1. NAME OF PROPERTY

Historic Name: The St. Charles Line

Other Name/Site Number: St. Charles Streetcar Line; St. Charles Street Line

Designated a National Historic Landmark by the Secretary of the Interior August 25, 2014

2. LOCATION

Street & Number: St. Charles Avenue, Carondelet Street, Canal Street, Howard Avenue, Lee Circle, Carrollton Avenue, Willow Street, and Jeannette Street Not for publication:__

City/Town: New Orleans Vicinity:__

State: Louisiana County: Orleans Code: 071 Zip Code: 70130, 70115, 70118

3. CLASSIFICATION

Ownership of Property	Category of Property
Private:	Building(s): X
Public-Local: X	District:
Public-State: X	Site:
Public-Federal:	Structure:
	Object:

Number of Resources within Property

Contributing		Noncontributing	
buildings	3	buildings	1
sites	0	sites	0
structures	36	structures	0
objects	0	objects	0
Total	39	Total	1

Number of Contributing Resources Previously Listed in the National Register: 36

Name of Related Multiple Property Listing:

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria.

Signature of Certifying Official Date

State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

Signature of Commenting or Other Official Date

State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

___ Entered in the National Register
___ Determined eligible for the National Register
___ Determined not eligible for the National Register
___ Removed from the National Register
___ Other (explain): _____

Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic: Transportation Sub: Rail-related

Current: Transportation Sub: Rail-related

7. DESCRIPTION

Architectural Classification: Other: Streetcar

Materials
Foundation: Concrete/Brick
Walls: Brick
Roof: Asphalt Shingle/Metal Standing Seam
Other:

Describe Present and Historic Physical Appearance.

Introduction

The St. Charles Line is the oldest operational street railway in the United States. It is nationally significant as a representation of street railway systems and the urban growth patterns they engendered, between the 1890s and 1920s, when streetcars reached the height of their popularity in the United States. Although other railway lines exist throughout the country, very few have preserved their conventional streetcars, having been converted to PCC or light rail systems later in the twentieth century.[1] Certain lines have preserved a portion of their original cars and routes and operate within a museum or tourism setting, yet these lines do not share the historic integrity and contextual depth of the St. Charles Line. The St. Charles Line is the most extensive and intact street railway in existence in the United States. First established as a freight and passenger railroad in 1835, the period of significance, 1893 to 1952, reflects the date the railway was electrified, until the establishment of its current route.

Describe Present and Historic Physical Appearance.

Geographic Terminology

The plan of New Orleans is dictated by the bodies of water that border it to either side, the Mississippi River and Lake Pontchartrain. The location and course of these bodies—particularly the Mississippi—inform the unique directional lexicology of New Orleans. The city's crescent shape makes application of the cardinal directions impracticable on a large scale. Instead, the four directions most commonly applied are riverside, lakeside, upriver, and downriver, denoting proximity to the river or lake for the former two, or the flow of the Mississippi for the latter two. Upper and lower may be used synonymously with upriver and downriver, respectively. For example, Canal Street—the historic boundary between the French Quarter and the American Sector of the city—forms the upper or upriver edge of the French Quarter, and the lower or downriver edge of the American Sector. Cardinal directions have been used within the text where appropriate, particularly in the description of buildings.

Street Names

The naming and number of New Orleans' streets have evolved over time. While the numbering system—which was standardized citywide in 1852 replacing an antiquated system—is not relevant to the history of the streetcar line—certain changes in street names merit listing here:

1. St. Charles Avenue: Formerly Nayades (or Naiades) Street, the name of the avenue was changed in 1856. At the point Nayades Street entered Carrollton, it became First Street.
2. Carrollton Avenue: Formerly Canal Avenue, the naming of the avenue was meant to rival Canal Street in the French Quarter, and to reflect its connection with the New Basin Canal.
3. Howard Avenue: Formerly Triton Walk
4. Lee Circle: Formerly Tivoli Circle

Description of Setting

The route of the St. Charles Line is fully located within the boundaries of the City of New Orleans and today traverses several unique areas of urban character and historical development.[2] When the route was established,

[1] Presidents' Conference Committee.
[2] The City of New Orleans is coterminous with Orleans Parish (county).

however, its majority ran through unincorporated land within Jefferson Parish, a condition that was reflective of the route's rural nature at that time. Like many American cities, New Orleans expanded its urban boundaries by annexing adjacent municipalities. While others existed (Algiers Point for example, which was annexed concurrently with Jefferson in 1870), there are three formerly independent municipalities whose boundaries and annexation are relevant to the discussion of the route and historical development of the St. Charles Line. Before annexation by New Orleans, each was located within Jefferson Parish. They are as follow:

1. Lafayette: Located between Felicity and Toledano Streets, Lafayette was incorporated as an independent city in 1833 and was annexed by New Orleans in 1852.[3]
2. Jefferson: Located between Toledano and Joseph Streets, Jefferson was incorporated as an independent city in 1850 and was annexed by New Orleans in 1870.
3. Carrollton: Located upriver of what would become Audubon Park, Carrollton was incorporated as a town in 1845, became the county seat of Jefferson Parish, and was annexed by New Orleans in 1874.

Today, these formerly independent municipalities are located within the neighborhoods of the Upper and Lower Garden Districts, Uptown, and Carrollton, respectively. The streetcar route also traverses or borders the Central Business District and Central City neighborhoods. Few firmly discernible boundaries exist along the St. Charles Line; rather, the urban character evolves gradually along the course of the line. These character areas are described below, ordered in increasing distance from Canal Street, the route's downriver terminus.

Central Business District

Formerly the Faubourg St. Marie (or St. Mary), the land comprising the Central Business District (CBD) was the earliest portion of the American Sector to develop. It was the commercial and municipal heart of the American Sector and counter to the Creole-dominated French Quarter. The CBD experienced two significant periods of growth. The first occurred in the 1830s and 1840s in conjunction with the establishment and rise to prominence of the American Sector. At the time the Carrollton Line was established, the enterprising business and political leaders of the American Sector were busy erecting stately banks, lively theaters, glamorous exchange hotels, and imposing residences that would serve their economic, social, and domestic needs. It was here that Lafayette Square, the second public park in the city, is located. The second significant phase of development occurred in the first half of the twentieth century, when the growing density of the CBD was manifested in buildings with larger footprints and greater heights, including the city's first generation of skyscrapers. While the CBD retains a large proportion of antebellum architecture—including a number of Greek Revival style townhouses—the majority of its buildings are twentieth-century commercial structures. The skyline today is dominated by Modernist style towers that house offices and hotels.

The streetcar route operates along St. Charles Avenue and Carondelet Street, through the center of the CBD. It also runs directly adjacent to the district's two principal public spaces, Lafayette Square and Lee Circle.[4]

The Upper and Lower Garden Districts and Central City

Between the CBD and Carrollton, St. Charles Avenue forms the spine of the city's nineteenth-century residential suburbs. The grassy neutral ground median for which the avenue is famous begins on the upriver side of Lee Circle, and extends until St. Charles Avenue meets Carrollton Avenue. The property numbers along the length of this avenue fall between 1000 and 8000, numeric ranges to which can be ascribed a general

[3] Some maps and sources cite Harmony Street, two blocks downriver of Toledano, as the upriver boundary of Lafayette.

[4] In 1877, the City of New Orleans granted the use of the circle to the Lee Monumental Association for the purpose of erecting a monument to General Robert E. Lee. The street railway line, which had run through the center of the circle, was diverted to allow for a raised-bed and platform to be erected. The monument was completed in 1884.

timeline of growth and character. Generally, the earliest development occurred nearest the French Quarter, and migrated upriver along the route of the Carrollton Line.

The Upper and Lower Garden districts approximately comprise the 1000 and 2000 blocks of St. Charles Avenue. The Lower Garden District falls between the Pontchartrain Expressway and Jackson Avenue, and the Upper Garden District falls between Jackson and Louisiana Avenues. The Upper Garden District developed predominantly in the second half of the nineteenth century with fine Italianate-style residences, although stylistic and temporal outliers fall on both sides of that period. Contrary to the European style of construction—which favored inward-facing buildings enclosing private courtyards—Americans built their homes to face outward and to be surrounded by lawns, paths, and gardens. Flowering and semi-tropical plants flourished in the temperate climate of New Orleans and the verdant quality of these neighborhoods contributed to its title.[5] Even by the late nineteenth century the Upper Garden District had attained mythic status as one of the architectural splendors of urban America. Mark Twain, a frequent visitor to New Orleans, gushed that its "…mansions stand in the center of large grounds, and rise, garlanded with roses, out of the midst of swelling masses of shining green foliage and many colored blossoms. No houses could well be in better harmony with their surroundings, or more pleasing to the eye, or more homelike and comfortable-looking."[6] The Lower Garden District shares much of the scale and character of the Upper Garden District. However, it features a higher proportion of vernacular and twentieth-century residences; institutional buildings; and commercial buildings, including several large nineteenth-century cotton warehouses.

On the opposite side of St. Charles Avenue developed a very different residential neighborhood, Central City, which extends to the outer borders of both Garden Districts. Unlike the latter neighborhoods, situated on a natural topographic rise, Central City sat on lower ground and was therefore subject to swampiness, flooding, and insect-borne disease. Its proximity to downtown encouraged development, yet its natural environmental disadvantages caused it to be inhabited as a working-class neighborhood with poor and first-generation immigrant families. The architectural character here is smaller in scale and vernacular in nature, with a preponderance of framed, single-story, double-shotgun houses.

Uptown

Uptown is a vast neighborhood bordered by Louisiana Avenue, South Claiborne Avenue, Lowerline Street, and Tchoupitoulas Street. Uptown is predominantly residential in character with scattered commercial development, principally along Prytania and Magazine Streets. Like the Garden District before it, Uptown became a prosperous suburban community that in the postbellum era was home to many of the city's preeminent residents. The elegance of its buildings, the profusion of its gardens, and the harmony of its tree-lined avenues contributed to the iconic image of a late-nineteenth-century suburb.

In the early twentieth century properties along the 2000 and 3000 blocks of the avenue were redeveloped to contain larger apartment buildings, hotels, schools, and churches, and continue to possess a twentieth-century character. As one continues upriver, the residential nature of the avenue is restored. In the later nineteenth century, as the wealth and prominence of the city's residents reached their apogee, houses along the avenue became their largest and most elaborate. The 4000 and 5000 blocks of St. Charles approximate small estates, with expansive lawns and substantial examples of Romanesque, Colonial Revival, and Queen Anne styles.

The upper portion of Uptown is dominated by Audubon Park and Zoo, which fills most of the river side of the 6000 block. Following the close of the World's Industrial and Cotton Centennial Exposition in 1885, the grounds were converted to a public park. In 1894, Tulane University relocated to its current site; the cluster of

[5] Richard Campanella, *Geographies of New Orleans* (Lafayette, LA: Center for Louisiana Studies, 2006), 11.
[6] Mark Twain, *Life on the Mississippi* (New York: Bantam, 1977), 250-251.

academic buildings for both Tulane and Loyola Universities now face the park across St. Charles Avenue and fill the lakeside portion of the former arpent-style plantation tract.[7] Immediately around Audubon Park and the university campuses, developers took advantage of pockets of vacant land to create exclusive residential cul-de-sacs—some of them gated from the general public—including Rosa Park, Audubon Place, and Newcomb Boulevard. These were mostly developed during the two decades surrounding the turn of the twentieth century and still rank among the city's most privileged addresses.

Carrollton

Much like the CBD, Carrollton Avenue forms the commercial and institutional core—albeit much smaller and more sedate than the CBD—of the formerly independent town of Carrollton. Carrollton has been served by the New Orleans & Carrollton Railroad (NO&CRR) since its inception, although not until the 1890s were the railway tracks extended along a portion of the avenue. The majority of Carrollton's architecture is vernacular with influences of the later revival styles, reflective of its growth following annexation. While they form a minority of its building stock, institutional and commercial buildings account for the majority of the properties along Carrollton Avenue, the area's principal thoroughfare, as well as that serviced by the St. Charles Line.

Resource Listing and Description[8]

The resources that comprise the St. Charles Line include the physical components of the streetcar route and the Carrollton Transit Station. The Carrollton Transit Station property includes three contributing buildings, the Carrollton Car Barn and two small storage buildings, and an additional noncontributing building. The line also includes thirty-six contributing structures, thirty-five Perley Thomas streetcars, and the physical components of the streetcar route which collectively represent a single resource. The route consists of the streetcar's neutral ground median, tracks, ties, bedding, and two types of electrical poles.

The majority of the St. Charles Line follows the route originally established by the Carrollton Line of the NO&CRR, which began operation in 1835. Over time, the route has evolved to meet the changing needs of the line proprietors and the New Orleans population. The current route of the St. Charles Line was established in 1952 and has since remained unchanged.

Route (Contributing)

Route Description

The St. Charles Line measures 13.4 miles of total trackage. Along St. Charles and Carrollton Avenues the streetcars run two abreast in opposing directions, making the total distance of a single trip between 6.5 and 6.75 miles, depending on the direction. Additional trackage connects Carrollton Avenue with the car barn allowing the rolling stock to be housed for storage and maintenance. Along the route there are 104 passenger stops and nine crossovers to the parallel tracks used during track maintenance and also during carnival season, both times at which regular service is interrupted. Switches are generally changed by car operators themselves.

The Carrollton-bound route of the St. Charles Line begins on the Canal Street neutral ground between Carondelet Street and St. Charles Avenue. From here, it turns on St. Charles Avenue. St. Charles for this portion of the route features no neutral ground and the cars share the street right-of-way until the road meets Lee Circle. The route moves counterclockwise around the circle until it again meets St. Charles on the opposite side, here within the neutral ground. The route follows the broad arc of St. Charles Avenue for the majority of its duration,

[7] Campanella, Geographies of New Orleans, 16.
[8] See "List of Resources" section for an itemized listing.

approximately 4½ miles. St. Charles Avenue ends at Carrollton Avenue, whose neutral ground the route follows until it ends at the intersection of South Claiborne Avenue.

The Canal Street-bound route follows the same course until it meets Lee Circle. Here the route moves counterclockwise around the circle for three-quarters of its circumference until it meets Howard Avenue. It runs along the neutral ground of Howard Avenue for a single block and turns on Carondelet Street. Along Carondelet, the streetcar shares the street right-of-way. The terminus of this route is located on Carondelet Street where it meets Canal Street.

Tracks branch from the Carrollton Avenue portion of the line at Willow and Jeannette Streets and allow the streetcars to access the Carrollton Avenue Car Barn. Access to the car barn is not a part of regular streetcar service; cars enter only when they require maintenance or nightly storage. To be stored within the larger train shed cars enter on the northeastern side of the building and exit on the southwestern, forming a counterclockwise loop. Cars entering the car barn for maintenance both enter and exit from the northeastern side. Switches are manipulated manually by shed personnel.

Development of Route

The electrification of the line, which occurred in 1892–93, heralded a number of changes for its operation. Its name was changed officially to the St. Charles Line, and the route was extended along Carrollton Avenue as far as Jeannette Street to connect with the newly constructed car barn. In 1900, the line instituted the St. Charles and Tulane Belt operations. With the termination of the St. Charles and Tulane belts in 1951, the St. Charles Line resumed its former line-type operation and continued to run on St. Charles Avenue and South Carrollton Avenue up to Dixon Street. At the Line's downtown end, the streetcars turned down Howard Street at Lee Circle, then turned down Carondelet Street to Canal Street, then finally returned up St. Charles Avenue. On August 10, 1952, the path up Carrollton Avenue was terminated at Claiborne Avenue. The route has remained unchanged ever since.

Physical Components of Route

The route is composed of a number of physical components that contribute to the character and functionality of the streetcar line. The tracks themselves are standard gauge 5′-2½″ T-rails weighing 115 pounds-per-yard. They are clipped to composite cross-ties bedded in trenches lined with granite ballast. Unlike traditional railroads wherein the ballast and ties are left exposed, those on the St. Charles Line are covered with earthen fill, topsoil, and grass seed, to preserve the verdant nature of the neutral ground. Rails laid along paved streets are European-sized girder rails weighing 59 kg per meter, and are bolted directly to reinforced concrete slabs.

The majority of the tracks run within the neutral ground of St. Charles, Carrollton, and Howard Avenues and Canal Street. The neutral ground acts both as the right-of-way of the St. Charles Line and as a prominent feature in New Orleans' urban landscape. The neutral ground along St. Charles Avenue was the direct result of an agreement between the NO&CRR and the private property owners whose land the route traversed. It established a 120-foot right-of-way for the railroad, a portion of which became a raised median as the avenue evolved into a paved street. The neutral ground typology in New Orleans emerged from several conditions. The removal of the ramparts around the French Quarter left generous swaths that became tree-lined boulevards with central medians (now Canal Street, North Rampart Street, and Esplanade Avenue). In other cases, the paths of railroads or canals, when abandoned, left similarly wide thoroughfares (Elysian Fields Avenue, formerly the route of the Pontchartrain Railroad, is one example). It is likely that the model of the St. Charles neutral ground was copied directly in the development of Jackson, Louisiana, and Napoleon Avenues, as these were used for branch lines of the NO&CRR, all of which are presently divided boulevards with central medians.

