

Chapter Three

Waterfront Past to Present



“We need a critical review of the history of the planning of the area because it has a long history. Extending the shoreline has been proposed since the 1970s, and it would be helpful to see the process that got us here.”

- CCLM participant from the first CCLM meeting



National Historic Landmark 1908 Lightship Ambrose docked at Pier 16 as part of the South Street Seaport Museum (Photo Credit: Joe Mabel CC BY-SA 2.0 <<https://creativecommons.org/licenses/by-sa/2.0/>>, via Wikimedia Commons)

History of the Waterfront

While Lower Manhattan's future is threatened by the impacts of climate change, this area's past is defined by a process of continuous reinvention to adapt to the needs of an evolving city. **At its core, this is the definition of resilience.** This dynamic waterfront has adapted time and time again over the last 400 years, from expanding the shoreline to support growing maritime trade, to its rise as an office district and residential neighborhood, to the rebuilding in the face of the September 11 terrorist attacks. Responding to the threats of climate change will take this same type of bold thinking.

This area's human history began thousands of years ago, when the native Lenape originally settled in what is now New York City.¹ About 3,000 years later, in the early 1600s, the Dutch arrived on the Southern tip of the island of Manhattan and founded New Amsterdam. This event also marked the beginning of the aggressive removal of the native Lenape people from their homeland.² The Lenape legacy is reflected to this day in the name of the island itself, originally called *Manahatta*.

The early development of the waterfront is also deeply tied to the African diaspora and transatlantic slave trade. Beginning in the 1600s, enslaved Africans arrived in Lower Manhattan by boat, and in 1711 a slave market opened on Wall Street near the East River.³ Local merchants supplied ships that transported enslaved Africans and traded the goods they produced. By the mid-1700s, enslaved Africans comprised about 20 percent of the city's total population.⁴ Their forced labor played a major role in building the city and growing its economy.

It is critical to acknowledge how the history of Lower Manhattan has been shaped by both the suffering and the contributions of enslaved Africans, Indigenous Peoples, and other oppressed people. This legacy reinforces the importance of centering equity and inclusion in planning for the city's future.



A photochrom postcard of South Street Seaport in about 1900 CE (Photo Credit: Detroit Publishing Co.)

An Evolving Shoreline

The first major step in shaping New York City's modern-day waterfront took place as early as 1686, when the British Crown transferred legal ownership of the waterfront to the City. Since the City did not have the capacity to make improvements along the waterfront at the time, it began selling waterfront lots to individuals under the condition that the lot owners would build the street and wharf along the shoreline edge. The private development dedicated the shoreline edge to industrial uses, leaving New Yorkers with little public access to the waterfront.⁵

Though disconnected from most residents, the waterfront was a hub of economic activity. As maritime trade expanded in the late 1600s, the City responded by extending the shoreline of Manhattan to increase available commercial space. By 1730, the eastern edge of Lower Manhattan reached what is now Water Street, by 1780 it extended to Front Street, and by 1800 it went all the way to South Street.⁶ Many inlets along the Lower Manhattan waterfront were left as slips for docking ships. As these inlets were filled in over time, the streets, now known as "slips," were created.⁷ The waterfront also became the site of several military facilities around the Harbor, such as The Battery and Governors Island.

As the island of Manhattan developed and expanded, so did its maritime capacity. By the 19th century, pierhead lines defined the boundaries of navigation channels. Large steam ferries also became a vital form of transportation during this time. In 1909, the Battery Maritime Building was completed to support 17 ferry lines that connected Manhattan and Brooklyn. The Art Deco building, decorated with cast-iron columns and stained-glass windows, is the last surviving East River ferry building of its time and was listed on the National Register of Historic Places in 1976.

