



South Carrollton Avenue Non-Motorized Transportation Enhancements Stage 0 Feasibility Study

FINAL REPORT

Task A-2.20SC; FY 20 UPWP

June 30, 2020

Contents

Project Overview	4
Existing Conditions	
Study Area	6
Review of Existing and Ongoing Plans	8
Demographics	20
Land Use and Zoning	24
Transportation	32
Design Concepts	62
Appendix A / Traffic Counts	
Appendix B / PMC Meeting Materials	
Appendix C / Stakeholder Meeting Summaries and Public Input	
Appendix D / Capacity Analysis	
Appendix E / Preliminary Scope and Budget Checklist	
Appendix F / Stage 0 Environmental Checklist	
Appendix G / Cost Estimates	

PROJECT OVERVIEW

The Regional Planning Commission (RPC), in coordination with the City of New Orleans, conducted this feasibility study for improved walking, bicycling, and transit facilities, as well as potential motor vehicle safety related improvements in the vicinity of the Carrollton Interchange, which joins Interstate 10 with Tulane Avenue, Airline Highway, and South Carrollton Avenue. The City of New Orleans has asked the RPC to develop and evaluate conceptual alternatives to enhance the safety, level of comfort, and accessibility of the Carrollton underpass for non-motorized users, while improving vehicular safety and efficiency where possible in the corridor.

The study area along South Carrollton Avenue lies beneath Interstate 10 and an adjacent rail corridor and is bounded by Tulane Avenue (US 61) and Palmetto/ Washington Avenue. The technical consultant team - Asakura Robinson, Urban Systems and Alta Planning + Design, assisted the RPC and City of New Orleans in the development and comparative analysis of facilities improvements within the study corridor.

South Carrollton Avenue is a 6-lane road functionally classified as an arterial roadway by LA DOTD. The study corridor moves significant volumes of motor vehicle traffic. Study area is bounded by a major arterial (Tulane Avenue) and minor arterial (Washington Avenue), and incorporates multiple access ramps connecting to Interstate 10. The corridor is also a key pedestrian and bicycle route linking the Mid-City and Dixon/Hollygrove neighborhoods and connecting to existing bike lanes on Tulane and Washington.

This section of S. Carrollton is also a major transit corridor. It is served by four RTA bus lines (the 27-Louisiana, 32-Leonidas, 39-Tulane and 90-Carrollton) and is designated for future high-capacity transit service by the Regional Transit Authority. The Tulane/South Carrollton intersection is a major transfer location, with RTA routes connecting to Jefferson Parish via the JeT E2 Airport bus.

This analysis addresses existing safety concerns along and immediately adjacent to the corridor and proposes potential improvements, which emphasize conceptual routes and improving existing facilities for non-motorized users to improve accessibility, transit service, and bike network connectivity.

Project Timeline and Milestones

	N 19	D 19	J 20	F 20	M 20	A 20	M 20	J 20
PMC Meetings	O			O		O		
Site Investigation								
Design Development								
Final Report								O

Project Management Committee

A Project Management Committee (PMC) was developed to foster coordination with agencies during the project development process. The PMC is comprised of lead and joint agency representatives and consultant study team members. The committee met multiple times during the study to review data inventory findings, to discuss alternative concepts and to review project costs.

Agencies and representatives who attended meetings during the study process are listed in the table below. PMC meeting materials are provided in Appendix B.

Name	Organization/Agency
Jeff Roesel	Regional Planning Commission
Jason Sappington	Regional Planning Commission
Samuel Buckley	Regional Planning Commission
Lynn Dupont	Regional Planning Commission
Tom Haysley	Regional Planning Commission
Leslie Couvillion	Regional Planning Commission
Louis Haywood	City of New Orleans Department of Public Works
Jennifer Ruley	City of New Orleans Department of Public Works
Daniel Jatres	City of New Orleans Mayor's Office of Transportation
Laura Bryan	City of New Orleans Mayor's Office of Transportation
Vivek Shah	New Orleans Regional Transit Authority
Arionne Edwards	New Orleans Regional Transit Authority
Elisabeth Stancioff	New Orleans Regional Transit Authority
Nicole Rizzo	Louisiana Department of Transportation and Development
Bao Le	Louisiana Department of Transportation and Development
Marion Bracy	Xavier University
Bruce Hamilton	Xavier University
Matt Rufo	Asakura Robinson
Kadence Hampton	Asakura Robinson
Nicole Stewart	Urban Systems
Matt Morgan	Urban Systems
Michael Palamone	Urban Systems
Alia Awwad	Alta Planning + Design
Joe Gilpin	Alta Planning + Design

EXISTING CONDITIONS

Study Area

The South Carrollton Avenue study area is defined as the square shape shown in the map at right, bounded by Cambronne, Ulloa Street, Broadway, and Palm Streets. The central focus of the study area is an approximately 0.3 mile stretch of South Carrollton Avenue between Washington Avenue/Palmetto Street and Tulane Avenue. The study area is a critical component in the city's – and region's – mobility network. It offers the only on and off ramps to and from Interstate 10 (I-10) to local Orleans Parish streets between City Park Avenue and the Central Business District. It therefore carries significant numbers of vehicles accessing major destinations in uptown New Orleans neighborhoods, such as Tulane, Loyola, and Xavier Universities; New Orleans Children's Hospital; and numerous commercial corridors and neighborhood business districts, as well as large shopping attractions such as Costco.

In addition to interstate access, the South Carrollton Avenue Underpass offers one of the few surface traffic crossings of I-10 corridor. It is the only motor vehicle, bicycle, and pedestrian crossing between City Park Avenue and Jefferson Davis Parkway, a distance of 1.5 miles. Consequently, it is also an important transit link, and carries the 28, 32, 39, and 90 Regional Transit Authority routes. The 39 Tulane route is particularly important, for its frequent and useful service between Ochsner Medical Center in Jefferson Parish and the Central Business District.

This segment of South Carrollton Avenue passes under the elevated, six-lane Interstate 10/Pontchartrain Expressway and two railroad overpasses carrying Class I freight trains and Amtrak passenger trains. The railroad overpasses, seen right, were reconstructed in 1958. This study refers to the underpass as the South Carrollton Avenue Underpass.

South Carrollton Avenue is a divided, local thoroughfare running from its western terminus near the Mississippi River in the Riverbend neighborhood of New Orleans to its Mid City terminus at Esplanade Avenue and Wisner Boulevard. Both the northeastbound (lakebound) and southwestbound (riverbound) segments of South Carrollton Avenue

vary from three to five lanes in width, including right-only and left-only turning lanes at intersections. From the intersection of Tulane Avenue and Airline Highway, riverbound South Carrollton Avenue is three driving lanes wide and expands to four driving lanes wide as the avenue passes under the South Carrollton Avenue Underpass. The added driving lane transitions to a left-only turning lane providing access to the I-10 on ramps as the avenue approaches Dixon Street, before the neutral ground replaces it. Beyond Dixon Street, which provides access to the Costco retail warehouse, the three driving lanes gain a right-only slip lane adjacent to Costco.

At the Palmetto Street intersection, lakebound South Carrollton Avenue is four lanes wide. The right most lane is designated for drivers accessing I-10 East, and the second right most lane allows drivers to access I-10 West, or to continue on lakebound South Carrollton Avenue. Beyond the I-10 access point, South Carrollton Avenue widens from three lanes to four lanes as the avenue passes under the interstate and railroad. The added, left-most lane is a left-only turning lane providing access to businesses on the upriver side of the avenue and continues as a left-only turning lane for drivers navigating toward Airline Highway and another on ramp to I-10 westbound. A right-only turning lane is provided at the intersection for drivers accessing river-bound Tulane Avenue.



South Carrollton Avenue Underpass prior to construction of the Pontchartrain Expressway. Source: Louisiana Digital Library

South Carrollton Avenue Study Area



Source: Regional Planning Commission



0 0.125 0.25 mile

- Study Area
- Railroad
- South Carrollton Avenue Study Segment
- South Carrollton Avenue Direct Access
- Elevated Roadways

Review of Existing & Ongoing Plans

This section provides summaries of several local and state plans and policy documents named in the project scope. A brief summary and table of relevant recommendations is included for each reviewed item.

Plan for the 21st Century

Owner: City of New Orleans

Adopted: 2010

Amended: 2016-2018


Available at: <https://www.nola.gov/city-planning/master-plan/>

The City Charter mandates the creation and administration of the Master Plan, formally known as The Plan for the 21st Century, which establishes a planning framework for the future growth and development of the City of New Orleans. The Plans holds "the force of law," meaning that land use actions must be consistent with its land use element. Recommended strategies pertaining to transportation and infrastructure are not considered directives with the same force of law. Nonetheless, these recommendations reflect priorities of the many community members who participated in the plan's development and the public officials who adopted the Master Plan. The following table lists the goals and recommended strategies relevant to the scope of this South Carrollton Avenue, by chapter/element.

VOLUME 2

chapter

TRANSPORTATION



11

GOAL	POLICIES FOR DECISION MAKERS	FOR MORE INFORMATION, SEE PAGE
1 Provide quality transportation infrastructure	1 A. Invest in our streets and maintain them in a state of good repair.	11.25
	1 B. Regularly monitor the condition of City off-system bridges and advance projects to address problems before they grow larger and become more expensive to fix.	11.26
	1 C. Improve and adapt Port facilities and infrastructure to leverage technological advances and changing cargo trends to remain competitive while protecting our quality of life.	11.27
	1 D. Coordinate with the State and other governments in the region to preserve and enhance the Louis Armstrong New Orleans International Airport as the preeminent airport facility in the State.	11.27
	1 E. Implement rail improvements to increase railroad safety, operating efficiency and fluidity.	11.27
	1 F. Enhance the RTA's infrastructure to support an upgraded transit network that focuses on access, safety, and timeliness.	11.28
2 Increase efficiency across all transportation modes	2 A. Develop and implement a Transportation System Management Strategy to increase capacity and maximize efficiency.	11.29
	2 B. Measure progress toward meeting the mode share goals of transit, bikes, walking and single occupancy vehicles.	
	2 C. Enable the efficient movement of freight.	11.30
	2 D. Encourage sustainable and healthy mobility choices.	11.31
	2 E. Improve connectivity between transportation modes.	11.31

Plan for the 21st Century Recommended Strategies

Chapter/Element	Goal	Recommended Strategies
Parks, Open/ Green Spaces and Recreation	2. Restoration and expansion of the New Orleans's urban forest to reach 50 percent tree canopy by 2030	2.A. Promote tree planting on public property.
		2.C. Restore and plant new trees in parks, open/green spaces and neutral grounds.
		2.D. Develop and establish storm water management practices in public parks, open/green spaces and neutral grounds.
	6. More green connectors throughout the city	6.A. Create linear parks and greenways for multi-use pathways using the city's neutral grounds and other linear connections, such as levees, canal edges and rail lines.
	7. Maintenance of existing parks, open/green spaces, and recreational sites to a high level through restoration, redesign, and reconstruction	7.C. Establish and maintain stormwater infrastructure in public spaces.
Enhancing Prosperity and Opportunity	2. Local government that supports high quality of life by delivering cost effective and efficient services to both businesses and residents	2.A Make New Orleans a safer more reliable city in which to live, work and play by ensuring basic service delivery. 2.A.1. Provide, maintain, and repair basic infrastructure and transportation systems for a safer, more dependable and efficient city
Community Facilities, Services and Infrastructure	2. Water, sewer and drainage infrastructure repaired, upgraded, safe and resilient	2. A. Rebuild the city's water, sewer and drainage system to add resiliency, improve efficiency, and preserve public health.
		2.B Prioritize, for capital spending, those projects that advance the Greater New Orleans Urban Water Plan principles and/or reflect stormwater best management practices.
	4. Cost, efficient, resource-efficient, well-maintained public facilities and services	4.E. Encourage citizens to become actively involved in the care and maintenance of public space and civic infrastructure in neighborhoods.

table continues on next page

Plan for the 21st Century Recommended Strategies, continued

Chapter/Element	Goal	Recommended Strategies
Transportation	1. Provide quality transportation infrastructure	1.A. Invest in our streets and maintain them in a state of good repair. 1.A.6. Consider and appropriately balance the needs of all users within the context of the City's Complete Streets program in the planning, design, construction, operation and maintenance of all capital improvement projects adjacent to or within the public right of way to meet our Complete Streets program goals.
		1.F. Enhance transit infrastructure to increase ridership and improve access to jobs and services.
	2. Increase efficiency across all transportation modes	2.D. Encourage sustainable and healthy mobility choices.
		2.F. Develop a great cycling city.
		2.G. Maximize walkability.
	3. Improve safety, accessibility, and quality of life for all transportation system users	3.A. Implement the adopted "Complete Streets Program."
		3.B. Implement the Vision Zero Safety program for the City of New Orleans to reduce traffic fatalities and severe injuries
		3.C. Improve and expand access to the transit network throughout the Region.
		3.E. Provide significant infrastructure investment to augment a pedestrian friendly environment, particularly where transit stops, schools, parks, and other pedestrian generators are located.
	5. Develop an environmentally sustainable and resilient transportation system.	5.B. Develop a transportation system that contributes toward a healthier environment for future generations through investments in multi-modal facilities and green infrastructure for stormwater management
Adapt to Thrive: Environmental Stewardship, Disaster Risk Reduction, and Climate Change	5. Improved environmental quality, increased resource efficiency, and economic growth through the mitigation of our climate impact	5.C. Encourage, incentivize, and expand low carbon transportation alternatives, including public transit, walking, and biking
	6. Environmental quality and justice through targeted investments in natural resources and improved ecosystem services.	6.A. Target investments in new and enhanced green spaces in areas of highest risk with the most vulnerable populations, underserved and low-income neighborhoods, and communities of color.

Moving New Orleans: The Road to Equitable Transportation

Owner: Mayor's Office of Transportation, City of New Orleans

Published: 2019

Available at: https://nola.gov/nola/media/311/MovingNewOrleans_5-2-19-2.pdf

The Mayor's Office of Transportation developed this action plan to "establish clear short-term goals" for Mayor LaToya Cantrell's administration. The plan was a collaborative effort by the Department of Public Works and City Planning Commission, and synthesizes priorities defined in the Master Plan, the RTA's Strategic Mobility Plan, Resilient New Orleans, Climate Action for a Resilient New Orleans, and the HousingNOLA 10 Year Strategy and Implementation Plan.

The Plan organizes the City's transportation efforts into four themes: Safety, Efficiency, Equity, and Connectivity. The table below lists the goals and recommended strategies relevant to the scope of the South Carrollton Avenue study, by chapter/element.

Among the plan's findings and referenced statistics are:

- Only 33% of the region's jobs are accessible within a one-hour transit trip, and only 11% in under 30 minutes (p. 8)
- From 2013-2017, an average of 50 people died each year in traffic crashes on city streets. Nearly 30% of these were killed while walking (p. 11)
- One in five New Orleans households do not own a car (p. 23)

Moving New Orleans: The Road to Equitable Transportation Action Items by Theme

Theme	Action
Safety	1. Improve the sidewalk network for pedestrians (conduct a sidewalk audit, install additional pedestrian signals, implement sidewalk improvements around public transit stops) (p. 12)
	2. Prevent crashes (implement improved street design guidelines, prioritize safety investments at high-frequency and high-injury crash locations, utilize funding in the Operations and Capital budgets to ensure that the City can deliver on these strategies) (p. 12)
	4. Develop a transportation safety dashboard (adopt a standard procedure for studying crash outcomes before and after making roadway safety improvements) (p. 13)
Efficiency	1. Improve traffic signals (Identify points of heavy congestion and bottlenecks within the City's roadway network and improve signalization to mitigate excessive delays) (p. 18)
Equity	1. Increase access to jobs (implement transit priority treatments in highest need corridors across the city, implement low-stress bike networks that connect residential areas to the downtown core) (p. 24)
	2. Link transportation to affordable housing (focus on areas with low-household income while planning and expanding the bike network) (p.24)
Connectivity	1. Plan and build a complete bike network (develop prioritization criteria to ensure equitable delivery of improvements taking into account factors like income, race, ethnicity, car-ownership, employment, and job access) (p. 32)
	2. Improve and expand the transit network (study existing transit network and connection to other parishes for improvements) (p. 32)

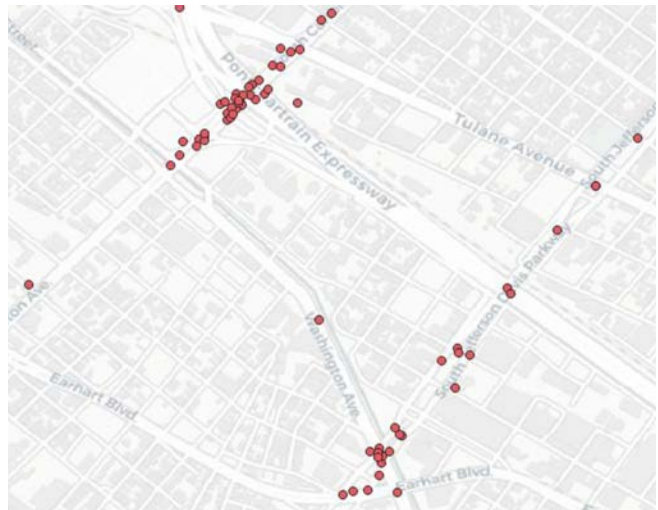
Moving New Orleans Bikes

Owner: Mayor's Office of Transportation, City of New Orleans

Published: 2019

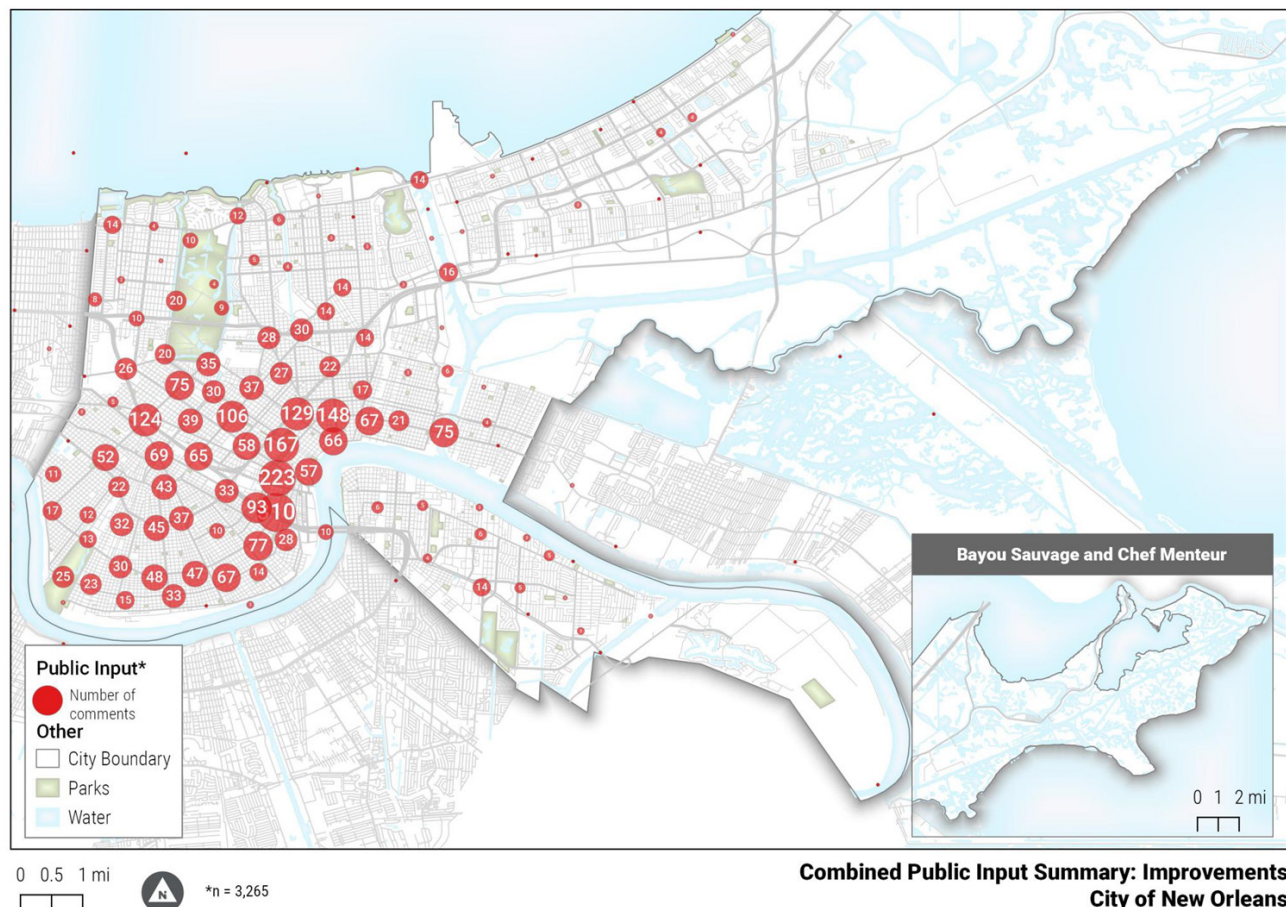
Available at: <https://nola.gov/transportation/moving-new-orleans-bikes/>

An initiative of the Mayor's Office of Transportation, Moving New Orleans Bikes is a city-wide bike plan launched in 2019 to create a comprehensive network of low-stress bikeways. Public engagement consisted of two rounds of public meetings and solicitation of input through an online survey and mapping tool. In a mapping activity, 124 comments indicated that the project study area is a high priority location for addressing bicycling challenges, as the city-wide and study area maps to the right show.



