

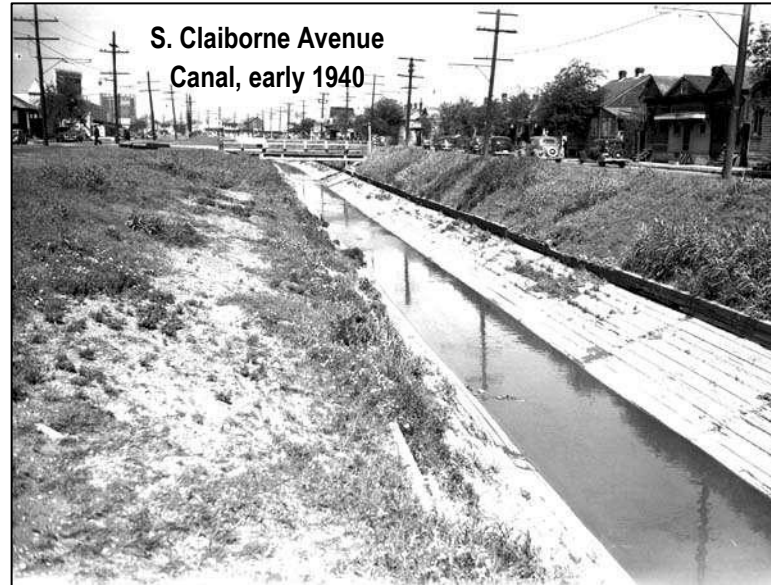


SOUTHEAST LOUISIANA (SELA) ENVIRONMENTAL PLANNING



Between 1978 and 1998, Orleans, Jefferson, and St. Tammany Parishes experienced numerous flooding events caused by excessive rainfall and insufficient drainage infrastructure. From May 8 through May 10, 1995, the 6-hour rainfall amounts averaged 12 inches.

Seven lives were lost and over 35,000 homes were flooded along with thousands of businesses and public facilities. There was significant street and highway damage. Estimated flood damage totaled about \$1 billion for the three parishes.