Throughout the 19th and 20th centuries, Manhattan's waterfront continued to sustain maritime-related development and South Street became a major center of maritime activity. The construction of the FDR Drive viaduct during the first half of the 20th century dramatically changed the character of the waterfront. Since the viaduct elevated most traffic above street level, goods could be more easily moved from the piers to the inland city streets. However, the practice of building highways along the waterfront in New York City hindered public access to the shoreline edge, blocking physical access in places and obstructing views of the harbor.



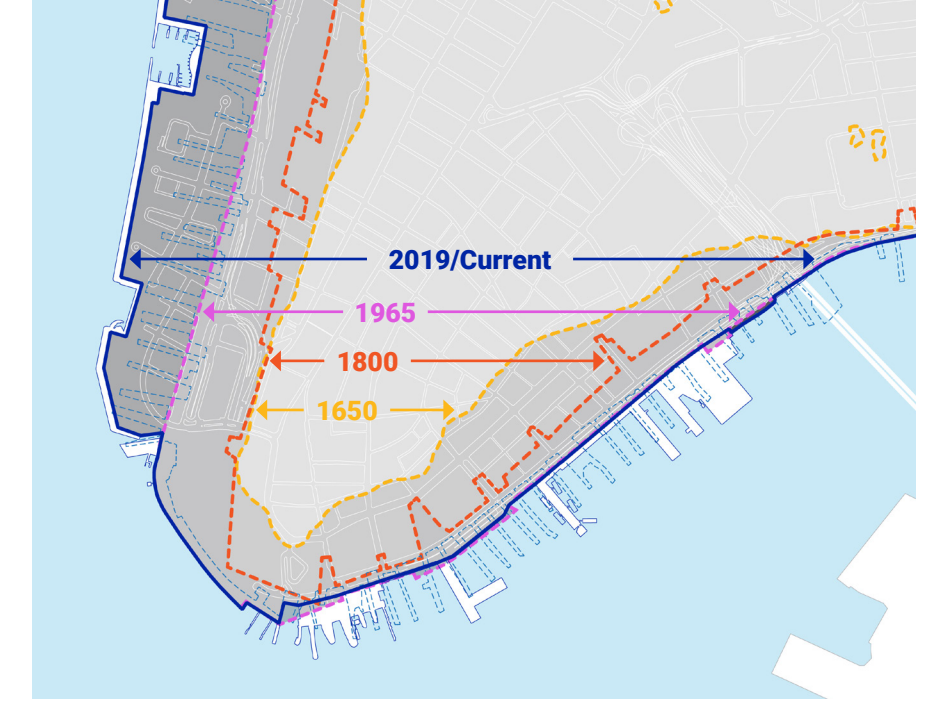
Aerial view of Lower Manhattan in 1931 (Photo Credit: National Archives)

During the mid-20th century, industry moved away from Lower Manhattan and the once bustling port underwent a period of economic decline. By the 1960s, the area surrounding South Street consisted of decaying low-rise commercial and industrial buildings. In 1967, the formation of the South Street Seaport Museum recognized the history of South Street and its significant role in the advancement of the city's maritime economy.⁸ South Street Seaport was listed on the National Register of Historic Places in 1972, and in 1977, it was expanded and designated a city Historic District by the Landmarks Preservation Commission.



Aerial view of Lower Manhattan today (Photo Credit: Cameron Davidson)

The movement of industry away from the Lower Manhattan waterfront also changed the landscape along the shoreline edge. When the City was the primary port for trade on the East Coast, over 40 piers lined the waterfront; today, fewer than ten of those piers remain. By the late 20th century, the only remaining maritime commercial use along the East River waterfront in Lower Manhattan was the Fulton Fish Market, which was relocated to a new facility in the South Bronx in 2005.



Shoreline extents of Lower Manhattan over time, identifying where the shoreline has been extended over the past few centuries

Though industry moved away from this area, new land continued to be created into the 20th century. This time, the Hudson River was filled in for housing. Excavated material from the World Trade Center construction was used to expand Lower Manhattan by an additional 24 acres to create Battery Park City in 1976. In total, the use of fill throughout Lower Manhattan's history has pushed the original location of the shoreline four city blocks, or almost 1,000 feet, outwards on each side.