A close-up of the comment locations.

Public Input Summary by Location



Existing and Recommended Bikeways (Draft)



In July 2019, the Office of Transportation published a draft city-wide, low-stress bikeway network map. It calls for shared use paths on both sides of S. Carrollton Avenue between Tulane and Washington Avenues.

City of New Orleans Americans with Disabilities Act Transition Plan for Public Rights-of-Way

Owner: Department, City of New Orleans

Published: June 15, 2013

Updated: March 7, 2018

Available at: <https://nola.gov/dpw/documents/ada-transition-plan-3-7-18-update/>

The Transition Plan is an internal Department of Public Works document that establishes a prioritized set of street intersections within the city's public right-of-way to upgrade for pedestrian accessibility. The document fulfills a the Americans with Disabilities Act requirement that public agencies develop a plan to make their facilities accessible to people with disabilities, as provided in the U.S. Access Board's Public Right of Way Accessibility Guidelines (PROWAG). These guidelines govern design of numerous existing elements within the public right-of-way and alterations to them. These elements include but are not limited to: sidewalks, street crossings, curb ramps, pedestrian signals, protruding objects, signs, street furniture, transit shelters, on-street parking spaces, passenger loading zones, stairways, handrails, and doors.

While the Plan does not include the project study area among its list of priority intersections to improve, it establishes the policy that alterations to any existing street be accessible to people with disabilities in accordance with the PROWAG.

City of New Orleans Complete Streets Program

Owner: City Council, City of New Orleans

Adopted: December 15, 2011

Available at: https://library.municode.com/la/new_orleans/codes/code_of_ordinances?nodeId=PTIICO_CH146STSIOTPUPL_ARTIISTGE_DIV1GE_S146-36COSTPR

Section 146-36 of the City's municipal code of ordinances spells out its complete streets program, which requires "all planning, designing, funding, operation and maintenance of the city's transportation system to accommodate and encourage travel for all users in a balanced, responsible and equitable manner consistent with, and supportive of, the surrounding community." The City may exempt roadway segments only if:

- The segment prohibits nonmotorized use by law,
- The City documents an absence of current and future need or use of segment by nonmotorized users,
- The cost of accommodating all users is 20% or more of the total project cost, or,
- The project involves routine, minor maintenance activities, such as cleaning, pothole and catch basin repair, or temporary measures on detour or haul routes. This excludes road overlay projects.

Whereas this law governs responsibilities of DPW and the City Planning Commission, Mayoral Policy Memorandum No. 134 (July 1, 2016),¹ establishes a Complete Streets Policy that broadens the responsibility of implementing complete streets principles to all City departments involved in "the planning, design, construction, operation and maintenance of all capital improvement projects adjacent to or within the public right of way."

¹ <https://www.nola.gov/chief-administrative-office/policies/policies/no-134-complete-streets-program/>

Louisiana Department of Transportation and Development (DOTD) Complete Streets Policy

Owner: DOTD, State of Louisiana

Revised: April 19, 2016

Available at: http://wwwsp.dotd.la.gov/Inside/LaDOTD/Divisions/Multimodal/Highway_Safety/Complete_Streets/Misc%20Documents/cs-la-dotpolicy.pdf

Similar to the City of New Orleans' Complete Streets Program, DOTD's Complete Streets Policy commits the agency to ensuring "a fully integrated transportation system, by planning, funding, designing, constructing, managing, and maintaining a complete and multi-modal network that achieves and sustains mobility, while safely accommodating pedestrians, bicyclists, and transit users."

Specifically, the policy states that DOTD "should plan, fund, and design sidewalks and other pedestrian facilities" on all roadway projects serving areas with existing development or transit service and "provide bicycle accommodations appropriate to the context of the roadway."

DOTD governs the design, construction, and operation of surface roadways underneath highway infrastructure, including the underpass segment of South Carrollton Avenue beneath Interstate 10.

Destination Zero Deaths / Louisiana Strategic Highway Safety Plan

Owner: The Louisiana Department of Transportation and Development (DOTD), the Louisiana State Police (LSP), and the Louisiana Highway Safety Commission (LHSC)

Revised: July 2017

Available at: <http://www.destinationzerodeaths.com/Images/Site%20Images/ActionPlans/SHSP.pdf>

The Strategic Highway Safety Plan sets and monitors progress toward achieving state highway safety goals and objectives, such as reducing the number of statewide traffic fatalities and serious injuries by 50% by 2030. It finds that the state is on track to meet this goal for overall fatalities and overall severe injuries. The five-year rolling average number for each have experienced meaningful declines between 2009 and 2016. However, these figures have increased for non-motorized users, rising from 114 fatalities in 2014 to 131 in 2016, and from 141 severe injuries in 2010 to 180 in 2016.

The Plan identifies five "emphasis areas" to address through various objectives and strategies. These are: Impaired Driving; Occupant Protection; Infrastructure and Operations; Crashes Involving Young Drivers; and Distracted Driving. Of these, Infrastructure and Operations is most relevant to the scope of the South Carrollton Avenue feasibility study. Its strategies include improving access to data to help prioritize selection of Local Road Safety Program (LSRP) and Highway Safety Improvement Program (HSIP) projects; encouraging the use of Road Safety Assessments; and reducing non-motorized user fatalities and severe injuries through better integration of DOTD's Complete Streets policy in project development.

Strategic Mobility Plan

Owner: New Orleans Regional Transit Authority (RTA)

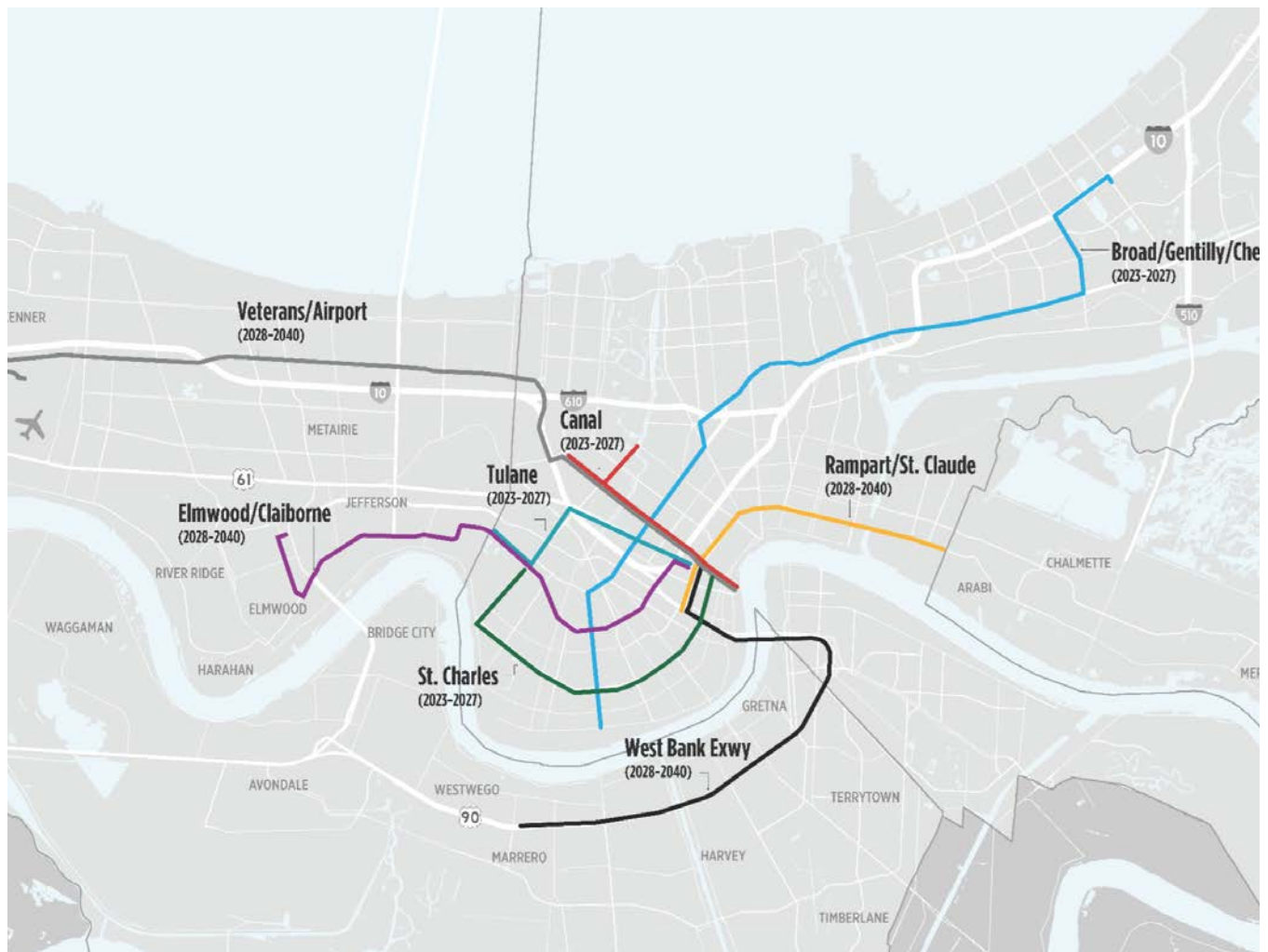
Adopted: December 2017

Available at: <http://www.norta.com/Getting-Around/Strategic-Mobility-Plan>

The RTA's Strategic Mobility Plan provides a new organization mission, vision and a roadmap for improving public transportation in the region over the next 20 years. The Plan's six goals, 31 strategies 129 actions guide the RTA's policy decision-making and budgeting. Five goals contain strategies and actions relevant to the South Carrollton Avenue feasibility study, which the table to the right summarizes.

The plan's Mobility Options and Corridors appendix recommends several corridors for high-capacity transit service offering fast, frequent and reliable trips through areas with the greatest propensity for transit ridership, shown in the map below. The recommended "Tulane" route alignment, which follows the existing 39 Tulane bus route, includes the South Carrollton Avenue study area. While the SMP does not recommend specific modes for this or any other high-capacity corridor, the Tulane route designation calls for consideration of dedicated transit lanes and other prioritization treatments within the study area segment of South Carrollton Avenue.

High-Capacity Transit Corridors



Source: New Orleans Regional Transit Authority Strategic Mobility Plan

Strategic Mobility Plan Goals, Strategies, and Action Items

Goal	Strategy	Action
Be Equitable: Provide mobility services in a just and fair manner	Make transit accessible for people with disabilities	BE6. By 2022, in accordance with legal agreements, work with the City of New Orleans to inspect transit stops and develop a new ADA Transition Plan
		BE7. In accordance with legal agreements, work with the City of New Orleans to ensure that all transit stops are ADA compliant by 2031
Prioritize the Rider Experience: Provide mobility services that are safe, easy to use, and comfortable	Provide a more comfortable and pleasant rider experience	PR13. By 2018, begin working with local governments to improve sidewalks, crossings, and bike infrastructure near transit stops
		PR14. By 2018, begin working with local governments to improve cleanliness and maintenance of stop facilities and surrounding areas, including garbage collection and removal, landscape and debris maintenance, and lighting
		PR16. By 2019, begin installing more shelters, seating, lighting, rider information, and other amenities at transit stops
Be Reliable: Provide on-time and predictable service	Add transit priority treatments on roadways and reduce conflicts with automobiles	BR8. By 2019, begin working with local governments to make bus stops highly visible in order to minimize illegal parking
		BR10. By 2020, identify stops to move from near-side locations (before an intersection) to far-side locations (after an intersection)
		BR11. By 2021, begin working with the City of New Orleans to reduce the number of turning conflicts between automobiles and transit vehicles in neutral grounds
		BR12. By 2022, identify potential dedicated lanes, High-Occupancy Vehicle (HOV) lanes, signal priority improvements, queue jumps, and other priority treatments for transit routes to minimize delay from areas with high congestion
		BR13. By 2022, coordinate with local governments to create policies in which roadway maintenance and construction projects include relocation of stops and bus pads to far-side locations, in accordance with Complete Streets policies
		BR14. By 2022, pilot transit priority treatments along one or more transit routes
Connect to Opportunities: Provide good access to destinations utilizing all transportation options available	Create fast, frequent service on major corridors in the region (High Capacity Transit)	CO1. By 2022, complete feasibility studies for upgrading and extending existing transit routes in RTA's service area into High-Capacity Transit corridors: <ul style="list-style-type: none"> Broad/Gentilly/Chef Canal Streetcar Rampart/St. Claude St. Charles Streetcar Tulane
		CO3. Implement the following High-Capacity Transit projects (2023-2027): <ul style="list-style-type: none"> Broad/Gentilly/Chef Canal Streetcar St. Charles Streetcar Tulane
	Expand the reach of High Capacity Transit and Select Service Routes	CO37. Coordinate with local governments to identify and address major barriers to pedestrian access at high demand stops
Support a Sustainable, Healthy Region: Mitigate climate change and improve public health	Support walkable, livable transit corridors	SH5. Work with regional organizations and business districts to use public and private funds to build enhancements to the pedestrian environment along major corridors

Nearby Projects

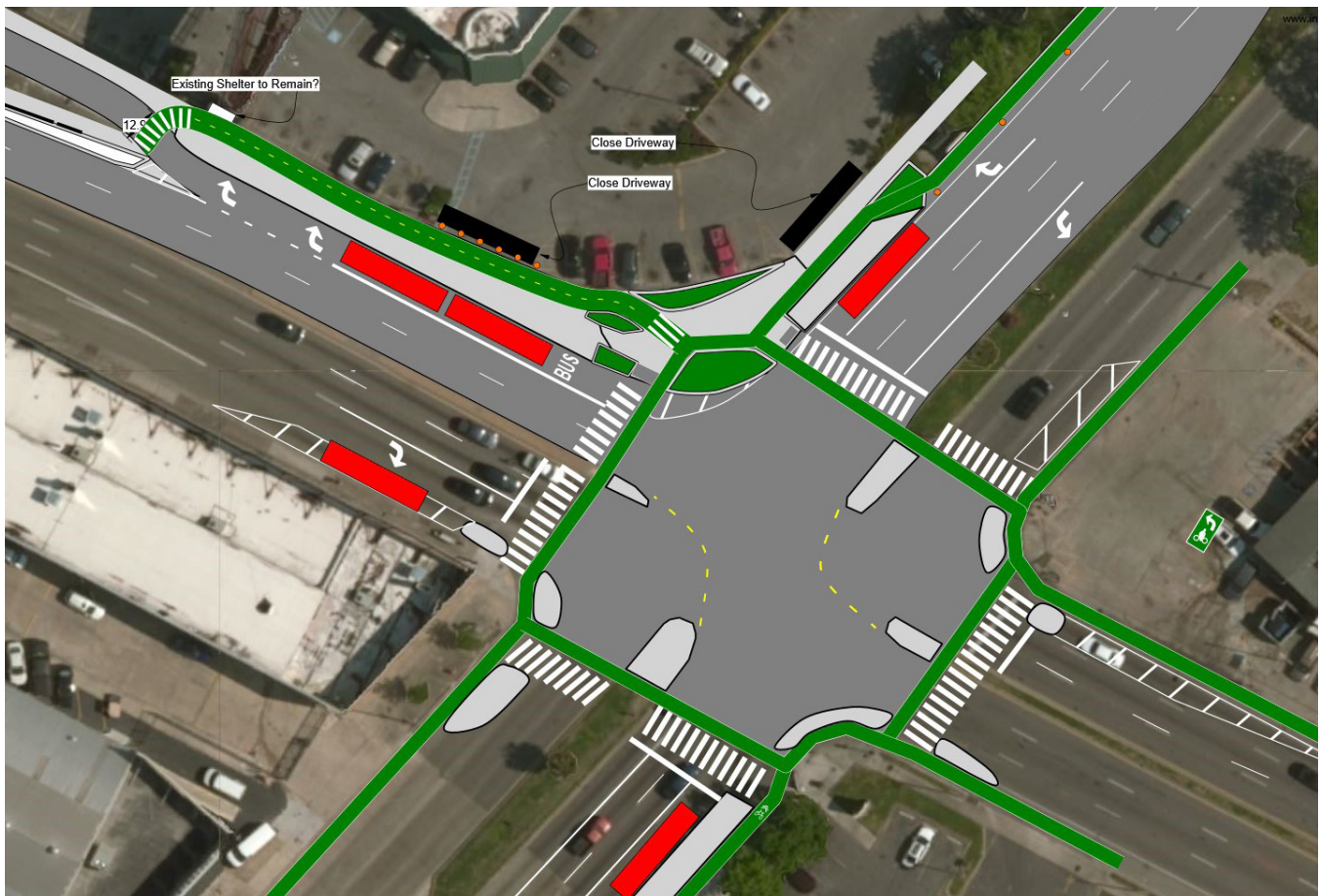
The City of New Orleans has developed a design concept for the Airline Highway / Tulane Avenue and South Carrollton Avenue intersection, which is outside of but directly adjacent the study area and corridor identified for this project. This design concept was developed independently of this study and provides potential guidance on what design concepts are drafted for the section of South Carrollton Avenue under study for this project.

The concept for the Airline Highway / Tulane Avenue intersection includes bikeways on either side of South Carrollton Avenue that are placed behind the curb where the bikeway facilities interact with transit stops. Where the bikeway facilities interact with the intersection, the facilities are shown as curb protected to discourage motorists from making wide turns.

Northbound South Carrollton Avenue is shown reduced to two through lanes with a left-turn-only lane and bus-only lane. Riverbound South Carrollton Avenue is shown as two through lanes south of the intersection. Similar to the northbound concept, the riverbound lanes north of the intersection include two through lanes, one left-turn-only lane, and a shared bus and right-turn-only lane.

All crosswalks are marked in the below concept diagram. Curb bumpouts and median extensions are also shown in the diagram. While not pedestrian islands, these bumpouts and extensions are designed to prevent drivers from making wide turns

Airline Highway / Tulane Avenue and South Carrollton Intersection Concept



Source: City of New Orleans Department of Public Works



The South Carrollton Underpass opened in 1952.

Source: New Orleans Public Library City Archives,
[http://nutrias.org/~nopl/photos/streets/underpasses/carrollton\(south\)_pp8.htm](http://nutrias.org/~nopl/photos/streets/underpasses/carrollton(south)_pp8.htm)

Demographics

About 7,200 of Orleans Parish's 386,000 residents live within a 1-mile walkshed of the South Carrollton Avenue Underpass - about a twenty-minute walking distance for an adult without mobility impairment.² The walkshed is approximate based on distance alone and does not take into account ADA accessibility or grade changes.

The median household income (MHI) for households within the 1-mile walkshed is \$35,052, slightly lower than the City's MHI of \$37,211. The income profile for the 1-mile walkshed is similar to that of the City; one-quarter of households in the 1-mile walkshed earn below \$15,000 annually, which approaches the federal poverty guidelines for the smallest households.³ The population with the 1-mile walkshed largely matches the racial composition of the city, except nearly twice the percentage of residents within the 1-mile walkshed identify as Hispanic (11%) compared with 6% of New Orleans residents who identify as Hispanic/Latino of any racial background. The age profile of residents within the 1-mile walkshed is comparable to the citywide age profile, with little difference in age groups between the two geographies. Approximately 85% of people living within the 1-mile walkshed and 85% of New Orleans residents are younger than the national retirement age of 67.

