Harlem River, 145th – 163rd Street Navigational Study

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Prepared by

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1.0 Executive Summary

This study assesses the potential navigational impacts of partially deauthorizing the federal navigation channel in the Harlem River between 145th and 163rd Streets and the associated construction of the City's potential Manhattan Waterfront Greenway: North Harlem (MWG: North Harlem) project that the New York City Economic Development Corporation (NYCEDC) is planning in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks.

Commissioned by NYCEDC, this analysis evaluates how these changes could affect current and future maritime operations. The study integrates stakeholder outreach, vessel traffic data, and an assessment of existing navigational constraints to determine whether deauthorization and the potential MWG: North Harlem would hinder the Harlem River's function as a commercial, working waterway.

The Harlem River, designated as a bank-to-bank federal navigation channel, primarily serves passenger tour vessels, municipal operators, environmental monitoring groups, and recreational boaters. Today, the federal navigation project defines a channel 350-400 feet wide and 15-18 feet deep. While vessel traffic volume is lower compared to other parts of New York Harbor, certain areas, particularly near the Macombs Dam Bridge, experience congestion and high levels of interaction between different vessel types. The partial deauthorization would reduce the federally maintained channel width by 75 feet on the Manhattan side, shifting future maintenance responsibilities away from the U.S. Army Corps of Engineers (USACE) and potentially limiting dredging activities in the affected area.

Stakeholders expressed varying concerns regarding the impacts of deauthorization and MWG: North Harlem construction. Passenger vessel operators, such as Circle Line and Classic Harbor Line, emphasized maintaining a minimum, uninterrupted, open navigable channel width of 100 feet underneath bridges to prevent operational disruptions. Further, Circle Lines requested 100 feet of federal navigation channel be maintained. The MWG: North Harlem, as proposed to stakeholders, would reduce the navigable federal channel underneath the Macombs Dam Bridge to approximately 95 feet or less on the Manhattan-side draw. Several groups, including NYC Ferry and Riverkeeper, recommended fendering systems to protect vessels from potential allisions with the MWG: North Harlem structure. Environmental and urban planning organizations, such as the Harlem River Working Group and the Bronx Council for Environmental Quality, questioned whether the MWG: North Harlem proposal sufficiently considers long-term Bronx-side waterfront access and environmental restoration efforts. Recreational boating organizations, including Rocking the Boat and New York Open Water, advocated for including emergency landings and kayak access points within the MWG: North Harlem's design to enhance public waterway access.

An automatic identification system (AIS) vessel traffic data analysis indicates that most vessels navigate within defined routes that avoid the potential MWG: North Harlem footprint; however, there are critical interaction points near the Macombs Dam Bridge where congestion could increase if the channel is narrowed. Additionally, the U.S. Coast Guard (USCG) has suggested that the MWG: North Harlem may require classification as a pedestrian bridge, necessitating permitting and regulatory oversight.

This study identifies several important considerations for evaluating the potential MWG: North Harlem and associated federal channel deauthorization. Based on stakeholder input, vessel traffic analysis, and physical constraints, the findings suggest that while partial deauthorization may not pose immediate barriers to existing navigational use, it could introduce long-term spatial limitations, particularly in areas of high vessel convergence. The current potential partial deauthorization of 75 feet would reduce the federal channel below the minimum width requested by stakeholders underneath the Macombs Dam Bridge. Further, the project's placement on the Manhattan side may limit the future feasibility of similar infrastructure on the Bronx shoreline in certain segments of the river, especially near the Macombs Dam Bridge, due to stakeholder requests to maintain a minimum open navigable channel of at least 100 feet. These findings underscore the importance of coordinated planning and mitigation to preserve navigational functionality and flexibility for future waterfront use.

Ultimately, the MWG: North Harlem represents a significant investment in public waterfront access and pedestrian and cyclist connectivity. Still, its success depends on balancing these goals with the Harlem River's continued function as a navigable waterway. This study provides a framework for decision-making and recommends continued stakeholder engagement, regulatory coordination, and design refinements to ensure the project minimizes navigational disruptions while advancing public access objectives.

2.0 Study Background and Purpose

The Harlem River is a 9-mile tidal strait that connects the Hudson and East Rivers, forming the boundary between Manhattan and the Bronx. Historically, the area featured a diverse network of streams, wetlands, and natural shorelines. However, extensive urban and industrial development led to significant environmental changes, including deforestation, shoreline hardening, and the burial of nearly all natural tributaries; only one of the original 25 remains visible today. Many of the neighborhoods adjacent to the Harlem River are fully urbanized and lack access to green space.[1]

The NYCEDC, in collaboration with the NYCDOT and NYC Parks, is proposing the MWG: North Harlem project between 145th and 163rd streets. The potential MWG: North Harlem would extend into the existing federal navigation channel. The Project Team is seeking to deauthorize a strip of the channel's western side to accommodate a greenway structure that is approximately 40 feet wide.[2]

The Manhattan Waterfront Greenway (MWG) is an important open space and transportation resource for New York City, providing improved access to the City's waterfront for a variety of activities, integrating larger parks within a connected network, and providing a bike path for recreation and commuting, all within some of Manhattan's most densely populated neighborhoods. When complete, the 32.5-mile loop will run continuously around the entire island. There is a 1.2-mile gap in the MWG in North Harlem from the 145th Street bridge to approximately 163rd Street on the Manhattan Side (see Figures 1 and 2).

Due to a lack of waterfront land between 145th and 163rd streets, the City is exploring the feasibility of constructing a continuous outboard greenway in the Harlem River for pedestrians and cyclists to close the MWG gap in North Harlem. The city has built similar structures, such as the East Midtown Greenway from 53rd Street to 61st Street, which opened in 2023. The greenway is envisioned to be 40 feet wide and offset from the shoreline by up to 30 feet for bulkhead maintenance.[3] A five-foot buffer is also expected on the eastern side of the greenway for fendering.

The Harlem River is designated as a bank-to-bank federal navigation channel, unlike the area of the East River where the East Midtown Greenway was built. Building the outboard greenway requires congressional deauthorization, which would narrow the boundaries of the federally maintained channel by up to 75 feet from the Manhattan side of the river from 145th to 163rd Street.

Congressional deauthorization will be sought by introducing language in an upcoming Water Resources Development Act (WRDA) bill. The New York City Department of City Planning (DCP) has previously obtained deauthorization for the lower portion of Flushing Creek through similar measures in 2020. To prepare for congressional deauthorization and support the assessment of the deauthorization and potential impacts of this greenway project, NYCEDC has retained Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study. The risk assessment study examines the present and predicted future uses of the federal navigation channel to ensure that

[1] FACT Sheet – Hudson Raritan Estuary (HRE) – Harlem River

[2] NYCEDC Project Scope of Work 2024.08.21

[3] https://edc.nyc/project/harlem-river-greenway

deauthorization would not hinder the use of the Harlem River as a working waterway. The study includes an analysis of:

1. The location and study area
2. Land use, zoning, and previous and current land use actions
3. Navigation and maintenance dredging history
4. Physical constraints (including bridges and tunnels)
5. Operational review of vessel traffic including normative routes
6. Berth analysis
7. User outreach
8. Assessment of potential risks and implications of building an outboard greenway and potential mitigations to address them

The structure and scope of the study are based on requirements provided by the U.S. Army Corps of Engineers (USACE) and the U.S Coast Guard (USCG) as follows:

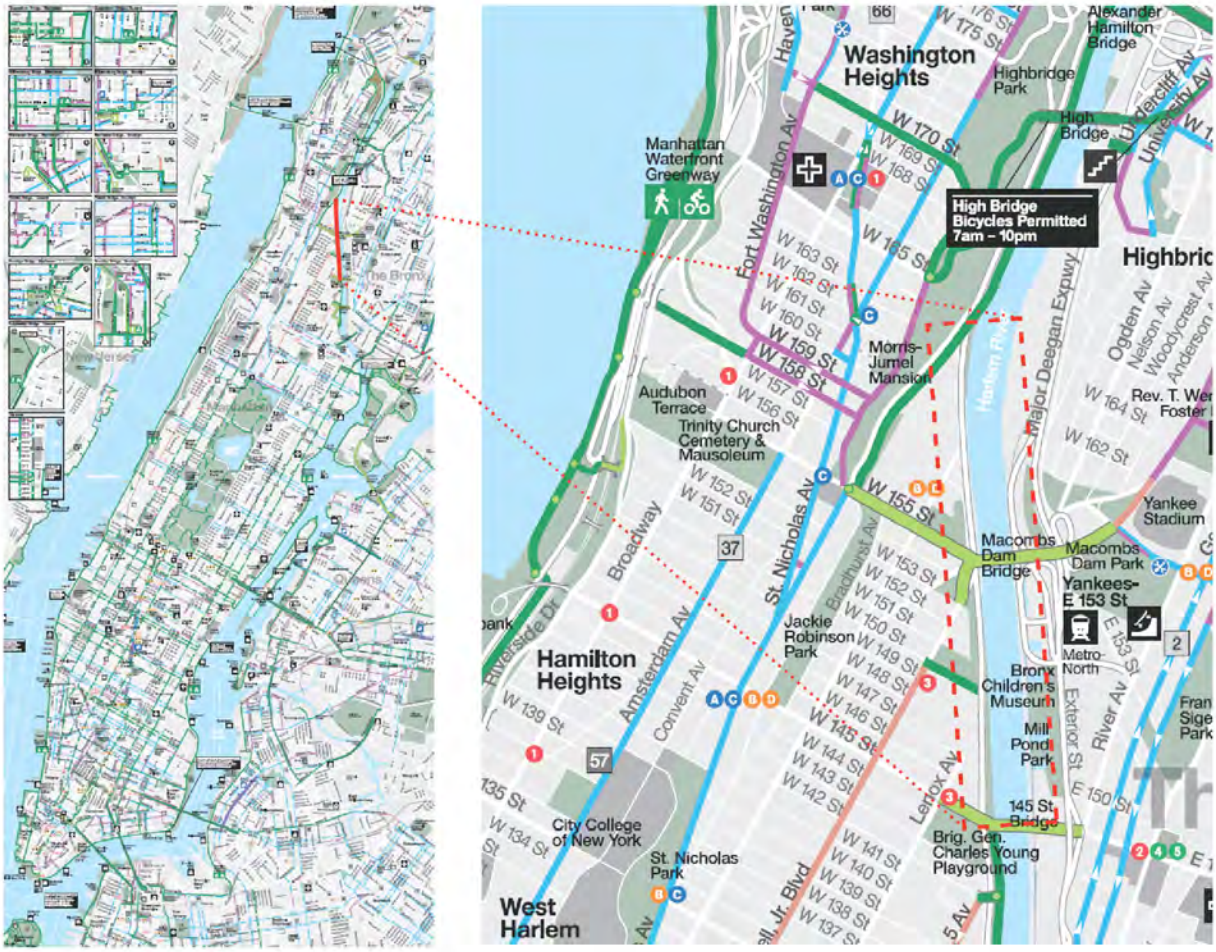
1. USACE Memorandum 03-MAR-23: *Process for Recommending Deauthorization of Federal Navigation Channels Without Structures*
2. USCG Office of Bridge Programs: *Bridge Permit Application Guide* – Appendix A1-7.G.

It is important to note that partial deauthorization of a federal navigation channel is a novel consideration and process for USACE. Therefore, the structure and scope of this report incorporate requirements from several industry best practices and regulatory sources to ensure that the study is comprehensive in anticipation of any additional requirements or concerns.

This study addressed two related but distinct potential impacts of the potential MWG: North Harlem project:

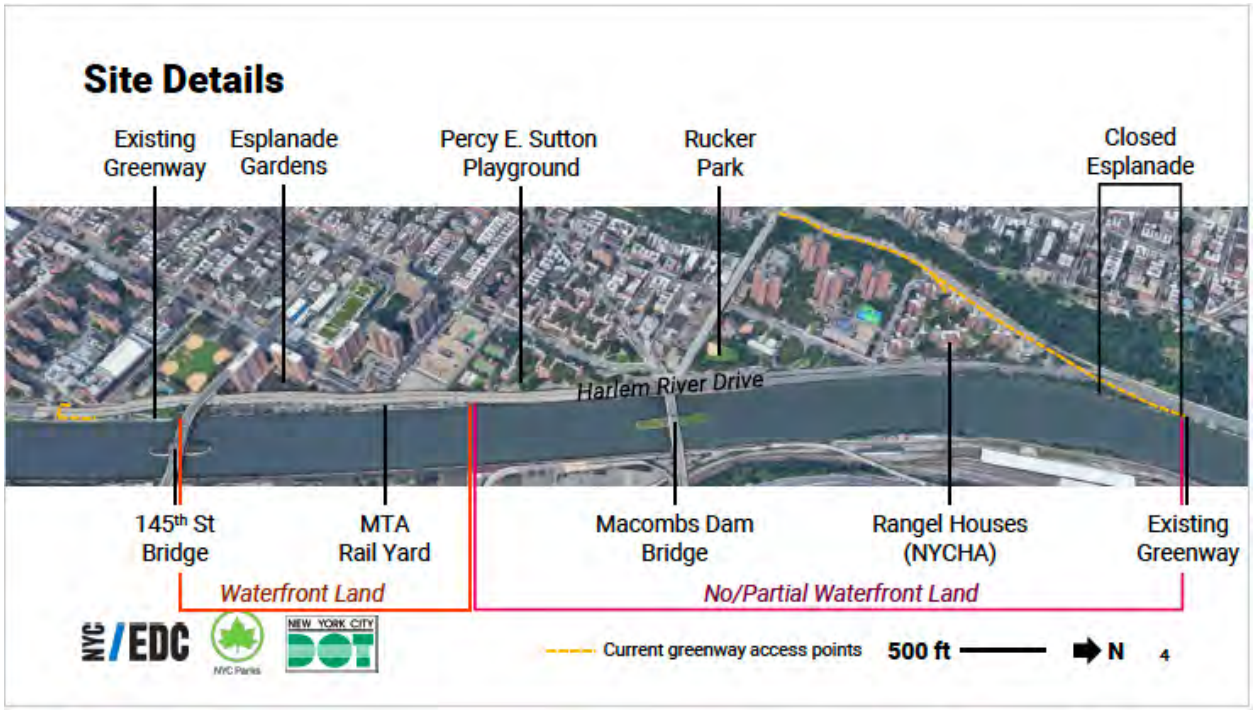
- The navigational implications of partially deauthorizing the federal navigation channel within the study area, and how this may affect the waterway's continued function for marine traffic and commercial operations.
- The impact of constructing the MWG: North Harlem structure within the study area, including how the project may influence vessel navigation, safety, land use, and overall waterway usage.

Figure 1 – Manhattan Waterfront Greenway: North Harlem Gap[4]



[4] 2025 NYC DOT Bike Map

Figure 2 - Site Details



3.0 Location and Study Area Description

In 1876, The New York State Legislature decreed the construction of the Harlem River Shipping Channel. The Harlem River New York Federal Navigation Channel was first authorized by the Rivers and Harbors Act of 1899. The channel extends from where the river meets the East River at the Ward's Island pedestrian bridge and continues north to where it meets the Hudson River by Spuyten Duyvil. The existing federal navigation project provides a 350-400 foot wide and 15-18 foot deep channel.[5]

The USACE has divided the river into five (5) reaches[6] with authorized depths ranging from 15 feet at either end to 18 feet at Reach D (Figure 4 and Table 1). All reported depths are relative to the mean lower low water (MLLW) datum. The channel reach lengths are nautical miles. All distances and dimensions are approximate.

The section of the Harlem River being studied starts just south of the 145th Street bridge and proceeds north, past the Macombs Dam Bridge, and terminates at approximately 163rd Street (See Figures 2 and 3). The termini of the project study area coincide with the existing sections of the MWG along the Harlem River on the Manhattan Side. The study area is entirely within Reach B.

[5] https://www.nycgovparks.org/parks/inwood-hill-park/highlights/8272
[6] A reach is essentially a continuous stretch of a river, channel, or waterway that has relatively uniform characteristics.

Figure 3 - Harlem River Study Area with Federal Channel



Figure 4 - Harlem River Federal Navigation Channel Reaches[7]



[7] Map Developed from NYC Department of City Planning, LION Single Line Street Base Map,vol. 19D, 2019, in Bytes of the Big Apple. Base Map image from riverhistories.org/harlem-river/

Table 1 - Harlem River Reaches, Authorized Depths, Condition Survey Results[8]

Reach	Authorized Project			Minimum Depths in Each ¼ Width of Channel Entering from Seaward			
	Width (ft)	Length (n miles)	Depth (feet)	Left Outside Quarter (ft)	Left Inside Quarter (ft)	Right Inside Quarter (ft)	Right Outside Quarter (ft)
Reach A: From approximately the seaward end of the Ward's Island Bridge to approximately 625 feet landward of the Third Avenue Bridge	400	1.60	15	2.7	7.1	4.9	2.5
Reach B: From Approximately 625 ft landward of the Third Avenue Bridge to approximately 2,675 ft seaward of the University Heights Bridge	400-354	3.17	15	0.2	2.4	2.0	1.2
Reach C: From approximately 2,675 ft seaward of University Heights Bridge to the Approximate location of the Broadway Bridge	400-350	1.03	15	2.1	3.4	10.9	0.7
Reach D (18-Foot Project): From the approximate location of the Broadway Bridge to a point approximately 1,250 feet landward of the start of this reach	350	0.21	18	6.7	15.6	15.7	0.7

[8] USACE Report of Channel Conditions, Harlem River New York, 10 December 2024.

Reach	Authorized Project			Minimum Depths in Each ¼ Width of Channel Entering from Seaward			
	Width (ft)	Length (n miles)	Depth (feet)	Left Outside Quarter (ft)	Left Inside Quarter (ft)	Right Inside Quarter (ft)	Right Outside Quarter (ft)
Reach D (15-Foot Project): From approximately 1,250 feet landward of the Broadway Bridge to the approximate location of the Henry Hudson Bridge	350-400	0.54	15	0.6	9.0	13.9	1.3
Reach E: From the approximate location of the Henry Hudson Bridge to the junction of the Harlem River with the Hudson River, approximately 800 feet landward of the beginning of this reach	400	0.10	15	6.0	13.2	9.3	5.3

Remarks:

- All Reported depths are relative to the Mean Lower Low Water Datum
- Channel reach lengths are nautical miles
- Report of Channel Conditions dated December 10, 2024
- When looking at the channel, aligned to the cardinal directions, left and right align approximately with west and east for the Harlem River Study Area

4.0 Land Use and Zoning Analysis (EDC)

The NYCEDC Land Use Department developed this section of the report. The information presented herein has been gathered through a review of the MapPLUTO 24v3 dataset (MapPLUTO) and confirmed by onsite observations conducted on November 14, 2024, for active land uses within the determined study area.

4.1 Overview

To better understand the surrounding properties, this section of the Risk Assessment analyzes land uses and properties within 400-feet of the potential greenway, which is inclusive of 53 parcels. These parcels were then reviewed for existing land uses, ownership type, and owners using the MapPLUTO data. The maps, Figure 5, Figure 6, and Figure 7, on the following pages show these attributes, respectively. There was also a consideration of the transportation, specifically trains and bikes, available near the Study Area, which can be seen in Figure 8 and Figure 1, respectively.

4.2 Summary of Surrounding Land Uses

The Table below shows the number of parcels and land areas in the Study Area. Following a site visit, parcels were sometimes assigned multiple land uses, as shown in Figure 5, Land Uses. However, the table below reflects the initial land use according to the MapPLUTO data, which is further confirmed through the aforementioned onsite observations.

Table 2 - Initial Land Use (MapPLUTO)

Land Use Category	# of Parcels	Land Area (square feet)	Land Area (% of total)
Multi-Family Elevator Building	4	8,218,318	8.0
Mixed Residential & Commercial Building	4	15,402,549	15.0
Commercial & Office Building	1	211,908	0.2
Industrial & Manufacturing	1	448,118	0.4
Transportation & Utility	13	19,605,358	19.0
Public Facilities & Institutions	5	7,014,518	6.8
Open Space & Outdoor	12	45,842,662	44.5
Parking Facilities	7	2,712,218	2.6
Vacant Land	3	124,149	0.1
Other	3	3,437,628	3.3
Totals	53	103,017,427	100

In general, the majority of the properties within the Study Area consist of either open space/outdoor, transportation/utility, or mixed residential/commercial building land uses. It is important to note that the transportation/utility uses are not water dependent uses but rather consist of train lines and roadways that extend along the Harlem River. The mixed residential/community building land uses could benefit from the connectivity offered by the potential greenway by providing a connection between existing green spaces and enhanced pedestrian access. Below is additional information related to the Manhattan and Bronx sides of the Study Area.

MANHATTAN SIDE

In terms of open space, to the north of the potential greenway, shown as the largest parcel in the Study Area, lies the Highbridge Park; to the south, the Brigadier General Charles Young Playground. For residential uses, the Esplanade Gardens housing co-op is located along the waterfront from approximately W 145th Street to W 147th Street and has largely established parking on the areas closest to the Harlem River, with the residential use comparatively set back. The other waterfront parcels are transportation/utility uses, with the Harlem River Drive itself accounting for the area directly along the waterfront from approximately W 151st St to W 163rd St. These uses, which also include the MTA rail yard located at the southern end from approximately W 147th Street to W 151st St, are not water dependent transportation/utility uses.

BRONX SIDE

The waterfront parcels along this side of the Harlem River similarly consist of transportation uses, with the Oak Point Link Freight Railroad established on piers located within the river. The over-water section of the Oak Point Link extends from approximately W 161st Street to Lincoln Avenue, which is roughly 0.8 miles south of the Study area. Set back from this rail line near E 151st Street is Mill Pond Park, providing open space along the eastern side of the river. Bronx Point, a mixed use residential/commercial development, is located at the southernmost portion of the Study Area. Generally speaking, this side of the Harlem River has been transforming from industrial to residential uses, encouraging pedestrian enjoyment and usage of the waterfront through open space. This is especially true for the aforementioned Bronx Point and directly adjacent parcels, for which potential future water-dependent uses are increasingly obsolete as the area continues to be developed. This transitioning waterfront land use will be further discussed in reference to previous and proposed land use actions later in this section.

Figure 5 - Land Uses

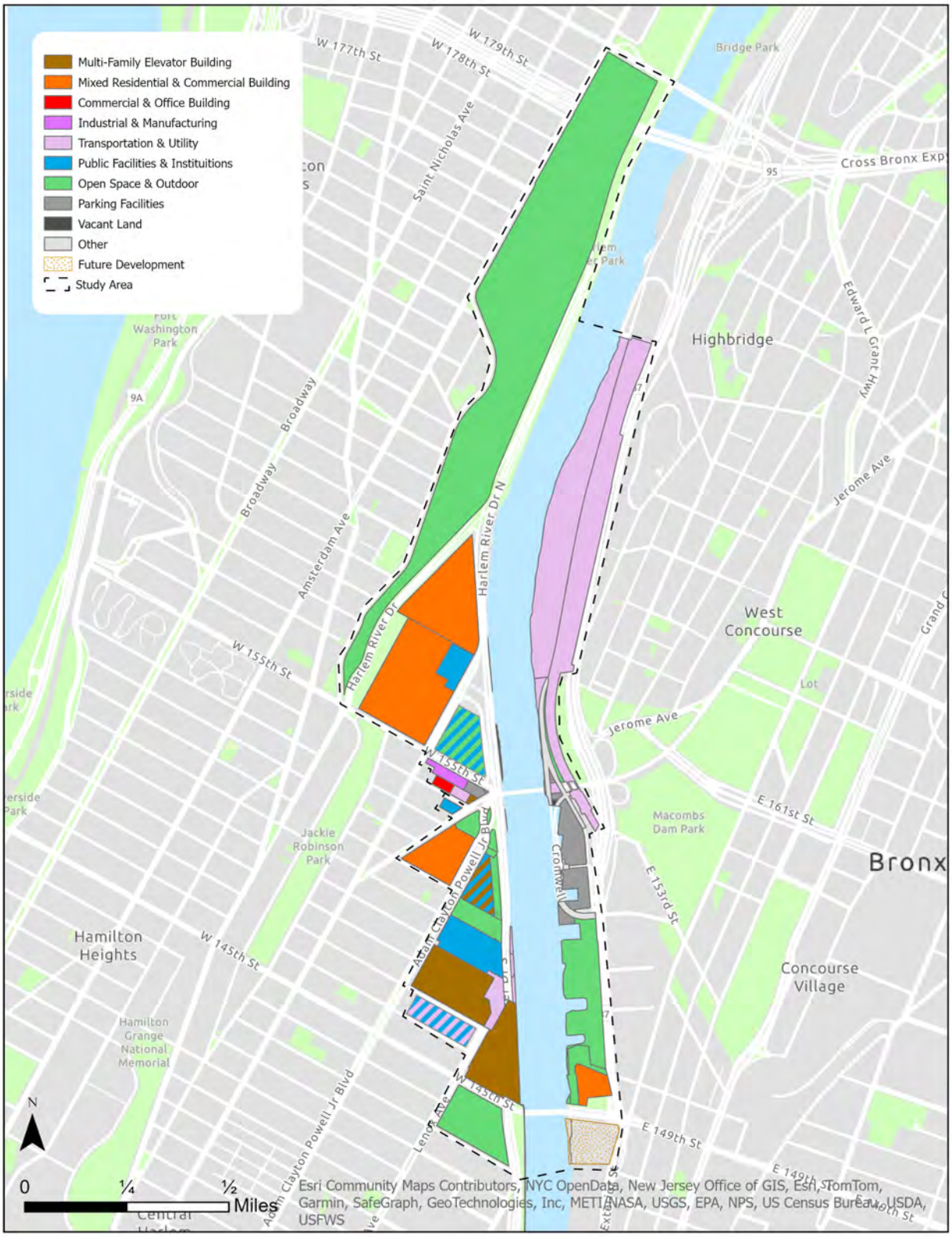


Figure 6 – Public vs. Private Ownership

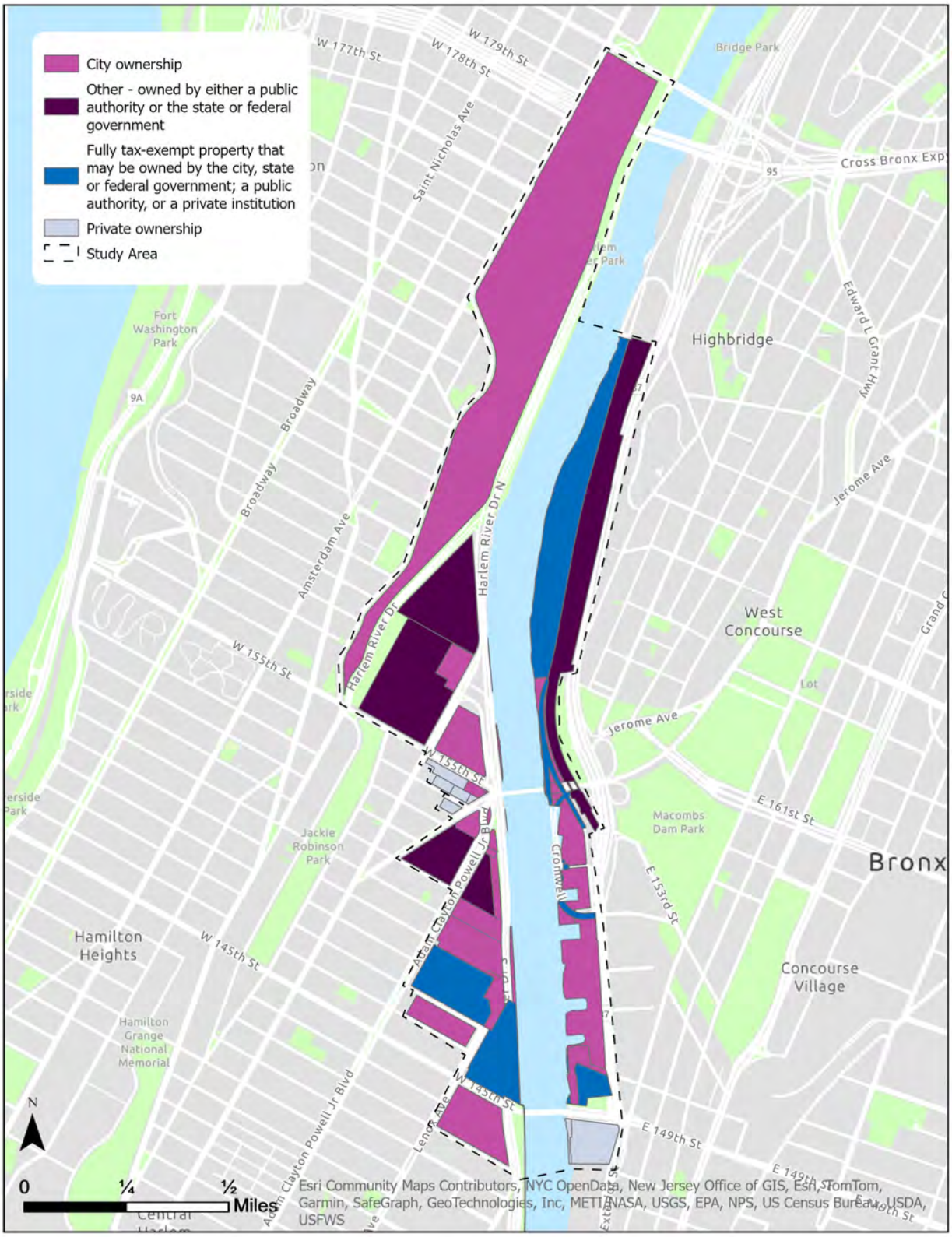


Figure 7 – Parcels by Owner

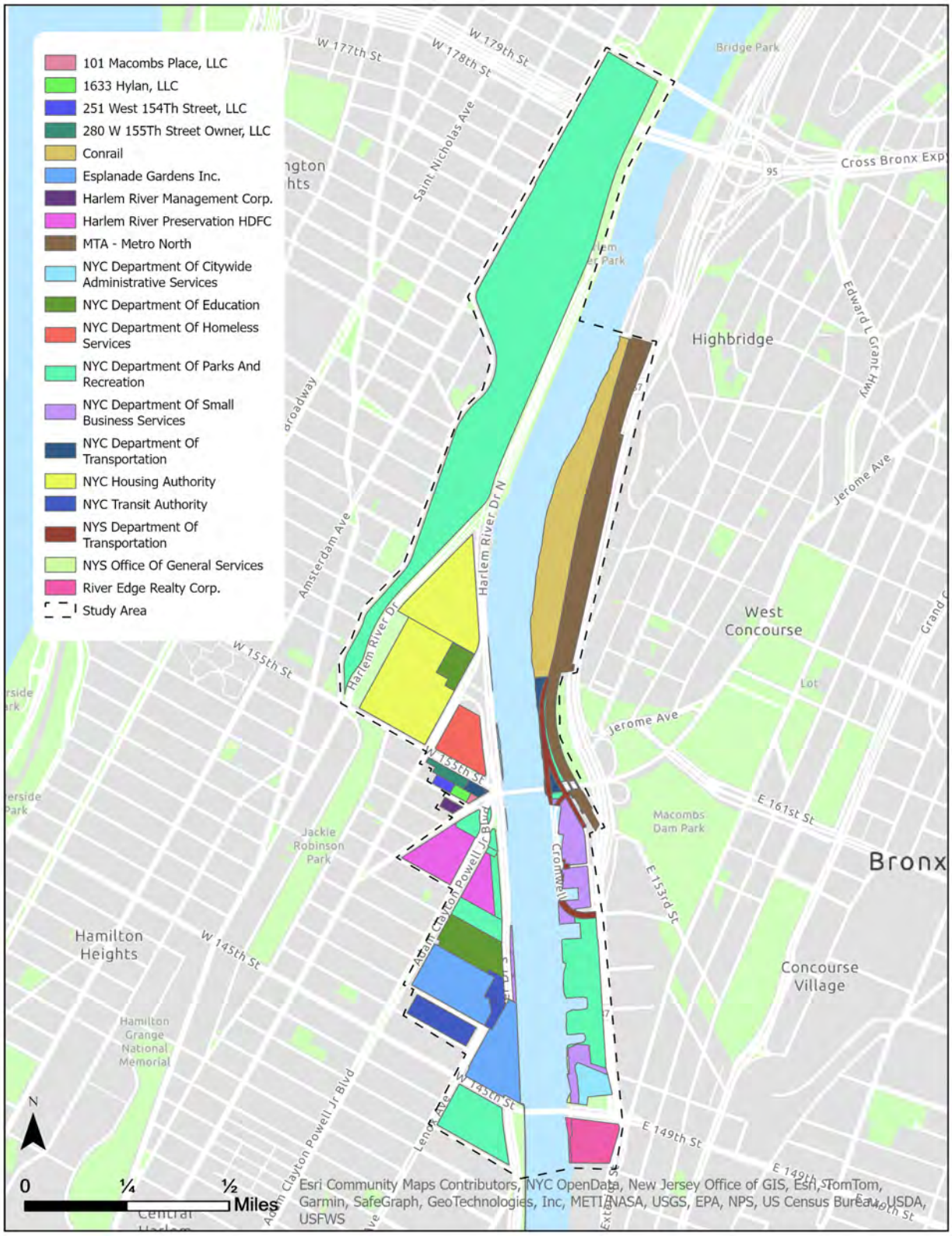
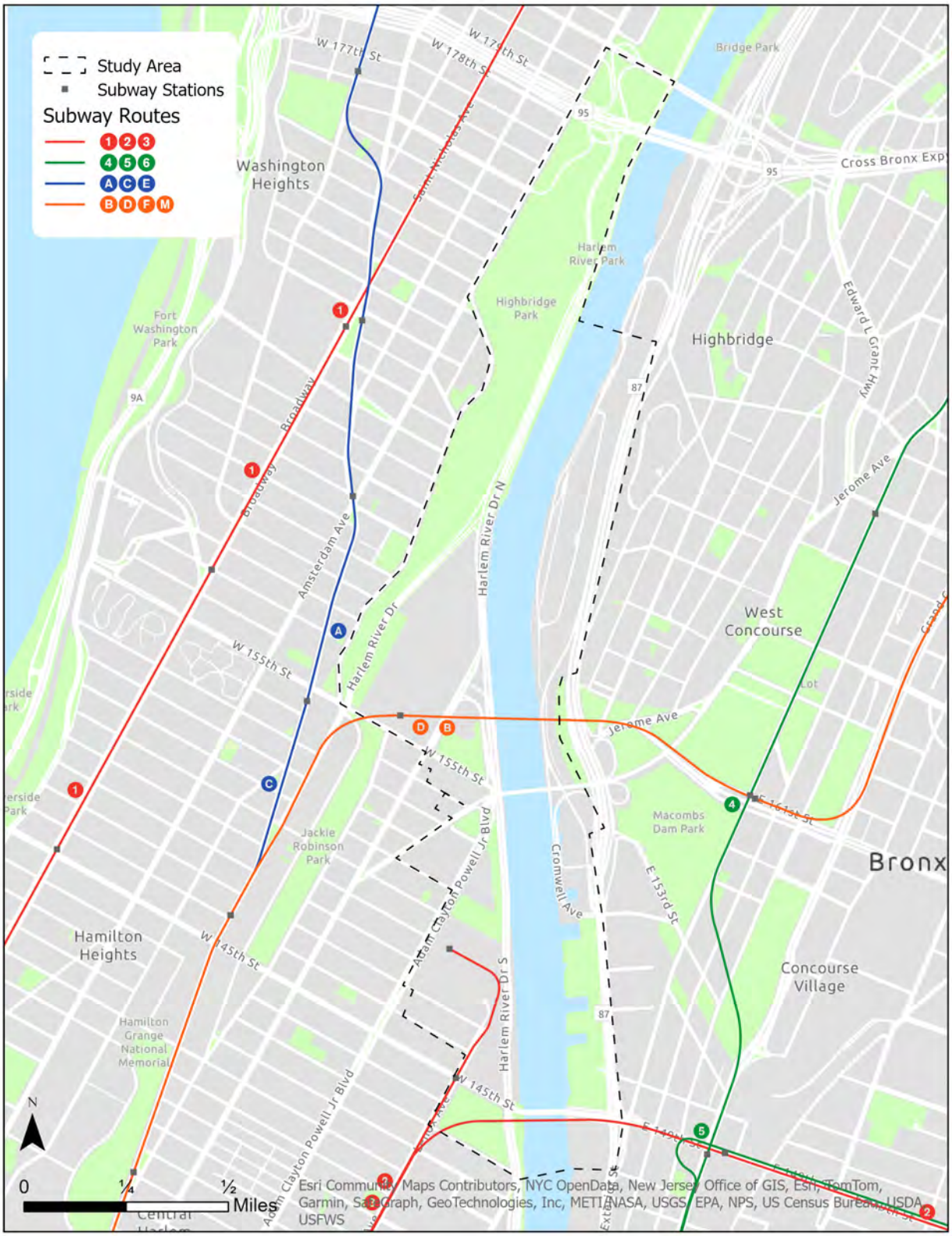


Figure 8 - Subway Routes



4.3 Summary of Surrounding Ownership

In addition to considering the land uses of the surrounding parcels, an analysis was completed to identify any ownership trends associated with the surrounding parcels. For this discussion, ownership was broken into the following four categories, as shown in Figure 6, Public vs. Private Ownership:

- City ownership;
- Fully tax-exempt property that may be owned by the City, state, or federal government, a public authority, or a public institution;
- Private ownership; and,
- Other – owned by a public authority or the state or federal government.

The Table below further analyzes the ownership of surrounding properties, highlighting that most are city-owned. Figure 7, Parcels by Owner, provides additional information about the owners associated with each parcel. Private entities own very little waterfront land in the study area. Just three privately owned parcels have direct waterfront access. The owners of these parcels are: Conrail (through their ownership of the Metro North rail yard), the Esplanade Gardens housing cooperative, and the River Edge Realty Co. (see Figures 6 and 7)

Table 3 - Ownership Type

Ownership Type	# of Parcels	Land Area (square feet)	Land Area (% of total)
City Ownership	34	56,776,306	55.1
Other – owned by either a public authority or the state or federal government	5	24,745,501	24.0
Fully tax-exempt property that the city, state, or federal government, a public authority, or a public institution may own	7	18,347,996	17.8
Private ownership	7	3,147,624	3.1
Totals	53	103,017,427	-

4.4 Previous Land Use Actions

It is also important to consider previous land use actions within the Study Area to identify any existing plans for the study area and determine if the potential greenway would impact these plans. This required reviewing New York City's Zoning and Land Use Map (ZoLa) for any recent and relevant zoning map amendments and reviewing any special purpose districts and subdistricts in the area as of January 2025.

4.5 Zoning Map Amendments

Since 2000, three zoning map amendments have been adopted within the study area. These are all focused on the Bronx side of the study area, specifically the southernmost section. In addition, these include waterfront land on the eastern side of the Harlem River,

although none specifically emphasize potential water-dependent uses. The zoning map changes are described below:

- BX Terminal Market Gateway Center – Adopted in 2006, this rezoning changed an M2-1 district to a C4-4 district. This change ultimately facilitated the development of the Bronx Terminal Market shopping Center and was aligned with the disposition of previously City-owned property to a private developer.
- Lower Concourse – Adopted in 2009, this rezoning affected approximately 30 blocks in the Mott Haven neighborhood of the Bronx. When reviewed through the lens of the MWG: North Harlem study area, the only included lot is the vacant lot directly south of the 145th Street Bridge. This area was rezoned to C4-4 and within the Special Harlem River Waterfront District (HRW) created through this rezoning. Moreover, HRW establishes a framework for mixed-use development along this portion of the Harlem River's eastern side, aligning with the Waterfront Access Plan to allow for and encourage public access to the waterfront.
- Lower Concourse North Rezoning – Adopted in 2017, this rezoning changed an existing M1-2 district to an R7-2 district. This change allowed for residential and commercial development of the property, including the creation of the Hip Hop Museum, which is scheduled to open in 2025.

It is important to note again that all these zoning map amendments are located on the eastern side of the Harlem River and do not directly involve any water-dependent uses. Therefore, the zoning map amendments do not affect the MWG: North Harlem, nor would they be negatively impacted by the potential greenway and necessary channel deauthorization. At the time of writing, there were no other pending zoning map amendments within the study area.

4.6 Special Purpose Districts/Subdistricts

According to ZoLa, as of January 2025, there are two special-purpose districts[9] within the study area. They are described below:

- Special Harlem River Waterfront District (HRW)- As noted when discussing the Lower Concourse rezoning, the parcels directly north and south of the 145th Street Bridge on the Bronx side of the Harlem River are included in this special purpose district. This district is aimed at supporting the revitalization of otherwise underutilized areas in the South Bronx. The potential greenway is not located within this special purpose district, but the district could help to create a shore public walkway on the Bronx side. This goal would reduce the need to use the river for navigation in this District but does not necessarily preclude accessing the river for commercial navigation.
- Special Planned Community Preservation District (SPCP)—This special purpose district is concentrated in the Harlem River Houses in Manhattan. It protects the specific area associated with the houses by requiring a special permit from the City Planning

[9] According to the Department of City Planning, special purpose districts are designated to "achieve specific planning and urban design objectives in defined areas with unique characteristics. Special districts respond to specific conditions; each special district designated by the Commission stipulates zoning requirements and/or zoning incentives tailored to distinctive qualities that may not lend themselves to generalized zoning and standard development."

Commission for any demolition, development, enlargement, or alteration of landscaping or topography. The potential greenway and deauthorization will not encroach on this area, as the district does not include any waterfront property and therefore would not be impacted by nor cause negative impacts to this special purpose district.