Along St. Charles Avenue the width of the neutral ground averages forty feet. It is nominally raised above the adjacent road surface and contained within concrete curbs. The surface of the neutral ground is grass (with the exception of Canal Street, which is paved), worn in patches by pedestrian traffic and maintenance activities. In addition to the double tracks, the neutral ground is punctuated by a variety of signs, lampposts, electrical poles, and concrete sidewalks laid at the streetcar stops. In contrast to the mature Live Oaks (*Quercus virginiana*) that line much of the perimeter of St. Charles Avenue, the neutral ground is only sparsely planted. While some mature trees do exist, the vegetation is predominantly composed of small shrubs and trees. The neutral ground along Carrollton Avenue is considerably wider averaging sixty feet, and tapers to forty feet immediately as it approaches South Claiborne Avenue, the route's upper terminus. The neutral ground here also features a greater variety and intensity of planting, with semitropical flowering shrubs and palm trees.

In addition to the 900 series Perley Thomas streetcars, the neutral ground is the most iconic and intact feature of the St. Charles Line. It is the oldest existing remnant from the formation of the line, conceived in 1833 as the NO&CRR right-of-way. As a functioning transportation system, the St. Charles Line necessarily undergoes repair and improvement work to maintain its functionality and passenger safety. Such work includes a 1988 restoration project that included tree protection and landscaping, as well as rail and track bed reconstruction. Following Hurricane Katrina in 2005, extensive damage necessitated track repair that was fully completed in 2008. An ongoing project that began in 2011 is focused on replacement of the track's deteriorated wooden cross-ties. This reconstruction and repair work has utilized in-kind replacement materials and does not compromise the physical appearance of the neutral ground. While the appearance and surroundings of the neutral ground have evolved over time, its existence has allowed St. Charles Avenue and other city streets to develop as gracious, tree-lined boulevards.

Sometimes referred to as "trolley poles," the T-shaped cast-iron posts along the route support the suspended wires from which the rolling stock receives its electrical current. The poles consist of a single vertical post bedded in concrete, which supports two broadly cantilevered horizontal arms, from which the outer wires are suspended. These arms are secured with triangular bracing elements. Above the horizontal bars is an upper horizontal T-arm, which supports a double set of wires that convey electricity from pole to pole. The poles are painted deep forest green and are located along the neutral ground of St. Charles and Carrollton Avenues. Their exact date of fabrication is unknown, although photographic evidence confirms that the poles were installed during the period of significance and are therefore contributing elements to the streetcar line.[9]

The electrical wires and streetlamps within the CBD are integrated into single vertical posts, and located along the perimeter sidewalks. Unlike the poles along St. Charles and Carrollton, these have no horizontal arms but rather wires that attach directly to the vertical poles forming gridded configurations that intersect at the center of the street. Affixed to a majority of the poles are twin lamp arms with frosted globes. The poles around Lee Circle support only wires and have no integrated lights. These poles were installed within the period of significance and retain the highest level of integrity among the extant electrical poles.

Buildings

Carrollton Transit Station

Car Barn (Contributing)

As part of the electrification process, it had also been necessary to construct a new car barn to house machinery, maintenance shops, and storage space for the line's rolling stock. In 1892, the NO&CRR constructed a car barn located in a primarily residential neighborhood on a large city block bound by Jeanette Street, Poplar Street

[9] Both types of electrical poles appear in historic photographs in the late 1910s.

(since renamed Willow Street), Dante Street, and Dublin Street. In order to reach the site, the St. Charles Line was extended from St. Charles Avenue out along Carrollton Avenue to Poplar Street. Tracks were laid on Carrollton Avenue's neutral ground leading to the proposed ten-track car barn. The route was planned to terminate with a loop through the barn.[10]

The design and function of the Carrollton Car Barn followed precedent for such structures, which were generally designed as large sheds intended to provide space for streetcar repair and to house the streetcars when not in service. The company contracted the Berlin Iron Bridge Company of Berlin, Connecticut, to construct the car barn. In 1894, the *Street Railway Journal* published a lengthy, detailed description of the building. The fireproof storage and maintenance shed was constructed with steel framework, corrugated iron sides, and a slate roof. The building was left open at the ends to allow the entry and exit of the streetcars, which accessed the barn by way of ten storage tracks. Half of the tracks were provided with concrete-sided maintenance pits, and one cross pit was located at the front of the shed.

Additionally, the car barn included two long, one-story brick buildings, described as "located in the rear of the shed and at right angles to each end of it, in one of which are the offices of the company and in the other the repair shops and store rooms."[11] Extending from the northwest elevation of the shed, the narrow office housed space for several offices to serve the company's secretary, directors, superintendent, and electrician. The shop held a store room, weaving room, iron repair shop, wood working department, erecting shop, and paint shop. A fireproof vault at one end sheltered a stationary motor that powered the shops' machinery, which included a planer, drill press, wheel press, a circular saw and a band saw, among a variety of other implements. Several outbuildings were also located on site, including a blacksmith shop, which have since been demolished. Between 1892 and 1908, the original office on Jeannette Street was demolished and the car barn was expanded with a newer office at Dublin Street, a paint shop, a heavy machinery shop, and several storage buildings. The car barn employed a number of workers, including a master mechanic, inspectors, and repair men. Equipped to complete all necessary repairs to keep the rolling stock in impressive condition, the car barn continues to serve this function today. Although the car barn was added to in several phases of construction, it reads as a single building at the exterior and interior.

The most prominent portion of the car barn at the date of construction and to the present is the maintenance and storage shed located at the southeast side of the site, with Jeannette Street and Willow Street forming the northeast and southwest boundaries, respectively. The shed was designed to serve as a space for storage and maintenance of the rolling stock, as it continues to the present. The large one-story, rectangular steel-frame structure is capped by a front-gabled roof that has been reclad in standing-seam metal. A prominent clerestory crowns the center of the roof and is also clad in standing-seam metal. The clerestory features fixed multi-light vinyl windows and louvered metal vents. The upper gable ends of the main structure are clad in narrow corrugated metal siding and each is marked by a centered, rectangular multi-light fixed vinyl window. The large shed is left open at the northeast and southwest elevations to allow entry and exit of the streetcars. Cars enter on the northeastern side of the structure and exit on the southwestern end forming a counterclockwise loop. Cars entering the shed for maintenance enter and exit from the northeastern side. The interior continues to serve its historic function; the large open space shelters out-of-service cars while several maintenance pits cut into the concrete floor provide space for inspection. The building includes a maintenance and storage shed, a heavy repair shop, body repair shop, machine shop, sheet metal shop, carpentry shop, welding and blacksmith shop, and maintenance and transportation offices.

A long, narrow, one-story office extends from the southeastern elevation of the maintenance and storage shed running its full depth between Willow and Jeanette Streets. The office was added circa 1894 based on

[10] James Guilbeau, *The St. Charles Streetcar* (New Orleans: Louisiana Landmarks Society, 1992), 67.
[11] The Street Railway Journal 10 (1894): 303.

comparison with historic photographs and historic Sanborn Fire Insurance maps. A building plan and a Sanborn Fire Insurance map, both dated 1893, indicate a narrow office running parallel to Jeannette Street.[12] A ca. 1894 photo documents the extant office at the corner of Willow and Dublin Streets which was constructed either to supplement or replace these offices.[13] The extant office was originally constructed as three-bays deep, stretching approximately one-third the depth of the maintenance and storage shed; it was expanded between ca. 1904 and 1908 to its present depth.[14] It is constructed of five-course American-bond brick that has been painted. A section of the southeast elevation towards the northeast end is clad in narrow corrugated metal siding. The façade facing Willow Street is capped by a half-hipped roof that transitions to a half-gabled roof for the remaining depth. The roofline is covered in standing-seam metal and is embellished with denticulated bricks at the cornice line. The façade is marked by a three-sided canted bay that is clad in vinyl siding and sheltered beneath the half-hipped roof of the main block. Historic photographs and maps indicate that the bay was constructed ca. 1904, removed by the mid-twentieth century, and reconstructed ca. 1988. Window openings throughout the office typically hold 6/6, double-hung, synthetic windows. All of the window openings facing Dublin Street are completed with rowlock brick sills; the window openings marking the original six bays are also completed with double rowlock segmented arches and a rowlock label molding.

Situated at a right angle to the southwest corner of the maintenance and storage shed is a grouping of one-story maintenance and construction shops that extend southwest to Dante Street. According to the 1893 plan of the car barn and the 1893 Sanborn map, these shops are original to the car barn. A rectangular machine shop capped by a side-gabled roof extends directly from the southwest corner of the maintenance and storage shed. A sheet metal shop and a carpentry shop, each housed in a smaller, square addition, extend from the southwest elevation of the larger machinery shop. The sheet metal and carpentry shop are sheltered under a shared side-gabled roof that is embellished with a brick parapet at the carpentry shop's Dante Street elevation. Each shop is constructed of five-course American-bond brick that has been painted. The roofline of each has been reclad in standing-seam metal.

The machine shop has replacement 6 over 6, double-hung, synthetic windows, but retains original paired four-light wood casement windows topped by a three-light transom at the shop's northeast elevation. All of the window openings are completed with double rowlock segmented arches. The sheet metal and carpentry shops are two bays wide at the southwest elevation facing Willow Street, each bay holding an original entry. Each entry is surmounted by a triple rowlock brick round arch defined by a projecting soldier-brick course, and holds a double-leaf wood door with lights. The northwest elevation of the carpentry shop, facing Dante Street, is six-bays deep. The elevation is defined by corner pilasters and by a pilaster at the center of the elevation. Projecting brick coursing defines the parapet wall at the roofline, and a corbel course of four projecting brick courses defines the interior ceiling level and also forms the capital of each pilaster. Each bay at the northwest elevation is fenestrated with a 4-over-4, double-hung, wood-sash window, completed with a textured concrete sill and a triple rowlock segmental arch.

On the interior, the machinery shop, sheet metal shop, and carpentry shop are finished with concrete floors and exposed brick walls. The sheet metal and carpentry shops retain their original wood truss systems, while the machinery shop has been replaced with a metal truss system for maintenance reasons. Interior connecting doors have typically been replaced with single-leaf flush metal doors throughout the building complex. The shops continue to serve their original function and contain the necessary machinery at the interior, much of which dates to the 1940s or earlier.

[12] Building plan from *The Street Railway Journal* 9 (May 1893): 285. Sanborn Fire Insurance map courtesy of the Louis C. Hennick Streetcar Collection, The Historic New Orleans Collection, New Orleans, LA.

[13] The Street Railway Journal 10 (1894): 303.

[14] George W. Engelhardt, *New Orleans, Louisiana: The Crescent City* (New Orleans, LA: Graham, 1904), 48.

A large one-and-one-half-story rectangular maintenance and paint shop extends from the northeast elevations of the sheet metal and carpentry shops to Jeanette Street. This addition was made to the car barn by 1908 based on comparison with Sanborn maps, which document it as a carpenter work and painting shop. The shop is capped by a flat roof with a raised brick parapet. A clerestory with fixed, multi-light windows is centered at the roof. Two bays wide at its northeast elevation facing Jeannette Street and eight bays deep at its northwest elevation facing Dante Street, each bay is defined by brick pilasters. A brick corbel course encircles the addition between the first story and the half-story clerestory space above. The corbel course also forms the capital of each pilaster. Moving from southwest to northeast across the elevation, the first story is marked by a single-leaf flush metal door, four overhead metal garage doors (which have replaced original windows), and two window openings at each of the remaining three bays. Each window opening holds eight-light fixed wood windows and is completed by a textured-concrete sill and a triple rowlock-brick segmental arch. The clerestory above is highlighted by four-light fixed wood windows at each elevation. The northeast elevation facing Jeanette Street holds a large roll-up metal overhead door at each bay.

Located at the center of the car barn, filling the U-shape created by the car barn shed, machinery, and storage shops, and the maintenance and paint shop, is a large, one-story heavy machinery shop. The shop was added by 1908 to accommodate new equipment for repairing and rebuilding the line's rolling stock; it continues to serve that function to the present. Capped by a shallow front-gabled roof covered in standing-seam metal, the addition is clad throughout in metal paneling. Six tracks enter the shop at its three-bay wide northeast elevation from Jeannette Street. The northeast elevation is marked by three overhead roll-up metal doors. The interior is finished with concrete floors, concrete block walls, and a metal truss system at the roof. Office space, storage areas, and restroom facilities are located at the northwest and southeast sides.

The Carrollton Car Barn is a contributing resource to the St. Charles Line, retaining strong integrity of setting and location, as well as substantial integrity of materials, workmanship, and design. The car barn is set in its original location, surrounded by the suburban housing of those patrons it was created to serve. Although the car barn has experienced some material replacement because of renovation work performed ca. 1988, each of its utilitarian spaces retains the essential physical features to express not only its use, but also workmanship and design as car barn-related spaces. Expansion of the car barn in the first decade of the twentieth century has not altered the integrity of design as the additions were completed under the continued direction and ownership of the New Orleans Regional Transit Authority (NORTA) for the operation of the St. Charles Line. Selective replacement of windows, doors, and roofing materials for routine maintenance and security reasons does not diminish the historic integrity of the resource. Moreover, the building is distinguished by its remarkable integrity of feeling and association, which is strengthened by its continued use as a functioning storage and repair building for the St. Charles Line for over 120 years. With the exception of a brief period between 1934 and 1943 when it was shut down, the Carrollton Car Barn has continuously served as the storage and maintenance facility for the St. Charles Line from its electrification in 1893, to the present. As it has from the late nineteenth century, the car barn provides space and machinery for master craftsman to repair and restore each element of the line's rolling stock from top to bottom.

Storage Building #1 (Contributing)

A one-story rectangular storage building is located adjacent to the southwest elevation of the car barn's machine shop at Willow Street. The building was constructed by 1908 based on comparison with Sanborn maps. Constructed of five-course American-bond brick that has been painted, the building is topped by a flat roof with a raised-brick parapet. It has several closed-over window openings at its southwest elevation, a double-leaf overhead garage door at its southeast elevation, and features several original four-light wood casement windows with wood sills at the northeast elevation. The storage building continues to serve its original function within the car barn site, and overall maintains strong integrity of materials, workmanship, and design to its period of

construction. Its integrity is not compromised by the ca. 1988 installation of the garage door and enclosure of several window openings.

Storage Building #2 (Contributing)

This one-story square storage building is located adjacent to the northwest elevation of Storage Building #1. The building was constructed by 1908 based on comparison with Sanborn maps, and originally served as an oil house. Constructed of five-course American-bond brick that has been painted, the building is capped by a pyramidal hipped roof covered in asphalt shingles. It has limited fenestration consisting of just a single-leaf flush metal door at its northeast elevation. The building's interior was renovated ca. 1988 to serve as storage space; this work also included the installation of the metal door. Although the building has had a change in function, it continues to contribute to the operations of the car barn. It also maintains overall integrity of materials, workmanship, and design to its period of construction.

Storage Building #3 (Noncontributing)

Constructed circa 1988, this one-story storage building is located adjacent to the northwest elevation of Storage Building #2 and extends to the northwest boundary of the car barn site. Capped by a shed roof, the structure is clad in narrow corrugated metal siding throughout, and is pierced by two metal, overhead garage doors on the Willow Street elevation. The building was constructed on the foundation and footprint of a historic store room and lumber shed at this location; due to its date of construction, it is a noncontributing resource.

Structures

Perley A. Thomas Car Works 900 Series Cars (35 cars) (Contributing)

Between 1923 and 1924, the 900 Series Perley Thomas streetcars were constructed by the Perley Thomas Car Works of High Point, North Carolina, to serve New Orleans' streetcar lines. From 1924 through the mid-twentieth century, the 900 series streetcars traveled on nearly every streetcar line in New Orleans. By 1955, with almost every streetcar line shut down, several of the 900 series cars were scrapped and the remainder continued to serve the Canal Street and St. Charles lines. In 1964, the Canal Street line was closed, and the remaining 900 series cars were transferred to full-time use on the St. Charles Line where thirty-five of the original Perley Thomas streetcars remain in use today.

The 900 series cars are descendants of the earlier 400 series streetcars designed by Perley Thomas in 1915.[15] The appearance of the 400 series streetcars received great attention in 1915 as the design was a significant departure from earlier streetcar construction. Departing from the traditional monitor-roof style, the 400 series cars were topped by arched roofs. In addition to their roof type, the Perley Thomas cars were distinguished by their steel-body design. The early twentieth century had witnessed a trend towards greater incorporation of steel parts into streetcars, gradually replacing the primarily wooden components of earlier car types. The 400 series cars were the culmination of this movement and were celebrated for their nearly all-steel body that proved particularly lightweight and fast, yet also powerful and durable. The cars incorporated wood elements only at the floor, seats, windows, and some interior trim. Finally, the Perley Thomas streetcars were noted for their streamlined aesthetic which eliminated unnecessary ornamentation. The streetcars were painted simply in the traditional olive green color of the St. Charles Line, highlighted only by enlarged cream-colored numbering and lettering. The 400 series inspired several improvements through the 1930s: the 800 series in 1922, the 900 series in 1923–24, and the 1000 series cars in 1927. Each of the series was very similar in construction and appearance, although each successive model incorporated improvements and modernizations as necessary. The

[15] All of the 400 series cars were scrapped in 1948.

new streetcar type would eventually influence streetcar design across the country, and became the standard for New Orleans through the present day. Today, the arch-roof, steel-body, olive green cars are considered an icon of New Orleans' streetscape.