A different pattern emerges when examining the study area, which is slightly under 0.3 square miles. The central focus of this study area is the approximately 0.3 mile stretch of South Carrollton Avenue between Washington Avenue/Palmetto Street and Tulane Avenue. The study area is much younger, nearly 90% nonwhite, and is likely an area of concentrated poverty, with approximately 45% of households earning less than \$15,000 annually. These findings are particularly important to better understand how to equitably serve study area residents' transportation needs, as discussed in the transportation section of this report.

² Esri 2019 estimate.

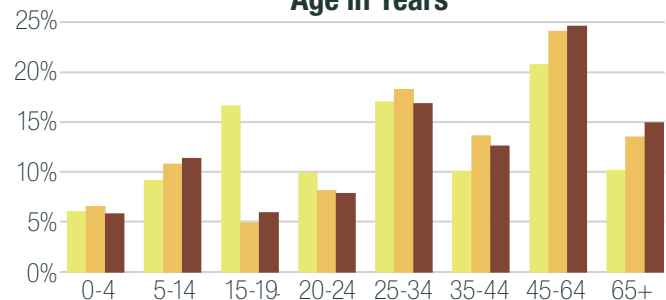
³ The 2020 federal poverty guidelines for a household size of one person is an annual income of \$12,760 and \$17,240 for a household size of two people. Source: <https://aspe.hhs.gov/poverty-guidelines>

1-Mile Walkshed

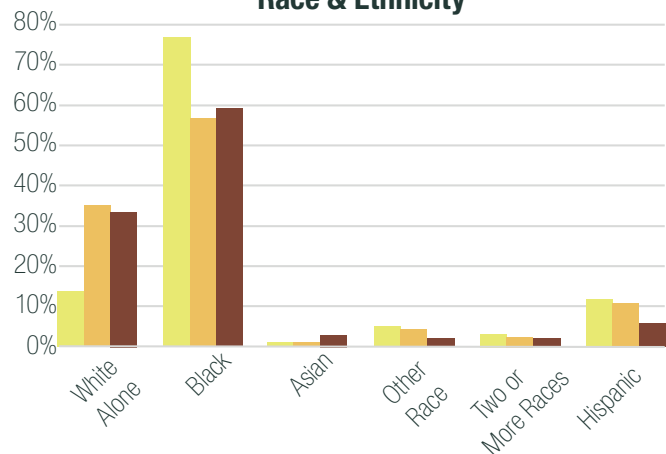


Study Area 1-mi Walkshed New Orleans

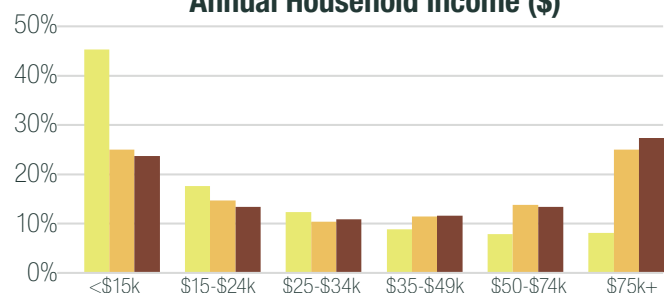
Age in Years



Race & Ethnicity



Annual Household Income (\$)



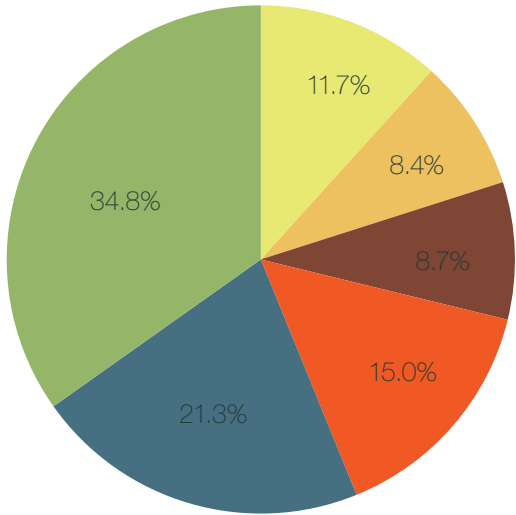
Source: Esri Business Analyst, 2019 estimates based on American Community Survey (ACS), Esri, U.S. Census data.

Employment

Approximately 3,000 people reside within the study area.⁴ Of these, approximately 1,114 people were employed in 2017.⁵ Only 11 of these people are reported to both live and work within the study area. An outflow analysis of employed study area residents indicates that the highest density of jobs for study area residents is located in the Central Business District (CBD). The largest share of study area residents work in accommodation and food services (21%), followed by health care and social assistance (15%) and retail (12%).

In 2017, approximately 1,443 people worked within the study area but lived outside of the study area.⁶ 1,831 people worked within the study area in 2019.⁷ Nearly 75% of these workers worked in educational services, retail, waste management, food service, and health care and social services. The largest share of commuting employees work in education services (22%) followed by retail trade (21%) and administrative and support and waste management and remediation services (15%).

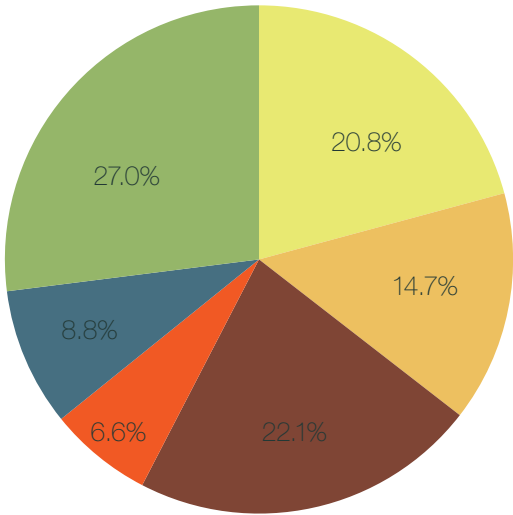
Employment by Industry for Study Area Residents in 2017



Source: U.S. Census Bureau. (2020). LEHD Origin-Destination Employment Statistics (2002-2017) [computer file]. Washington, DC: U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program [distributor], accessed on 01/24/2020 at <https://onthemap.ces.census.gov>. LODS 7.4 [version]

4 2019 ESRI population estimates
5 U.S. Census OnTheMap data portal

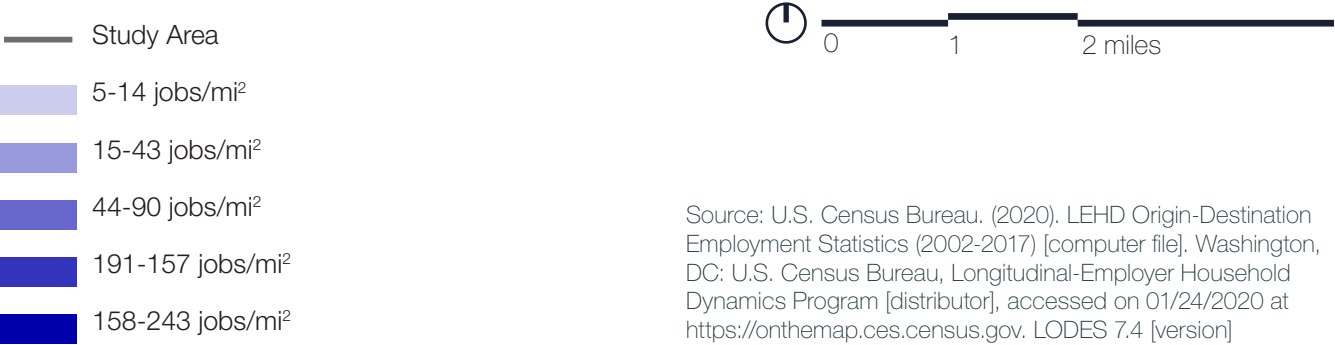
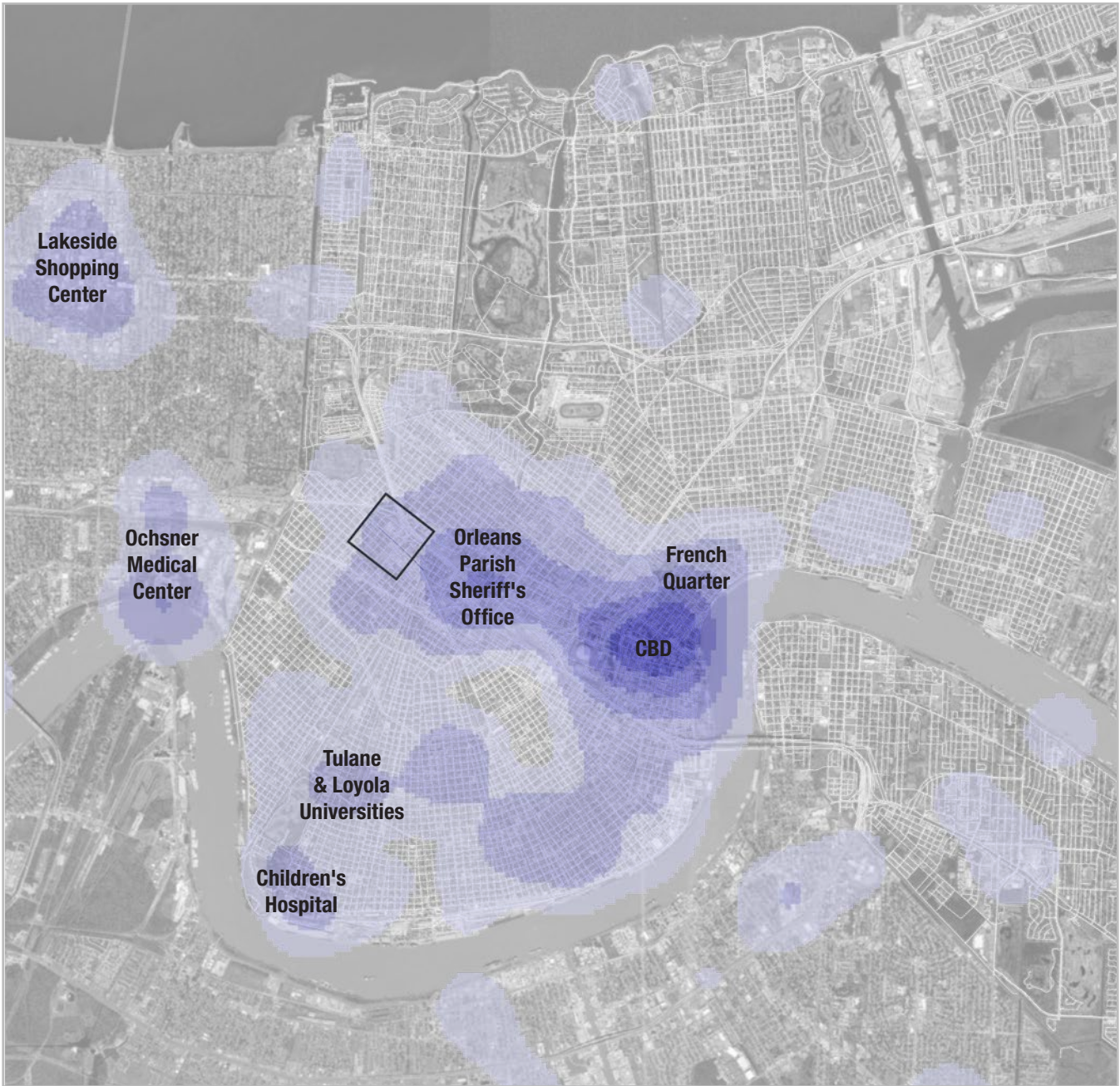
Employment by Industry for Study Area Workers in 2019



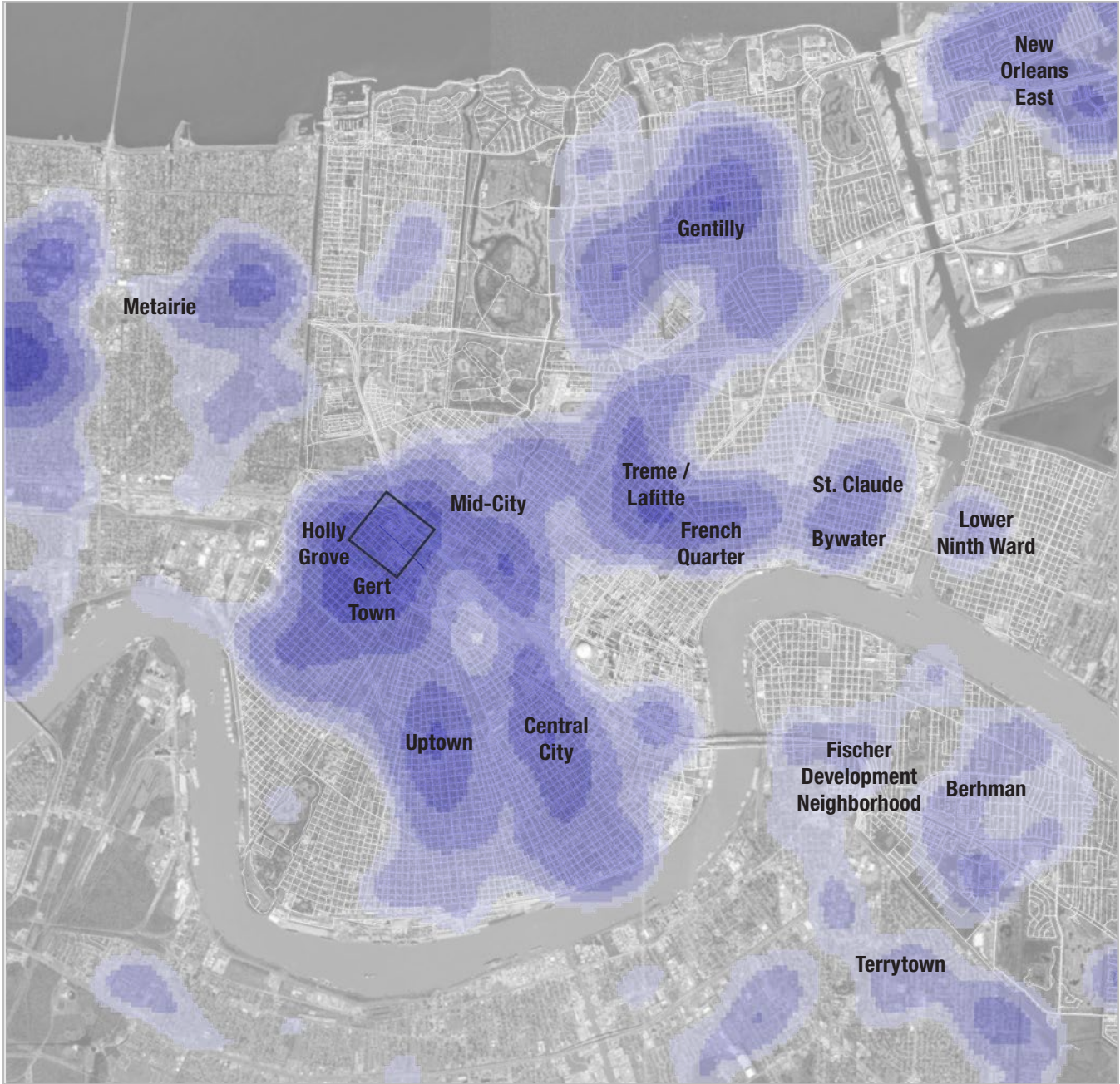
Source: Esri Business Analyst, 2019 estimates based on American Community Survey (ACS), Esri, U.S. Census data.

6 U.S. Census OnTheMap data portal
7 2019 ESRI population estimates

Where Study Area Residents Work



Where Study Area Workers Reside



- Study Area
- 5-6 workers/mi²
- 7-9 workers/mi²
- 10-14 workers/mi²
- 15-22 workers/mi²
- 23-32 workers/mi²

Source: U.S. Census Bureau. (2020). LEHD Origin-Destination Employment Statistics (2002-2017) [computer file]. Washington, DC: U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program [distributor], accessed on 01/24/2020 at <https://onthemap.ces.census.gov>. LODS 7.4 [version]

Land Use and Zoning

Nine different zoning categories are represented in the 0.3 mi² study area. Of these zoning categories, three are strictly housing-related uses. Single and multifamily housing uses are concentrated on the perimeter of the study area, primarily to the northeast and northwest of the South Carrollton Avenue Underpass.

However, much of the study area is currently designated as a mixed-use district, with the Medium Intensity District inclusive of residential uses such as Fountainbleau Apartments and light manufacturing such as the Interior Exterior Building Supply and Porchjam Distillery. The Historic Urban Neighborhood Mixed-Use District includes housing located along Washington Avenue directly south of the underpass. There are two High Intensity Mixed-Use Districts, one adjacent to the north side of the Medium Intensity District and one straddling South Carrollton Avenue south of Palmetto Street. Both of these districts are dominated by retail and restaurant related uses.

The largest contiguous existing zoning category belongs to the Educational Campus District, home to Xavier University. These parcels include campus buildings, adjacent campus parking, and the University Police Department.

The second largest contiguous existing zoning category is the Heavy Commercial District, which includes Costco and auto-related uses such as Enterprise Rent-A-Car and Gerber Collision and Glass. More than half of the area designated as heavy commercial is devoted to surface parking lots.



Xavier University occupies the Education Campus District and includes several buildings and adjacent parking lots in addition to the University Police Department located at the corner of South Carrollton Avenue and Palmetto Street.

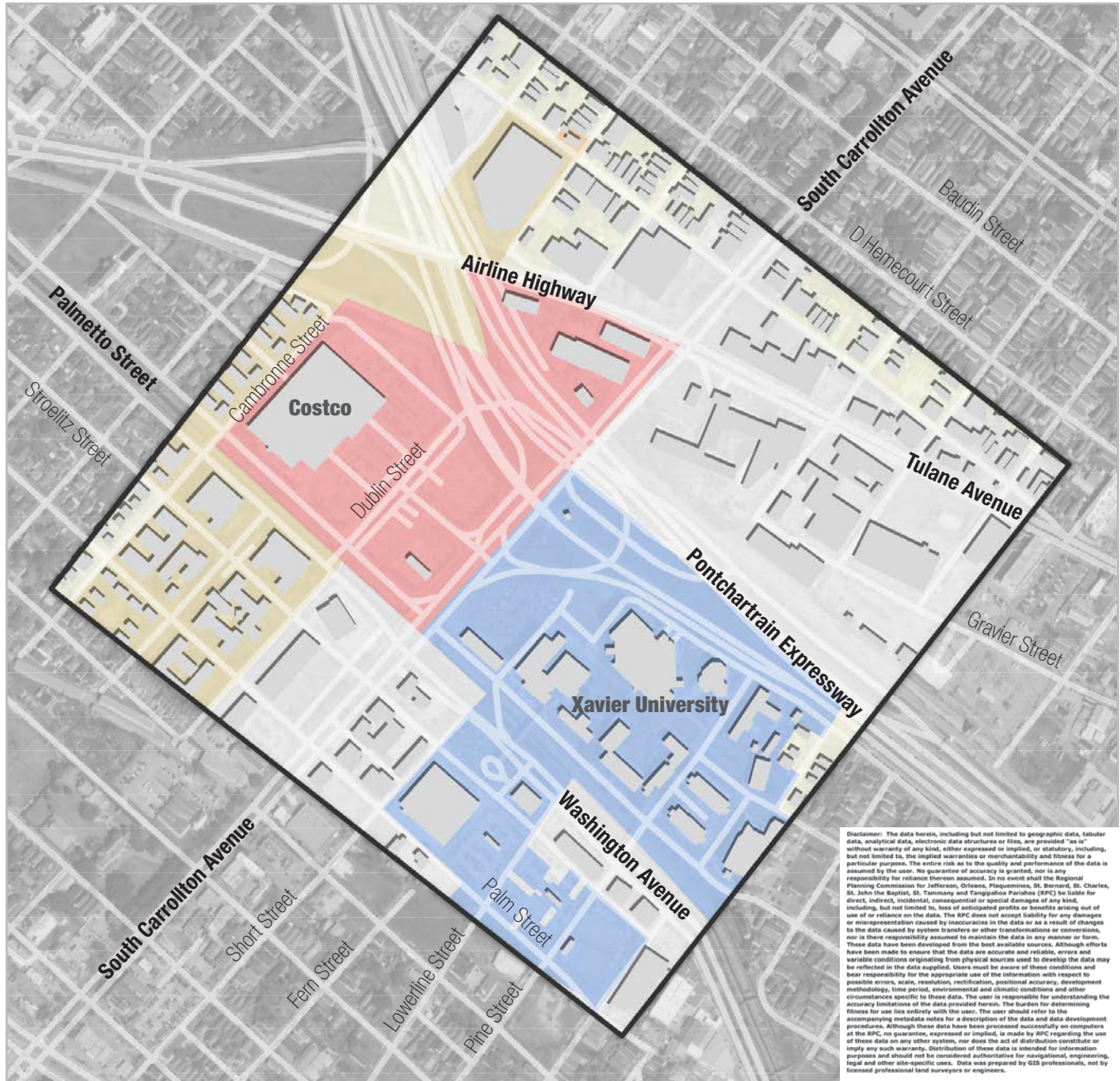


Costco Wholesale, its gas station, and its parking lots comprise much of the Heavy Commercial District; more than half of the area of this district is devoted to Costco surface parking lots.



