

Richard Campanella

Urban Transformation in the Lower Ninth Ward

The Lower Ninth Ward the world came to know after Hurricane Katrina in 2005 bore neither that name nor that form for the first two centuries of its historical development. A sequence of human interventions - some gradual, some swift - since the early 1700s transformed that natural deltaic landscape into the cityscape we know today. During the era of indigenous occupation, that landscape comprised part of a gradually sloping hydrological basin bordered on the south by the ten-foot-high natural levee of the Mississippi River, and on the west and north by the slight Esplanade and Gentilly topographic ridges, rising two to four feet above sea level. Any rainfall or high river water spilling into that basin flowed eastward out Bayou Bienvenue toward Lake Borgne and the Gulf of Mexico.

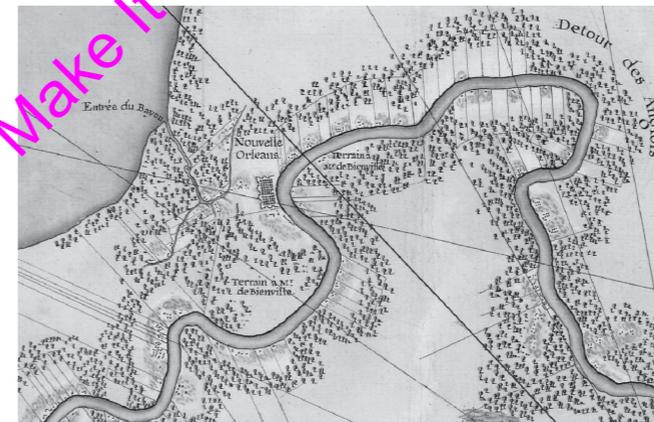
Springtime high water on the Mississippi overtopped the river's natural levees every few years. Those periodic floods did not constitute disasters; in fact, they created the entire Louisiana deltaic plain, over five to seven thousand years, by depositing layers of sand, silt, and clay at a pace faster than natural subsidence or wave action could reduce them. In this manner, the present-day Lower Ninth Ward and its deltaic environs arose from the Gulf of Mexico through periodic nourishment by sediment-laden river water. The highest lands, which lay closest to the Mississippi, declined by roughly one vertical inch for every hundred feet of distance away from the river. The lowest lands stood at or near the level of the sea, not below it. A semi-tropical climate, abundant rainfall, and rich alluvial soils allowed verdant vegetation to grow, but not all plant communities grew everywhere. Along the river arose dense bamboo-like reeds; immediately behind them grew jungle-like hardwood forests laced with vines. Farther back, at lower elevations, were palmetto-strewn cypress swamps, which petered out to grassy saline marshes where Bayou Bienvenue flowed into the sea.

"All this land is a country of reeds and brambles and very tall grass," wrote Pierre Le Moyne, sieur d'Iberville in March 1699 as the French explorer sailed up the Mississippi for the first time. About eighty miles upriver, a sharp meander challenged Iberville's expedition by positioning its ships against prevailing winds. Once past this obstacle, the Mississippi straightened out for about eight miles, then curved sharply again. Between those two meanders, on the eastern bank, lay the present-day Lower Ninth Ward, undistinguished and unnoticed by its early European visitors.



Satellite image of the New Orleans metropolitan area.

Graphic by Richard Campanella, 2008



New Orleans area around 1732. The original city, now the French Quarter, appears at center left; the English Turn meander of the Mississippi River appears at upper right. The present-day Lower Ninth Ward occupies the riverside land in the upper center of this image.

Source: Library of Congress, Washington.

Over the next two decades, Iberville, and later his younger brother Bienville, would establish a French colonial society throughout the region, culminating with the foundation of New Orleans in 1718. Bienville located his settlement (present-day French Quarter) on the natural levee at the cusp of that second meander, exploiting a portage route which allowed for faster and safer access to the Gulf Coast.

