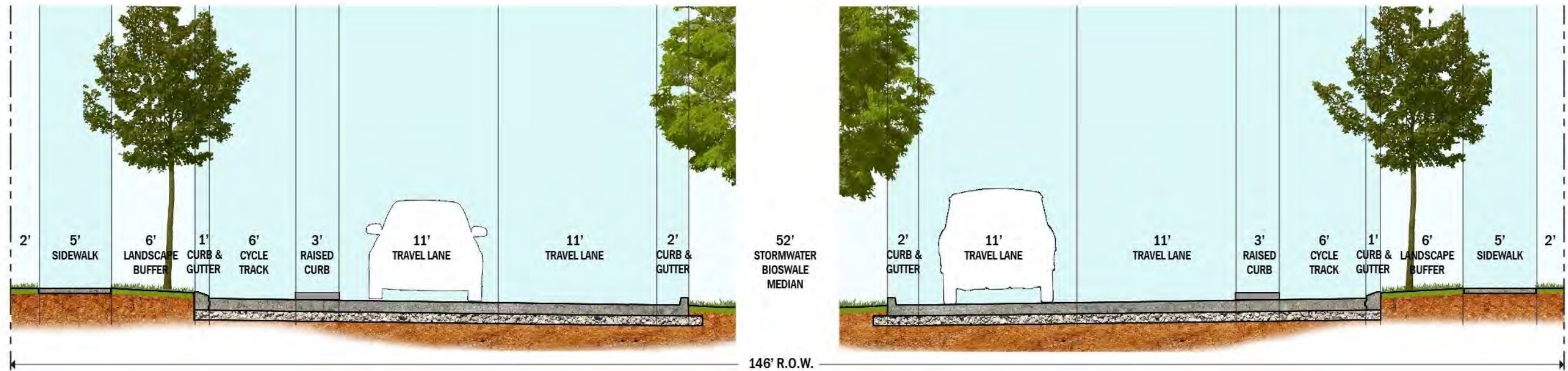
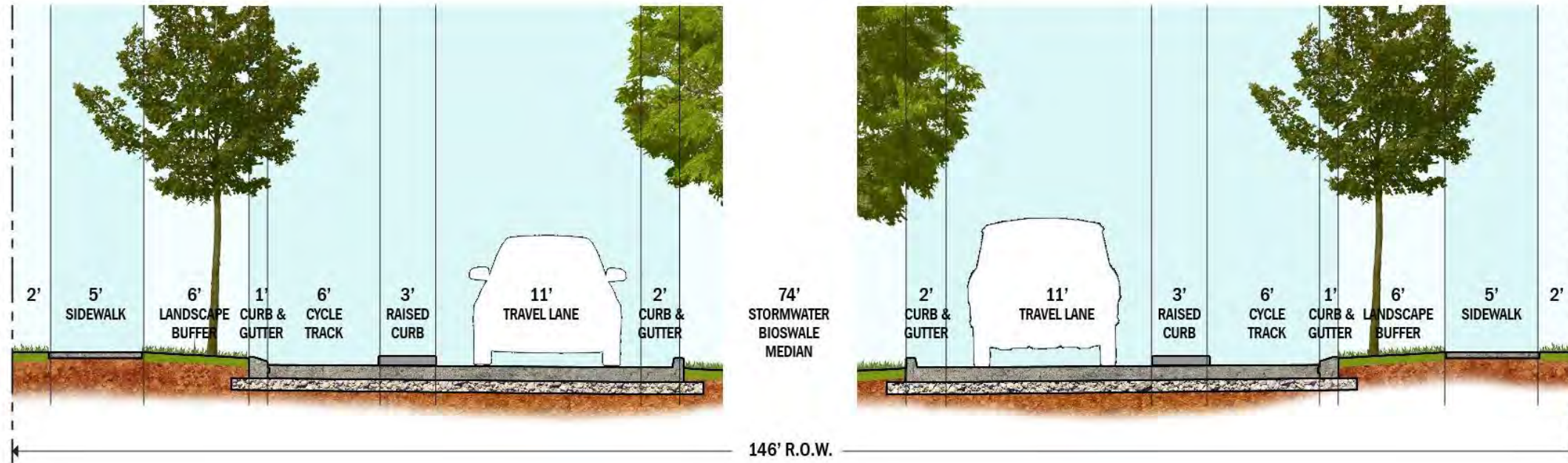
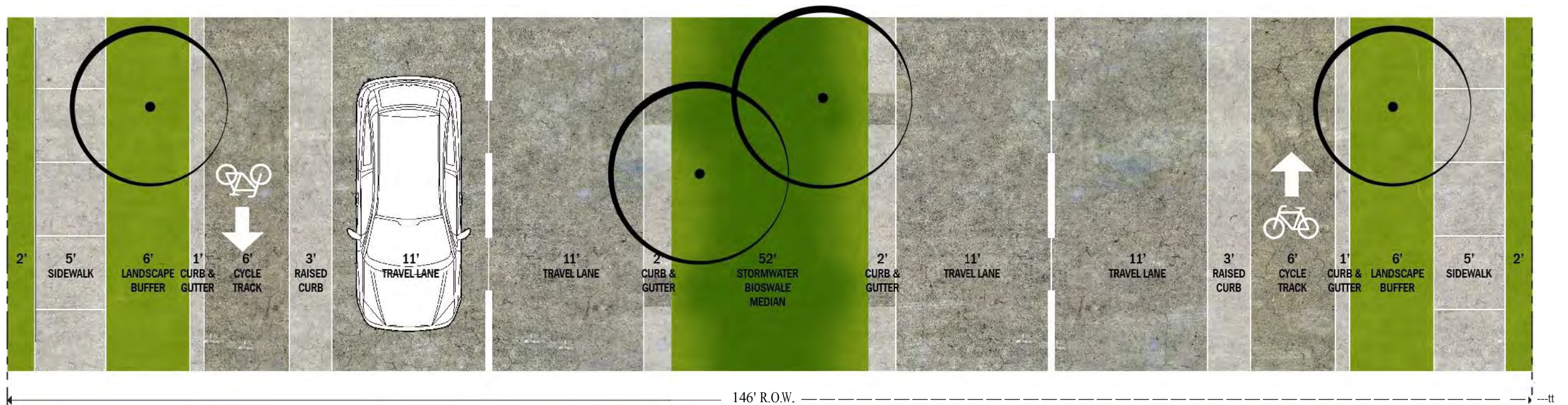
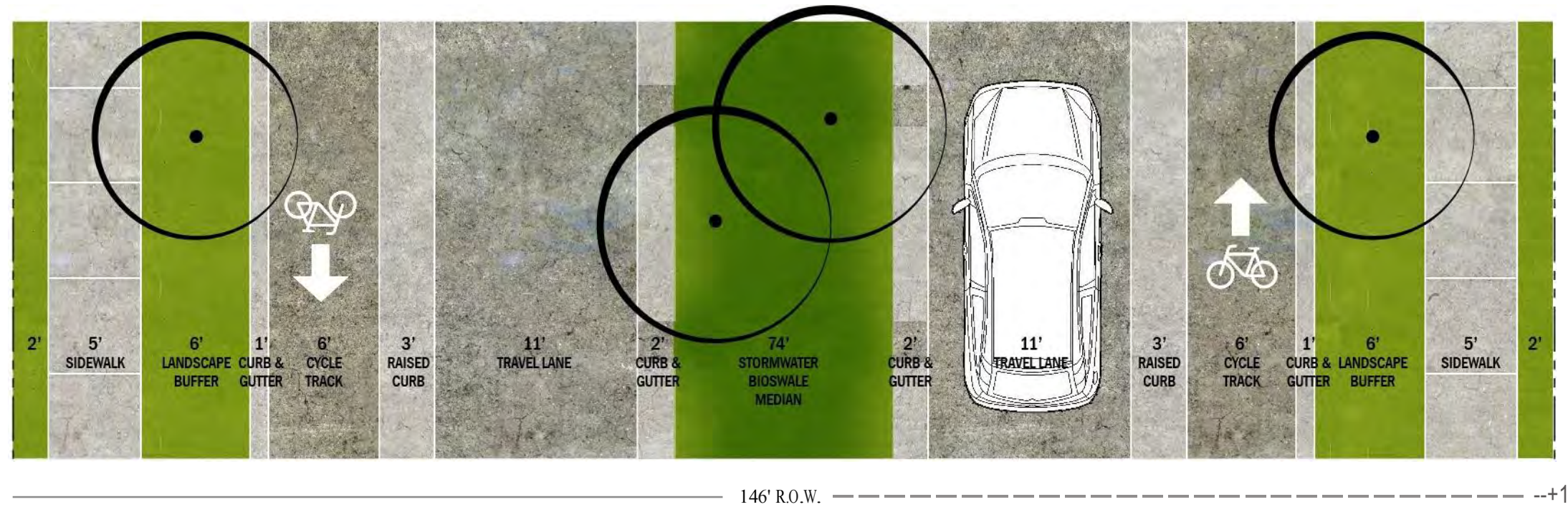