Although the thirty-five Perley Thomas 900 series cars running on the St. Charles Line are custom handcrafted, and therefore unique, each shares the essential construction and design elements of the series. Weighing 21 tons, the 900 series cars measure 47′-8″ in length, and 8′-7″ in width. The wheels measure 33″ in diameter and have a gauge of 5′-2½″. Each car sits 11′-4″ high and folding steps reaching 14½″ from the track provide access for passengers. In addition to its steel body, each car has an aluminum roof, vestibule post, outside panels, and sash. Thirteen metal windows are located on each side of the vehicle and three large windows highlight each vestibule end. The vestibules have four double-folding pneumatic doors on each side. Each window is single hung and composed of an operable lower sash topped by a smaller fixed sash. At the vestibule end, the upper fixed sash provides space for signage announcing the car belongs to the St. Charles Line and NORTA. The exterior body is painted in olive green with the doors and windows accented in brown paint. The streetcars are minimally decorated featuring only an enlarged car number painted in white at each dash, and at each side near the doors. Small white lettering at the dash instructs passengers to have exact fare or pass at the ready. The middle panel at each side provides space for local advertising placards.

On the interior, the vestibule ends provide space for the operator and for passenger entry. Each end of the cars is equipped for operation, including a cushioned, swivel-metal seat for the operator, control mechanizations including an operational controller with a wood base, a break valve, and a pressure gauge. A small metal heater is located on the floor for the driver's comfort. The vestibules also provide space for modern fare boxes which were installed beginning in 1972. The streetcars provide four longitudinal seats at each vestibule to seat approximately sixteen passengers, and eighteen cross seats that fit approximately thirty-six passengers are located in the main body. The cross seats are reversible allowing for adjustment so that passengers always face forward. The polished-mahogany seats are set on a metal base with small metal handles at their backs for standing passengers. Standing metal poles with leather hand straps are provided at the vestibule ends for additional passenger stability. The floors are of oak plank, with rubber laid in the center aisle for passenger safety. Additional details include original, operational canvas shades at each window and a curtain to provide privacy for the driver, if desired. Signage on the interior is minimal and respectful of the cars' historic integrity. Simple white lettering indicates the car number and passenger entry and exit directions. Space for local advertising placards is located in panels immediately beneath the ceiling. The ceiling above is painted a soft white.

The streetcars have undergone several repair and restoration efforts for maintenance and safety. The streetcars received their first restoration from 1962 through mid-1964, including repainting and improved lighting. The majority of improvements focused on mechanical improvements and mitigating safety concerns. For example, new wheels and axles were installed to help reduce swaying of the vehicles, the floors were resurfaced to provide more secure traction, and brighter lighting was installed to improve visibility conditions for passengers.[16] Upon the completion of the restoration, all of the renovated cars were run on the St. Charles Line. A second restoration project in 1967 included repainting the cars and replacing the earlier, railway light bulb with newer, automobile-sealed beam headlights.[17] In 1970, automatic registering fare boxes were installed. A renovation under RTA undertaken in 1990 focused on passenger safety, with body work performed to strengthen the end vestibules for crash resistance, and added beams and posts to provide a more rigid, solid structure. Cosmetic work was also performed on the aging rolling stock. Corrosion of the frame and sides was repaired where necessary and the wooden floors were restored with in-kind replacement material, where

[16] Brochure, "Progress Report on the St. Charles line, Transit Improvement Program," from the vertical files of the New Orleans Public Library (hereafter cited as NOPL).

[17] Earl W. Hampton, Jr., *The Streetcars of New Orleans: 1964-Present* (Gretna, LA: Pelican, 2010), 25.

necessary. Where rounded standee door and windows had been incorrectly installed in the 1960s renovations, rectangular windows were installed to their original 1923 design. The cars were also freshly painted and workers restored the cars' classic graphic style in its signage.

Since the 1990s, the streetcars have been restored and maintained to their original 1923–24 appearance. Aging material is replaced in-kind where necessary, but otherwise is meticulously restored. Skilled craftsmen employed at the Carrollton Car Barn Complex are trained to restore the cars from top to bottom with machinery, carpentry, and sheet metal shops equipped to maintain the cars in excellent condition. In many cases, the craftsmen work with historic machinery dating to the mid-twentieth century that is best able to service the cars. The craftsmen's extraordinary attention to detail includes labeling each element in restoration, so that, for example, a restored window is not only returned to its original, correct car, but its exact location. Regular maintenance and inspection ensures that the cars remain in excellent condition and ongoing restoration work, including a current project focusing on repainting, ensures that each car maintains its flawless appearance. The thirty-five Perley Thomas 900 series cars that currently serve the St. Charles Line are in remarkably good condition and have excellent physical integrity.

New Orleans Regional Transit Authority and FTA Restoration Grant

The acquisition of NOPSI by the New Orleans Regional Transit Authority (NORTA or RTA), a state-run agency, occurred on June 1, 1983, and was an important turning point in the preservation of the line.[18] In 1984, the St. Charles Avenue Streetcar Line was designated a National Historic Mechanical Engineering Landmark, a title bestowed by the American Society of Mechanical Engineers. In January of the following year, NORTA received a grant from the Federal Transportation Administration for preliminary design and engineering intended to extend the line's operating life. Developed in 1985–86, plans for the project included: rail and track bed reconstruction (and installation of new rail and switches); renovation of the Carrollton Car Barn, including its structural, mechanical, electrical and plumbing systems; and renovation of the streetcars including mechanical and electrical systems and necessary body and interior work.[19] Also as part of the project, NORTA underscored the importance of the setting of St. Charles Avenue to the streetcar and included landscape improvements in the overall streetcar revitalization project.[20] The project began in 1988 with the Federal Transportation Administration granting the majority of funding and NORTA supplying extra funding for consultant fees and landscaping along the tracks. The track and wire replacement work began in 1988 and was performed in sections allowing the line to maintain partial service at all times. The majority of the project was completed by 1990.[21]

The late 1980s and early 1990s renovations included a meticulous restoration of the streetcars themselves. Originally, engineers had proposed to build new, replica cars intended to recreate the look of the historic cars. Fortunately, a coalition of historic preservationists fought to come to an agreement with NORTA. In December 1988, the group and NORTA signed an agreement agreeing to restore the original cars.[22] In 1990, the Federal Transit Authority and NORTA reached an agreement stating that the thirty-five Perley Thomas streetcars would be restored locally at the historic Carrollton Car Barn. The main priority of the work was passenger safety, and focused on the renovation of the line's electrical systems and the rolling stock. The aging rolling stock also

[18] Ibid., 73.

[19] Bring Our Streetcar Home Committee, St. Charles Streetcar Line, 150th Birthday Celebration, Fact Sheet, September 10, 1985, prepared by Reeves and Associations, New Orleans, LA; Letter from Daniel, Mann, Johnson, & Mendenhall, Planning, Architecture firm, New Orleans, Richard Brown, Jr., Project Manager to Florence Schornstein, Superintendent, Parkway and Parks Commission, August 29, 1985, NOPL.

[20] Park and Parkway Commission Correspondence/Subject Files, box 11, St. Charles Streetcar folder, NOPL.

[21] Guilbeau, *St. Charles Streetcar*, 99-100.

[22] "New Orleans Renovates 35 Thomas Streetcars," *Metro Magazine*, March/April 1992, 46, from St. Charles Streetcar brochure, Streetcar vertical file, NOPL.

benefitted from cosmetic improvements. The careful restoration work completed in the 1990s spoke to the city's and NORTA's commitment to New Orleans' only surviving streetcar line, and demonstrated the impressive skill of the Carrollton Car Barn's craftsmen in preservation and restoration of the historic rolling stock. By this time, not only dedicated preservationists but also citizens and city leaders recognized the value of the St. Charles Line to the community. The continued success of the line through the end of the twentieth century even inspired the opening of a new streetcar line, the Riverfront Line, in 1988, and the revival of the Canal Street Line, fully completed in 2004. The Riverfront Line and the Canal Street Line run replica historic streetcars that were constructed in the Carrollton Car Barn shops. The new streetcars utilize modern technology, such as air conditioning, but resemble the historic Perley Thomas streetcars that run on the St. Charles Line.

One of the most difficult periods in the streetcar line's history followed the August 29, 2005, landfall of Hurricane Katrina. Although the historic streetcars had been safely stored in the Carrollton Car Barn, the storm greatly impacted the overhead wire system and trackage. The 900 Series Perley Thomas cars were temporarily transferred to service on the new Riverfront line and the restored Canal Street line, but the St. Charles Line itself underwent extensive repair work. Full reestablishment of the line was a major undertaking for the city, but restoration of this symbol of New Orleans' culture was a top priority. By 2006, streetcar service on the St. Charles Line resumed from Canal Street to Lee Circle, and by June 2008 the Carrollton Avenue segment reopened with the line again in full operation.[23]

The gradual restoration of the line was widely celebrated even in national news sources at the time, including an article in the *New York Times* titled "A Streetcar of Solace Is Back in New Orleans," which focused on the St. Charles Line's "intimate connection" with New Orleans' citizens as an important link to individual memory as well as the collective history of the city.[24] The St. Charles Line is not just a tourist attraction for the city but an integral part of the daily life of its citizens. The line is that rare historical artifact that maintains its symbolic significance while continuing to serve a functional purpose. Today, the line continues to operate twenty-four hours a day, transporting thousands of citizens and tourists between New Orleans' French Quarter and uptown neighborhoods each day. The RTA and the workers at the Carrollton Car Barn shops also continue their attentive maintenance and restoration work to the rolling stock and line, including an ongoing restoration project to replace tracks and repaint the streetcars, expected to be completed by 2014.

[23] Hampton, Streetcars of New Orleans, 188.
[24] Adam Nossiter, "A Streetcar of Solace is Back in New Orleans," *New York Times*, December 30, 2007.

List of Resources

Resource Group	Individual Resource	Resource Type	Contributing	Noncontributing	Notes/Relevant Dates
Route	Includes neutral ground and track rails, ties, bedding, electrical poles, and integrated electrical poles and lights	Structure	•		Course of route evolved between 1835 and 1952
Carrollton Transit Station - bound by Jeannette, Dante, Willow, and Dublin Streets	Carrollton Car Barn	Building	•		1892; later modifications
Carrollton Transit Station - bound by Jeannette, Dante, Willow, and Dublin Streets	Storage Building #1	Building	•		circa 1908
Carrollton Transit Station - bound by Jeannette, Dante, Willow, and Dublin Streets	Storage Building #2	Building	•		circa 1908
Carrollton Transit Station - bound by Jeannette, Dante, Willow, and Dublin Streets	Storage Building #3	Building		•	circa 1988
Rolling Stock	900	Structure	•		1924
Rolling Stock	903	Structure	•		1924
Rolling Stock	904	Structure	•		1924
Rolling Stock	905	Structure	•		1924
Rolling Stock	906	Structure	•		1924
Rolling Stock	907	Structure	•		1924
Rolling Stock	910	Structure	•		1924
Rolling Stock	911	Structure	•		1924
Rolling Stock	914	Structure	•		1924
Rolling Stock	915	Structure	•		1924
Rolling Stock	920	Structure	•		1924
Rolling Stock	921	Structure	•		1924
Rolling Stock	922	Structure	•		1924
Rolling Stock	923	Structure	•		1924
Rolling Stock	926	Structure	•		1924
Rolling Stock	930	Structure	•		1924
Rolling Stock	932	Structure	•		1924
Rolling Stock	933	Structure	•		1924
Rolling Stock	934	Structure	•		1924
Rolling Stock	937	Structure	•		1924

Resource Group	Individual Resource	Resource Type	Contributing	Noncontributing	Notes/Relevant Dates
Rolling Stock	940	Structure	•		1924
Rolling Stock	945	Structure	•		1924
Rolling Stock	947	Structure	•		1924
Rolling Stock	948	Structure	•		1924
Rolling Stock	951	Structure	•		1924
Rolling Stock	953	Structure	•		1924
Rolling Stock	954	Structure	•		1924
Rolling Stock	961	Structure	•		1924
Rolling Stock	962	Structure	•		1924
Rolling Stock	963	Structure	•		1924
Rolling Stock	965	Structure	•		1924

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:
Nationally: X Statewide__ Locally:__

Applicable National Register Criteria:	A X B__ C X D__
Criteria Considerations (Exceptions):	A__ B__ C__ D__ E__ F__ G__
NHL Criteria:	1 and 4
NHL Theme(s):	V. Developing the American Economy 3. Transportation and Communication
Areas of Significance:	Community Planning and Development; Engineering; Transportation
Period(s) of Significance:	1893–1952
Significant Dates:	1893; 1923–1924; 1952
Significant Person(s):	N/A
Cultural Affiliation:	N/A
Architect/Builder:	New Orleans & Carrollton Railroad Thomas Sully Perley Thomas Car Works
Historic Contexts:	XIV. Transportation F. Urban Transport (Trolleys, Streetcars, and Subways)

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

STATEMENT OF SIGNIFICANCE

The St. Charles Line is the oldest operational street railway in the United States and is nationally significant as a representation of street railway systems and the urban growth patterns they engendered between the 1890s and the 1920s, when streetcars reached the height of their popularity in the United States. The St. Charles Line is significant under National Historic Landmark Criterion 1 for its outstanding representation of street railway history. Its electrified streetcars represent the evolution of urban rail transportation, which evolved throughout the nineteenth century from steam- and horse-powered systems. By facilitating outward mobility and suburbanization, streetcars strongly influenced urban growth patterns, today reflected in the urban character of many American cities, including New Orleans. Such was the influence of the streetcar on New Orleans that today the two are inextricably linked, both in the physical fabric of the city and in its unique cultural identity as evidenced through its prominence in cultural touchstones like *A Streetcar Named Desire*.[25] Nationally, between 1888 and 1923 streetcars reached the zenith of their popularity, utility, and esteem. At their peak, streetcars traveled more than one billion miles and carried nearly sixteen billion passengers annually nationwide. The St. Charles Line is the only streetcar system dating from that period to remain in operation and is an intact vestige of a once-ubiquitous transportation system. The St. Charles Line represents an essential resource for understanding street railway technology as well as the effect it had on the growth and form of American cities.

The St. Charles Line is also significant under National Historic Landmark Criterion 4 for its thirty-five streetcars which represent an evolution in the engineering of street railway technology. Improvements made to streetcars during this period greatly improved the safety, efficiency, and flexibility with which streetcar systems could operate, allowing for even greater expansion of street railway systems in a variety of urban conditions. Designed by the Perley A. Thomas Car Works and purchased by the line's operators in 1923–24, they have continuously operated on the line's tracks since. The 900-series cars are exceptionally intact and retain a high degree of historic integrity, and embody the conventional arch-roofed, steel-bodied streetcars popular in the 1910s and 1920s. Tens of thousands of this style of car were manufactured and operated worldwide before their design was further modified to combat the growing popularity of automobiles and motorbuses in the late 1920s. Of those thousands, the St. Charles Line's thirty-five Perley Thomas cars are the only streetcars to have remained in operation within their original system.

The St. Charles Line's period of significance spans from 1893 to 1952. Although the line began operation in 1835, it was between 1893 and 1952 that it was electrified, that its iconic fleet of Perley Thomas Cars was put into operation, and that the course of its route was finally established. These qualities allow it to convey its significance, both for its representation of the street railway as a ubiquitous transportation system and for the exceptionality of its Perley Thomas streetcars. The contributing resources have been rigorously restored and are today maintained to that period of significance, sustaining the incomparable appearance and character of the proposed landmark.

[25] The Desire Line began service in 1920 and was operated by the New Orleans Railway & Light Company, a distinct agency from the St. Charles Line's operator, the New Orleans & Carrollton Railroad Light & Power Company (a successor to the New Orleans & Carrollton Railroad). The two companies merged following the formation of NOPSI in 1922. Streetcar service on the Desire Line continued until 1948.

Street Railways Nationwide, 1820s–1900s

Historical Summary of the St. Charles Line

The St. Charles Line made its inaugural run in 1835 as the Carrollton Line of the New Orleans & Carrollton Railroad (NO&CRR).[26] The proprietors of the railroad planned the Carrollton Line as a main line railroad transporting both people and freight 5½ miles uptown from New Orleans to the rural outpost of Carrollton. A majority of the route was laid along St. Charles Avenue along a grassy median that became known as the neutral ground. Between 1835 and 1867, the route offered both steam and animal locomotion, depending on the distance and nature of travel.

As St. Charles Avenue developed into a major commercial and residential thoroughfare, the railroad evolved into a street railway and fostered the development of uptown neighborhoods, including Carrollton. Steam locomotives gradually fell out of use in the 1860s, and freight service was fully abandoned on the line in 1871. Horse-drawn cars provided local service between downtown New Orleans and Carrollton. The difficulties associated with employing animal stock prompted the proprietors of the line to experiment with emerging propulsion technologies, including electrified battery cars, overhead cables, ammonia motors, and other methods. After years of experimentation with alternative propulsion systems, an overhead, electrified wire system was installed between 1892 and 1893. On the occasion of its first run as an electric streetcar the route was rechristened the St. Charles Line.