As New Orleans grew in the 1720s to a population of five hundred to one thousand people, fertile lands above and below the city were surveyed into French "long lot" plantations. Their elongated shape ensured that every plantation would garner a share of the most arable land, while gaining access to the Mississippi for transportation purposes. On a typical Louisiana plantation, the manor house occupied the crest of the natural levee near the river; behind it were dependencies, workshops, sheds, and slave cabins, followed by croplands and backswamp. Planters raised tobacco, indigo, rice, plus grains and vegetables, using the labor of enslaved Africans first brought to Louisiana in 1719. Maps from around 1730 indicate that such plantations had already been

established around the present-day Lower Ninth Ward, their forests probably cleared by recently arrived slaves. Reported Governor Périer in 1728, “[slaves] are being employed to cut down the trees at the two ends of the town as far as Bayou St. John in order to clear this ground and to give air to the city and to the mill.”

Colonial-era New Orleans struggled throughout the eighteenth century with sparse population, disease, disaster, and low prioritization under French and Spanish dominion. Then, a sequence of events around the turn of the nineteenth century reversed the city’s fortunes. First, a slave insurgency in Ste. Domingue (present-day Haiti), which began in 1791 and eventually expelled the French regime, diminished Napoleon’s interest in the seemingly unpromising Louisiana colony, and eventually motivated him to sell it to the United States in 1803. Concurrently, the cotton gin (1793) and the successful granulation of Louisiana sugar cane (1795) facilitated the rapid expansion of lucrative cotton and sugarcane production in the hinterland, both of which would profit New Orleans enormously. Finally, the introduction of the steamboat to Mississippi River commerce starting in 1812 allowed the new American city to exploit fully its strategic position in world shipping. Within two decades (1790s-1800s), New Orleans blossomed from an orphaned outpost of two descendent Old World powers, into a strategically sited port city of an ascendant, business-oriented, expanding New World nation. Prominent observers regularly predicted New Orleans would become the most affluent and important city in the hemisphere.

In 1805, the new American administrators incorporated New Orleans as a municipal entity, legally establishing its government, duties, privileges, and boundaries. Shortly thereafter, the city’s lower limit became fixed roughly three miles downriver from the present-day French Quarter, an area within which lies the present-day Lower Ninth Ward. Designating those rural outskirts as being within New Orleans (Orleans Parish) limits would, in time, affect their use, population, and destiny. Features and phenomena that (1) people did not want to be located in the heart of the city, (2) could not be located above the city because it would pollute the water source, but (3) nevertheless had to be located within the city’s limits, often ended up in the city’s lowermost corner. This would become a familiar theme for the future Lower Ninth Ward: first on the list for urban nuisances, last in line for amenities.

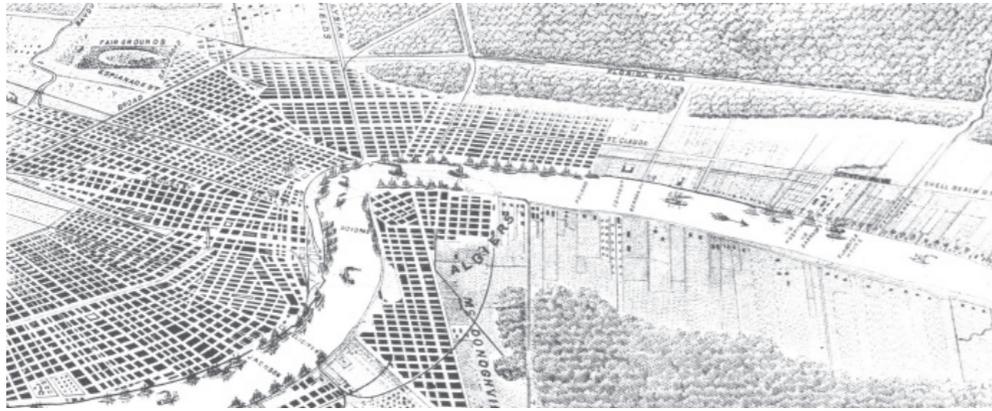
Being the farthest-downriver corner of New Orleans also meant being the first that ships would encounter while heading upriver. For this and other reasons, the U.S. Government established New Orleans Barracks near the parish line in 1835. Now known as Jackson Barracks, home of the Louisiana National Guard, the installation served as the premier embarkation point for military operations throughout the region. It also represented the first designed development within the future Lower Ninth Ward.