Exhibit 18: Typical Two- and Four-Lane Arterial Plans



Phasing: As discussed earlier, funding for the arterial network will be a significant challenge, which increases the importance of developing a rational plan for phasing improvements. Initial system improvements should include:

Nicolle Blvd. Widening. The widening of Nicolle Blvd. to better accommodate existing and projected traffic demands from the NOLA Motorsports events and the opening of Delgado Community College's new campus. If insufficient funding is available for the widening in 2015, the Parish should consider the interim installation of turn lanes at Churchill Parkway and NOLA Motorsports.

Nicolle Blvd Extension/Avondale Garden Rd. Improvement. The next improvements should include the extension of Nicolle Blvd to the west, turning to the south of Avondale Homes, and crossing Avondale Gardens Canal to intersect with an improved Avondale Garden Rd. The Nicolle Blvd. extension and Avondale Garden Rd. improvements should happen concurrently. The Nicolle/Avondale Garden improvements will provide additional connectivity both internally and externally and facilitate access to key traffic generators. It also will reduce the burden of increased traffic within Avondale Homes.

Exhibit 19: Nicolle Blvd Widening



Other arterial improvements should be phased as development occurs and sufficient funding becomes available. Subsequent environmental and design studies will determine locations of wetlands to be avoided as well as the final alignments needed to minimize the costs for culverts and bridges. Development of each phase of arterial system improvements should achieve the following objectives:

- Safely serve all modes of traffic;
- Serve new development concurrent with demands;



- Maximize the fiscal benefits from available funding; and
- Reinforce the Parish's objectives for promoting high quality employment and residential growth.

Funding: Exhibit 20 shows the projected costs of the proposed arterial system improvements. Actual costs will vary based on alignments, required road elevations, wetlands mitigation requirements and stormwater management needs. Financial resources are limited in Jefferson Parish, the State of Louisiana and the Federal government. Phasing will require sensitivity to available funding and aggressive pursuit of funding from all available public and private sources. Jefferson Parish general funds, bonds, and matches to Federal programs are likely the most feasible options for providing the Parish's share of funding. The eastern portion of the study area encompasses the Churchill Economic Development District that generates ½% sales tax to be used to fund economic development projects and infrastructure improvements within the boundaries of the district. The Parish should consider expanding the boundaries of this district to include the shell road on the west side of Avondale Garden Road because of the importance of the road as an arterial road. Due to the lack of public funding, the private sector should be expected to play an active role in funding the arterial system. The Parish should consider available tools to promote private investment in the provision of right-of-way and some portion of improvement costs.