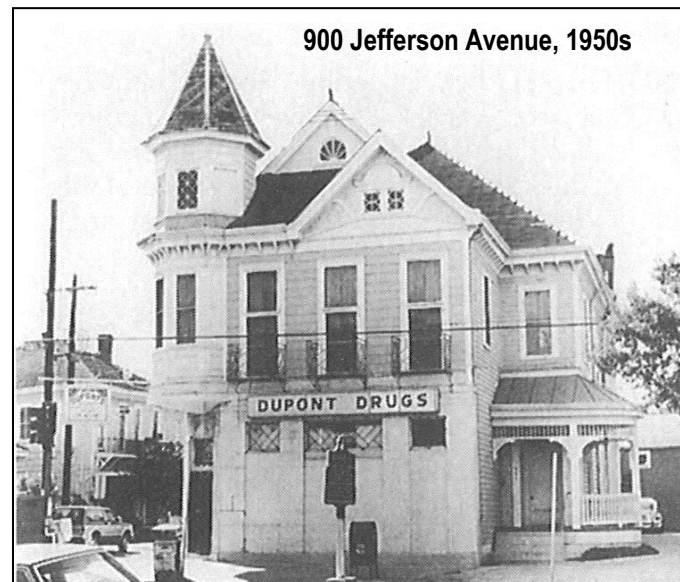
S. Claiborne Avenue Canal, early 1940



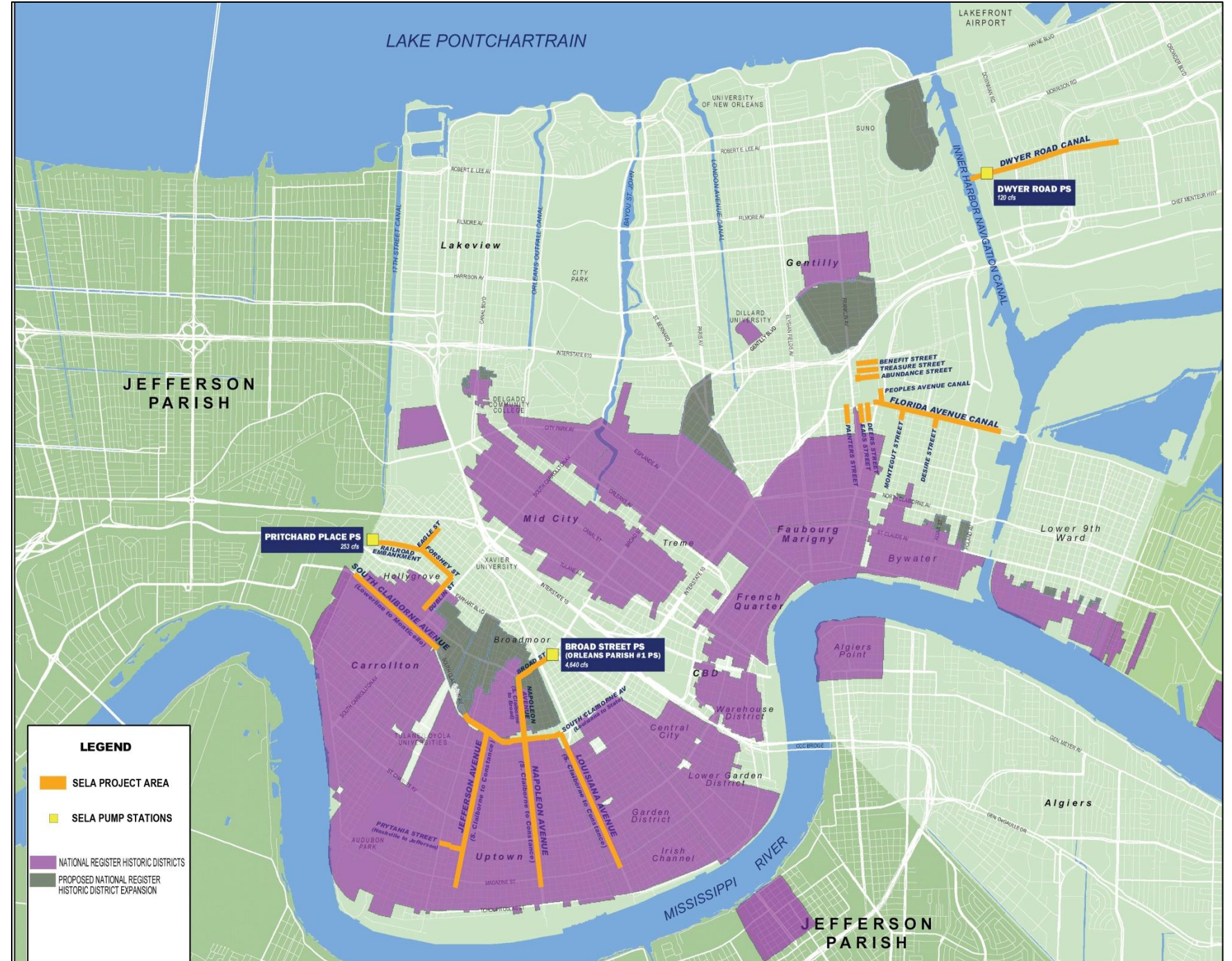
Napoleon Avenue Streetcar 969, 1949

In Fiscal Year 1996, Congress authorized the Southeast Louisiana (SELA) Project through enactment of Section 108 of the Energy and Water Development Appropriations Act and Section 533 of the Water Resources Development Act (WRDA) of 1996.

Due to Environmental and Historic Preservation Acts, the United States Army Corps of Engineers - New Orleans District (CEMVN) prepared Environment Assessments and Supplemental Environment Assessments to identify potential impacts to the natural or manmade environment from the SELA Project. In addition, Section 106 consultation with the State Historic Preservation Officer (SHPO) was initiated, as they recognized that portions of the Orleans Parish SELA were in National Historic Districts in Orleans Parish. CEMVN drafted a Programmatic Agreement with the Louisiana SHPO and the Louisiana Coastal Protection and Restoration Authority. The Sewerage and Water Board (S&WB) of New Orleans also signed the agreement as an invited signatory.



900 Jefferson Avenue, 1950s



The Programmatic Agreement recognized that several landscape features may remain from the National Historic District's periods of significance, including: vegetation; street name tiles; historic curbs; and, lighting fixtures.

