

The Industrial Canal at 100

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Hardly anyone living today remembers New Orleans before the Industrial Canal, and the rest of us have grown accustomed to seeing its wharves and waters amid our cityscape. So it may take some empathy to appreciate just how radical a river-to-lake waterway seemed 100 years ago, when work began on the project.

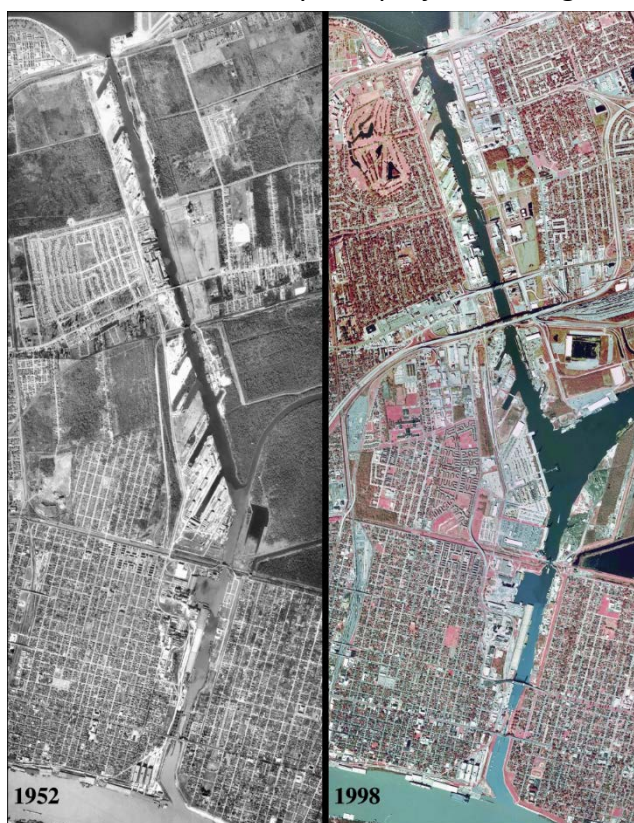
Physically, the excavation literally cut the city in half, while also detaching the entire lower East Bank from the deltaic plain. Economically, it realized an idea as old as the city itself, and has since become both asset and liability to the modern metropolis.

French colonials sited New Orleans for its accessibility to both Lake Pontchartrain and the Mississippi River, so it behooved them to connect the two waterbodies. As early as 1718, authorities suggested such a linkage to the colony's engineer, and in March 1721, the envisioned canal appeared on the *Plan de la Ville de la Nouvelle Orleans*. Fortunately, the project never got off the ground: the 1721 map betrayed a dangerous naiveté regarding how the river, whose height may rise to 20 feet, would interact with a sea-level bay. Engineers might have lost control of the current, and the Mississippi River might have lunged into Lake Pontchartrain.

Yet the economic rationale for the waterway would only intensify, as the growing city needed resources from across the lake, including timber, tar, pitch, clay for bricks, game, finfish and shellfish, not to mention access to Biloxi, Mobile and beyond.

Spanish Governor Hector Carondelet improved the connection in 1794, when he had excavated a channel between the rear of the city and Bayou St. John. It was called the Carondelet Canal, and its inland port gave Basin Street its name. (Today, the filled-in canal is the Lafitte Greenway.)

The idea gained momentum in 1807, when an Act of Congress set aside a 60-foot right-of-way within a soon-to-be-surveyed boulevard, so that



Aerial views of Industrial Canal in 1952 and 1998, by Richard Campanella

it might be dug out to unite the Carondelet Canal with the Mississippi. But engineers recognized that a lock would be needed to reconcile the differing water levels, for which neither the technology nor the financing were available. The project died, but the name lives on in today's Canal Street.

The idea resuscitated in 1827, when a *Report on a Canal Destined to Connect the Mississippi with Lake Pontchartrain* proposed to extend the Marigny Canal down present-day Elysian Fields Avenue. But that path was instead used by the Pontchartrain Railroad (1831), whose success further evidenced that river-lake access would indeed be lucrative.