Exhibit 20: Projected Arterial Road Network Costs

Street Name	Length (in miles)*	Cost (per mile)**	Total Cost**
Segnette Blvd. extension	4.25	\$ 3,500,000	\$ 14,875,000
Nicolle Blvd. extension	2.25	\$ 3,500,000	\$ 7,875,000
Nicolle Blvd. widening	2	\$ 3,000,000	\$ 6,000,000
Live Oak Blvd. extension	1	\$ 3,500,000	\$ 3,500,000
Avondale Garden Rd. improvement from US 90 to Nicolle Blvd. (west of canal)	1.25	\$ 3,000,000	\$ 4,375,000
Avondale Garden Rd. improvement from Nicolle Blvd. to Pump Station (west of canal)	1.5	\$ 3,000,000	\$ 4,500,000
Avondale Garden Rd. extension (east of canal)	2.5	\$ 3,500,000	\$ 8,750,000
N/S A (north of Nicolle Blvd.)	0.75	\$ 3,500,000	\$ 2,625,000
N/S A (south of Nicolle Blvd.)	1.25	\$ 3,500,000	\$ 4,375,000
Total	16.75		\$ 56,875,000
* in current planned network; two vehicular travel lanes as per typical section; approximate length			
** in 2014 dollars; approximate cost			

Right-of-way Preservation: Ideally, right-of-way should be secured as soon as precise alignments of the arterial streets are finalized. Where development is proposed before adequate right-of-way is secured, the Parish should establish setbacks that shift proposed development outside the planned right-of-way. This will ensure that right-of-way is protected and avoid development encroachments that could create unnecessary extraordinary costs of retrofitting arterial streets needed to serve those developments.

Collector and Local Street Design and Development: Future development patterns should establish standards for collector and local street design. While many existing Parish standards may apply based on the type of roadway, its general purpose (i.e., what type of traffic it is to handle) and number of lanes necessary to achieve the purpose, the development patterns for mixed-use development should ensure that block lengths are short enough to facilitate walking and bicycling. In general, roads should be designed to promote internal and external connectivity and where appropriate, include bicycle lanes or shared use paths, parking lanes (if applicable), medians and islands, pedestrian enhancements, landscaping and lighting.

3.3 Utilities

3.3.1 Meeting Utility Capacity Needs

Before significant additional development can occur in the Fairfield planning area, Jefferson Parish will need to establish a preferred strategy to increase wastewater treatment capacity and to convey wastewater from the study area to the existing wastewater treatment plant. In addition, the success of planned development will require the assessment of the best ways to supply sufficient potable water to meet projected water demands, which entails providing additional



water treatment and conveyance capacity to supply water at adequate pressures to meet normal and emergency fire flow demands. The water and wastewater demand projections from within the planned development area, shown in **Exhibit 21**, are intended to facilitate this analysis and planning effort. The public works, sewer, and water departments should be included early in development design to ensure demands can be met. Jefferson Parish should encourage innovative design and construction alternatives to ensure environmental best practices and reduced operation and maintenance costs.

Key challenges that the Parish must address include:

- Identifying the most cost-effective water transmission and distribution system improvements or operational changes required to maintain adequate water pressures and volumes as development occurs.
- Modifying or increasing capacity of the current water treatment plant so it can supply adequate fire flow and potable water to new development.
- Increasing the capacity of the current wastewater treatment system so it can accept flow from new development.
- Phasing lift station and force main improvements to convey wastewater from the planning area to the expanded wastewater treatment plant.



Exhibit 21: Projected Water and Wastewater Demands

Future Land Use	Acres	Dwelling Equiv.	Residential Pop. Equiv.	Commercial FAR (Ft ²)	Commercial Pop. Equiv.	Water				Wastewater			
						Residential Flow (Gal/capita-day)	Commercial Flow (Gal/capita-day)	Residential Demand (Gal/Day)	Commercial Demand (Gal/Day)	Residential Flow (Gal/capita-day)	Commercial Flow (Gal/capita-day)	Residential Demand (Gal/Day)	Commercial Demand (Gal/Day)
Environmental Mixed Use	2,717	543	1,357	-	-	100	20	135,700	-	80	15	108,560	-
Neighborhood Mixed Use	2,037	11,407	28,217	2,661,952	10,185	100	20	2,821,700	203,700	80	15	2,257,360	152,775
Regional Recreational	1,222	-	-	2,661,516	183	100	5	-	915	80	4	-	732
Business Park	580	-	-	8,842,680	17,400	100	20	-	348,000	80	15	-	261,000
Industrial Park	405	-	-	4,410,450	8,100	100	20	-	162,000	80	15	-	121,500
Corporate Campus	246	148	370	7,501,032	9,840	100	20	37,000	196,800	80	15	29,600	147,600
Community Mixed Use	1,121	8,968	22,035	15,625,843	56,050	100	20	2,203,500	1,121,000	80	15	1,762,800	840,750
						Σ		5,197,900	2,032,415			4,158,320	1,524,357
						Total		7,230,315				5,682,677	



3.3.2 Planning Area Utility Improvement Requirements

For the purposes of this Strategic Plan, water/wastewater (w/ww) demands are planned to be met by systems configured to extend along the outer reaches of each of the future land use pattern boundaries. As discussed above, off-site improvements to provide wastewater and water capacity will require planning efforts that exceed the scope of this plan.

Exhibits 22 and 23 show the projected improvements and costs required to adequately address water distribution and wastewater collection demands within the planning area. The pipe sizes for the waterlines are based on the potential population density and land usage. For areas that are considered sparsely populated, an 8-in. diameter waterline is used. Land development areas that are projected to be more densely populated are designed using a 10-in. diameter pipe. For the more intensive commercial and industrial areas, 12-in. diameter pipe is assumed to be used.