In 2014, CEMVN completed the inventory for the Claiborne, Napoleon, Jefferson, and Louisiana Avenue corridors for the above landscape features, assessing their historic character, and documenting existing landscape features for future planning purposes. At this point, planning documents have been completed for all four corridors under discussion.





SELA LANDSCAPE FEATURES INVENTORY



Vegetation

Palmer Park, S. Claiborne and Carrollton Avenues



Live Oaks, Napoleon Avenue (1954)



Crape Myrtle, Jefferson Avenue



Bald Cypress, Louisiana Avenue

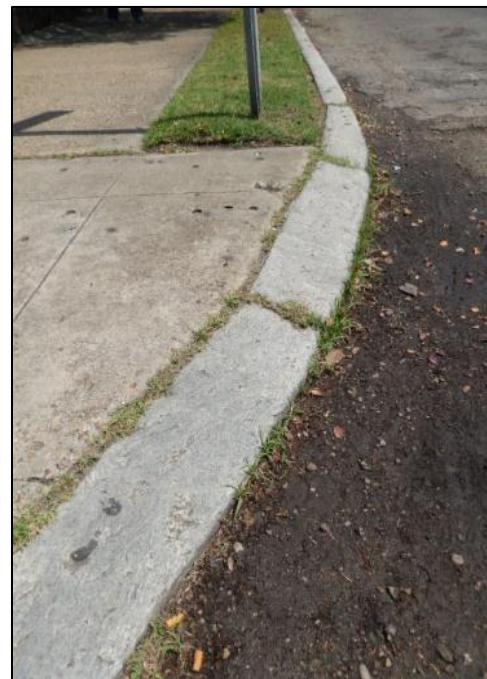


Historic Curbs



Two types of stone dominated historic curbing material in New Orleans starting in the late nineteenth century; slate and granite.

The **slate** was imported to the city, coming from Wales or northern Germany, possibly during the nineteenth century.



Granite was one of the most durable and abundant natural materials available in the late nineteenth and early twentieth century. It was well-suited for use as curbing for high traffic areas on urban sidewalks.

The main source of granite curbs was likely Stone Mountain, Georgia. In 1911, they leased the quarry to a company owned by the Weiblen family in New Orleans.

What will happen to landscape features disturbed by the drainage culvert construction?

The drainage culvert construction contractor will address replacement of stone curbing, street tiles, and lighting. The stone curbing and street tiles will be replaced with in kind materials. The removed street lighting poles are being stored and they will be reinstalled with New Orleans Department of Public Works standard fixtures.

Street Name Tiles



The earliest street name tiles were imported from Europe during the 1880s and are known as **Belgian style** tiles.



These tiles have either blue or white backgrounds, with the contrasting color as the lettering. The letters are in a gothic font and the tiles are smooth with no pinstripe groove.

The second type are **American style**, which was manufactured by the American Encaustic Tile Company of Ohio and New York, which operated from 1875 through 1935.

These tiles have a white background with blue lettering, surrounded by a pinstripe groove and shadow line. Local reproductions of these tiles are found on dozens of New Orleans street corners today.

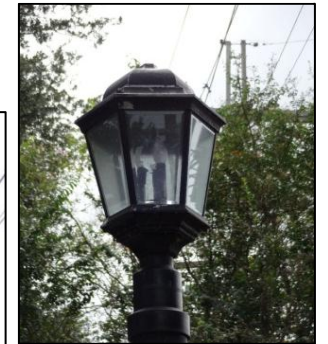


Small **mosaic tiles** in red, cream/off-white, and blue are also present. The street names are in red surrounded by cream/off-white tiles in a rectangular outline. These tiles were installed between the 1970s and 1980s.



Lighting

Prior to 1916, it is likely that the study areas used only gas lighting for their streets.



The **Type 1916** lighting standards identified above would have been installed between approximately 1916 and 1929. The close-up image on the top right shows that the glass top on the light standard has been replaced with a modern equivalent. The close-up image on the bottom right shows the King Luminere Company Seal on the base of the lighting standard, which identifies it as one of the 1916 to 1929 models.



Type A-1 lighting standards were installed after 1929. The majority of these were produced by a American Concrete Stress-Spun, as evidenced by a seal usually located at the base of the standard.



S. Claiborne Avenue Canal



S. Claiborne Phase 1 - constructing approximately 2,600 linear feet of concrete canal under the inside west-bound lane of S. Claiborne Ave. from Monticello Ave. to Leonidas St.