The High Intensity Mixed-Use District located south of the South Carrollton Avenue and Palmetto Street intersection is dominated by retail and restaurants. Multifamily housing is visible in the top right corner of the above photo.

Current Zoning



Source: Regional Planning Commission



0 0.125 0.25 mile

- | | |
|--|---|
| Study Area | HU-MU Historic Urban Neighborhood Mixed-Use District, MU-1 Medium Intensity Mixed-Use District & MU-2 High Intensity Mixed-Use District |
| HU-RD1 & HU-RD2 Historic Urban Two-Family Residential District | C-3 Heavy Commercial District |
| HU-RM2 Historic Urban Multifamily Residential District | EC Educational Campus District |
| HU-B1A Historic Urban Neighborhood Business District | |

Future Land Use

Future land use in the study area allows for a greater range of infill development and uses than the existing zoning designations. Six future land use categories are present: Residential Low Density Pre-War, Residential Multifamily Density Pre-War, Mixed-Use Low Density, Mixed-Use Medium Density, Mixed-Use High Density, and Institutional.

The Residential Low Density and Residential Multifamily land use categories describe areas that were built before World War II. The Residential Low Density Pre-War category aims to preserve neighborhood character and limit the addition of multifamily housing that would be better suited for the Residential Multifamily Pre-War designated areas. Both future residential land use categories allow historical institutional or "other non-residential structures" to be converted to multifamily or mixed use, particularly commercial uses that directly serve the neighborhood.⁸

The three mixed use density categories encourage walkability, with Mixed-Use High Density areas specifically designated as "transit-oriented (or transit-ready) neighborhood centers" to support and encourage compact, walkable neighborhoods.⁹ The parcels that Costco currently occupies and to the parcels located between the Pontchartrain Expressway and Tulane Avenue are designated as Mixed-Use High Density future land uses.

The Institutional category includes a range of uses from education to health care. Future, large-scale development in this area is allowed provided there are "appropriate transitions to surrounding land uses and neighborhoods."¹⁰ According to the Xavier Office of Facilities Planning and Management, the university plans to construct a mixed-use development on its lot located at the corner of Washington and South Carrollton Avenues.

⁸ <https://nola.gov/city-planning/master-plan/mpamendments/future-land-use-map-categories-as-amended-by-city/>

⁹ <https://nola.gov/city-planning/master-plan/mpamendments/future-land-use-map-categories-as-amended-by-city/>

¹⁰ <https://nola.gov/city-planning/master-plan/mpamendments/future-land-use-map-categories-as-amended-by-city/>



Multifamily housing located along Palmetto Street between Dublin Street and Dante Street.



Much of the land area designated for future Mixed-Use High Density is presently occupied by large surface parking lots.



Future development on the Xavier University campus will need to be coordinated in such a way as to provide appropriate transitions to surrounding land uses.

Future Land Use



Source: Regional Planning Commission,
City of New Orleans

- Study Area

RLD-PRE Residential Low Density Pre-War

RMF-PRE Residential Multifamily Pre-War

MUL Mixed-Use Low Density
- MUM Mixed-Use Medium Density

MUH Mixed-Use High Density

INS Institutional

Parcel Ownership

There are four parcels and two multi parcels along South Carrollton Avenue along the study corridor. On the northside of the avenue, moving from the southwest to the northeast, the parcels are owned by Carrollton Central Plaza Associates, Carrollton Central, and Lam-King Enterprises, LLC. The two parcels owned by Carrollton Central Plaza Associates and Carrollton Central are occupied by Costco with a mailing address listed for the Costco Wholesale Corporation. The multiparcel owned by Lam-King Enterprises consists of four parcels, which include Enterprise Rent-a-Car and Gerber Collision and Glass. Lam-King Enterprises also owns a second, single parcel adjacent to their multiparcel, which is occupied by a second Gerber Collision and Glass building. Lam-King Enterprises is based in Elmwood, Louisiana.

On the southside of the avenue, moving from the northeast to the southwest, there is one multiparcel owned by the 4040 Tulane Avenue LLC, which has a Tennessee mailing address. The multiparcel consists of five parcels, which include Burger King, Fountainbleau Storage, and Fountainbleau Apartments. According to the New Orleans Assessor website, the other two parcels are tied to Verizon Wireless and T-Mobile, although neither corporation operates a storefront on this multiparcel. The other parcel on the southside is owned and occupied by Xavier University.



Gerber Collision and Glass occupies two buildings across multiple parcels.



Lam-King Enterprises, LLC, owns one multiparcel and one single parcel immediately adjacent one another. The multiparcel includes Gerber and Enterprise Rent-A-Car.



The multiparcel owned by Tulane Avenue, LLC, includes the Fountainbleau Storage and Apartments and the Burger King.

Parcels



Source: Regional Planning Commission,
City of New Orleans

- Study Area
- Parcel

Environmental Conditions

Flooding

During multiple site visits, no standing water was observed on site, though evidence of dirt and debris resting in and along the sidewalk suggest that excess water during rainfall events is channeled through the sidewalk areas directly under the expressway.

Drainage

There are significant drainage issues on site under the Pontchartrain Expressway. Dirt, silt, debris, and litter are washed down concrete retaining walls and collect along the sidewalks at the base of the retaining walls. No direct drainage outlets are present from the sidewalk to the roadway under the underpass and there are few drainage inlets along South Carrollton Avenue.

Impervious Cover

Much of the area under the Pontchartrain Expressway is impervious cover, creating other issues described in subsequent subsections below. In addition to the paved sidewalks underneath the underpass, the footings of the expressway and railroad bridge are covered with concrete retaining walls and asphalt.

Topography

While the study area itself is relatively flat, major man-made grading issues exist: South Carrollton Avenue dips down several feet as its eight driving lanes transverse under the Pontchartrain Expressway. The sidewalk elevation remains relatively unchanged along the corridor in the section directly under the expressway, with pedestrians and non-motorized users elevated above vehicles. However, a secondary pedestrian space exists under the expressway elevated above sidewalk accessible by remnant staircases.

The topography becomes more challenging for non-motorized users traveling lakebound along South Carrollton Avenue as the parcels directly adjacent are elevated from the street and sidewalk. Significant grading issues exist where the driveways to the Fountainbleau Apartments on the downriver side and Gerber Collision and Glass on the upriver side interface with South Carrollton Avenue.



A drainage area under the express shows where dirt, silt, and debris collect along the base of a retaining wall on the north side of South Carrollton Avenue.



The retaining walls for the expressway, railroad bridge, and adjacent parcels are covered in concrete and include remnant staircases that presumably provided access to now fenced off parcels or a prior pedestrian route.



View from up on the highest accessible pedestrian level under the expressway looking down onto the ground-level sidewalk.



A drainage system access point encroaches onto the sidewalk.



A drainage catch basin on the downriver side of South Carrollton Avenue near Xavier University before the I-10 on ramps.



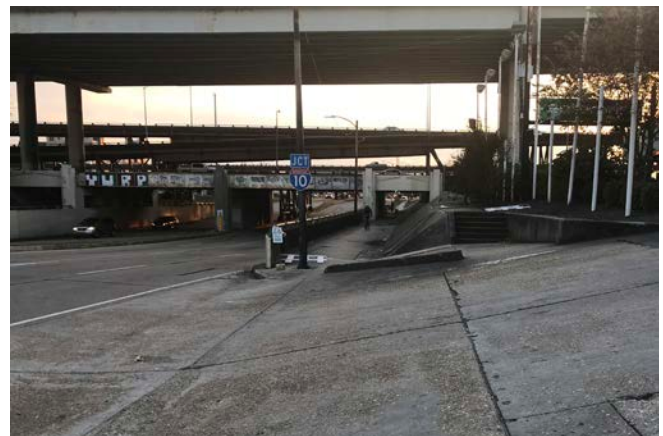
Dirt, silt, debris, and litter collect at the base of concrete retaining walls, covering significant portions of the underpass sidewalk.



Much of the area on either side of South Carrollton Avenue approaching the underpass from either direction is covered in concrete.



View looking lakebound on the downriver side of South Carrollton Avenue from the secondary pedestrian area provided under the expressway.



View looking riverbound from the sidewalk on the upriver side of South Carrollton Avenue showing an uneven, slanting sidewalk sloping down towards the street level.

Transportation

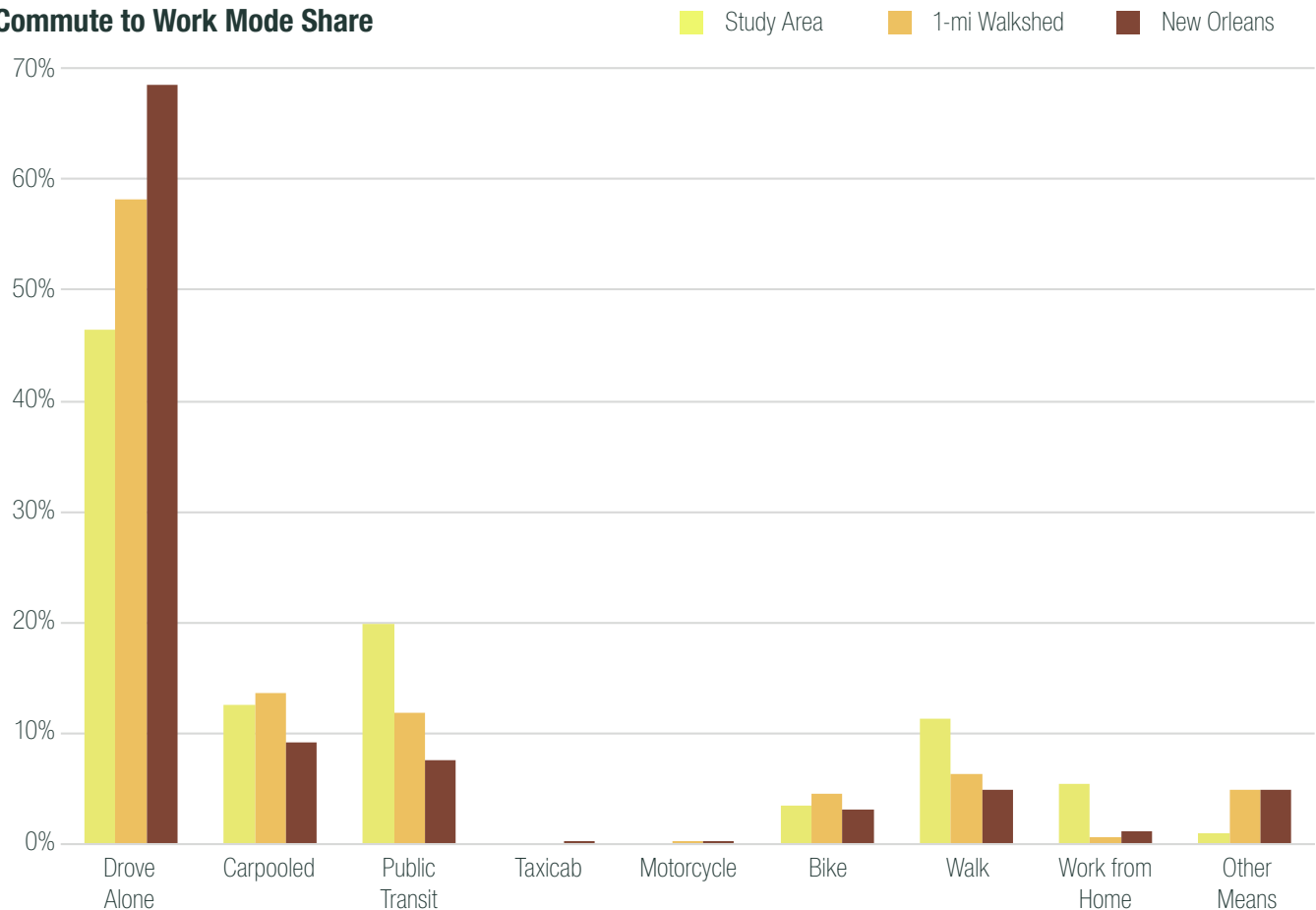
This section includes information about mode share, roadways, transit, pedestrian infrastructure conditions, bikeways and trails, and safety. The roadways subsection includes roadway speeds, roadway volumes, and traffic counts. The transit subsection includes a map of existing routes and stations with ridership levels. The pedestrian realm subsection includes information about the sidewalk network, pavement conditions, and where signals and crossings are located. The bikeways and trails subsection examines existing and planned infrastructure and connections. The safety subsection explores where crashes occur most frequently so that safety related design recommendations may be prioritized for different mode users.

Commute to Work Mode Share

Most people in New Orleans drive to work alone, which is also true of people located within the 1-mile walkshed area. However, a majority of people who live within the study area do not commute to work alone and utilize other modes of transportation. Nearly 13% of study area residents carpool to work, which is supported by the statistic that nearly 18% of households in the study area do not have access to a vehicle (compared to 6.9% of households in New Orleans without access to a vehicle).

Nearly 20% of people take public transit and over 11% of people walk to work within the study area, which is more than twice the percentage of New Orleans residents who take public transit (7.6%) and walk (5.0%) to work. A similar percentage of people with in the study area (3.5%) bike compared to the city (3.2%), although there is a slightly higher percentage of people who bike within the 1-mile walkshed (4.5%).

Commute to Work Mode Share



Source: Esri Business Analyst, 2019 estimates based on American Community Survey (ACS), Esri, U.S. Census data.

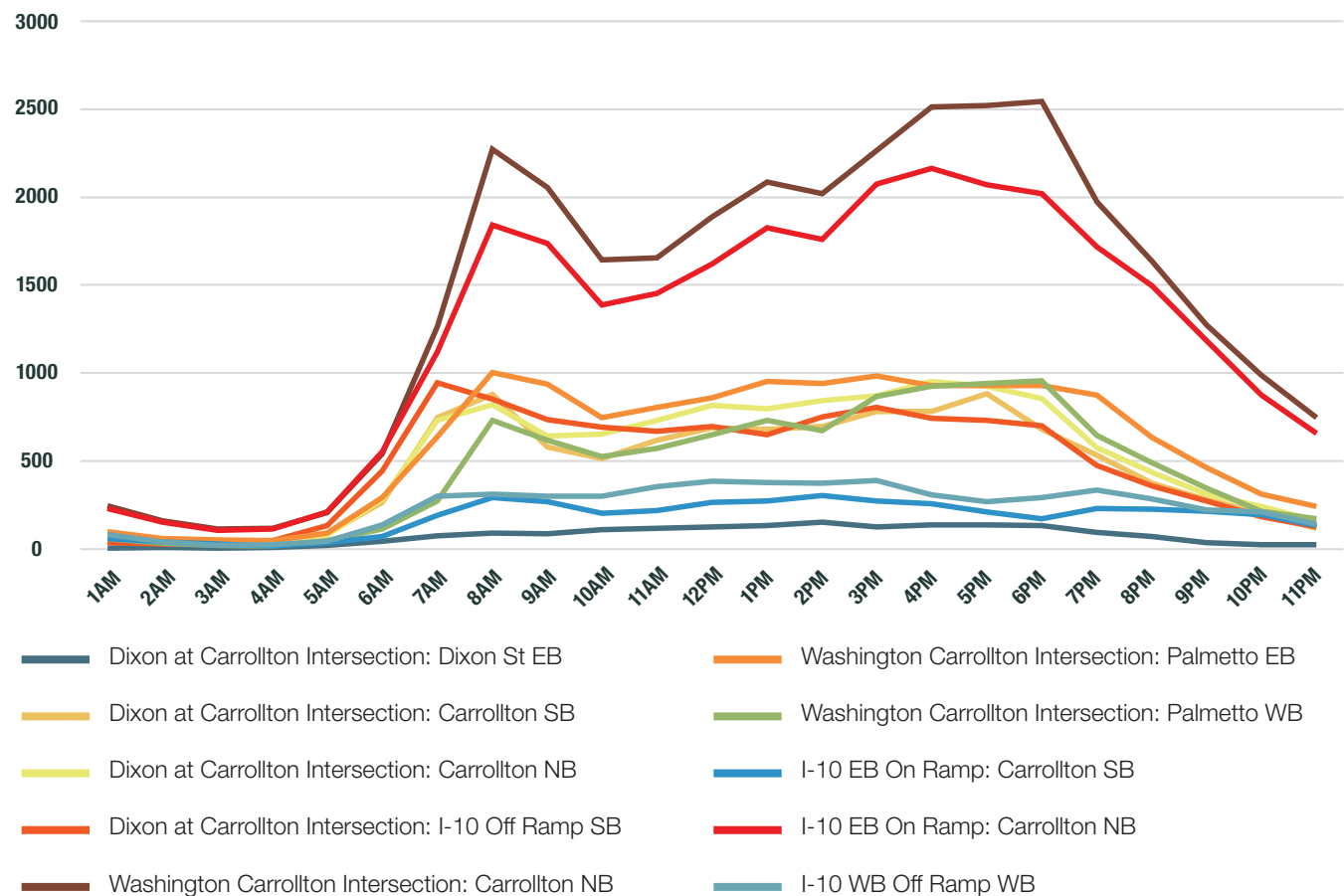
Roadways

Speed limits on New Orleans city streets are set at 25 miles per hour (mph) and at 35 mph on divided streets. Within the study area, South Carrollton Avenue is signed with a designated speed limit of 35 mph. Other 35 mph roadways within the study area include Tulane Avenue, Palmetto Street, and Washington Avenue. The remaining streets within the study area have a designated speed limit of 25 mph. Not all street segments are signed where speed limits change from one roadway designation to another. For example, there is no posted speed limit sign for auto drivers continuing onto Tulane Avenue from Airline Highway, which has a signed speed limit designated at 40 mph further west of the intersection. The lack of signage as well as the maximum speed limit designation has important implications for pedestrian and bicyclist safety, especially since there is a higher incidence of pedestrian and bicycle-related collisions at the Airline Highway / Tulane Avenue and South Carrollton Avenue intersection (discussed in detail in the safety subsection of this report).

Traffic Volume and Counts

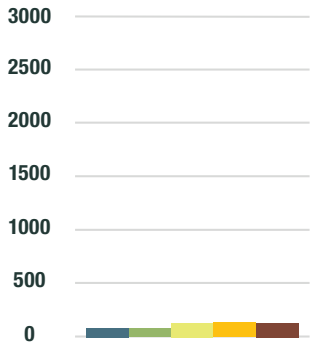
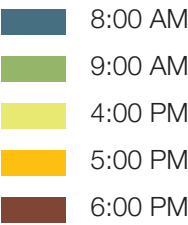
48-hour traffic counts were conducted at ten different count locations with the study area at South Carrollton intersections or where on and off ramps from I-10 interface with the avenue (see map on next page). These counts took place during the week on Wednesday and Thursday in late January. Throughout any period during the count, the heaviest trafficked lanes are the northbound South Carrollton Avenue lanes at Washington Avenue and at the I-10 eastbound on ramp. Of the locations at which counts were conducted, eastbound Dixon Street at Carrollton, southbound Carrollton at the I-10 eastbound on ramp, and the I-10 westbound off ramp all had less than 500 vehicles per hour at any time during the count period with no large peaks.