To calculate the peak flow rates for wastewater, Q_p , a peaking factor of four is multiplied by the estimated wastewater flow. The diameter of the sewer gravity pipe is estimated based on the calculated Q_p for the corresponding future land use area. For areas with a relatively low Q_p , less than 600 gallons per minute, a 8-in. diameter pipe is placed throughout the area. For a Q_p greater than 600 gallons per minute and less than 1000 gallons per minute, the gravity pipe size at the beginning of the system is set at 8-in. diameter at the start of the conveyance system and increased by 2-in. when applicable. For a Q_p greater than 1000 gallons per minute, the pipe is initially set at 10-in diameter at the start of the conveyance system. It is increased by 2-in. increments when necessary.



Exhibit 22: Projected Water System Improvements and Costs

Water									
Future Land Use	Hydrants	Residential Service Connections	Commercial Service Connections	8" Gate Valves	10" Gate Valves	12" Gate Valves	8" dia. PVC	10" dia. PVC	12" dia. PVC
Environmental Mixed Use	70	510		50			26,400		
Neighborhood Mixed Use	80	9,420	130	60		10	28,900		3,200
Regional Recreational	60		120	50			25,500		
Business Park	50		100			30			17,100
Industrial Park	30		150			20			8,700
Corporate Campus	20	10	50			10			6,600
Community Mixed Use	30	1,280	290		30			14,200	
Total:	340	11,220	840	160	30	70	80,800	14,200	35,600

Water				
Equipment	Unit of Measure	Unit Price	Quantity	Total Price
Hydrants	EA	\$ 6,100	340	\$ 2,074,000
Residential Waterline Service Connections	EA	\$ 500	11,220	\$ 5,610,000
Commercial Waterline Service Connections	EA	\$ 5,000	840	\$ 4,200,000
8" Gate Valves	EA	\$ 2,565	160	\$ 410,400
10" Gate Valves	EA	\$ 3,220	30	\$ 96,600
12" Gate Valves	EA	\$ 3,875	70	\$ 271,250
8" dia. PVC/C-900 Pipe	EA	\$ 76	80,800	\$ 6,140,800
10" dia. PVC/C-900 Pipe	LF	\$ 96	14,200	\$ 1,363,200
12" dia. PVC/C-900 Pipe	LF	\$ 116	35,600	\$ 4,129,600
500,000 Gallon Elevated Storage Tank	LS	\$ 1,600,000	1	\$ 1,600,000
New Water Plant*				
Water Plant Expansion/Modifications*				

Total: \$ 25,895,850.00
 20% Contingency: \$ 5,179,170.00

Water Grand Total: \$ 31,075,020.00

*To be determined. Not part of this scope.



Exhibit 23: Projected Wastewater System Improvements and Costs

Wastewater														
Future Land Use	Manholes	Lift Stations	Residential Service Connections	Commercial Service Connections	8" dia. PVC Force Main (LF)	10" dia. PVC Force Main (LF)	12" dia. PVC Force Main (LF)	14" dia. PVC Force Main (LF)	30" dia. PVC Force Main (LF)	8" dia. PVC Gravity (LF)	10" dia. PVC Gravity (LF)	12" dia. PVC Gravity (LF)	14" dia. PVC Gravity (LF)	
Environmental Mixed Use	90	11	510		2,200				21,500	26,400				
Neighborhood Mixed Use	110	9	9,420	130		800	800	200				14,300	15,700	2,100
Regional Recreational	90	10		120	2,000						25,500			
Business Park	60	8		100	1,600						17,100			
Industrial Park	30	4		150	800						8,700			
Corporate Campus	20	3	10	50	600						6,600			
Community Mixed Use	50	5	1,280	290		600	400					9,900	4,300	
Total:	450	50	11,220	840	7,200	1,400	1,200	200	21,500	84,300	24,200	20,000	2,100	

Wastewater				
Equipment	Unit of Measure	Unit Price	Quantity	Total Price
Manhole	EA	\$ 9,000	450	\$ 4,050,000
Residential Sewer Service Connection	EA	\$ 1,000	11,220	\$ 11,220,000
Commercial Sewer Service Connection	EA	\$ 5,000	840	\$ 4,200,000
Lift Station (GPM < 50)	EA	\$ 500,000	10	\$ 5,000,000
Lift Station (50 < GPM < 4000)	EA	\$ 750,000	26	\$ 19,500,000
Lift Station (4000 < GPM < 7000)	EA	\$ 1,000,000	14	\$ 14,000,000
Lift Station (GPM > 7000)	EA	\$ 1,500,000		\$ -
8" dia. PVC Force Main	LF	\$ 80	7,200	\$ 576,000
10" dia. PVC Force Main	LF	\$ 85	1,400	\$ 119,000
12" dia. PVC Force Main	LF	\$ 90	1,200	\$ 108,000
14" dia. PVC Force Main	LF	\$ 95	200	\$ 19,000
30" dia. PVC Force Main	LF	\$ 339	21,500	\$ 7,288,500
32" dia. PVC Force Main	LF	\$ 347		\$ -
42" dia. PVC Force Main	LF	\$ 387		\$ -
8" dia. PVC Gravity	LF	\$ 108	84,300	\$ 9,104,400
10" dia. PVC Gravity	LF	\$ 132	24,200	\$ 3,194,400
12" dia. PVC Gravity	LF	\$ 156	20,000	\$ 3,120,000
14" dia. PVC Gravity	LF	\$ 180	2,100	\$ 378,000
New Wastewater Treatment Plant*				
Wastewater Plant Expansion/Modifications*				

Total: \$ 81,877,300
 20% Contingency: \$ 16,375,460
Sewer Grand Total: \$ 98,252,760

*To be determined. Not part of this scope.



3.3.3 Funding Utility Improvements

Jefferson Parish's service rates and capital charges are likely to be inadequate to fund the major system improvements to provide adequate water and wastewater services to for all planned development. While some funding for the water system may be available through Safe Drinking Water and Clean Water State Revolving Funds, serving the Fairfield area will require public and private participation in funding major system improvements.

Investments in water and wastewater infrastructure can pay substantial dividends to a community's public health, environment, and economy. Phasing and funding of improvements are key to ensuring that the Parish can maintain competitive rate structures. While the off-site phasing issues are discussed above, the most appropriate on-site phasing plan depends on how water and wastewater improvements are funded.