A Waterfront for People

During the 19th and early 20th centuries, many residents avoided the city's waterfronts. Dominated by industry and pollution, the shoreline was often seen as dangerous and foul-smelling.⁵ Events during the last three decades have begun to shape a waterfront for the people, bringing New Yorkers closer to the harbor than ever before.

The Clean Water Act of 1972 was the first major shift in the city's waterways, leading to a much cleaner and healthier harbor for both the people of New York City and aquatic life. Twenty years later, the City released its first Comprehensive Waterfront Plan with a focus on "environmental remediation, infrastructure investment, and redevelopment."⁹ This was followed by the Manhattan Waterfront Greenway Plan in 1993, which envisioned new public open spaces and a continuous pedestrian and bicycle pathway along the perimeter of Manhattan. These federal and city policies led to the transformation of this waterfront from a declining maritime industrial hub to a thriving waterfront focused on recreation and transportation.

While the Financial District and Seaport neighborhoods suffered greatly due to the tragic events of September 11, the neighborhoods demonstrated their strength by seizing the opportunity to rebuild and prosper. Since 2001, more than \$20 billion worth of public and private investments have been dedicated to transforming Lower Manhattan into a thriving, 24-hour live-work district, with new open spaces and recreational uses along the waterfront.¹⁰

Then in 2012, Hurricane Sandy revealed a new vulnerability along the city's waterfronts. Hurricane Sandy significantly impacted this waterfront, including extensive damage to the South Street Seaport Historic District and other maritime uses. It forced subway stations and office buildings on Water Street to shut down due to the damage. Public and private investments since Hurricane Sandy have made Lower Manhattan more resilient and further enhanced the public waterfront experience.



Get-downs bring people closer to the water (Photo Credit: SCAPE)



Seating with views of the East River (Photo Credit: SCAPE)



Ferry docks on Pier 11 (Photo Credit: SCAPE)



New seating, paving, and planted beds at Peck Slip (Photo Credit: SCAPE)



Bike path and esplanade under the Brooklyn Bridge (Photo Credit: SCAPE)



Piers with elevated views of the East River (Photo credit: Several Seconds)

The Waterfront Today

Lower Manhattan's waterfront is unique. It houses maritime functions that serve residents, workers, and visitors throughout the entire region, includes historic landmarks, and links together sections of the Manhattan Waterfront Greenway. Adjacent to this waterfront is the Financial District, a hub of the city's economy and a growing residential district, and the South Street Seaport, with dozens of small businesses and historical assets. Protecting this one-mile stretch between The Battery and the Brooklyn Bridge requires an understanding of what exists there today, as well as the services this waterfront provides – both to the adjacent neighborhoods and the city as a whole.

Transportation

Lower Manhattan is a transportation hub with connections to all five boroughs and the broader tri-state region. The ferry terminals are a central node for waterborne transportation, handling almost 100,000 daily ferry riders and connecting them to the subway system. The waterfront's character is defined in part by the waterborne transportation network: Whitehall Ferry Terminal, which services the Staten Island Ferry; the Battery Maritime Building, which services the Governors Island Ferry; and the Wall Street Ferry terminal at Pier 11, which services the citywide NYC Ferry system, among other operators. The area also contains multiple piers, including the Downtown Manhattan Heliport, space for chartered vessels and historic ship docking, and public open spaces and amenities.

Several major streets and roadways in the area provide important connections for cyclists, pedestrians, and vehicles. The FDR Drive is a major thoroughfare connecting the Battery Park Underpass to the Brooklyn Bridge, as well as local streets and the regional highway network. The stretch of the Manhattan Waterfront Greenway that runs along this shoreline connects pedestrians and cyclists to The Battery to the south and the Brooklyn Bridge Esplanade to the north. While this area has robust transportation infrastructure and connections, many areas along the Lower Manhattan waterfront still suffer from poor pedestrian and cyclist conditions.