The electrification of the New Orleans' streetcar system also brought a new generation of rolling stock to the city's streets. Beginning with the wooden, monitor-roofed St. Louis Car Company models that entered service on the St. Charles Line in 1893, the city's streetcars continued to evolve technologically and aesthetically through the first quarter of the twentieth century. Decades of improvements to function and design culminated in the 900 series streetcars constructed by the Perley Thomas Car Works between 1923 and 24. The 900 series cars featured an arched-roof, steel-body design that proved to be of a remarkably durable construction, and continue to be used on the St. Charles Line presently.

With the advent of the motorbus and automobile, streetcar usage both in New Orleans and across the country began to decline. Following the first closure of a New Orleans streetcar line in 1924 (also the year a motorbus line first appeared in the city), streetcar closures occurred with increasing frequency through the following decades. With the closure of the Canal Street Line in 1964, the St. Charles Line survived as the only streetcar line in New Orleans boasting the oldest operational service in the nation. With a history that spans nearly two centuries, the St. Charles Line has made a significant impact on the growth and development of New Orleans. Additionally, it reflects broad trends in the evolution of street railway lines in the United States, particularly during the peak of their popularity from the 1890s to the 1920s.

Omnibuses, Railroads, and Horsecars

Throughout the nineteenth century, the urbanization of the United States elicited new and changing patterns of urban form. Cities became larger and increasingly stratified in their divisions of commerce, industry, and housing. Greater distances necessitated public transportation networks, a need initially satisfied by horse-drawn

[26] The St. Charles Line has operated under two names. When it began service in 1835, it operated as the Carrollton Line of the New Orleans and Carrollton Railroad. When the line was electrified in 1893, its name was changed to the St. Charles Line. It has also been governed by three corporate entities as well as various lessors. The three corporations were the New Orleans and Carrollton Railroad (NO&CRR), 1835–1922; New Orleans Public Service, Inc. (NOPSI), 1922–1983; and the New Orleans Regional Transit Authority (NORTA), 1983–Present. These changes occurred as a result of the consolidation of the various street railway and utility companies that had operated independently during the nineteenth and early twentieth centuries. Changes to the original route of the Carrollton Line were minor and occurred in conjunction with operational and technological improvements.

omnibus routes.[27] Slow and inefficient, omnibus lines were soon deemed inadequate for longer distances and larger passenger loads. Close in their wake came horse-drawn street railways and steam locomotives that ran along fixed rails laid in roadbeds. Steam locomotives were established as freight and commercial enterprises designed to transport goods and passengers over moderate to long distances. Construction of the first steam railroad line began in Baltimore in 1829. Soon after, several short line routes were constructed in the Mid-Atlantic and Eastern Seaboard, including Charleston, Boston, and eastern Pennsylvania.

Horse-drawn street railways, in contrast, were preferable for busy city streets. They were faster than omnibuses—traveling between six and eight miles per hour—and their cars were equipped to carry as many as several dozen passengers, plus one or two operators.[28] The first street railway line was incorporated in New York City in 1831 and began operation a year later. Development of street railway lines lagged behind railroads and omnibuses. In New Orleans, the Carrollton Line of the NO&CRR began in 1835.[29]

Technological developments influenced the expansion of street railways, which did not experience their first sustained period of growth until after 1852, when French inventor Alphonse Loubat introduced grooved rails that lay flush with the ground surface. This innovation allowed railway lines to be more easily integrated with vehicular traffic on busy streets. Additionally, Loubat's invention coincided with the culmination of the First Industrial Revolution, a period of intense urbanization, when efficient means of transportation were becoming indispensable. In 1830, one million Americans lived in urban areas, and only one city, New York, had surpassed 200,000 residents. By 1850, that number had grown to three-and-one-half-million Americans living in urban areas, with six cities (including New Orleans) numbering more than 100,000 residents. By the end of that decade that number had risen to nine, with an equal number of cities—New York, Brooklyn, Boston, Philadelphia, Baltimore, Pittsburgh, Cincinnati, Chicago, and New Orleans—operating street railway service.[30]

Like omnibuses before them, horse-drawn street railways were soon deemed too unwieldy and inefficient to meet growing passenger and time demands. In New Orleans specifically, the complications associated with operating a single line between both urban and rural settings were uniquely demonstrated by the need to employ both steam locomotives and horse-drawn carriages.[31] Steam engines, despite a high initial investment, were economical to operate, while mules and horses were expensive to feed and difficult to house. Mules worked slowly, tired easily, and generated noxious organic waste, yet could be relocated or redirected (such as at the terminus of a line) with greater flexibility.[32] Locomotives traveled swiftly, but could be a nuisance in developed areas, as they generated noise, fumes, smoke, and sparks. Certain cities, like Chicago and New York, instituted elevated lines to remove the smoke and noise from pedestrian traffic. Others concentrated their efforts on devising alternative means of propulsion. In New Orleans, the NO&CRR experimented with a variety of

[27] Omnibus was the term commonly given to horse-drawn stagecoaches that operated along set routes, but did not run on fixed rails.

[28] By contrast, omnibuses could contain about one dozen passengers and could travel no more than five miles per hour.

[29] The singularity of the New York and New Orleans lines was sustained largely through a national economic crisis that curbed the mania for land speculation and subdivision, which were often closely aligned with railway development. The Panic of 1837, as it was called, hit western cities particularly hard as their economies often relied on real estate expansion and lax banking practices, both of which were sharply curtailed in the aftermath.

[30] William Middleton, *The Time of the Trolley*, vol. 1 (San Marino, CA: Golden West Books, 1987), 11-15.

[31] While popular terminology prefers to use the word "horse" to describe animal-pulled rolling stock, New Orleans most often employed mules, which were more suited to hot and humid climates.

[32] The numbers of mules or horses required for street railway networks were staggering; one historian estimates that by 1881, 100,000 animals were required nationwide. A decade earlier, the difficulties inherent to animal power were revealed by the "Great Epizootic," an epidemic disease that killed or disabled thousands of horses throughout North America. The epidemic caused service in most cities—including New Orleans—to be temporarily discontinued. Middleton, *Time of the Trolley*, 21-27.

methods throughout the decade. Most systems were more efficient adaptations of steam engines, employing chemicals such as ammonia or calcium chloride.[33]

Improvements in propulsion technology coincided with the evolution of track and rolling stock. Tracks were improved to be less bulky and flusher with the ground surface. As more roads were paved with brick or bituminous material, the wood planks that had provided walking surfaces for animal stock became less common. The more noticeable change, however, was the adoption of lighter passenger cars, which generally meant single- or double-ended bobtail cars. Bobtail cars were named as the square car enclosure did not extend to meet the curve of the front or rear platform and roof, giving the car a foreshortened appearance. Single-ended bobtail cars were employed by the New Orleans City Railroad when it began operation in 1861 and soon became the standard model for street railways in New Orleans.[34] It was during this time that street railways nationwide assumed a unique identity, their bobtail-style horsecars providing distinct appearances and rider experiences, as compared to either omnibuses or passenger railroads.

Cable Cars and Other Experimental Technologies

Of all the proposed alternative means of propulsion, one of the most effective and ingenious systems was the cable car, which was first successfully used in San Francisco in 1873. Cable cars were powered by remote steam plants, which used pulleys to guide wire cables inserted in conduits along the tracks. Andrew Hallidie, the inventor of the system, leveraged recently-developed wire rope technologies invented and supplied by John Roebling, the pioneering bridge engineer. The cars used grips that provided smooth propulsion and reliably safe braking. The sophisticated braking and propulsion technologies of cable cars proved extremely successful in cities with dramatic changes in elevation, like San Francisco and Seattle, but were also adopted in flatter cities like Chicago and New York where the technology was further refined to allow for operation in subzero temperatures. Cable cars were clean, fast-moving, and inexpensive to operate. At their peak, cable cars operated in every major city in the United States with the exception of Boston, Detroit, and New Orleans. However, they required huge initial investments in cables and infrastructure, and in smaller or less quickly growing cities where requirements of space, speed, and braking were less stringent—as was the case in New Orleans—cable cars were determined financially unfeasible.[35]

Other inventors leveraged improvements in electric motor technology to experiment with variations on an electrified street railway system.[36] Two such experimental installations were displayed at the World's Industrial Cotton Centennial Exposition held in New Orleans in 1884–85.[37] Two exhibits, however, were particularly notable: fully electrified railways, the first applications of these systems in New Orleans. The first operated for one-fifth of a mile using a third rail laid in the center of the tracks. The second ran for a full mile powered by an overhead trolley wire. These two iterations represented how the technology could be employed on a commercially successful and citywide basis.[38]

Unfortunately, each of the systems soon failed as none successfully combined each element into a seamless system. Frank Julian Sprague, an inventor and former employee of Thomas Edison, finally resolved these issues in 1887 making electrified railways a commercially-feasible operation. Specifically, Sprague improved the

[33] E. Harper Charlton and Louis C. Hennick, *The Streetcars of New Orleans* (Gretna, LA: Jackson Square, 2005), 14-15.
[34] Guilbeau, St. Charles Streetcar, 36.
[35] Robert C. Post, *Urban Mass Transit* (Westport, CT: Greenwood, 2007), 22-33.
[36] The perfection of the dynamo in the 1870s allowed for a current to be sent from a central power station to a light electric motor, thus eliminating the need for batteries, which had proven inefficient and costly.
[37] The exposition was named to commemorate the one-hundred-year anniversary of the oldest surviving record of a cotton shipment from the United States to England, and was designed to highlight the modernity of the South. The locale was particularly appropriate considering the city's reigning title as the arbiter of the North American cotton trade.
[38] Middleton, Time of the Trolley, 64-67.

direct motor and discovered an improved method of mounting it, which placed the motor in a position between the axle and the spring in order to minimize shock.[39] In May 1887, Sprague electrified a single-track streetcar line in St. Joseph, Missouri. This accomplishment led to a contract for a more complicated project–the electrification of twelve miles of double railway track in Richmond, Virginia. The system included a generating station, a full overhead wire system, and forty streetcars.

In late 1887, Sprague successfully installed the Richmond system, and by May 1888 all forty cars were in service. The system's performance on the city's hilly streets impressed observers, and it quickly proved its many advantages to railway companies, investors, and passengers. Cleaner, faster (traveling at almost ten miles per hour), more cost-effective, and more reliable than the horsecar, the electric railway jettisoned its competition. While the cable car could list many of the same benefits, it represented an extremely costly investment.[40] By 1890, 200 cities had either ordered or built an electrified system based on Sprague's method, and 1,262 miles of track operated electrically. By 1902, the Department of Commerce and Labor Census reported that track mileage across the nation had increased to more than 21,000 miles. During the same period, 180 miles of streetcar tracks had been laid in New Orleans, with thirty-five of those controlled by the NO&CRR.[41]

THE STREETCAR AND ITS IMPACT ON AMERICAN URBAN DEVELOPMENT

Street railways signaled swift transportation within cities, but also to peripheral communities. The ease of transportation offered by railroads and street railways allowed—and was in turn supported by—the rise in American suburban development. Suburban communities grew around the fringes of cities beginning in the 1830s. Urbanization and the rise of a physically and economically mobile middle class—fueled mainly by industrial growth—enabled the creation of these suburbs. In contrast to city cores, stigmatized as old, crowded, and polluted, the suburbs were viewed as clean and healthy with affordable housing opportunities for the middle class. For those who could afford the cost to commute, these railroad suburbs offered both the serenity of country life and easy access to the city.[42] Initially, its only connection to New Orleans being the solitary outpost of Carrollton, the Carrollton Line of the NO&CRR eventually served as a main line as residential neighborhoods developed along its route. As New Orleans grew, the Carrollton Line served as a connective thread and a powerful stimulus for suburban expansion, paralleling similar patterns of development that occurred as suburban lines were established in Philadelphia (1832), New York (1837), and Boston (1838).[43] As service on the NO&CRR improved to be more regular and less costly, Carrollton transitioned from an isolated outpost to a residential bedroom community.

Considering this pattern, the defining feature of New Orleans' urban expansion was its avenues. The city's prime residential real estate—and therefore its wealthiest citizens and its finest homes—did not develop around secluded clusters but rather along the principal avenues of the Upper Garden District and Uptown, including St. Charles, Napoleon, and Louisiana Avenues. Not coincidentally, it was these avenues that were serviced by street railway lines. Following a pattern that began in earnest in the 1860s, the prominent residents of New Orleans chose to locate their homes along the avenues. First, the path of St. Charles Avenue was located along a natural topographic rise that made its land less susceptible to flooding. Second, these addresses enjoyed close

[39] David E. Nye, *Electrifying America: Social Meanings of a New Technology* (Cambridge, MA: MIT Press, 1990), 88-89.

[40] For example, in 1890 a ten-mile streetcar line, including a powerhouse, cost approximately $200,000, whereas a cable car system of the same length cost approximately $550,000.

[41] *Street and Electric Railways, 1902* (Washington, DC: Department of Commerce and Labor, U.S. Census Bureau, 1905), 276-282.

[42] Two notable examples of this pattern were Brookline, Massachusetts (a stop on the main line between Boston and Worcester), and the suburban communities of Long Island (stops along the Long Island Railroad, planned to connect New York City and Boston). Kenneth T. Jackson, *Crabgrass Frontier* (New York: Oxford University Press, 1985), 36-37.

[43] Starr, Southern Comfort, 64-65.

proximity to the street railways, which offered an ease and convenience of travel unmatched until the advent of the automobile. Finally, the highly visible nature of the avenues allowed for prominent residents to display their trappings of wealth and position in society. The residents of the Garden District and Uptown were not averse to nouveau riche displays of extravagance and ostentation, a fact that is clearly revealed through the architectural flamboyance of their homes and the botanical luxuriance of their gardens.

Until the twentieth century, when the draining of swampland and implementation of more reliable and sophisticated levee systems occurred, the unique nature of New Orleans' geography placed seemingly insurmountable limitations on the size and direction of its urban growth. Unlike Boston, New York, or Chicago, whose suburban expansion was directly correlated to the growth of these cities and the improvement of their transportation corridors, the growth of New Orleans was largely restricted to its nineteenth-century boundaries. Moreover, the decline in New Orleans' rate of population growth and economic prospects (as compared with growing midwestern and northeastern cities) beginning in the late nineteenth century preserved the size and form of its existing residential suburbs. As late as the 1950s, enormous portions of the city's outer fringes were undeveloped, and would not be for several decades.[44]

Documentation of Streetcar Suburbs

Across the country, streetcar suburbs continued to grow apace with streetcar lines themselves, which reached peak ridership in 1923. The initial transition from streetcar to automobile travel occurred slowly and only sped precipitously following World War II. Eventually, nearly all streetcar lines were dissolved. Some survived in the form of electrified interurban lines. In major cities, they were replaced with infrastructure-heavy transit systems like subways or elevated trains, where the volume of traffic encouraged its removal from city streets. In most other places, streetcars were supplanted with bus routes and automobiles, which took advantage of improvements in hardened roads and highways. Although streetcar tracks were removed and the cars scrapped, the urban and suburban development brought about by their operation, were preserved in situ; today there is a great wealth of documentation relating to historic streetcar suburbs.[45]

CONSTRUCTION AND DEVELOPMENT OF THE ST. CHARLES LINE, 1830s–1890s

Growth of New Orleans to the 1840s

New Orleans was founded as a French colonial outpost in 1718. Over the course of the eighteenth century, it was passed to Spanish control and again back to French, before being purchased by the United States in 1803 under the Louisiana Purchase. Creole residents, until then the dominant social and political force of the city, resented the influx of "American" settlers that the Purchase had prompted to immigrate. These settlers found themselves unwelcomed in the French Quarter, the historic core of the city.[46] For this reason, a distinct

[44] "Metropolitan New Orleans, Louisiana: Land Development – 1950," Louisiana Research Collection, Howard-Tilton Memorial Library, Tulane University, New Orleans (hereafter cited as LRC).

[45] The National Park Service's National Register bulletin, *Historic Residential Suburbs*, provides a historic context to evaluate the significance of such development, isolating trends into the following periods as applicable to the St. Charles Line's period of significance: Railroad and Horsecar Suburbs, 1830 to 1890; Streetcar Suburbs, 1888 to 1928; and Early Automobile Suburbs, 1908 to 1945. Many cities have developed Multiple Property Documentation Forms to document and assess their streetcar-related resources and districts, including areas as diverse as Richmond, St. Louis, and Washington, D.C. While no such document has been created for New Orleans, historic districts have been rigorously surveyed and identified on both local and national levels. The route of the St. Charles Line today passes through or runs immediately adjacent to seven National Register historic districts: Upper and Lower Central Business Historic District, the Upper and Lower Garden Historic District, the Central City Historic District, Uptown Historic District, and Carrollton Historic District. Rarely does the associated documentation place each district's period of development within the context of technological or transportation improvements. Nevertheless, the unbroken history of the St. Charles Line—in addition to the unique urban character it fomented—creates unique and unparalleled opportunities for such analyses to be made.

[46] At the time, Creoles outnumbered Americans about twelve to one.