As New Orleans Barracks was under construction, its upriver neighbors included fifteen plantations or other land holdings principally dedicated to the cultivation and processing of sugar cane. Modern-day street names recall this now-extinct agrarian landscape: “Sister Street” once lined the convent and land holding of the Ursuline Nuns (where the Industrial Canal now lies), while nearby Deslonde, Reynes, Forstall, Caffin, and Delery streets all commemorate plantation owners from the 1830s. Flood Street was named not for the natural disaster but for another plantation owner, Dr. William Flood, who played an important role in the Battle of New Orleans in 1815.

With the rapid agricultural development of the Mississippi Valley and only one way to deliver those commodities to market effectively—by shipping down the Mississippi—New Orleans’ economy boomed. So too did its population, which more than doubled between the Louisiana Purchase (1803) and 1810, and nearly doubled decennially until 1840, when New Orleans counted 102,193 residents and ranked as the third-largest city in the nation. It was also the South’s largest city and its premier immigration destination, home to arguably the most ethnically, racially, linguistically, and culturally diverse population in the nation. Thousands of English-speaking, mostly Protestant Anglo-Americans had emigrated to the opportunity-rich port city after the Louisiana Purchase, where they encountered thousands of French-speaking Catholic Creoles who seemed to view nearly everything—government, law, religion, race, architecture—differently. People of African descent, both free and enslaved, as well as tens of thousands of immigrants from Ireland, Germany, France, Haiti, Cuba, Mexico, Italy, Greece, and nearly every other nation, made antebellum New Orleans like no other American city.

New Orleans’ urban footprint expanded accordingly, as former “long lot” sugar plantations were subdivided as faubourgs (suburbs) and built up with new homes. Because the wealthier Anglo population tended to settle above the original city (present-day uptown), where the natural levee was wider and the river flowed free of inner-city refuse, New Orleans spread predominantly in an upriver direction, by a two-to-one ratio over downriver development. It expanded only slightly away from the river, where low-lying swamplands prevented most urban development.

The downriver expansion that did occur began in 1805 with the surveying of Faubourg Marigny, and continued into the 1810s-1840s with the subdivision of plantations comprising the present-day neighborhood of Bywater. The population that settled here tended to be markedly poorer than that of the upper city, mostly comprising Creoles, Irish and German immigrants, and representatives of smaller groups from southern Europe and Latin America. Officially, the area was designated as the Third Municipality. To some, it was nicknamed “the Creole faubourgs;” to others, it was the



This circa-1885 bird's eye perspective shows the semi-rural state of lower New Orleans in the late nineteenth century. At this time, the area formed a low-density village, only recently emerged from an agrarian state.

Detail, "Perspective of New Orleans and Environs," 1885, courtesy Louisiana Collection of the University of New Orleans.

"old Third," the "dirty Third," the "poor Third," and only occasionally, and ironically, the "glorious Third." After 1852, the lower regions of New Orleans gained a new nomenclature: wards.

Wards as a political-geographical unit date to the 1805 chartering of the city. Serving as voting districts, census units, and other municipal purposes, wards were delineated and redrawn four times over the next forty-seven years. After the city's unsuccessful sixteen-year experiment with semi-autonomous municipalities, the reunified city government (1852) redrew ward lines for a fifth time. Because Felicity Street had, for many years, marked New Orleans' upper boundary, the new ward enumeration began at Felicity (First Ward) and continued consecutively downriver. To equalize populations within wards, the high-density French Quarter was sliced into the narrowest wards (Fourth, Fifth, and Sixth), while the lower-density "Creole faubourgs" allowed for broader units. The lowermost outskirts remained so rural that a single mega-ward - the Ninth - enveloped the entire area. Hence the birth of the Ninth Ward. City planners then "swung around" above Felicity Street and demarcated upriver lands, and later Algiers on the West Bank, as wards ten through seventeen. The modern-day map of New Orleans wards, unchanged since the 1880s, thus reflects the city's piecemeal growth since 1852.