Project Status:
 Contract Award: September 2011
 Estimated Completion: Fall 2015
Current Status as of 9/19/2014: 58% complete

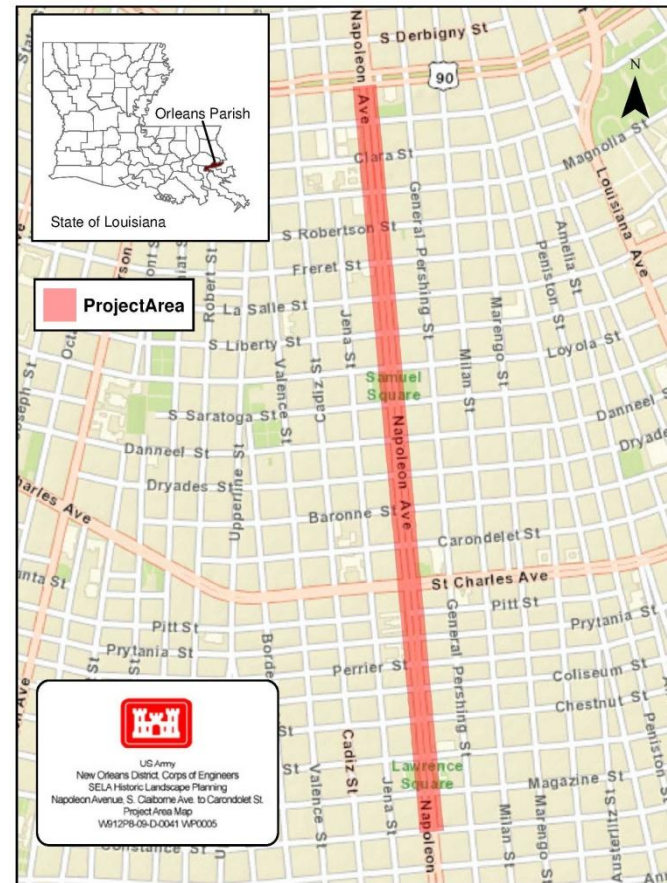
S. Claiborne Phase 2 - constructing approximately 3,400 linear feet of concrete canal under the inside west-bound lane of South Claiborne Ave. from Leonidas St. to Lowerline St.

Project Status:
 Contract Award: June 2012
 Estimated Completion: Summer 2016
Current Status as of 9/19/2014: 53% complete

Completed Uptown Projects:

- Napoleon Avenue Canal, from S. Claiborne to Fontainebleau
- S. Claiborne Avenue Canal from Nashville to Jena
- S. Claiborne Avenue Canal from Jena to Louisiana
- Broad Street Pump Station improvements
- Pritchard Place Pumping Station
- Hollygrove, Forshey and Dublin
- Hollygrove, RR Right-of-Way and Eagle Street

Napoleon Avenue Canal



Napoleon Phase 2 - constructing approximately 4,100 linear feet of concrete canal under the neutral ground along Napoleon Ave., from S. Claiborne Ave. to Carondelet St.

Project Status:
 Contract Award: September 2011
 Estimated Completion: Spring 2015
Current Status as of 9/19/2014: 44% complete