Total Hourly Traffic Count



There are two peak periods for the study area: the morning peak period is from 8:00 a.m. to 9:15 a.m. and the afternoon peak period is from 3:45 p.m. to 6:15 p.m. For some of the count locations, the afternoon peak period experiences higher traffic counts, especially the two busiest count locations. For all southbound count locations, the morning peak experiences higher counts than during their respective afternoon peak periods. These counts are consistent with more people driving into or through the study area in the morning for work and commuting back out of or through the study area to return home.

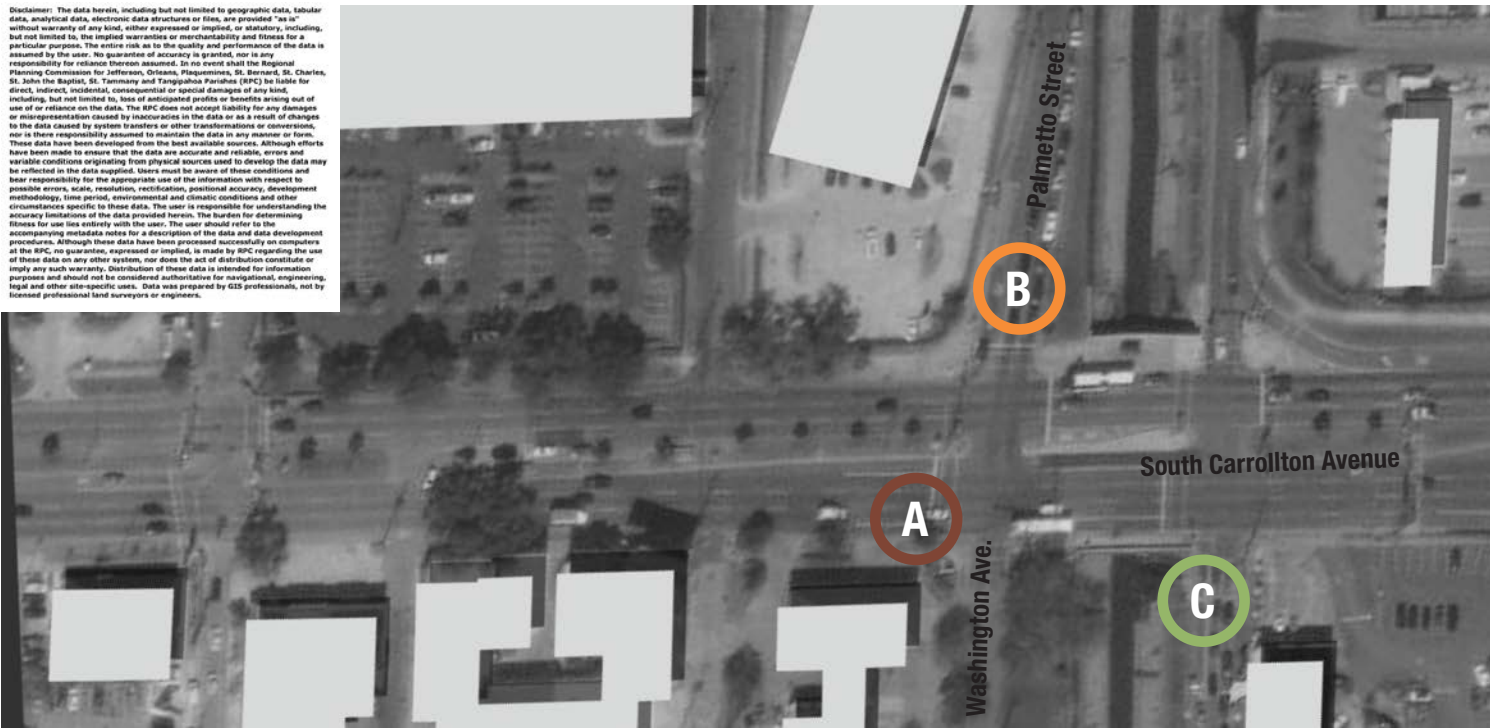
Traffic Count Times



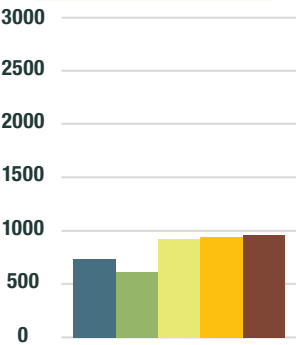
Dixon Street, Eastbound



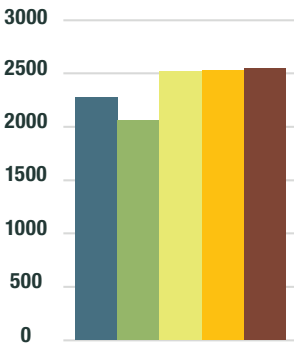
Disclaimer: The data herein, including but not limited to geographic data, tabular data, analytical data, electronic data structures or files, are provided "as is" without warranty of any kind, either expressed or implied, or statutory, including, but not limited to, the implied warranties or merchantability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



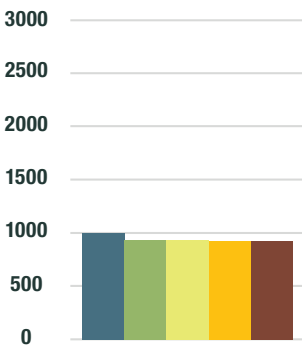
Palmetto, Westbound



Carrollton, Northbound

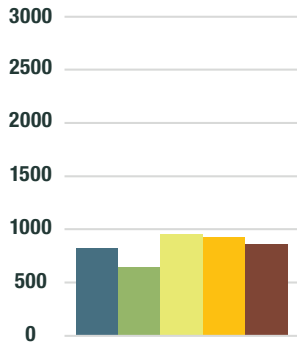


Palmetto, Eastbound

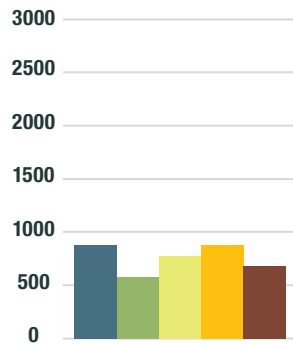


Washington Carrollton Intersection

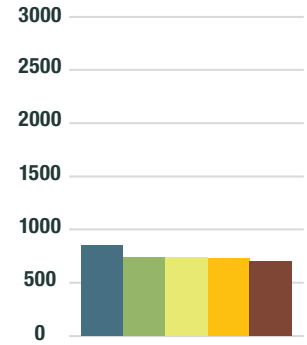
Dixon at Carrollton Intersection



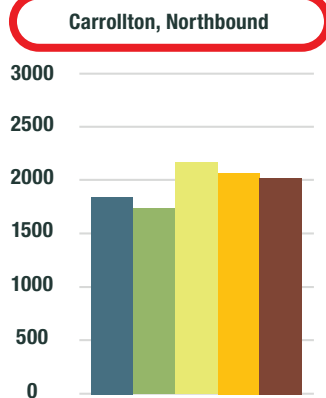
Carrollton, Northbound



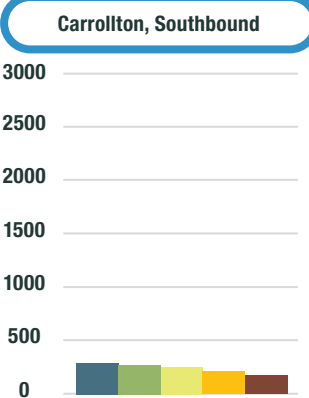
Carrollton, Southbound



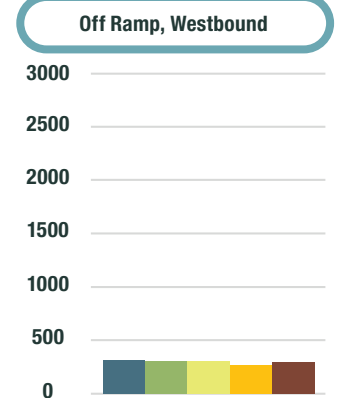
I-10 Off Ramp, Southbound



Carrollton, Northbound



Carrollton, Southbound



Off Ramp, Westbound

I-10 Eastbound On Ramp

I-10 Westbound

The total daily count figures, averaged across the data collection days, are included for each count location on the map. The busiest count location is northbound South Carrollton Avenue at Washington Avenue (count location A), with 87% (28,797) of these vehicles traveling onto the I-10 eastbound on ramp at count location F. This means that 4, 388 vehicles recorded at count location A were recorded again at count location E continuing to travel northbound on South Carrollton Avenue. The total daily count figure at count location E is inclusive of all northbound South Carrollton Avenue traffic lanes in addition to the left-only turn lane.



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



1,782

Dixon Street, Eastbound

Palmetto, Westbound

Carrollton, Northbound

Palmetto, Eastbound



Washington Carrollton Intersection

Dixon at Carrollton Intersection

11,946



Carrollton, Northbound

10,586



Carrollton, Southbound

11,175



I-10 Off Ramp, Southbound

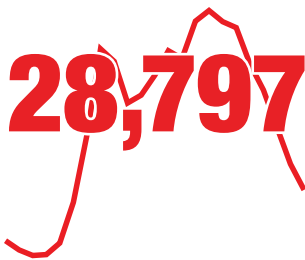


Carrollton, Northbound

Carrollton, Southbound

Off Ramp, Westbound

28,797



I-10 Eastbound On Ramp

4,268



5,607



I-10 Westbound

Turning Count Movements

48-hour turning movement counts were conducted at seven different count locations with the study area; these locations include:

- South Carrollton Avenue at the I-10 Westbound Off ramp
- South Carrollton Avenue at the I-10 Eastbound On ramp
- I-10 Eastbound Off ramp at Dixon Street
- South Carrollton Avenue Southbound at Dixon Street
- South Carrollton Avenue Northbound at Washington Avenue
- Palmetto Street Eastbound at South Carrollton Avenue
- Palmetto Street Westbound at South Carrollton Avenue

These counts took place during the week in early February and the peak periods are 8:00 a.m. - 9:15 a.m. and 3:45 p.m. - 6:15 p.m., similar to the peak traffic count periods. A Saturday turning movement count was also collected at 1:30 p.m. - 2:30 p.m. the same week. These peak hour vehicular volumes are shown in the figure on p. 32 of this report).

Turning movements counts were also collected for cyclists on the roadway and pedestrians using crosswalks during the aforementioned peak periods at the select following locations:

- South Carrollton Avenue at Palmetto Street Eastbound
- South Carrollton Avenue at Palmetto Street Westbound
- Dixon Street and I-10 Eastbound Off ramp at South Carrollton Avenue
- I-10 Eastbound On ramp at South Carrollton Avenue
- I-10 Westbound Off ramp at South Carrollton Avenue

The peak hours for cyclists and pedestrians varies from the peak turning movement hours for motorists, which are weekdays from 8:00 a.m. - 9:00 a.m. and 4:15 p.m. - 5:15 p.m. These peak hour cyclist and pedestrian volumes are presented in the figure on p. 33 of this report.)

Peak Period Observations

Signal timing, phasing, queuing of vehicles, and general traffic conditions surrounding the study area intersections were taken during the weekday morning and afternoon peak periods counts. Signal phasing and timings corresponded with the signal controller printouts provided by the City of New Orleans Department of Public Works.

Queued vehicles generally cleared through the intersections during the observations. Queuing on the northbound South Carrollton Avenue far right lane at Palmetto Street eastbound would extend into the Palm Street intersection. Similarly, the Palmetto Street eastbound approach queues would extend to the Dublin Street intersection. Illegal left turns were observed being taken from the Palmetto Street eastbound through lane to South Carrollton Avenue northbound, as well as from South Carrollton Avenue southbound to Washington Avenue eastbound that is signed for buses only. It was observed that the upstream signalized intersections metered the arrival of traffic to the study area intersections. Very few cyclists were observed on the roadway during the peak period.

Base Conditions Capacity Analysis Criteria

Capacity analysis was performed to determine operational conditions in the morning and afternoon peaks. This type of analysis is the industry standard for traffic studies and the methods are the widely accepted practice for evaluating impacts on traffic operations.

Levels of Service (LOS) represent a qualitative and quantitative evaluation of the traffic operation of a given intersection using procedures developed by the Transportation Research Board and contained in the Highway Capacity Manual Special Report 209. The Highway Capacity Manual (HCM) procedures have been adapted to computer-based analysis packages, which include signalized intersection modules.

Intersection geometry, turning movement volumes, and traffic control parameters were entered into Synchro, version 8 for the signalized intersections to determine the expected LOS. For signalized intersections, the HCM bases LOS quality on average control delay (in terms of seconds per vehicle) and volume to capacity ratio.

Levels of Service range from LOS A, a condition of little or no delay, to LOS F, a condition of capacity breakdown represented by heavy delay and congestion. LOS B is characterized as stable flow. LOS C is considered to have a stable traffic flow but is becoming susceptible to congestion with general levels of comfort and convenience declining noticeably. LOS D approaches unstable flow as speed and freedom to maneuver are severely restricted and LOS E represents unstable flow at or near capacity levels with poor levels of comfort and convenience. The table at right presents the Level of Service criteria for signalized intersections. The table below presents the results of the base conditions capacity analysis, which correspond with field observations that vehicles are generally able to clear through the intersections within one cycle.

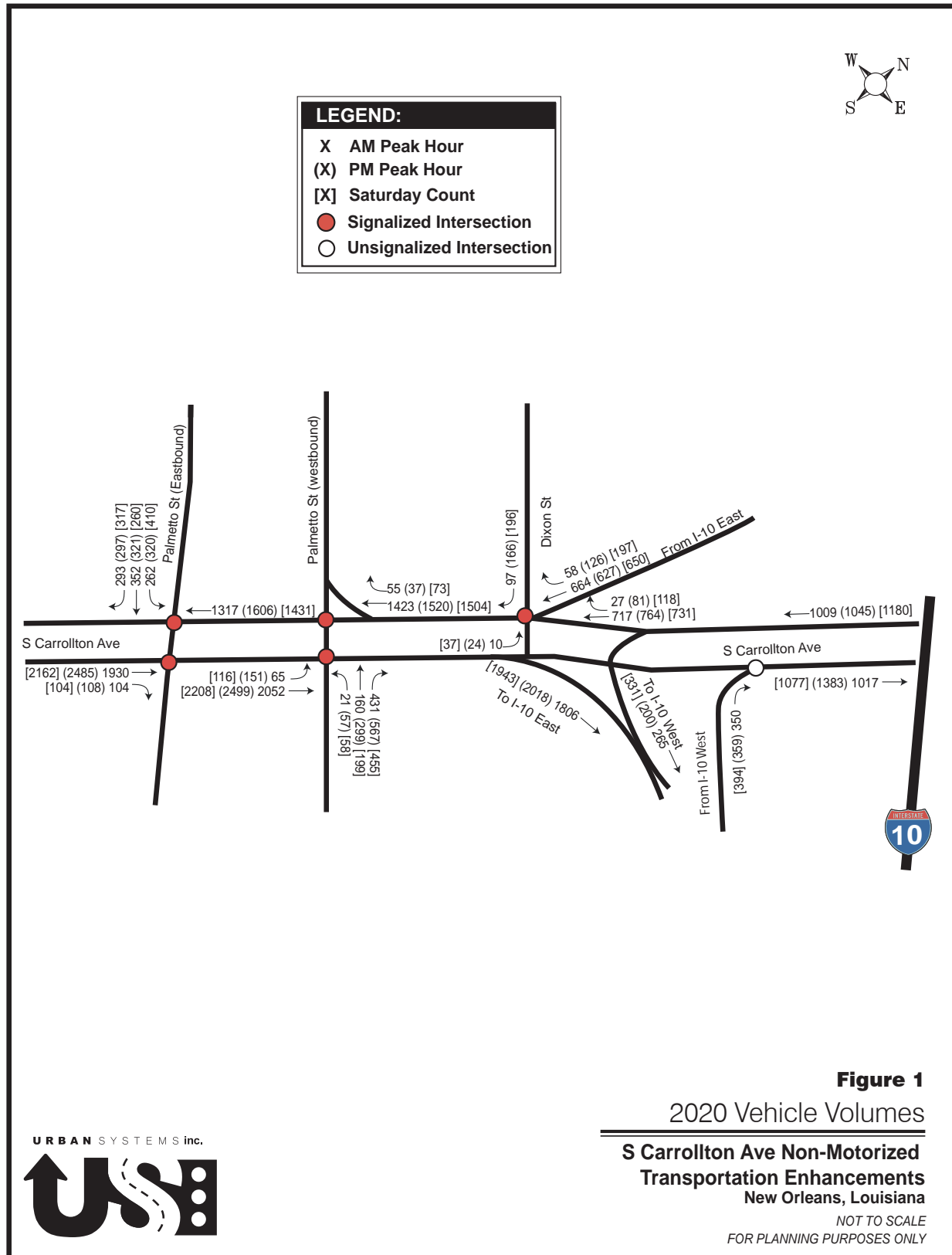
Level of Service Criteria: Signalized Intersections

Level of Service	Average Total Delay (Seconds/Vehicle)
A	≥ 10
B	$> 10 \text{ and } \leq 20$
C	$> 20 \text{ and } \leq 35$
D	$> 35 \text{ and } \leq 55$
E	$> 55 \text{ and } \leq 80$
F	> 80

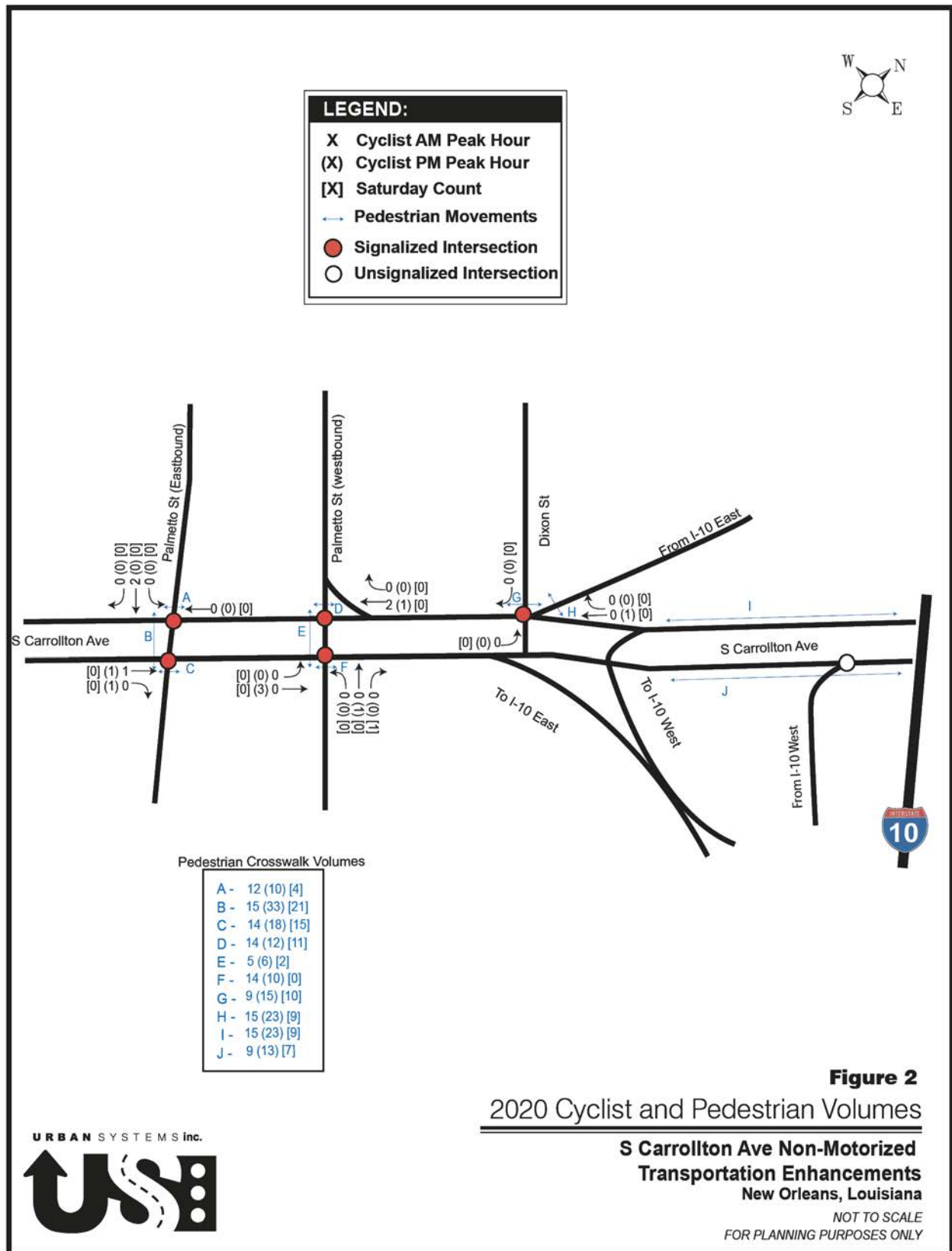
2020 Existing Intersection Capacity Analysis

Location	AM			PM		
	LOS	V/C	Delay (sec)	LOS	V/C	Delay (sec)
Palmetto Street Westbound at South Carrollton Avenue	B	0.60	11.1	B	0.73	15.9
Palmetto Street Westbound	C	0.50	30.2	D	0.70	35.8
South Carrollton Avenue Northbound	A	0.56	6.3	A	0.66	8.5
South Carrollton Avenue Southbound	A	0.62	9.9	B	0.72	16.7
Palmetto Street Eastbound at South Carrollton Avenue	B	0.63	12.1	B	0.72	13.3
Palmetto Street Eastbound	C	0.71	32.9	C	0.65	32.2
South Carrollton Avenue Northbound	A	0.47	9.4	B	0.58	12.3
South Carrollton Avenue Southbound	A	0.58	1.8	A	0.76	3.8
Dixon Street at South Carrollton Avenue	B	0.88	10.7	B	0.97	12.0
Dixon Street Eastbound	D	0.04	36.8	D	0.23	39.6
I-10 Off Ramp Southeastbound	C	0.67	25.9	C	0.71	32.4
South Carrollton Avenue Southbound	C	0.48	24.8	C	0.53	27.1
South Carrollton Avenue Northbound Left	C	0.06	34.0	C	0.11	32.4

2020 Vehicle Volumes



2020 Cyclist and Pedestrian Volumes



URBAN SYSTEMS inc.