Essential Underground Infrastructure

Beyond the more visible transportation infrastructure lies a network of critical, dense underground infrastructure that serves the area and all of New York City. Subway tunnels connect Manhattan to Brooklyn and include the 4/5, R/W, 2/3, and A/C lines. The 1 and J/Z subway tunnels also pass through the study area. Many waterfront structures, including piers and parts of the East River Esplanade, are built on piles with foundations that extend deep into the ground. Citywide utilities along the waterfront include Con Edison's oil-o-static line, which supports the electrical grid, and the City's sewer interceptor line, which carries wastewater and stormwater. A gas pipeline and fire prevention pipeline also run underground. While this infrastructure is invisible to most who visit and enjoy this area, it delivers critical services to Lower Manhattan and the city as a whole.

Essential Infrastructure and Transportation

- 2100 100-Year Floodplain
- Highway Tunnel
- Oil-O-Static Line
- Sewer Interceptor
- FDR Viaduct Columns
- NYC Ferry Landing
- Other Ferry Landing
- Subway Station
- Subway Station Footprint
- Ferry Route
- Subway Route



Open Space and Retail

More visible are the beloved open spaces and community amenities that line this waterfront. Approximately ten acres of open space run along the waterfront between The Battery and the Brooklyn Bridge. Most of this space comprises the esplanade, which provides a pedestrian walkway and seating. Pier 15 also houses an elevated green space with views of the harbor, but larger open spaces appropriate for gathering and recreation are currently lacking in the area. In addition to the open spaces along the water, adjacent open spaces in the Financial District and Seaport neighborhoods include pedestrian plazas like the Vietnam Veterans Memorial, green spaces like The Elevated Acre, and playgrounds like Imagination Playground.

Many food, beverage, and entertainment establishments line the esplanade and occupy the piers, including restaurants and other retail in Piers 15 and 17. Pier 17 also contains a rooftop performance venue. These amenities serve both local workers and residents and draw tourists and visitors from across the city.

Historic Districts and Landmarks

Many historic structures contribute to the overall identity of the Financial District and Seaport waterfront. The Battery Maritime Building, a landmarked structure that historically serviced ferries throughout the East River, is now home to an event space and the Governors Island ferry. The South Street Seaport Historic District features renovated mercantile buildings and a dock for historic ships, like the *Wavertree* at Pier 16, serves as a reminder of the area's history as a port. The South Street Seaport Museum also houses many historic artifacts, such as art and books.