Water and wastewater system extension policies that promote more efficient growth will enable the Parish to provide more cost-effective services. Minimum pipe sizes, requirements that utilities be extended through properties and participation in on-site improvement costs will reduce some cost shifting to the existing rate base. The key policy decision facing the Parish is to determine the proportions of system improvement costs required for the Fairfield planning area that should be borne by existing rate-payers and private property owners who will be served by the improvements. When making this decision, the Parish must balance the economic benefits of facilitating new development with the costs of increasing utility rates.

3.4 Stormwater Management

3.4.1 Stormwater Goals

Through the implementation of green infrastructure, Fairfield should be able to successfully manage the first hour of rain in a 10-year design storm. By achieving this, flooding as a result of the frequent storms seen in the region would be mitigated. Residents and business owners would be able to maintain their daily routines, as is not the case in other areas of the Parish. It is the goal of this Strategic Plan to establish a green infrastructure conceptual design and implementation system that would improve water quality, reduce localized flooding, reduce long term infrastructure and maintenance costs, and create desirable spaces for recreation, nature, and public use.

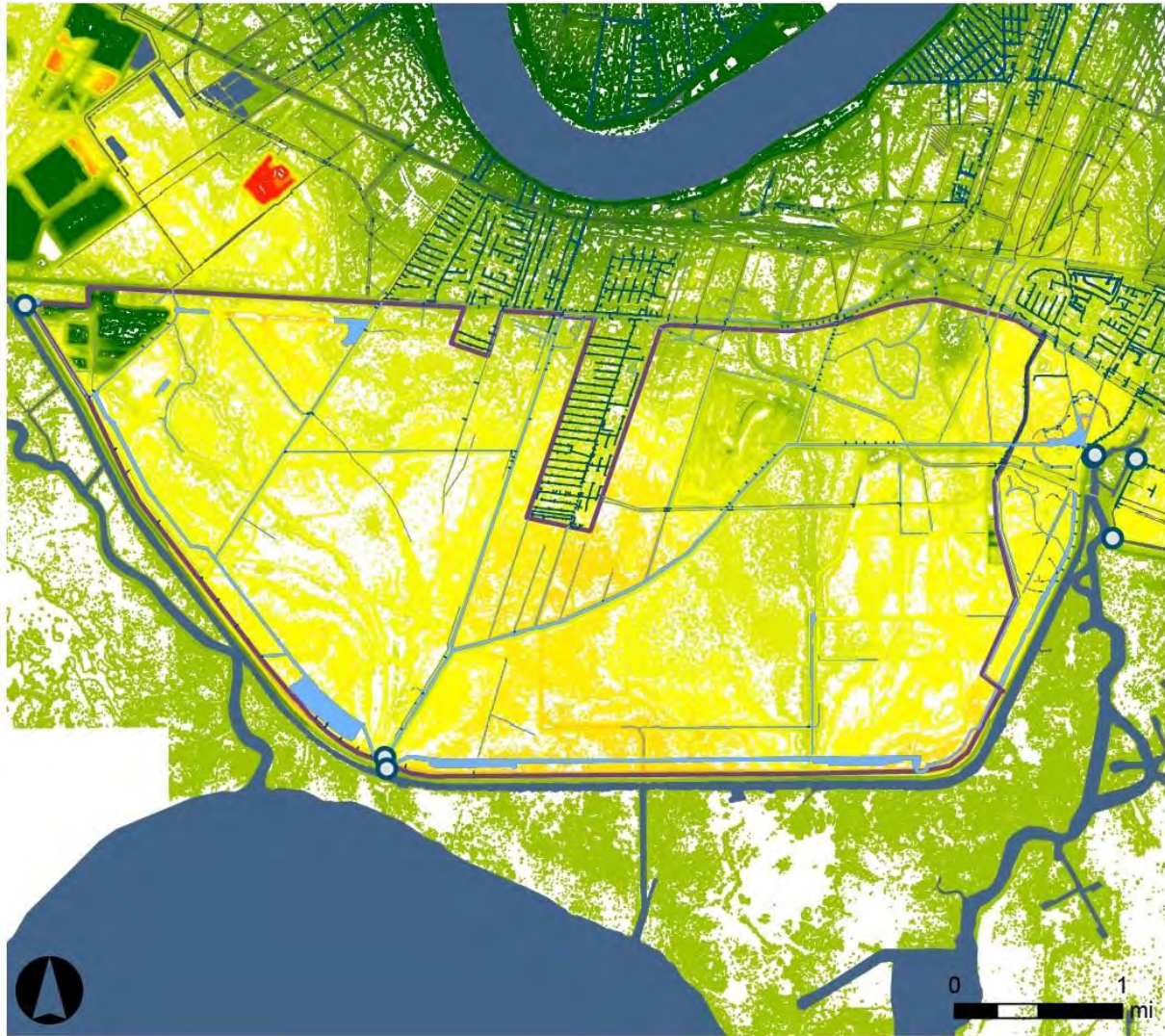
3.4.2 Existing Elevation & Drainage

As **Exhibit 24** demonstrates, Fairfield has a generally flat topography with very minor increases and decreases in elevation throughout the site. A majority of the site falls in the elevation range of -3 to -8 feet. Higher points on the site are located in the northeastern and northwestern portions, where the elevation ranges from -2 to 5 feet. The lowest areas of the site are located along the southern perimeter, just inside the levee, where the elevation ranges from -11 to -8 feet. Lands surrounding the Fairfield site sit at slightly higher elevations, especially near the Mississippi River.

Stormwater drainage data provided by the Jefferson Parish Department of Public Works indicates that stormwater drainage pipes are present in developments along River Road, U.S. 90, and Lapalco Boulevard. Within the Fairfield site, there is a system of drainage canals that lead to the pump stations along the levee; however, there are few to no drainage pipes within the site.