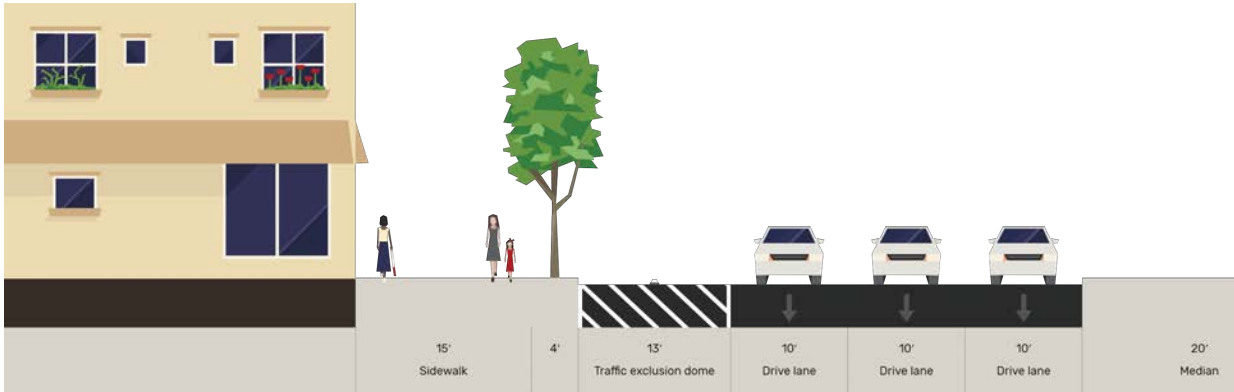


Project # 19-076

Last revised February 2020

Street Cross Sections

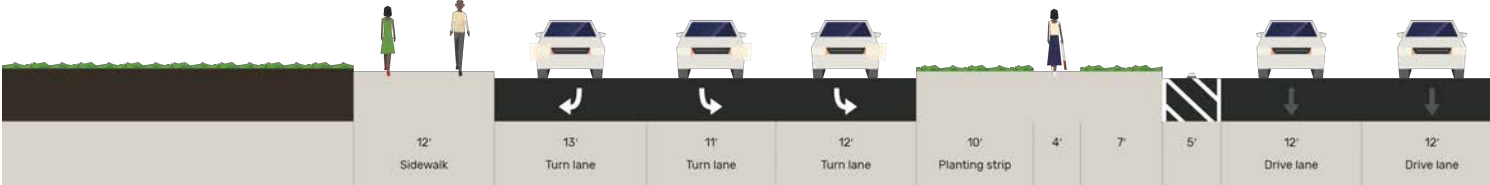
South Carrollton at Airline Highway/Tulane Avenue intersection (looking lakebound)



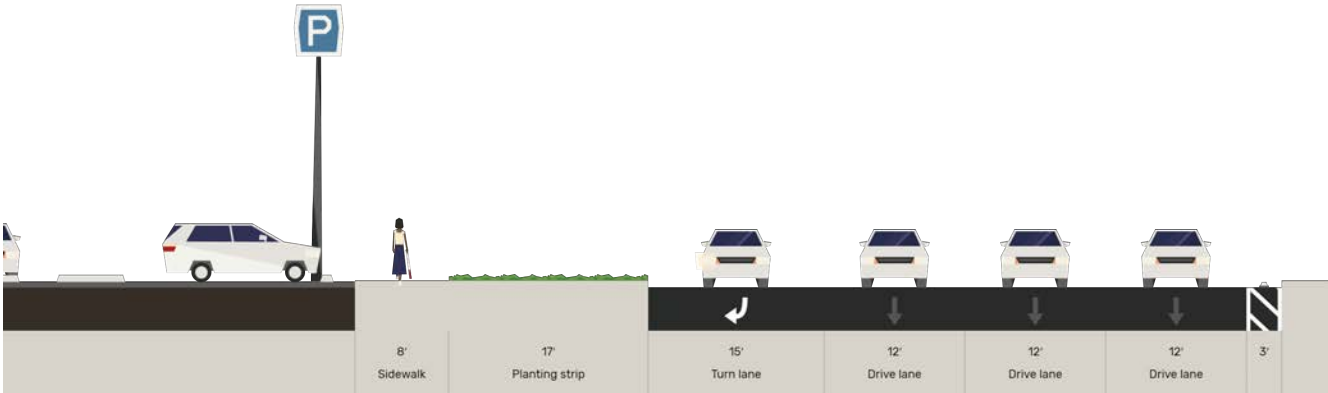
South Carrollton north of northmost Pontchartrain Expressway overpass (looking lakebound)

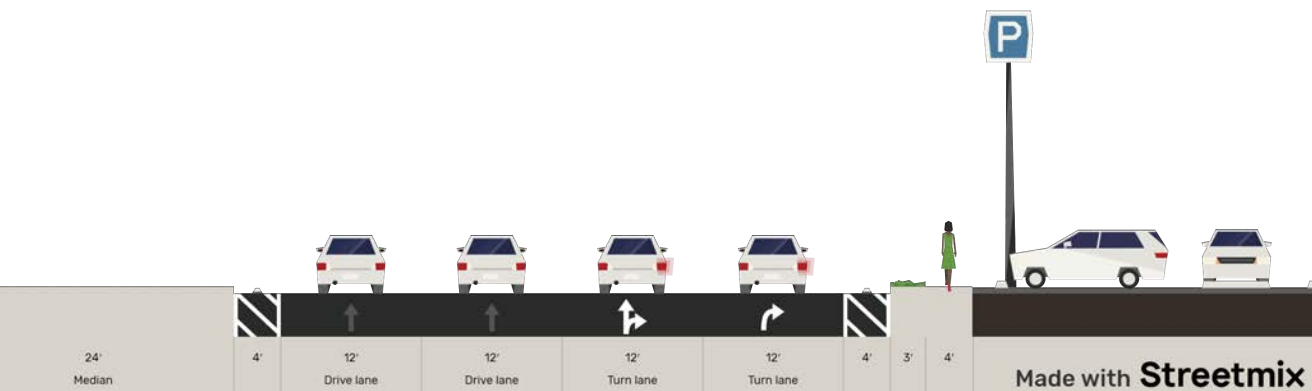


South Carrollton north of Dixon Street intersection (looking lakebound)



South Carrollton at Palmetto Street intersection (looking lakebound)





Transit

Four New Orleans Regional Transit Authority (RTA) bus routes serve the study area along South Carrollton Avenue, Airline Highway/Tulane Avenue, Palmetto Street/Washington Avenue, and along the Pontchartrain Expressway.

The 27 Louisiana provides access between the Cemeteries transfer station and the Garden District, and travels along Airline Highway before turning onto South Carrollton Avenue and then turning along Washington Avenue. A designated Bus Only left hand turn lane serves the 27 route at the intersection of South Carrollton Avenue and Washington Avenue. The 32 Leonidas-Orleans-Treme route travels directly down South Carrollton Avenue and along Palmetto and Palm Streets to provides access between Carrollton, Mid-City, and the Treme neighborhood. The 39 Tulane route travels down Tulane Avenue, South Carrollton Avenue, and Jefferson Highway to provide access between the Central Business District and the Ochsner Medical Center. The 90 Carrollton provides access along the avenue between the Carrollton and Gentilly neighborhoods.

Route 202, the Airport Express Line, traverses through the study area on I-10 but does not provide any transfers or direct access to the study area.

Between Palmetto Street and Airline Highway/Tulane Avenue, five bus stops are located directly along South Carrollton Avenue. Of these bus stops, only one (at the corner of South Carrollton and Tulane Avenues) provides a shelter. The other four bus stops vary from providing a concrete landing pad to only a signed post.

Ridership data shows that the busiest bus stops are located at either end of the study corridor at the intersections of South Carrollton Avenue with Washington Avenue and Tulane Avenue. These bus stops all serve four bus routes (Routes 27, 32, 39, and 90) and represent major route transfer opportunities.



View of bus shelter located on the downriver side of South Carrollton Avenue just south of Tulane Avenue.

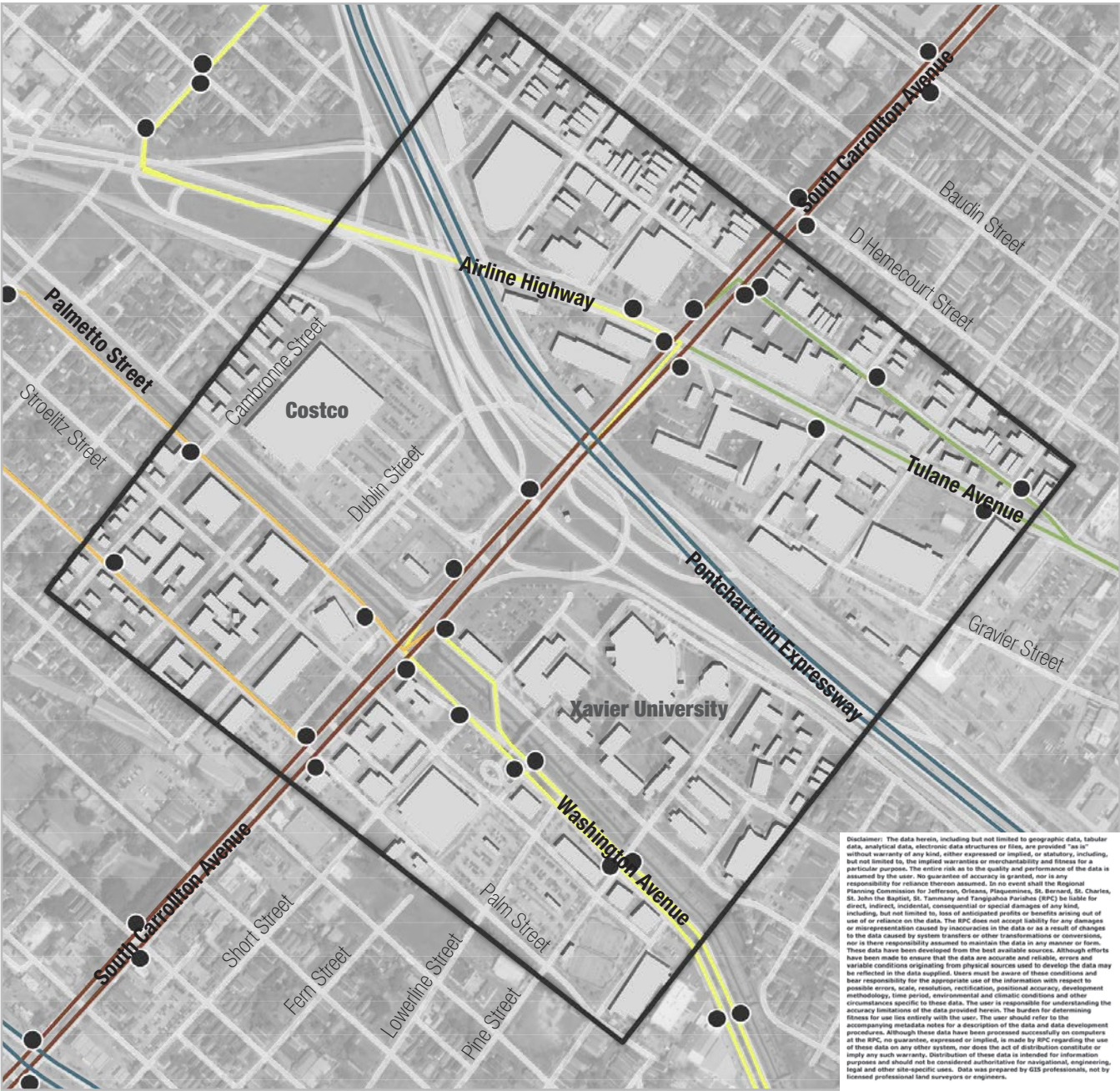


Five New Orleans Regional Transit Authority (RTA) bus routes serve the study area.



Signed bus stop at South Carrollton Avenue and Dixon Street does not provide any concrete access pad to the sidewalk for people using mobility assistance devices.

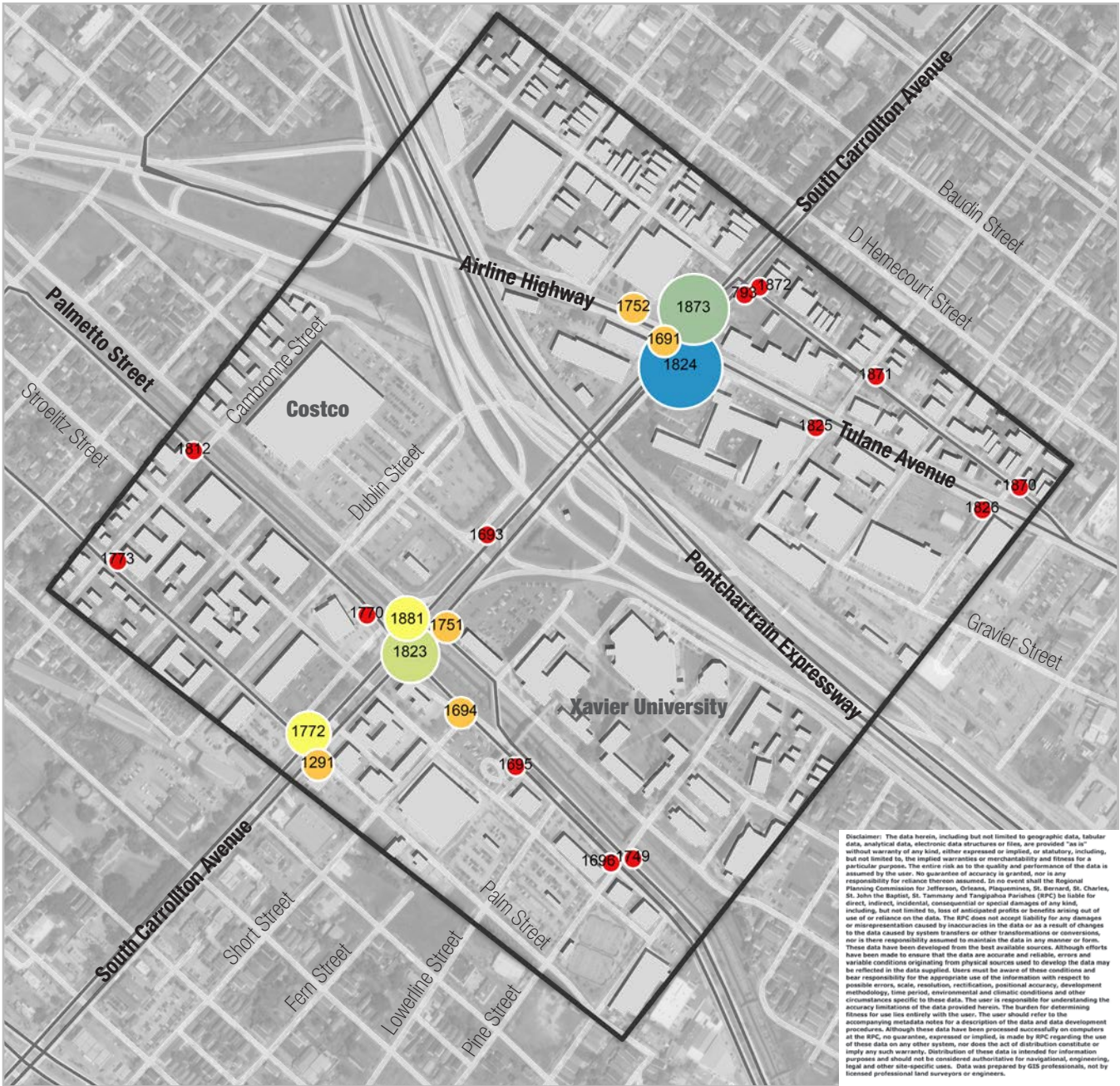
Bus Routes



Source: Regional Planning Commission,
City of New Orleans

- Louisiana Line (Route 27)
- Leonidas-Orleans-Treme Line (Route 32)
- Tulane Line (Route 39)
- Carrollton Line (Route 90)
- Airline Express Line (Route 202)

Total Ridership by Bus Stop



Source: Regional Planning Commission, City of New Orleans

- 0-50
- 51-100
- 101-150
- 151-200
- 201-250
- 250-300

Total Boardings and Alightings by Time of Day



Source: Regional Planning Commission,
City of New Orleans



- 4:00 a.m. - 5:59 a.m. (early morning)
- 6:00 a.m. - 8:59 a.m. (peak morning)
- 9:00 a.m. - 2:59 p.m. (midday)
- 3:00 p.m. - 5:59 p.m. (peak evening)

- 6:00 p.m. - 8:59 p.m. (late evening)
- 9:00 p.m. - 11:59 p.m. (late night)
- 12:00 a.m. - 3:59 a.m. (overnight)

Pedestrian Realm

Paved sidewalks line the length of the study area corridor along either side of South Carrollton Avenue between the Palmetto Street / Washington Avenue and the Airline Highway / Tulane Avenue intersections. However, the sidewalk conditions are poor in many areas, and the width of the sidewalk varies from as narrow as 4 feet-wide to 8 feet-wide in places. The sidewalk is also uneven with slight lips that create tripping hazards. On the north/lakeside of the underpass, the sidewalk's cross-slope slants downward towards the street level where driveway access points are provided along South Carrollton Avenue at such a steep grade as to be inaccessible to people using wheeled mobility devices.

Passing under the I-10 from south to north, support beams are just over six feet high on the upriver side of the avenue. The sidewalk conditions deteriorate under the underpass and experience a buildup of dirt, silt, and debris that are washed down the retaining walls and other impervious surfaces adjacent to the underpass. The pedestrian realm under the expressway is dimly lit by few wall overhead lights and the support columns for the railroad crossing create poor sight lines for pedestrians. Chain link fences are installed between the railroad support columns on the downriver of South Carrollton Avenue, but not on the upriver side. These spaces allow people to disappear behind view of the support columns and can contribute to a feeling of being less safe for some users.

As one emerges out from under the expressway, the sidewalk grade becomes very steep as the sidewalk crosses driveway access points on either side of the avenue. On both sides of the avenue, the sidewalk grade increases until users reach short staircases. On the downriver side of the avenue, a desire path has been worn into the grass adjacent to the staircase where people are walking or riding bicycles around the steps.