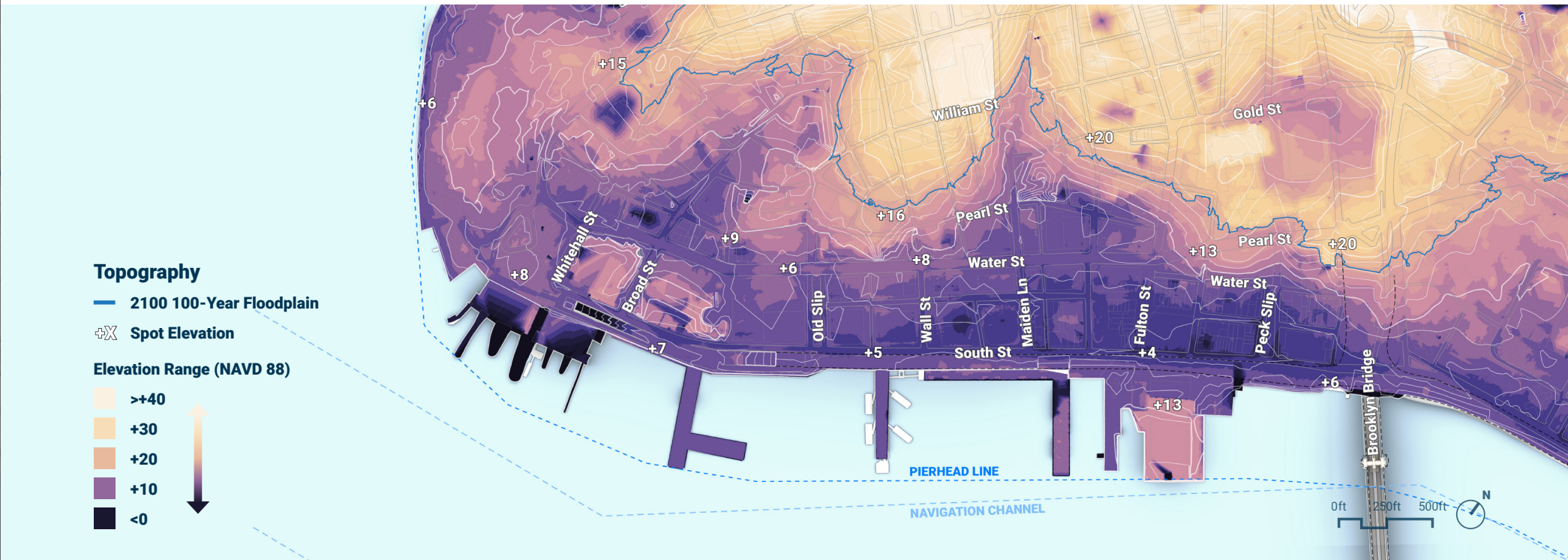
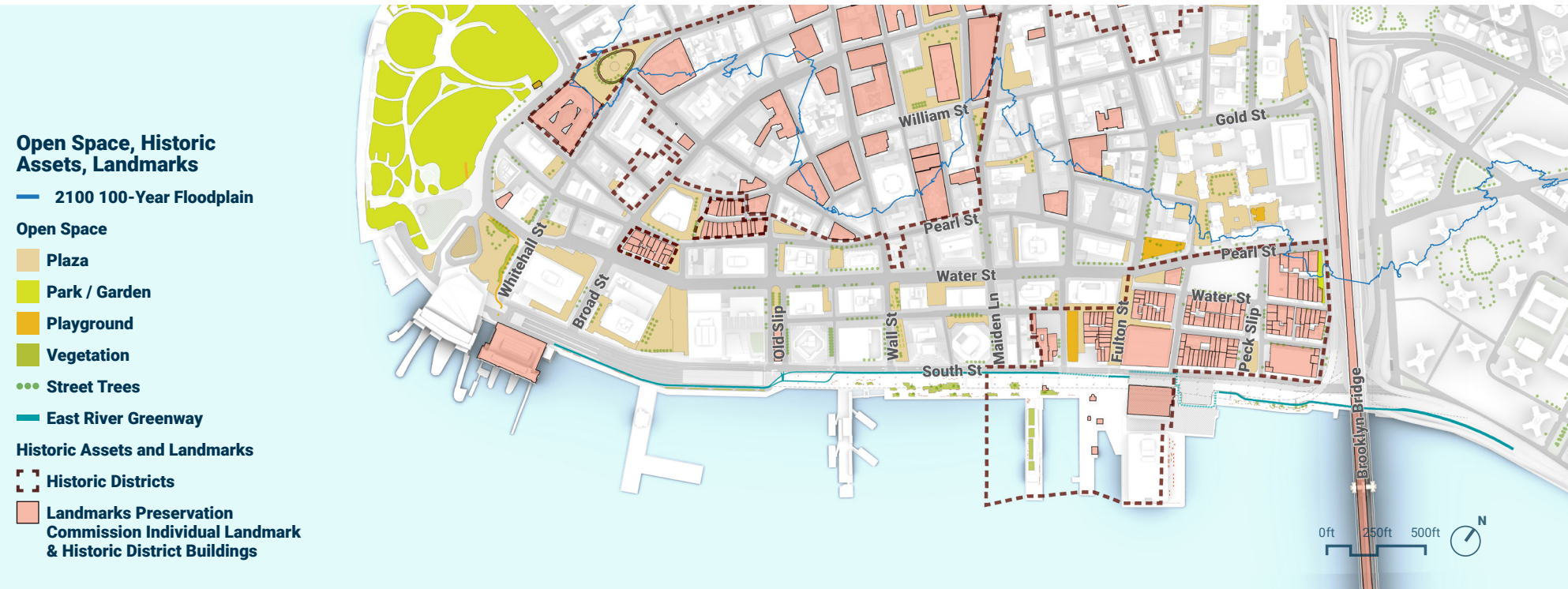
Topography