Exhibit 24: Existing Elevation and Drainage



— Canal	— -20 -	— -15	— -10	— -5	— 0	— 5	— 10
— Pipe	— -19	— -14	— -9	— -4	— 1	— 6	— 11+
● Pump	— -18	— -13	— -8	— -3	— 2	— 7	
● Pump Station	— -17	— -12	— -7	— -2	— 3	— 8	
Study Area	— -16	— -11	— -6	— -1	— 4	— 9	

ROAD GRID

The road grid shows developed areas surrounding the project site.



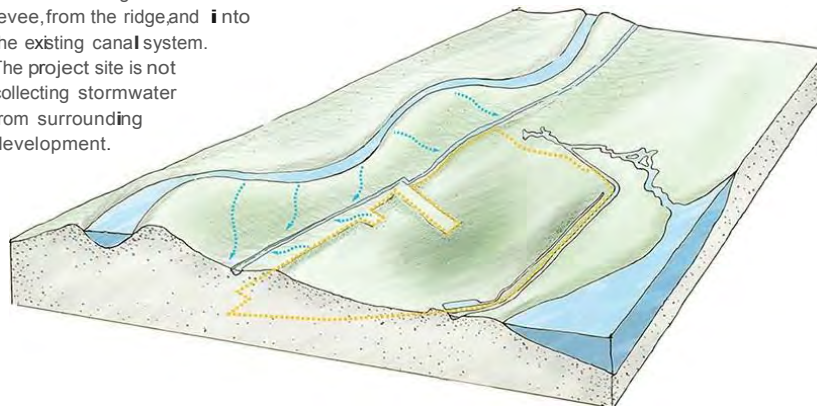
PIPES & CANALS

Pipes from surrounding development drain into the existing canal system. The canals transport stormwater to the pump stations.



TOPOGRAPHY

Run-off is draining from high elevations along the levee, from the ridge, and into the existing canal system. The project site is not collecting stormwater from surrounding development.





3.4.3 Stormwater Runoff & Storage Projections

The following projections are based on estimations of density, FAR, land area, and impervious cover listed in **Exhibit 6: Development Assumptions**. The values below were calculated using data for a 10-year, 1-hour storm in the Greater New Orleans area, or a rainfall intensity of 8.5 inches over a 1-hour period. A 10-year storm indicates a storm that has a 10 percent chance of being equaled or exceeded in any one year over a 10-year period. The values in the “Projected Runoff” and “Required Green Infrastructure” columns are measured in acre-feet, which is the volume of one acre of surface area to a depth of one foot. The mean “Percent Impervious” was calculated using a weighted mean based on a future land use pattern’s percent of total area.

Exhibit 25: Stormwater Runoff and Storage Projections

Future Land Use	Area (ac)	Percent of Total Area	Percent Impervious	Projected Runoff (cf)	Projected Runoff (ac/ft)	Required GI (ac/ft)
Environmental Mixed Use	2,717	33%	5%	17,109,912	393	393
Regional Recreation	1,222	15%	40%	9,463,766	217	217
Neighborhood Mixed Use	2,037	24%	50%	16,698,283	383	383
Community Mixed Use Corporate	1,121	13%	80%	10,846,568	249	249
Campus Business	246	3%	80%	2,380,246	55	55
Park	580	7%	65%	5,169,711	119	119
Industrial Park	405	5%	65%	3,609,884	83	83
Total	8,328	100%		65,278,370	1,499	1,499
Mean			41%	9,325,481	214	214

3.4.4 Stormwater Capital Cost Projections

Coordinating green infrastructure with the beginning phases of planning and construction will save time and resources for developers. In low-density developments the average cost for the implementation of green infrastructure would equal approximately \$28,000 per acre. Moderately dense areas would be around \$37,000 per acre, and areas of high-density development would equal around \$68,000 per acre. The tables below further explain the initial breakdown of probable costs for the implementation of green infrastructure throughout each development type. Six inches of above ground storage is used uniformly across all future land use patterns, which resulted in 12-36 inches of below ground storage to create profiles that are commonly used for stormwater management in developed areas.



Exhibit 26: Low Density Future Land Use Pattern

Environmental Mixed Use	
6 Inch Storage	
Above Ground (ac/ft)	Below Ground (ac/ft)
258	135

Environmental Mixed Use Costs				
<i>Excavation</i>	1,140,673	CY	\$20	\$22,813,458
<i>Hydroseeding</i>	516	AC	\$4,000	\$2,064,920
<i>Subgrade Aggregate</i>	724,248	CY	\$40	\$28,969,929
<i>Miscellaneous: plants, pipes, etc.</i>	1	LS	\$13,462,077	\$13,462,077
			Subtotal	\$67,310,384
			15% Contingency	\$10,096,558
			TOTAL	\$77,406,942





Exhibit 27: Moderate Density Future Land Use Patterns

Business Park	
6 Inch Storage	
Above Ground (ac/ft)	Below Ground (ac/ft)
51	68

Business Park Costs				
<i>Excavation</i>	447,189	CY	\$20	\$8,943,788
<i>Hydroseeding</i>	102	AC	\$4,000	\$406,000
<i>Subgrade Aggregate</i>	365,313	CY	\$40	\$14,612,516
<i>Miscellaneous: plants, pipes, etc.</i>	1	LS	\$5,990,576	\$5,990,576
			Subtotal	\$29,952,880
			15% Contingency	\$4,492,932
			TOTAL	\$34,445,812





Industrial Park	
6 Inch Storage	
Above Ground (ac/ft)	Below Ground (ac/ft)
35	47

Industrial Park Costs				
<i>Excavation</i>	312,262	CY	\$20	\$6,245,231
<i>Hydroseeding</i>	71	AC	\$4,000	\$283,500
<i>Subgrade Aggregate</i>	255,089	CY	\$40	\$10,203,567
<i>Miscellaneous: plants, pipes, etc.</i>	1	LS	\$4,183,075	\$4,183,075
			Subtotal	\$20,915,373
			15% Contingency	\$3,137,306
			TOTAL	\$24,052,679