4.7 LPC Landmarks

The New York City Landmarks Preservation Commission (LPC) also regulates various locations within the city, including some within the Study Area. These locations are designated by the LPC as of historical significance and include individual landmarks, interior landmarks, and scenic landmarks. There are several individual landmarks within the Study Area including:

- The eleven Harlem River Houses within the SPCP
- Eight historic street lampposts
- Macombs Dam Bridge

Despite the aforementioned LPC individual landmarks being located within the Study Area, the potential greenway and deauthorization do not directly change the historic or architectural nature of the resources. The Macombs Dam Bridge is the closest resource to the potential greenway, with the connection proposed to extend underneath the structure. Moreover, the deauthorization would be located under the western portion of the bridge, extending 75 feet into the river.

Officially designated as a New York City landmark in January 1992, the through-truss swing span structure is the oldest extant swing-type bridge in its original form in New York City.[10] Upon commencing design, the interface between the greenway structure and landmark structures will need to be presented to LPC and the State Historic Preservation Office (SHPO) for review. The MWG: North Harlem will not directly impact its land-use despite its proximity to the historic resource. This would need to be evaluated by the LPC and SHPO.

4.8 Proposed Development

Proposed developments, meaning those that are under consideration but have not yet been adopted, are largely on the Bronx side of the Study Area, with the exception of a public access study on the southern portion of the Manhattan side. First, as previously mentioned, the parcel associated with the Lower Concourse North Rezoning was developed into the "Bronx Point" project. Phase I of this project includes a 22-story, mixed-use structure on the Bronx side of the Harlem River with 542 affordable residential units, additional public green space, waterfront improvements, community facility space, retail space, and the Hip Hop Museum. The residential portion of Phase I was completed in late 2023 and the Hip Hop Museum is expected to open officially in 2025. The public green space, called Bronx Point Public Park, extends the green space of the Mill Pond Park directly north of it, providing the community with an additional playground. There is also a Phase II associated with the project, which would incorporate additional residential

[10] NYCDOT - https://www.nyc.gov/html/dot/html/infrastructure/bridges-harlem.shtml#macombs

units on the southernmost portion of the site. At the time of this research, there are no plans under review for this additional phase.

A vacant parcel directly south of the 145th Street Bridge in the Bronx may also become a future development site. In 2019, a real estate investment group entered into a 50-year lease over the property, suggesting the potential for future residential development on the site[11]. However, at the time of this research, there were no plans under review for development of the site. The site is currently used by New York Recycling, LLC as a construction waste processing and storage site. Neither of these land use actions add new commercial users to the river and therefore would not be in conflict with the potential project. In addition, none of these uses currently depend on the river as a navigational channel and therefore would not be impacted by the necessary deauthorization associated with the project.

Figure 9 - Harlem River Greenway Conceptual Routes[12]



In 2023, the NYC Department of Transportation began an implementation planning process for Harlem River Greenway in the Bronx. When complete, the Harlem River Greenway would span 7 miles from Van Cortlandt Park to Randall's Island Park, running as close as possible to the Harlem River. As part of the planning process, NYC DOT identified a challenging pinch point for greenway routing on the Bronx side of the river between approximately Depot Place and the Yankee Stadium parking lots. While no detailed engineering study has been conducted at this time, the plan contemplates an outboard structure to get around the large area taken up by the MTA Metro-North's Highbridge Yards (see project F, "Outboard River Path" in Figure 9). While the project is not yet funded, it has significant community support. Such an outboard structure would require an additional partial channel deauthorization on the Bronx side of the river in this location at an unknown future date.

[11] TheRealDeal - https://therealdeal.com/new-york/2019/02/13/lightstone-group-makes-yet-another-play-in-the-bronx/

[12] New York City Department of Transportation. "Selected Routes + Draft Plan. March 2025. Slide 27

On the Manhattan side of the Study Area, the New York City Department of Housing Preservation and Development (HPD), in coordination with the Esplanade Gardens Co-op, anticipates beginning a Flood Protection Study in 2025. This effort will study how best to repair the privately-owned Esplanade Gardens seawall, as well as to increase public access to the waterfront by incorporating a portion of the co-op's waterfront land abutting the shoreline as part of the MWG: North Harlem either in lieu of or alongside building the outboard greenway in this geography. The purpose of the study is to identify a preferred resiliency and public access solution and prepare for design and construction in the future. The eventual capital project may require actions that could, depending on the solution, benefit from deauthorizing the portion of the federal navigation channel that abuts the co-op's land.

4.9 Land Use Summary

The review of existing and past land use associated with the Study Area suggests that the potential greenway and related deauthorization would not negatively impact the surrounding current or proposed land uses, with the exception of potential impacts to historic resources and a possible Harlem River Greenway project on the Bronx side of the river in the Study Area's northern section. As a result of the proximity of the Macombs Dam Bridge, a historic resource, to the potential greenway and related deauthorization, SHPO will need to be engaged before the design of any project begins. The potential greenway presents potential positive impacts to green space and the pedestrian environment, as it would provide a connection between existing green spaces and enhance pedestrian access. Generally, the project would be in alignment with the transforming waterfront in this area. Residential and open space uses are becoming a more prevalent part of the fabric of land use adjacent to the river, a shift from the more industrial uses of the past. Most recent development is focused on the Bronx side of the Harlem River, while the potential greenway would be located on the Manhattan side. The potential greenway would complement this development by providing pedestrian waterfront access on the Manhattan side as well. Moreover, the analysis and research herein have shown that no water-dependent uses currently exist or are proposed within a significant majority of the Study Area. In addition, the banks of the navigational channel continue to transform, supporting more open space that allows for access that is not dependent on the navigability of the channel. Overall, when considering this project, it is important to acknowledge that despite the potential benefits to pedestrian access and green space that are associated with the project, there is a risk of going under the historic bridge. Additionally, careful planning will be required to ensure the project does not reduce the feasibility of a similar project on the Bronx side of the river at Highbridge Yard. Proper coordination and mitigation measures would need to be taken to ensure impacts to both present and future resources are accounted for.

5.0 Navigation and Maintenance History

The Harlem Ship Canal officially opened on June 17, 1895. Prior to its construction, the surrounding area featured an intricate network of tidal creeks and wetlands. To enhance navigation and support industrial growth in New York Harbor, the city undertook extensive dredging and channelization of the Harlem River during the late 19th and early 20th centuries. Across the Harlem River watershed, roughly 25 spring-fed streams once contributed a combined 32 miles of natural water flow. Over the course of the 20th century, nearly all these waterways were either filled in or redirected underground, with only about four miles of Tibbetts Brook remaining above ground today.[13]

Based on USACE dredging history records, the USACE dredged the Harlem River from 1929 to 1973. The USACE's dredging history is presented in Table 4, and the resulting construction depth in each reach is presented in Table 1. USACE last conducted maintenance dredging in the federal navigation channel of the entire Harlem River in July 1973. USACE dredged to a depth of 15 feet below Mean Low Water, removing 141,104 cubic yards (CYD) to provide sufficient depth for safe navigation of vessel traffic.

[13] Harlem River Watershed and Natural Resources Management Plan for the Bronx, 2020

Table 4 - USACE Dredging History of the Harlem River[14]

Fiscal Year	Dredging Date	Depth (ft)	Reach	Construction (CYD[15])	Maintenance (CYD[16])
1930	Jul 1929	15	Between Macombs Dam Br & Putman RR Br.	99 R 976 OM	-
1930	Jul 1929 – Mar 1930	15	Between High Br. & Broadway Br.	228,143	-
1931	May – Jun 1931	15	Between High Br. & W 207th St.	0	-
1931	During FY 1931	15	Various Shoals	333	-
1931	Apr-Jun 1931	15	Between West 114th St. & West 126th St.	-	33,850
1932	June-Aug 1931	15	Between West 114th St. & West 126th St.	8,733 OM	-
1932	June 1932	15	Between High Br. & W 207th St.	15,459R	-
1937	Oct – Jun 1937	15	Straightening channel at Johnson Iron Works	84,319 R 81,467 OM 125,958 AM	-
1938	Oct – May 1938	15	Straightening channel at Johnson Iron Works	132,983 R 163,758 OM 127,224 AM	-
1938	Oct 37 – May 1938	15	21 Isolated areas between the 3rd Ave Bridge and Broadway Bridge	-	79,255
1939	Mar – Apr 1939	15	4 areas, wreckage and debris	-	-
1957	November 3 – November 16, 1956	15	Vicinity Macombs Dam Bridge (shoals)	-	1,410

[14] USACE Harlem River Dredging Record – Freedom of Information Act Request dated 12/09/2025
[15] Cubic Yards
[16] Cubic Yards

Fiscal Year	Dredging Date	Depth (ft)	Reach	Construction (CYD[15])	Maintenance (CYD[16])
1965	June 1 – June 30, 1965	15	Isolated sections between 103rd St. Bridge & Broadway Bridge	-	3,600
1966	23 Jun – 22 Sept 1965	15	(Bridge)	-	37,691
1969	September 23 – September 28, 1968	15	Vicinity Macombs Damn Bridge	-	4,059
1974	% Jul 1973	15	Harlem River Total	-	141,104

The USCG does not maintain any aids to navigation on the Harlem River federal channel.

6.0 Physical Constraints Including Bridges and Tunnels

Bridges are constraints that may be obstacles to certain types of waterborne traffic. The dimensions and functionality of a bridge (fixed, lift, swing, etc.) will restrict traffic that exceeds the available horizontal and vertical clearance. Bridges may contribute to vessel congestion areas if clearances are inadequate to allow vessels to navigate safely past each other. The Harlem River Federal Navigation Channel has 15 bridges, two of which are in the study area (Table 5). Pictures of both bridges, taken from the vantage point of a vessel on the Harlem River, can be referenced in Figures 11 and 12.

Table 5 - Bridges in Harlem River Study Area[17]

Bridge Name	River Mile[18]	Bridge Type	Navigation Horizontal Clearance (ft)	Navigation Vertical Clearance (ft)
145st Bridge	2.8	Movable-Swing	103.7	24.9
Macombs Dam Bridge	3.2	Movable-Swing	164.7	28.8

[17] https://infobridge.fhwa.dot.gov/data
[18] From confluence with East River

Table 6 - Bridge Measurements in Feet (Approximate)[19]

Bridge Name	River Width at Bridge	Manhattan Bank to West Footing	West Footing to Center Piling	Center Piling Width	Center Piling to East Footing	East Footing to Bronx Bank
145st Bridge	419	73	105	83	120	42
Macombs Dam Bridge	408	13	166	64	152	21

Note that the navigable channel width for either side of each bridge is synonymous with the labels "West Footing to Center Piling" and "Center Piling to East Footing". The river width generally narrows from 419 feet at the 145th Street Bridge to its narrowest point of 408 feet at the Macombs Dam Bridge. The river then widens moving north towards 163rd street to approximately 485 feet. These dimensions inherently restrict the volume/density and type of vessel traffic which can safely navigate the Harlem River.

6.1 Tunnels and Utility Crossings

While both tunnels and utility crossings are unlikely to impact vessel navigation directly, their location will inform development for the greenway. NOAA navigational charts identify areas under both bridges as cable crossing areas (see Figure 10). As such, vessels must avoid anchoring in such areas to prevent disturbing a utility or communication line. Additionally, the NYCDOT Bridges Division advised the project team that electric cables run parallel to the bridges on the floor of the Harlem River. These cables support communications and bridge operations. Periodically, these cables need to be replaced. Telecommunications companies may also have lines running across the river in these areas.

There are two subway tunnels in the study area. The 149th Street Tunnel crosses the Harlem River just south of the 145th Street Bridge. The Concourse Tunnel crosses north of the Macombs Dam Bridge. Both are visible on the 2024 USACE Hydrosurvey of the Harlem River (see Appendix 3).

In addition, Figure 8 displays the general locations of these tunnels. As noted above, the presence of these tunnels does not directly impact day-to-day vessel traffic. Still, they must be accounted for during MWG: North Harlem planning to ensure they are not compromised. Periodic maintenance of these tunnels may cause vessel traffic diversions in the area.

6.2 Champlain Hudson Power Express (CHPE) Project Overview[20]

The Champlain Hudson Power Express (CHPE) is a high-voltage direct current (HVDC) transmission project designed to deliver 1,250 megawatts of renewable hydroelectric power from Quebec, Canada, to New York City. Spanning 339 miles, the transmission line primarily follows underwater and underground routes, reducing environmental and visual

[19] Measurements taken in NOAA ENC Viewer utilizing the measuring tool and are considered approximate
[20] https://chpexpress.com/construction-progress/

impacts. The project is intended to support New York's clean energy transition by increasing the supply of low-carbon electricity.

6.3 CHPE in the Harlem River

The Harlem River segment is a key portion of the CHPE route, where the transmission cables will be laid underwater along a 6.2-mile stretch of the river. The installation process involves:

- Pre-installation surveys to clear debris and prepare the riverbed.
- Jet plowing to create a trench in the riverbed for cable burial at a minimum depth of seven feet below sediment.
- In areas of the river where the cable is not buried, it will be laid atop the riverbed.
- Post-installation monitoring to confirm burial depth and ensure minimal impact on navigation and infrastructure.

The Harlem River segment will connect the underwater Hudson River segment to land-based infrastructure in the Bronx and Queens, ultimately leading to a converter station in Astoria, Queens.

6.4 CHPE Project Status in the Harlem River

As of early 2025, CHPE is over 60% complete, with Harlem River cable installation scheduled for later this year. During installation, vessels will work along the river, requiring temporary commercial and recreational traffic navigation precautions. The project is expected to be fully operational by Spring 2026.

This section of the project has been designed to minimize disruption to river traffic, with cables being buried wherever possible. CHPE is coordinating with maritime authorities to ensure safety during the installation phase.

The Project Team contacted CHPE and provided them with a stakeholder questionnaire, which is discussed in more detail in Section 9. CHPE did not identify any conflicts with either deauthorization or the greenway project. CHPE has stated that the cable will not be buried in the study area and can be temporarily floated on the surface during construction to avoid conflicts. CHPE advised that the cable is expected to pass under the eastern (Bronx) draw of the Macombs Dam Bridge.

Figure 10 – NOAA Chart US5NYCFH - Snapshot of Study Area

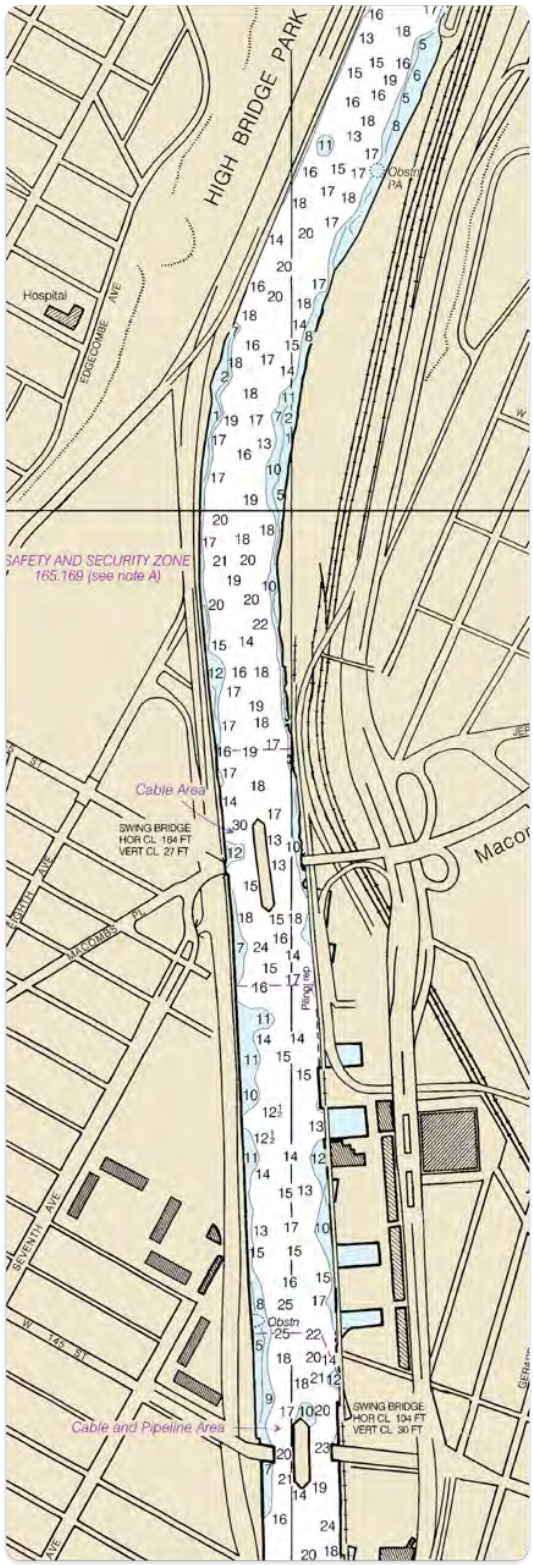


Figure 11 - 145th Street Bridge from Harlem River[21]



[21] Picture courtesy of NYCEDC. Note that bridge is symmetrical. Picture is of the Manhattan draw. Taken August 2022.

Figure 12 - Macombs Dam Bridge, Taken from the North Side Looking South[22]



[22] Picture courtesy of NYCEDC. Taken August 2022.

7.0 Operational Information

7.1 Commodity Flow, Trips, and Drafts (2013-2022)

The project team evaluated detailed data from the USACE's Institute for Water Resources, Navigation Data Center (NDC) Waterborne Commerce Statistics over ten years to identify commodities transported and trips and drafts of vessels within the Harlem River. Statistics were available covering the period of 2013 through 2022 at the initiation of the analysis. In addition, a stakeholder analysis was conducted through interviews with stakeholders operating in the Harlem River (see Section 9). The stakeholder analysis revealed each stakeholder's current and reasonably anticipated future use at their facility or for their operation.

Figures 13 and 14 present data for calendar years 2013, 2015, and 2020, that indicate there were no recordable trips during the other years between 2013 and 2022.

Waterborne Commerce Statistics revealed several interesting characteristics of the commerce conducted on the Harlem River from 2013 to 2022 (Figure 13). The users along the Harlem River transported nearly 25.5 million tons of commodities over 10 years (2013-2022). Approximately 84% of the commodities are classified as Sand and Gravel. The remaining commodity, distillate fuel oil, comprises over 4136 thousand tons, representing approximately 16% of the commodities. The total trips and draft barge size per year (Figure 14) were also evaluated.

Figure 13 - Commodities Transported Harlem River (2013-2022)

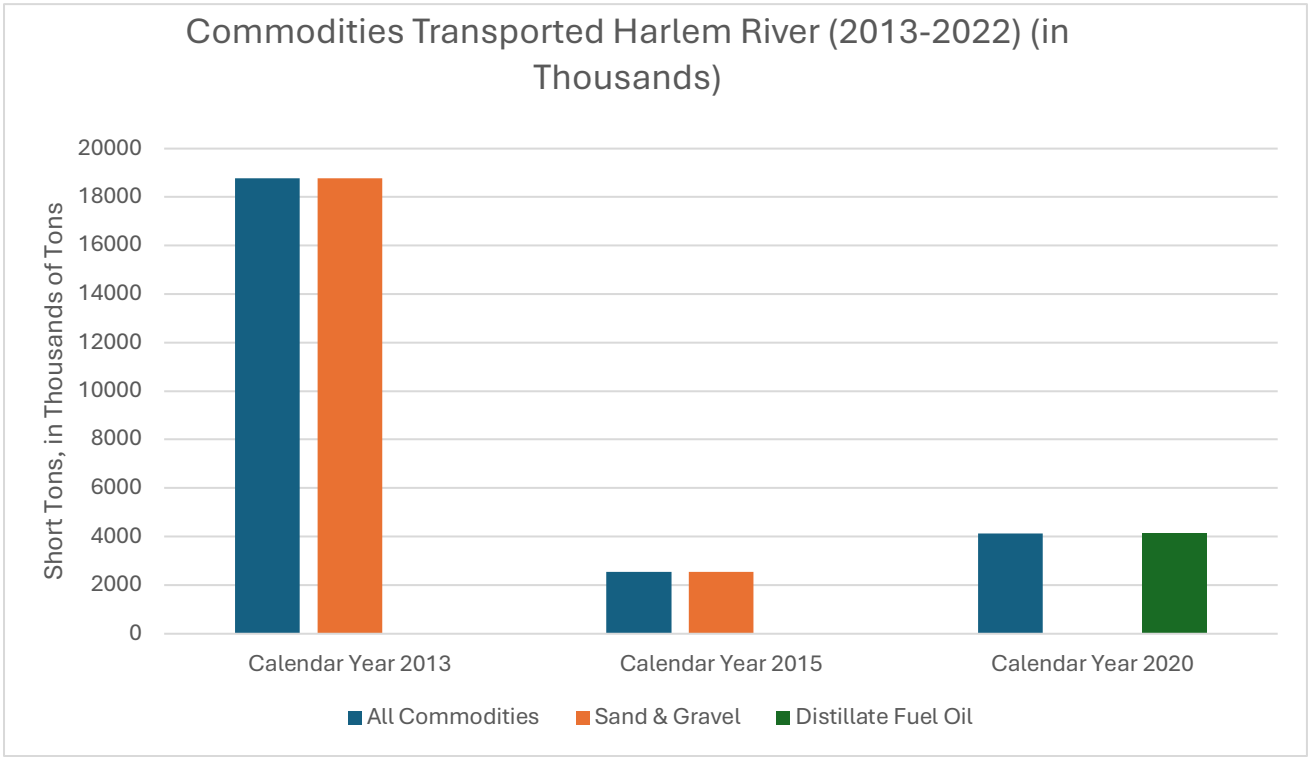
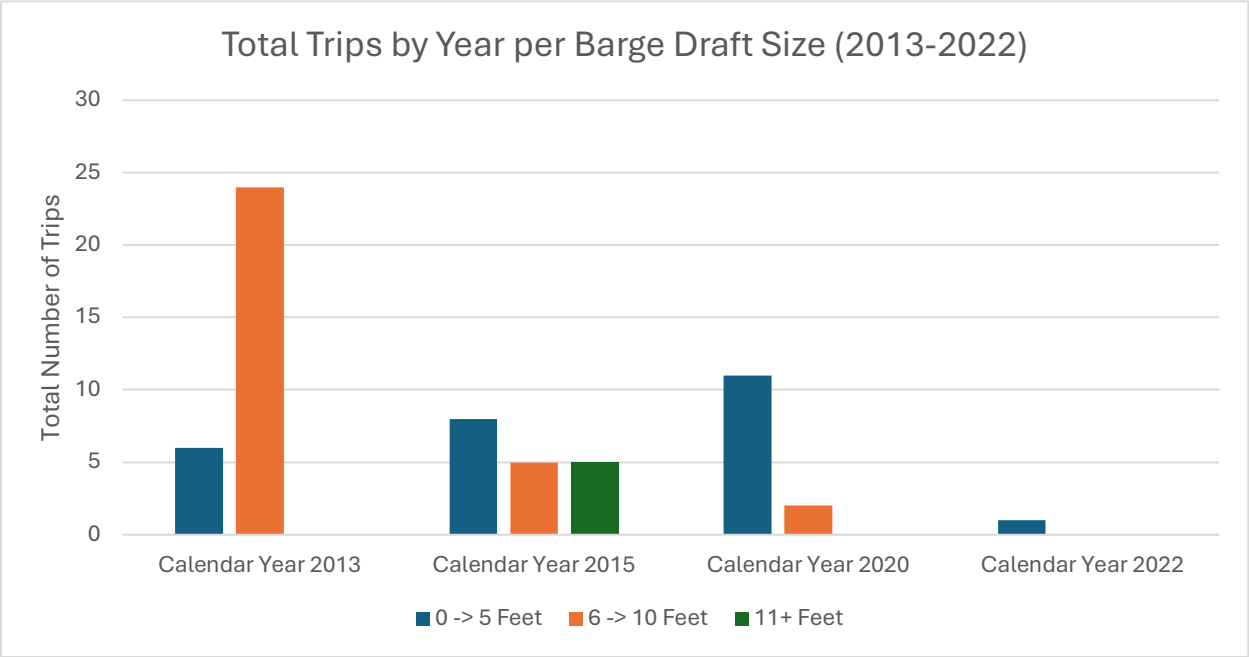


Figure 14 - Total Trips by Year per Barge Draft Size



Three observations can be made after evaluating the waterborne commerce data for this 10-year period:

1. The bulk of this commerce consisted of Sand and Gravel products, accounting for more than 84% of the total volume. The remaining volume consisted of Distillate Fuel Oil (Figure 13).
2. The volume of commerce varied dramatically over the years, with most calendar years experiencing zero commerce and trips.
3. Approximately 92% of commerce was transported in vessels whose loaded draft is 10 feet or less. However, users occasionally request greater-depth barges, as in 2015.

These three observations, taken together support the conclusion that partial deauthorization, and subsequent potential MWG: North Harlem, are unlikely to impose a significant burden on the current or foreseeable commercial commodities traffic.

7.2 Berth and Facility Analysis

Ports and Waterways Facilities Data (Feb 2025) was obtained from USACE's Waterborne Commerce Statistics Center. Five port facilities were listed as being on the Harlem River. Detailed results are included in Table 7. Of these five facilities, only one was in the study area, the Public Fuel – Highbridge Facility. Note that this facility is on the Bronx side of the river and blocked from waterfront vessel access by the Oak Point Link railroad line (See Figure 15). Additionally, the Bronx Industrial Scrap yard, while listed as being on the Harlem River is located on the Bronx River, hence there are only four facilities shown on Figure 15.

Table 7 - Ports and Waterways Facilities, Harlem River (Feb 2025)

Names	Mile	Latitude	Longitude	Owners	Dock	Commodities	Remarks	In Study Area?
Kinder Morgan Brooklyn	2	40.80646	-73.930335	Current Owner and Operator: KINDER MORGAN BROOKLYN Phone: 713-401-5816	92	-	Location at the foot of Lincoln Avenue, Bronx	No
Central Coal Co. Wharf	2	40.815333	-73.932213	-	129	-	Location from past Port Series 5 map. Imagery shows the waterfront blocked by the Oak Point Link railroad	No
Bronx Industrial Scrap Corp	2	40.818592	-73.882632	-	139	-	-	No (Bronx River)

Names	Mile	Latitude	Longitude	Owners	Dock	Commodities	Remarks	In Study Area?
Public Fuel – Highbridge	3	40.821862	-73.932207	-	149	Units (Ferried Autos, Passengers, Railway Cars) | Sand, Gravel, Stone, Rock, Limestone, Soil, Dredged Material	Location from historic Port Series 5 map. Imagery shows the waterfront blocked by the Oak Point Link railroad, which is elevated above the river, and the site vacant. Oak Point Link Railroad was opened in 1998.	Yes
184 St.	6	40.862884	-73.913742	-	310	-	-	No

Figure 15 - Ports and Waterways Facilities of the Harlem River[23]



[23] Map Developed from NYC Department of City Planning, LION Single Line Street Base Map,vol. 19D, 2019, in Bytes of the Big Apple. Base Map image from riverhistories.org/harlem-river/

7.3 Vessel Traffic Information

The objective of the Vessel Traffic Analysis (VTA) is to gather data on vessel types and vessel transits that could be affected by the potential deauthorization of the project area and the potential MWG: North Harlem. The VTA was accomplished through detailed vessel Automatic Identification System (AIS) data analysis. Both the USCG and the USACE provided recommended sources from which AIS data was obtained. The SMSLLC project team obtained data during October 2024 from *Marine Cadastre*, a preferred AIS resource of the USACE and USCG. AIS data from 2019 through Q1 2024 for the study area was obtained. The data was provided as a rough Excel file with tens of thousands of data entries.

AIS Limitations

The AIS is an industry-standard dataset for vessel traffic analysis and risk assessments. However, inherent limitations must be considered when interpreting AIS-derived trends.

AIS carriage requirements exempt certain classes of vessels, such as smaller commercial vessels and some recreational boats, leading to incomplete vessel coverage in any given area.[24] Additionally, AIS data accuracy is highly dependent on proper data entry by vessel operators, and errors—such as incorrect vessel dimensions, misclassification of ship types, or failure to update tow configurations—can result in misleading representations of vessel activity.[25] Signal reception limitations may also cause gaps in AIS data, particularly in areas with obstructions or weak coverage, necessitating supplementary data sources such as authoritative vessel registries.

Despite these limitations, the USCG recognizes AIS as the primary tool for spatial analysis of the Marine Transportation System and accepts it as a general indicator of vessel traffic patterns, provided that appropriate caveats and supplementary analyses are included. Moreover, the USCG has issued guidance emphasizing the importance of accurate AIS data entry and maintenance, underscoring the role of vessel operators in enhancing navigational safety and decision-making.

The project team contracted a third-party service provider to translate the data into detailed visualizations and analyze it for trends and other helpful information. Based on the available data sets, the team decided to use the most recent complete data set for 2023. At the time of this report, the entire 2024 dataset on the *Marine Cadastre* was unavailable.

Visualizations produced by the third-party service provider and the project team include:

- Overview of 2023 AIS Vessel Traffic Patterns overlayed with the potential partial deauthorization area (see Figures 16-19);
- Primary incursions into the potential partial deauthorization area (see Figures 20-23);
- Vessel Movement Patterns and Traffic Density (See Figures 28-30; 32);
- Vessel Traffic by type and seasonality year-over-year (See Figures 24-27; 31);

[24] USCG Navigation Center (NAVCEN) Work Instruction 2022-01
[25] USCG Safety Alert 04-20

Data was also analyzed to identify vessel traffic patterns associated with seasonal use and vessel types and to identify vessels that most frequently transit the study area. In Figures 16-19, the pink arrows indicate AIS data points, which are vessel track lines. All vessel transits from 2023 are show in Figures 16-19. In Figures 20-23, the arrowed lines are vessel track lines for specific passenger vessel transits which intersected the potential deauthorization area at any point during the vessel's transit through the study area. Analysis revealed that there were approximately 150 trips that caused an incursion in the potential deauthorization zone. Of the 150, nine were Circle Line vessels, 25 were Classic Harbor Line Vessels, and All Others were 116.

Please note that several figures organize and present data by trips. Trips can be defined as a continuous voyage through the study area (e.g., entering and exiting). It is calculated from AIS data as a sequence of AIS messages grouped by vessel and time gap. Each uninterrupted sequence is counted as a separate "trip" through the river.

Data is presented in several forms of visualization including:

1. Monthly Vessel Traffic by Trips (2021-2023) (Figures 25-27);
2. Seasonal Variability in Vessel Traffic (2023, Total Trips) (Figure 31);
3. Vessel Movement Patterns (2021-2023) (Figures 28-30);
4. Vessel Traffic Density on Harlem River (2023) (Figure 32); and
5. Vessel Type Breakdown by Number of Trips (2021-2023) (Figure 24).

A brief description of what each visualization type shows and its utility to the study are provided below.

Monthly Vessel Traffic by Trips (Figures 25-27)

Each line chart presents the number of vessel trips per month by vessel type (e.g., passenger, tug, cargo). Trips are defined as uninterrupted AIS activity segments for unique vessels (MMSIs) through the Harlem River study area. These visualizations are useful because they highlight seasonal fluctuations in vessel operations, particularly the surge in passenger vessel activity during spring and summer months. They show consistent tug traffic throughout the year. This information will assist planners in determining the timing of construction, inspections, or maintenance work near piers and bridges.

Seasonal Variability in Vessel Traffic (2023, Total Trips) (Figure 31)

This line chart condenses all traffic into a total trip count per month for 2023, regardless of vessel type. It offers a clear overview of peak usage periods across all vessel categories. This may clarify congestion risks at chokepoints such as the Macombs Dam Bridge and the 145th Street Bridge. It will be useful for understanding when additional safety measures or operational controls, such as signage and communications, may be indicated.

Vessel Movement Patters (2021-2023) (Figures 28-30)

Each scatter plot depicts all AIS positions from trips through the study area, color coded by vessel type. The approximate bridge locations are overlaid for spatial reference to identify common vessel corridors and traffic density within the navigational channel. Scatter plots display similar information to Figures 16-23, but in a simpler format which may be easier to read and understand. These visuals help validate the observations that

vessels adhere to predictable travel lanes, which may be especially relevant for bridge clearance modeling or any potential encroachment (e.g., for MWG development). Scatter plots may also help inform risk assessments near high-traffic clusters, such as upstream and downstream from the bridges.

Vessel Traffic Density on the Harlem River in the study area (2023) (Figure 31)

Figure 31 is a hexbin heatmap that visualizes AIS message concentration, which is a proxy for time spent in a location, overlaid with approximate bridge spans. It is useful as it pinpoints areas of prolonged vessel presence (e.g., docking, idling, maneuvering). It highlights potential conflict zones between slow-moving or stopped vessels and transiting vessels. This is helpful for modeling navigation hazards and evaluation the sufficiency of maneuvering room around bridge abutments and terminal areas. Note that the greatest density areas are underneath the spans of both bridges.

Vessel Type Breakdown by Number of Trips (2021-2023) (Figure 24)

Figure 24 is a grouped bar chart which summarizes the number of trips by vessel type across all three years. It is useful as it allows for a comparison of vessel type activity trends year-over-year. The trend is towards increasing vessel traffic overall, specifically passenger vessel traffic. The category of Other has decreased year-over-year while Tug traffic has remained fairly consistent. Knowing that passenger vessel traffic is both increasing year-over-year and constitutes a significant majority of vessel traffic is helpful as the information may be used to inform recommendations on which vessel types should be prioritized in planning and mitigation strategies. Additionally, Table 8 identifies the top 10 vessels by trips in 2023. Out of the total number of trips taken by the top 10 vessels in 2023, the top 5 were passenger vessels and constituted approximately 85% of the total trips taken by the top 10 vessels. For all vessel trips, passenger vessels accounted for approximately 71% of total trips for 2023.

Figure 16 - Incursions into the Potential Deauthorization Area from 145th to 163rd Streets

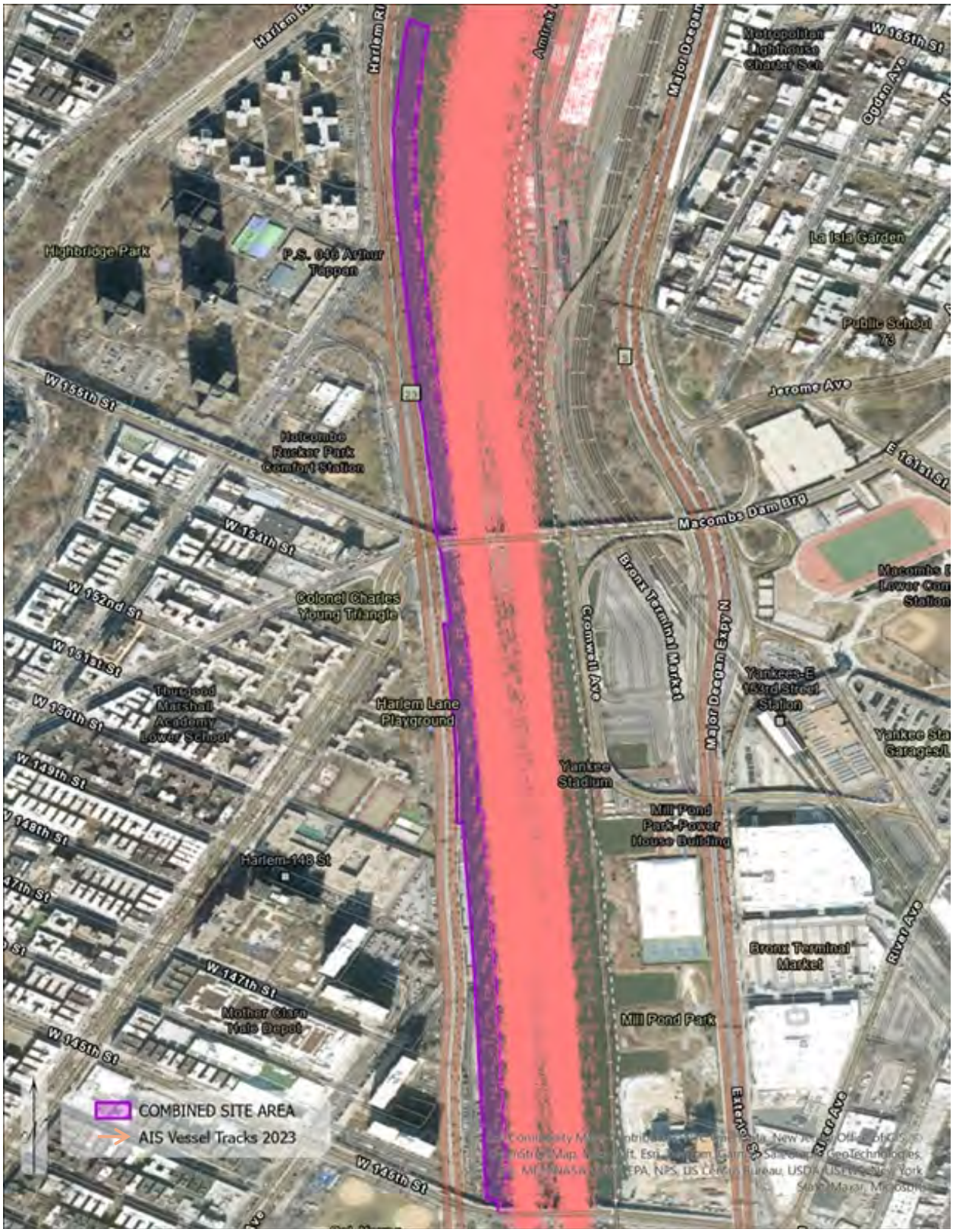


Figure 17 - Incursions into the Potential Deauthorization Area from Macombs Dam Bridge to 163rd Street

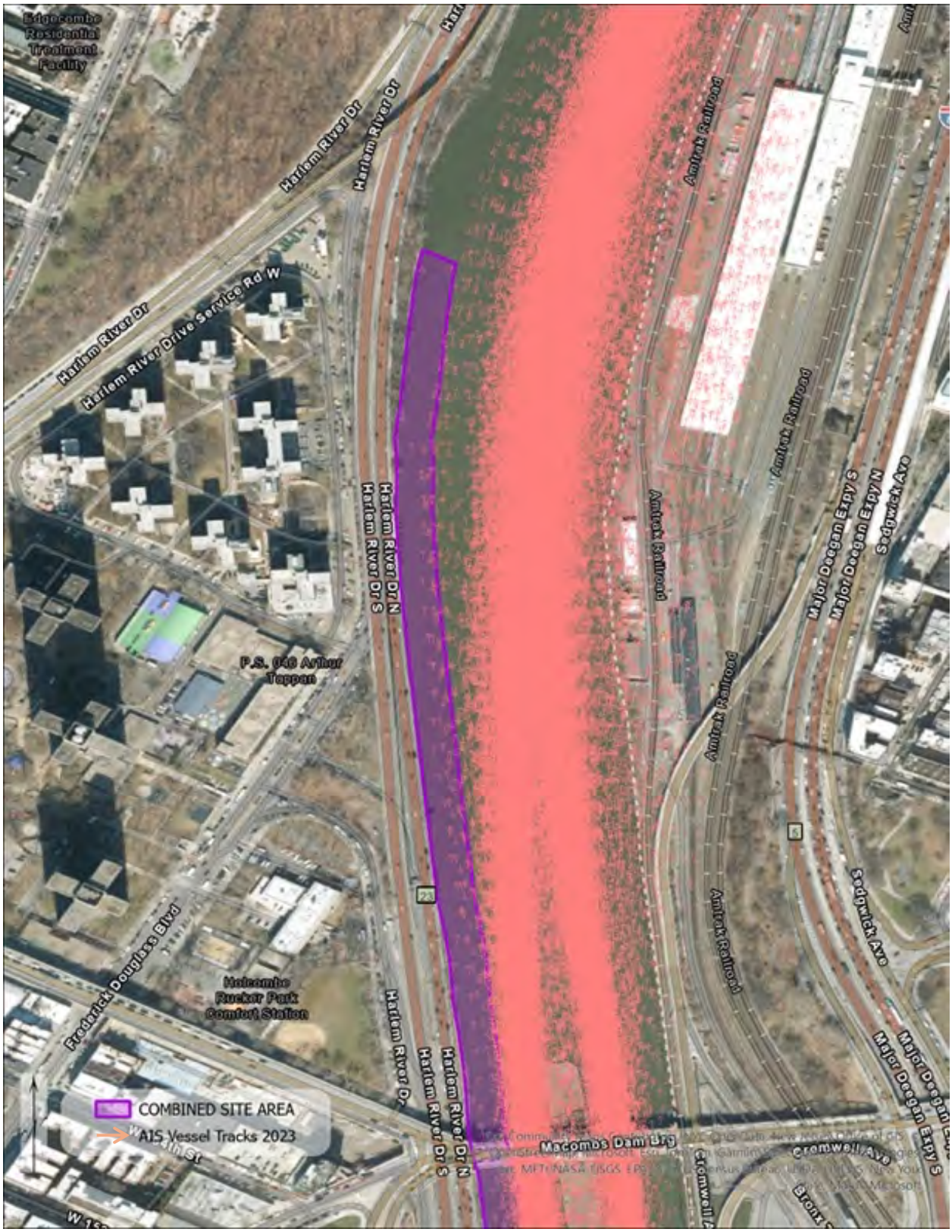


Figure 18 - Incursions into the Potential Deauthorization Area south of Macombs Dam Bridge