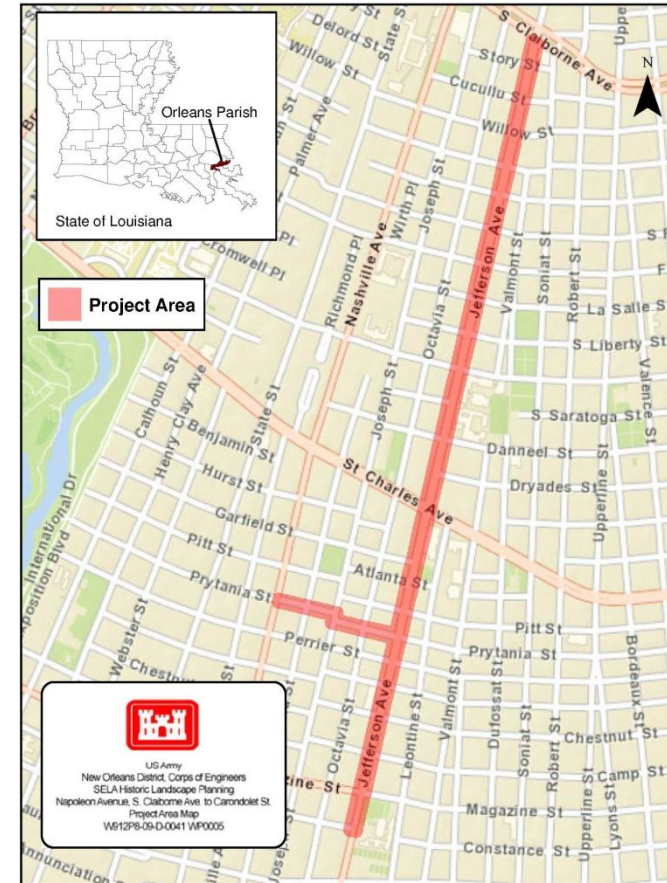
Napoleon Phase 3 - constructing approximately 3,000 linear feet of concrete canal under the neutral ground along Napoleon Ave., from Carondelet St. to Constance St.

Project Status:
 Contract Award: September 2013
 Estimated Completion: Winter 2016
Current Status as of 9/19/2014: 12% complete

The Southeast Louisiana Flood Control Project (SELA) in Orleans Parish is a partnership between the U.S. Army Corps of Engineers, the Coastal Protection and Restoration Authority of Louisiana, and the Sewerage and Water Board of New Orleans designed to reduce the risk of urban rainfall flooding in Orleans Parish.

The construction cost for the overall project in Orleans Parish is over \$1 Billion.

Jefferson Avenue Canal



Jefferson Phase 1 - constructing approximately 4,300 linear feet of concrete canal under the neutral ground along Jefferson Ave., from S. Claiborne Ave. to Dryades St.

Project Status:
 Contract Award: July 2013
 Estimated Completion: Fall 2017
Current Status as of 9/19/2014: 11% complete

Jefferson Phase 2 - constructing approximately 3,700 linear feet of concrete canal under the median along Jefferson Ave. from Dryades St. to Constance St. The work also consists of constructing 1300 linear feet of concrete canal under Prytania St. from Nashville Ave. to Jefferson Ave.

Project Status:
 Contract Award: January 2013
 Estimated Completion: Spring 2016
Current Status as of 9/19/2014: 36% complete

Louisiana Avenue Canal



Louisiana Ave - constructing approximately 7,400 linear feet of concrete canal under the neutral ground along Louisiana Ave. from S. Claiborne Ave. to Constance St.

Project Status:
 Contract Award: March 2014
 Estimated Completion: Spring 2018
Current Status as of 9/19/2014: 0% complete



Intersection of Constance Street and Louisiana Avenue, view to north, 2013

SUSTAINABLE APPROACHES TO LANDSCAPE PLANNING



The U.S. Army Corps of Engineers, New Orleans District (CEMVN), Coastal Protection and Restoration Authority, The City of New Orleans, and the Sewerage and Water Board of New Orleans are committed to a sustainable approach to landscape planning. This approach also involves community outreach.



The goal of quality sustainable design is to create aesthetic, functional, maintainable, and cost effective landscapes that are well suited for a specific location.

The landscape plans developed for these four corridors are informed and guided by sustainable practices identified by the sponsoring agencies.

The plans are designed to improve the community's quality of life by accounting for natural and cultural systems.

In addition to the specific ecological benefits identified on this board, the landscape plans

- Contribute to our unique sense of place, community livability and pride,
- Improve neighborhood connections, and
- Minimize maintenance needs.

US ARMY CORPS OF ENGINEERS

ACOE guidelines for sustainable design provided the following direction:

- ♦ Preserve and incorporate existing vegetation as feasible.
- ♦ Provide habitat for birds by selecting plants that provide for bird nesting and feeding. And provide needed rest stops for migratory birds
- ♦ Using existing lighting poles and updating existing fixtures to meet current energy efficiency standards.
- ♦ Manage on-site stormwater as feasible by providing rain gardens.
- ♦ Reconstruct existing landscape features that includes stone curbing and street name tiles.

Other planning principles still under consideration:

- ♦ Creating a more pedestrian friendly environment with a walkway.
- ♦ Managing impacts of on-site stormwater by using permeable pavements as feasible.
- ♦ Positively impacting the regional economy by utilizing local and regional suppliers for landscape construction materials.