Neighborhood Mixed Use	
6 Inch Storage	
Above Ground (ac/ft)	Below Ground (ac/ft)
255	129

Neighborhood Mixed Use Costs				
<i>Excavation</i>	1,102,992	CY	\$20	\$22,059,849
<i>Hydroseeding</i>	509	AC	\$4,000	\$2,037,000
<i>Subgrade Aggregate</i>	692,198	CY	\$40	\$27,687,932
<i>Miscellaneous: plants, pipes, etc.</i>	1	LS	\$12,946,195	\$12,946,195
			Subtotal	\$64,730,976
			15% Contingency	\$9,709,646
			TOTAL	\$74,440,623





Regional Recreation	
6 Inch Storage	
Above Ground (ac/ft)	Below Ground (ac/ft)
183	34

Regional Recreation Costs				
Excavation	1,365,513	CY	\$20	\$27,310,255
Hydroseeding	367	AC	\$4,000	\$1,466,400
Subgrade Aggregate	182,619	CY	\$40	\$7,304,767
Miscellaneous: plants, pipes, etc.	1	LS	\$9,020,356	\$9,020,356
			Subtotal	\$45,101,778
			15% Contingency	\$6,765,267
			TOTAL	\$51,867,044

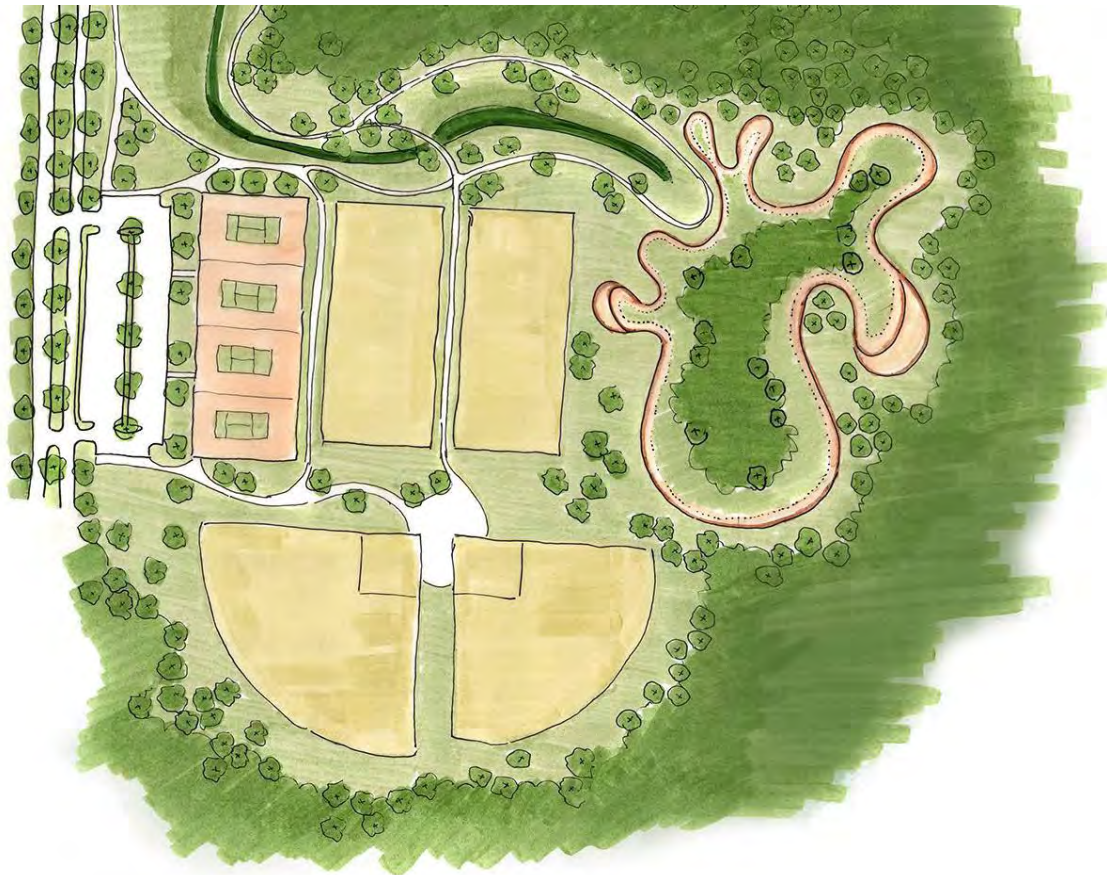




Exhibit 28: High Density Future Land Use Patterns

Community Mixed Use	
6 Inch Storage	
Above Ground (ac/ft)	Below Ground (ac/ft)
95	154

Community Mixed Use Costs				
<i>Excavation</i>	980,385	CY	\$20	\$19,607,706
<i>Hydroseeding</i>	191	AC	\$4,000	\$762,280
<i>Subgrade Aggregate</i>	826,659	CY	\$40	\$33,066,366
<i>Miscellaneous: plants, pipes, etc.</i>	1	LS	\$13,359,088	\$13,359,088
			Subtotal	\$66,795,4400
			15% Contingency	\$10,019,316
			TOTAL	\$76,814,756





Corporate Campus	
6 Inch Storage	
Above Ground (ac/ft)	Below Ground (ac/ft)
12	42

Corporate Campus Costs				
<i>Excavation</i>	247,554	CY	\$20	\$4,951,087
<i>Hydroseeding</i>	25	AC	\$4,000	\$98,400
<i>Subgrade Aggregate</i>	227,710	CY	\$40	\$9,108,415
<i>Miscellaneous: plants, pipes, etc.</i>	1	LS	\$3,539,475	\$3,539,475
			Subtotal	\$17,697,377
			15% Contingency	\$2,654,607
			TOTAL	\$20,351,984





3.4.5 Stormwater Analysis

As shown above in **Exhibit 25**, the preferred scenario produces a total projected runoff of 1,499 acre-feet that can be managed through green infrastructure. By effectively designing and planning green infrastructure to meet the runoff capacity throughout Fairfield and in each development pattern, Fairfield can be at the forefront of sustainable development for the Gulf South region. It can serve as a beautiful, recreation- and walking-friendly neighborhood while managing nearly 100 percent of its stormwater runoff on-site.