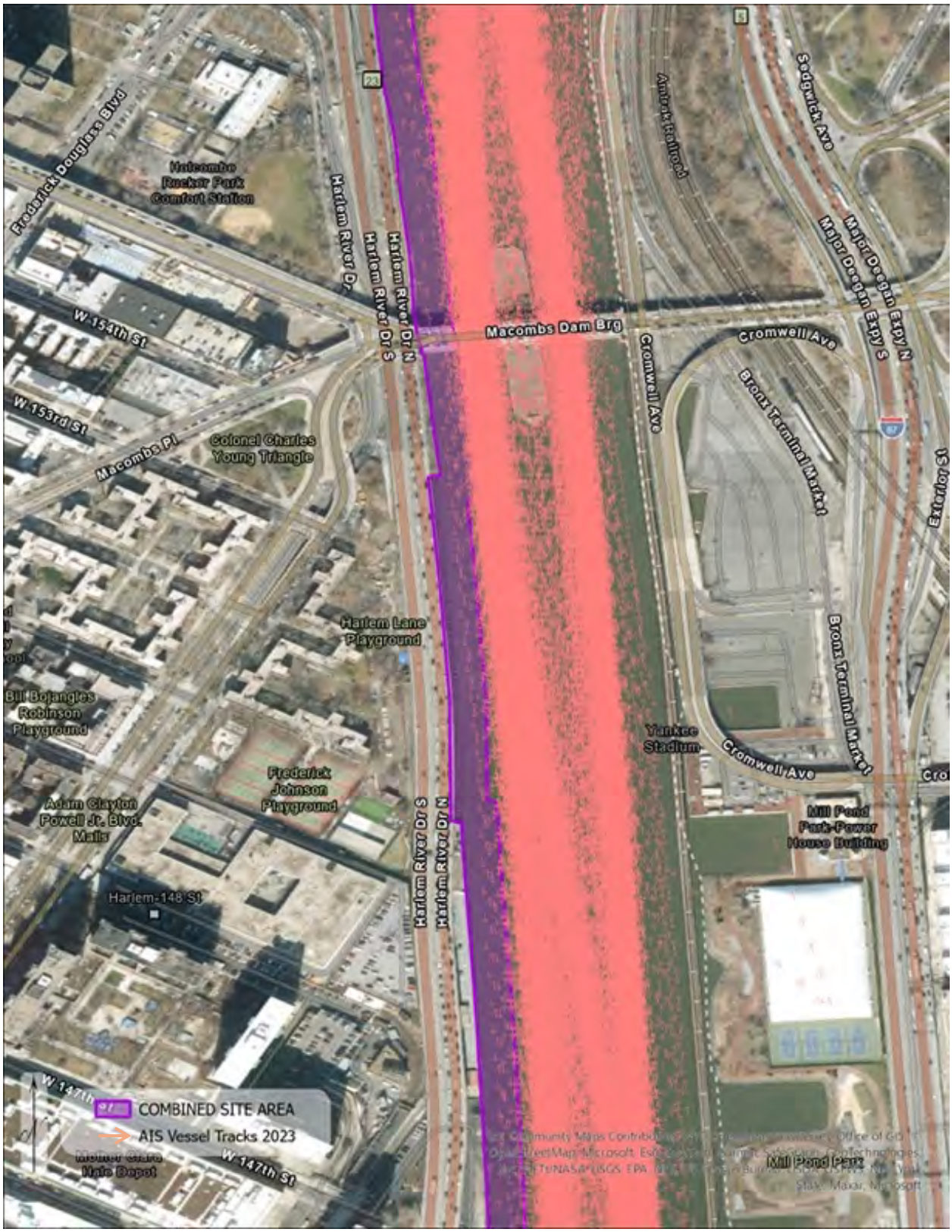


Figure 19 - Incursions into Potential Deauthorization Area North of 145th Street Bridge

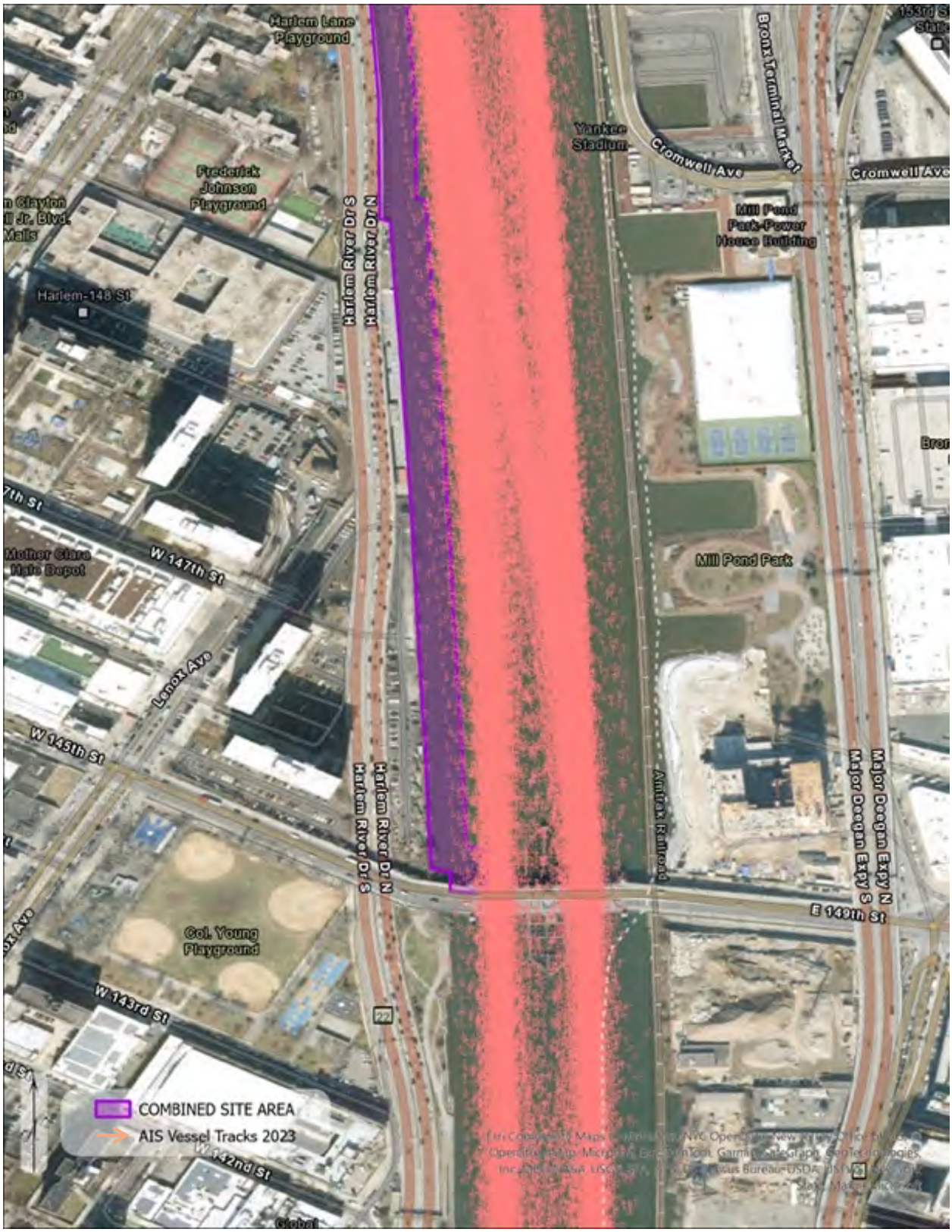


Figure 20 - Specific Vessel incursions into Potential Deauthorization Area, Full Study Area

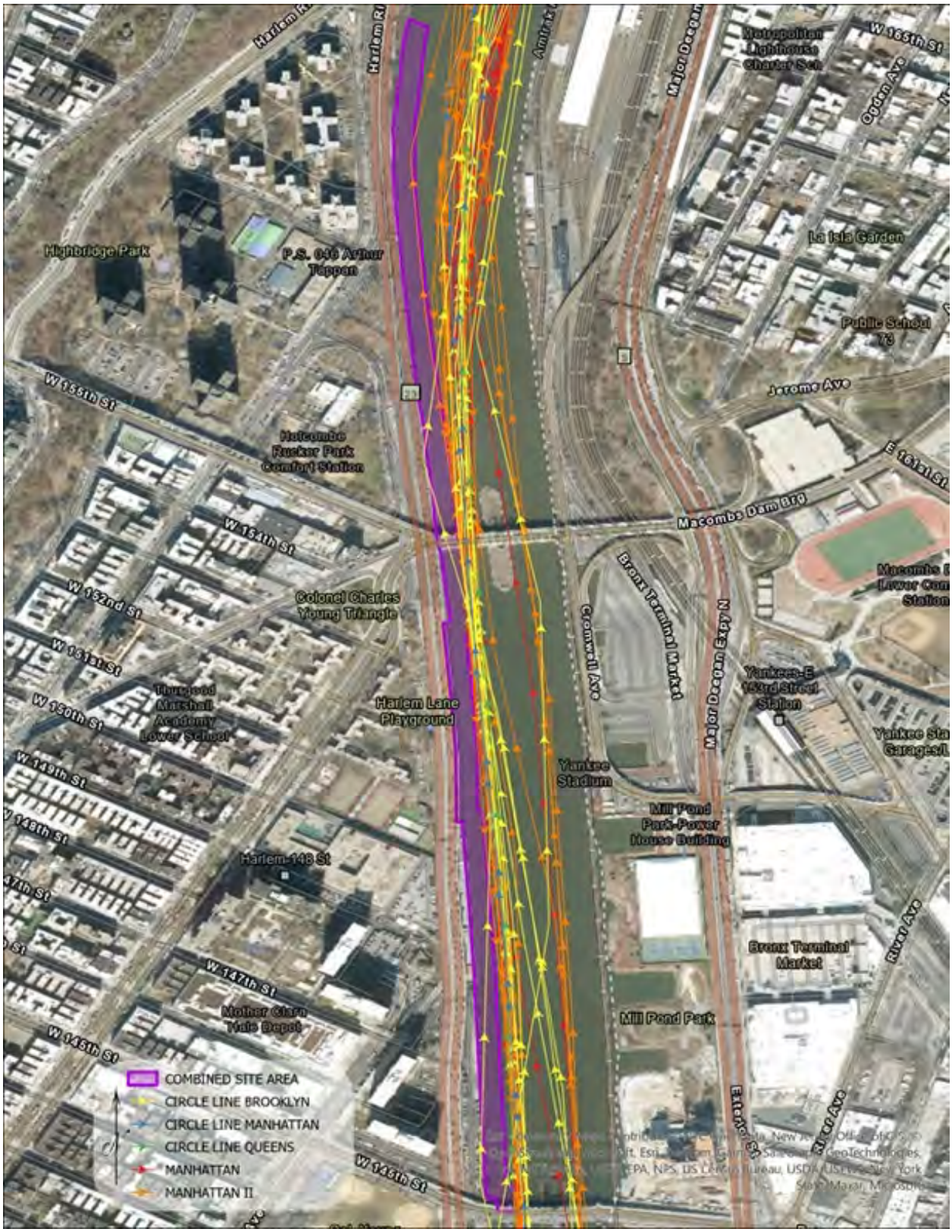


Figure 21 - Specific Vessel incursions into Potential Deauthorization Area, Macombs Dam Bridge north to 163rd Street.

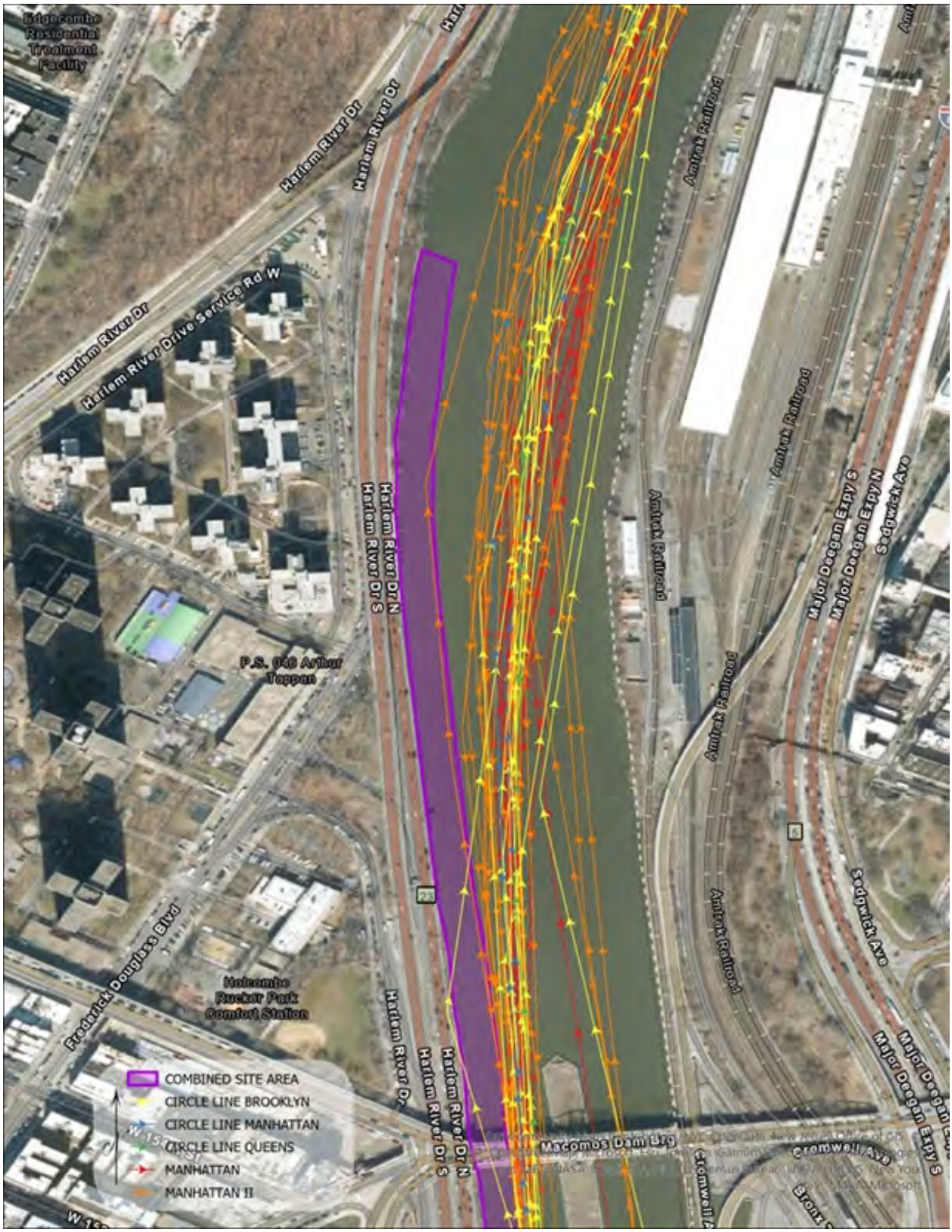


Figure 22 - Specific Vessel incursions into the Potential Deauthorization Area, south of Macombs Dam Bridge

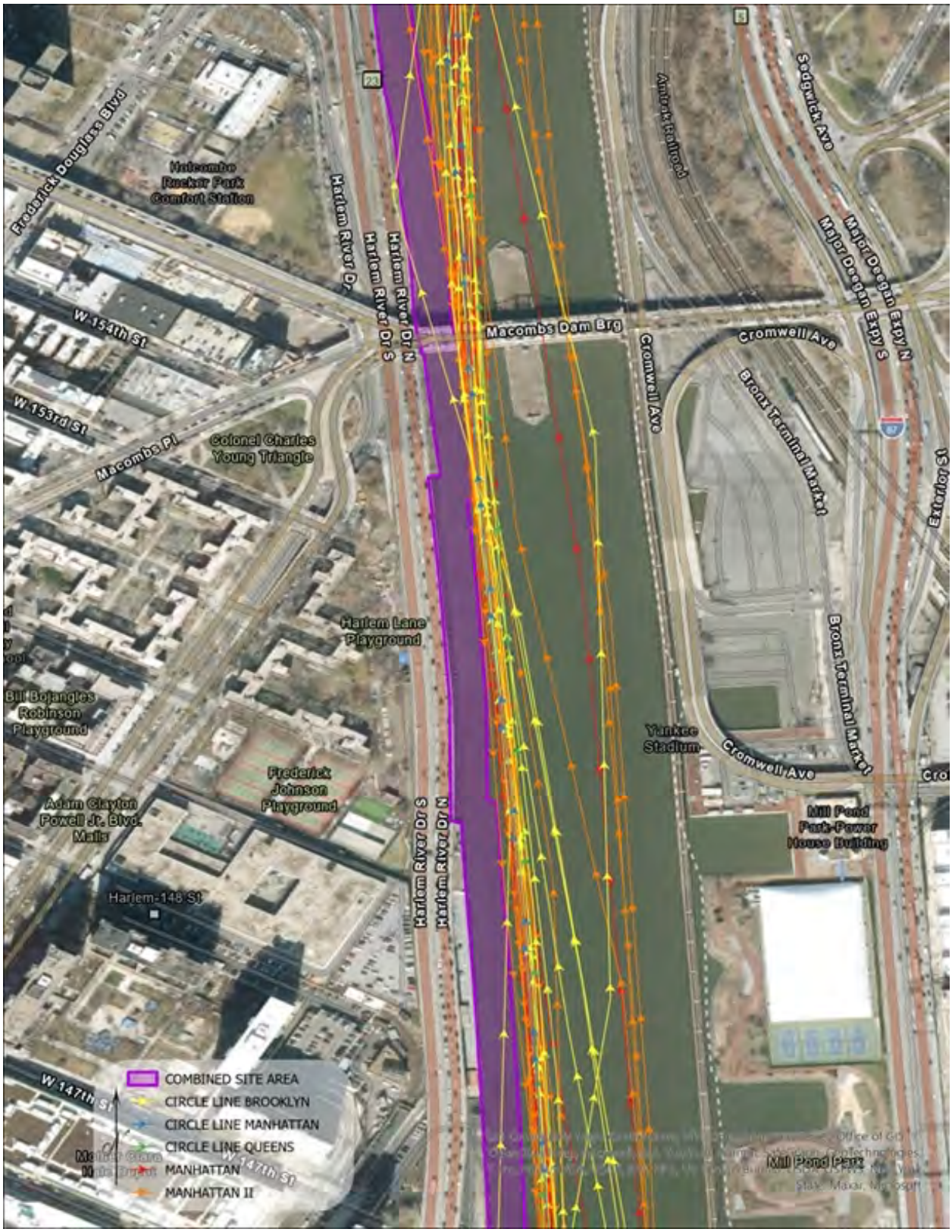
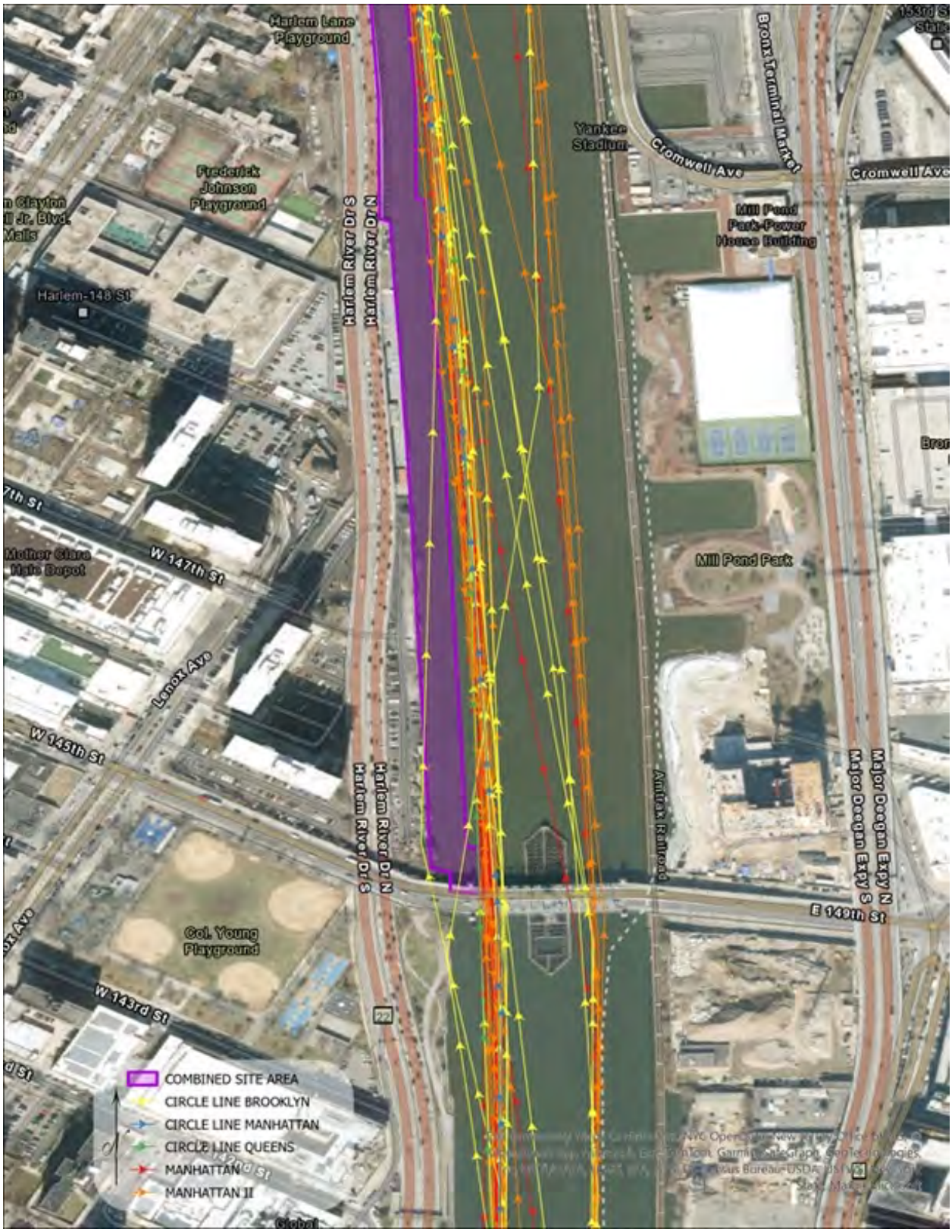


Figure 23 - Specific Vessel incursions into the Potential Deauthorization Area, 145th Street Bridge



The key findings from the analysis are:

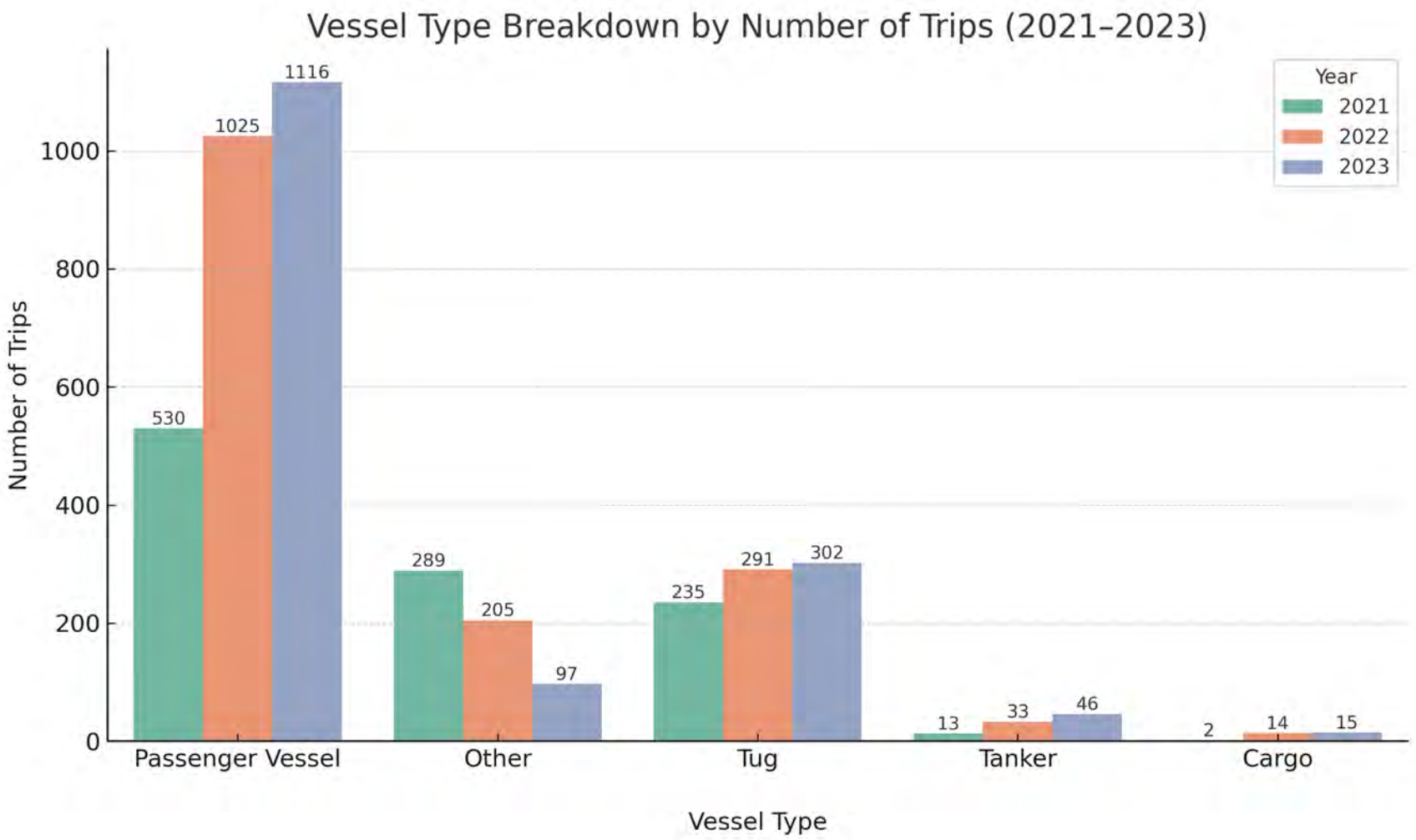
- Passenger vessel activity was the highest across the data set (See Figure 24);
- Vessel traffic follows well-defined routes, with relatively few incursions into the partial deauthorization area, as well as where the potential greenway structure is to be built (see Figures 16-23, 28-30, 32 – Vessel Movement Patterns);
- A majority of specific vessel incursions passed under the Manhattan draw of the Macombs Dam Bridge (See Figures 21 and 22);
- Passenger vessel activity peaks during warmer months (April-October) aligned with tourism demand (See Figures 25-27, 31); and
- Towing vessel activity peaks during warmer months (April-October) aligned with construction demand (See Figures 25-27, 31).

The resulting conclusions do not identify any immediate navigational conflicts between vessel traffic and partial deauthorization of the federal channel, provided that the physical conditions of the river remain unchanged, primarily the river depth and width.

Partial deauthorization of the federal channel would not change the fact that the Harlem River is a navigable waterway. However, if the deauthorized area were to become shallow or congested due to debris or silt build up, this could impact vessel traffic patterns by forcing traffic eastward.

There were a few conflicts between vessel traffic and the potential MWG: North Harlem project area. Specifically, there are vessel congestion/convergence areas underneath the two bridges on both sides. While the number of vessel incursions into the partial deauthorization area were a small percentage of total trips, it is noteworthy that most passed under the Manhattan draw of the Macombs Dam Bridge. The potential MWG: North Harlem may encourage vessel to alter their preferred course and transit under the Bronx draw of the Macombs Dam Bridge, as there would be greater horizontal clearance (91 feet Manhattan draw with MWG: North Harlem vs approximately 152 feet for the Bronx draw). This shift in traffic eastward may impact future waterfront development projects on the Bronx side of the river. Further project planning and development must account for these congestion areas to ensure vessel traffic is minimally unaffected and potential congestion and convergence areas are mitigated as much as possible.

Vessel Traffic Visualizations
Vessel Type Breakdown
Figure 24 - Vessel Type Breakdown 2021-2023



Monthly Vessel Traffic by Type

Figure 25 - Monthly Vessel Traffic by Type - 2021

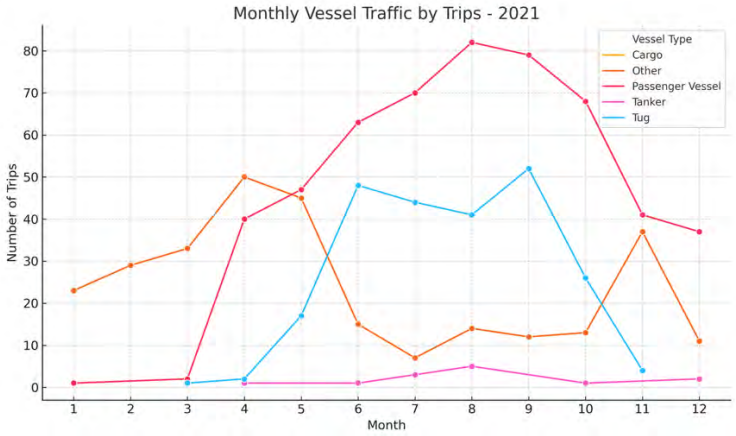


Figure 26 - Monthly Vessel Traffic by Type - 2022

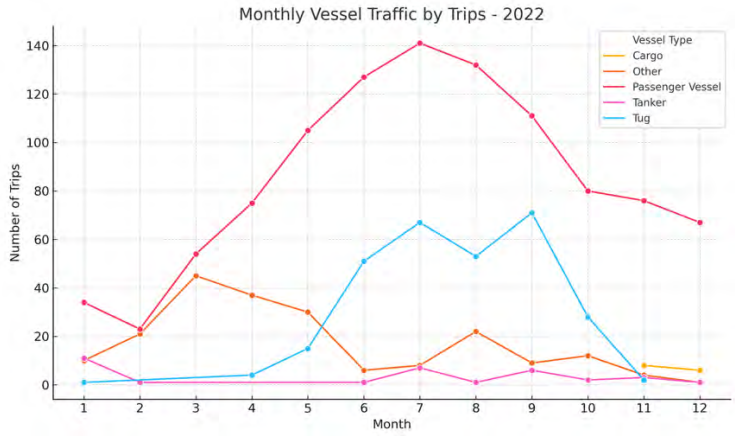
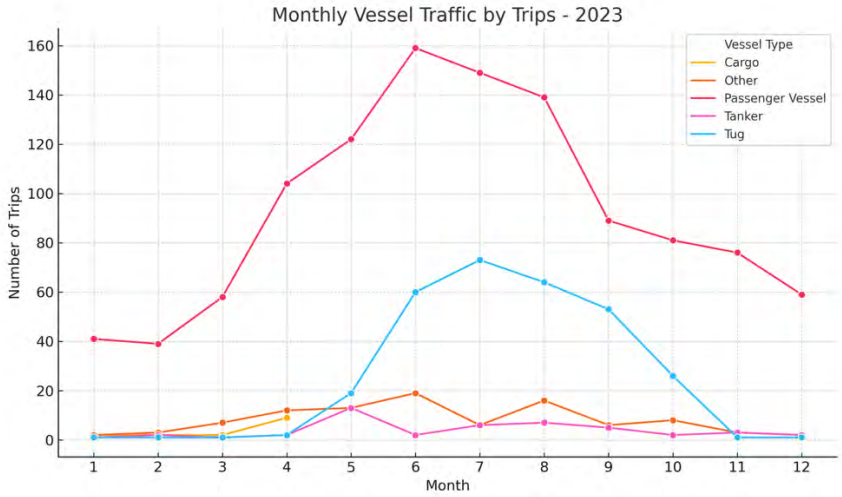


Figure 27 - Monthly Vessel Traffic by Type - 2023



Vessel Movement Patterns – By Year

Figure 28 - Vessel Movement Patterns - 2021

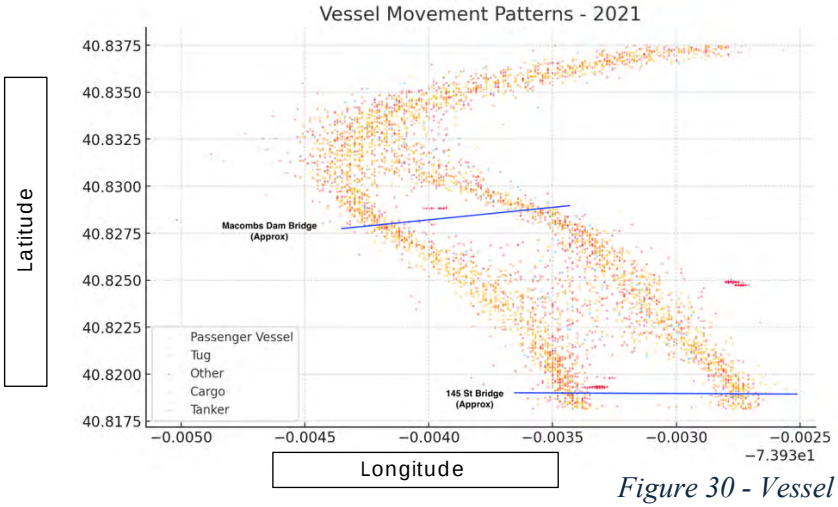


Figure 29 - Vessel Movement Patterns - 2022

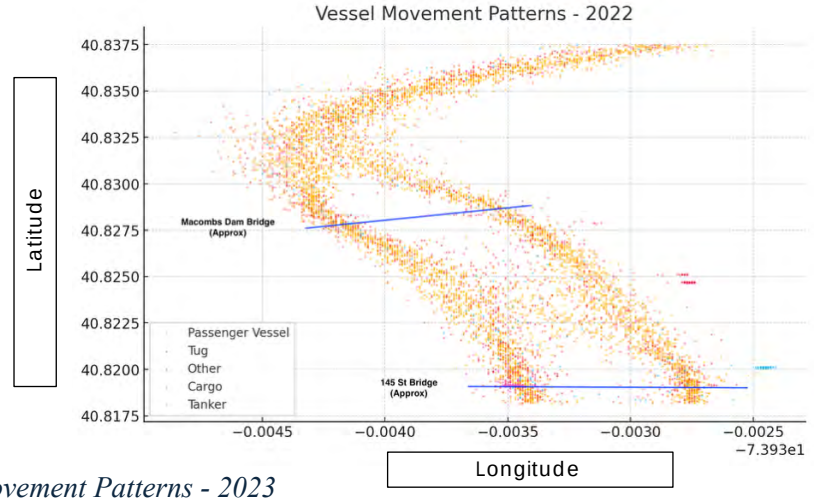


Figure 30 - Vessel Movement Patterns - 2023

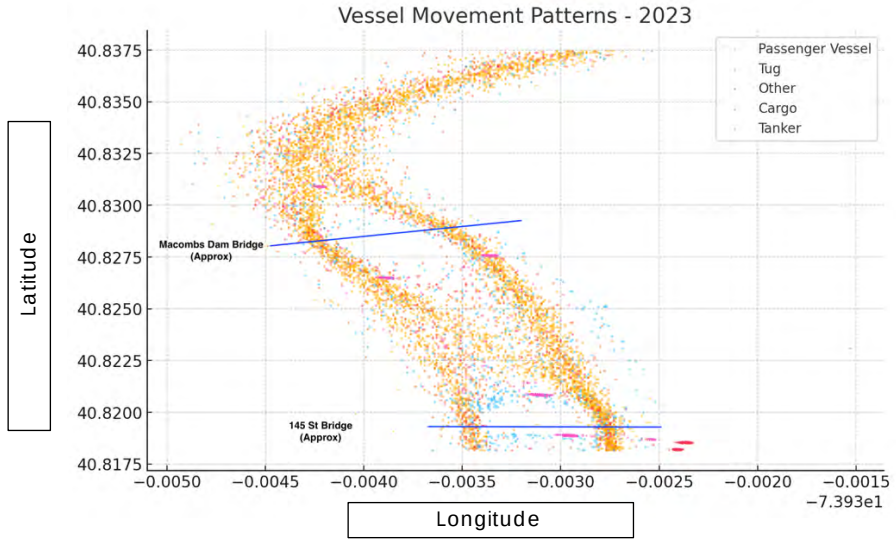


Figure 31 - Season Variability in Vessel Traffic (2023)

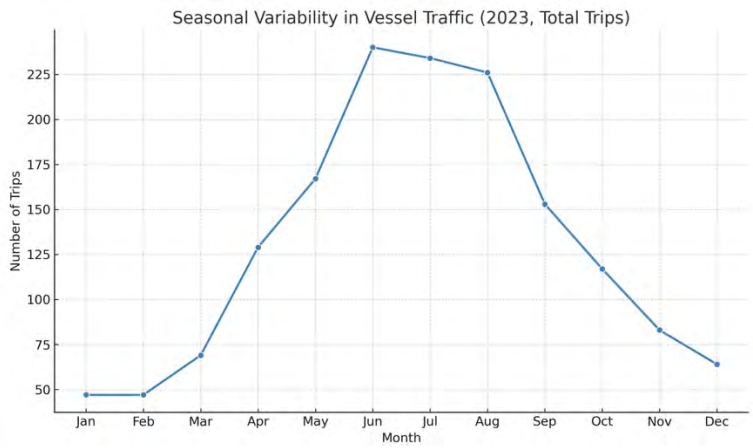


Figure 32 - Vessel Traffic Density on Harlem River (2023)

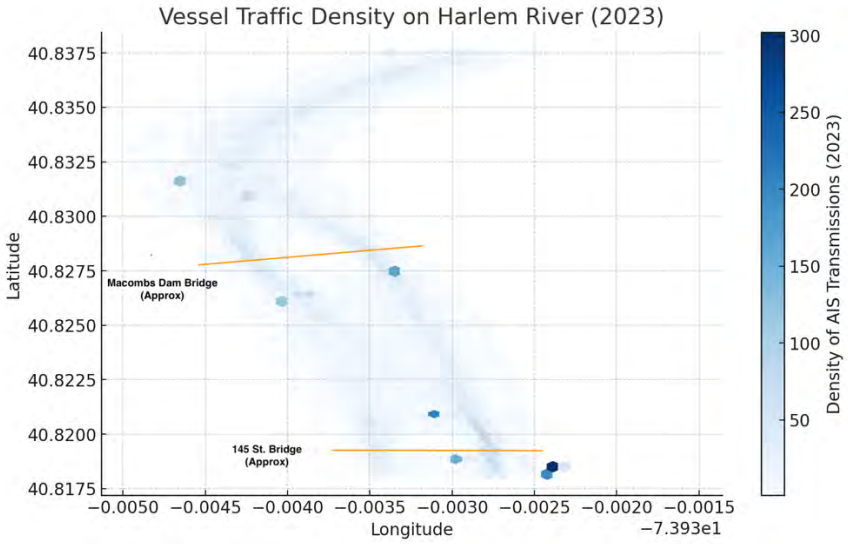


Table 8 - Top 10 Vessels by Trips (2023)

MMSI	Trips	Vessel Name	Vessel Code	Vessel Type	Company
367686740	303	MANHATTAN II	60	Passenger, All ships of this type	Classic Harbor Lines
367402250	260	CIRCLE LINE BROOKLYN	60	Passenger, All ships of this type	Circle Lines
367367270	212	CIRCLE LINE MANHATTAN	60	Passenger, All ships of this type	Circle Lines
367402210	170	CIRCLE LINE QUEENS	60	Passenger, All ships of this type	Circle Lines
367303910	149	MANHATTAN	60	Passenger, All ships of this type	Classic Harbor Lines
368111560	80	FDNY 4	51	Other type, all ships of this type	FDNY
368238270	38	SPOONBILL	37	Pleasure Craft	-
368111950	34	HSV OSPRY	90	Other Type, all ships of this type	NYCDEP
368078150	23	HERO	37	Pleasure Craft	-
338381216	21	DELTA	34	Diving Operations	-

8.0 Environmental Considerations

Environmental data related to the study area, partial deauthorization, and MWG: North Harlem project were reviewed to identify any environmentally sensitive areas or conditions in the project area and determine which may be impacted by the potential partial deauthorization. The environmental analysis was accomplished by researching existing publications, reports, and resources and through stakeholder engagement. The impact of the potential partial deauthorization and subsequent greenway extension was reviewed for consistency with existing environmental restoration efforts.

Combined Sewer Outflows (CSOs)

The NYC sewer system is approximately 60% combined, which conveys both sanitary and storm flows. When the sewer system is at full capacity, a diluted mixture of rainwater and sewage may be released into the local waterways. This is called a combined sewer overflow.[26] (See Figure 33). During wet weather, if the sewer system or Wastewater Resource Recovery Facility (WRRF) is at full capacity, a diluted mixture of combined storm and sanitary flow may discharge into the Harlem River through one or more of the 65 SPDES-permitted CSO outfalls. CSO discharges, direct drainage runoff, and tidal exchanges with the Hudson River and the East River influence water quality in the Harlem River. The New York State Department of Environmental Conservation (NYSDEC) and the New York City Department of Environmental Protection (NYCDEP) are committed to reducing the number of CSOs to improve water quality. DEP has developed 10 waterbody-specific Long Term Control Plans (LTCPs) to support this goal. The LTCP that covers the Harlem River is called the Citywide/Open Waters LTCP.