CITY OF NEW ORLEANS

In 2010, The City of New Orleans adopted the "Plan for the 21st Century" - Chapter 7 of the Plan focuses on the incorporation of Green Infrastructure for Parks, Open Space, and Recreation.

- ♦ Restoration and expansion of New Orleans' urban forest to reach 50 percent tree canopy by 2030.
- ♦ Replace most lawn areas in neutral grounds and street swales with shrubs and ground cover.
- ♦ Create linear parks and green ways for multiuse pathways using the city's neutral grounds and other linear connections; (note – safety issues preclude multi-use paths from much of the study area)
- ♦ Using native trees and shrubs, which require limited irrigation or the use of herbicides.
- ♦ Use energy efficient fixtures and LED lighting, which will reduce energy consumption while still providing a well-lit and safe urban environment.

Goal	Priority for Decision Makers	Key Metric
1. Protection of existing natural areas, water, and wetlands and other sensitive resources	1.A. Ensure that land use and zoning categories for sensitive areas are consistent with the City's natural resources plan. 1.B. Use conservation easements for sensitive areas. 1.C. Use conservation easements for sensitive areas.	7.13 - 7.14
2. Restoration and expansion of the urban forest to reach 50 percent tree canopy by 2030	2.A. Provide tree planting on both public and private property. 2.B. Restore and plant tree trees in parks and neutral grounds. 2.C. Provide tree preservation on public property. 2.D. Establish urban water management planning priorities in public green spaces.	7.15 - 7.17
3. A commitment to use low energy and low carbon energy	3.A. Establish systems to ensure that the city does not use energy inefficient for parks.	7.18
4. A park with walking distance (approximately 1/2 mile) to other City facilities	4.A. Balance private and public uses of parks and public spaces.	7.19
5. More public access to waterfront	5.A. Create parks and public spaces along the Mississippi River and Lake Pontchartrain.	7.20
6. More green connections throughout city	6.A. Create linear parks and green ways for multi-use pathways along the city's neutral grounds and other linear connections, such as levees, canal edges and former rail lines. 6.B. Establish improved maintenance criteria for urban parks/greenways.	7.21
7. Maintenance of existing parks and green spaces at a high level	7.A. Establish clear and consistent policies and procedures for assessing, planning and monitoring parks and green spaces and maintenance plans. 7.B. Establish clear and consistent policies and procedures for assessing, planning and monitoring parks and green spaces and maintenance plans.	7.22



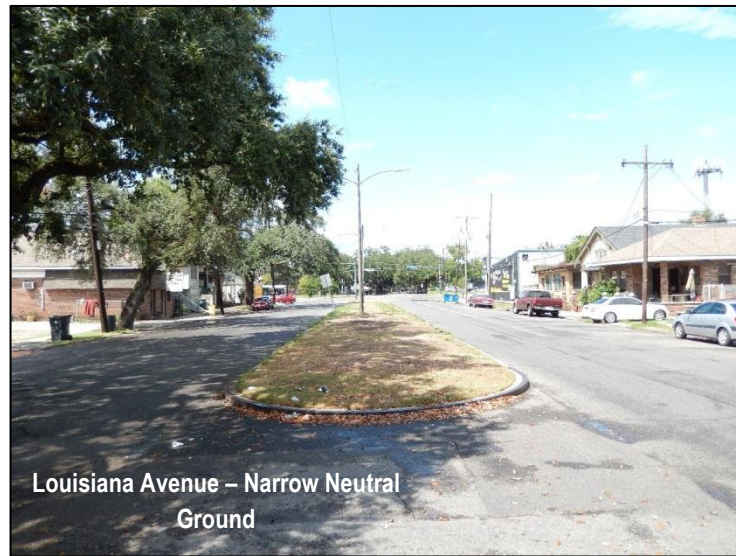
SUGGESTED PLANT PALETTES



The selection of plant species for these four corridors was based on a complex set of design criteria, including the integration of site constraints, the historic context, and sustainable design principles.

Site Constraints

SITE CONSTRAINTS - These corridors have many physical constraints, such as existing transportation infrastructure, varying neutral ground widths, and the presence of underground drainage culverts. For instance, the underground drainage culverts will be located close to the surface in many locations, thereby precluding the planting of large deciduous trees with deep root systems.