Urbanization first arrived to the present-day Lower Ninth Ward around 1840. While the Charles Zimpel map of 1834 indicates a solid line of plantations from the Ursulines' parcel to the U.S. Barracks, the Maurice Harrison map of 1845 shows roughly one-third of that area subdivided into vacant streets and blocks. As each planter decided he could

make more money subdividing his plantation than cultivating it, more and more croplands became platted with urban grids. Names for old streets running parallel to the river (Chartres, Royal, Dauphine, etc.) were extended from the original city downriver to the U.S. Barracks, while new river-perpendicular streets often adopted the names of their antecedent plantations. Thus, the geometry of the old French long-lot surveying system drove the urban form of the emerging neighborhood.

Historical population figures for what is now the Lower Ninth Ward are difficult to ascertain because nineteenth-century censuses aggregated populations by wards, not at sub-ward levels. The vast majority of Ninth Ward residents clustered not in the present-day Lower Ninth Ward but at the upriver end of the ward, in what is now called Bywater by the river. We do know that enough residents lived in the present-day Lower Ninth to warrant the establishment of St. Maurice Catholic Church in 1857. Fourteen years later, the Brothers of the Holy Cross established an orphanage which would later become the Holy Cross Catholic High School campus. Horse-drawn streetcar service arrived to the area in 1872, which brought more residents to the once-rural district. By the time the 1883 Robinson map was published, the area had been subdivided at least as far north as Urquhart Street, just one block beyond the aptly named Marais ("marsh") Street. Roughly two-thirds of those blocks (present-day Holy Cross section of the Lower Ninth Ward) were further subdivided into parcels, and of those, approximately half had homes. The neighborhood in the late nineteenth century formed a low-density dispersion of cottages and frame houses, usually with fenced gardens, arranged in a village-like setting amid open fields and an occasional West Indian-style plantation home left over from the antebellum era. Also there were railroads, a cotton press, a military hospital, warehouses, and a livestock landing and slaughterhouse - an enormous malodorous operation enabled by a controversial 1873 U.S. Supreme Court decision approving the consolidation of the city's stockyards and slaughtering facilities. It comes as no surprise that this urban nuisance got located downriver from the city proper but within city limits - that is, in the lowermost corner of the Ninth Ward. With it came railroads, soap makers, rendering plants, and related operations. They provided working-class jobs, but also drove down property values. So too did the American Sugar Refining Company, which built a fourteen-story industrial sugar-refining plant (complete with its own docking and railroad facilities) across the parish line in 1909-12. The year 1912 also saw the realignment and augmentation of the Mississippi River levee in the area, improving flood protection for the increasing number of working-class families moving into the neighborhood.

The single most influential transformation of the Ninth Ward's environment occurred in the late 1910s. Competition among ports motivated city leaders in that era to



The Inner Harbor Navigation Canal ("Industrial Canal," excavated 1918-1923) severed the Ninth Ward into "upper" and "lower" portions, and was later enjoined by the Intracoastal Waterway (visible at center right) and Mississippi River-Gulf Outlet Canal.

Sources: Circa-1950s photo courtesy Army Corps of Engineers-New Orleans District

advocate streamlining navigation routes and creating new dock space off the crowded riverfront. The vision soon evolved into the "Inner Harbor Navigation Canal." Officials in 1918 identified the corridor for the so-called "Industrial Canal:" a five-mile-long, six-hundred-foot-wide, mostly undeveloped right-of-way splitting the Ninth Ward in two. From the city's perspective, the proposed route made the most sense: it lay within city limits, crossed a relatively narrow land strip between river and lake, exploited a convenient position for shipping and docking activity, and was either city-owned or readily acquirable. From the Ninth Ward's perspective, the canal represented job opportunities—but also a major disruption, a barrier, and a potential threat that would have been resisted fiercely by citizens had it been proposed for the heart of the city.