American Sector grew on the outskirts of the French Quarter, primarily located upriver in the new faubourgs that were established there.[47] This divide was significant; the growth of the American Sector largely dictated the future of New Orleans' growth and strongly influenced the character of its streets and architecture.[48]

While the French Quarter remained a stronghold of Creole culture and commerce, its upriver neighbors expanded quickly, capitalizing on New Orleans' growing trade dominance, its rapidly inflating land values, and its ready availability of liquid capital. In 1812, the arrival of the first steamboats on the banks of the Mississippi further heralded the trade growth of the city. Soon, New Orleans boasted the largest slave and cotton markets in the United States.[49] The city's population grew from 46,000 in the 1830 census to more than 100,000 a decade later, an increase fueled by new immigrants.[50]

Railroads and Urban Development

In the first half of the nineteenth century, development in the American Sector remained clustered around the French Quarter and in the future Central Business and Garden Districts. Speculators gazed upriver at the miles of undeveloped land, looking beyond the private plantations and forested swamplands to the great profits that could be realized through subdivision. Although most plantation owners were eager to capitalize on their undeveloped land, a few proved reluctant to part with their fine homes and valuable plantations. The land that was available for purchase, considerably removed from the river, was swampy or forested and therefore unsuitable for development, necessitating significant capital to clear and drain. Therefore, expansion required both viable building land and means to connect that land with the central city, both for people and freight.

In the eighteenth and early nineteenth centuries, the most expedient method of connection was via canals, which were costly to construct, necessitated enormous amounts of human labor, and created environmental hazards.[51] As the means and technology became available, New Orleans' entrepreneurs recognized the advantages of railroads as a flexible and efficient means of transportation and invested heavily in their construction. The infrastructure investment associated with railroad construction—while still significant—was not nearly that required for the digging of a new canal. For New Orleans, the timing coincided with its fastest period of Economic growth, and could not have been more advantageous. The advent of railroads in New Orleans—and their evolution into street railways and eventually streetcars—was closely tied to the city's economic prosperity, its growth following American annexation, and its unique urban form.

Foundation of the New Orleans and Carrollton Railroad

Late in 1831, a group of American speculators purchased the Macarty Plantation, a large tract of land several miles upriver of Canal Street. The Macarty Plantation offered several hundred acres of land that met the Mississippi River at the western edge of the New Orleans crescent. The land acquisition was partially financed by the New Orleans Canal and Banking Company, a corporation charged with building a canal in the American Sector. The New Basin Canal, as it was called, originated several blocks from Lee (formerly Tivoli) Circle and ran northwest, turning twice before extending into Lake Pontchartrain. Its route, completed in 1836, informed

[47] "Faubourg" is the French term for a suburb, and generally connotes a settlement planned immediately outside a city's original limits (or in some cases, its planned fortifications).

[48] Contrary to the Spanish colonial style of construction—which favored inward-facing residences built around private courtyards—Americans built their homes to face outward and to be surrounded by lawns, paths, and gardens. Flowering and semi-tropical plants flourished in the temperate climate of New Orleans, and the verdant residential neighborhoods of Lafayette came to be known as the "Garden District." Federal Writers' Project, *New Orleans City Guide* (Boston, MA: Houghton Mifflin, 1938), 12-18; and Campanella, *Geographies of New Orleans*, 11.

[49] Federal Writers' Project, *New Orleans City Guide*, 12-18.

[50] Campanella, Geographies of New Orleans, 10-12.

[51] Sewage and, especially in the semi-tropical climate of Southern Louisiana, insect-borne disease.

the subdivision and growth of Carrollton, the new residential suburb platted within the boundaries of the former Macarty Plantation.[52]

The great divide between New Orleans and Carrollton required the formation of a convenient land route that could link the two areas, could provide access to the intervening properties, and could communicate with auxiliary modes of transportation, namely the river and the New Basin Canal. Charles Zimpel, surveyor of the City of New Orleans as well as Carrollton, advocated for the creation of a rail line. Before any lots were sold within the new community, planning had begun to incorporate and finance a railroad company that could provide both freight and passenger service. The suburb and its railroad were conceived as a single entity, each reliant on the other to levy revenue, entice investors, and sustain the practical necessities of transportation.

The NO&CRR was chartered on February 9, 1833. The mission of NO&CRR was twofold: to construct and operate a rail line connecting the City of New Orleans with the newly established suburb of Carrollton; and to survey, subdivide, and sell land within that suburb.[53] The corporation negotiated with the City Council of New Orleans; the two intervening, independent municipalities, Lafayette and Jefferson; and the private property owners who owned land along the route and whose deep, wedge-shaped parcels connected the Mississippi River with the swampy interior landmass. These negotiations established the railroad's principal route, the Carrollton Line; its multiple branch lines; and the finer points of constructing and maintaining the lines themselves.[54]

The charter granted the NO&CRR rights to a 120-foot-wide swath of property along its proposed route, thereby establishing a generous right-of-way for the railroad.[55] The deal proved mutually beneficial for both the private property owners and the NO&CRR. For the NO&CRR, this path granted them a generous corridor through which they could construct and operate their line. For the property owners, the placement of the line provided them with access to this convenient transportation corridor and fostered opportunities for real estate development and subdivision to occur on those portions immediately fronting on the rail line. For the future of the City of New Orleans, this section of the charter established a generous thoroughfare that, were the rail line to fail, could (and would) be developed into a graciously proportioned avenue.[56] As these railway routes evolved to become public streets, the operation rights were held in perpetuity by the railways as long as they operated routes upon them. These reserved paths became known as "neutral ground," and are now an important feature of New Orleans' urban character, bestowing generous widths to its main avenues.[57]

Upon completion, the rail lines of the NO&CRR served multiple purposes: they carried both people and freight; they were powered both by steam and horse; and they traversed both urban and rural routes. The NO&CRR's planners and engineers faced unique topographical conditions along the route. Although they were not forced to

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[52] John A. Mahe, "The Development of a Town at Carrollton, Louisiana" (master's thesis, Tulane University, 1976), 19-24. The wide arc of the canal's path was planned to avoid the path and tributaries of Bayou St. John.

[53] Plots in Carrollton were sold at public auction beginning in 1833. Parcels in the tract were divided and sold in massive blocks measuring 650 feet on each side. Once purchased, each block could be subdivided into smaller building lots allowing profits to trickle down to successive rounds of speculators. This method allowed the original owners of Carrollton to divest themselves of larger chunks of property. It allowed for a more flexible subdivision of blocks and also took advantage of the wildly inflationary land values. Land in Carrollton developed first near the river and around the NO&CRR properties and gradually spread inland along Carrollton Avenue. Much of Carrollton's inland property was undevelopable due to the swampy ground, which would not be drained for some decades. Mahe, "The Development of a Town at Carrollton, Louisiana," 35-46.

[54] Charter of the New Orleans and Carrollton Rail Road Company (New Orleans: E. Johns, 1837), 3-9.

[55] Ibid., 5-6.

[56] By contrast, the streets in the French Quarter averaged 37-feet wide.

[57] Mahe, "The Development of a Town at Carrollton," 34-36. Although the tracks followed the path of St. Charles Avenue, the corporation was not held responsible for creating or maintaining a passable thoroughfare beyond the maintenance of its own tracks. The poor condition of the dirt roads and their general susceptibility to muddiness and poor drainage guaranteed the superiority of the railroad as a means of travel. In fact, the only road that ran as far upriver as Carrollton was an old dirt river road, which approximately followed the path of present-day Tchoupitoulas Street.

contend with extreme grade changes, the undeveloped land within parts of Carrollton, Lafayette, and Jefferson were low lying, often swampy, and subject to flooding. The new railroad—which mitigated the flooding hazard by operating on raised median beds—sped the conveyance of people, goods, and construction materials between the well-established city and the new suburb.

The principal thoroughfare through this suburb was Carrollton (formerly Canal) Avenue. The foot of Carrollton Avenue formed the upriver terminus of the NO&CRR; at its opposite end it met the New Basin Canal effectively linking the rail line with Lake Pontchartrain. Carrollton grew slowly, with most of its early development financed by the NO&CRR. At the foot of Carrollton Avenue, they constructed an elegant resort hotel. The hotel and its pleasure gardens were patronized by New Orleans residents seeking to escape the oppressive heat and humidity of the city. The Carrollton Hotel accommodated overnight lodgers, sold food and refreshments, and acted as an informal terminal from which passengers could purchase tickets or await their trains. The hotel and its surrounding gardens were modeled after eighteenth-century colonial residences: a gracious, two-story building encircled by colonnaded balconies and surrounded by four acres of lovely landscaped gardens. The hotel embodied the pastoral charms of country life, much like Carrollton itself did. In addition to the hotel and garden plot, the NO&CRR proprietors purchased several surrounding blocks on which they constructed the buildings necessary for the operation of their line: a train shed, housing for their employees, machine shops, and blacksmith shops.[58]

Early Operation of the NO&CRR

The main line of the NO&CRR—which connected New Orleans with Carrollton—was called the Carrollton Line. The Carrollton Line was the second in New Orleans after the Pontchartrain Railroad, which began operation in 1831.[59]

Growth and Transition to Street Railway, 1850s to Civil War

During the 1850s, the NO&CRR—and especially its main Carrollton Line—transitioned from a freight and passenger railroad to a street railway. The changes were prompted by the growing residential character of New Orleans' uptown faubourgs as well as the diminished revenue produced by freight service.[60] Prior to 1860, the four lines of the NO&CRR were the only street railways to operate in the city. Omnibus routes supplemented the railroad and provided mass transit for those parts of the city it did not serve. The density of the French Quarter rendered street railways within its boundaries unnecessary. However, the expanding populations of the neighborhoods immediately up- and downriver of the French Quarter prompted a broad expansion of street railway service. To satisfy this need, the New Orleans City Railroad incorporated in 1860, and by mid-1861 had established lines along six main streets: Rampart, Prytania, Magazine, Camp, Esplanade, Dauphine, and Canal.[61] Following the successful launch of the New Orleans City Railroad lines, street railways in New

[58] Mahe, "The Development of a Town at Carrollton," 25-55.

[59] Guilbeau, *St. Charles Streetcar*, 1-3. The Pontchartrain Railroad formed a model on which the development of the Carrollton Line was based. The route carried passengers and freight between the Mississippi River and Lake Pontchartrain. Originating at the downriver foot of the French Quarter (where it intersected Esplanade Avenue), the Pontchartrain Railroad followed a straight, five-mile path along Elysian Fields Avenue where it met a jetty that extended into Lake Pontchartrain. A hotel was also constructed near the pier to accommodate passengers. Like the NO&CRR, the Pontchartrain Railroad ordered its steam locomotives from England, which set the precedent for the 4′-8½″-gauge track that would be used on the NO&CRR until 1929.

[60] In contrast to railroads, street railways operated on more frequent departure times, carried only human passengers, and served localized transportation needs.

[61] Charlton and Hennick, *Streetcars of New Orleans*, 10-17. The cars of the New Orleans City Railroad operated on 5′-2½″-gauge tracks, which would eventually become the standard for street railways in New Orleans.

Orleans proliferated. Independent corporations were founded in rapid succession, hoping to garner a share of the urban transit market as well as capitalize on the continued growth of the city.

New Orleans and the NO&CRR after the Civil War: Transition to Electrical Technology

The Civil War dampened the economic vibrancy of New Orleans. Although Union occupation temporarily stifled the trade and growth of the city—eliciting the failure of several street railway lines—it also spared New Orleans from the destruction wrought upon other southern cities. After the war, many of the surviving street railway lines were consolidated into larger and more prosperous lines, and this period marked the beginning of a citywide street railway network in New Orleans.[62] By 1873, there were seven street railway corporations operating several dozen lines between them.[63]

The difficulties associated with animal and steam locomotion encouraged the proprietors of the NO&CRR to continuously seek out alternative means of powering their lines. The most active period of experimentation occurred after the Civil War, during which time the NO&CRR was leased to a group of investors led by General Pierre Gustave Toutant Beauregard, who served as president of the line between 1866 and 1876.[64] In 1869, Beauregard and his fellow investors began a series of experiments that synthesized elements of both the underground cable and the overhead electrified-wire systems.[65] However, operational problems caused the method to be abandoned soon after.[66] A satisfactory method was not achieved until the adoption of the electrified overhead wires in 1893.

Streetcars and Segregation

One of the many changes Reconstruction brought to New Orleans was the desegregation of the city's streetcar network. Streetcars had been selectively segregated since their implementation in the 1830s, with individual corporations enforcing varying restrictions: some operated separate black and white cars, while others forbade blacks from riding any cars, and still others allowed blacks and whites to ride on the same cars. Following numerous (and sometimes violent) protests and a prolonged publicity campaign, black citizens were successful in convincing transit operators to desegregate cars in 1867. The Supreme Court's decision in the landmark *Plessy v. Ferguson* case eventually led to the segregation of the New Orleans street railways once again in 1902.

Plessy involved the case of Homer Plessy, a black man of Creole descent who was jailed for sitting in a "white" car on the East Louisiana Railroad. The Supreme Court's finding legalized and reinforced the "separate but equal" practice for public facilities. Although the *Plessy* case arose from railroad cars, it had far-reaching implications for all public services, especially public transportation systems that were patronized by a broad range of socioeconomic classes. Segregation in the wake of *Plessy* was complicated for New Orleans, a city with two distinct black populations. One of these, the Creole community, exercised considerable social and political influence in the city and was successful in advocating for a number of civil rights issues on their own behalf, including streetcar integration. However, due to a number of factors—including a violent race riot in the city in 1900 and disenfranchisement of black voters enacted at the state level—the state legislature passed an ordinance to segregate New Orleans's streetcars in July 1902. Moveable metal screens were installed in the

[62] Campanella, Geographies of New Orleans, 14.

[63] Edwin L. Jewell, *Jewell's Crescent City, Illustrated* (New Orleans: Edwin L. Jewell, 1873), xii.

[64] Beauregard was born to a Louisiana plantation-owning family and was educated at West Point before serving as a military engineer and officer during the Mexican-American and Civil Wars. He is credited with ordering the first shots fired on Fort Sumter.

[65] Beauregard's method employed steam motors attached to roof-mounted armatures. The arms gripped traction cables and the steam motors powered pulleys that propelled the cars along the line, much the same as a rope ski tow functions. Beauregard was issued a patent for the technology and the New Orleans Improved Car-Traction Company was chartered the following year to install and test the system along a portion of the St. Charles track.

[66] Guilbeau, St. Charles Streetcar, 50.

streetcars, and eventually the buses, throughout the city. For black passengers, the use of screens—which could only be moved by car operators and which gave preference to white riders—caused frequent overcrowding and sometimes injury or ejection from a car. The screens were used until the entire system was desegregated in 1958, following the 1954 *Brown v. Board of Education* ruling, in which the Supreme Court reversed *Plessy* and found the "separate but equal" doctrine unconstitutional.[67]

THE ST. CHARLES LINE, 1890s–1920s

After Beauregard's experiments in the 1860s, street railway corporations in New Orleans continued to test new propulsion methods, including a "fireless engine" car utilizing ammonia gas, a storage battery system, and the overhead wire method. At the same time, the company faced what proved to be the significant challenge of convincing a hesitant city council of the superiority, and inevitability, of electrification. NO&CRR superintendent, Chris V. Haile, visited Richmond, Virginia, in 1888 and directly witnessed the city's successful use of electric traction and the overhead wire system. Firmly convinced of the advantages of the system, and excited about its application in New Orleans, NO&CRR petitioned the city council for permission to electrify using Sprague's method. Despite the system's demonstrated success, the city council rejected the petition and instead passed an ordinance allowing for implementation of a storage battery system.

As a result, the NO&CRR's attention remained focused on the overhead wire method and Haile continued to present the case for the railway's electrification in the company's annual reports. In the Annual Report of 1889, Haile described electric traction as "more modern and far superior to steam or mule, both in economy and better service to the public." Noting that 2,000 cars already operated on the system in cities across the country, including nearby Shreveport, Louisiana, Haile proclaimed that "It is a recognized fact by all, that our clean and level tracks and beautiful avenues are more adapted to the use of Electric cars, than any other in the world, and ours would make one of the finest Electric roads in existence…"[68] Further, at a time when so many companies experienced considerable resistance from communities, Haile remarked upon the overwhelming support for electrification among New Orleans' citizens, particularly those living along St. Charles Avenue.[69]

In 1890, the NO&CRR stockholders demonstrated their commitment to electrification with a decisive vote of 5,508 to 60 in its favor.[70] The New Orleans City Council, on the other hand, remained wary of electrification, and Haile continued to use the company's annual reports as a medium for his arguments in its defense. The following year, Haile convincingly argued for electrification in the company's 1891 Annual Report. Here, Haile detailed the system's use and success in a number of communities, specifically noting cities as varied as Boston, Cincinnati, Nashville, Louisville, Cleveland, Dayton, and Chattanooga. The system had proven to increase receipts for the companies and to encourage suburban growth in each case. The case was confidently made for the superiority of the electric system in matters of economy and efficiency over the increasingly outdated animal power.[71] That year, company president Joseph Hernández again petitioned the city council for electrification. Finally, on December 15, 1891, Ordinance No. 5847, "An Ordinance to Authorize the New

[67] For additional information, see: Roger A. Fischer, "A Pioneer Protest: The New Orleans Street-Car Controversy of 1867," The Journal of Negro History 53, no. 3 (July 1968): 219-233; Blair L. M. Kelley, *Right to Ride: Streetcar Boycotts and African American Citizenship in the Era of Plessy v. Ferguson* (Chapel Hill, NC: The University of North Carolina Press, 2010); *Plessy v. Ferguson*, 163 U.S. 537, 210 (1896); and Susan Cianci Salvatore et al., *Civil Rights in America: Racial Desegregation of Public Accommodations, A National Historic Landmarks Theme Study* (Washington, DC: U.S. Department of the Interior, 2009).