3.4.6 Stormwater Phasing

If Fairfield is to realize the full benefits of green infrastructure, a green infrastructure plan should be developed and implemented across the site. Green infrastructure design and installation should coincide with land development and roadway construction efforts to ensure proper functionality and minimize construction costs associated with error and incoordination. Rights-of-way (ROWs) can be utilized to detain stormwater with features such as roadside bioswales, median bioswales, permeable pavement in parking lanes, street trees, and more. Residential and commercial development can incorporate permeable paths and parking lots, bioretention cells (rain gardens), native plantings, and more. Detention areas can be designed as overflow zones for the retention water bodies that serve as a development amenity and enhance property values. Denser land uses, such as Community Mixed-Use and Corporate Campus, with less open space and room for green infrastructure, can direct their stormwater to other less dense developments that have an abundance of green infrastructure in order to meet overall stormwater capacity—this is why it is critical to implement green infrastructure as a system rather than as individual pieces throughout the site.

The goal should be to develop a series of stormwater treatment connections that bring together differing development patterns and double as functional travel, recreational, and aesthetic corridors. Design standards for each future land use can be created and implemented in early development phases, which can then be repeated in later development phases.



Chapter 4: Plan Implementation Program

The action plan in **Exhibit 29** is intended to be a dynamic tool to coordinate public and private actions within the Fairfield area. The initial action plan is focused on short-term, non-recurring actions to implement this plan. Subsequent revisions, which should occur on an annual basis, should document public and private commitments to continually improve the vitality and desirability of living and doing business in the Fairfield planning area.

Exhibit 29: Fairfield Action Plan

Action Number	Action	Coordinator	Year Initiated	Funding
1	Evaluate potential modifications to the U-1 zoning district to provide greater scrutiny of uses that are inconsistent with the Future Land Use map	Planning	2015	General Fund
2	Adopt Planned Development (PD) district	Planning	2015	General Fund
3	Create Development Patterns standards for: Conservation Subdivisions Regional Recreation Neighborhood Mixed Use Community Mixed Use Corporate Campus Business Parks Industrial Parks	Planning	2015	General Fund
4	Secure funding for phase 1 arterial system improvements to Nicolle Blvd, the Nicole Blvd extension and improvements to Avondale Garden Road	Public Works	2015	
5	Rename Nicolle Blvd to <i>Fairfield Pkwy</i> (from Lapalco Blvd to Pat Dr)	Public Works	2015	General Fund
6	Develop gateway signage at key entrance points to the Fairfield area	Public Works	2015	General Fund
7	Create a water and wastewater master and phasing plan for the existing Jefferson Parish systems to accept demands of the planning area	Public Works	2015	General Fund
8	Review and revise Strategic Plan as needed to incorporate changes resulting from wetlands delineation study	Planning and Public Works	2016	General Fund
9	Evaluate cost sharing alternatives to expedite construction of arterial street system improvements	Public Works	2016	General Fund

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Action Number	Action	Coordinator	Year Initiated	Funding
10	Finalize alignment and secure right-of-way for arterial system improvements to Nicolle Blvd, the Nicole Blvd	Public Works	2016	General Fund
11	Develop green infrastructure master plan for planning area	Public Works	2017	General Fund
12	Evaluate utility funding policies for off-site and oversized utilities	Public Works	2017	General Fund
13	Explore potential for improved access to Lake Cataouatche in coordination with affected property owners and the	Planning and Public Works	2017	General Fund
14	Begin improvements to Nicolle Blvd, the Nicole Blvd extension and improvements to Avondale Garden	Public Works	2017	General Fund



Appendix A

Project Management Committee, Working Group, Area Stakeholders

Project Management Committee

Walter Brooks, Executive Director, Regional Planning Commission
John F. Young Jr., President, Jefferson Parish
Meredith Soniat, Project Manager, Sustainability Planner Regional Planning Commission
Kazem Alikhani, P.E., Director, Jefferson Parish Public Works Department
Terri Wilkinson, Ph.D., AICP, Director, Jefferson Parish Planning Department
Mitch Theriot, P.E., Director, Jefferson Parish Drainage Department
Robin Christiana, Aide, Jefferson Parish Council At Large-B
Nelson Capote, LA DOTD
Marnie Winter, Director, Jefferson Parish Environmental Affairs Department
Linda Daly, P.E., Director, Jefferson Parish Sewerage Department
Brett Lawson, Aide, Jefferson Parish Council At Large-A
Casey Jumpiere, Aide, Jefferson Parish Council District 3
Randy Nicholson, Jefferson Parish Streets Department
Jerry Bologna, Executive Director, JEDCO
Ryan Brown, Director, Jefferson Parish Transit

Working Group

Walter Brooks, Executive Director, Regional Planning Commission
Jeff Roesel, Deputy Director, Regional Planning Commission
Meredith Soniat, Project Manager, Sustainability Planner, Regional Planning Commission
Terri Wilkinson, Ph.D., AICP, Director, Jefferson Parish Planning Department
Mark Drewes, P.E., Director, Engineering Department

Stakeholders

N. Buckner Barkley	Jamie Coleman	Michael O'Brien
Vincent Vastola	Kristine Strickland	Harry Molaison
Lori Ward	Stanton McNeely	Larry Kornman
Joseph Marcello	Bruce Crutcher	Laney Chouest
Bruce Wainer	Luke Farabaugh	Mike Sherman
Josh Wainer	Jack Stumpf	Jimmy St. Pierre