For this study, it is essential to identify the location of CSOs in the study area. Doing so will help determine if the potential partial deauthorization and the subsequent greenway extension project may impact CSOs and water quality. Figure 34 shows the study area and the CSO outflows within it. The study area contains two of the top five discharging CSO outfalls on the Harlem River. There are a total of nine outfalls in the project area, six on the Manhattan side and three on the Bronx side.[27]

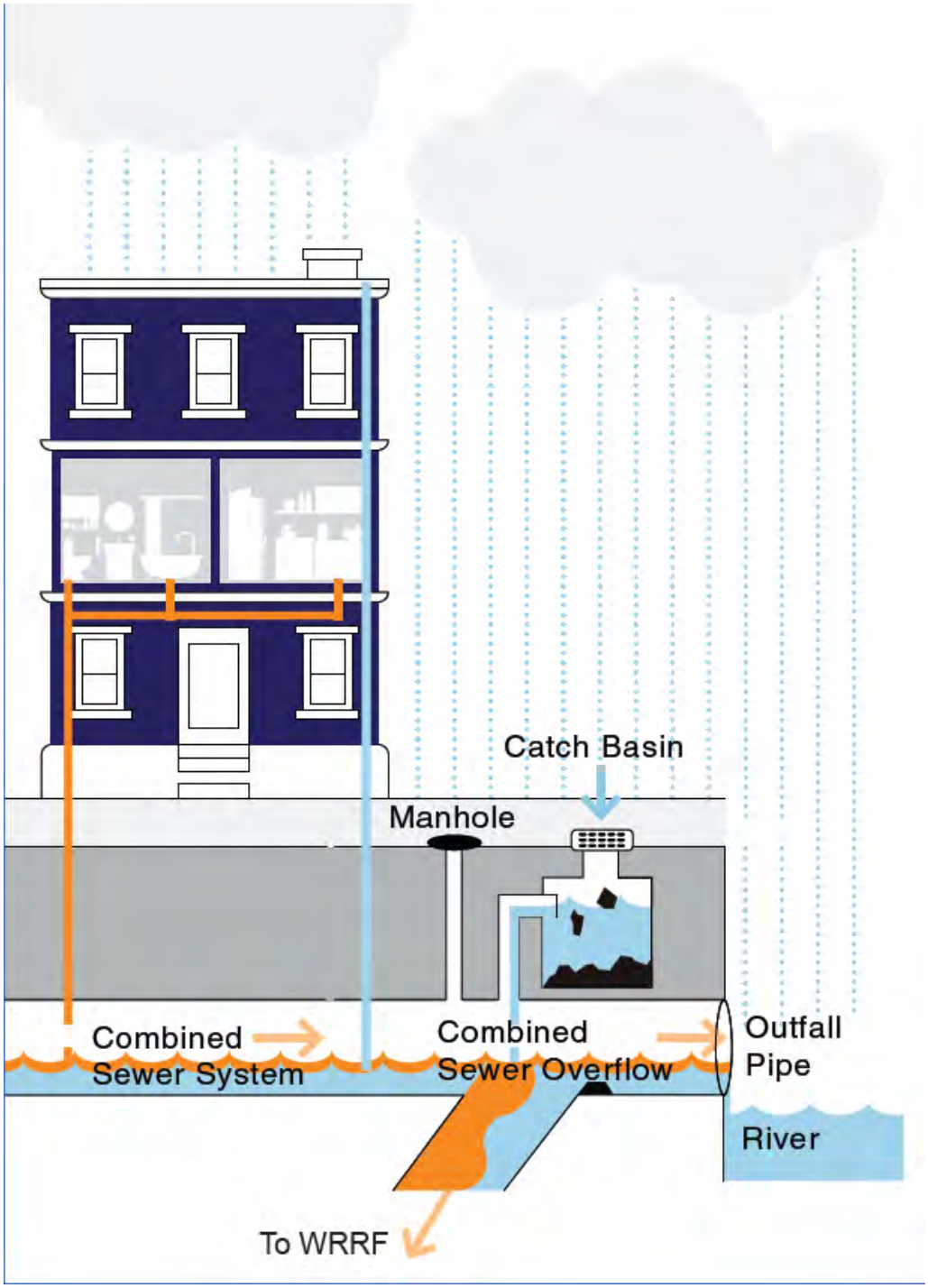
Natural Resources

The New York Department of State Geographic Information Gateway was consulted to identify environmental factors in the study area. The Gateway system is a fully integrated ArcGIS Hub Site with a data catalog, mapping capabilities, tools, and stores. The analysis revealed no unique environmental conditions or sensitive areas in the project area (See Figure 35).

The NOAA Essential Fish Habitat (EFH) Mapper identified 11 species of aquatic life mapped in the Harlem River. NOAA states that the EFH Mapper should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH in the project location. A regional expert must perform a location-specific evaluation of EFH for any official purpose. Please reference Appendix 2 – NOAA EFH Mapper Report for additional details.

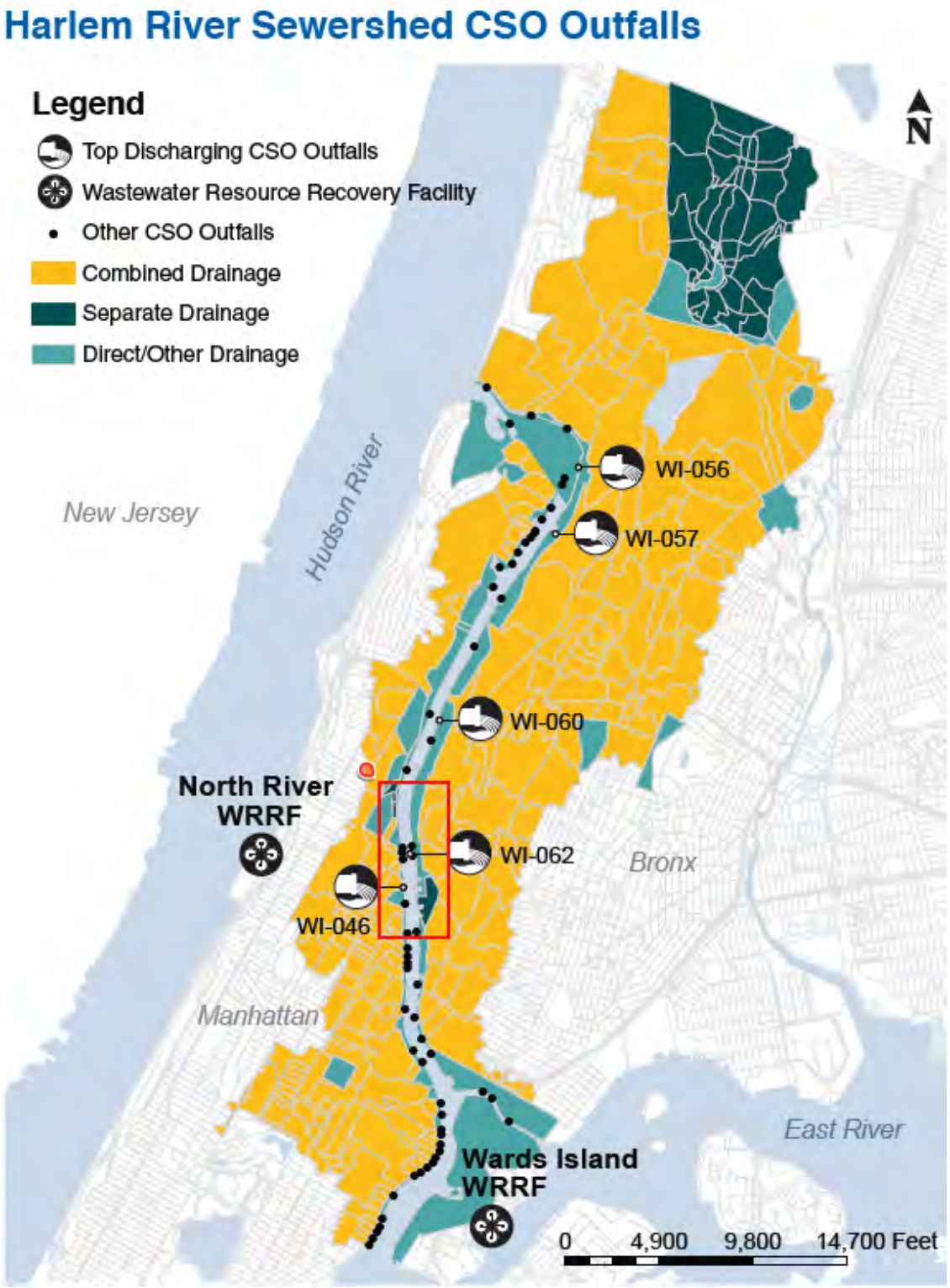
[26] Combined Sewer Overflow Long Term Control Plan for Citywide/Open Waters, September 2020.
[27] SPDES BMP CSO Annual Report 2023

Figure 33 - CSO Example Picture[28]



[28] Combined Sewer Overflow Long Term Control Plan for Citywide/Open Waters, September 2020

Figure 34 - Harlem River Sewershed CSO Outfalls[29]



[29]Combined Sewer Overflow Long Term Control Plan for Citywide/Open Waters, September 2020

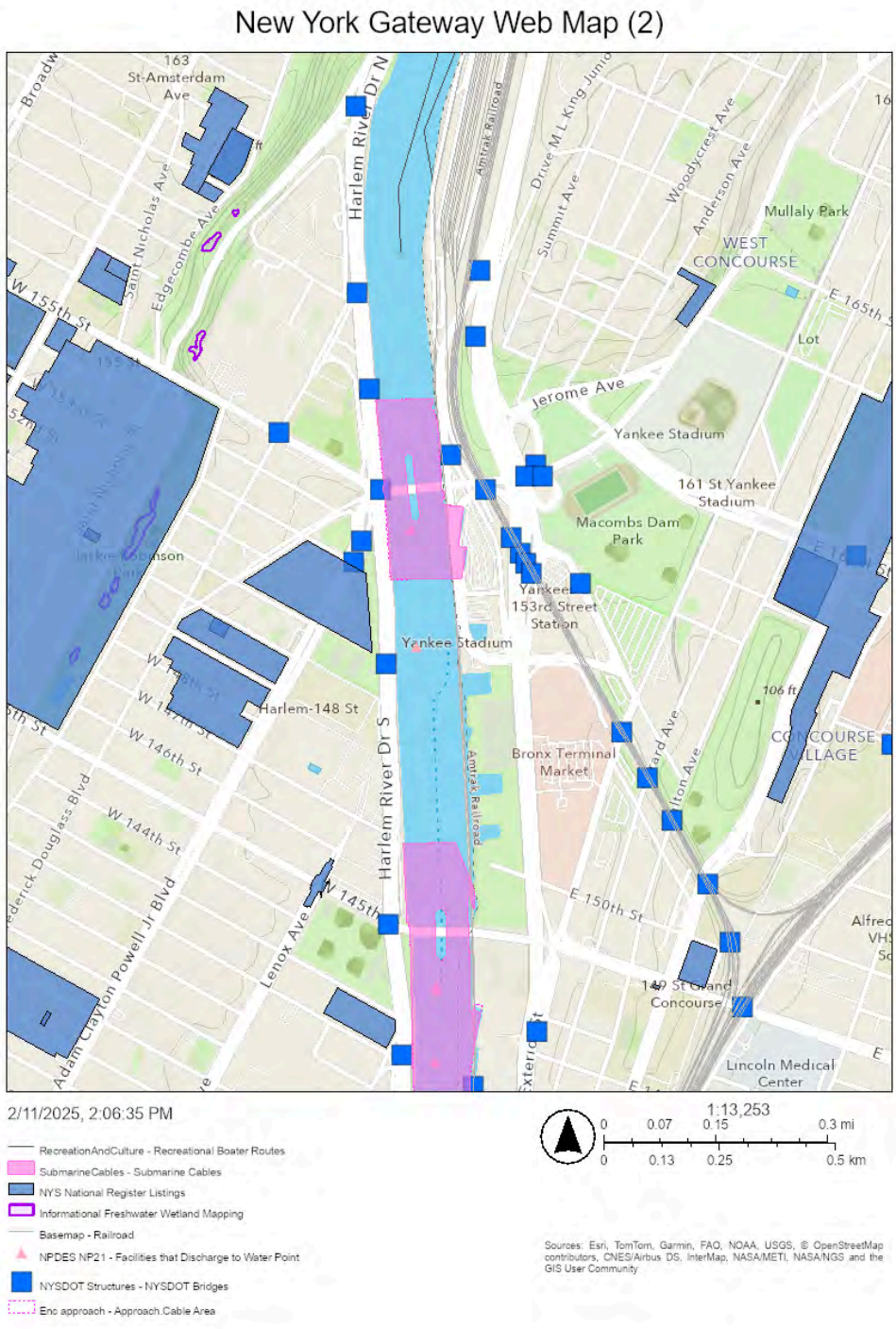
Existing Environmental Restoration and Coastal Storm Risk Management Efforts

Existing environmental restoration, conservation, and coastal storm risk management efforts were reviewed for consistency with the potential partial deauthorization and subsequent greenway extension. The primary purpose of the review was to identify any competing environmental, conservation, or coastal storm management efforts and proposed projects within the study area. Plans and publications reviewed include:

1. Hudson-Raritan Estuary Comprehensive Restoration Plan;
2. NY & NJ Harbor & Tributaries Focus Area Feasibility Study (HATS);
3. Harlem River Watershed and Natural Resources Management Plan for the Bronx;
4. Combined Sewer Overflow Long Term Control Plan for Citywide/Open Waters; and
5. USGS Historical Water-Quality Data from the Harlem River, New York.

No conflicts were identified with partial deauthorization and ongoing environmental, conservation, or coastal storm management efforts. The 2022 HATS draft report proposed a floodwall intervention in the study area as a possible design alternative. HATS is a dynamic, long-term planning effort. Ongoing coordination with USACE will be critical to ensure future compatibility.

Figure 35 - NYS Geographic Information Gateway - Study Area



9.0 Stakeholder Outreach

The Stakeholder Outreach analysis aims to describe the current state of commercial, municipal, and recreational navigation on the Harlem River, the reasonably anticipated future use by each user, and to collect user requirements and concerns regarding the partial deauthorization and the subsequent greenway extension project.

The project team undertook a good-faith effort to engage with as many stakeholders as possible throughout the course of this assessment. Outreach included communication with known river users, adjacent landowners, regulatory agencies, infrastructure operators, and key advocacy organizations. This approach was designed to ensure a comprehensive understanding of how the potential federal navigation channel deauthorization and MWG: North Harlem could impact the diverse operations and interests in this section of the Harlem River. A total of 66 stakeholders were contacted with 27 responding.

Wherever possible, stakeholders were contacted directly via email and invited to participate in the study through interviews, written questionnaires, or supplemental correspondence. While not every entity responded, the input received reflects a broad cross-section of the river's current and anticipated future users and provides meaningful insight into the navigational, operational, and environmental implications of the potential project.

A list of stakeholders was compiled with help from the USACE, USCG, The Maritime Association of the Port of New York and New Jersey (MAPONY), project team research, Vessel Traffic Analysis (AIS), and stakeholder recommendations. User information is compiled and summarized in Appendix 6 – Stakeholder Registry. Further, completed questionnaires are appended to this report as Appendix 5. Users were contacted between December 2024 and April 2025.

Each user was provided with a questionnaire (See Appendix 1) to address:

1. Current Usage and Operations;
2. Impact of the Potential Greenway (*includes the Impact of the Partial Deauthorization*);
3. Future Usage and Operations;
4. Support and Feedback on the Project; and
5. Additional Input.

Note that the questionnaire asked stakeholders to consider the effects of a 150-foot partial deauthorization of the federal navigation channel with a potential 70-foot project width. As the study progressed, it was determined that a 75-foot partial deauthorization width would be more appropriate.

Key Recommendations

The following Table organizes and presents key recommendations from stakeholder outreach. Table 9 summarizes each recommendation and identifies which stakeholders provided it.

Table 9 – Stakeholder Key Recommendations

Key Recommendation	Stakeholders
Maintain a minimum open navigable channel width of 100 feet on either side of the Macombs Dam Bridge.	Circle Line Classic Harbor Line
Install fendering to protect the MWG: North Harlem and mitigate potential vessel allisions	Circle Line NYC Ferry
Provide screening or barriers to protect vessel passengers from projectiles from the MWG: North Harlem	Circle Line
Ensure MWG: North Harlem placement does not interfere with bridge maintenance and closures	Circle Line Classic Harbor Line DOT Bridges
Conduct outreach to recreational boaters to inform them of navigation changes	Classic Harbor Line Riverkeeper
Avoid placing the MWG: North Harlem too far into the river, reducing available navigational space	Riverkeeper, Hudson Canyon Consulting, Harlem River Working Group & BCEQ
Implement enforceable speed and no-wake restrictions to ensure small vessel safety	Rocking the Boat
Incorporate kayak landings and emergency exit points into the MWG: North Harlem design	Rocking the Boat, New York Open Water
Ensure no access points to the MWG: North Harlem adjacent to private properties for security reasons	Esplanade Gardens
Engage MTA and Metro-North in the MWG: North Harlem design to avoid impacts on existing infrastructure	MTA / Metro-North
Conduct hydrodynamic modeling to assess potential current and wake effects on navigation	Hudson Canyon Consulting
Reconfigure MWG: North Harlem placement to align with the USACE Living Shorelines study	Harlem River Working Group & BCEQ
Consider an alternative MWG: North Harlem route that improves Bronx waterfront access	Harlem River Working Group & BCEQ
Keep a gap between the MWG: North Harlem and the navigational area for vessel safety	NYC Ferry
Install external or floating fenders along the MWG: North Harlem to reduce impact risks	NYC Ferry
Ensure project coordination with Bronx-side waterfront and MWG: North Harlem planning efforts	Harlem River Working Group & BCEQ, Rocking the Boat
Conduct CCTV inspection of outfalls and ensure repairs before MWG: North Harlem construction	NYCDEP BWSO

Key Recommendation	Stakeholders
Ensure maintenance vehicle access to outfalls via the MWG: North Harlem design	NYCDEP BWSO
Consider incorporating drawbridge or removable sections in the MWG: North Harlem to allow barge access for outfall maintenance	NYCDEP BWSO
Install retractable ladders at outfall locations for inspection and maintenance	NYCDEP BWSO
Verify shoreline survey to confirm if existing outfalls extend beyond the bulkhead	NYCDEP BWSO
Ensure MWG: North Harlem structure does not obstruct outfalls or interfere with existing drainage infrastructure	NYCDEP BWSO
Coordinate with the USACE New York-New Jersey Harbor and Tributaries Study (HATS) for potential future conditions	NYCDEP BCR
Coordinate and consult NYC DOT regarding any preferred standoff distance around bridge piers.	USACE

Responses are summarized for each of the four classes of stakeholders in the following sections.

9.1 Commercial Stakeholders

The project team received responses from five commercial stakeholders out of eighteen contacts who regularly operate in or near the Harlem River, including passenger vessel operators, tug and barge service providers, and freight rail carriers. These stakeholders provided valuable operational perspectives shaped by years of experience navigating the river or managing adjacent infrastructure.

Passenger vessel operators noted that the Harlem River, particularly the stretch near the Macombs Dam and 145th Street bridges, can become congested during peak periods, especially when multiple large vessels are transiting simultaneously. Maintaining a consistent and predictable channel width, particularly under bridge spans, was identified as critical to safe operations. Some operators, such as Circle Line, expressed that a minimum navigable channel width of approximately 100 feet under each bridge span was necessary to ensure safe passage and turning capabilities. The potential for MWG: North Harlem encroachment to reduce this clearance raised concerns, especially if vessels are diverted away from typical traffic lanes due to maintenance activities or other river uses.

In addition to channel dimensions, several operators highlighted the importance of vessel protection measures such as fendering and designated tie-up points. These features were recommended not only to prevent damage to the MWG: North Harlem but also to support vessel maneuverability and safety during routine operations, inspections, or emergencies.

Miller's Launch also pointed to a need for improved coordination among Harlem River bridge operators. They noted that bridge operations are often not synchronized, which can create additional navigational challenges—especially for longer or wider vessels that require precise timing and route planning. Standardized communication protocols were suggested as a potential improvement.

While rail operators do not use the waterway directly, they provided important insights about infrastructure adjacent to the Bronx shoreline. Concerns were raised about the increased proximity of marine traffic to rail corridors and piers, with particular attention to the Oak Point Link, a vital freight route. Stakeholders noted that increased vessel wake or accidental impacts could accelerate infrastructure wear and potentially affect rail service.

Overall, commercial stakeholders appreciated the opportunity to participate and offered constructive feedback. Most expressed a willingness to remain engaged as design details are further developed.

Table 10 - Commercial Stakeholder Responses

Organization	Type
Circle Line Navigation	Passenger Vessel Operator
Classic Harbor Line	Passenger Vessel Operator
Miller's Launch	Tug & Barge Operator
CSX Transportation	Freight Rail Operator
CPKC	Freight Rail Operator

Circle Line Navigation

Circle Line Navigation (CL) operates sightseeing vessels (165 feet long, 35-foot beam, 9-foot draft) through this section of the Harlem River daily, with up to four daily trips, carrying as many as 2,400 passengers. They are the most frequent user of the Harlem River based on vessel traffic analysis. They require a minimum open navigable channel of 100 feet, including under bridges, and consider fendering necessary for protection. Their primary concerns include navigational safety, maintaining operational efficiency, and protecting passengers from potential projectiles thrown from the greenway.

The MWG: North Harlem, as currently proposed, is deemed unacceptable due to its encroachment into the navigable channel. Specifically, Circle Line has requested at least 100 feet of clearance under both bridges for safe navigation. Circle Line suggests shifting the greenway closer to the bridge abutment by 30 feet, or inland routing around the bridges, to mitigate these impacts. They emphasize the necessity of a fendering system to prevent vessel damage and screening to protect passengers.

CL stated that a narrowed channel could affect their ability to turn vessels if needed. Less room to maneuver may make turning more difficult. They reference the effect of congestion as a factor which could compromise their ability to turn as well. While they generally operate on the Bronx side, maintenance work on bridges or construction on

the Bronx shore might force them to navigate closer to the Manhattan side, heightening concerns about limited space.

If implemented safely, they support the MWG: North Harlem but disapprove of the current proposal based on their requirement for 100 feet of clearance under bridges. Recommended mitigations include adjusting the walkway's placement inland around the bridges, ensuring proper fendering, and addressing security concerns related to thrown objects. Circle Line is open to further discussions and suggested contacting Classic Harbor Lines, NYC Ferry, and CHPE LLC for additional input.

Classic Harbor Lines

Classic Harbor Line operates boat tours transiting the Harlem River, with two to three daily trips from April through October and five to seven per week from November through March. They currently operate two vessels, *Manhattan* (80 feet) and *Manhattan II* (100 feet, 22-foot beam), and will introduce *Manhattan III* (110 feet, 25-foot beam) in late 2025.

They do not foresee a significant impact from the MWG: North Harlem under normal conditions but express concerns about increased congestion during high-traffic periods, particularly on weekends when they and Circle Line operate simultaneously. The narrowing of the federal navigation channel could force large vessels to exclusively use the eastern side of the Macombs Dam Bridge, potentially causing delays and safety risks. Classic Harbor Line believes that commercial vessels can communicate with each other for safe passage. However, they also highlight the need for communication and outreach to recreational boaters to prevent conflicts in the narrowed space.

While they do not anticipate needing a buffer zone, they reference the East River as an example of a shoreline greenway without a buffer. Their primary concern is the risk of multiple vessels converging in the same bridge channel, increasing the potential for navigational conflicts.

Classic Harbor Line emphasizes the importance of coordination among commercial operators and effective communication with recreational users. It does not explicitly state support or opposition to the Greenway but expresses concerns about traffic flow and safety. It is open to further discussions on the project.

Miller's Launch

Miller's Launch operates tug and barge services throughout the Harlem River, transporting various barges for construction, dredging, and maintenance work. Their operations include crane barges, material barges, scows for dredging, deck barges for debris, and man lift barges for inspections and emergency work. They frequently transit the area and have extensive experience working on projects within the Harlem River over the past 17 years.

Regarding the potential federal navigation channel deauthorization and MWG: North River proposal, Miller's Launch anticipates minimal impacts in this section based on its operational experience. However, it strongly recommends installing fendering and tie-up points at either end of the deauthorized section and on both sides of the Macombs Dam Bridge to mitigate potential risks and provide secure mooring locations.

One of their primary concerns is the lack of coordinated communication between all Harlem River bridge operators, including the MTA rail bridge and NYC DOT movable bridges. They emphasize that bridge operations are not synchronized, which poses challenges for vessel transits, particularly for larger tug and barge units. They recommend improving and standardizing communication protocols, especially during construction periods when navigation constraints could further complicate transit planning.

While Miller's Launch does not foresee significant operational changes due to the MWG: North Harlem proposal, it stresses the importance of maintaining functional navigation infrastructure and enhancing coordination among agencies responsible for bridge operations. Miller's Launch stated they were open to further discussions and emphasized the need for better communication standards for vessels transiting the Harlem River.

Canadian Pacific Kansas City (CPKC)

CPKC (Canadian Pacific Kansas City) has confirmed that it does not operate within the North Harlem River section and, therefore, does not have direct input regarding the federal navigation channel deauthorization or the potential Greenway extension. While it appreciates being included in the outreach process, it does not anticipate any operational impacts from the project.

In their response, CPKC expressed a general willingness to assist with railroad-related inquiries should they arise in the context of this or other transportation projects. CPKC has no further recommendations or concerns regarding the project and has not requested additional follow-up.

CSX Transportation

CSX Transportation provided input regarding the potential partial deauthorization of the Harlem River federal navigation channel and the associated MWG: North Harlem, with a focus on the Oak Point Link, a critical freight rail corridor located on the Bronx side of the Harlem River. CSX emphasized that this link plays a vital role in transporting time-sensitive freight, including produce and municipal solid waste (notably for the Department of Sanitation of New York, DSNY), to and from New York City.

Their primary concern is that narrowing the federal channel and shifting marine traffic closer to the Bronx shoreline would increase the risk of vessel collisions with infrastructure supporting the rail line, potentially disrupting freight service. In particular, CSX is worried that vessel traffic may come closer to the Oak Point Link, raising the likelihood of collision-related outages.

Additionally, CSX identified wake-related impacts as a secondary concern. Increased vessel traffic in closer range to their infrastructure could lead to heightened wave action against the piers and rail track components, which are maintained by NYSDOT. This increased exposure could result in accelerated wear and tear on structural elements, requiring more frequent maintenance and replacement.

While CSX did not explicitly oppose the MWG: North Harlem project, their response underscores the need for marine traffic management and design considerations that would mitigate the risks posed to essential freight infrastructure along the Bronx shoreline.

9.2 Recreational Stakeholders

Four recreational stakeholders provided input on the MWG: North Harlem, out of eleven organizations contacted, representing human-powered boating, swimming events, and shoreline tours. All expressed support for expanding waterfront access but emphasized the importance of ensuring safe and equitable use of the Harlem River for small vessels.

Ray Fusco, a recreational boater and consultant, raised concerns about increased congestion and wake risk near bridge abutments. He recommended hydrodynamic modeling and design revisions to better integrate water-based users, including kayak launches and docks.

Rocking the Boat highlighted the need for enforceable no-wake zones, emergency exits, and shoreline space for the safe maneuvering of rowing gigs. They also urged broader consultation with Bronx community organizations regarding long-term planning.

New York Open Water did not anticipate direct impacts on its swimming events and supported the project, recommending kayak put-ins and restrooms to serve support crews and spectators.

The Yonkers Paddling and Rowing Club, which organizes kayak events with up to 100 participants, emphasized that the narrowed channel may pose safety hazards. They urged the project to provide shoreline safety corridors and a low-freeboard emergency takeout. They expressed conditional support, contingent on the project incorporating these features.

Together, these responses highlight the need for the MWG: North Harlem to balance land access goals with the operational realities and safety of the river's growing recreational community.

Table 11 - Recreational Stakeholder Responses

Organization	Type
Rocking the Boat	Youth Development / Rowing Program
New York Open Water	Recreational Swim Event Organizer
Ray Fusco – Hudson Canyon Consulting	Recreational Boating and Consultant
Yonkers Paddling and Rowing Club	Recreational Kayak Event Organizer

Rocking the Boat

Rocking the Boat, a youth development non-profit based in Hunts Point, primarily conducts rowing and sailing activities on the Bronx River and East River. However, they also occasionally navigate the Harlem River, including during an annual round-Manhattan rowing event involving 100 people and 12-15 rowing gigs (longboats), as well as safety and spectator boats.

They express concerns that narrowing the navigable channel will leave less room for large vessels to pass safely and smaller boats to maneuver out of their way, increasing the risk

of accidents. They recommend enforceable speed and no-wake restrictions, noting that while some no-wake signs exist, there are currently no actual regulations or enforcement.

Given the increased risk of accidents in a narrower channel, they suggest that the greenway proposal should incorporate emergency landings or ladders that allow boaters to exit the water in case of an emergency or to rest.

Rocking the Boat also questions the long-term impact of narrowing the Harlem River from the Manhattan side, as this might preclude future public waterfront access on the Bronx side. They ask whether Bronx community groups, community boards, and elected officials have been formally consulted about the project and the City's long-term goals for Bronx-side waterfront access.

They are open to further discussions and welcome direct engagement to explore these concerns further.

New York Open Water (NYOW)

New York Open Water (NYOW) organizes open water swimming events in New York City, including the 20 Bridges Swim, a circumnavigation of Manhattan that passes through the Harlem River between 145th and 163rd Streets. Their operations occur 35 to 40 days per season, from June to October, with swimmers traveling south to north. Each swimmer is accompanied by a kayak escort and a support RHIB (rigid-hulled inflatable boat), with a course marshal boat overseeing the event.

NYOW does not anticipate the MWG: North River affecting its on-water operations. It believes it could enhance spectator viewing of its events. It has no concerns about narrowing the federal navigation channel or vessel maneuverability but recommends that the greenway proposal include designated kayak put-in locations and restrooms along this stretch.

NYOW fully supports the MWG: North Harlem, citing the benefits of expanded pedestrian and bicycle access to the waterfront. They suggested contacting the Inwood Canoe Club for additional input and said they would like to know about project developments.

Hudson Canyon Consulting

Ray Fusco, a recreational boater and consultant with Hudson Canyon Consulting, participates in kayak tours and events in the Harlem River between 145th and 163rd Streets. His operations include the use of single and double kayaks and a 25-foot recreational powerboat, primarily from spring to fall, depending on tides and weather.

Fusco believes the 70-foot encroachment into the river would force vessel traffic into a narrower space, increasing congestion and raising the likelihood of accidents. He also notes that small vessels like kayaks would be especially vulnerable near bridge abutments, where wakes and turbulence could create dangerous conditions. Furthermore, he highlights that safe boating practices require at least 100 yards of clearance between vessels, which the narrowed passage would not provide.

He critiques the MWG: North Harlem proposal as one-dimensional, focusing solely on land users while ignoring opportunities for water-based access. Instead of restricting waterway space, he suggests the greenway should incorporate boat-friendly infrastructure, such as kayak launches, rowing docks, or educational access points. He points to successful waterfront designs in Portland and Atlanta as models.

While Fusco supports the concept of a greenway, he does not support the current proposal. He recommends moving the structure closer to shore and conducting hydrodynamic modeling to assess potential impacts on currents and wake conditions. He also stresses the need for alternative designs that benefit both land and water users rather than forcing boats out of the area.

He stated he is open to further discussions and suggests reconsidering the approach to better integrate recreational boating opportunities into the project.

Yankers Paddling and Rowing Club

The Yonkers Paddling and Rowing Club (YPRC) participates in large-scale recreational paddling events in the Harlem River each summer, particularly in July and August, when up to 100 kayaks may be present on the water at the same time. These events pass through the 145th to 163rd Street section, and operations are dependent on weather and tidal conditions, with no set schedule.

YPRC expressed safety concerns regarding the potential 75-foot greenway extension into the river. They noted that narrowing the navigable channel may increase the risk of collisions between commercial vessels and human-powered boats, especially given that kayaks are difficult to see from ferries and large powerboats. They also warned that increased fishing activity from the greenway could push paddlers further into the main navigation channel, increasing their exposure to vessel traffic.

YPRC emphasized the importance of maintaining a safe corridor along both shorelines and requested the inclusion of a low-freeboard emergency takeout dock for small vessels. They noted that in a narrowed waterway, they might need to stagger operations during large events to reduce risk.

While YPRC is not opposed to the greenway project in principle, they will only support it if the needs of human-powered boaters are explicitly addressed in the design. They reiterated that human-powered boaters already face significant challenges in shared waterways and must not be further marginalized.

They are open to further engagement and recommended additional outreach to groups such as RowNY, Harlem River Community Rowing, Long Island City Boathouse, and Manhattan Kayak.

9.3 Government Stakeholders

Government organizations with jurisdiction over infrastructure, utilities, and public waterfront assets offered a range of technical and operational feedback on the potential MWG: North Harlem and partial channel deauthorization. The project team received twelve responses out of eighteen organizations contacted. While most organizations reported no immediate conflicts with their current operations, several emphasized the importance of ongoing coordination to address future maintenance, design integration, and potential access constraints.

Many organizations, including NYCDEP BWSO, NYPA, MTA, and USACE, noted concerns related to shoreline access, infrastructure protection, or regulatory implications. USACE clarified that if the greenway is built beneath bridge spans without full channel deauthorization, the City may become responsible for future dredging in those areas.

They also warned that the structure could complicate maintenance access and add risk to future dredging operations.

Organizations such as NYC DOT Bridges, NYSDOT, and NYC Parks stressed the importance of preserving navigational space and ensuring the greenway does not interfere with inspections or emergency access. Other respondents encouraged design elements like fendering, vehicle access to shoreline assets, or accommodations for long-term resilience and flood protection.

While no entity expressed formal support or opposition, nearly all government stakeholders expressed a willingness to remain engaged as the project advances into design and permitting phases.

Table 12 - Government Stakeholders Responses

Organization	Type
USACE	Federal Navigation & Permitting Authority
NYCDEP – Marine Section	Environmental Monitoring Agency
NYCDEP – Bureau of Wastewater Treatment (BWT)	Sewer/Water Quality Operations
NYCDEP – Bureau of Water & Sewer Operations (BWSO)	Infrastructure Operations
NYCDEP – Bureau of Coastal Resiliency (BCR)	Coastal Resilience Planning
NYCDOT Bridges Division	Movable Bridge Infrastructure
NYCEDC – NYC Ferry	Municipal Ferry Operator (Non-operational)
NYC Parks	Shoreline Owner / Public Access Manager
MTA Construction & Development	Transit Infrastructure Oversight
MTA / Metro-North / Coastal Resiliency	Rail Infrastructure Oversight
MTA Bridges & Tunnels (TBTA)	Transit Infrastructure Oversight
New York Power Authority (NYPA)	Utility Operator / Transmission
New York State DOT (NYSDOT)	Road & Bridge Infrastructure

U.S. Army Corps of Engineers (USACE)

USACE indicated that any new structure introduced into the federal navigation channel, such as the MWG: North Harlem, adds operational risk and cost to their ability to maintain the channel. In particular, structures located beneath bridges complicate future dredging operations and would likely require special conditions under a Section 408 permission.

USACE expects that, if the greenway is constructed under bridge spans and the channel is not fully deauthorized, the City will likely be required to assume full responsibility for dredging beneath those bridges. This would be due to the limitations imposed on

dredging contractors, such as access restrictions and elevated safety concerns introduced by the new structure.

They further noted that minimum dredging buffers are not defined by the Corps, as those vary based on the contractor's equipment and risk tolerance. However, USACE recommends consulting NYC DOT regarding any preferred standoff distance around bridge piers. Importantly, USACE clarified they are not conducting stability analysis for either the bridge structures or the potential greenway, which should be factored into risk and cost assessments by the project team.

While USACE did not formally oppose the project, their input underscores that installation of the greenway within the federal channel, particularly near bridges, may trigger future operational and maintenance obligations for the City.

NYCDEP Marine Section

The NYCDEP Marine Section conducts periodic water quality sampling in the Harlem River. It operates two primary harbor survey vessels, *OSPREY* and *PIPING PLOVER* (each approximately 60 feet long with a 6-foot draft). Their operations occur once weekly from April to November and once monthly from December to March.

They do not anticipate any significant impacts from the potential MWG: North Harlem or the deauthorization of the Manhattan side of the federal navigation channel. However, they recommend installing vertical fendering below the greenway structure to prevent vessels from becoming encumbered beneath it in case of a loss-of-control incident.

If the channel were narrowed, they would likely rely more on the east draw of the Macombs Dam Bridge but do not foresee any significant operational changes. They remain noncommittal regarding support for the MWG: North Harlem.

Additionally, they suggest analyzing how recreational boaters receive navigation information (such as social media or Electronic Navigation Chart [ENC] publishers) and ensuring that any navigation instructions related to the project are widely distributed. NYCDEP Marine Section was open to further discussions and participation in stakeholder meetings.

NYCDEP – Bureau of Wastewater Treatment

The NYCDEP Bureau of Wastewater Treatment (BWT) has no comments on the Harlem River Greenway extension project and does not see a need to submit a separate questionnaire beyond the one already provided by their Marine Section. However, they requested to stay informed as the project progresses, particularly regarding scheduling, as they conduct regular water sampling and need to correlate any potential anomalies that might arise due to construction or other activities.

NYCEDC's response indicates no significant concerns or objections to the project from its wastewater and sewer operations perspective, but it emphasizes the importance of continued communication regarding project updates.

New York City Department of Environmental Protection (NYCDEP) Bureau of Water and Sewer Operations (BWSO)

The New York City Department of Environmental Protection (NYCDEP) Bureau of Water and Sewer Operations (BWSO) has provided feedback on the MWG: North Harlem,

primarily focusing on infrastructure and maintenance considerations during the project's design phase. Their primary concerns relate to accessibility for maintenance, coordination with existing outfall structures, and potential conflicts with other ongoing projects in the Harlem River.

BWSO has requested a closed-circuit television (CCTV) inspection of the existing outfalls along the shoreline and bulkhead up to the nearest manhole or chamber. This inspection must be coordinated with DEP's Construction Support and Inspection (CSI) unit, and any outfalls found to be defective must be repaired or upgraded before construction begins. Additionally, they asked for clarification on whether bulkhead work will be required as part of the greenway project, emphasizing that any necessary bulkhead inspections should also be conducted during the design phase.

A key operational requirement from BWSO is that landside access must be provided for all existing outfalls. They have requested a vehicle turning analysis to demonstrate that DEP maintenance trucks can access the bulkhead where these outfalls are located. Furthermore, they have asked for clarification on how outfalls can be accessed from the waterside. They suggested that sections of the greenway be designed as drawbridges or other removable structures to allow for barge and vessel access in case of emergency maintenance or repairs.

BWSO has also raised concerns about the clearance between outfalls and the greenway structure, recommending that retractable ladders or similar access supports be installed at each outfall location to facilitate inspections and routine maintenance. They have requested a shoreline survey to confirm whether any existing outfalls extend beyond the bulkhead and emphasized that potential greenway piers at connection points must not obstruct any outfalls.

Additional concerns include ensuring that the greenway structure can support HS-20 maintenance vehicles if needed, clarifying whether the project will introduce new water or sewer service lines, and ensuring that ownership of all outfalls within the project limits is identified. BWSO has also flagged the need to coordinate with the DEP Bureau of Coastal Resiliency (BCR) and has highlighted potential conflicts with ongoing clean energy projects in the Harlem River.

While BWSO's feedback is mainly technical and tied to the design and engineering phase, their recommendations emphasize the importance of infrastructure accessibility, maintenance feasibility, and interagency coordination as the MWG: North Harlem moves forward.

NYCDEP – Coastal Resiliency (BCR)

The New York City Department of Environmental Protection (NYCDEP) Bureau of Coastal Resiliency (BCR) has reviewed the Harlem River Navigational Risk Assessment and does not anticipate any immediate conflicts between the potential MWG: North Harlem and existing coastal resiliency efforts. Their primary input relates to the USACE New York-New Jersey Harbor and Tributaries Study (HATS), which may influence future conditions along the greenway's placement.

BCR notes that the HATS study remains tentative and does not have a definitive implementation timeline. However, they advised project planners to consider potential

future coastal resiliency infrastructure from the HATS study as part of the MWG: North River long-term planning.

Beyond this advisory note, BCR has not currently identified specific design or operational concerns. Their response confirmed that no additional coordination is required from their division. Still, they remain available for future discussions if the project evolves in a way that intersects with coastal resiliency planning.

NYCDOT Bridges Division

The New York City Department of Transportation (NYCDOT) Bridges Division acknowledged receipt of the Harlem River Navigational Risk Assessment questionnaire and was reviewing it as of March 11th, 2025. While an official response was not submitted, their initial feedback suggests that they did not anticipate any significant conflicts between the potential federal channel deauthorization, the MWG: North Harlem project, and the operation of the Macombs Dam and 145th Street bridges.

The Bridges Division highlighted the presence of bridge cables running along the Harlem River floor at or near the bridges, which support the communications and operations of DOT's movable bridges. These cables require periodic maintenance and replacement, but DOT Bridges did not identify any direct conflicts between the MWG: North Harlem project and these cables based on their initial review. However, they indicated a willingness to provide additional clarification if needed.

NYCDOT has requested that a means of access to the west swing bridge pier by water be provided for maintenance and inspection. Additionally, NYCDOT has request that as a part of future greenway design, there will need to be accommodations to the design/layout of the greenway sub structure to ensure there were no risks of impacts to the DOT's cables mentioned above.

NYCDOT stated that they are unaware of any current scour issues with the Manhattan swing space rest pier. However, if such issues were to develop, it would be difficult to address the scour with the greenway structure, as proposed, present. NYCDOT recommends that a scour analysis be done to see what effect the greenway may have on the bridge piers.