Louisiana Avenue – Narrow Neutral Ground

Historic Contexts

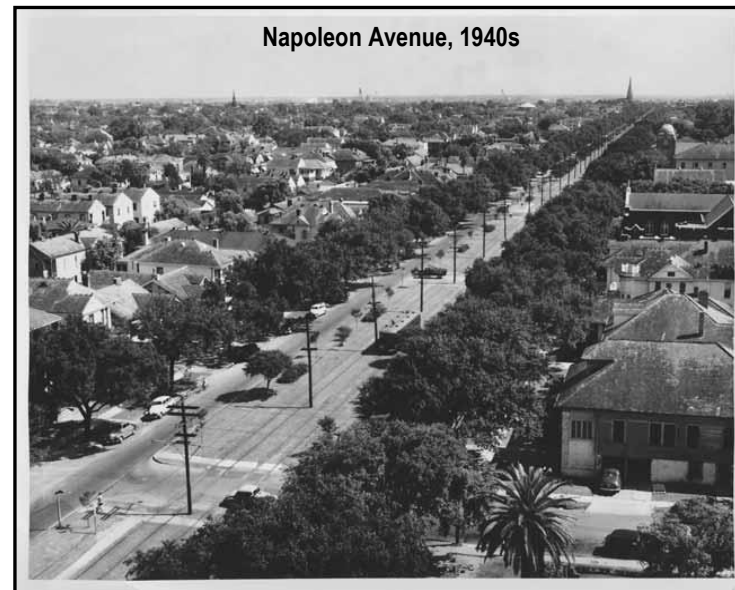
HISTORIC CONTEXT – CEMVN developed detailed historic context reports for each corridor, as well as identifying the vegetation patterns that developed over the years along these corridors. This data will be used to select plants that were present during the corridors' period of historic significance.

Claiborne Avenue (Period of Significance 1880-1937)

The neutral ground between Monticello Avenue and Lowerline Street was dominated by an open drainage canal that was built prior to the 1840's. Portions of the canal were improved in 1940 with concrete replacing the wooden-sided canal that existed previously; the entire canal from Monticello to South Carrollton Avenue was covered during the 1970's. Irregularly patterned plantings of **live oak, palm, ornamental trees and shrubs** were planted in the neutral grounds within each section after the canal was enclosed.

Napoleon Avenue (Period of Significance 1900-1949)

In 1914, the Napoleon Avenue Commission approved a plan to plant the now-mature **Live Oaks** seen along the thoroughfare along the public ROW between the sidewalk and the roadway. **Crape Myrtles and Azaleas** were also planted between the neutral ground's eastern roadside edge and the streetcar tracks. In 1953, Napoleon Avenue's streetcar service was discontinued and the infrastructure removed. In 1954, Napoleon Ave. was widened. Some of the Crape Myrtle trees and Azalea shrubs that existed along the eastern outer edge of the neutral ground at that time were transplanted to the center of the neutral ground in a single row.



Napoleon Avenue, 1940s

Jefferson Avenue (Period of Significance 1925-1949)

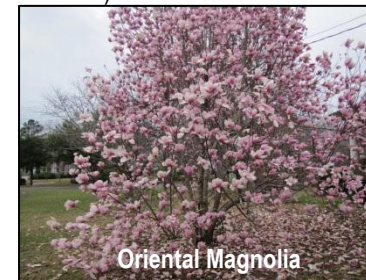
The Jefferson Avenue corridor has changed comparatively little over the past century. A diverse mix of vegetation within the neutral ground and between the sidewalk and curb has continued from the historic into the modern period. **Live Oak** and **Crape Myrtles** dominate, but over 35 additional species were identified, suggesting local residents and/or City officials eclectically planted various tree varieties over the last 80 years.

Louisiana Avenue (Period of Significance 1930s-1950s)

Given the long history of street car and rail line usage along **Louisiana Avenue**, the majority of the neutral ground would have not been available for planned plantings until after 1934. Almost 80% of the **Live Oaks** identified may have been present between the late 1930s to the late 1950s. However, of the 56 identified trees within the neutral ground, only three – two southern live oaks and a single **Bald Cypress** – were potentially present from this period.