[68] "Annual Statement of 1889, New Orleans & Carrollton Railroad Company," LRC.

[69] Nye, *Electrifying America,* 91; "Annual Statement of 1889, New Orleans & Carrollton Railroad Company."

[70] Guilbeau, St. Charles Streetcar, 65.

[71] "Annual Statement of 1890, New Orleans & Carrollton Railroad Company," LRC.

Orleans and Carrollton R. Co., To Use Electricity as a Motive Power to Operate Its Cars Over the Different Streets Covered By Its Contract" was passed by the New Orleans City Council.[72]

The ordinance stated:

> AND WHERAS, the property holders along and adjacent to St. Charles avenue have almost unanimously petitioned for the use of electricity by means of the overhead wire; and whereas, the experience of other cities have shown that the use of electricity in this form is an improved process for the propulsion of street cars; therefore, BE IT ORDAINED, By the Common Council of the City of New Orleans; Section 1. That the New Orleans and Carrollton Railroad Company, is hereby authorized and empowered to operate its cars along the streets wherever it is now entitled to run, a street railway by the overhead electric system.

The ordinance further detailed several matters of concern regarding the new system, including the necessity for building infrastructure. The ordinance allowed for the erection of iron or steel poles of "an ornamental character" to be erected on both sides of the streets, with the necessary wires installed to convey the electric current. The line's route and mileage were specified as follow:

> That the said Railroad Company shall run its cars from Canal Street to the neutral ground on the upper side of Lee Circle, at no greater speed than six miles an hour, and that it shall run its cars along the neutral ground from the upper side of Lee Circle to Carrollton, and along the branch roads of the system at no greater speed than fifteen miles an hour.[73]

With permission to proceed, the NO&CRR took its first concrete steps towards electrification. On April 20, 1892, the *Daily Picayune* reported that a contract had been awarded to the Thomas-Houston Electric System, noting that the corporation had recently worked with the Edison Company to form a consolidated corporation named General Electric. The overhead wires were to be installed by the J. G. White Company of New York City.[74] With contracts awarded, construction work officially commenced with a silver spike ceremony held at Lee Circle on July 13, 1892. Beginning January 25, 1893, experimental runs were made to test the new overhead system as well as the newly arrived streetcars, which were built by the St. Louis Car Company. The first trial runs were made at midnight, running between Napoleon Avenue and Canal Street. A week later, on February 1, 1893, a procession of seven cars began service on the newly renamed St. Charles Line of the NO&CRR.[75]

The following day, the *Daily Picayune* provided its readers with an enthusiastic description of the event, declaring that: "Yesterday, for the first time, New Orleans rode by wire" and hailed the NO&CRR's hard work to change 'their system from the unambitious mule to the progressive power of electricity."[76] The paper also described the line's "elegantly made" rolling stock, which featured green cars on the St. Charles line, with green destination signs with white letters.[77] Proudly describing the moment, the newspaper stated: "Promptly at 10, the gay, spic and span green cars were drawn up on Carrollton Avenue for the trip to the foot of Baronne, the

[72] New Orleans City Ordinances, LRC.
[73] Ibid.
[74] Guilbeau, St. Charles Streetcar, 69.
[75] Charlton and Hennick, *Streetcars of New Orleans*, 23.
[76] Hugh M. Blain, *A Near Century of Public Service in New Orleans* (New Orleans: New Orleans Public Service, 1927), 56-57; quoting *Picayune*, February 2, 1893.
[77] Guilbeau, St. Charles Streetcar, 69-76.

present terminal of the road."[78] With this successful kick-off, the line undertook regular service, running up to twenty-five cars at one time.

The electrified St. Charles Line proved immediately popular among patrons, and was a financial success for the NO&CRR. While the total expense of the electric railway was double that of the mule car operation, its speed and increased passenger capacity translated to greater revenue. Not a little part of the line's success was attributed to its route along St. Charles Avenue, the broad street allowing for "real rapid transit" along its length, not to mention providing a pleasing setting for the commute.[79]

Growth and Consolidation of Streetcar Companies

Across the country, the enormous financial success of the first electrified street railways resulted in a rapid expansion of public transit led by scores of competing companies formed to construct new lines. In the earliest years, then, a number of individual railroad companies might have served a single city. This early period of expansion inevitably gave way to the process of consolidation as the operational and financial benefits of a single, larger company became clear. The construction of an electric streetcar line required a considerable capital outlay for the track, overhead wires, rolling stock, powerhouse, and likely a new car barn. The operation of an electric railway system also proved more complex than a horsecar line. The greater speed of the electrified cars and the increase in traffic required greater attention to scheduling and administrative coordination, and regular maintenance performed by skilled workers was critical.[80] As a result, street railway companies in most cities consolidated into a single system by the early part of the twentieth century.

New Orleans' street railway system underwent this process beginning with the electrification of the St. Charles Line in 1893, culminating with the establishment of the New Orleans Public Service, Inc. (NOPSI) in 1922. Following electrification of the St. Charles Line on February 1, 1893, the NO&CRR's Jackson Line and Napoleon Line electrified on February 10, 1893. A number of other railway companies quickly followed suit, including the Crescent City Railroad Company and the New Orleans City & Lake Railroad Company (1894), the Orleans Railroad Company (1895), and the St. Charles Street Railroad Company (1896).[81] This rapid growth of electrified streetcar lines led to mergers between companies by the end of the decade.

In 1899, the NO&CRR acquired the Canal & Claiborne Railroad Company (C&CRR).[82] This brought five electric car lines under the domain of NO&CRR, the St. Charles Line, the Jackson Line, the Napoleon Line, the Claiborne Line, and the Tulane Line, and one remaining mule car operation, the Girard and Poydras Line. In total, NO&CRR managed forty miles of standard gauge rail operation and 120 electric streetcars, and an additional four miles of 5′-2½″ broad gauge track with ten mule cars.[83] Under the control of the NO&CRR, the C&CRR laid new tracks and ordered new cars from the American Car Company of St. Louis. Designed by Ford, Bacon & Davis, the new cars were painted olive green with a cream trim. With the merger completed, NO&CRR repainted all of its cars following this color scheme, employed to this day on the St. Charles Line.[84]

By the turn of the twentieth century, it was recognized that the unification of utilities allowed for improved public services. Railway companies and electric companies began to consolidate first, followed by the

[78] Blain, A Near Century of Public Service, 56-57.
[79] Guilbeau, St. Charles Streetcar, 80-82.
[80] Nye, Electrifying America, 190.
[81] Charlton and Hennick, *Streetcars of New Orleans*, 23-26.
[82] Guilbeau, St. Charles Streetcar, 83.
[83] Operation of mule cars ceased with the passage of city ordinance C.S. 15489 in July 1899. Charlton and Hennick, *Streetcars of New Orleans*, 27.
[84] Guilbeau, St. Charles Streetcar, 83.

inevitable union of all interrelated utilities, including electric light and power, gas, and street railways.[85] The New Orleans & Carrollton Railroad, Light & Power Company (NO&CRR L&P) was formed in July 1901, reorganizing the former NO&CRR and absorbing the Edison Electric and Merchant's Lighting companies.[86] The New Orleans Railway Company, a holding company, incorporated on January 28, 1902. The company acquired and consolidated the city's streetcar system, including those lines owned by the NO&CRR L&P.[87] The New Orleans Railway Company was reorganized as the New Orleans Railway and Light Company in 1905.

While each of the railways was now under the control of a single holding company, the NO&CRR L&P continued to technically operate as a separate division because its standard gauge tracks were different than the broad gauge tracks of the other street railways.[88] The most visible result of the consolidation was that all cars were repainted with the words "New Orleans Railway Company." While all other cars in the city were painted orange and yellow, those owned by the NO&CRR L&P division remained the traditional olive green and cream colors.[89]

New Orleans underwent a complete reorganization of its railway and utilities companies in 1922. NOPSI was chartered on August 18, 1922, and on September 27 the company consolidated with the NO&CRR L&P, Orleans Railroad Company, and the New Orleans & P. Railway Company. Further unification occurred over the next several years as the St. Charles Railroad Company consolidated in December 1923, the New Orleans Gas Light Company entering in September 1924, and the New Orleans City Railroad Company entering in May 1925. In December 1925, the two remaining public service organizations, Consumers Electric Light & Power Company, and Citizens Electric Company, were folded in, completing the public service consolidation under NOPSI.[90]

A stockholder-owned utility company, NOPSI brought New Orleans' entire railway, electric, and gas companies under its authority. In addition to purchase of the various railway and power lines, the company was also empowered through its charter to build railway and bus lines in the future.[91] Upon consolidation, NOPSI had a total street railway trackage of 220 miles, most of which was 5′-2½″ gauge, with approximately twenty-eight miles of 4′-8½″ gauge located on the former NO&CRR routes.[92] At the close of 1922, the company was operating 225 miles of street railway, which was likely the peak of street railway mileage in the city. Upon consolidation, NOPSI immediately undertook improvements to its street railway system. One of its first actions was to reduce cash fares, and upgrades continued with significant rebuilding of equipment between 1923 and 1924.[93]

One of the largest projects undertaken by NOPSI was the conversion of all of the city's track mileage to wide gauge track in 1925. An *Electric Railway Journal* article from April 3, 1926, described the widening of the neutral ground tracks to 5′-2½″ within a single night. The track work began on October 28, 1925, at 9 p.m., and was completed by 2:15 a.m. Conversion work continued through 1930, with the St. Charles and Tulane Belts converted in October 1929, and the Canal Street section of the St. Charles Belt converted in 1930.[94] The completion of the project allowed for complete flexibility of the New Orleans' rolling stock so that a streetcar

[85] Blain, A Near Century of Public Service, 58.
[86] Charlton and Hennick, Streetcars of New Orleans, 28; Guilbeau, St. Charles Streetcar, 90; Blain, A Near Century of Public Service, 67.
[87] American Street Railway Investments 10 (1903): 59; and Englehardt, New Orleans, Louisiana: The Crescent City, 43.
[88] Guilbeau, St. Charles Streetcar, 93.
[89] Charlton and Hennick, *Streetcars of New Orleans*, 29.
[90] Blain, A Near Century of Public Service, 70.
[91] Charlton and Hennick, *Streetcars of New Orleans*, 37.
[92] Guilbeau, St. Charles Streetcar, 95.
[93] Charlton and Hennick, *Streetcars of New Orleans*, 38.
[94] Guilbeau, St. Charles Streetcar, 96.

could be assigned to any line in the city. The project had been planned for years, so that beginning in 1915 all streetcars ordered were of sufficient width to allow for easy conversion to wide gauge.[95]

Evolution of the Rolling Stock

The first quarter of the twentieth century had also witnessed the continued evolution of the streetcar system's rolling stock. In addition to a number of tested propulsion systems, New Orleans utilized a variety of streetcar types through its history, experimenting with new designs and technology, and placing orders with a number of different builders. With electrification, a new generation of streetcars arrived in the city, beginning with the St. Louis Car Company models that entered service on February 1, 1893, for the NO&CRR's St. Charles Line. Constructed primarily of wood, the small, light cars were typical of the period and featured a single-truck (four-wheel) arrangement and a monitor-style roof.

With the rapid electrification of street railway lines throughout the 1890s, a number of new streetcars rolled into the city. As noted previously, under the control of NO&CRR in 1899, the C&CRR laid new tracks and ordered new cars designed by engineering firm Ford, Bacon & Davis. Based in New York City, the firm was hired to design improvements to the company's roadway, facilities, and streetcars. The Ford, Bacon & Davis cars were distinguished by their prominent monitor deck roof, and featured such improvements as reversible cross seats and steel side posts and carlines that gave the car's body greater solidity and strength. This model was so successful for the C&CRR that a number of other companies ordered them. Between 1896 and 1908, approximately 350 of these models arrived in New Orleans, constructed by American, St. Louis, and McGuire-Cumming companies.[96]

400, 800, and 900 Series Cars

In 1915, an entirely new car type appeared in New Orleans, one that would influence streetcar design across the country and become the standard for New Orleans streetcars through the present day. Constructed almost entirely of steel, the 400 series, arch-roof streetcars designed by Perley A. Thomas were the predecessor of the 800 and 900 series cars, which would go on to serve countless passengers in New Orleans. Constructed by the Southern Car Company of High Point, North Carolina, the fifty cars constructed in the 400 series design usually ran on the St. Charles and Tulane Belts and the Jackson Line, although they serviced almost every line in the city at some point during their lifetime from 1915 to 1948.[97]

Writing in February 1915, the *Electric Railway Journal* praised the cars as "unique" and a "radical departure" from earlier streetcars, finding them "an excellent example of the most modern developments in surface-car construction." The arch-roof, steel-body design of the 400 series double-truck streetcars proved stable, powerful, and durable. In addition to its new roof type, the car was distinguished by its nearly all-steel body, with the exception of wood used in the floor, roof, and for some interior trim. In perfecting the steel body and focusing on simplicity of form and design, the car builders produced a remarkably light-weight yet sturdy car that required less maintenance than earlier types. The 52-seat cars also featured reversible cross-seats, dropped vestibules with hinged steps, and four sets of double-folding doors, allowing for operation on either the inside or outside tracks. The *Electric Railway Journal* also took special note of the streetcars' simplified aesthetic calling it an "innovation of special importance for electric railways." The new cars eliminated what was by this

[95] Charlton and Hennick, *Streetcars of New Orleans*, 196.
[96] Ibid., 120.
[97] Guilbeau, St. Charles Streetcar, 94.

time considered "unnecessary ornamentation," and the olive green cars were instead painted only with the car number and an aluminum stripe at the dash.[98]

The next series of arch-roof, steel-body cars designed by Perley Thomas arrived in New Orleans in the 1920s under NOPSI administration. Constructed by the Perley Thomas Car Works and the J. G. Brill Company, the 800 series cars were constructed in 1922, and the 900 series in 1923 and 1924. Although taller and heavier, the 800 and 900 series cars were very similar in construction and appearance to the earlier 400 series. The 900 series cars were distinguished by the pneumatic operation of their folding entry doors. From the early 1920s through the mid-twentieth century, the cars in the 800 and 900 series served on nearly every line in New Orleans. By 1955, though, most of the 800 series and several of the 900 series had been retired and scrapped, the result of the continued decline of the railway lines at the time. When the Canal Line shut down in 1964, the last of the 800 series were either scrapped or donated to trolley museums across the country. The remaining 900 series cars were transferred to full-time use on the St. Charles Line, and thirty-five of the original streetcars continue to serve the line today.

The 1000 series was the final model of the arch-roof, steel-body car type. Though generally similar in appearance to the earlier 400, 800, and 900 series, the 1000 series sat lower and slightly wider, had no drop platforms, and ran faster than their predecessors due to a high-speed motor. Ordered in 1927 from the St. Louis and Perley A. Thomas Car Companies, the 1000 series had limited service from 1928 until 1949.[99] The 1000 series streetcars were the most modern cars run on the New Orleans street railway system, and were the most modern of what is considered a "conventional" type streetcar. All of the 1000 series were scrapped in 1949, and therefore the most modern streetcars used in New Orleans had less use than any type employed in the city.