DOT Bridges is expected to respond to the questionnaire formally, and NYCEDC has followed up to confirm when their feedback can be expected. In the meantime, the existence of bridge cables has been noted, with potential considerations for future maintenance access.

At this stage, DOT Bridges did not foresee significant conflicts but left open the possibility for further discussion if additional concerns arise during their formal review.

NYC Ferry

NYC Ferry does not currently operate in the Harlem River. If service were to be introduced, they would consider using alternative vessels to navigate the already narrow waterway with low bridge clearances. However, these adjustments would be made regardless of the Greenway project.

They support the MWG: North Harlem but recommend keeping a gap between it and the navigational area to mitigate potential risks. Additionally, they suggest installing

external or floating fenders along the greenway to reduce damage in the event of a vessel allision.

While they do not anticipate the project hindering their future operational decisions, they remain open to discussions and suggest engaging Harbor Ops for further input.

NYC Parks

NYC Parks manages multiple properties along the Harlem River, including Mill Pond Park, Harlem River Park, Bobby Wagner Walk, Randalls Island Park, and various shoreline parks. They support public recreational use, provide water access, and conduct infrastructure inspections and maintenance. Boat launching regularly occurs at Inwood Hill Park, W 202nd St End Park, and Swindlers Cove Riverfront Park.

Their direct vessel operations in the Harlem River are limited to occasional inspections, using a 25-foot Parker powerboat with a 10-foot beam. Contractors utilize barges and workboats for infrastructure repairs. Additionally, recreational paddlers such as rowboats, kayaks, and sculls use the area several times a week.

Concerns about the MWG: North Harlem:

- Navigation & Safety: The greenway would tighten travel lanes, requiring vessels to slow down, particularly near bridges and when passing other vessels. This could lead to increased wake challenges.
- Recreational Vessel Safety: They highlighted the risk of small recreational paddlers, such as kayakers, getting trapped under the structure and raise concerns about reckless Jet Ski operators.
- Shoreline Maintenance: NYC Parks questioned how the greenway structure might impact future repairs to existing shoreline infrastructure on the west side of the river.

They anticipate no significant changes to their operations, but vessels may need to travel more slowly in congested conditions. They do not foresee substantial infrastructure changes to adapt to a narrow channel.

NYC Parks request that wetland mitigation efforts, specifically shading and fill, be investigated and addressed during the planning process.

NYC Parks did not explicitly state support or opposition to the project. They recommended consulting Circle Line, Classic Harbor Line, and Weeks Marine for additional input. They are open to continued discussions and participation in stakeholder meetings.

MTA Construction & Development

MTA Construction & Development oversees key infrastructure in the area, including the NYCT Rail Yard, the 2 and 3 subway tunnels, pump rooms, and various structures along the Harlem River between 145th Street and beyond 149th Street. Their operations run 24 hours a day, 365 days a year. While they do not operate vessels on the river, they are responsible for maintaining and operating the subway infrastructure that intersects the project area.

The MTA's primary concern regarding the MWG: North River proposal is the potential impacts on existing infrastructure. They request that MTA NYCT design guidelines be

followed to ensure the greenway does not interfere with their assets. Additionally, they emphasize that narrowing the federal navigation channel or structural modifications in the area should not affect NYCT properties, structures, or operations.

While they did not explicitly support or oppose the project, they expect to be informed of potential impacts and suggest further coordination with MTA Planning, Resilience, and Development teams. They are open to further discussions and requested continued engagement as the project progresses.

MTA / Metro North / Coastal Resiliency

The MTA and Metro-North Railroad operate and maintain significant transportation infrastructure in the Harlem River corridor, including the 2 and 3 subway tunnels, NYCT Rail Yard, Metro-North's Hudson Line, and associated pump rooms, duct banks, and shoreline properties. Their operations run 24/7, year-round, and while they do not use vessels, they are heavily invested in the stability of infrastructure along the river.

Their main concern with the MWG: North Harlem is its potential impact on existing MTA properties and structures. They requested that the greenway design complies with MTA NYCT guidelines and express interest in engaging with project designers to minimize risks to their assets, particularly regarding coastal surge exposure.

While they do not anticipate needing immediate modifications to their operations, they see long-term value in integrating their coastal resilience projects with broader flood protection initiatives. They do not explicitly state support or opposition to the greenway but stress the need for continued engagement to review conceptual designs and assess potential impacts.

The MTA does not currently have plans to operate within the Harlem River channel but remains open to discussions as the project evolves. They request to be informed of developments and consulted on design considerations that may affect their infrastructure.

MTA Bridges & Tunnels (Triborough Bridge and Tunnel Authority (TBTA)

The Triborough Bridge and Tunnel Authority (TBTA) manages the RFK Bridge, including its vehicle, pedestrian, and cyclist approaches spanning the Harlem River. While TBTA does not operate vessels in this area regularly, barge traffic may be required during major bridge rehabilitation projects. Such vessel use would be conducted under appropriate permits and notifications.

TBTA operates in the project area 24 hours a day, year-round, and its primary concern with the potential greenway relates to hydrodynamic impacts. They specifically requested confirmation that the MWG: North Harlem would not increase water velocity or turbulence near the bridge piers, which could elevate the risk of scour and undermine pier protection systems. Additionally, they flagged potential risks if vessels are forced to hold station near the bridge due to congestion, as a loss of propulsion could lead to collisions with critical infrastructure.

While TBTA supports the MWG: North Harlem in principle, its support is conditional on addressing these concerns. They recommend minimizing the project's impact on water flow and maintaining usable navigational space west of the Macombs Dam Bridge. They did not raise objections regarding vessel maneuverability or the narrowing of the

navigation channel but emphasized that design coordination is essential to protect the bridge structure and maintain navigational safety.

TBTA stated they were open to further engagement as planning progresses.

New York Power Authority (NYPA)

The New York Power Authority (NYPA) does not own property adjacent to the Harlem River. Still, it plans to utilize the waterway to install, operate, and maintain high-voltage power cables. These cables are expected to be installed as close to the Manhattan shoreline as feasible, likely positioned between the land and the first foundation pier of the Macombs Dam Bridge on the Manhattan side.

Once installed, the power cables will require ongoing maintenance, with operational schedules depending on maintenance needs. NYPA anticipates that the MWG: North Harlem proposal could impact the space needed for barge operations and maintenance work, particularly between the greenway structure, the Macombs Dam, and 145th Street Bridge piers. The extent of this impact will depend on the final offset of the greenway structure from the Manhattan shore.

NYPA has not identified specific concerns regarding vessel maneuverability but notes that any modifications to the channel could affect the feasibility of maintenance operations. The ability of maintenance barges to operate will depend on what is ultimately constructed and whether sufficient clearance is maintained.

While NYPA has not provided direct feedback on support or opposition to the project, they highlight the critical need to ensure barge accessibility for future maintenance. They have not offered additional design recommendations but remain open to further discussions as the project progresses.

New York State Department of Transportation (NYSDOT)

The New York State Department of Transportation (NYSDOT) maintains ownership and oversight of several key assets along the Harlem River between 145th and 163rd Streets, including segments of Harlem River Drive, the Macombs Dam Bridge, access ramps, and associated stormwater outfalls. Their operations in this area primarily involve bridge and sea wall inspections, maintenance, and repairs.

NYSDOT uses a variety of vessels for their work, including 25-foot dive boats, navigation vessels, and barges. Bridge inspections generally occur on a two-year cycle, however, based on bridge conditions, more frequency inspections, ranging from annually to every six months, may be required. Duration of each bridge inspection can range from 5 to 10 days, depending on bridge conditions, while emergency inspections and repair operations are carried out as needed. Diving inspection frequency is typically every 5 years, however, based on sea wall conditions interim (biannual or annual) diving inspections may be required. Each diving inspection typically involves approximately 20 days of field work. NYSDOT reported that they currently face no significant navigational challenges in this section of the river.

Regarding the potential Greenway extension and partial deauthorization of the federal navigation channel, NYSDOT stated that they do not anticipate any impacts on their operations. However, they recommend maintaining a 12-foot clearance at Mean High

Water (MHW) under the potential Greenway structure to ensure vessel accessibility for their inspection and maintenance needs.

NYSDOT did not identify any concerns related to vessel maneuverability, docking, or traffic flow resulting from the Greenway project. They also noted that narrowing the federally maintained channel on the Manhattan side would not affect their current or future operations.

They did not offer specific design mitigation recommendations or state a position on project support but expressed willingness to participate in further discussions. Additionally, they recommended reaching out to NYCDOT, NYC Parks (NYCDPR), DCAS, and NYCTA for further stakeholder input.

9.4 Association/Land Use/Utility Stakeholders

This group included environmental organizations, landowners, utilities, and infrastructure developers with long-standing ties to the Harlem River corridor. Their feedback focused on balancing infrastructure development with environmental protection, equitable access, and operational continuity. A total of six responses were received out of nineteen contacted.

The Navigation Study project team either contacted or made a good faith effort to contact every property owner with direct waterfront access identified in report section 4.0.

Environmental advocates such as Riverkeeper and the Harlem River Working Group/Bronx Council for Environmental Quality voiced concerns about how the MWG: North Harlem placement could limit navigation, undermine ecological restoration efforts, and impede future Bronx-side greenway development. While they expressed general support for expanding pedestrian access, they urged the project team to consider alternative alignments, improve integration with regional planning efforts, and assess aquatic habitat impacts more fully.

Private landowners and utilities emphasized the need for the protection of existing infrastructure and clarity around maintenance responsibility. Esplanade Gardens supported the project but requested firm commitments on seawall repairs and recommended limiting direct public access from the greenway to their property for security reasons. The New York Power Authority and Champlain Hudson Power Express expressed no objections, provided that sufficient clearance and coordination are maintained for long-term cable maintenance.

Finally, Waste Management, which operates a nearby Bronx facility, reported no operational concerns but requested to be kept informed as the project progresses.

Table 13 - Association/Land Use/Utility Stakeholders Responses

Organization	Type
Riverkeeper	Environmental Monitoring / Advocacy
Harlem River Working Group & BCEQ	Environmental & Community Advocacy
Champlain Hudson Power Express (CHPE)	Transmission Utility Developer
Waste Management (WM)	Solid Waste Transfer Facility Owner

Organization	Type
Esplanade Gardens	Residential Landowner
New York Power Authority (NYPA)	State Utility Agency

Riverkeeper

Riverkeeper operates on the Harlem River primarily for environmental monitoring, conducting monthly water quality sampling and patrols, investigating pollution concerns, and engaging with policymakers and community organizations. Between April and October, they transit the section between 145th and 163rd Streets approximately 35 times per year using a fleet that includes a 36-foot single-screw vessel, a 25-foot Parker with an outboard motor, and a 20-foot center console with an outboard motor. Their operations occur about five times per month during their active season.

Their primary concern with the MWG: North Harlem is the funneling effect it would have by narrowing the navigable channel. This would lead to delays in operations and potential congestion, mainly when commercial and recreational vessels mix. They note that New York State safe boating regulations require vessels to give 100 feet of clearance to both shorelines. This requirement would significantly impact navigation, especially for larger vessels.

Riverkeeper also highlights safety concerns, stating that reducing the navigable channel would reduce necessary emergency anchoring and maneuvering space. The mixture of large commercial vessels, smaller recreational boats, and personal watercraft could lead to unsafe conditions, particularly during high-traffic periods.

While Riverkeeper supports the MWG: North Harlem, it emphasizes that its design must address these operational challenges. It recommends constructing the greenway entirely on land rather than extending it over the water. It also suggests conducting an environmental survey to assess the impact of construction and shading on aquatic life in this section of the river.

For additional input, Riverkeeper recommends contacting Circle Line, Classic Harbor Line, New York Harbor Tours, Boat Ride NYC, NY Water Taxi, Billion Oyster Project, the Harlem River Working Group, Columbia University, and the Hudson River Foundation. They are open to further discussions and stakeholder meetings as the project progresses.

Harlem River Working Group & Bronx Council for Environmental Quality

The Harlem River Working Group (HRWG) and the Bronx Council for Environmental Quality (BCEQ) have raised significant concerns regarding the potential MWG: North Harlem, arguing that the project is too expansive for the Harlem River, poses risks to water quality, conflicts with existing USACE studies, and they would like to see alternative proposals. Both HRWG and BCEQ are community-based organizations focused on environmental advocacy, education, and sustainable development along the Harlem River and within the Bronx.

One of their primary objections is the sheer size of the greenway's extension into the river. While they support greenway development on both sides of the Harlem River[30], they

[30] The HRWG and BCEQ have a role to advocate for Bronx-side waterfront access.

believe that placing such a large structure on the Manhattan side would severely restrict navigation and potentially prevent future greenway development on the Bronx side. They also emphasize the environmental risks, pointing out that the Harlem River already has the highest number of stormwater outfalls in New York City. Covering portions of the river with impervious surfaces could lead to increased untreated stormwater runoff. HRWG and BCEQ recommend that the project develop a mitigation plan, such as wetland restoration, to offset these effects.

Another significant issue they highlighted is the greenway's potential interference with the USACE's ongoing three-year feasibility study on Living Shorelines. This study aims to enhance the ecological productivity of both riverbanks, but in HRWG and BCEQ's opinion, the current MWG: North Harlem proposal does not align with these efforts or offer any explicit environmental protections. HRWG and BCEQ also advocate for the city to consider alternative routes, arguing that the current plan prioritizes Manhattan at the expense of a more integrated and equitable approach. They suggest an alternative route for cyclists to cross the 145th/149th Street Bridge to the Bronx, travel along Exterior Street, and return via the Macombs Dam Bridge. They state that this alternative route will improve Bronx access while avoiding excessive river encroachment.

Finally, they stress the need for coordination with regional greenway plans. BCEQ states that they have long advocated for Bronx-side greenways and secured Brownfield Opportunity Area status for park and trail development. They argue that the current MWG: North Harlem proposal isolates Manhattan instead of integrating it into the citywide bike and pedestrian networks.

While HRWG and BCEQ support the idea of a greenway, particularly on the Bronx side of the river, they strongly urge for a more balanced approach that includes better Bronx access, greater water quality protection, and alignment with the USACE's studies. They request ongoing involvement in discussions and planning to ensure that City greenway planning serves both sides of the river equitably.

Champlain Hudson Power Express

Champlain Hudson Power Express (CHPE) is developing a high-voltage direct current (HVDC) transmission line to supply 20% of New York City's power via a submarine route through the Harlem River. The cable will run from Spuyten Duyvil at the northern end of the river to the Waste Management site north of the Willis Avenue Bridge.

During the construction phase, CHPE plans to operate in the Harlem River between June and July 2025 for approximately six to eight weeks while installing the power cable bundle, either burying it underground or laying it on the river bed. This work will require a 200-foot by 80-foot modular cable installation barge, a 165-foot crane support barge, and a 180-foot logistics barge with accompanying tugs to transport materials. Additionally, a small fleet of vessels will assist with crew transfers and cable handling. Once the installation is complete, CHPE's facility will function as a full-time transmission utility starting in 2026. Still, no regular in-water activities are planned beyond periodic surveys every five years and occasional maintenance.

CHPE does not foresee any impact from the MWG: North River proposal on their installation, operations, or maintenance. They do not anticipate needing a buffer zone or additional navigational space, and narrowing the federal navigation channel will not

affect their work. CHPE stated that they would float the cable out of the way during greenway construction and would require a representative on board one of the construction vessels to monitor for any conflicts. As a result, they do not object to the project and have no recommendations for design changes or additional navigational considerations. However, they remain open to further discussions if needed.

Overall, CHPE's operations will be largely unaffected by the MWG: North Harlem due to the specific location of their cable route and the limited in-water activities required after installation. They do not foresee any navigational or safety concerns and have no objections to the project.

Waste Management (WM)

Waste Management (WM) owns and operates a solid waste transfer station at 98 Lincoln Avenue in the Bronx but does not conduct vessel operations in the Harlem River between 145th and 163rd Streets. Since WM does not utilize the waterway for transportation or logistics, it does not anticipate any impact from the MWG: North Harlem.

WM faces no navigational challenges in this section of the river and has no specific concerns regarding vessel maneuverability, docking, or anchoring. They also do not foresee the greenway affecting the traffic flow or safety in the area.

While unsure whether a narrower channel would impact future operations, they support the MWG: North Harlem project and do not have recommendations for design modifications or risk mitigations. They are open to further discussions as the project progresses but do not have additional stakeholder recommendations for input.

Esplanade Gardens

Esplanade Gardens, a residential complex at 700 and 720 Lenox Avenue, does not foresee any direct impact from the potential Greenway extension, provided the structure remains beyond the bulkhead that forms the eastern boundary of their property. Its primary concerns relate to the maintenance and security of the waterfront area adjacent to its property.

While they support the Greenway project, their support is contingent on city, state, and federal government authorities assuming full responsibility for seawall repair and maintenance. Additionally, they emphasize that the Greenway should not negatively impact their property.

Security is a significant concern for Esplanade Gardens, and they strongly recommend that no access or egress points be created along the Greenway adjacent to their property. They believe restricting direct access to their property in this area is critical for ensuring the safety of their residents.

Esplanade Gardens has no additional stakeholders to recommend for input but is open to further discussions and participation in future meetings regarding the project. They also requested the ability to provide additional comments as planning progresses.

10.0 Risk Assessment

10.1 Potential Risks Introduced by Partial Deauthorization

The following are risks posed by partial deauthorization of the federal channel identified during the navigational safety risk study of the project area.

At the time of this report, the NYCDOT Bridges Division did not complete a questionnaire. DOT Bridges provided a short commentary via email on factors affecting underwater communications cables (see Section 9). An unaccounted-for risk is that the partial deauthorization in some way impacts either the Macombs Dam or 145th Street Bridges. Partial deauthorization may impact DOT's ability to maintain the bridges. The project team will not speculate further, but DOT Bridges Division's acceptance of the potential deauthorization is viewed as essential.

Conversations with USACE revealed that if partial deauthorization were achieved, the deauthorized section of the river would no longer benefit from USACE dredging activities. While the project depth has been has remained unchanged for some time without maintenance dredging (see Section 5.0), a storm such as Hurricane Sandy (2011) could conceivably alter the depth of the channel. This scenario could further restrict vessel traffic and the ability to maintain the two bridges.

The primary risk posed by partial deauthorization is removing the USACE as a resource to maintain the partial deauthorized area. If dredging operations were required in the deauthorized area of the river, either state or city resources would need to be utilized. Note that if the area were deauthorized without subsequent construction of the greenway, this risk would remain.

As the Federal Channel is currently bank-to-bank for the entire river length, no USCG aids to navigation (AtoN) are installed. However, partial deauthorization may require the placement of AtoN to guide safe navigation. Additional USCG involvement to determine necessary AtoN installations, if any, have not yet been considered.

10.2 Potential Risks Introduced by MWG: North Harlem

The following are risks posed by the potential MWG: North Harlem identified during the navigational safety risk study of the project area.

Interviews with USCG personnel revealed that any greenway structure would likely be designated a pedestrian bridge, requiring application and permitting approval. This information was relayed by the USCG Office of Bridge Programs First Coast Guard District Commander, who attended in-person interviews and provided guidance. Development plans must include the USCG to achieve the necessary bridge permits, as the USCG permitting process was not directly addressed in the scope of this study.

Several stakeholders (see Section 9) withheld endorsement of the project as proposed due to concerns with vessel traffic. These stakeholders believe that building the MWG: North Harlem as initially proposed may create unnecessary vessel congestion focused primarily underneath the Manhattan side of the Macombs Dam Bridge. One Primary stakeholder stated that they required a minimum of 100 feet of navigable channel under both sides of the bridge.

The placement of the MWG: North Harlem along the Manhattan shoreline would effectively reduce the available channel width from the Manhattan side by 75 feet. Based on bridge width measurements (see Table 6), the narrowest point in the study area is at the Macombs Dam Bridge, where the river spans approximately 408 feet. Given the potential 75-foot deauthorization on the Manhattan side, which reduces the navigable waterway to a width of approximately 91 feet underneath the Manhattan side draw, a symmetrical deauthorization on the Bronx side to support a similar greenway would reduce the effective navigable width to approximately 77 feet in way of the Bronx-side draw at this chokepoint. Considering the stakeholder need to maintain a minimum open navigable channel of at least 100 feet, and allowing for a safety buffer, the feasibility of constructing a similar outboard greenway on the Bronx side would be constrained at the Macombs Dam Bridge.

The positioning of the MWG: North Harlem structure risks interfering with the USACE's ability to effectively dredge the federal channel under the Macombs Dam bridge. To dredge the federal navigation channel properly, USACE will require a minimum distance between the centerline piling and the outer edge of the greenway. This minimum distance is specific to the contractor performing the work and is therefore variable. USACE's ability to maintain the project depth of the channel may be impacted if the minimum distance, based on the width of the dredging barge and operational requirements, is not met.

Recreational users have expressed concerns regarding speed and wake. As smaller vessels, the narrowing of the channel and congestion point under the Macombs Dam Bridge may pose risks to their safe operation in the area.

10.3 Mitigation Strategies

Further project planning and development must account for the congestion areas underneath the Macombs Dam Bridge. The MWG: North Harlem project team should, if at all practicable, investigate whether the MWG: North Harlem can avoid passing underneath the Macombs Dam Bridge through alternative routing strategies. Doing so will remove the risks of vessel congestion, interference with NYCDOT Bridges Division, and interference with USACE's ability to maintain the project depth of the federal navigation channel.

A no-wake or speed restriction area may mitigate the risks associated with recreational users in high-vessel traffic areas such as under the Macombs Dam Bridge. EDC must work with the USCG to install proper signage and establish an appropriate no-wake or slow-speed area.

EDC may mitigate the absence of USACE dredging resources by working with NY State and City agencies to develop a dredging plan to address a need to dredge in the partially deauthorized area. The plan should establish responsibilities and authorities and identify required resources to support dredging in the area if necessary.

EDC should continue to inform and work with local, state, and federal agencies throughout the project lifecycle to collect and address all regulatory requirements.

11.0 Conclusions

This study identifies several important considerations for evaluating the potential MWG: North Harlem and associated federal channel deauthorization. Based on stakeholder input, vessel traffic analysis, and physical constraints, the findings suggest that while partial deauthorization may not pose immediate barriers to existing navigational use, it could introduce long-term spatial limitations, particularly in areas of high vessel convergence.

If the deauthorized area were to become shallow or congested due to debris or silt build up, this could impact vessel traffic patterns by forcing vessel traffic eastward. Further, there were several conflicts between vessel traffic and the potential MWG: North Harlem project area. There are vessel congestion/convergence areas underneath the two bridges on both sides. Ensuring that the MWG: North Harlem does not encroach excessively into the river, maintaining a minimum open channel width of 100 feet (particularly under the bridges), and incorporating vessel protection measures are key considerations moving forward. Additionally, further coordination with regulatory agencies, including the USACE and the USCG, will be necessary to define permitting or maintenance responsibilities. Further project planning and development must account for these congestion areas to ensure vessel traffic is minimally affected and potential congestion and convergence areas are mitigated as much as possible

This navigational risk assessment thoroughly analyzes the potential impacts of partially deauthorizing the federal navigation channel in the Harlem River between 145th and 163rd Streets and the subsequent construction of the potential MWG: North Harlem within the deauthorized section. These two items, while interdependent are analyzed sequentially. First, the impact of the partial deauthorization. Second, the impact of the potential MWG: North Harlem. Through extensive stakeholder engagement, historical navigation data, and vessel traffic analysis, this study evaluates the implications of these actions on the river's continued function as a navigable waterway.

The Harlem River remains an active commercial, municipal, and recreational navigation corridor. While the frequency of maritime operations is lower than in other significant waterways in the New York Harbor, specific users, including passenger tour vessels, municipal agencies, and environmental monitoring groups, rely on this section of the river. Many stakeholders expressed concerns about the consequences of narrowing the federally maintained channel, particularly in congested areas near the Macombs Dam Bridge, where vessel maneuverability is already limited. Operators such as Circle Line and Classic Harbor Line emphasized maintaining a minimum open navigable channel width of 100 feet under each bridge span. They suggested installing protective fendering with the MWG: North Harlem structure to safeguard vessels from potential allisions.

One of the most significant implications of partial deauthorization is the shift in responsibility for maintaining deauthorized portions of the Harlem River. If deauthorization is approved, the USACE would no longer be responsible for dredging or maintaining the section of the Harlem River between the potential MWG: North Harlem and the shoreline. While the current navigational depths have been maintained without dredging for decades, any future sediment accumulation or storm-related shoaling could create challenges for vessel operators. The study also highlights potential regulatory

considerations, as the USCG has indicated that the MWG: North Harlem structure may be classified as a pedestrian bridge, requiring permitting.

Stakeholders raised concerns that narrowing the channel would create navigation bottlenecks, particularly during peak commercial and recreational activity. Vessel traffic data shows that while most transits follow established navigation routes that avoid the MWG: North Harlem's potential footprint, there are critical interaction points near the Macombs Dam Bridge where commercial passenger vessels, tug-and-barge traffic, and recreational boaters converge. Some stakeholders, including Rocking the Boat and New York Open Water, have recommended speed and wake restrictions to mitigate potential conflicts. In contrast, others have suggested enhanced outreach to recreational boaters unfamiliar with navigation hazards in a more constrained waterway.

Beyond navigational impacts, environmental and urban planning organizations have raised concerns about the broader consequences of permanently altering the Harlem River's boundaries. The Harlem River Working Group and the Bronx Council for Environmental Quality have emphasized the importance of aligning the MWG: North Harlem's placement with ongoing environmental restoration efforts. They also raised concerns that a partial deauthorization of the channel on the Manhattan side could preclude a similar greenway project on the Bronx side of the river in this location. The project's placement on the Manhattan side may limit the future feasibility of similar infrastructure on the Bronx shoreline in certain segments of the river, especially near the Macombs Dam Bridge. This is due to the stakeholder requirement for a minimum of 100 feet of open navigable channel width on either side of the bridge.

Ultimately, while the potential partial deauthorization and MWG: North Harlem construction aim to improve public waterfront access and close a significant gap in Manhattan's greenway network, their successful implementation depends on carefully balancing these goals with the continued navigability of the Harlem River. This study provides a foundation for informed decision-making, emphasizing the need for continued stakeholder engagement, regulatory coordination, and design refinements that mitigate potential navigational and operational concerns.

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Harlem River, 145th – 163rd Street Navigational Study

Appendix 1 – Nav Study User Questionnaire (R-0) 05-MAR-2025

03/05/2025
[Recipient's Name]
[Recipient's Position]
[Company/Organization Name]
[Address]
[City, State, Zip Code]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

e) What is your typical operational schedule in this area?

f) Are there any specific navigational challenges you currently face in this section of the river?

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

b) How would you operate differently if the channel was narrower?

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

c) Is there anything else we should consider in the navigational risk assessment?

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 18 March 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

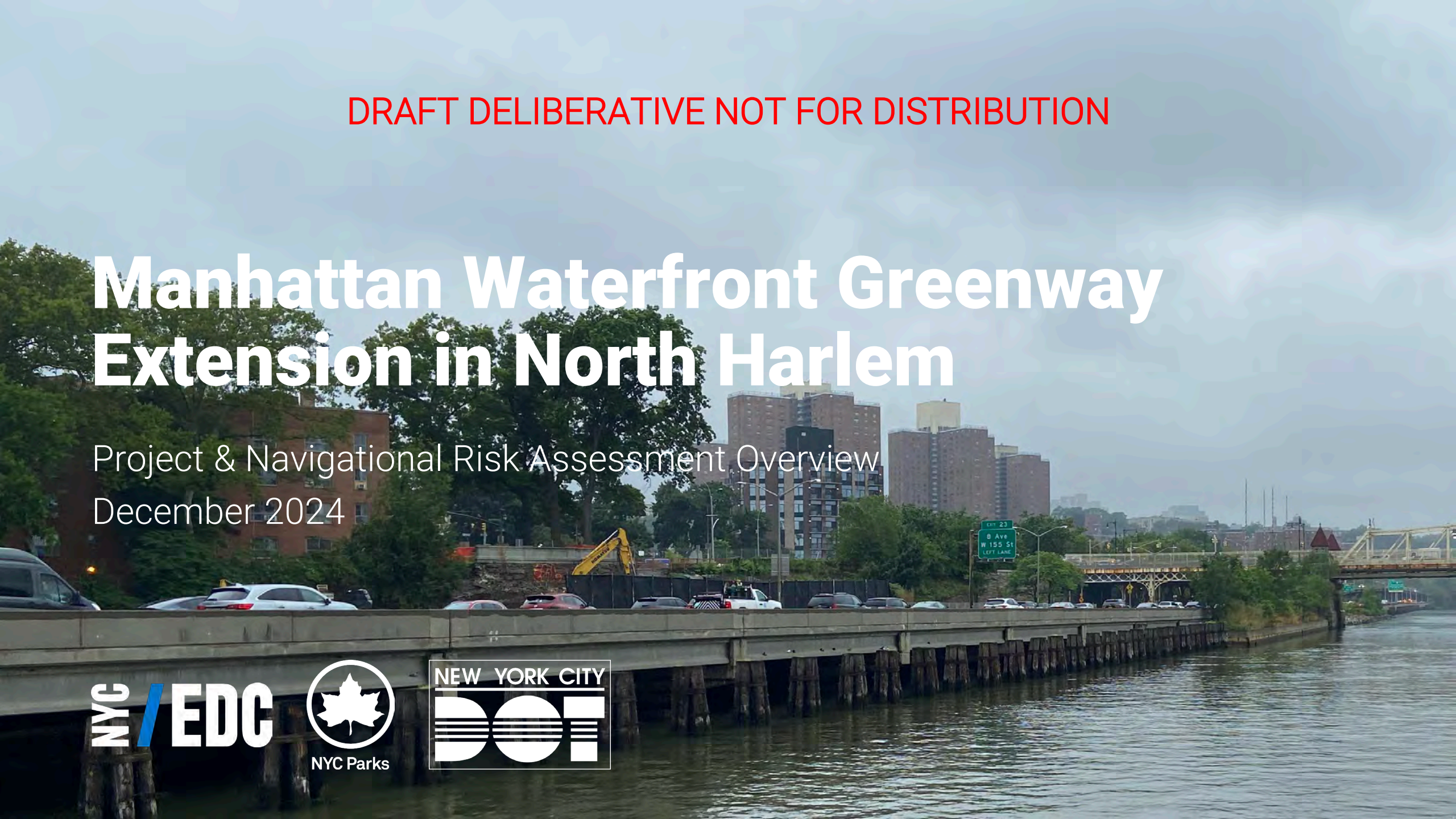
Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

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Manhattan Waterfront Greenway Extension in North Harlem

Project & Navigational Risk Assessment Overview

December 2024



NYC EDC

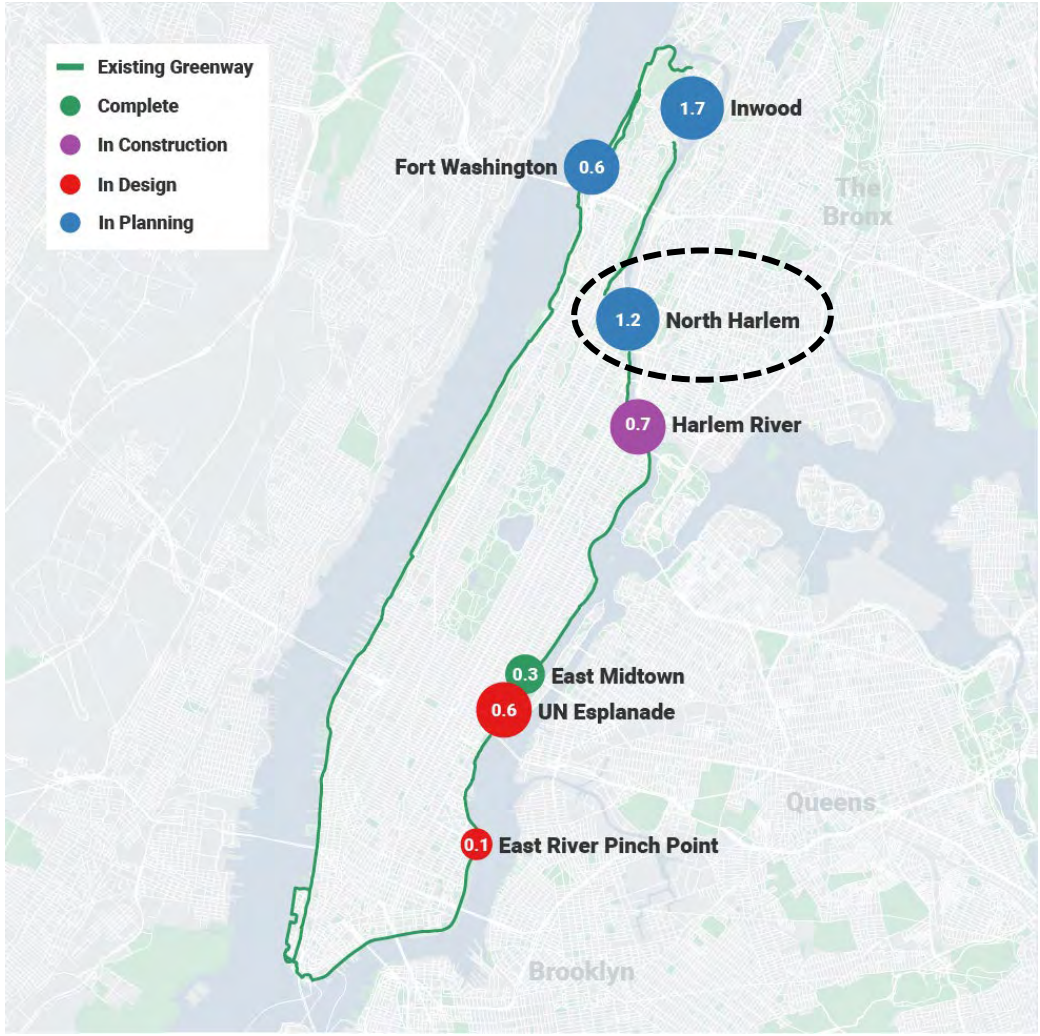
NYC Parks

NEW YORK CITY DOT

Manhattan Waterfront Greenway

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- The Manhattan Waterfront Greenway is an important **open space and transportation resource** for New York City, providing improved **access to the city's waterfront** for a variety of activities, **integrating larger parks within a connected network**, and providing a **bike path for recreation and commuting**, all within some of Manhattan's most densely-populated neighborhoods
- When complete, the **32.5-mile loop** will run continuously around the entire island



TOTAL MANHATTAN GREENWAY	COMPLETED SEGMENTS	FUTURE SEGMENTS
32.5 MILES	27.6 MILES (85%)	4.9 MILES (15%)

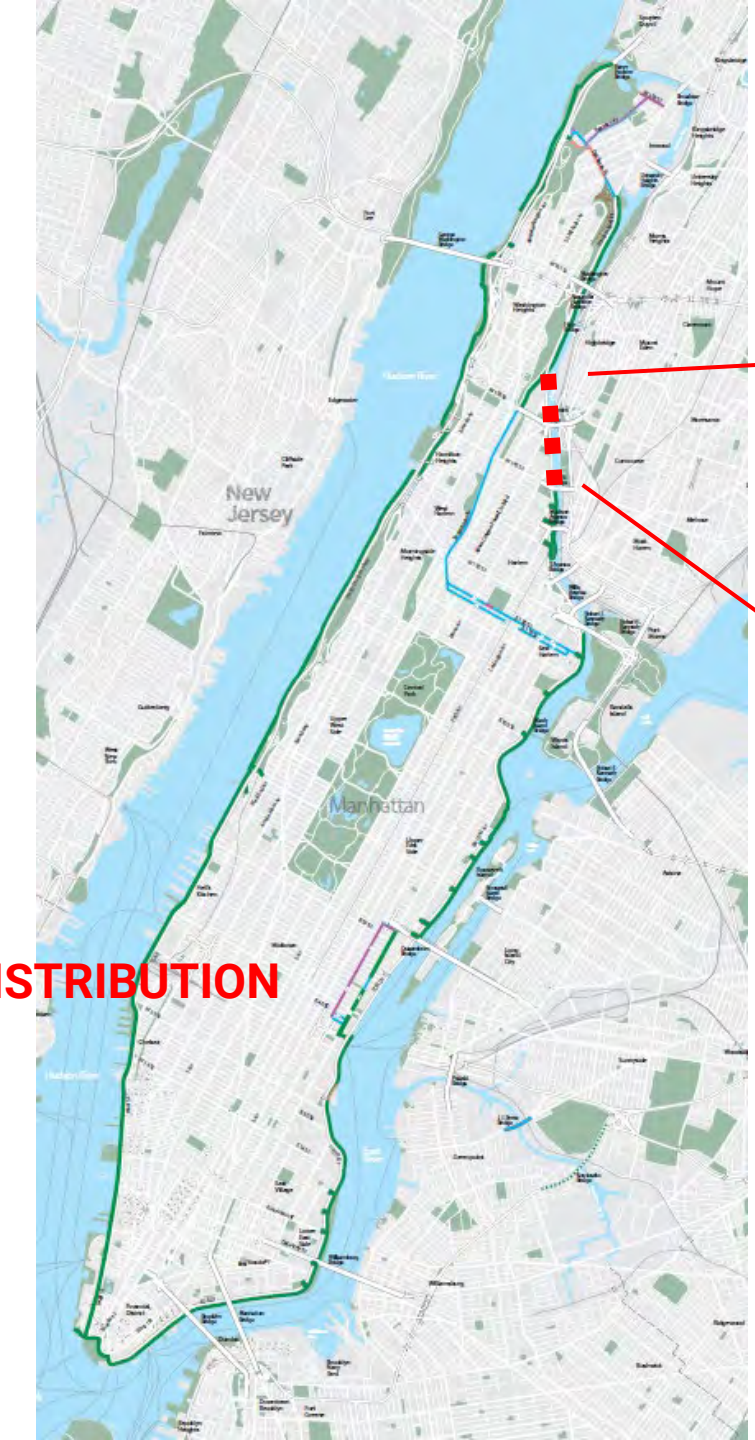
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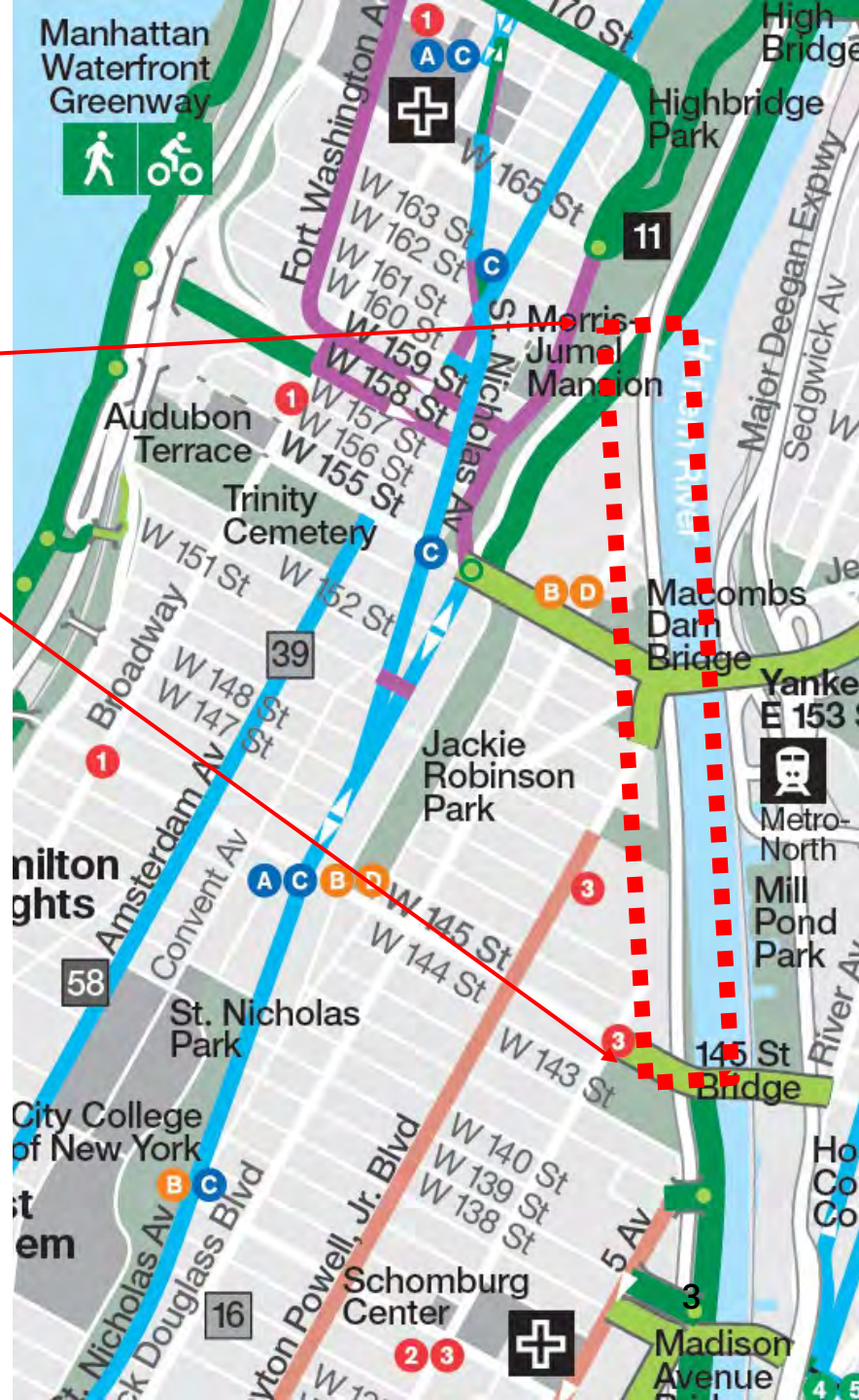
NYC Parks