Where marked crosswalks are present, people traveling by non-motorized modes still experience difficulty attempting to cross streets. The crosswalks across the eastbound I-10 on ramps are marked and signed, yet the high speed and volume of vehicles creates a constant stream of vehicles that typically do not yield to pedestrians and people biking who were waiting on either side of the crosswalk.



Under the Pontchartrain Expressway, the sidewalk is in disrepair on the upriver of South Carrollton Avenue. The orange traffic safety barrel has been present in the field since at least November 2019.

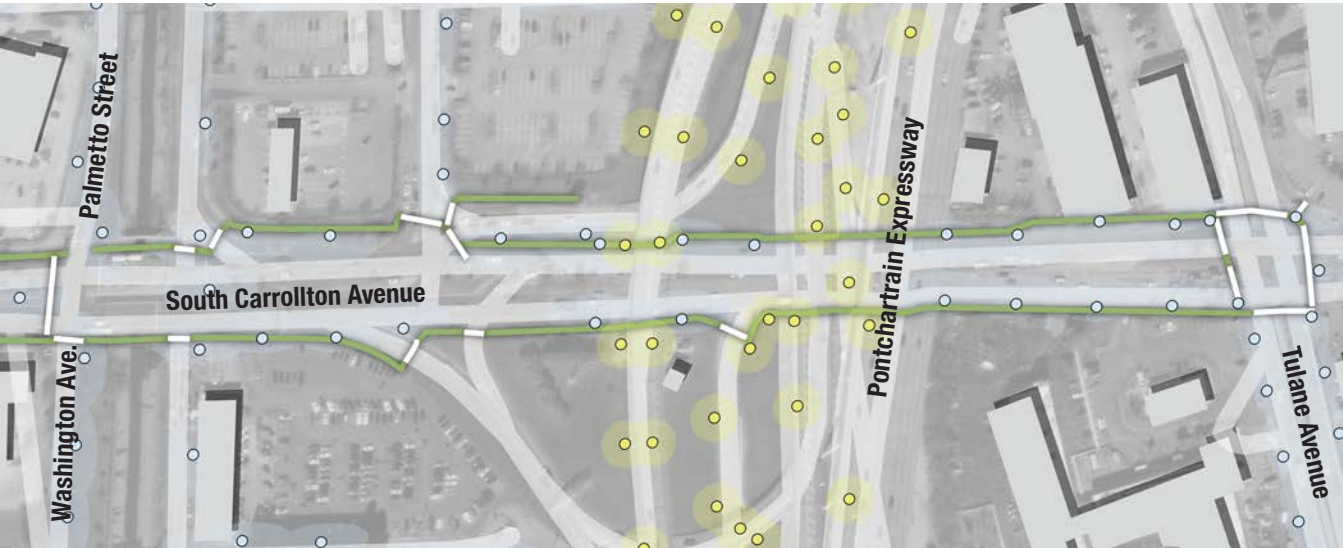


There is a sidewalk present along both sides of South Carrollton; on the north side of the avenue the sidewalk is approximately four feet wide in most sections.



The sidewalk on the upriver side of the avenue is interrupted by a short set of stairs that are not accessible to people in wheeled mobility devices.

Sidewalks, Signals, and Crossings



Source: Regional Planning Commission, City of New Orleans

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

- Marked Crosswalk
- Existing Sidewalk
- LED Streetlights
- High Pressure Sodium (HSP) Streetlights



View looking lakebound showing marked crosswalks and pedestrian islands at the intersection of South Carrollton Avenue and Dixon Street.

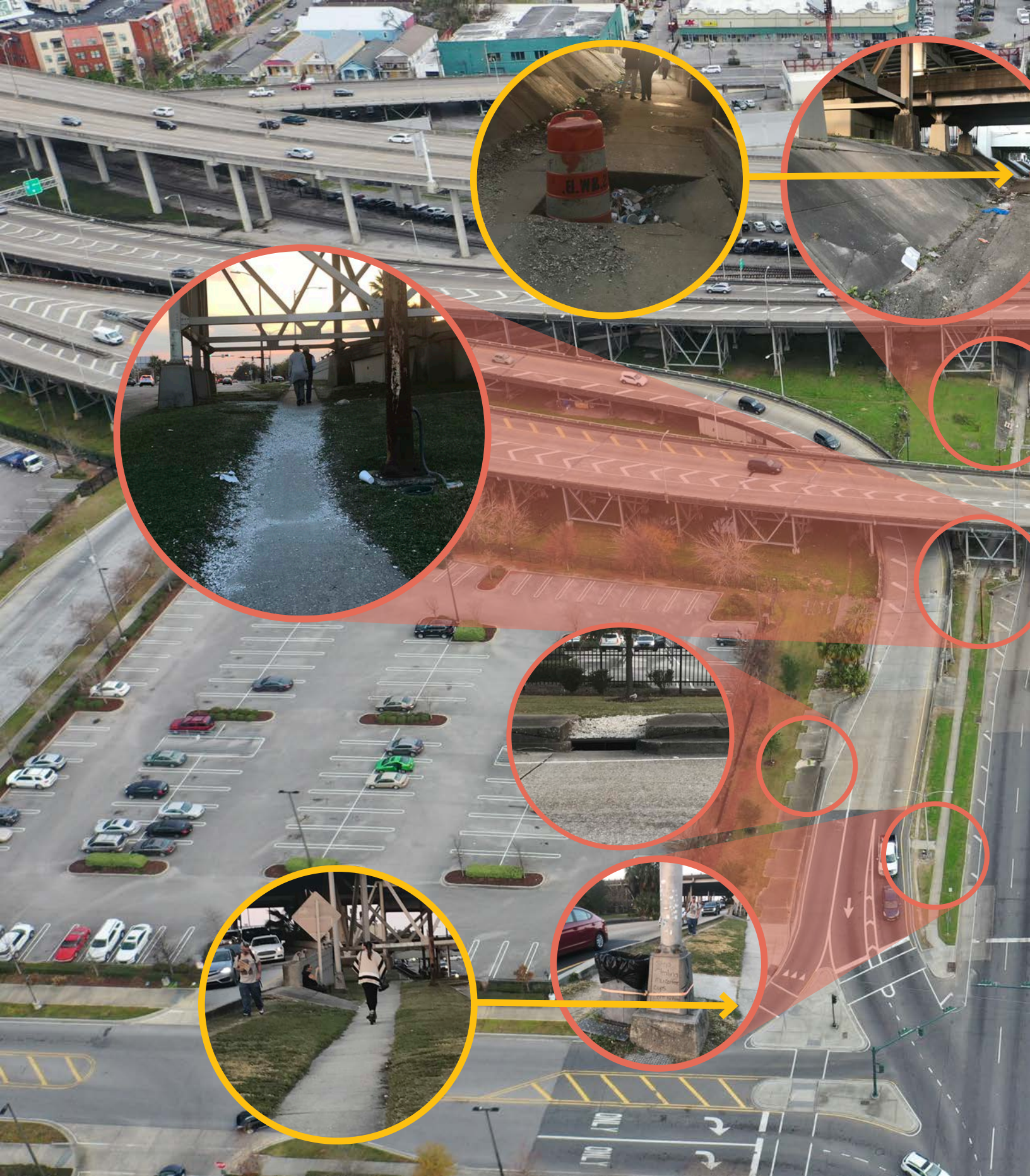


View looking west showing marked crosswalks at the I-10 on ramps on the south side of South Carrollton Avenue.



🕒 Viewshed looking riverbound along South Carrollton Avenue





🕒 Viewshed looking lakebound along South Carrollton Avenue



Bikeways

Field observations revealed frequent bicycle usage on South Carrollton Avenue between Palmetto Street/ Washington Avenue and Airline Highway/Tulane Avenue. People generally ride on the sidewalk rather than in the street, on either side of the underpass.

A handful of formal bikeways serve the study area.

A traditional, unbuffered bike lane serves Tulane Avenue beginning at South Carrollton Avenue and between two lanes of auto traffic and a right-side parking lane.

A traditional, unbuffered bike serves the lake side of Washington Avenue until becoming a shared facility at Fern Street.

A shared lane facility serves the lake side of Washington Avenue.

The draft Moving New Orleans Bikes recommendations are included in the map at right. They include protected bike lanes along the main thoroughfares in the study area:

- On both sides of Tulane Avenue, on the lake side of Airline Highway, and on both sides of Palmetto Street and Washington Avenue.
- Along much of South Carrollton Avenue with a designated shared use path between Palmetto Street and Airline Highway/Tulane Avenue. This would combine space for people biking and people walking behind the curb.
- A bicycle boulevard is recommended along Pine Street and Drexel Drive.

Protected bike lanes: Bike lanes physically separated from adjacent auto users through the use of a barrier such as a concrete curb or vertical bollards.

Bicycle boulevards prioritize people riding bikes by slowing the speed of traffic on low-volume, shared neighborhood streets.

Shared lane: People on bikes and people operating motor vehicles share the same traffic lane.



A desire path indicates high usage by people walking and biking along downriver South Carrollton Avenue away from the underpass toward Tulane Avenue.

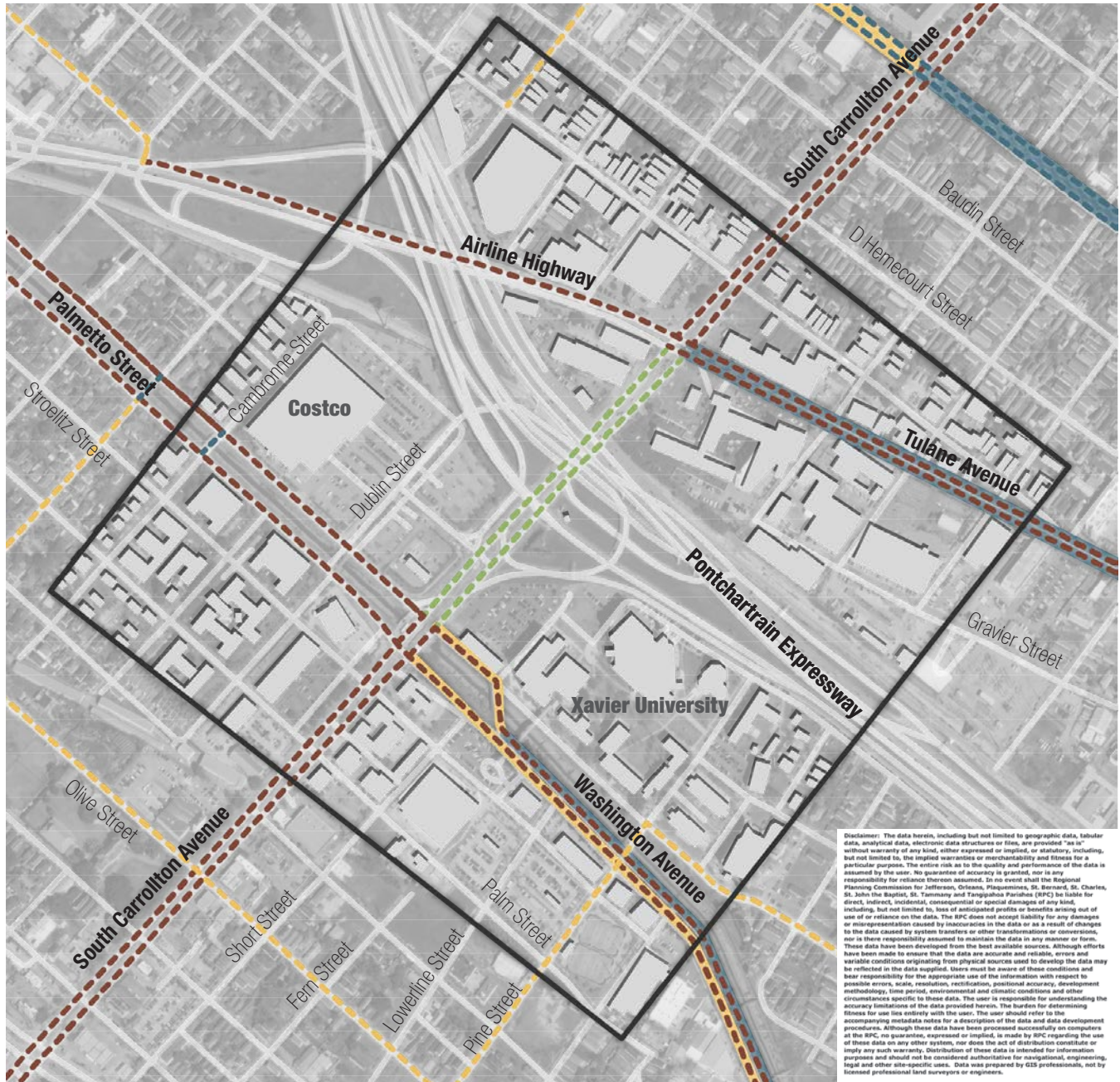


South Carrollton Avenue does not offer any cyclist accommodations. (Riverbound in the right most traffic lane on South Carrollton Avenue away from Palmetto Street)



A person on a bike heading riverbound in the sidewalk along South Carrollton Avenue under the underpass.

Existing and Recommended Bikeways



Source: Regional Planning Commission,
City of New Orleans, Toole Design
Group

Crash Data Analysis

The Department of Transportation and Development collects crash data from the New Orleans Police Department, and the Center for Analytics and Research in Transportation Safety (CARTS) at LSU conducts quality assurance and control of the data.

According to this dataset, 945 crashes occurred from 2015 to 2017 within a quarter-mile of the study area. This figure excludes crashes that occurred on Interstate 10 and its associated ramps, outside of the study area. Of these 945, 546 occurred on or adjacent to South Carrollton Avenue between Washington and Tulane Avenues. The table below summarizes these 546 crashes.

The majority of these 546 crashes involved small and medium-sized (personal) motor vehicles. However, five of the six crashes that resulted in fatalities or severe injuries either involved pedestrians (one each), bicyclists (one severe injury), or motorcyclists (one each), whereas only one crash of any other vehicle type (small vehicle) resulted in a severe injury, and none in fatalities.

Four of the six fatality/severe injury crashes occurred at or near the intersection of Tulane Avenue/Airline Highway and South Carrollton Avenue. Of the other two, one involved the severe injury of a cyclist on the riverbound side of South Carrollton Avenue at the intersection with Dixon Street. The second involved the severe injury of a pedestrian at the intersection of lakebound South Carrollton Avenue and Stroelitz Street, one block south of Washington Avenue.

Crashes by Type of Vehicle Involved

Crash Type	Total	Percent of Total	Fatal	Severe	Percent Fatal/ Severe	Moderate	Complaint	No injury
Small Vehicle	334	61.20%		1	0.30%	8	56	269
Medium Vehicle	98	17.90%			0.00%	2	17	79
transport	30	5.50%			0.00%	2	4	24
3+ vehicles	23	4.20%			0.00%	1	12	10
pedestrian	12	2.20%	1	1	16.70%	6	4	
bus	11	2.00%			0.00%			11
Parked	10	1.80%			0.00%		1	9
Pedalcycle	8	1.50%		1	12.50%	3	2	2
Other Vehicle	6	1.10%			0.00%		1	5
Error - Odd Combination of Attributes	4	0.70%			0.00%		2	2
Motorcycle	4	0.70%	1	1	50.00%	1	1	
Other Fixed	3	0.50%			0.00%	1		2
Miscellaneous	1	0.20%			0.00%	1		
Structures	1	0.20%			0.00%		1	
Vertical Fixed	1	0.20%			0.00%			1
Grand Total	546		2	4		25	101	414

Crashes by Severity of Crash

Source (Chetani): This data consists of information collected by the Louisiana Department of Transportation and Development (LA DOTD) from numerous sources including state and local police departments. The source data was collected by various entities using a variety of reporting methods. These data have been geographically located in the form of X and Y coordinates to generally represent the location of an accident. LA DOTD processed the data to determine geographic locations.

The LA DOTD and the Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. John the Baptist, St. Tammany, and Tangipahoa Parishes (RPC) are not responsible for any errors arising from any use or alterations made to the data. There is no guarantee of warranty concerning the accuracy of the data. Users should be aware that this data may not represent current conditions. Users should not use these data for critical applications without a full awareness of their limitations. Under no circumstances is reuse or distribution of the data permitted. Any use of the data must be accompanied with this citation and accompanying note, and the special crash citation below:

Special Disclaimer concerning Crash data:

- 1) CONFIDENTIAL INFORMATION: This document is exempt from discovery or admission under 23 U.S.C. 409. Contact the LADOTD Traffic Safety Office at (225)779-1529 before releasing any information.
- 2) This report is prepared solely for the purpose of identifying, evaluating and planning safety improvement on public roads, and is therefore exempt from discovery or admission under 23 U.S.C. 409.



Source: Regional Planning Commission



- Study Area
- No Injury
- Complaint
- Moderate
- Severe
- Fatal

The table below summarizes all study area crashes by collision type. Most collision types were rear ends (174) and same direction sideswipes (131). The map below shows rear-end crashes clustered in a handful of areas. The interstate on ramp located to the south of the highway has two clusters: where riverbound traffic turns left across oncoming lakebound traffic, and where this traffic merges with lakebound traffic access the on ramp. Numerous rear ends also occurred on riverbound Washington Avenue crossing South Carrollton Avenue and throughout the intersection with Tulane Avenue. Sideswipe crashes are most heavily concentrated on lakebound South Carrollton Avenue between Washington Avenue and the I-10 on ramp, and at the intersection with Tulane Avenue.

While most of these crashes resulted in no injuries, the high concentration at these locations demonstrates high degrees of vehicular conflict and/or high traffic volumes on at these locations.



Rear-end crashes are clustered along the I-10 on ramp pictured above.

Crashes by Type of Collision

Collision Type	Fatal	Severe	Moderate	Complaint	No injury	Total
Rear end			5	38	131	174
Sideswipe - same direction		1	2	12	116	131
Right angle		2	5	29	51	87
Other		1	1	13	43	58
Right turn - same direction				5	37	42
Left turn - angle			1	2	12	15
Non-collision with motor vehicle	2		5		4	11
Left turn - same direction			2		8	10
Left turn - opposite direction			1		8	9
Head-on			1	1	2	4
Right turn - opposite direction			2	1	1	4
Sideswipe - opposite direction					1	1
Total	2	4	25	101	414	546

Crashes by Type of Collision

Source (Disclaimer): This data consists of information collected by the Louisiana Department of Transportation and Development (LA DOTD) from numerous sources including state and local police departments. The source data was collected by various entities using a variety of reporting methods. These data have been geographically located in the form of X and Y coordinates to generally represent the location of an accident. LA DOTD processed the data to determine geographic locations.

The LA DOTD and the Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. John the Baptist, St. Tammany, and Tangipahoa Parishes (RPC) are not responsible for any errors arising from any use or alterations made to the data. There is no guarantee of warranty concerning the accuracy of the data. Users should be aware that this data may not represent current conditions. Users should not use these data for critical applications without a full awareness of their limitations. Under no circumstances is review or distribution of the data permitted. Any use of the data must be accompanied with this citation and accompanying text, and the special crash citation below:

Special Disclaimer concerning Crash data:

- 1) CONFIDENTIAL INFORMATION: This document is exempt from discovery or admission under 23 U.S.C. 409 - Contact the LA DOTD Traffic Safety Office at (225) 779-1529 before releasing any information.
- 2) This report is prepared solely for the purpose of identifying, evaluating and planning safety improvement on public roads, and is therefore exempt from discovery or admission under 23 U.S.C. 409.



Source: Regional Planning Commission



0 0.125 0.25 mile

- Study Area
- Sideswipe - Same Direction
- Right Turn - Same Direction
- Right Angle
- Rear End

Source (Disclaimer): This data consists of information collected by the Louisiana Department of Transportation and Development (LA DOTD) from numerous sources including state and local police departments. The source data was collected by various entities using a variety of reporting methods. These data have been geographically sorted in the form of X and Y coordinates to generally represent the location of an accident. LA DOTD processed the data to determine geographic locations.

The LA DOTD and the Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. John the Baptist, St. Tammany, and Tangipahoa Parishes (RPCI) are not responsible for any errors arising from any use or alterations made to this data. There is no guarantee of warranty or accuracy of the data. Users should be aware that this data does not represent current conditions. Users should not use these data for critical applications without a full awareness of their limitations. Under no circumstances is reuse or redistribution of the data permitted.