Excavation took a little over a year; construction of the intricate lock system, to handle the differing water levels of the river and lake, took another three years. When the Industrial Canal opened in 1923, it succeeded in enhancing port activity in the area. It also severed the lowermost portion of the city from the urban core, inspiring the term Lower Ninth Ward. From now on, residents of this isolated neighborhood (who mostly relied on a single streetcar line for transportation into the city center) would have to dodge drawbridges and railroad crossings to interact with the rest of their city. More ominously, the Industrial Canal introduced gulf water into city limits, held back only by flimsy floodwalls and inadequate levees. Worse yet, the installation of the municipal drainage system around the turn of the twentieth century - and a few decades later to the Lower Ninth Ward - drained the back swamp and allowed its finely textured sediment particles to settle and subside. Soon, former swamp and marshlands throughout

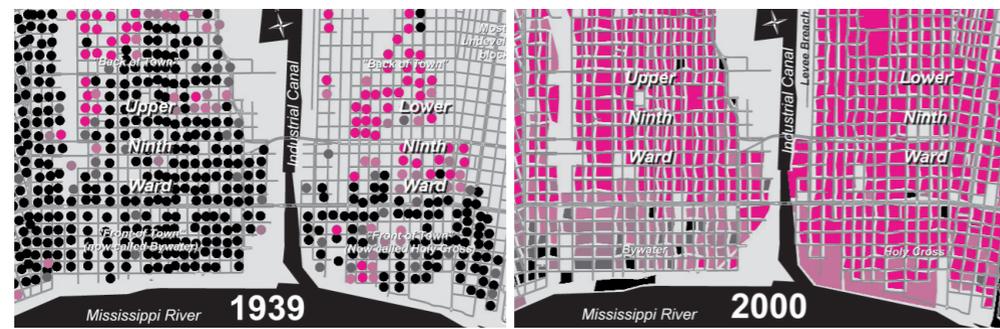


Three centuries of urban transformation in the Lower Ninth Ward

Map by Richard Campanella

the city began to subside below sea level, even as their populations increased. Artificial levees were built along the periphery to keep water out. The topography of New Orleans began to assume the shape of a bowl - or rather, a series of bowls, one of which comprised the Lower Ninth Ward.

The human geography of the Lower Ninth Ward in the early twentieth century iterated the area's topography. The 5,500 New Orleanians who resided there in 1910 (1.6 percent of the city's total population) shared certain traits: most ranked no higher economically than the working- or lower-middle class, and nearly all were born and raised locally. Those settling on higher ground closer to the river, in the so-called "front of town," were predominantly white, usually of Irish, German, Sicilian, French, Creole, or Latino stock, who in previous generations lived in the "Poor Third" or in the French Quarter. Those who settled in the "back of town" (north of St. Claude Avenue and later Claiborne Avenue, an area that remained largely undeveloped into the 1920s-1930s) were mostly African-American and either poor or working-class. Some were black Creoles (Franco-African-Americans) with generations of heritage in the city; others had emigrated from rural areas after emancipation, or later, following the mechanization of Southern agriculture. Immediately behind the back-of-town blocks lay the city's sewage treatment plant - yet another municipal disamenity which had to be located downriver from the city proper (and its water source), but had to remain within city limits. Behind the treatment plant, another navigation canal - the Intracoastal Waterway - was excavated in the 1930s and 1940s to facilitate east-to-west barge traffic. By World War II, the 11,556 residents of the Lower Ninth Ward, long severed from the other 97.7



Radical Distribution in the Upper and Lower Ninth Wards, 1939-2000

Percent African-American Per Block



This pair of maps shows the changing racial geography of the Upper and Lower Ninth wards from 1939 to 2000. Most whites moved into neighboring St. Bernard Parish during the 1960s-1970s.

Map by Richard Campanella based on 1941 WPA Land Use Survey and 2000 Census

percent of the city's population by the Industrial Canal, were now surrounded on three sides by water bodies, even as their underlying soils subsided.