NEW YORK CITY DOT

North Harlem Gap

- **1.2-mile greenway gap** from 145th St to 163rd St





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NYC Parks

NEW YORK CITY DOT

Site Details

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NYC EDC

NYC Parks

NEW YORK CITY DOT

Current greenway access points

500 ft

N

Conceptual Route

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- Due to a lack of waterfront land, the City is planning to a continuous **outboard greenway** in the Harlem River for pedestrians and cyclists to extend the Manhattan Waterfront Greenway and close the gap
- The greenway will be **similar to the East Midtown greenway** (photo right)
- The greenway is estimated to be **up to 40 feet wide** and to be **offset from the shoreline by up to 30 feet**
- Benefits:
  - New **connections between neighborhoods** north and south
  - New **waterfront access** for community where little currently exists
  - Expanded safe **pedestrian and bicycle infrastructure**



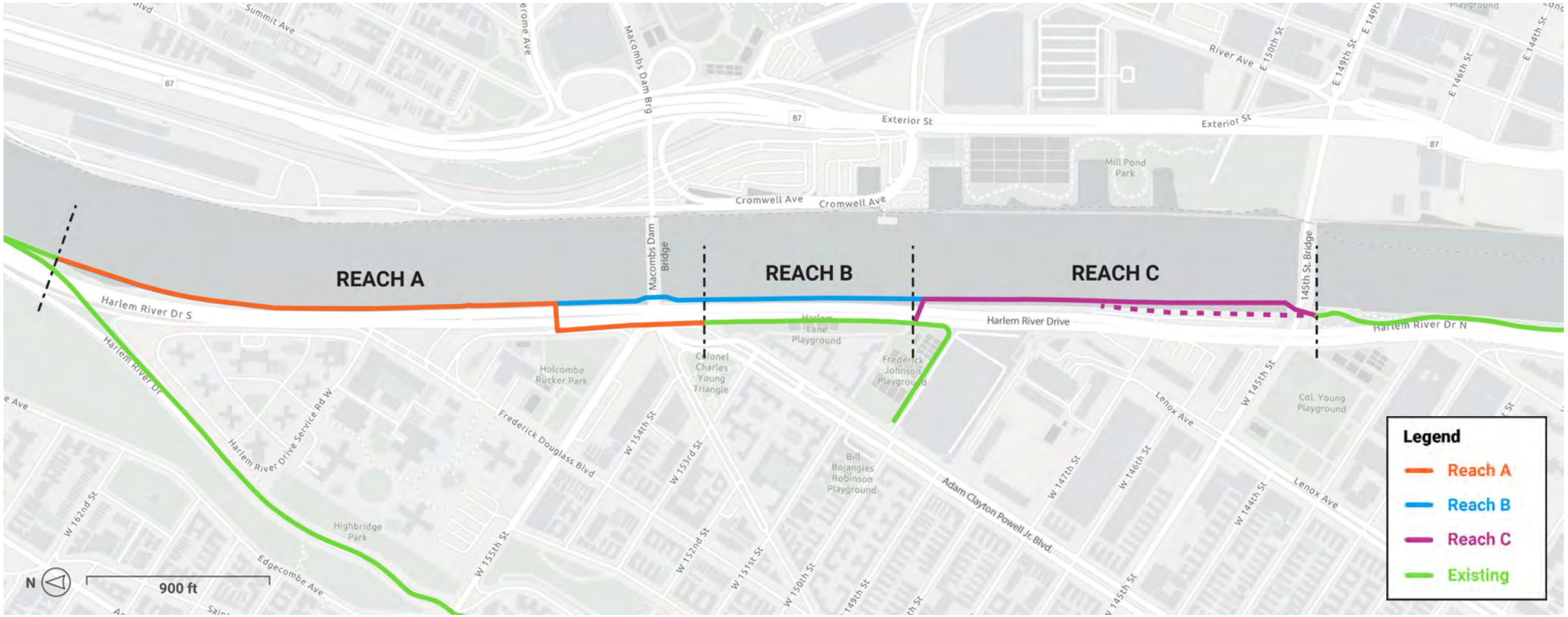
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Conceptual Route Map

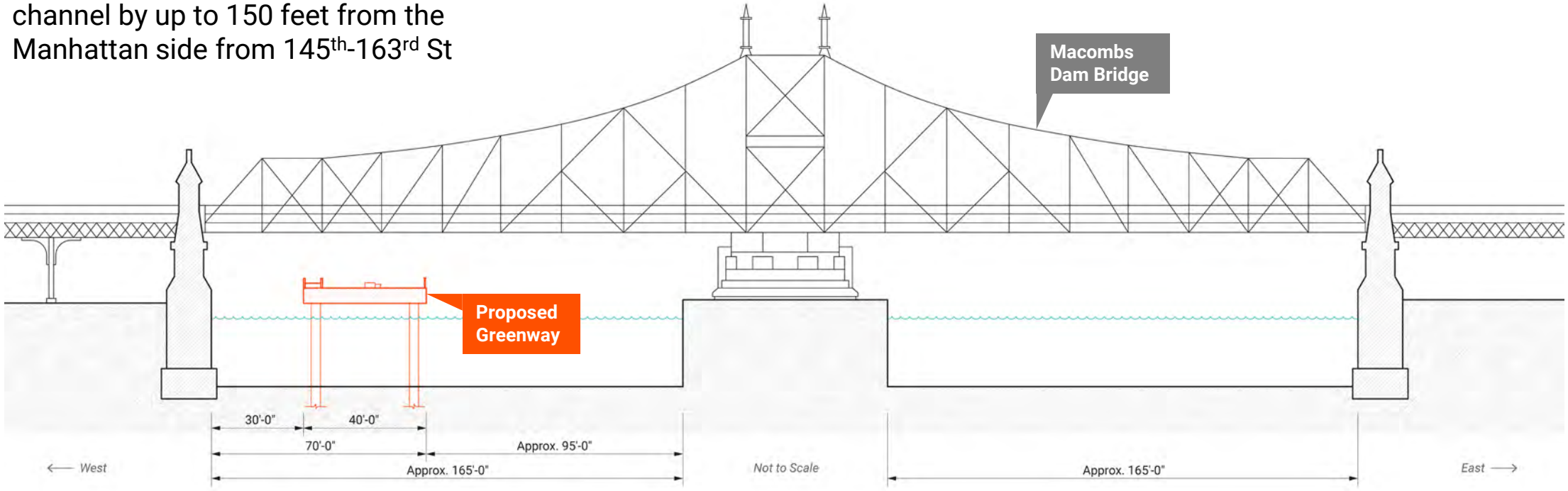
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Harlem River Federal Navigation Channel

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- The Harlem River federal navigation channel is **bank-to-bank**
- Building an outboard greenway requires **congressional deauthorization**, which could narrow the federally-maintained channel by up to 150 feet from the Manhattan side from 145th-163rd St



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Navigational Risk Assessment

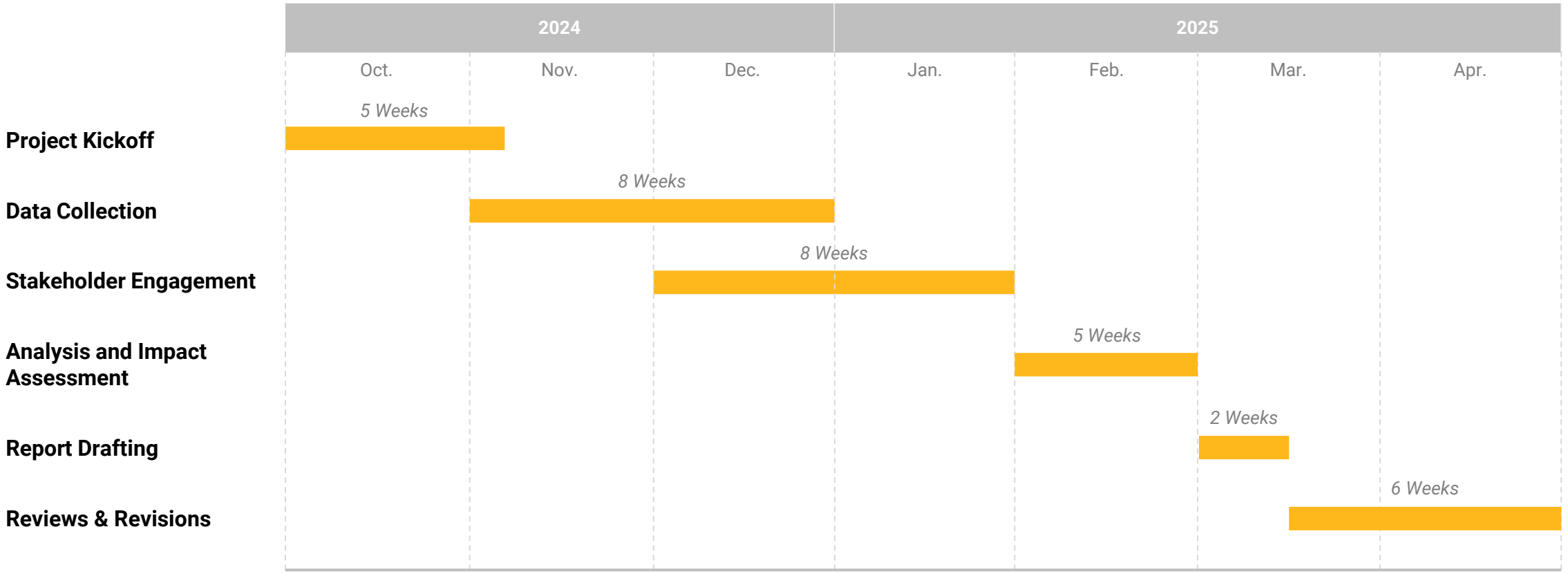
- The process the City is taking to receive congressional deauthorization of up to 150 feet of the Harlem River federal navigational channel from the Manhattan side between 145th-163rd St includes the following steps:
  1. Undertake a **navigational risk assessment** of the present and predicted future uses of the Harlem River federal navigation channel from 145th-163rd St to ensure the deauthorization would not hinder the use of this section of the Harlem River as a working waterway
  2. Submit the study to **USACE** and receive concurrence
  3. Introduce legislative language into the **2026 Water Resources Development Act (WRDA)**

- The navigational risk assessment includes analysis of the current channel, current and future land uses, navigation and maintenance dredging history, physical constraints (including bridges), operational information, including quantifying vessels and their travel paths, berth analysis, assessment of potential risks and implications of the project, and potential mitigation.
- The assessment will be based on:
  - **USACE and other data**
  - **Surveys and engagement** with property owners and users of the Harlem River between 145th-163rd S

NYC EDC NYC Parks NEW YORK CITY DOT

Navigational Risk Assessment Timeline

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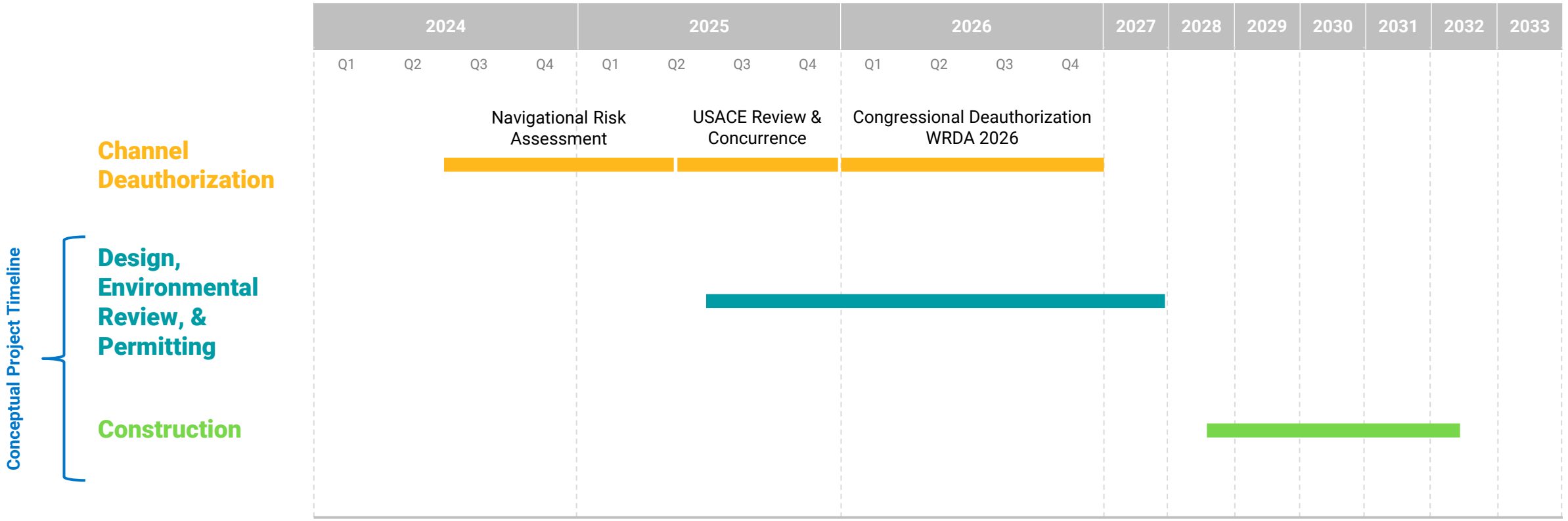
NYC EDC

NYC Parks

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Project Timeline

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Harlem River, 145th – 163rd Street Navigational Study

Appendix 2 – NOAA EFH Mapper – Reporting Page

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 40° 49' 31" N, Longitude = 74° 3' 59" W
Decimal Degrees: Latitude = 40.825, Longitude = -73.934

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Atlantic Butterfish	Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Atlantic Herring	Adult, Juvenile, Larvae	New England	Amendment 3 to the Atlantic Herring FMP
		Bluefish	Adult, Juvenile	Mid-Atlantic	Bluefish
		Clearnose Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Little Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Longfin Inshore Squid	Eggs	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Red Hake	Adult, Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
					FMP
		Summer Flounder	Adult, Juvenile, Larvae	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Windowpane Flounder	Adult, Eggs, Juvenile, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs, Juvenile, Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

Link	Data Caveats	HAPC Name	Management Council
		Summer Flounder SAV	Mid-Atlantic Fishery Management Council

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

All EFH species have been mapped for the Greater Atlantic region,
Atlantic Highly Migratory Species EFH,
Bigeye Sand Tiger Shark,
Bigeye Sixgill Shark,
Caribbean Sharpnose Shark,
Galapagos Shark,
Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark

Harlem River, 145th – 163rd Street Navigational Study

Appendix 3 – 2024 Harlem River Hydrosurvey

Note – Sheets 7-9 comprise the project area. Sheet 8 contains the Macombs Dam Bridge. Sheet 7 contains the 145th Street Bridge. The study area ends where the shoreline walkway begins, approximately with 163rd Street.



(GRID NORTH)

PROJECT SPECIFIC NOTES:

-COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983(2011), NEW YORK LONG ISLAND, 3104 US SURVEY FEET.
-MAP SCALE IS "1 INCH = 2,000 FEET" ON SHEET 1 AND "1 INCH = 100 FEET" ON SHEETS 2 TO 17.
-THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
-THE SOUNDINGS ON THIS MAP MEET USACE EM 1110-2-1003 ACCURACY STANDARDS.
-VERTICAL DATUM FOR THE PROJECT IS NOAA MEAN LOWER LOW WATER (MLLW) (EPOCH 1983-2001) AS DETERMINED USING VDATUM (VER. 4.7), WHICH IS 2.26-2.64 FEET BELOW NAVD88.
-MULTI-BEAM SOUNDINGS AS SHOWN ARE REPRESENTED USING THE MEDIAN OF A THREE (3') FOOT CELL SORTED TO THIRTY (30') FEET.
-SINGLE-BEAM SOUNDINGS AS SHOWN ARE REPRESENTED USING A THREE (3') FOOT CELL SORTED TO FIFTEEN (15') FEET.
-CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 MEDIAN DATA SET.
-THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
-THE PLANIMETRICS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. ORTHOIMAGES WERE OBTAINED FROM DISCOVER GIS DATA (2022).
-THIS SURVEY WAS PERFORMED USING LOCAL CONTROL ESTABLISHED BY THE CORPS OF ENGINEERS AND REAL TIME KINEMATIC GNSS FROM NY VRS.
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
-THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
    SURVEY VESSEL: SV BOTTOM LINE.
    ECHOSOUNDER: R2 SONIC 2024 MULTIBEAM.
    NAVIGATION SYSTEM: APPLANIX POSMV INTEGRATED I2NS INERTIAL NAVIGATION SYSTEM. IN REAL TIME KINEMATIC (RTK) MODE.
    AQUISITION AND PROCESSING SOFTWARE: HYPACK/HYSWEEP VERSION 2023/2024.
    SOUND VELOCITY PROFILER: AML BASE X2.
-THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED BETWEEN AUGUST 28 AND SEPTEMBER 7, 2024, AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS MAY BE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS, THE INFORMATION PROVIDED HERE SHOULD NOT BE EXCLUSIVELY RELIED UPON. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
-UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
-THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
-REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND/OR COPYRIGHT HOLDER IS OBTAINED.
-A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

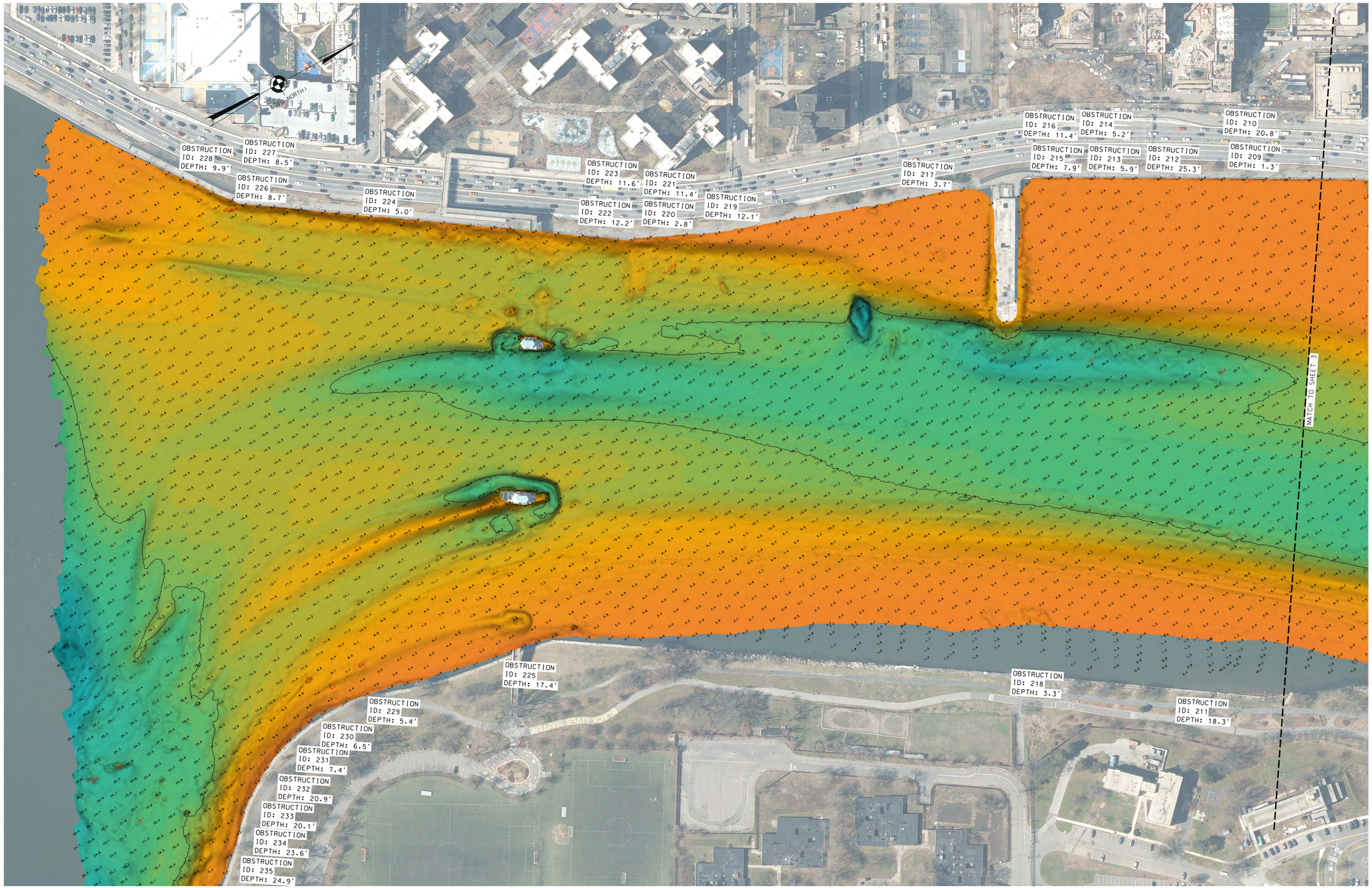
LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 251-8048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

0 2000' 4000'

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

| | | |



0 100′ 200′

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-0480
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82′ (NAVD 1988)	ELEVATION: 16.20′ (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TC VH-101

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

		GD	ND
		PR	MP

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE: ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED: N. DENDUKURI, FIELD CARTOGRAPHER
APPROVED: R. SMITH, CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADUR, CHIEF OF SURVEY SUPPORT SECTION
APPROVED: MIKE, DEPUTY CHIEF OF SURVEYS AND MAPPING BRANCH
DATE: 25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

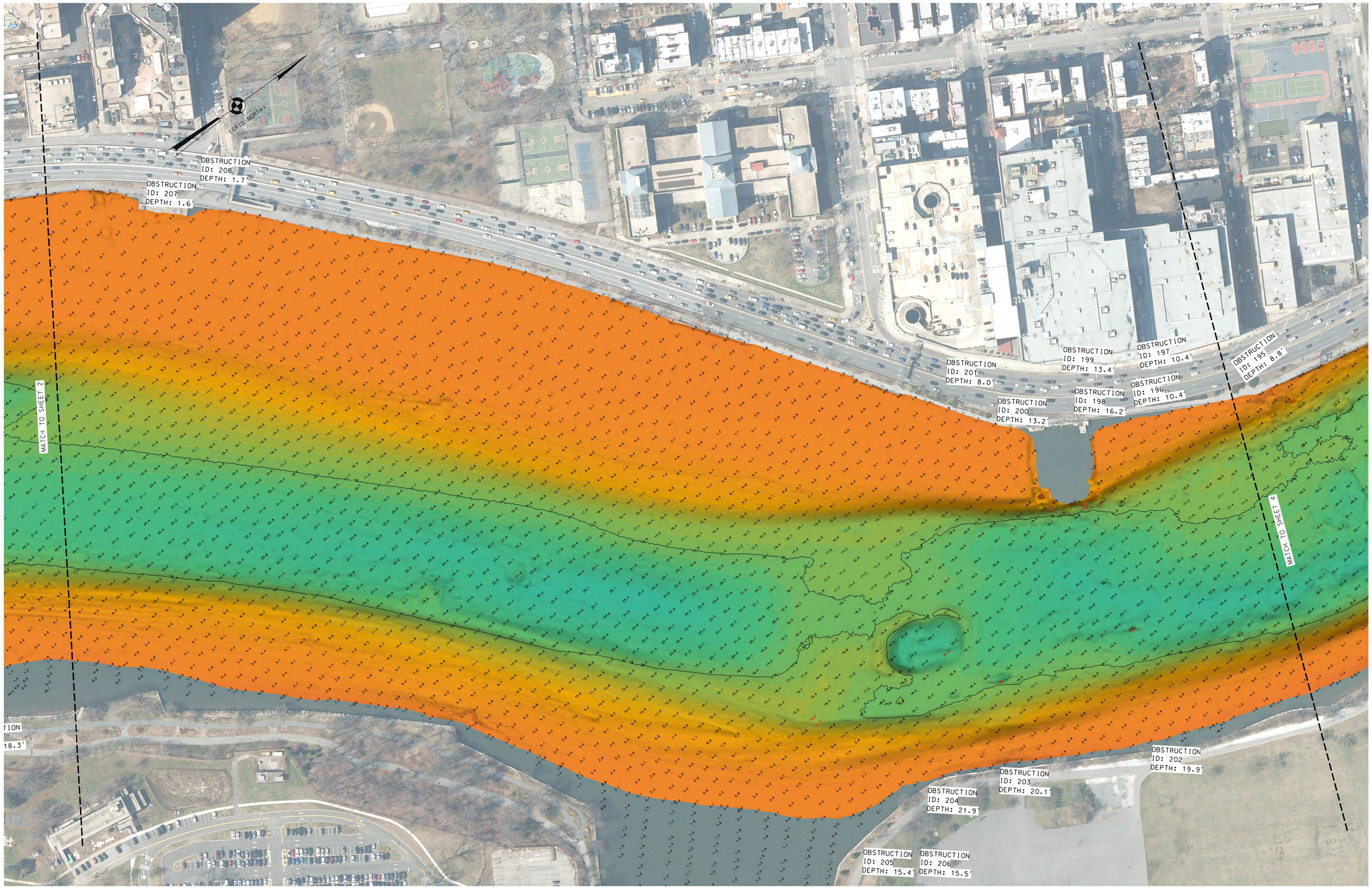
OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-102

2 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 251-8848
WWW.MCKIMCREED.COM
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES. REFER TO VH-101.

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

CD	ND
PR	MP

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE: ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED: N. DENDUKURI, FIELD CARTOGRAPHER
APPROVED: R. SMITH, CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADURI, CHIEF OF SURVEY SUPPORT SECTION
APPROVED: MIKE GRAZ, CHIEF OF GEOSPATIAL ASPECTS AND MAPPING BRANCH
DATE: DEPTH SURVEY 25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

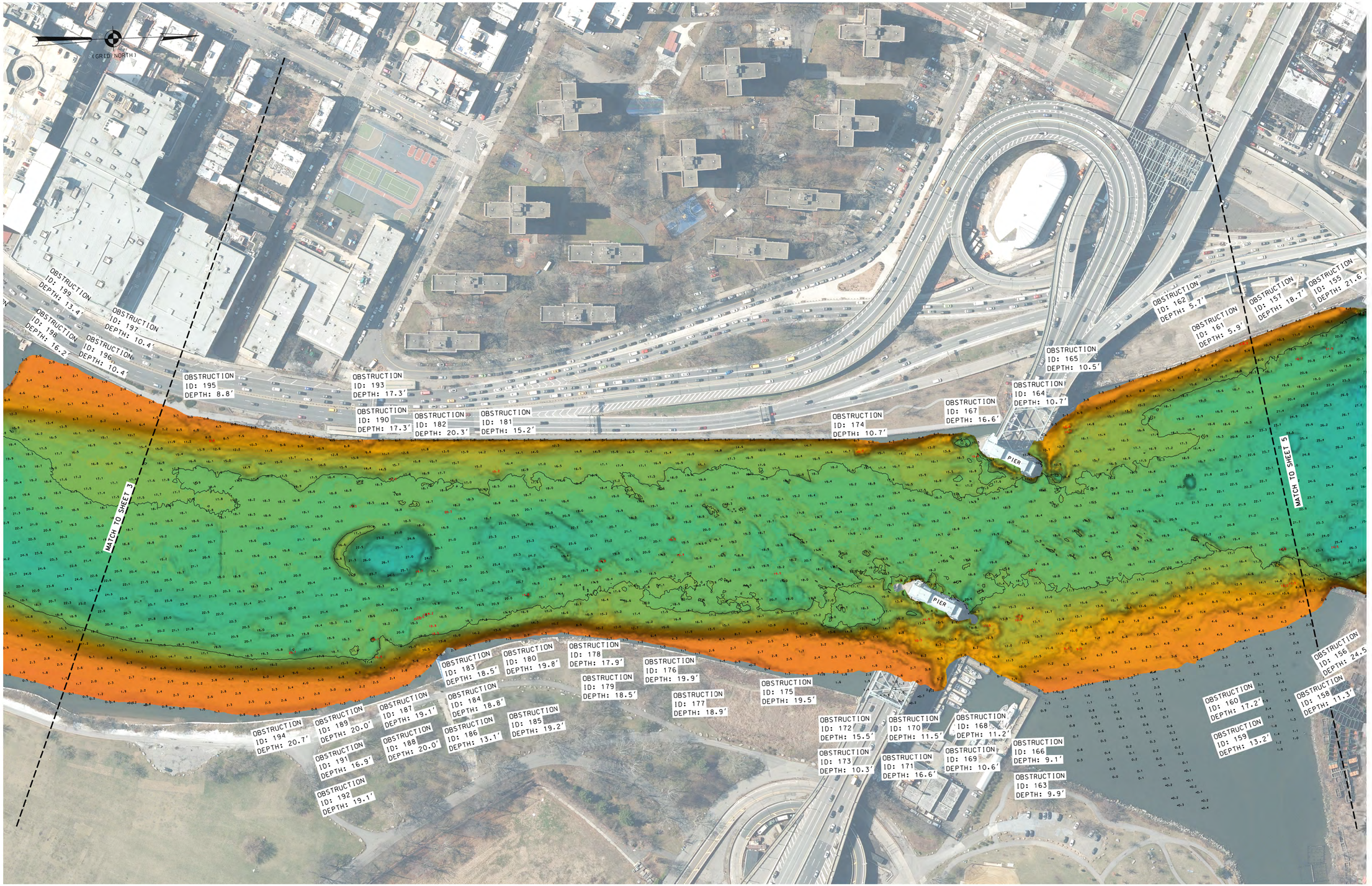
OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-103

3 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

		PR	GD
		MP	ND

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE: ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED: N. DENDUKURI, FIELD CARTOGRAPHER
APPROVED: R. SMITH, CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADURI, CHIEF OF SURVEY SUPPORT SECTION
APPROVED: MIKE MEAD, CHIEF OF HYDROGRAPHICS AND MAPPING BRANCH
DATE: DEPTH SURVEY 25 OCTOBER 2024

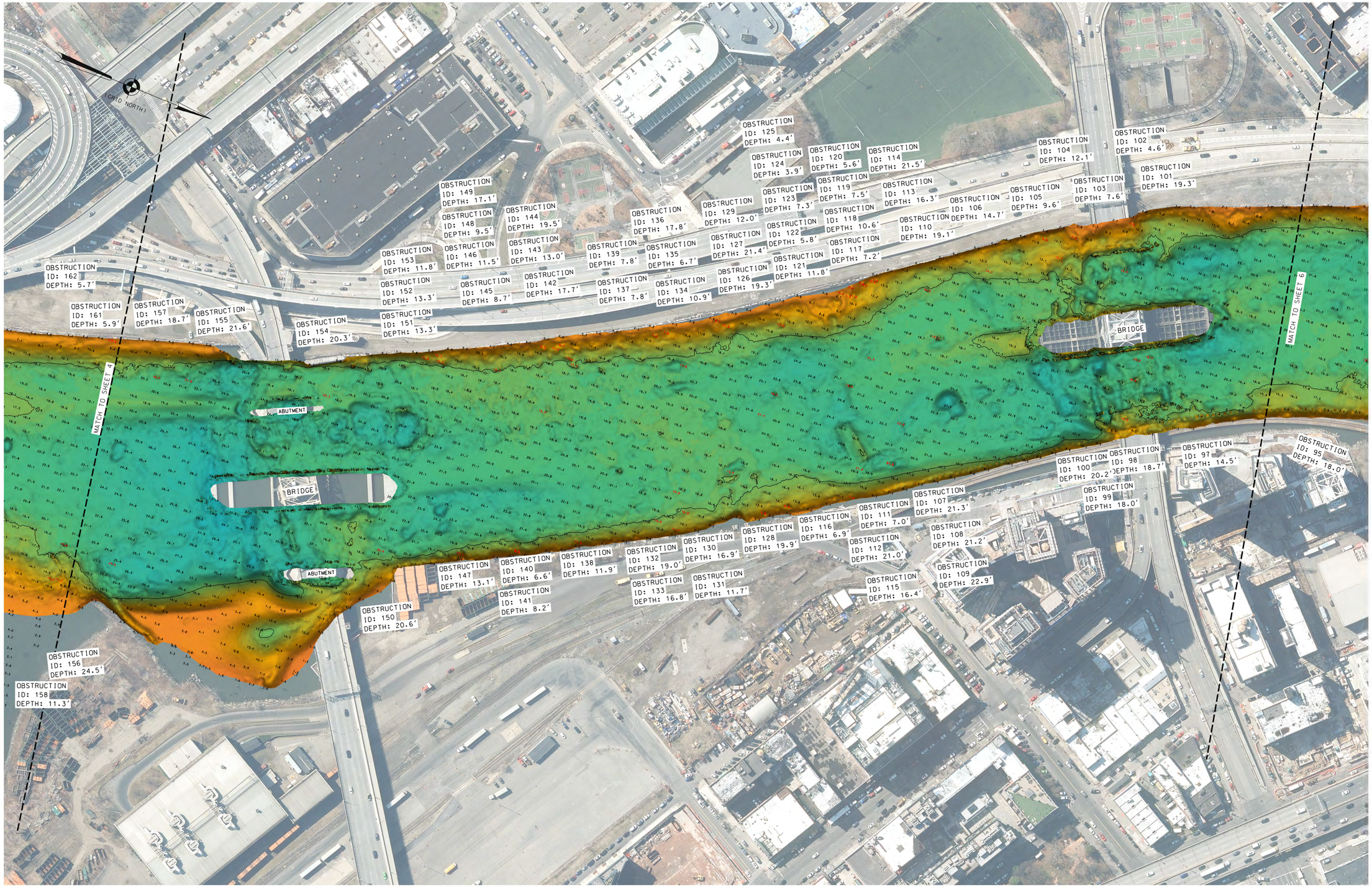
DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

NEW JERSEY
SHOAL HARBOR & COMPTON CREEK
PLANS AND SPECS SURVEY

VH-104

4 OF 17



0 100′ 200′

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1049
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82′ (NAVD 1988)	ELEVATION: 16.20′ (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101.

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	GD
MP	ND

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE: ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED:	N. DENDUKURI, FIELD CARTOGRAPHER
APPROVED:	R. SMITH, CIVIL ENGINEERING TECHNICIAN
APPROVED:	P. BHADURI, CHIEF OF SURVEY SUPPORT SECTION
APPROVED:	DEPUTY CHIEF, OPERATIONS AND MAPPING BRANCH
DATE:	25 OCTOBER 2024

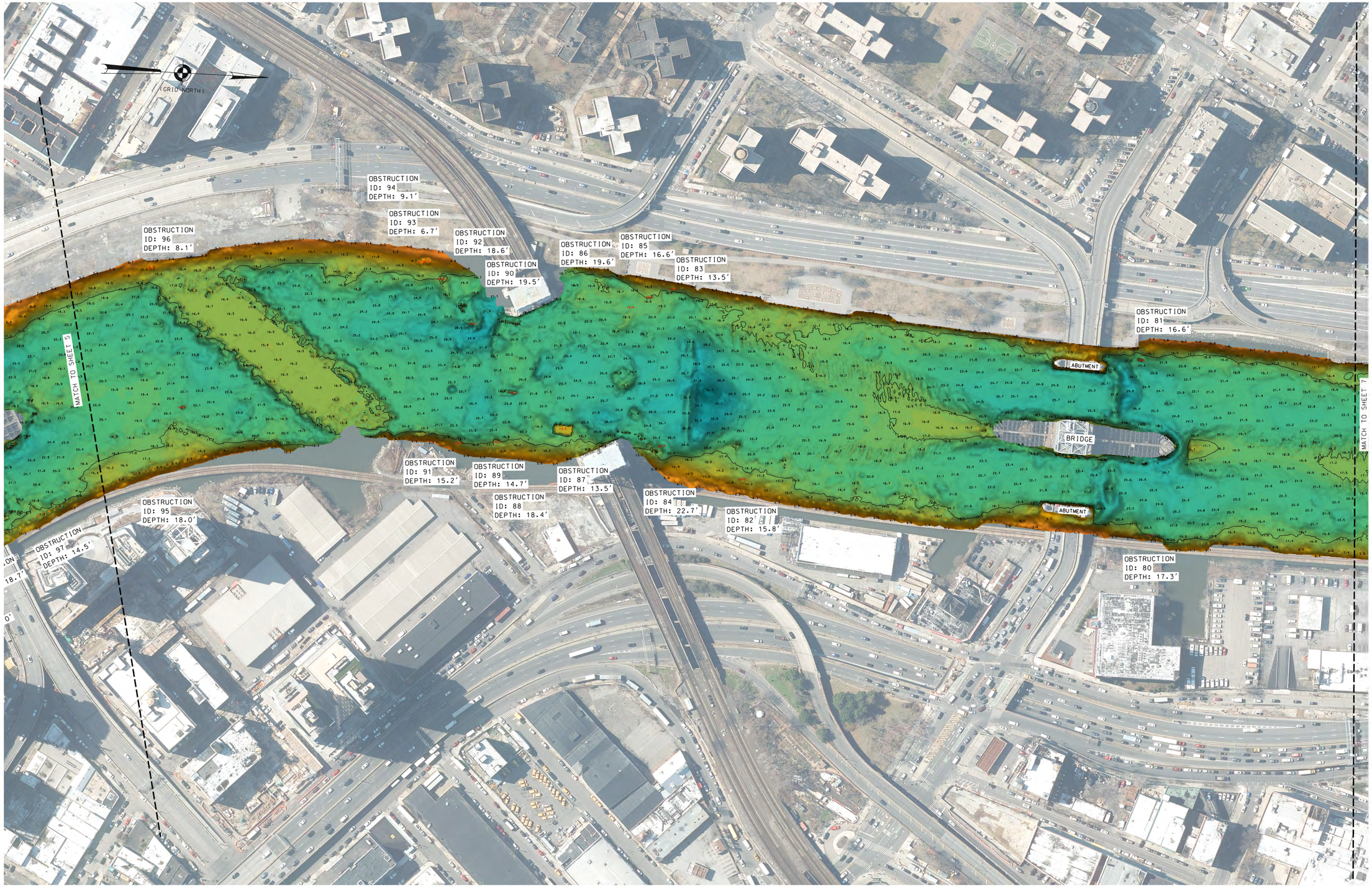
DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK
CONDITION SURVEY

VH-105

5 OF 17



0 100′ 200′

McKIM&CREED
241 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1648
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82′ (NAVD 1988)	ELEVATION: 16.20′ (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101.

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

		CD	ND
		PR	MP

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE: ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED:	N. DENDUKURI / FIELD CARTOGRAPHER
APPROVED:	R. SMITH / CIVIL ENGINEERING TECHNICIAN
APPROVED:	P. BHADUR / CHIEF OF SURVEY SUPPORT SECTION
APPROVED:	MR&A / CHIEF OF GRAPHICS AND MAPPING BRANCH
DATE:	25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

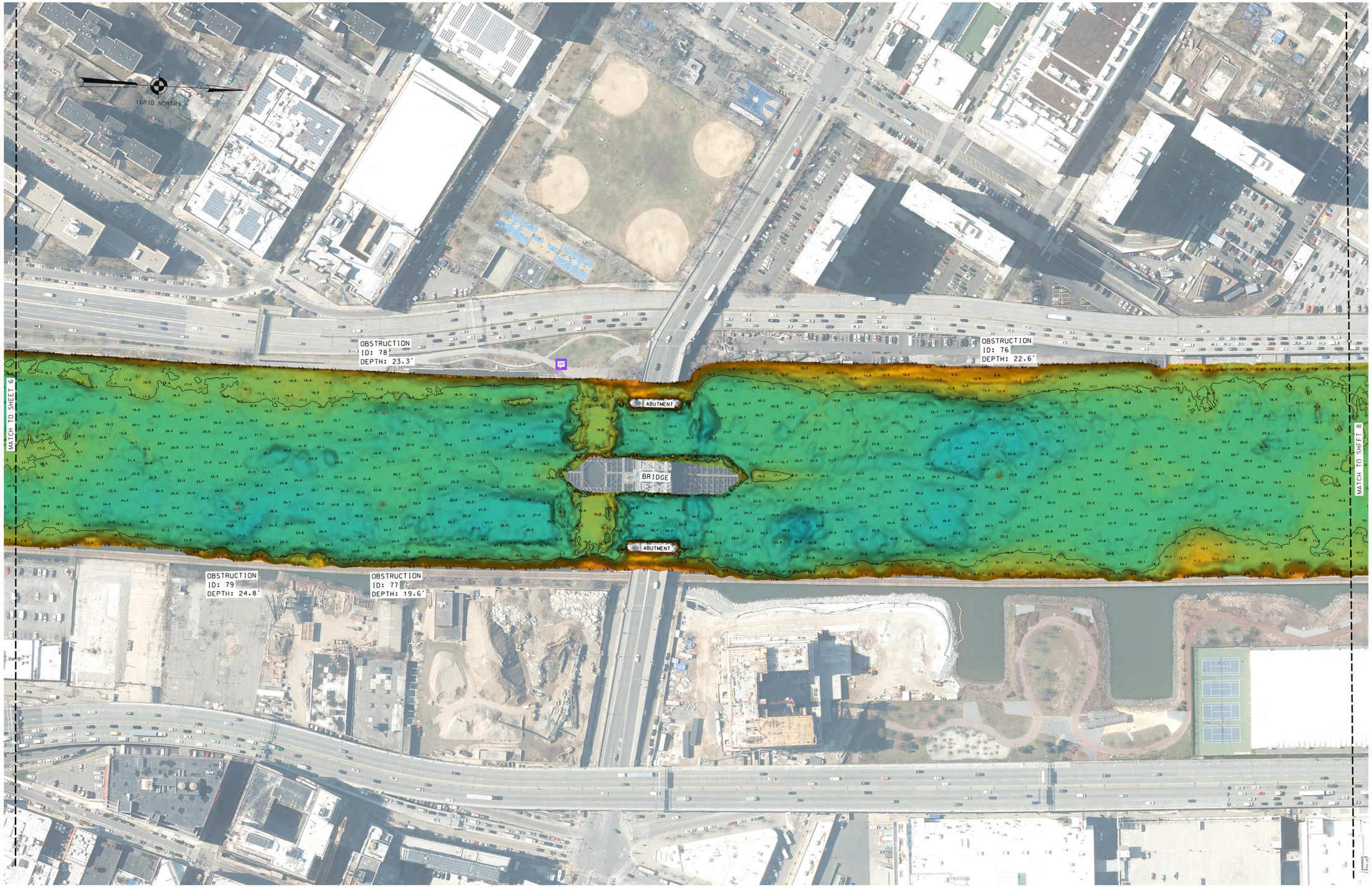
OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-106

6 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1049
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDW52)	BENCHMARK: 851 8902 B (PID:BBDW50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101.