Any use of the data must be accompanied with this citation and accompanying seal, and the special crash citation below:

1) CONFIDENTIAL INFORMATION-This document is exempt from discovery or admission under 23 U.S.C. 409. Contact the LADOTD Traffic Safety Office at (225)379-1929 before releasing any information.

2) This report is prepared solely for the purpose of identifying, evaluating and planning safety improvement on public roads, and is therefore exempt from discovery or admission under 23 U.S.C. 409.

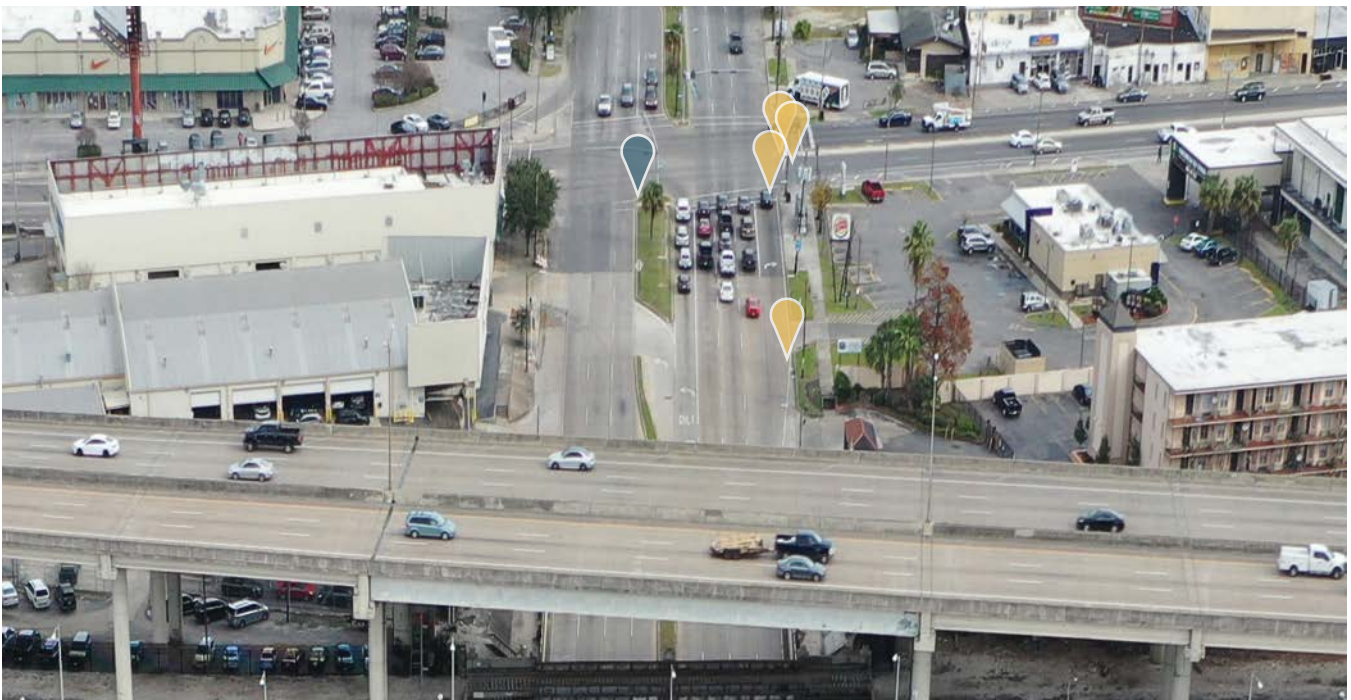


A number line starting at 0 and ending at 0.25 mile. There are tick marks at 0, 0.125, and 0.25 mile. The line is divided into four equal segments. The first segment, from 0 to 0.125, is shaded light blue. A clock icon is placed at the 0 mark.

- 60 South Carrollton Avenue Enhancements Stage 0 Feasibility Study



Collisions between vehicles and bicycles (in blue) and collisions between vehicles and pedestrians (orange) along South Carrollton Avenue within the 0.3 mile stretch of the avenue directly under study are shown above. Note that nearly all of these collisions occurred along the heaviest used traffic lanes according to the 48-hour traffic counts.



There were four separate collisions between pedestrians and people operating motor vehicles along South Carrollton Avenue near or at the intersection with Tulane Avenue. One of these collisions occurred near a driveway access point and the other three occurred within or adjacent to a marked crosswalk. There was one collision between a bicyclist and a driver at the intersection nearer Airline Highway; Airline Highway does not currently have a designated bikeway but there is an existing marked bike lane on Tulane.

DESIGN CONCEPTS

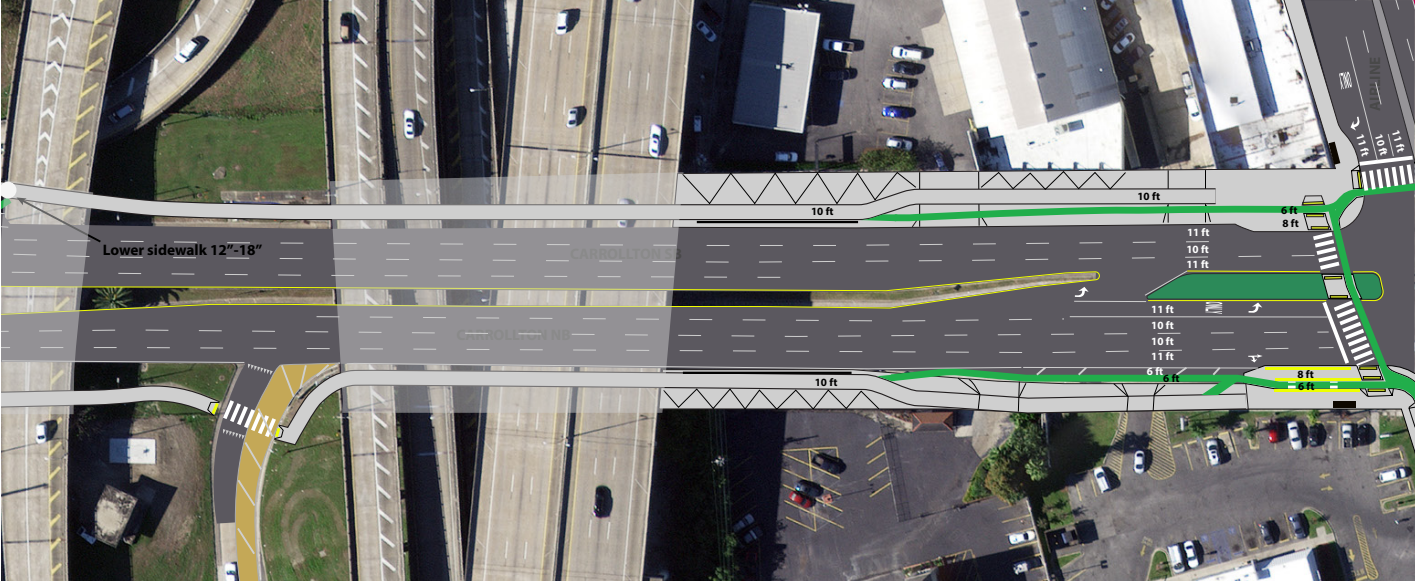
Through an iterative process of developing and refining project concepts, the study resulted in two potential design concepts for the study area.

Shared Design Elements

The two concepts share many of the same proposed designs. These are:

- At all existing crosswalks, continental crosswalk markings, ADA curb ramps and pedestrian countdown signals are installed.
- All sidewalks are repaired or replaced to achieve ADA compliance for surface smoothness and cross-slope. Noteworthy sidewalk repairs and enhancements include:
 - Replacing and widening the sidewalks along the railroad underpass from 8' to 10', providing adequate room for two-way shared use by people walking and bicycling. This will require excavation of two feet of width from the existing retaining walls. The cost and feasibility of this excavation was not examined as part of this study.
 - Lowering of the sidewalk by 12" to 18" under the flyover ramp that provides access from the Pontchartrain Expressway and Airline Highway to Howard Avenue, where the lower beam of a supportive truss currently provides approximately 75" of clearance;
 - Widening the existing northbound and southbound sidewalk from Washington Avenue to the underpass to accommodate two-way, shared use pedestrian and cyclist travel.
- The right-turn-only lane northbound approaching Tulane Avenue is eliminated by a curb extension that provides a bus landing pad and off-street bikeway. A curb extension on the southbound side of the roadway at this intersection reduces the number of through lanes from three to two for approximately 30' to 40', before returning to a three-lane configuration.
- The westbound Pontchartrain Expressway off ramp onto northbound South Carrollton Avenue is narrowed from two lanes to one lane by pavement markings, and yield pavement markings and signage are installed before the crosswalk.
- To accommodate off-street bikeways in each direction, travel lanes on South Carrollton Avenue are narrowed from a range of 12' to 14' to a range of 10' to 11'.
- Dedicated, green-painted bikeways are installed throughout the study area:
 - Southbound from Airline Highway to the Enterprise driveway apron: A six-foot wide off-street cycle-track (behind the curb)
 - Southbound from the Howard Avenue flyover ramp to Dixon Street: A five-foot wide off-street cycle-track (behind the curb)
 - Southbound from Dixon Street to westbound Palmetto Street: A five-foot on-street bike lane crosses the I-10 off ramp and southbound right-turns slip lane, where a four-foot buffer marking separates it from the right-side through lane
 - A five-foot bike lane serves the right side of Palmetto Street westbound and widens to six feet after crossing the right turn slip lane from South Carrollton Avenue southbound
 - A five foot bike lane serves eastbound Palmetto Street between the right-turn only lane and the center through lane. This transitions to a six-foot wide right-side bike lane on Washington Avenue eastbound.
 - A five-foot wide bike lane buffered by pavement markings serves the right side of South Carrollton Avenue northbound from Washington Avenue westbound to the I-10 on ramp, where it transitions to an off-street shared use trail.
 - Northbound from the Fontainebleau Apartments driveway apron to Tulane Avenue: A six-foot wide on-street bikeway separated by a six foot pavement marking buffer.
- Brighter lighting replaces the existing overhead lighting in the underpass sidewalks
- A street light pole and figure is installed on northbound South Carrollton Avenue immediately to the north of the southbound South Carrollton Avenue I-10 on ramp.
- Public art is installed in the underpass sidewalks, such as murals and lighting.

North of Underpass: Both Concepts

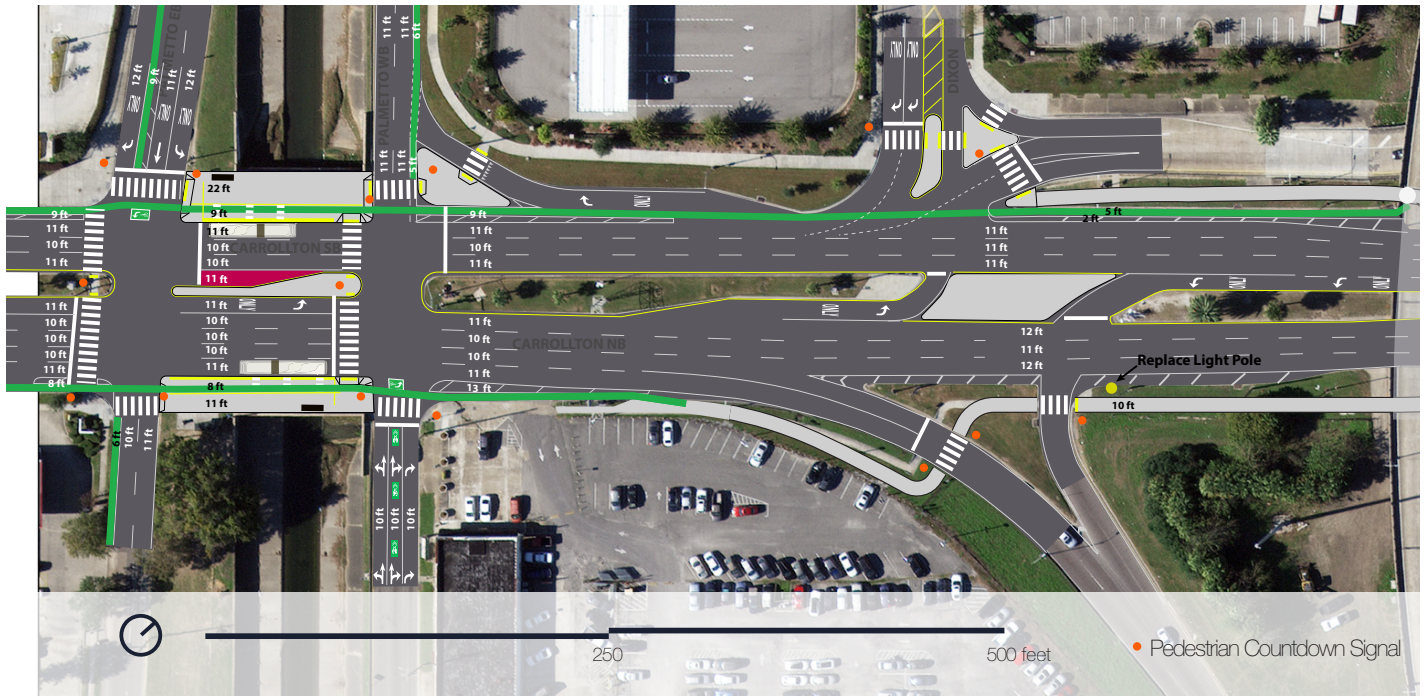


Concept 1: Enhanced Palmetto/ Washington Bus Stop

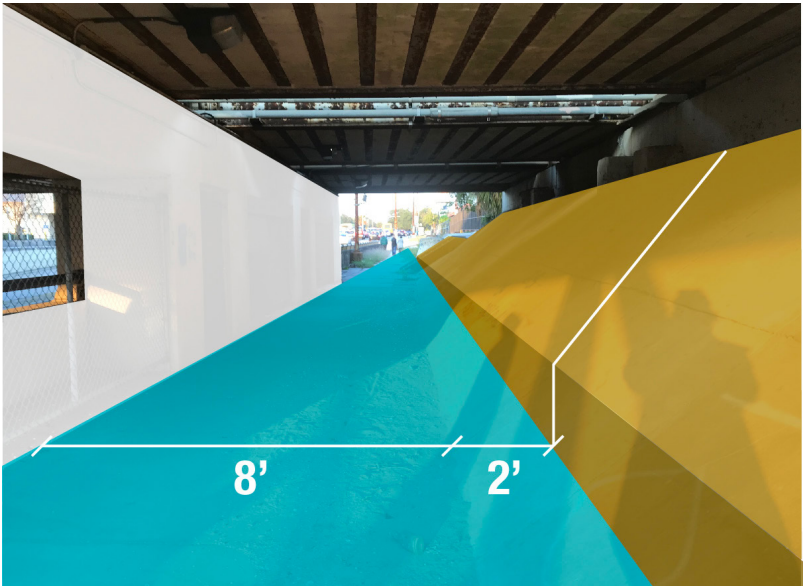
Concept 1 Improved Palmetto Bus Stop includes the following design elements:

- The existing bus stops at Palmetto Street/ Washington Avenue are enhanced
 - Southbound bus stop: The curb is extended nine feet into the roadway to provide room for a four-foot wide bike lane located behind a five-foot bus passenger landing area.
 - Northbound bus stop: The curb is extended eight feet into the roadway to provide room for a four-foot wide bike lane located behind a five-foot bus passenger landing area.
- The I-10 northbound on ramp crossings are enhanced
 - Crossings are marked with continental crosswalks
 - Pedestrian activated signals (such as rectangular rapid flash beacons) are installed at both crossings
 - A signal head with a flashing yellow arrow at the S Carrollton Ave Southbound left lane
 - Stop bars are marked for on ramp traffic in both directions

South of Underpass: Concept 1 - Enhanced Palmetto/Washington Bus Stop



Southbound Underpass Sidewalk: Existing and Proposed

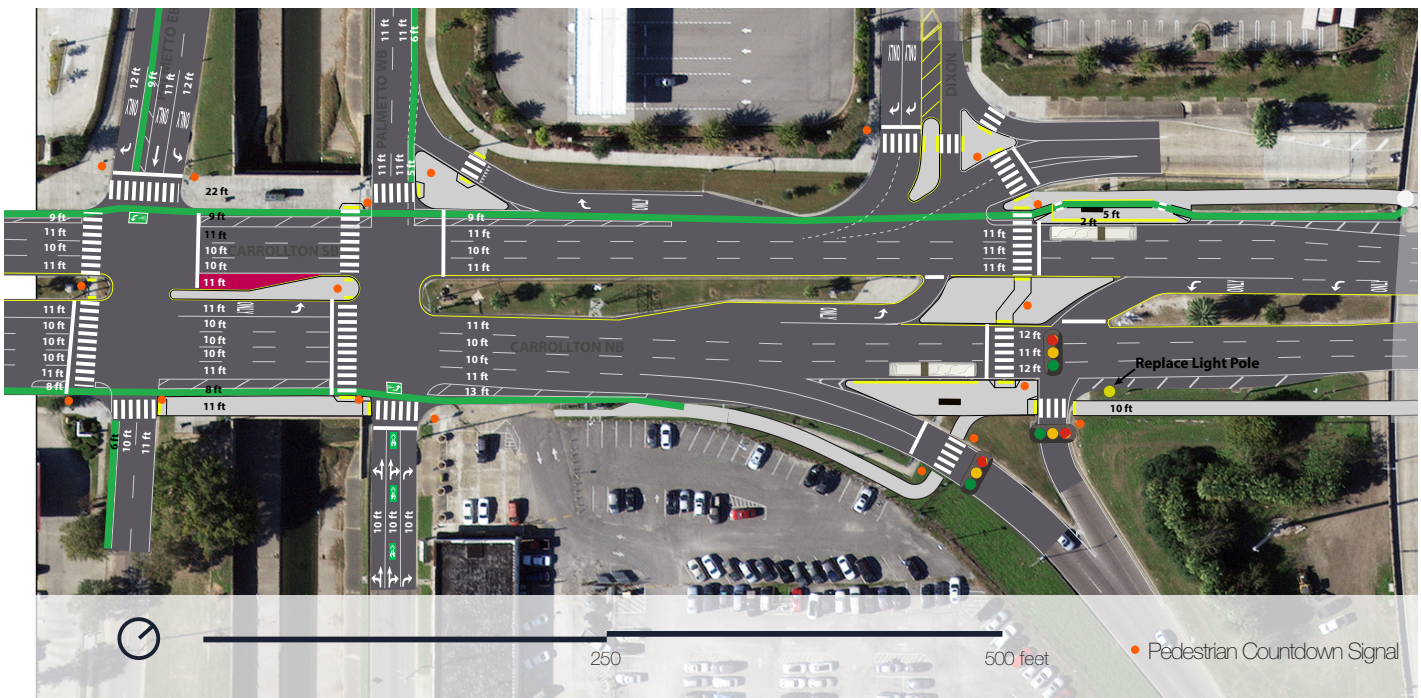


Concept 2: Dixon Bus Stop

Concept 1 Improved Palmetto Bus Stop includes the following design elements:

- The existing bus stops at Palmetto Street/ Washington Avenue are moved to Dixon Street
 - A five foot bike lane with a four foot pavement marking buffer runs southbound and a three-foot pavement marking buffer runs northbound connecting on-street bikeways in both directions. Narrowing existing lanes permits this addition without removing lanes.
- Traffic signals are installed in three directions at the I-10 on ramps: northbound South Carrollton through-traffic, northbound South Carrollton on ramp traffic, and southbound South Carrollton on ramp traffic
 - The signals are phased at 70 second intervals for northbound on ramp and through traffic and 20 second intervals for southbound on ramp traffic
- The phasing permits pedestrians to cross the on ramps and S. Carrollton Avenue during protected phases
- New bus stops, long enough to accommodate articulated buses, are installed on southbound S. Carrollton Avenue
 - Southbound, the curb is extended into the existing shoulder to create a seven-foot landing and waiting area before Dixon Street. The on street bike lane wraps transitions off-street at the bus stop, behind the shelter and waiting area, and back on-street after the southbound crosswalk.
 - Northbound, the new bus stop is located on an extended sidewalk between the two I-10 on ramps.

South of Underpass: Concept 2 - Dixon Bus Stop



Dixon and I-10 On Ramps: Existing and Concept 2 Dixon Bus Stops