Sustainable Design Principles

Sustainable design principles - The suggested plant palette consists of mainly native plants; however, plants that provide food and nesting sites for birds, butterflies, and insects have also been included (see below).



Oriental Magnolia



Canary Date Palm



American Holly



Sweet Bay Magnolia



Bismarck Palm



Fringe Tree (Grancy Greybeard)



Schizachyrium scoparium

Additional suggestions include the replacement of portions of the grassy areas in the neutral grounds and street swales with grasses, shrubs, and ground cover would promote limited irrigation needs and a decrease in the use of herbicides (see above and below).



Solidago odora



Schizachyrium scoparium



Sorghastrum nutans



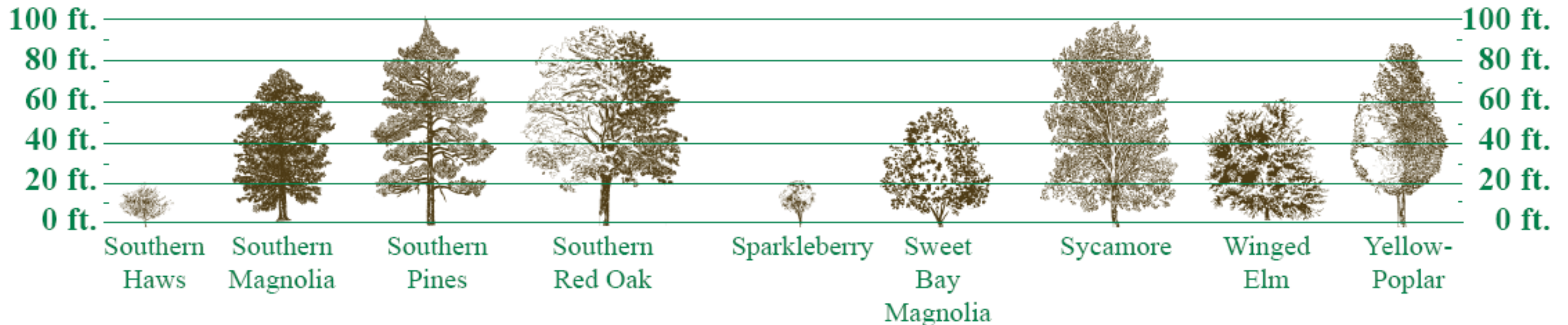
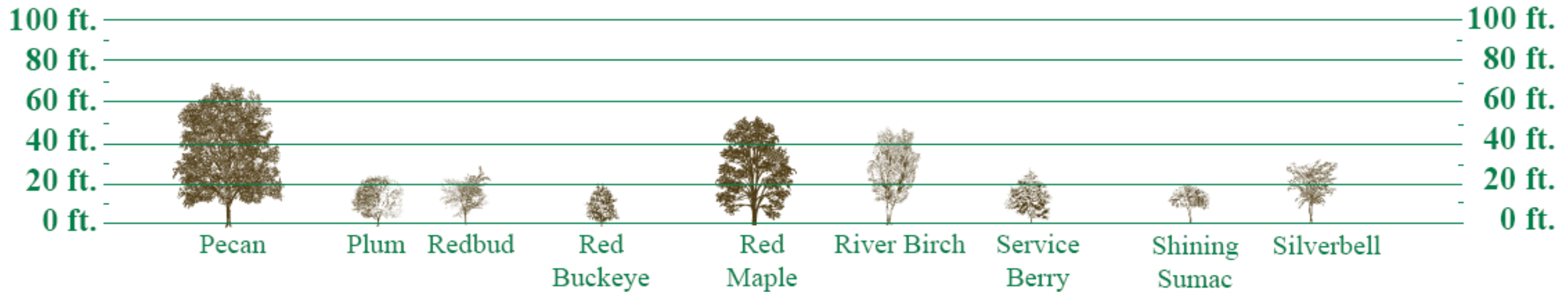
Helianthus mollis



'Split Beard'



TREE HEIGHT and SPREAD COMPARISONS





SELA Landscape Implementation Alternatives
Louisiana Avenue





SELA Landscape Implementation Alternatives
Napoleon Avenue



SELA Landscape Implementation Alternatives
Jefferson Avenue





SELA Landscape Implementation Alternatives
Claiborne Avenue