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

	GD
	ND
	PR
	MP

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED: N. DENDUKURI
FIELD CARTOGRAPHER
APPROVED: R. SMITH
CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADURI
CHIEF OF SURVEY SUPPORT SECTION
APPROVED: MIKE
CHIEF OF GRAPHICS AND MAPPING BRANCH
DEPTH CONTOURS
DATE: 25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

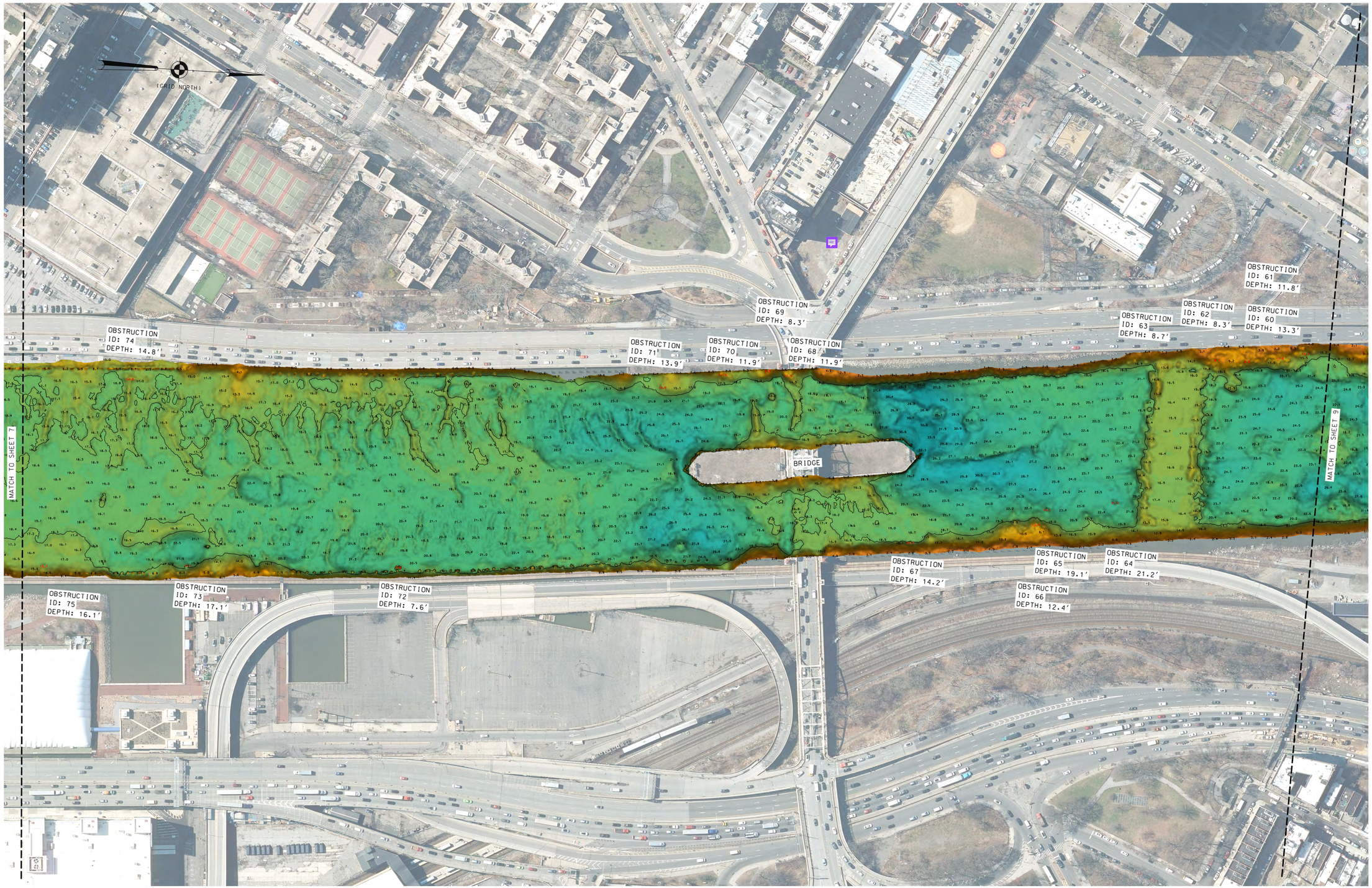
OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-107

7 OF 17



0 100′ 200′

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82′ (NAVD 1988)	ELEVATION: 16.20′ (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

		GD	ND
		PR	MP

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED:	N. DENDUKURI	FIELD CARTOGRAPHER
APPROVED:	R. SMITH	CIVIL ENGINEERING TECHNICIAN
APPROVED:	P. BHADURI	CHIEF OF SURVEY SUPPORT SECTION
APPROVED:	MIKE ANDRACHUK	CHIEF OF GRAPHICS AND MAPPING BRANCH
DATE:	25 OCTOBER 2024	

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK
CONDITION SURVEY

VH-108

8 OF 17



0 100′ 200′

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1045
FAX: (910) 251-2282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82′ (NAVD 1988)	ELEVATION: 16.20′ (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

		PR	GD
		MP	ND

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE: ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED: N. DENDUKURI, FIELD CARTOGRAPHER
APPROVED: R. SMITH, CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADUR, CHIEF OF SURVEY SUPPORT SECTION
APPROVED: MIKE KRAUSE, CHIEF OF SURVEYS AND MAPPING BRANCH
DATE: 25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-109

9 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 251-8444
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES. REFER TO VH-101

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

		CD	ND
		PR	MP

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED: N. DENDUKURI, FIELD CARTOGRAPHER
APPROVED: R. SMITH, CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADURI, CHIEF OF SURVEY SUPPORT SECTION
APPROVED: MIKE, DEPUTY CHIEF, SURVEYS AND MAPPING BRANCH
DATE: 25 OCTOBER 2024

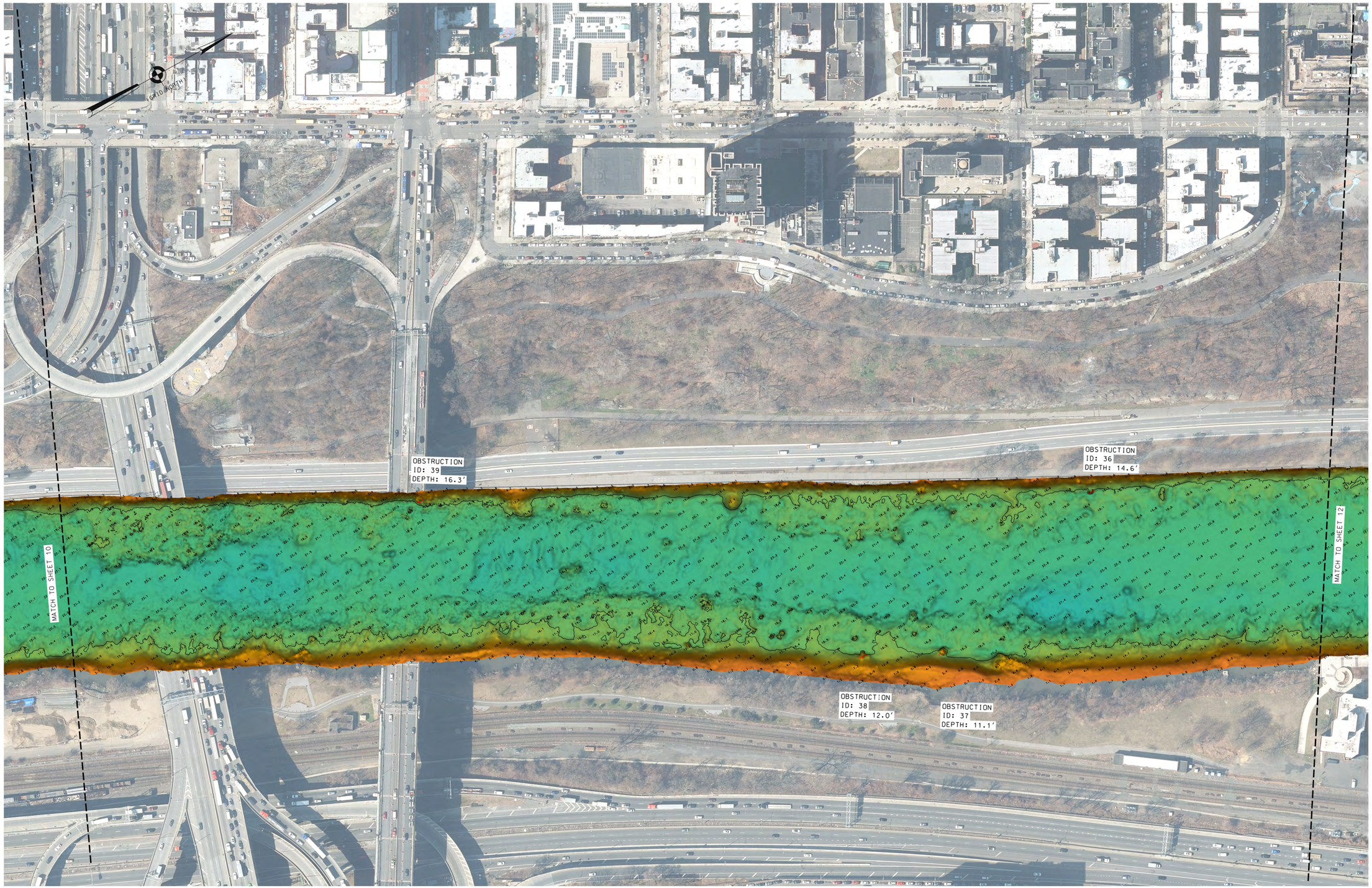
DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

NEW JERSEY
SHOAL HARBOR & COMPTON CREEK
PLANS AND SPECS SURVEY

VH-110

10 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

		GD	ND
		PR	MP

SCALE: ONE INCH = 100 FEET

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED: N. DENDUKURI, FIELD CARTOGRAPHER
APPROVED: R. SMITH, CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADURI, CHIEF OF SURVEY SUPPORT SECTION
APPROVED: MIKE, DEPUTY CHIEF OF SURVEYS AND MAPPING BRANCH
DATE: 25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-111

11 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-9282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

GD	PR
ND	MP

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

REQ. NO./FILE NO.: 5457

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

APPROVED: N. DENDUKURI
FIELD CARTOGRAPHER

APPROVED: R. SMITH
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADURI
CHIEF OF SURVEY SUPPORT SECTION

APPROVED: MIKE
DEPUTY FOR SURVEYS AND MAPPING BRANCH

DATE: 25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-112

12 OF 17



0 100' 200'

McKIM&CREED
245 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 251-0454
FAX: (910) 251-1878
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

		PR	GD
		MP	ND

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED: N. DENDUKURI
FIELD CARTOGRAPHER

APPROVED: R. SMITH
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADURI
CHIEF OF SURVEY SUPPORT SECTION

APPROVED: MIKE
DEPUTY CHIEF OF GRAPHICS AND MAPPING BRANCH

DATE: 25 OCTOBER 2024

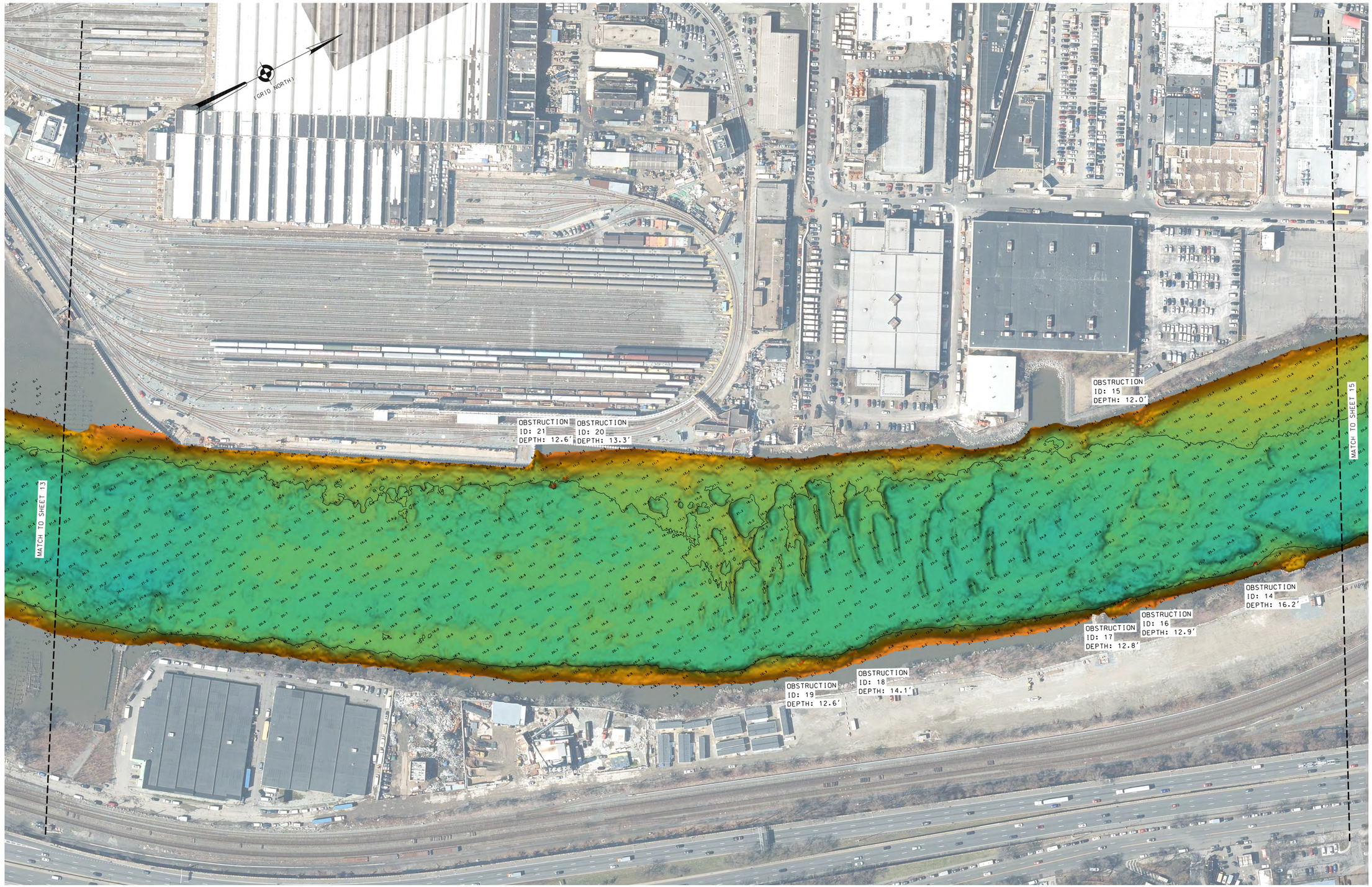
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U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK
CONDITION SURVEY

VH-113

13 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE (910) 343-0648
FAX (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

		PR	GD
		MP	ND

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

REQ. NO./FILE NO.: 5457

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-60
W2301 / 61-80
W2241 / 1-12

APPROVED: N. DENDUKURI
FIELD CARTOGRAPHER

APPROVED: R. SMITH
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADURI
CHIEF OF SURVEY SUPPORT SECTION

APPROVED: MIKE
DEPUTY CHIEF, OPERATIONS AND MAPPING BRANCH

DATE: 25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

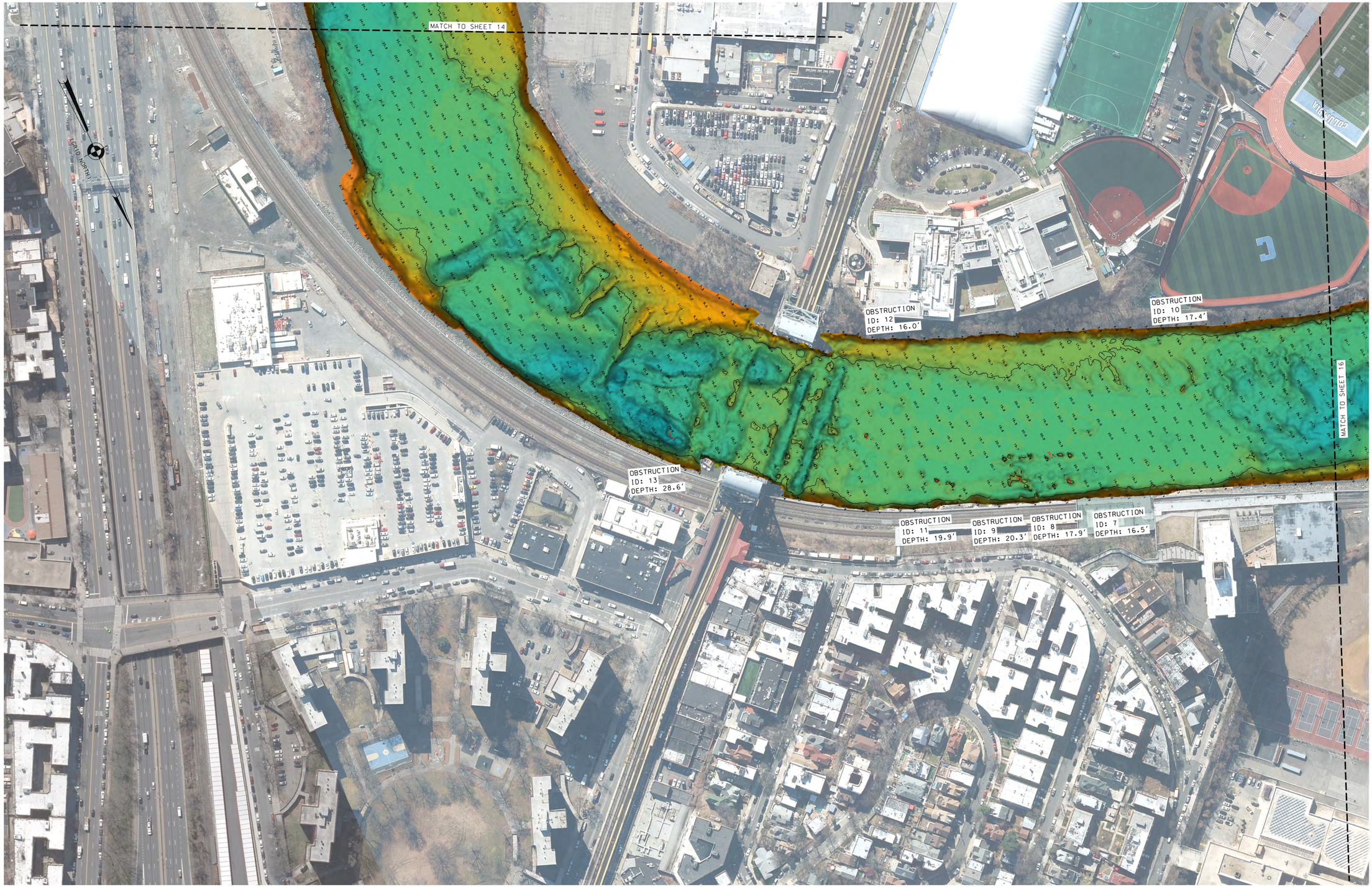
OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-114

14 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE (910) 251-8848
WWW.MCKIMCREED.COM
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:88DM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

		GD	ND
		PR	MP

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

SCALE: ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

REG. NO./FILE NO.: 5457

APPROVED: N. DENDUKURI
FIELD CARTOGRAPHER

APPROVED: R. SMITH
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADURI
CHIEF OF SURVEY SUPPORT SECTION

APPROVED: MIKE
DEPUTY FOR GRAPHICS AND MAPPING BRANCH

DATE: 25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

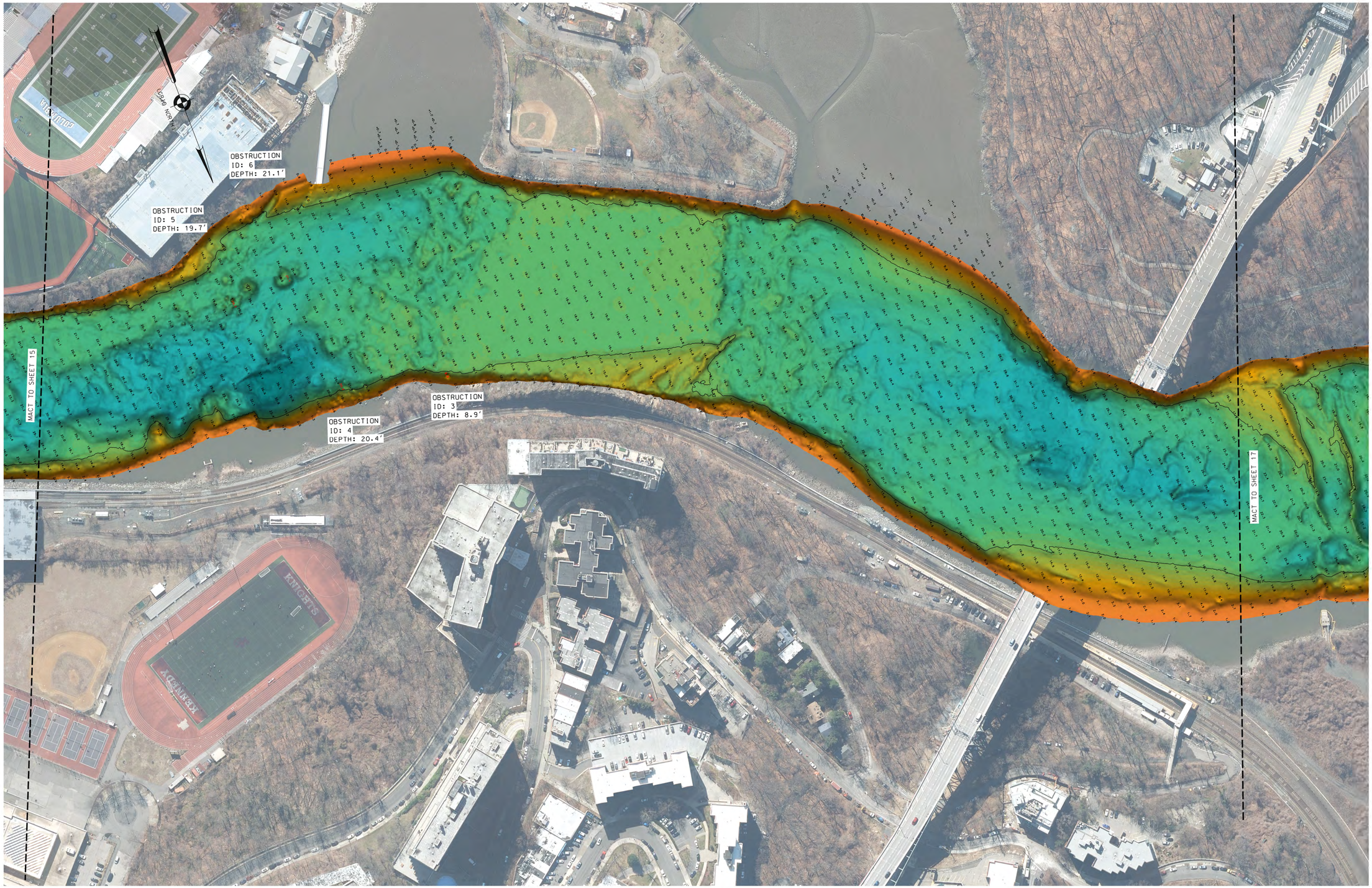
OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-115

15 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

	PR	GD
	MP	ND

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

REG. NO./FILE NO.: 5457

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
W2301 / 61-80
W2241 / 1-12

APPROVED: N. DENDUKURI
FIELD CARTOGRAPHER

APPROVED: R. SMITH
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR
CHIEF OF SURVEY SUPPORT SECTION

APPROVED: MIKE
DEPUTY FOR SURVEYS AND MAPPING BRANCH

DATE:
25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

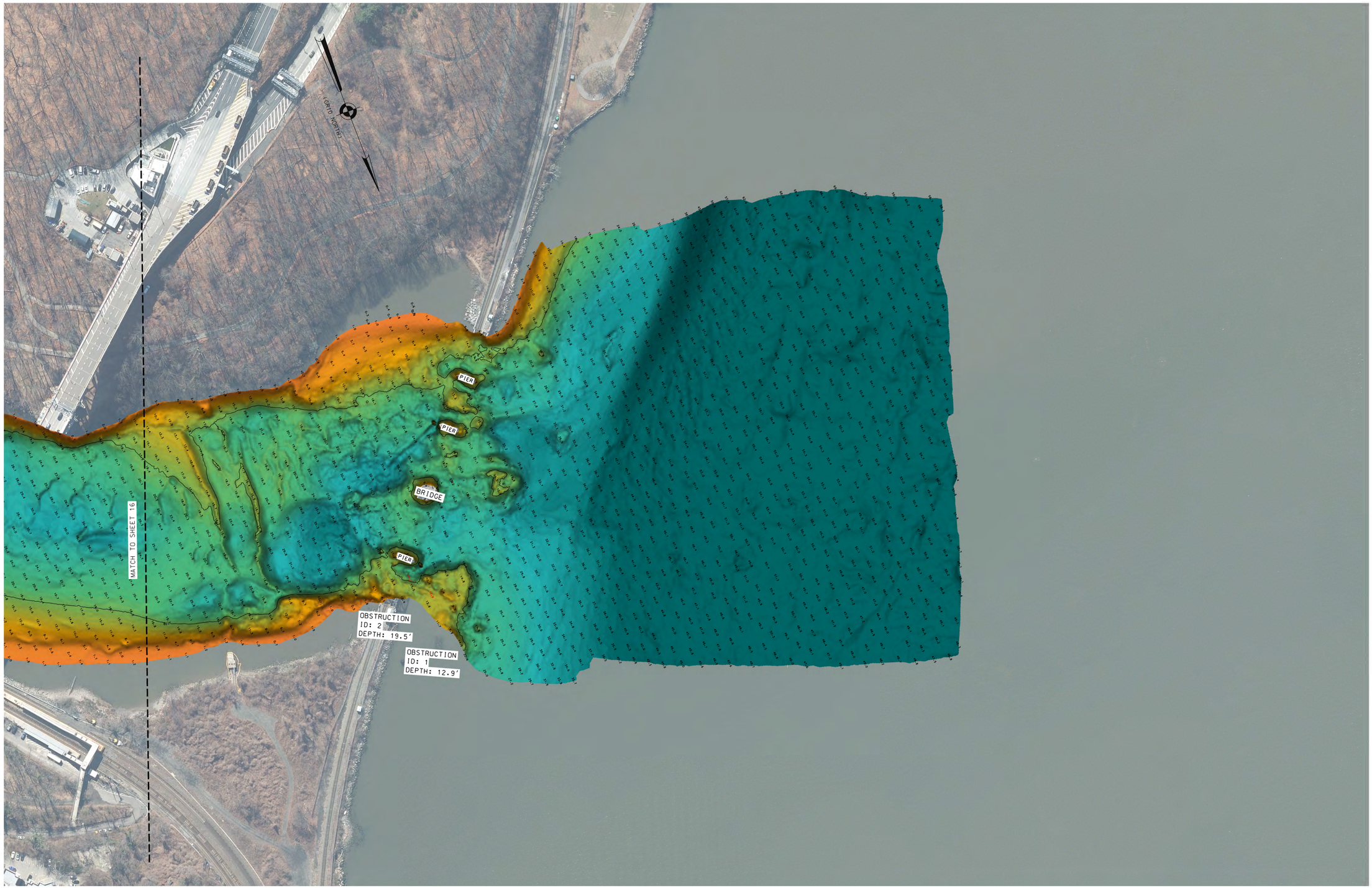
OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-116

16 OF 17



0 100' 200'

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1049
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

LOCAL CONTROL DATA	NSRS BENCHMARK
BENCHMARK: 851 8643 G (PID:BBDM52)	BENCHMARK: 851 8902 B (PID:BBDM50)
ELEVATION: 9.82' (NAVD 1988)	ELEVATION: 16.20' (NAVD 1988)

FOR PROJECT SPECIFIC NOTES, REFER TO VH-101

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

CD	ND
PR	WP

DATES OF SURVEY:
28-29 AUGUST 2024
4-7 SEPTEMBER 2024

REG. NO./FILE NO.: 5457

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
W2301 / 53-80
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APPROVED: N. DENDUKURI
FIELD CARTOGRAPHER

APPROVED: R. SMITH
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADURI
CHIEF OF SURVEY SUPPORT SECTION

APPROVED: MIKE
DEPUTY CHIEF OF SURVEYS AND MAPPING BRANCH

DATE: 25 OCTOBER 2024

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEYS AND MAPPING BRANCH
CENAN-OP-SS

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-117

17 OF 17

Harlem River, 145th – 163rd Street Navigational Study

Appendix 4 – Harlem River Report of Channel Conditions 2024

REPORT OF CHANNEL CONDITIONS
(FOR CHANNELS 400 FEET WIDE OR GREATER)

DATE 10 December 2024

TO: The Record

FROM: U.S. Army Corps of Engineers
26 Federal Plaza, ATTN: CENAN-OP-ST
New York, NY 10278-0090

RIVER/HARBOR NAME AND STATE:
Harlem River, New York

MINIMUM DEPTHS IN EACH ¼ WIDTH OF CHANNEL ENTERING FROM SEAWARD

NAME OF CHANNEL	DATE OF SURVEY	AUTHORIZED PROJECT			LEFT OUTSIDE QUARTER (feet)	LEFT INSIDE QUARTER (feet)	RIGHT INSIDE QUARTER (feet)	RIGHT OUTSIDE QUARTER (feet)
		WIDTH (feet)	LENGTH (n miles)	DEPTH (feet)				
Reach A: From approximately the seaward end of the Ward's Island Bridge to approximately 625 feet landward of the Third Avenue Bridge	File 5457; Shts 2-6 of 17; 28-29 August & 4-7 September 2024	400	1.60	15	2.7	7.1	4.9	2.5
Reach B: From approximately 625 feet landward of the Third Avenue Bridge to approximately 2,675 feet seaward of the University Heights Bridge	File 5457; Shts 6-12 of 17; 28-29 August & 4-7 September 2024	400-354	3.17	15	0.2	2.4	2.0	1.2
Reach C: From approximately 2,675 feet seaward of University Heights Bridge to the approximate location of the Broadway Bridge	File 5457; Shts 12-15 of 17; 28-29 August & 4-7 September 2024	400-350	1.03	15	2.1	3.4	10.9	0.7
Reach D (18 Foot Project): From the approximate location of the Broadway Bridge to a point approximately 1,250 feet landward of the start of this reach	File 5457; Shts 15-16 of 17; 28-29 August & 4-7 September 2024	350	0.21	18	6.7	15.6	15.7	0.7
Reach D (15 Foot Project): From approximately 1,250 feet landward of the Broadway Bridge to the approximate location of the Henry Hudson Bridge	File 5457; Shts 15-16 of 17; 28-29 August & 4-7 September 2024	350-400	0.54	15	0.6	9.0	13.9	1.3
Reach E: From the approximate location of the Henry Hudson Bridge to the junction of the Harlem River with the Hudson River, approximately 800 feet landward of the beginning of this reach	File 5457; Sht. 17 of 17; 28-29 August & 4-7 September 2024	400	0.10	15	6.0	13.2	9.3	5.3

REMARKS:

- All reported depths are relative to Mean Lower Low Water datum.
- Channel reach lengths are in nautical miles.

HARLEM RIVER:

- **Reach A:** Shoaling exists intermittently throughout this reach. Sporadic shoaling exists throughout all four quarters of this reach. The controlling depth of -2.5 feet exists in the Right Outside Quarter approximately 3,750 feet seaward from the landward end of this reach.

- **Reach B:** Edge shoaling exists intermittently throughout this reach. Sporadic shoaling exists throughout all four quarters of this reach. The controlling depth of -0.2 feet exists in the Left Outside Quarter approximately 3,260 feet seaward from the landward end of this reach.

- **Reach C:** Edge shoaling exists intermittently throughout this reach. Sporadic shoaling exists throughout all four quarters of this reach. The controlling depth of -0.7 feet exists in the Right Outside Quarter approximately 2,200 feet seaward from the end of this reach.

- **Reach D (18 Foot Project):** Edge shoaling exists intermittently throughout this reach. Sporadic shoaling exists throughout all four quarters of this reach. The controlling depth of -0.7 feet exists in the Right Outside Quarter approximately 420 feet from the landward end of this reach.

- **Reach D (15 Foot Project):** Edge shoaling exists intermittently throughout this reach. Sporadic shoaling exists throughout all four quarters of this reach at the landward end of the reach. The controlling depth of -0.6 feet exists in the Left Outside Quarter approximately 1,075 feet landward from the beginning of this reach.

- **Reach E:** Shoaling exists in the Left Outside and Inside Quarters and Right Outside and Inside Quarters at the beginning of this reach. The controlling depth of -5.3 feet exists in the Right Outside Quarter at the landward from the beginning of this reach.

Harlem River, 145th – 163rd Street Navigational Study

Appendix 5 – User Questionnaire Responses

Circle Line Response

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

Every day except Xmas day. Present schedule is up to 4 times a day and up to 2400 passengers a day.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

Sightseeing vessels. 165 feet in length, 35-foot Beam, 9 foot draft. 600 Passengers

e) What is your typical operational schedule in this area?

Up to 4 trips a day. 364 days a year.

f) Are there any specific navigational challenges you currently face in this section of the river?

We would find a minimum of 100-foot channel through the bridge acceptable. That would be after what ever fendering system you would have to protect the greenway. There should also be some type of screening to protect the boats from thrown objects that could injure the passengers.

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

The proposed greenway on Page 7 is unacceptable. That Greenway could be moved closer to the bridge abutment by 30 feet. It shows no fendering which could make the channel narrower.

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

We would accept a minimum open channel of 100 feet. That is after pilings or fendering is installed to protect the Greenway.

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

We would require a minimum open channel of 100 feet on both sides of the bridge. Periodically the bridge draws are closed for Maintenance, so we need both channels to conduct our 80 year old business.

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed? Safety is our

main concern. Moving the Greenway 30 feet off the bridge abutment is not safe. We have been circumnavigating the island of Manhattan for 80 years. We are happy to share the bridge draw if the Greenway is narrow enough to let our vessels safely pass through the draw. That means there needs to be fendering to protect the Greenway and Screening to protect the passengers on passing vessels for thrown projectiles. You are asking us to get within 25 feet of people walking along the greenway.

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

Our boats are 165 feet, narrowing the channel by 150 feet could prevent us from turning around should we need to. However we could more further up the river to turn around if needed.

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

We would stay on the Bronx side of the channel through the Harlem River unless construction projects on the Bronx side close that side of the river or maintenance on the bridges force us to the Manhattan side.

Circle Line Response

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

We intend on running the same way we have been for the last 80 years.

b) How would you operate differently if the channel was narrower?

Depending on how narrow the channel becomes, in the interest of safety we might not be able to run causing a financial burden.

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

No

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

If it is done safely for all concerned yes, but as it is, No.

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

Move the walkway closer to the shoreline and closer to the bridge wall.

c) Is there anything else we should consider in the navigational risk assessment?

Protecting the Greenway with fendering. Protecting vessels from projectiles thrown by people on the Greenway in the narrowest areas of the Greenway.

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

Classic Harbor Lines, NYC Ferry, Neil Henderson VP Marine ops CHPE LLC neil.henderson@tdi-usa.com.

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes

12/11/24

Cait Field
General Manager
Classic Harbor Line
62 Chelsea Piers, Suite 103
New York, NY 10011

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

N/A

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

We run boat tours that transit the Harlem River.

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

We transit the river approximately 2 to 3x per day from April through October and aproximately 5 to 7x per week November through March.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

We typically operate two of our vessels along this route.

Manhattan, which is 80 feet in length

Manhattan II, which is 100 feet in length with a 22 foot beam

In late 2025, we will begin operating Manhattan III which will be 110 feet in length with an approximately 25 foot beam.

e) What is your typical operational schedule in this area?

We typically operate one morning trip and one afternoon trip each day, with an additional morning trip on the weekends.

f) Are there any specific navigational challenges you currently face in this section of the river?

This section of the river can be narrow on occasion if there is working happening along the shoreline as there has been at times along the Bronx side of the river.

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

For most of our operations, I anticipate that there would be minimal effect. The effects would primarily be when there is ample boat traffic in this region, which there can be, particularly on weekends. See below (2c).

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

I am not sure what type of buffer you are referring to here. I would not anticipate a buffer, really, just as there is no buffer between the shoreline greenways and the East River, for example.

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

This is where I anticipate challenges. Our vessels, and those of Circle Line, are large enough that we would really exclusively pass under the eastern side of the Macombs Dam Bridge. On weekends when both of us are operating, this could cause delays and potentially dangerous situations. Weekends are of course when

we also have the most recreational boat traffic, so I do worry about us all being pinched into a more narrow space. I believe that we on the commercial vessels can communicate with each other for safe passage, but outreach/communication to recreational boaters would be needed to alert them to the narrower channel up ahead.

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

I think that my concerns have been outlined above. I predominantly worry about multiple vessels being forced through the same bridge channel and the conflict that could cause for commercial operators and recreational boaters.

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

N/A

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

See above.

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

b) How would you operate differently if the channel was narrower?

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

c) Is there anything else we should consider in the navigational risk assessment?

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 31 January 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

Captain Joseph G Ternyila Millers Launch
Captain Luke Lucas
Master of Towing
Millers Tug and Barge
Pier 7 1/2
Staten Island, NY

1) a)
None

1)b)
Transport various barges throughout the Harlem River. Crane barges, material barges, scows for any proposed dredging, scows and deck barges for constructing debris, man lift barges for maintenance/ inspections/emergencies. Those are just some examples of why tugs and barges would be transiting.

wide. Not to mention a deeper draft will present more challenges with regards to the current.

2)a)
Minimal affect In that section based on all of the work I've been involved in it the past 17 years.

2)b)
Fendering and tie up points at either end of the section and on both sides of the Macombs Dam Bridge .

2)c)
Minimal affect

2)d)
No

Millers Launch

Yes

4)b)

Answered in question 2)b)

4)c)

All of the bridges on Harlem River,including MTA rail bridge, do not operate in unison. Extreme lack of communications between all. Communications, especially during construction, should be brought to a higher standard.

5)a)

N/A

5)b)

Yes

Henri Levesque <hlevesque@smsllc.com>

Stakeholder Input Request: North Harlem Greenway

CPKC Response

Nicholas Smith <Nicholas.Smith@cpkcr.com> Tue, Feb 4, 2025 at 12:38 PM
To: Charlie Townsley <cTownsley@edc.nyc>
Cc: "Henri Levesdque (Guest)" <hlevesque@smsllc.com>, Lena Ferguson <lferguson@edc.nyc>, Alexis Taylor <ataylor@edc.nyc>

Hello Charlie,

We retain what is referred to as haulage rights. Meaning any traffic we could originate or terminate at this location would still be handled by CSX on our behalf. Those rights were gained through the purchase of the D&H in the late 80's or early 90's. To the very best of my knowledge, your input request would best be handled by CSX Transportation for this project.

Thank you,

Nicholas Smith

Director, Business Development

C 816-394-1813

Nicholas.Smith@cpkcr.com

427 West 12th Street

Kansas City, MO

US 64105

From: Charlie Townsley <cTownsley@edc.nyc>
Sent: Monday, February 3, 2025 2:46 PM
To: Nicholas Smith <Nicholas.Smith@cpkcr.com>
Cc: Henri Levesdque (Guest) <hlevesque@smsllc.com>; Lena Ferguson <lferguson@edc.nyc>; Alexis Taylor <ataylor@edc.nyc>
Subject: RE: Stakeholder Input Request: North Harlem Greenway

CSX Response

Henri Levesque <hlevesque@smsllc.com>

Stakeholder Input Request: North Harlem Greenway

Charlie Townsley <cTownsley@edc.nyc> Fri, Apr 4, 2025 at 4:20 PM
To: "Henri Levesdque (Guest)" <hlevesque@smsllc.com>
Cc: "William Mahoney (Guest)" <wmahoney@smsllc.com>

This response did not make it into the first draft of the nav study. Please include in draft #2. Comments coming shortly.