The 1960s brought more tumultuous transformations. Resistance to school integration - which was fierce within the working-class white Ninth Ward population - and other factors led to the wholesale departure of whites downriver into the neighboring suburban parish of St. Bernard. Once racially mixed with a predominantly white front-of-town and black back-of-town, the Lower Ninth Ward became increasingly African-American. At the same time, excavation commenced on a third major navigation canal: the Mississippi River-Gulf Outlet (MR-GO) Canal, designed to connect the earlier manmade waterways directly with open gulf water. Its excavation entailed the widening of the Intracoastal Waterway and the turning basin at the Industrial Canal junction. Like the earlier waterways, the MR-GO promised jobs and economic dividends, in actuality, it delivered little more than environmental degradation and urban hazard. This was demonstrated when Hurricane Betsy struck in September 1965, its surge inundating the four major hydrological sub-basins straddling each side of the manmade navigation canals. Hardest hit of all was the Lower Ninth Ward. A series of Industrial Canal levee breaches along the Southern Railroad tracks, coupled with overtopping, deluged the poor, mostly black rear section of the neighborhood by three to five feet along St. Claude Avenue, and to nine feet along the back levee. Only the streets closest to the Mississippi River - present-day Holy Cross - evaded Betsy's deluge. Severe flooding damaged or destroyed thousands of homes and hundreds of businesses throughout the Lower Ninth Ward.

The next thirty-five years saw the Lower Ninth Ward's population decline from its 1960 peak of over 33,000 (five percent of the city's population) to under 19,500 (four percent) by century's end. Once racially mixed, the neighborhood in 2000 was over 95 percent black. By no means was the Lower Ninth Ward the poorest or lowest-lying neighborhood of the city. It actually boasted a higher home-ownership rate than the city as a whole, and its lowest-lying areas (four feet below sea level) lay three to four feet above the lowest zones of Lakeview and Gentilly, and eight feet higher than the lowest spots in New Orleans East. Its riverside section (Holy Cross National Historic Register District) stood six to eight feet above sea level, and boasted sturdy, raised, historically significant homes mostly dating to the 1870s-1920s. Its rear section, particularly the blocks lakeside of Claiborne Avenue, possessed a humbler housing stock dating mostly from the 1920s-1970s, many of which were built on concrete slabs at grade level. Isolated from public view, dismissed by the historical and architectural community, and plagued by the same social ills found throughout inner-city America, the rear sections of the Lower Ninth Ward seemed like a world unto itself - cherished by its residents, avoided by everyone else.

At 5:00AM August 29, 2005, Hurricane Katrina's low pressure and residual Category-Five storm surge penetrated the MR-GO/Intracoastal Waterway "funnel," overtopped meager levees, and introduced gulf water immediately behind the Lower Ninth Ward and St. Bernard Parish. Water stage rose dangerously in the Industrial Canal to fourteen feet above normal levels. Around 7:45AM, a massive section of floodwall collapsed and sent a violent torrent of brackish water eastward into Lower Ninth Ward homes. Shortly thereafter, the surge overtopped the rear levee and inundated the neighborhood from the north. More water surged westward from St. Bernard Parish. Flood levels rose by ten feet in twenty minutes. Scores of people, who either could not or would not evacuate, perished in their own homes under harrowing circumstances. Others climbed to attics or rooftops, even as their houses bobbed and drifted. Bloated gulf waters would continue to pour into the Lower Ninth Ward and every other hydrological sub-basin on the East Bank of Orleans Parish for days after the passage of Hurricane Katrina. By week's end, water levels stabilized at three to four feet deep in the highest areas of the Lower Ninth Ward, and ten to twelve feet or deeper in the lowest sections. For all the social tensions that existed between the Lower Ninth Ward and St. Bernard Parish, the two areas suffered sadly similar fates.

The federal levee failures induced by Hurricane Katrina and a century of environmental deterioration altered utterly the destiny of the Lower Ninth Ward. The neighborhood ranked unquestionably as the hardest-hit of the entire metropolis, and, not surprisingly, was the last to see utilities, municipal services, and residents return. Two

years after the storm, roughly one-quarter of the Holy Cross-area population and under ten percent of the north-of-Claiborne section had returned, the two lowest return rates in the city.