Investors uptown reacted with a connection of their own. Dug during 1832-1838, the New Basin Canal also had an inland port, around Julia Street at present-day Loyola Avenue, nearly a mile from the Mississippi.

Neighboring parishes, meanwhile, pursued similar opportunities. A connection of sorts was finally achieved during 1886 to 1904, when Bayou Dupre was widened into the Lake Borgne Canal (today's Violet Canal) to link the Mississippi and Lake Borgne in St. Bernard Parish.

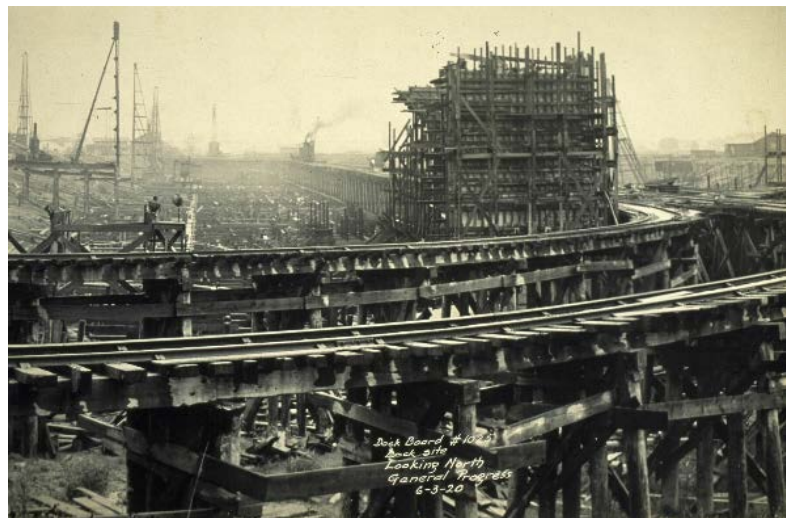
Officials in New Orleans eyed that project warily, especially after the 1896 transfer of port management from city control to the newly formed state agency called the Port of New Orleans. Its Board of Commissioners, known as the Dock Board, saw their regional and national competitors stridently improving their facilities to attract more dues-paying vessels and lease-holding shipping firms. The challenge for the Port of New Orleans was the varying stages of the shoal-prone river, and relatedly, its disassociation from the stable, clear waters of the lake. There were also complex legal servitudes along the publically owned riverfront which limited leasing opportunities.

The proposed solution was as simple as it was radical: excavate a deep-draft navigation channel—an “inner harbor”—with a lock to stabilize water levels, creating mile after mile of wide-open, adaptable and easily leasable wharf space.

Nearly 200 years after its original conception, the river-lake connection finally moved forward.

State authorization for the Inner Harbor Navigation Canal, nicknamed the “Industrial Canal”

even before it was built, came in July 1914. Next step was route selection: the corridor had to be

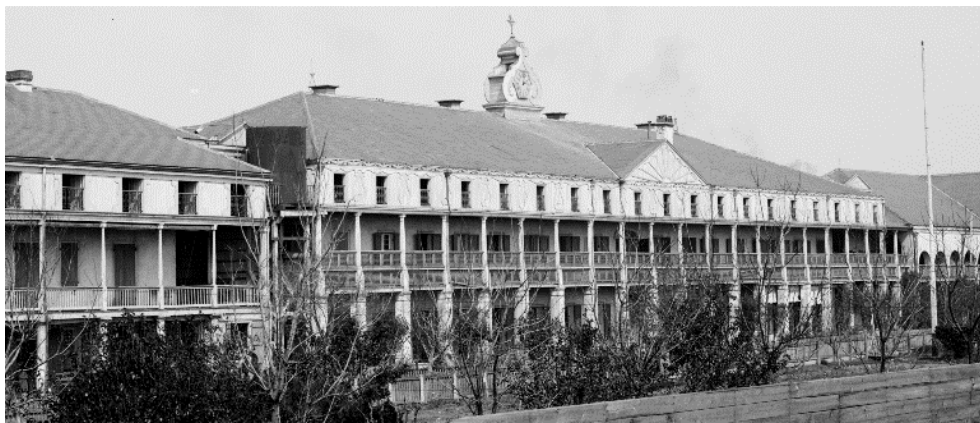


Lock of the Industrial Canal under construction, June 3, 1920, courtesy Port of New Orleans

within Orleans Parish, convenient to shipping, and as short and undeveloped as possible, to minimize land-acquisition costs.