In the Financial District and Seaport neighborhoods, the topography shifts from the shoreline to the upland neighborhoods. With elevations only a few feet above mean sea level near the shoreline, the neighborhood gently slopes upward, with higher ground located further inland. However, in certain locations, the elevation of the shoreline is higher than the inland streets, which can cause a dangerous "bathtub" effect, trapping water behind higher areas during flooded conditions. A map of the topography in the study area is shown below.

East River Bathymetry

The Financial District and Seaport waterfront runs along the East River, which, despite its name, is a tidal strait linking western Long Island Sound with New York Harbor. As a tidal strait, water flows in both directions, and the waterway experiences low tides and high tides twice a day – much like the ocean tides one might experience at the beach. As discussed in depth in the next chapter, high tides will increase over time with sea level rise.

The East River is approximately 16 miles long and between 600 and 4,000 feet wide. Near the shoreline, the waterway is relatively shallow (less than 10 feet deep); however, it deepens significantly as it approaches the edge of the current pier structures and is even deeper towards the center of the river.



Sources

1. McCully, Betsy. "The Lenapes: The First New Yorkers." New York Nature (blog), September 2, 2018. <https://www.newyorknature.us/lenapes/>.
2. Connolly, Colleen. "The True Native New Yorkers Can Never Truly Reclaim Their Homeland." Smithsonian Magazine. Accessed December 7, 2021. <https://www.smithsonianmag.com/history/true-native-new-yorkers-can-never-truly-reclaim-their-homeland-180970472/>.
3. Diouf, Sylviane. "New York City's Slave Market," June 29, 2015. <https://www.nypl.org/blog/2015/06/29/slave-market>.
4. "Slavery in New York." New York Historical Society. Accessed December 7, 2021. <http://www.slaveryinnewyork.org/history.htm>.
5. Platt, Rutherford. "The Humane Megacity: Transforming New York's Waterfront." Environment Science and Policy for Sustainable Development, July 2009.
6. "Transforming the East River Waterfront." City of New York, 2004. https://www1.nyc.gov/assets/planning/download/pdf/plans-studies/east-river-waterfront/east_river_waterfront_book.pdf.
7. Trapnell, Kelli. "History of NYC Streets: The Secrets of Slips in Lower Manhattan." untapped new york, November 14, 2012. <https://untappedcities.com/2012/11/14/history-of-streets-the-secrets-of-the-slips-on-the-lower-east-side/>.
8. Kaplan, James. "Controversy Over Development At New York's Seaport Historic District." New York Almanack (blog), January 21, 2021. <https://www.newyorkalmanack.com/2021/01/controversy-over-development-at-new-yorks-seaport-historic-district/>.
9. "New York City Comprehensive Waterfront Plan: Draft Framework." New York: NYC Department of City Planning, September 2020.
10. Hoffman, Laura. "Community Impact on Post 9/11 Urban Planning in Lower Manhattan: Form Follows Values." University of Georgia, 2005. http://getd.libs.uga.edu/pdfs/hoffman_laura_j_200505_mla.pdf.