The Katrina flood also brought great notoriety to the Lower Ninth Ward, rocketing it from local obscurity to worldwide infamy as the most beleaguered urban neighborhood in world's wealthiest nation. With the infamy came sympathy and concern, which in turn brought legions of advocates, researchers, church groups, student volunteers, documentary filmmakers, politicians, and the just-plain-curious to the once-ignored neighborhood. With its odd and ominous name, the Lower Ninth Ward seemed to bear witness and impart wisdom on a wide range of complicated and polemical topics. Poverty. Race. Social justice. Environmental deterioration. Geographical risk. Global warming. Urban and cultural sustainability. Green architecture. Decent citizens nationwide fell into two schools of thought regarding the Lower Ninth Ward's future. Some viewed the entire region as equally at-risk and dependent on levees for flood protection, and interpreted the closing-down of heavily damaged, low-lying neighborhoods as an outrageous cultural affront that should be resisted on humanistic and economic grounds. They pointed to the Netherlands as a model for how to solve this problem. Others, who could not deny the scientific realities of soil subsidence, coastal erosion, and sea level rise, encouraged the densification of higher-elevation historical districts and the relinquishing of hazardous areas to nature. This school viewed massive Netherlands-style floodwalls as dangerously deleterious to coastal wetlands, which would further increase urban risk. To the outside world taking sides in the debate, the Lower Ninth Ward became a flashpoint, a symbol, a metaphor. To the inside world of its residents, however, the Lower Ninth Ward represented very different things. Family. Friends. Schools and churches. Heritage and legacy. Home.

The Make It Right Foundation's efforts stand at the nexus of these conflicting visions. No one vision is categorically false or improper; each one represents parallel truths and values, projected upon an unknowable future. This much is certain: whatever progress the Foundation makes will influence the future transformation of the Lower Ninth Ward.

Carrie Bernhard

New Orleans Urban Structure & Housing Typology

New Orleans is unlike any other American city. Not only has it retained much of its 19th century building stock, it has formed a domestic architecture that is unique to the city and its particular combination of climate, site and history. Urban house types, such as townhouses, courtyard houses and cottages, were imported as the building traditions of the various cultures that settled in the city. These were then adapted to local conditions of site and climate in addition to the cultural exigencies of the time. Eventually the Creole Townhouse, the Creole Cottage and the Shotgun emerged as the ubiquitous house types of New Orleans. The simplicity of these houses, in form and organization, allowed for easy replication and the potential for multiple variations.

Today, the uniformity of these formal and organizational principles from one variation to the next maintains a legible and continuous order while the profusion of manifold variations generates the richness and complexity of New Orleans' urban landscape. The proliferation of these house types, in all their variations, is what comprises New Orleans' unique architectural identity. They stand as the datum against which variations of scale, vintage and economies are juxtaposed. A contemporary skyscraper might stand next to a four-story 19th century urban block building, a lone ranch house from the 1970s might reside among a block of shotguns from the 1890s, and a three-block pocket of decaying buildings might flank a three-block pocket of affluence.

Despite these anomalies, or perhaps in addition to them, New Orleans has maintained a singular urban and architectural identity due to the abundance of its unique, historical housing stock. Following the events of Hurricane Katrina, however, many of these buildings suffered severe damage. While some can be saved and renovated, many are too devastated to survive, particularly in poorer neighborhoods throughout the city where high concentrations of deteriorating properties and vacant lots were serious issues even before the storm. As a consequence, the urban fabric is becoming increasingly perforated and as large numbers of new housing begin to fill these voids, New Orleans' architectural identity is becoming increasingly diluted. It is critical now to examine and understand the city's historical domestic architecture not in order to build facsimiles, as is the tendency, but in order to achieve the efficacy of New Orleans

excerpted from "Architecture in Times of Need," Make It Right Foundation, 2009