DECLINE AND REVIVAL OF STREET RAILWAY SYSTEMS, 1920s–1990s

Decline of the Streetcar, 1920s–1960s

The overwhelming success of the nation's streetcar systems through the early part of the twentieth century created a false expectation that ridership and profits would continue to grow indefinitely. But streetcars were no more immune to changing trends and technology than the earlier transportation systems they had replaced. While ridership increased through the early twentieth century, poor management practices of streetcar lines across the country resulted in lost profits and a weak infrastructure that was ill-prepared to compete with increasingly popular automobiles and bus systems. In the 1920s, streetcar systems across the country underwent a similar experience, simultaneously recording peak patronage numbers and feeling the first real effects of the competing automobile industry. Even as streetcar patronage peaked at 15.7 billion riders in 1923, the increase in business did not translate to larger profits for companies.[100]

Although much attention is given to the influence of the automobile on the streetcar's decline, equally culpable was mismanagement on the part of the railway companies. One of the most significant issues was a rigid fare system (usually imposed by contracts with city governments) that long remained at a flat rate fare of five cents. This problem was compounded by the fact that many systems had been overextended in earlier years. Further, for years companies had allowed rolling stock and tracks to depreciate in order to provide dividends, but unfortunately the cost of steel and other replacement materials rose steeply during World War I.[101] Thus, the railway companies were poorly prepared for the increasing competition of automobiles and, more specifically,

[98] Electric Railway Journal 45 (1915): 265-273.
[99] Charlton and Hennick, *Streetcars of New Orleans*, 149-159.
[100] David L. Ames and Linda Flint McClelland. *Historic Residential Suburbs* (Washington, DC: U.S. Department of the Interior, National Park Service, National Register of Historic Places, 2002), 20.
[101] Nye, Electrifying America, 134.

buses.[102] Annual streetcar ridership decreased from 15.7 billion riders in 1923 to 8.3 billion in 1940. Similarly, in 1917 there were nearly 73,000 streetcars in service nationwide; by 1948, this number had been reduced to fewer than 18,000 cars.[103]

The issues that plagued streetcar lines across the nation did not spare New Orleans. There, the growing number of private automobile drivers prompted NOPSI to replace the former crushed-oyster-shell streets with asphalt paving. The transition occurred quickly; in 1900 the city had only twenty-five miles of paved street, and by the early 1920s, paved street exceeded the city's railway trackage for the first time.[104] In the same year that the famed 800 and 900 series Perley cars arrived in the city in 1924, NOPSI also undertook its first motor bus line. That same year, the Carondelet Line was discontinued and in 1925 three more lines were dissolved, the Ferry, Bayou St. John, and Peters Avenue. Incongruously, New Orleans' streetcar patronage reached its peak in 1926. That year, NOPSI counted twenty-six streetcar lines and five motorbus lines serving 148 million passengers. Up to 1926, street railway abandonments translated to the elimination of duplicate streetcar services, but in the following years new bus lines signified an actual decrease in streetcar service. By the end of 1927, NOPSI counted over two million fewer passengers on its transit systems.[105]

The decrease in street railway service of course equaled a corresponding decrease in the number of operators needed. Concerned about their job security, operating personnel went on strike on July 1, 1929. The personnel were not concerned with wages or hours but rather the company's ability to discharge men; they feared the effects of transition from two-man operation to solo conductors. After a month-long strike, car service was gradually restored beginning in August. The strike has been named "one of the lengthiest and most violent street railway strikes the nation has ever witnessed."[106] The strike was officially settled with an agreement reached by union vote on October 10. The agreement allowed continued two-man operation of the streetcars until 1972 when automatic fare boxes were installed.[107] While the agreement ensured the workers' job security, the strike unfortunately also deeply hurt NOPSI's public transportation services. Its 1929 revenue amounted to almost two million dollars less than the total for 1928, and forty million fewer people rode streetcars and buses compared to the previous year. Five additional street lines were also dissolved: the Coliseum, Dryades, Oak Street, St. Bernard, and Tchoupitoulas lines.[108]

As streetcar systems continued to decline, executives explored new ways to revitalize the industry. In 1929, a national organization of street railway officials formed the Electric Railway Presidents' Conference Committee (PCC). The PCC hoped that development of a modern, well-designed, and affordable streetcar could revitalize the industry. Up to this point, efforts to construct improved streetcars were generally undertaken by individual builders and companies, such as the introduction of the 1000s series car in New Orleans in the late 1920s. The PCC aimed to produce a standardized streetcar design that would be implemented industry wide.[109] Considerable attention was paid to designing a light-weight, quick car with a streamlined and modern aesthetic. Finally, in the interest of further cutting operating costs, the committee produced single-ended cars that were specifically designed to eliminate the need for a conductor or what was known as two-man operation.

While the PCC cars were undoubtedly successful in many ways, they were not capable of saving the streetcar industry as the committee had envisioned. Streetcar mileage and patronage continued to decrease in every city.

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[102] Middleton, Time of the Trolley, 1:168.
[103] Jackson, Crabgrass Frontier, 171.
[104] Fred Robertson, "The Street Railways of New Orleans: St. Charles Sesquicentennial," 5 June 1985; Streetcar vertical file, NOPL.
[105] Charlton and Hennick, *Streetcars of New Orleans*, 39.
[106] Ibid.
[107] Guilbeau, St. Charles Streetcar, 96.
[108] Charlton and Hennick, *Streetcars of New Orleans*, 39.
[109] Post, Urban Mass Transit, 92.

In New Orleans, closures continued apace through the 1930s. By 1931, railway trackage had decreased to 168 miles from 191.5 miles in 1927. The numbers continued to diminish with each passing year. By 1932, mileage totaled just fewer than 144. As with public transit services across the country, removal of trackage slowed during World War II, and the city experienced a brief, though significant, increase in ridership. Patronage increased in 1940 overall, and 73.7% of NOPSI's gross revenue from transit operations that year, totaling 58.3% of vehicle miles. The numbers peaked in 1945 when 246 million riders used the city's public transit, including streetcars and buses.[110] Unfortunately, with the end of the war came a return to the private automobile as the transportation of choice and closures of the city's streetcar lines resumed.

Closures in the late 1940s included the Magazine, Gentilly, and Desire lines in 1948, and continued through the 1950s, including the cessation of the St. Charles and Tulane Belts in 1951. With the St. Charles and Tulane Belts terminated, the St. Charles Avenue Line continued to run on St. Charles and South Carrollton Avenues up to Dixon Street. At the line's downtown end, the streetcars turned down Howard Street at Lee Circle, then turned down Carondelet Street to Canal Street, then finally returned up St. Charles Avenue. On August 10, 1952, the route up Carrollton Avenue was terminated at Claiborne Avenue and has remained unchanged since. In 1953, NOPSI had 278 miles of transit route, with motor bus mileage totaling 191, trackless-trolley totaling 48, and street railway totaling 36. With the motorization of the South Claiborne and Napoleon lines in 1953, only two streetcar lines remained: the Canal Line and the St. Charles Line.[111] When the Canal Street Line was replaced by buses on May 30, 1964, the St. Charles Line became the only surviving street railway service in New Orleans and the oldest operating street railway service in the country.

REVIVAL OF THE STREETCAR, NEW ORLEANS AND ELSEWHERE

Streetcar Preservation

By 1967, street railway remained in service in only a few American cities, including New Orleans, Boston, Philadelphia, Pittsburgh, and San Francisco. New Orleans had the country's only surviving, conventional streetcar system, while the other cities operated with PCC-type cars. Unsurprisingly, the decline of streetcar operation almost immediately produced nostalgia for the now nearly extinct transportation form. The decline of streetcar systems was characterized by increased interest in preservation of streetcar history and the rolling stock itself. By 1967, over 40 streetcar preservation organizations were formed in North America, and several trolley museums had been established.[112]

In New Orleans, interested citizens and preservationists quickly organized to protect the historic St. Charles Line, which NOPSI originally intended to shut down in 1968. In addition to protecting the line itself, many worried that motor buses would spoil the character of St. Charles Avenue, one of the city's most celebrated streets. By 1967, the city had become serious about preserving its last streetcar line, and came to an agreement with NOPSI to keep the line running indefinitely.[113] The St. Charles Line also underwent its first renovation projects in the 1960s. Beginning in 1962 and continuing through mid-1964, the St. Charles Line underwent its first streetcar renovation program. The majority of improvements focused on mechanical improvements and mitigating safety concerns. Upon the completion of restoration, all of the renovated cars were run on the St. Charles Line. Following agreements made in 1967, NOPSI undertook a second renovation of the streetcars in the late 1960s, including repainting and new lighting.

[110] Charlton and Hennick, *Streetcars of New Orleans*, 39-40.
[111] Ibid., 40-42.
[112] Middleton, *Time of the Trolley,* 1:170-171.
[113] Earl W. Hampton, Jr., *The Streetcars of New Orleans: 1964-Present* (Gretna, LA: Pelican, 2010), 24.

Other modernization changes gradually occurred as necessary, such as the installation of automatic registering fare boxes in 1970. As a conductor was no longer needed at the rear of the cars to make change, the former two-man operation was modified to a one-man operation (previously trolleys had both a conductor and a motorman). One-man trolleys commenced operation on June 4, 1972.[114]

COMPARABLE PROPERTIES

Urban streetcar ridership reached its peak popularity in the United States following World War I, in the period between electrification and the rise of the automobile. At this time, the St. Charles Line was merely one of a dozen streetcar lines in New Orleans and one of a few thousand streetcar lines in the United States. Its most distinguishing characteristic was its age. However, as late as the 1930s, the St. Charles was not even the oldest rail line in New Orleans, which it became when the Pontchartrain Railroad made its final run in 1932.[115] The Great Depression proved difficult for street railways, many of which folded in its wake. Although rubber and gas shortages during World War II—which limited automobile manufacturing and use—created a brief resurgence in popularity for streetcars, the technology was doomed to be replaced by cheaper and more flexible bus routes. One by one, city by city, streetcars gradually disappeared.

From this pattern, the St. Charles Line emerged as the nation's oldest and most intact street railway line. In 1964, it became the last street railway line in New Orleans when service on Canal Street was replaced by buses. By 1967, the St. Charles Line was the only traditional streetcar system still in operation. Certain North American cities have retained their nineteenth-century streetcar routes, including Boston, Philadelphia, Pittsburgh, and Toronto, but none have retained their traditional streetcars. Following a national trend, these four cities opted to convert their traditional fleet to PCC cars, some of which remain in operation in their original cities.[116] Most, however, have been replaced with modern light rail technology.[117] The remarkable integrity of the St. Charles Line was made possible through a unique combination of forces, including adamant and vocal local support; official recognition of its historic significance through National Register listing; and federal grant funding to restore the rails, cars, and car barn.

Today, there are a number of National Register-listed resources relating to the streetcar. Most focus on individual resources rather than entire systems, namely trolley cars or buildings significant for their association with streetcar lines, yet no longer used in service to them. A sampling of the former includes the Birney Safety Streetcar (Fort Smith, Arkansas) and the Fort Collins Municipal Railway Birney Safety Streetcar #21 (Fort Collins, Colorado). A sampling of the latter includes the Baltimore City Passenger Railway Power House and Car Barn (Baltimore, Maryland) and Carolina Power and Light Company Car Barn and Automobile Garage (Raleigh, North Carolina). In addition to the St. Charles Streetcar Line, the Como-Harriet Streetcar Line and Trolley (Minneapolis, Minnesota) is the only other intact and operational streetcar line listed in the National Register, although it experienced a seventeen-year gap in service between the line's abandonment and restoration.

Therefore, the singularity and longevity of the St. Charles Line distinguishes it from any comparable streetcar-related resources. There are two National Historic Landmarks related to public transportation systems, the Tremont Street Subway in Boston and the San Francisco Cable Cars, and each has aspects of the complexity and integrity of the St. Charles Line.

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[114] Guilbeau, St. Charles Streetcar, 97.

[115] A portion of the tracks remained until 1954.

[116] For example, a number of Boston's PCC cars, which formerly operated on the Green Line, have been restored and currently operate on the Ashmont–Mattapan High Speed Line.

[117] Middleton, *Time of the Trolley*, 1:175-177.

San Francisco Cable Cars

The San Francisco Cable Cars were designated a National Historic Landmark in 1964. The designation includes thirty-nine cars, the rails, the terminal roundtables, the cables, and car barn and repair shop. The San Francisco Cable Cars share many attributes of the St. Charles Line: both represent the only extant, operational examples of their particular technology; both are vestiges of a much larger and more comprehensive transit system; and both are recognized symbols of the culture and character of their respective city. Unlike the St. Charles system, the cable cars were implemented to serve a developed urban population, with service beginning in 1873 utilizing technology that has remained largely unchanged. Its significance is derived from its representation of the cable car system as a work of engineering and urban transit.

Tremont Street Subway

The Tremont Street Subway also became a National Historic Landmark in 1964. The contributing resources are the 2⅔ miles of original tunnels, five miles of double-wide tracks, and two sets of entrance and exit kiosks. All are representative of the subway's original period of construction, 1897–98. Like in San Francisco, the Boston subway system was implemented within a developed urban area, in this case intended to relieve traffic congestion on Boston's busy streets. The original equipment and rolling stock no longer exist; rather, the significance is based on the subway as a work of civil engineering, which formed the nucleus of Boston's now-extensive public transportation network.

The New Orleans, Boston, and San Francisco systems represent unique contributions to the story of American urban transit. Even within the context of these comparable properties, the St. Charles Line is an exceptional example of an intact streetcar route, while the line's period of significance documents its most comprehensive and intact period as an electrified urban streetcar. Enhanced by a successful restoration effort, the St. Charles Line's contributing resources exhibit outstanding integrity, and it exists today as an accurate and comprehensive representation of the golden era of American streetcar service.

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Previous documentation on file (NPS):

__ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
X Previously Listed in the National Register. NR # 73000873; listed May 23, 1973
__ Previously Determined Eligible by the National Register.
__ Designated a National Historic Landmark.
__ Recorded by Historic American Buildings Survey: #
__ Recorded by Historic American Engineering Record: #

Primary Location of Additional Data:

X State Historic Preservation Office
__ Other State Agency
__ Federal Agency
__ Local Government
__ University
__ Other (Specify Repository):

10. GEOGRAPHICAL DATA

Acreage of Property: Approximately 35 acres

UTM References:	Zone	Easting	Northing
A	15	782831	3317235
B	15	782556	3316059
C	15	776618	3315928
D	15	777878	3317354
E	15	777076	3316732

Verbal Boundary Description: The route of the streetcar begins at the intersection of St. Charles Avenue and Canal Street, at the upper border of the French Quarter. The route travels southwest along St. Charles Avenue until it meets Lee Circle. There, the path of the tracks continues counterclockwise around Lee Circle until it again meets St. Charles Avenue. From that point, the route travels along St. Charles Avenue until it meets Carrollton Avenue. The route turns northeast to follow Carrollton Avenue until it terminates at South Claiborne Avenue. This constitutes one complete Carrollton-bound trip of the St. Charles Line. Spur tracks extend northwest from Carrollton Avenue along Jeannette Street until they cross Dublin Street. Here, they curve southwest to enter the Carrollton Transit Station property. The Carrollton Transit Station is located at 8225 Willow Street, and fills the entirety of Square 180. The square is bound by Willow Street on the southwest, Dante Street on the northwest, Jeannette Street on the northeast, Dublin Street on the southeast. After passing through the transit station property, the tracks turn southeast and run along Willow Street until they again meet Carrollton Avenue. On a Canal Street-bound trip of the St. Charles Line, the route begins at South Claiborne Avenue and follows Carrollton and St. Charles Avenues along the same path until it meets Lee Circle, where it continues counterclockwise nearly one full turn until it meets Howard Avenue. The route travels along Howard Avenue briefly until it turns northeast on Carondelet Street, which the tracks follow until the route terminates at Canal Street. Along St. Charles and Carrollton Avenues between South Claiborne Avenue and Lee Circle, as well as along Canal Street, the boundaries of the landmark are fully contained within the curb line of the neutral ground median. Where the route does not have a neutral ground (Willow, Jeannette, Howard, Lee Circle, Carondelet, and St. Charles between Canal and Lee Circle), the boundaries of the landmark extend to the curb line of the street.

Boundary Justification: The boundary encompasses all extant resources that are historically related to the St. Charles Line's operation during its period of significance, 1893–1952, which includes the physical right-of-way and the Carrollton Transit Station.

11. FORM PREPARED BY

Name/Title: Bill Marzella and Kate Ritson
EHT Traceries, Inc.