Eyes gravitated to the vast Ninth Ward, the least-populated part of the city, and specifically to the Ursulines Nuns' land between Kentucky and Sister streets. Their circa-1824 compound had already been partially expropriated for levee realignment in 1912, at which point the sisters moved to South Claiborne Avenue where they remain today.

The Ursulines agreed to relinquish what remained of their holding, the orientation of which established a north-northeasterly trajectory for the planned canal. Once that path got beyond subdivided areas, engineers dog-legged the route to reduce overall length through the backswamp. The final right-of-way measured 5.3 miles long and up to 1600 feet in width, along which properties were expropriated, land owners compensated, houses razed or relocated, and train tracks rerouted.



Third Ursuline Convent, built in 1824 and seen above shortly before 1912 demolition. Its site (below) is now the mouth of the Industrial Canal. Courtesy Library of Congress; graphic by Richard Campanella.



With the renowned George W. Goethals Company as consulting engineers, ground was broken on June 6, 1918. Boring in directly from the Mississippi River proved too risky, so dredges had to enter via the lake or Bayou Bienvenue to scour the muck. Waterlogged soils had to be restrained from back-sliding into the pit, and ancient cypress logs would jam suction dredges and delay work. The recently installed municipal drainage system at Florida Avenue had to be siphoned beneath the canal bed through what journalists called an “underground river.” The whole undertaking was enormous.

To make matters more complex, the Dock Board decided to double the canal’s capacity to a width of 300 feet across at the top, 150 feet across the bottom, and 30 feet in depth. With labor gangs, mechanized excavators, pile drivers, dredges and dynamite, the largest single infrastructure project in New Orleans history progressed steadily over the next fifteen months. After the channel was completed in September 1919, attention turned to the lock.

Located 2000 feet in from the river, the five-gate motorized lock would be among the largest in the nation, built upon soils far less stable than typically encountered. Fifty feet deep and 640 feet long, the lock had one aspect that would later prove a vexing limitation: at only 74 feet wide, it would eventually form a bottleneck for barge traffic. Plans for its enlargement would be debated for decades, to this day. But at the time, the lock was an engineering marvel.

Work concluded on January 29, 1923, and eight days later, the fire tug *Samson* carried Governor John M. Parker and guests through the lock to inaugurate navigation. At the May 5, 1923, dedication ceremony, Parker declared that the Inner Harbor Navigation Canal would “equip New Orleans to be, in the broadest sense, the gateway of the Mississippi Valley.”

The six-block-long Galvez Street Wharf was added in 1924, followed by the Florida Avenue Wharf in 1942, by which time the Gulf Intracoastal Waterway was joined with the Industrial Canal for domestic barge traffic to move between Texas to Florida.

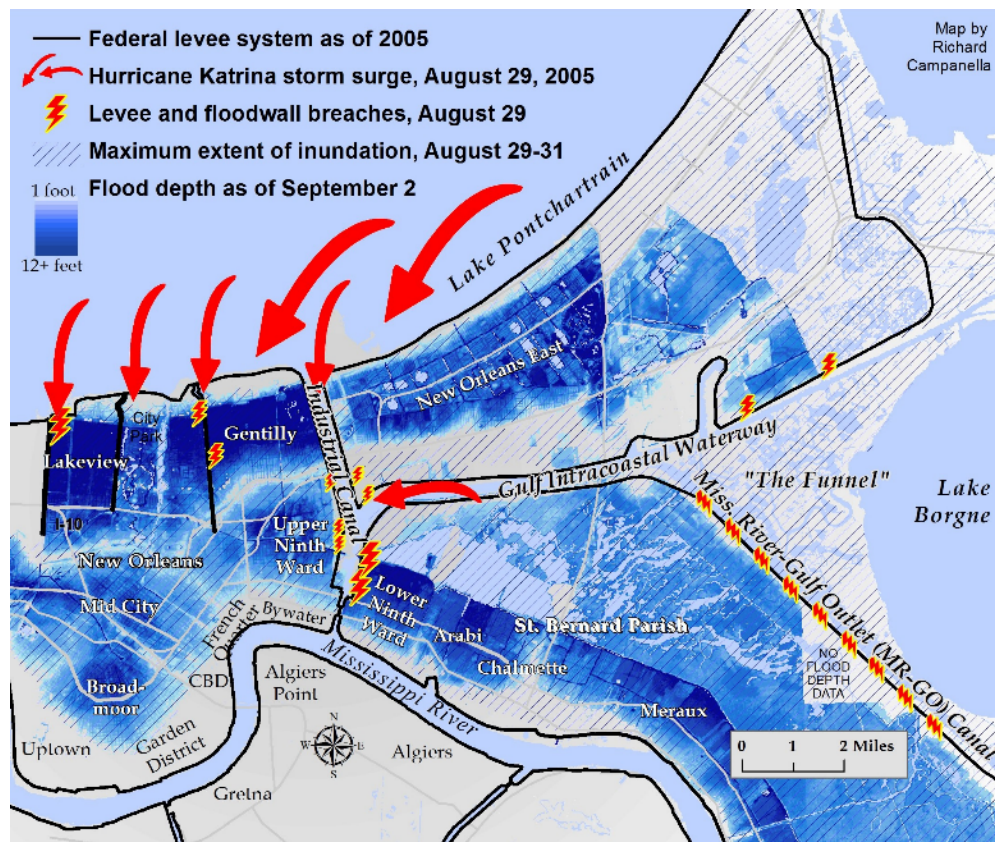


Lake entrance to Industrial Canal, at Seabrook, 1953-photo by NOPSI from Richard Campanella-personal collection

All the economic activity produced thousands of jobs and generated revenue for the city and state, while keeping the port competitive. With New Orleans' population surpassing 627,000 in 1960, the spirit of the times called for ever-more improvements; in subsequent years, the Industrial Canal and Intracoastal Waterway were adjoined by the excavation of a seaway for ocean-going vessels known as the Mississippi River-Gulf Outlet Canal.

The MR-GO was the lynchpin of a Promethean plan to relocate maritime activity off the Mississippi River to a new intermodal, containerized "Centroport," accessible to rail lines and the new Interstate 10. A more radical reconfiguration of local geography could hardly be imagined, and it all happened within fifty years, starting with the Industrial Canal in 1918.

Too radical, it turned out. The MR-GO's banks eroded and its channel silted up, requiring costly dredging and making the lynchpin more of a wildcard in the whole Centroport concept. Worse, all three manmade waterways introduced salt water into the heart of the metropolis at the very same time its soils, dried by drainage for former swamps, subsided below sea level. The MR-GO itself accelerated the demise of coastal wetlands in St. Bernard Parish, while also providing a minimum-friction conduit for sea water to surge inland ahead of tropical storms. Most of the disastrous flooding from Hurricane Betsy in 1965 came via the three interconnected canals, as did the majority of the catastrophic deluge pushed forward by Hurricane Katrina. The Industrial Canal, ungated at the time, saw the two worst federal floodwall breaches of August 29, 2005, and residents living along its flanks suffered terribly as a result.



These costs were not foreseen when the Inner Harbor Navigation Canal was first planned, nor were the impacts of physically separating the Lower Ninth Ward and points east from the urban core (to which any motorist traversing the I-10 high-rise or awaiting a raised drawbridge can attest). Only the envisioned benefits were touted.

We can debate which outweighed which for the Industrial Canal, benefits or costs. But one thing is certain: the centuries-old dream of effortlessly connecting river and lake for the unconditional advantage of everyone was exactly that—a dream.



Figure Photo by Richard Campanella

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