Address: 1121 Fifth Street, N.W.
Washington, DC 20001

Telephone: (202) 393-1199

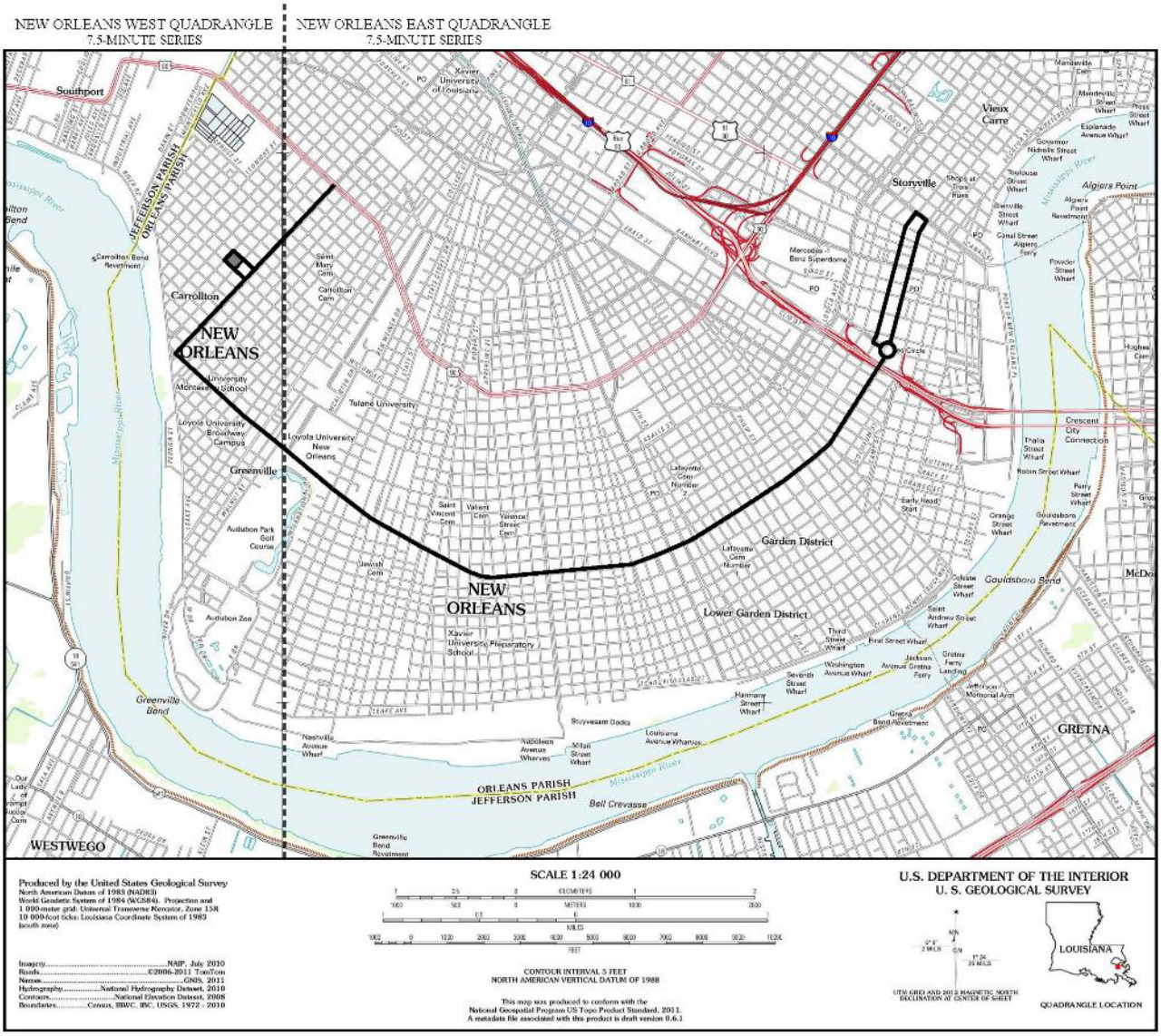
Date: July 11, 2013

Edited by: Caridad de la Vega, Historian
National Park Service
National Historic Landmarks Program
1201 Eye St., NW (2280)
Washington, DC 20005

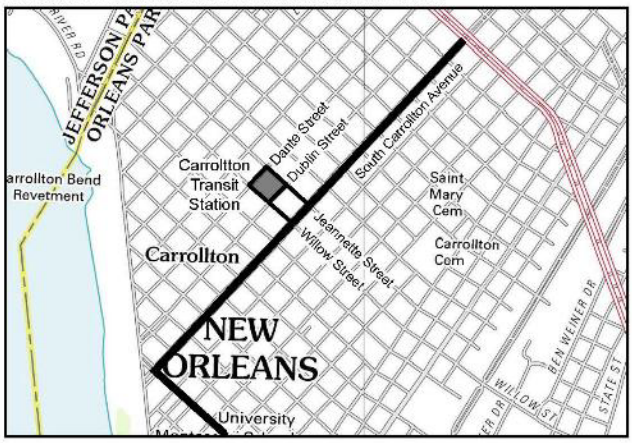
Telephone: (202) 354-2253

NATIONAL HISTORIC LANDMARK
August 25, 2014

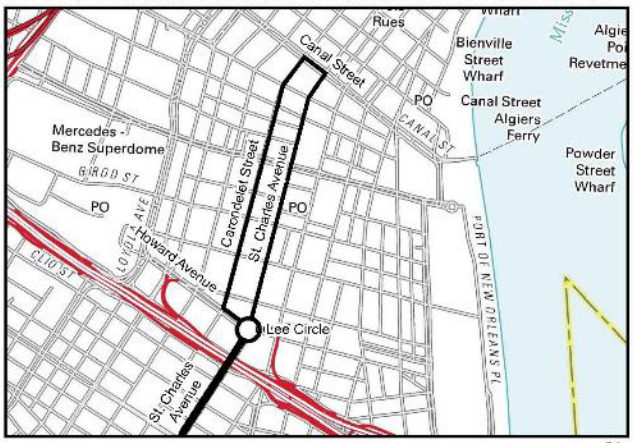
ST. CHARLES STREETCAR LINE USGS MAP



DETAIL CARROLLTON & TRANSIT STATION

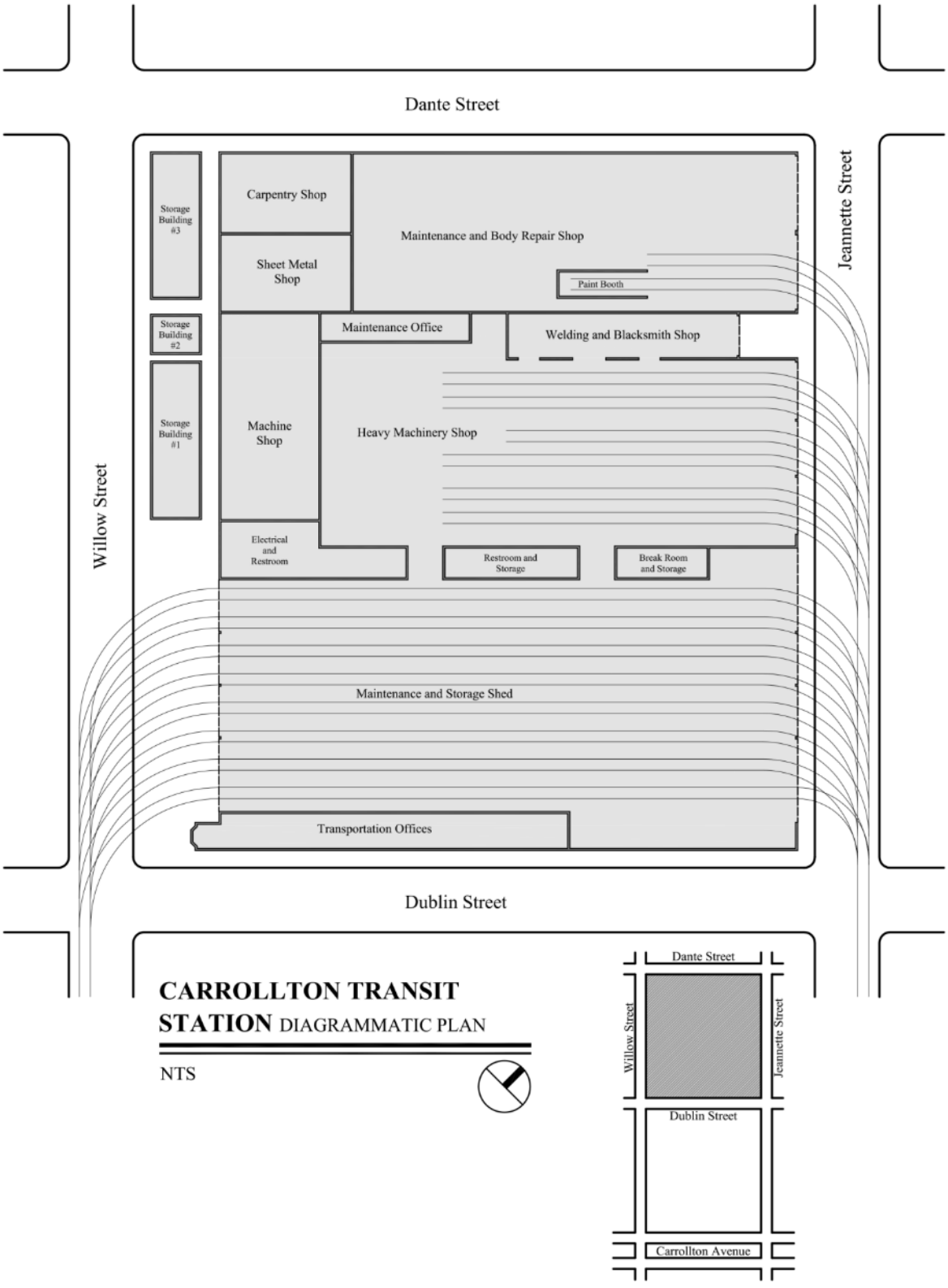


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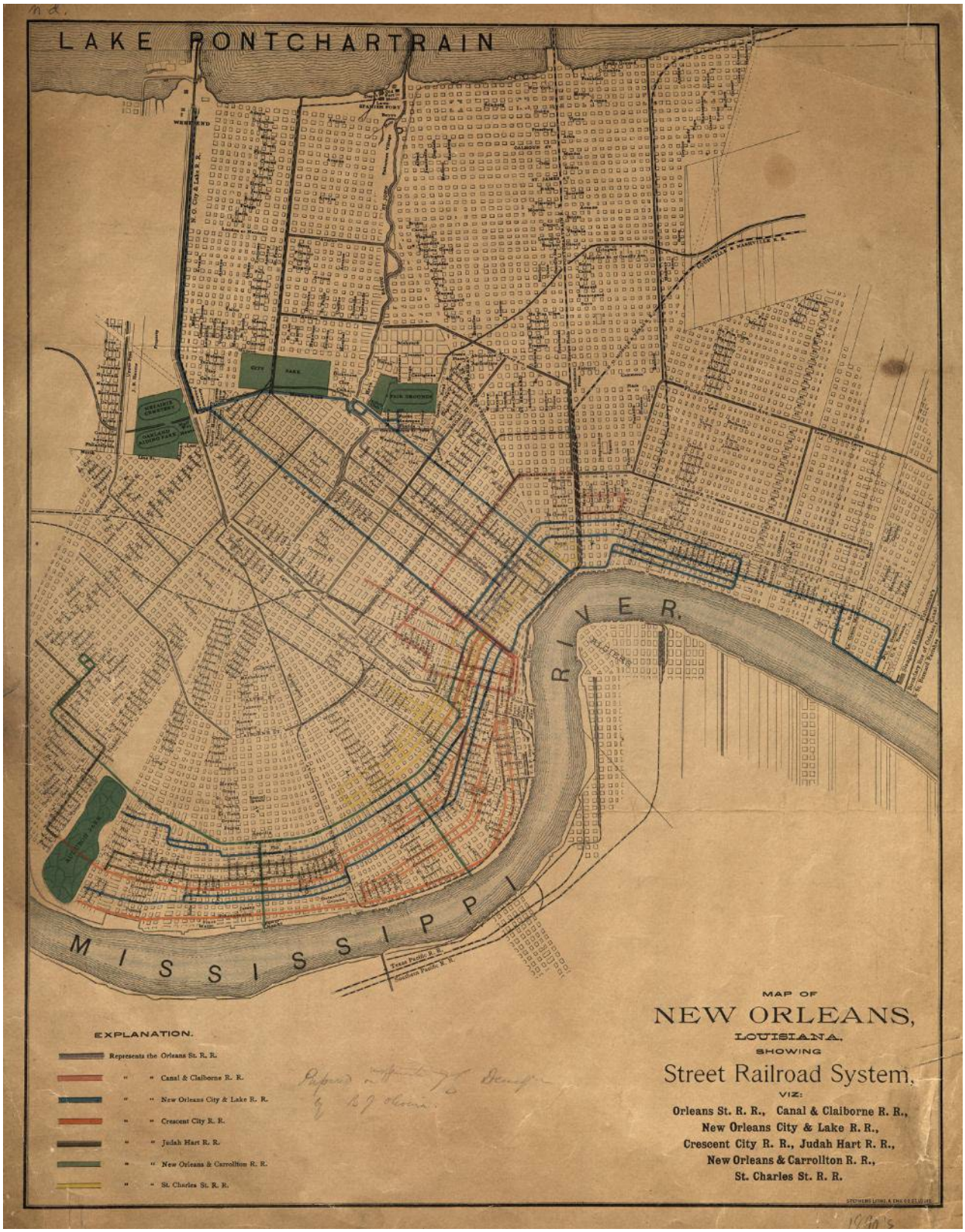


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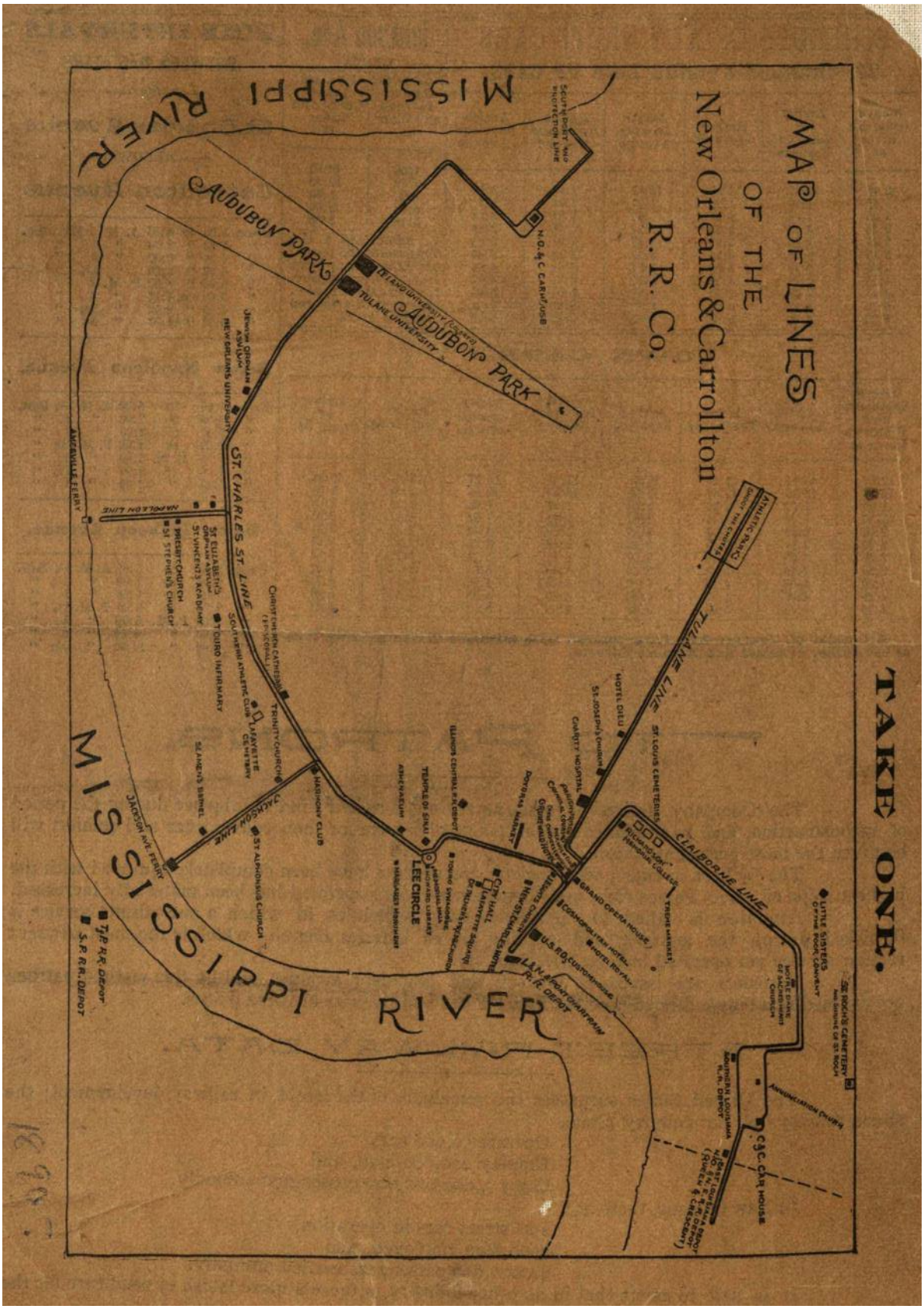
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EHT Traceries, Inc. Diagrammatic Plan of the Carrollton Transit Station, 2013



"Map of New Orleans, Louisiana, Showing Street Railroad System." Stephens Lithograph and Engraving Co., undated, circa 1890s. Louisiana Research Collection (hereafter LaRC), Tulane University.



"Map of Lines of the New Orleans & Carrollton R.R. Co.," Undated, circa 1890s. LaRC, Tulane University.



Streetcar traveling along St. Charles Avenue, opposite Lafayette Square in Central Business District, camera facing northwest. Photograph by Charles E. Leche, April 2013.



Streetcar traveling along Lee Circle, entering neutral ground at St. Charles Avenue, camera facing northeast. Photograph by Charles E. Leche, April 2013



Streetcar traveling along St. Charles Avenue in Garden District, camera facing northwest. Photograph by Charles E. Leche, April 2013.



Streetcar traveling along Carrollton Avenue. Photograph by Charles E. Leche, April 2013.



Streetcars passing along Carrollton Avenue. Photograph by Charles E. Leche, April 2013.



Streetcar interior. Photograph by Charles E. Leche, April 2013.



Streetcar interior, detail of doors and operator controls. Photograph by Charles E. Leche, April 2013.



Carrollton Transit Station, southwest (left) and southeast (right) elevations, camera facing north. Photograph by Charles E. Leche, April 2013.



Streetcar entering car barn, camera facing south. Photograph by Charles E. Leche, April 2013.



Streetcars housed in car barn, camera facing southwest. Photograph by Charles E. Leche, April 2013.



Interior of car barn with streetcars and internal roof structure. Photograph by Charles E. Leche, April 2013.



Interior of machine shop, camera facing northwest. Photograph by Charles E. Leche, April 2013.