From: Feygelson, Arthur <Arthur_Feygelson@csx.com>
Sent: Wednesday, February 5, 2025 7:50 AM
To: Charlie Townsley <cTownsley@edc.nyc>; O'Connell, Maurice <Maurice_O'Connell@CSX.com>; Oglesby, Rodney <Rodney_Oglesby@csx.com>
Cc: Alexis Taylor <ataylor@edc.nyc>; Lena Ferguson <lferguson@edc.nyc>; Campbell Munn <chmunn@edc.nyc>; Henri Levesdque (Guest) <hlevesque@smsllc.com>
Subject: RE: [E] Stakeholder Input Request: North Harlem Greenway

[EXTERNAL EMAIL]

Charlie-

Good morning.

Based on feedback received, we can offer the following input:

The Oak Point Link in the Bronx is vital to carrying time sensitive rail traffic to and from New York City including produce and waste (particularly DSNY); as such our concerns would be as follows:

a) Increased risk of collision due to marine traffic traveling closer to the Oak Point Link (which could put the section of track out of service)

b) Greater wake activity causing increased wear on piers (NYS DOT maintained) supporting the railroad

c) More proximal marine traffic could cause wave action against rail track components resulting in increased wear & require more frequent replacement

Arthur Feygelson

Manager, Industrial Development (DE, NJ, NY, PA & PQ)

CSX Transportation

M. 718.344.6402

E. Arthur_Feygelson@csx.com

PO Box 43; Imperial, PA 15126



[Quoted text hidden]

Rocking the Boat

Henri Levesque <hlevesque@smsllc.com>

Stakeholder Input Request: Harlem River Greenway

Rob Buchanan <rob@rockingtheboat.org> Tue, Mar 4, 2025 at 8:59 AM
To: Henri Levesque <hlevesque@smsllc.com>
Cc: Nick Siewert <Nick@rockingtheboat.org>, Adam Green <Adam@rockingtheboat.org>

Hi Henri,

Sorry for the belated reply, and for not responding to your questionnaire directly, but below are a few quick thoughts on the proposed project from the perspective of Rocking the Boat, a youth development non-profit in Hunts Point. We mostly row and sail on the Bronx River and the East River, but do occasionally travel up and down the Harlem on our way to the Palisades. Also, every year in the fall, we are on the Harlem as part of a round-Manhattan row for about 100 people in 12-15 rowing gigs (longboats). That event also includes a bunch of safety and spectator boats so it's a big production.

- Narrowing the navigable channel in Harlem means that there will be less room for large vessels to pass each other and less room for small boats like ours to get out of the way of large vessels. To us that suggests that enforceable speed and no-wake restrictions would need to be instituted. While there are currently a few no-wake signs in place, there are no actual speed or wake regulations, as far as we know, and certainly no enforcement.

- Since narrowing the channel could increase the chances of an accident or a collision, and since improved waterfront access would ideally also include improved access to and from the water itself, we'd like to see the design of the proposed greenway incorporate occasional landings or at least ladders that boaters could use to get out of the water in the event of an accident or emergency, or simply to take a rest.

Narrowing the navigable channel from the Manhattan side would seem to preclude the possibility of someday doing the same thing on the Bronx side, where public access to the waterway is similarly constrained. Have Bronx community groups, community boards and elected officials been formally notified about this project? What are the city's long-term goals for Bronx-side access?

Thanks and please don't hesitate to call if you'd like to discuss any of this further.

Best,

Rob

public programs & special projects

rocking the boat

Rocking the Boat

917.656.7285

812 edgewater road, bronx, ny 10474

rockingtheboat.org

From: Henri Levesque <hlevesque@smsllc.com>
Sent: Friday, February 14, 2025 10:35 AM
Subject: Stakeholder Input Request: Harlem River Greenway

[Quoted text hidden]

03/05/2025
[Dr. Rondi Davies]
[President]
[New York Open Water]
[208 West 119th St, #5B]
[New York, NY, 10026]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

We conduct open water swimming events that circle Manhattan. This usually takes place over 35 to 40 event days her season.

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

New York Open Water, Inc. (NYOW) was formed for the purposes of providing safety, support, and funding for open water swimming and kayaking programs and events, while advocating for better stewardship of New York State's natural water resources and promoting public access to these waters. NYOW is a 501(c)(3) organization. We support swimmers seeking to swim around Manhattan Island,

known as the 20 Bridges Swim (formerly Manhattan Island Marathon Swim). In recent seasons, there have been approximately 100 swimmers per year spread across approximately 30 dates. We arrange for each swimmer to have a dedicated kayak escort and support from a dedicated motorized RHIB. There is also a course marshal boat each day.

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

We pass through approximately 35-40 days per season, which is June-October. Our travel direction is from south to north except in the rare event of an aborted or halted swim.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

From two to five 24 ft long boats and 14 ft kayake

e) What is your typical operational schedule in this area?

Our season is June-October, and we hold swims on days or nights when the tides are supportive. Swimmers take less than an hour to cover this distance.

f) Are there any specific navigational challenges you currently face in this section of the river?

We need to keep clear of commercial traffic.

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

This would not impact our on-water operations. It would help spectators have a better view of the swims.

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

None

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

No effect

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

No

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

No, but it would be great if there were a put-in location or two for kayaks along this stretch, even better if bathrooms were added.

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

No

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

Same as present

b) How would you operate differently if the channel was narrower?

No change

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

NA

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

Yes, absolutely. It would be wonderful to expand pedestrian and bicycle access to the Manhattan waterfront.

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

N/A

c) Is there anything else we should consider in the navigational risk assessment?

None

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

Inwood Canoe Club

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Possibly. Please keep us posted.

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 18 March 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

02/12/2025
[Raymond Fusco]
[Recreational Boater]
[Company/Organization Name]
[34 Iroquois Ave]
[Palisades, NY, 10964]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

Not a property owner, I'm a waterway user.

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

NA

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

Annually for several events, kayak tours and programming

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

single and double kayaks, recreational powerboat - 25ft

e) What is your typical operational schedule in this area?

It's seasonal - spring to fall -schedule varies. Its also weather and tide dependant.

f) Are there any specific navigational challenges you currently face in this section of the river?

We do not have enough safe egress locations - we could use a safety take out in this area

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

First, this engineered solution only takes into account the greenway users. This solution is a one dimentional design which could be designed with far fewer impacts, less water bound restrictions and provide value to water based users. The impacts of a 70 foot encroachment would create dangers and force most vessel traffic, and recreational traffic into one small confined area - creating an unneccessary congenstion point and dramatically increase the likely hood of accidents.

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

Do not build as designed - "additional buffer" would create more problems again forcing users to transit a smaller area.

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

All vessel operations would be forced to one passage way. The impacts would create dangers and force all vessel traffic, and recreational traffic into one small confined area - creating an unneccessary congenstion point and dramatically increase the likely hood of accidents. Please note - many small craft and recreational vessels would not have room to transit side by side or pass when coming from different directions close to this structure especially when adjacent to bridge abutments. Safe boating calls for 100 yards of berth to not interfere with another vessel. Small craft like kayaks do not want to make passage next to a bridge abutment and a passing vessel inside 95feet window - the wakes and potential for problems in a confined space are great.

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

The illustrations do not show a water line measurements to the bottom of the greenway platform (or even a range due to tides). It does not show a side view except on photo of previous greenway - wakes, waves and a confused sea state stack up under and near a structure like this especially if those waves are refracting off of the seawall on the inbound side making navigation in close proximity difficult in small craft in a heavy sea state - kayak or recreational power boat. Only during a very calm sea state can you get close for a protected transit.

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

Anchoring would be impossible for any type of vessel as the 95 foot width would not be large enough to be on anchor with the ability to swing 360 degrees. Water depth is 20ft - anchor scope is 5 to 1 or 7 to 1 - meaning you need 105 feet of swing circle for a 25ft boat in 20ft of water. You could not achive this with a 7 to 1 scope.

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

Yes, without a doubt. It would create an attractive nusance. As stated it would force all vessel traffic to use a much smaller section of river to transit - increasing the likelyhood of conflict.

If you are going to build something in this section of the river - why not closer to shore and if not closer then why not with the ability to include recreational boaters - for revenue, for exrcise and create a "town dock" scenario. Expand the way "you" are thinking of this. If you are taking away all of this water real estate why not use it for expanded access. NYC is low on recreational marinas. Especially in this area? Kayak launches, rowing programs? In water environmental educational programs?

https://i.pinimg.com/originals/cf/f3/b3/cff3b3207a9763c6cfa8d7345222f44d.jpg

The Vera Katz Eastbank Esplanade & Springwater Trail Corridor—Portland, Ore

You could easily design 3 - 200 foot or 300 foot sections along the 1.2 miles or 6336 ft overall length as local get down sections on the inbound side to offer direct access to the harlem - educational programming, human powered boating, and other programming.

https://www.atlantatrails.com/atlanta-running-walking-trails/george-pierce-park-ivy-creek-greenway/

https://www.visitvaldese.com/visit-valdese/canoe-kayak-launch/

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

Tough to predict how much expansion will happen into the future.

b) How would you operate differently if the channel was narrower?

As stated above we'd be forced into the center of the channel with other large vessels.

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

I support the concept of the greenway - BUT I do not suport as it is currently deisgned for all the reason I've stated.

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

Yes, closer to shore - and with options to accommodate boats instead of forcing them out.

c) Is there anything else we should consider in the navigational risk assessment?

Hydrodynamic modelling of swift moving currents adjacent to the structure.

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 28 February 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

12/11/24
[Phil Giller]
Director]
[Yonkers Paddling and Rowing Club]
[19 Alexander St]
[Yonkers, NY 10701]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

N/A

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

N/A

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

Each summer July and August At times 100 kayaks on the water at the same time

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

Kayaks max dimension 30" wide x 17' long

e) What is your typical operational schedule in this area?

Depends on currents and weather conditions, NO SET TIME

f) Are there any specific navigational challenges you currently face in this section of the river?

Commercial and recreational powerr boat traffic

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

It would make navigating this section MORE DANGEROUS. Comercial ferries have a hard time seeing kayaks, making the channel narrower will not help

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

We need an area on eithere shore to allow swimmers and human powered boats a SAFE corridor

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

Not sure

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

Yes, the more greeway there is means more people Fishing off the piers forcing human powered boaters further into the center of the channel which is unsafe

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

We do not dock in this section Any takeout would be hor emergency situations. If this where to go through, we ASK that you provide a emergency dock out section that has a freeboard of 9" or less

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

Yes

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

N/A

b) How would you operate differently if the channel was narrower?

On our larger events wqere 100 kayaks are on the waterr at the sme time, we might have to stagger

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

We have no facility in that area

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

WILL ONLY SUPPORT it if the needs of human powered boaters are taken into concern

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

c) Is there anything else we should consider in the navigational risk assessment?

Human powered boaters are already not welcome on the water, commercial operators think we are in the way. Even following all Coast Guard navigational rules and staying close to a shore line, kayaks, and sailors are always at risk especially in a narrow waterway

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

RowNY, Harlem River Community Rowing, Long Island City Boathouse, Manhattan kayak,

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 31 January 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

USACE NY Operations Response

Henri Levesque <hlevesque@smsllc.com>

Harlem River Nav Study - USACE Operations Question

Bruno, William (Tom) CIV USARMY CENAN (USA) <William.Bruno@usace.army.mil> Fri, Apr 18, 2025 at 9:10 AM

To: Henri Levesque <hlevesque@smsllc.com>
Cc: "Scott Calhoun, P.E., PMP" <SCalhoun@95cgc.com>, Charlie Townsley <ctownsley@edc.nyc>, "Ferguson, Ryan CIV USARMY CENAN (USA)" <Ryan.M.Ferguson@usace.army.mil>, "Minck, Christopher W CIV USARMY CENAN (USA)" <Christopher.W.Minck@usace.army.mil>

Henri,

I've coordinated internally and the Corps recommended next step for EDC is to ask DOT if they have a recommended buffer distance from which they would not desire dredging around any piers in the channel.

Specific to any future dredging under the bridge, it will depend on the contractor's equipment and their risk tolerance for safety factors. It would be difficult to give minimum buffers for that since it's contractor specific. Additionally, we are not conducting stability analysis for either the bridge nor the new structure which should be considered when determining buffers.

In short, introducing a new structure to the channel also introduces increased risk and assumed costs for the Corps to maintain the channel.

The likely scenario is a Section 408 permission is granted for the greenway project as proposed in areas beneath existing bridges is that conditions would be included to require that EDC be fully responsible for dredging the full width the channel below any bridge where the greenway is installed. This would be because EDC would be installing a structure within the channel which introduces an operational limitation for a dredging contractor and in turn would cause assumed greater costs to the Corps to maintain the channel depth.

This responsibility for EDC to maintain the channel depth is assuming there is not a full deauthorization of the channel and would apply should there be a partial deauthorization of the channel and may be applicable in reaches of the greenway not beneath existing bridges within the channel.

[Quoted text hidden]

12/11/24
HANCHROW, G
Senior Port Captain
NYCDEP Marine Section
Wards Island WWRF
NY, NY 10035

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

N/A

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

Periodic water quality sampling

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

Water qualiy monitoring is divided into two operating seasons.

1. April through November DEP Marine Section operates in the Harlem River taking samples once weekly

2. December through March DEP Marine Section operates in the Harlem River once monthly.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

DEP Marine Section operates two primary harbor survey vessels. The OSPREY and the PIPING PLOVER. Both vessels are aluminum monohull diesel direct twin engine. average LOA 60ft maximum draft 6ft.

e) What is your typical operational schedule in this area?

See anser c) above

f) Are there any specific navigational challenges you currently face in this section of the river?

None

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

No anticipated impact on operations

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

A form of vertical fendering below the elevation of the structure. In other words srtucture that would prevent vessels NUC from being encumberd underneath the structure.

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

No anticipated impact on operations

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

See comment section b) above

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

N/A

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

N/A

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

No change in operations proposed at this time

b) How would you operate differently if the channel was narrower?

Utilize the East draw more regularly

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

N/A

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

Non committal

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

See comment 2)b) above

c) Is there anything else we should consider in the navigational risk assessment?

N/A

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

The Harlem River marine traffic has become primarily reacreational. One recommendaiton would be to analyze where current recreatinal boaters obtain ther enavigation al information. For example, social media platforms, or Elctronic Navigation Chart (ENC) publishers. The navigation instruction regarding the project should be distributed if at all practicable

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 31 January 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

NYCDEP - BWT

Henri Levesque <hlevesque@smsllc.com>

Harlem River Risk Assessment

Burke, Meaghan <MBurke2@dep.nyc.gov> Fri, Feb 28, 2025 at 4:46 PM
To: Charlie Townsley <cTownsley@edc.nyc>
Cc: "Henri Levesdque (Guest)" <hlevesque@smsllc.com>, Lena Ferguson <lferguson@edc.nyc>, Alexis Taylor <ataylor@edc.nyc>, Max Taffet <mtaffet@edc.nyc>, "Aristy, Janet" <jamaro@dep.nyc.gov>, "McDermott (Cawley), Chelsea" <ChMcDermott@dep.nyc.gov>

Hi Charlie,

We confirmed that our Bureau of Wastewater Treatment (BWT) does not need to submit any questionnaires in addition to the one you received from their Marine Section. They mentioned that keeping DEP in the loop as the project moves forward would be helpful. One of BWT's main tasks is sampling, so it's important for us to stay updated on the project schedule so that we can correlate any potential sampling anomalies.

We have been discussing the questionnaire with our Bureau of Water and Sewer Operations (BWSO) engineers. Could we possibly let you know on Monday if they plan to complete a questionnaire? Please let us know.

We don't anticipate questionnaires from any other DEP groups.

Thank you,
Meaghan

From: Burke, Meaghan <MBurke2@dep.nyc.gov>
Sent: Tuesday, February 18, 2025 3:39 PM
To: Charlie Townsley <cTownsley@edc.nyc>
Cc: Henri Levesdque (Guest) <hlevesque@smsllc.com>; Lena Ferguson <lferguson@edc.nyc>; Alexis Taylor <ataylor@edc.nyc>; Max Taffet <mtaffet@edc.nyc>
Subject: Re: Harlem River Risk Assessment

[Quoted text hidden]

NYCDEP BWSO

Henri Levesque <hlevesque@smsllc.com>

Harlem River Risk Assessment

Charlie Townsley <cTownsley@edc.nyc> Wed, Mar 19, 2025 at 9:14 AM
To: "Henri Levesdque (Guest)" <hlevesque@smsllc.com>
Cc: Alexis Taylor <ataylor@edc.nyc>

Morning Henri,

We just received feedback from DEP's BWSO division. Most of their comments have to do with the design phase, but sending them along all the same.

Best,

Charlie

From: Burke, Meaghan <MBurke2@dep.nyc.gov>
Sent: Tuesday, March 18, 2025 5:59 PM
To: Margo Riecks <mriecks@edc.nyc>; Gregory Dixon <gdixon@edc.nyc>; Max Taffet <mtaffet@edc.nyc>; Charlie Townsley <cTownsley@edc.nyc>; Surge Zherebchuk <szherebchuk@edc.nyc>; Elijah Seraballs <eseraballs@edc.nyc>
Cc: Lena Ferguson <lferguson@edc.nyc>; Alexis Taylor <ataylor@edc.nyc>; Jessica Greenspan <jgreenspan@edc.nyc>; Aristy, Janet <jamaro@dep.nyc.gov>; McColgan, Jannine <JMcColgan@dep.nyc.gov>; McDermott (Cawley), Chelsea <ChMcDermott@dep.nyc.gov>
Subject: Re: Harlem River Risk Assessment

[EXTERNAL EMAIL]

Hi all,

Below please find high-level comments/requirements from DEP-BWSO for the Manhattan Waterfront Greenway - North Harlem Gap project. For item 11, we reached out to DEP Bureau of Coastal Resiliency (BCR) internally, but could you please let us know if you have been in touch with them directly about this project?

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Thank you,

Meaghan

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To: Gregory Dixon <gdixon@edc.nyc>; Max Taffet <mtaffet@edc.nyc>; Aristy, Janet <jamaro@dep.nyc.gov>; Charlie Townsley <cTownsley@edc.nyc>; Burke, Meaghan <MBurke2@dep.nyc.gov>; McColgan, Jannine <JMcColgan@dep.nyc.gov>; Surge Zherebchuk <szherebchuk@edc.nyc>; Elijah Seraballs <eseraballs@edc.nyc>
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Subject: RE: Harlem River Risk Assessment

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Hi Max,

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Feel free to reach out with any other questions or clarifications.

FY2016 HRD Waterfront Routine Inspection Report.pdf

Thanks,

Margo Riecks
Project Manager | Design & Construction, Waterfront

New York City Economic Development Corporation
One Liberty Plaza, New York, NY 10006
T:917 748 9998 edc.nyc
Pronouns: She/Her/Hers

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To: Max Taffet <mtaffet@edc.nyc>; Aristy, Janet <jamaro@dep.nyc.gov>; Charlie Townsley <cTownsley@edc.nyc>; Burke, Meaghan <MBurke2@dep.nyc.gov>; McColgan, Jannine <JMcColgan@dep.nyc.gov>; Surge Zherebchuk <szherebchuk@edc.nyc>; Margo Riecks <mriecks@edc.nyc>; Elijah Seraballs <eseraballs@edc.nyc>
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We will look into this

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Subject: Re: Harlem River Risk Assessment

[EXTERNAL EMAIL]

[Quoted text hidden]

NYCDEP BCR

Henri Levesque <hlevesque@smsllc.com>

Harlem River Risk Assessment

Charlie Townsley <cTownsley@edc.nyc> Wed, Mar 19, 2025 at 10:50 AM
To: "Henri Levesdque (Guest)" <hlevesque@smsllc.com>
Cc: Alexis Taylor <ataylor@edc.nyc>

Hi Henri,

DEP's Bureau of Coastal Resiliency has weighed in as well. They do not anticipate conflicts at this time and flagged USACE's HATS study for us.

We have now heard from DEP's BWT, BWSO, and BCR divisions so we can consider feedback from DEP complete.

Best,

Charlie

From: Prybylski, Kathryn <kprybylski@dep.nyc.gov>
Sent: Wednesday, March 19, 2025 10:39 AM
To: Burke, Meaghan <MBurke2@dep.nyc.gov>; Margo Riecks <mriecks@edc.nyc>; Gregory Dixon <gdixon@edc.nyc>; Max Taffet <mtaffet@edc.nyc>; Charlie Townsley <cTownsley@edc.nyc>; Surge Zherebchuk <szherebchuk@edc.nyc>; Elijah Seraballs <eseraballs@edc.nyc>
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Subject: RE: Harlem River Risk Assessment

You don't often get email from kprybylski@dep.nyc.gov. Learn why this is important

[EXTERNAL EMAIL]

Thanks, Meaghan.

Hi EDC team-BCR doesn't have any particular needs related to this assessment and potential outboard greenway. I would just point you to the USACE NYNJ HATS tentatively selected plan to understand a potential future condition along this alignment. As many of you know HATS is very tentative and does not have a definitive timeline.

Thanks,

Kathryn

From: Burke, Meaghan <MBurke2@dep.nyc.gov>
Sent: Wednesday, March 19, 2025 10:20 AM
To: Margo Riecks <mriecks@edc.nyc>; Gregory Dixon <gdixon@edc.nyc>; Max Taffet <mtaffet@edc.nyc>; Charlie Townsley <cTownsley@edc.nyc>; Surge Zherebchuk <szherebchuk@edc.nyc>; Elijah Seraballs <eseraballs@edc.nyc>; Prybylski, Kathryn <kprybylski@dep.nyc.gov>
Cc: Lena Ferguson <lferguson@edc.nyc>; Alexis Taylor <ataylor@edc.nyc>; Jessica Greenspan <jgreenspan@edc.nyc>; Aristy, Janet <jamaro@dep.nyc.gov>; McColgan, Jannine <JMcColgan@dep.nyc.gov>; McDermott (Cawley), Chelsea <ChMcDermott@dep.nyc.gov>
Subject: Re: Harlem River Risk Assessment

+ Kathryn

Hi all,

As an update, I'm adding in Kathryn from BCR.

Thanks,

Meaghan

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Margo Riecks
Project Manager | Design & Construction, Waterfront

New York City Economic Development Corporation
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T:917 748 9998 edc.nyc
Pronouns: She/Her/Hers

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<mriecks@edc.nyc>; Elijah Seraballs <eseraballs@edc.nyc>
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Subject: Re: Harlem River Risk Assessment

[EXTERNAL EMAIL]

[Quoted text hidden]

NYCDOT Bridges Division

Henri Levesque <hlevesque@smsllc.com>

FW: [EXTERNAL] Connecting with DOT Bridges - Harlem River Navigational Risk Assessment

3 messages

Charlie Townsley <cTownsley@edc.nyc> Tue, Mar 11, 2025 at 5:35 PM
To: "Henri Levesdque (Guest)" <hlevesque@smsllc.com>
Cc: "William Mahoney (Guest)" <wmahoney@smsllc.com>, Lena Ferguson <lferguson@edc.nyc>, Alexis Taylor <ataylor@edc.nyc>

FYI. I followed up to clarify whether we can expect to receive their feedback by the 21st. In the meantime, could we flag the existence of these bridge cables in the Risk Assessment?

Thanks,

Charlie

From: Di Luccio, Sean <SDiLuccio@dot.nyc.gov>
Sent: Tuesday, March 11, 2025 5:19 PM
To: Charlie Townsley <cTownsley@edc.nyc>
Cc: Alexis Taylor <ataylor@edc.nyc>; Lena Ferguson <lferguson@edc.nyc>; Mattera, John <jmattera@dot.nyc.gov>; Breen, David <dbreen@dot.nyc.gov>
Subject: Re: [EXTERNAL] Connecting with DOT Bridges - Harlem River Navigational Risk Assessment

[EXTERNAL EMAIL]

+John, David

Hi Charlie,

Thank you for the clarification. I've added John who let me know that the questionnaire has been presented to Bridges and we are awaiting to receive back.

Regarding the bridge cables, most of our moveable bridges have electric cables that run parallel to the bridges on the floor of the Harlem River. These cables help with communications and operations of the bridges. These cables need to be replaced over time. Bridges can help explain further if there are any potential conflicts between this project and their cables, but there didn't appear to be one upon my initial conversation with them.

Thanks,

Sean M. Di Luccio (he/him)

Assistant General Counsel

NYCDOT Bridges Division

NYC Department of Transportation

55 Water St, 9th Floor, New York, NY 10041

646-532-8034 | sdiluccio@dot.nyc.gov



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From: Charlie Townsley <cTownsley@edc.nyc>
Sent: Thursday, March 6, 2025 5:30 PM
To: Di Luccio, Sean <SDiLuccio@dot.nyc.gov>
Cc: Alexis Taylor <ataylor@edc.nyc>; Lena Ferguson <lferguson@edc.nyc>
Subject: RE: [EXTERNAL] Connecting with DOT Bridges - Harlem River Navigational Risk Assessment

Hi Sean,

-Max.

Thanks for the quick response. Ideally, we would be able to include a completed questionnaire (form attached) from Bridges that clearly laid out any conflicts or concerns they foresee between the proposed channel deauthorization and associated greenway project and the Macombs Dam and 145th St. bridges.

As currently contemplated, the greenway would pass underneath the Manhattan draw of the Macombs Dam Bridge and would terminate within roughly 30 feet of the 145th St. Bridge.

For someone unfamiliar with the terminology, could you clarify what you mean by ‘bridge cables’?

If you could pass this questionnaire along to Bridges, or help us connect with them, we would appreciate it very much.

Thank you,

Charlie

NYCDOT Bridges Division

From: Di Luccio, Sean <SDiLuccio@dot.nyc.gov>
Sent: Thursday, March 6, 2025 5:11 PM
To: Charlie Townsley <cTownsley@edc.nyc>
Cc: Max Taffet <mtaffet@edc.nyc>; Alexis Taylor <ataylor@edc.nyc>; Lena Ferguson <lferguson@edc.nyc>
Subject: Re: [EXTERNAL] Connecting with DOT Bridges - Harlem River Navigational Risk Assessment

[EXTERNAL EMAIL]

Hi Charlie,

I spoke with both Bridges and John, and we don't believe there to be any conflict with the CHPE project and this project as it relates to our bridge cables. Was there a specific concern that EDC had? I apologize if I misunderstood the ask.

Thank you,

Sean M. Di Luccio (he/him)

Assistant General Counsel

NYC Department of Transportation

55 Water St, 9th Floor, New York, NY 10041

646-532-8034 | sdiluccio@dot.nyc.gov



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From: Charlie Townsley <cTownsley@edc.nyc>
Sent: Thursday, March 6, 2025 11:00 AM
To: Di Luccio, Sean <SDiLuccio@dot.nyc.gov>
Cc: Max Taffet <mtaffet@edc.nyc>; Alexis Taylor <ataylor@edc.nyc>; Lena Ferguson <lferguson@edc.nyc>
Subject: [EXTERNAL] Connecting with DOT Bridges - Harlem River Navigational Risk Assessment

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Hi Sean,

Following up from the transmission stakeholder call where we discussed the Harlem River Navigational Risk Assessment that EDC is conducting in support of a potential waterfront greenway in North Harlem.

Thank you for offering to check with John Mattera about connecting EDC with DOT Bridges to gather their feedback.

We still have not heard from Bridges, so checking in to see if you were able to connect with John about this matter?

Thank you,

Charlie

Charlie Townsley
Chief of Staff & Project Manager, Neighborhood Strategies

New York City Economic Development Corporation
One Liberty Plaza, New York, NY 10006
T:917 747 8070 edc.nyc
Pronouns: He/Him/His

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****
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Thank you.

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Thank you.

NYC – Department of Transportation

****
****

Henri Levesque <hlevesque@smsllc.com> Mon, Apr 14, 2025 at 2:10 PM
To: Charlie Townsley <cTownsley@edc.nyc>

Hi Charlie -

Did we receive more information from Bridges? I think this is the most recent correspondence from them.

Best Regards,
Henri
[Quoted text hidden]
--
Best Regards,
Henri Levesque

Henri Levesque
Senior Associate Consultant | Safety Management Systems, LLC | 40 Main Street - Suite 13-140 | Biddeford, Maine 04005 | USA
Mobile: +1 703.342.9629 | web: www.smsllc.com

Charlie Townsley <cTownsley@edc.nyc> Mon, Apr 14, 2025 at 5:02 PM
To: "Henri Levesdque (Guest)" <hlevesque@smsllc.com>

Hi Henri,

Not yet. Thanks for checking in. I spoke with John Materra, at DOT, about this over the phone on Thursday. He said they're working on it, so I'm hopeful we'll hear from them this week. They've been saying something similar for awhile now though, so I'm not getting my hopes too high quite yet.

Will follow up with John tomorrow and let you know what I hear back.

Best,

Charlie

[Quoted text hidden]

02/12/2025
[Recipient's Name]
[Recipient's Position]
[Company/Organization Name] **NYCEDC - NYC Ferry**
[Address]
[City, State, Zip Code]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

N/A

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

N/A

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

N/A

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

N/A

e) What is your typical operational schedule in this area?

N/A

f) Are there any specific navigational challenges you currently face in this section of the river?

N/A

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

N/A

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

N/A

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

N/A

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

N/A

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

N/A

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

N/A

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

Potential NYC Ferry service with a landing along the Manhattan or/and Bronx side of the channel.

b) How would you operate differently if the channel was narrower?

The Harlem River is already a narrow channel with low bridge clearances. If we were to build a landing and operate a service in this channel, we would consider using vessels with lower freeboard for easy navigation and manageable turnaround radius. We would contemplate such service adjustments regardless of the proposed project.

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

No, we currently do not offer services along the Harlem River but if we were to do so in the future, we do not anticipate the proposed project to hinder our service plans and decisions.

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

Yes

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

Keep a gap between the greenway and navigational area.

c) Is there anything else we should consider in the navigational risk assessment?

Installation of external or floating fenders along the greenway to minimize impact in case a vessel allision.

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

Harbor Ops

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 28 February 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

1/31/25

Christopher Ameigh
Deputy Director of Marine Infrustructure
NYC Parks
830 5th Ave,
New York, NY 10065

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

Mill Pond Park, Bronx

Harlem River Park, Manhattan

Bobby Wagner Walk, Manhattan

Randalls Island Park, Manhattan

Bridge Park, Bronx

Harlem River Drive Greenway, Manhattan

Swindlers Cove Riverfront Park, Manhattan

W. 202nd St End Park, Manhattan

W. 203rd St End Park, Manhattan

W. 204th St End Park, Manhattan

W. 205th St End Park, Manhattan

W. 206th St End Park, Manhattan

Inwood Hill Park Manhattan

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

Parks maintains properties for recreational use of the Public, including water access at several of these sites. Boat launching occures regularly from Inwood Hill Park, W 202nd St End Park, and Swindlers Cove Riverfront Park. The waterway is used for inspections of inwater infrustructure and for water based construciton and maintenance of new and existing marine park infrustrucure as well as occasional transit of Parks vessels for city business.

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

Our Park vessel operates rarely. several times a year. Our contractors use the waterbody less frequently using a variety of barges and work boats for infrustructure repairs. Recreational paddlers utilizing our parks may use rowing skulls, row boats kayaks etc and utilize this waterbody more frequently, several times a week.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

Parks directly operates a ~25 foot Parker power boat with a 10 ft beam in this waterway

e) What is your typical operational schedule in this area?

Occasionally we will visit Parks sites from the water to observe conditions of infrustructure and to discuss ongoing capital projects.

f) Are there any specific navigational challenges you currently face in this section of the river?

It is a relatively narrow water body which can pose a challenge when there is stationary activity in the river, construction for example being staged by barge. Or passing larger vessels.

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

Tighter travel lanes for passing vessels. closer interactions would also make wakes challenging. We would likely take the water body a little slower during periods of close passing between vessels, especially while passing under bridges.

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

Recreational paddlers or other small vessels being possibly caught under the structure. Note that this waterbody is subject to occasional reckless groups of Jet Skiiers. How would the structure impact the ability to repair existing shoreline structures on the western shore of the river?

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

Yes, but minor for parks vessels.

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

Yes

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

No changes anticipated

b) How would you operate differently if the channel was narrower?

Possibly more slowly under congested conditions

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

Not at this time

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

c) Is there anything else we should consider in the navigational risk assessment?

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

Circle Line

Classic Harbor Line

Weeks Marine

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 31 January 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

02/12/2025
[Recipient's Name]
[Recipient's Position]
[Company/Organization Name] **MTA Construction & Development**
[Address]
[City, State, Zip Code]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

At a minimum, NYCT Rail Yard, the 2 and 3 subway tunnels, pump rooms, manholes, ductbanks and a variety of other infrastructure in the vicinity. 145th St and harlem river drive in manhattan through the 145th St bridge and beyond 149th st and gerard ave in the Bronx.

Manhattan, Block 2016, Lot 1, Lot 65, Lot 100; Manhattan, Block 1744, Lot 13

Manhattan, Block 1741, Lot 1; Bronx, Block 2356 Lot 3 Block and Lot 6

Bronx, Block 2349, Lot 108 ; Bronx, Block 2349, Lot 112

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

To operate and maintain the 2 and 3 train.

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

24 hours a day, 365 days a year.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

Trains

e) What is your typical operational schedule in this area?

24 hours a day, 365 days a year.

f) Are there any specific navigational challenges you currently face in this section of the river?

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

potential impacts to the existing structure and properties

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

follow MTA NYCT design guidelines

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

NYCT has a variety of infrastructure on 145th

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

EPP would like to ensure there are no impacts to NYCT infrastructure, structure, properties, assets and operations.

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

For planning to respond

b) How would you operate differently if the channel was narrower?

For planning to respond

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

For planning to respond

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

For the resiliency team to respond

c) Is there anything else we should consider in the navigational risk assessment?

For others to respond

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

MTA Planning, Resiliency, Development

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

We would like to be made aware of potential impacts

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 28 February 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

02/12/2025
[Recipient's Name]
[Recipient's Position]
[Company/Organization Name] **MTA - Coastal Resiliency**
[Address]
[City, State, Zip Code]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

At a minimum, NYCT Rail Yard, the 2 and 3 subway tunnels, pump rooms, manholes, ductbanks and a variety of other infrastructure in the vicinity. 145th St and harlem river drive in manhattan through the 145th St bridge and beyond 149th st and gerard ave in the Bronx.

Manhattan, Block 2016, Lot 1, Lot 65, Lot 100; (NYCT Subways 148th St Yard)

Manhattan Block 2015, Lot 6 (NYCT Mother Clara Hale Bus Depot)

Manhattan, Block 1744, Lot 13 (NYC DBS?)

Manhattan, Block 1741, Lot 1; (NYC Parks?)

Bronx, Block 2356 Lot 3 and Lot 6 (NYS OGS and NYC DBS?)

Bronx, Block 2349, Lot 108 and Lot 112

Bronx Block 2539, Lot 502 (Metro North Right of Way)

Bronx Block 2539 Lot 506 (Conrail)

Bronx Block 2540, Lot 3 (Metro North)

Bronx Block 2541 Lot 123, Lot 180, Lot 22 (Metro North)

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

To operate and maintain the 2 and 3 train, and Metro North Railroad's Hudson Line.

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

24 hours a day, 365 days a year.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

Trains

e) What is your typical operational schedule in this area?

24 hours a day, 365 days a year.

f) Are there any specific navigational challenges you currently face in this section of the river?

No

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

potential impacts to the existing structure and properties

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

follow MTA NYCT design guidelines

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

NYCT has a variety of infrastructure on 145th

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

EPP would like to ensure there are no impacts to NYCT infrastructure, structure, properties, assets and operations.

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

N/A

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

No

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

The MTA does not have current plans to operate within the channel. However there are active climate resilience programs on the shorelines of MTA properties to reinforce from coastal flooding risks.

b) How would you operate differently if the channel was narrower?

No change to current MTA operations

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

Over the long term the MTA would be interested in tying into community scale coastal surge protection infrastructure.

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

N/A

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

MTA would be interested in engaging on the design of the Greenway features to reduce coastal surge exposure on its assets.

c) Is there anything else we should consider in the navigational risk assessment?

N/A

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

Not at this time

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

We would like to be made aware of potential impacts, including review of conceptual designs as these evolve.

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 28 February 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

MTA Bridges & Tunnels; Triborough Bridge and Tunnel Authority (TBTA)

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

RFK bridge and vehicle, pedestrian and cyclist approach ramps over the Harlem River.

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

vehicle, pedestrian and cyclist traffic crossing the Harlem River between Manhattan, Randalls Island, Bronx and Queens.

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

Operates 24 hours per day, every day.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

There may be a need for barge traffic depending on required bridge rehabilitation for state of good repair. Such barge traffic would be subject to appropriate notifications and permits.

e) What is your typical operational schedule in this area?

Operates 24 hours per day, every day for vehicle, pedestrian and cyclist traffic crossing the Harlem River.

f) Are there any specific navigational challenges you currently face in this section of the river?

No

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

We will want to know if water flow (for example increased velocity/turbulence) at our bridge would be impacted resulting in the potential for increased scour at the substructures.

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

N/A for our bridge

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

See response to 2) f) below

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

No

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

No

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

Our concern would be related to the potential for vessels having to hold station near our bridge if they have to wait for clearance to proceed. Should the vessel lose way there is a risk of collision with our pier protection systems.

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

None at this time. See response to 1) d).

b) How would you operate differently if the channel was narrower?

N/A at our bridge.

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

N/A at our bridge.

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

Yes, with the concerns raised in 2) a) and f) above.

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

To the extent possible configure, protect and locate the proposed greenway to allow a useable channel on the west side of the Macombs Dam Bridge and minimize impacts to water velocity an turbulence.

c) Is there anything else we should consider in the navigational risk assessment?

No comments.

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

No comments.

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes.

02/12/2025
[Recipient's Name]
[Recipient's Position]
[Company/Organization Name] **New York Power Authority (NYPA)**
[Address]
[City, State, Zip Code]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

NYPA does not own any adjacent property. However, NYPA intends to utilize the waterway for installation, operation and maintenance of high voltage power cables within the waterway. The cables are expected to be installed on the Manhattan side of the waterway as close to the land portion as feasible. For example, the cables are expected to be installed between the land portion and the first foundation pier for Macombs Dam Bridge on the Manhattan side.

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

once installed, the power cables will be maintained for forseeable future.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

The installation and operational barges vary in its maintenance aspect. It would depend on the type of the maintance needed.

e) What is your typical operational schedule in this area?

It would be dependent on the operational management needs.

f) Are there any specific navigational challenges you currently face in this section of the river?

N/A

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

It is likely that this structure could impact the space available for the barge to perform operations and maintenance between the Greenway Structure and the pier for both Macombs Dam Bridge and 145th Street Bridge depending on the offset from the land side of Manhattan.

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

It would depend on what is constructed and allowability for the maintenance barges to be able to perform the work.

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

Please see response to other questions.

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

b) How would you operate differently if the channel was narrower?

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

The power cables are expected to be installed in the Short term and then maintained in the long term.

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

c) Is there anything else we should consider in the navigational risk assessment?

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 28 February 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

02/12/2025
[Recipient's Name]
[Recipient's Position]
[Company/Organization Name] **NYS DOT**
[Address]
[City, State, Zip Code]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

- Harlem River Drive and access ramps.

-BIN 1077030 - Harlem River Drive / NYCTA IRT Subway

-BIN 1240090 - Macomb Dam Bridge over Harlem River

-BIN 1055040 - Harlem River Drive NB over Harlem River Shore

-BIN 1077040 - SB HRD over 8th Ave

-BIN 1077050 - HRD Ramp to NB HRD

- NYSDOT stormwater outfalls part of NYSDOT drainage system

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

-Access to bridges for inspection and maintenance

- Asset maintenance

- Asset Improvement and repairs

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

- Bridge Inspection: Once in 5 years for each bridge, each 5-10 days

Emergency Inspection.

- Asset repair as needed.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

- Inspection Boat - 25' Dive Boat

- Navigation vessel for repairs.

- Barge

e) What is your typical operational schedule in this area?

Bridge Inspection: 20 days every 5 years

Repairs/Maintenance: As needed.

f) Are there any specific navigational challenges you currently face in this section of the river?

-No significant challenges

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

No effect

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

12 Ft. @ MHW clearance

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

No effect

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

No

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

No

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

N/A

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

Bridge inspection

Asset maintenance and repairs as needed

b) How would you operate differently if the channel was narrower?

No change

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

None

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

c) Is there anything else we should consider in the navigational risk assessment?

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

NYCDOT, NYCDPR, DCAS & NYCTA

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 28 February 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

1/31/25
Luis Melendez
Patrol Captain
Riverkeeper
20 Secor Rd
Ossining, NY, 10562

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

Not Applicable

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

RIverkeeper uses the Harlem River for transiting to/from the East River, performing monthly water quality monitoring trips, monthly patrols on the Harlem River, engaging decision makers and partners, making observations and investigating pollution concerns.

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

Approximately 35 times from April through October annually.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

36 ft Deadrise - single screw vessel, a 25 ft Parker - outboard and a 20 ft center console - outboard.

e) What is your typical operational schedule in this area?

5 trips a month during our 7-month operating season.

f) Are there any specific navigational challenges you currently face in this section of the river?

Occasional congestion with commercial traffic, recreational boaters and Personal watercrafts; Ongoing construction with tug and barges.

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

Delay in service due to funneling of commercial and recreational traffic.

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

Vessels accessing this area will have to greatly reduce operational speeds as narrowing of the channel will decrease distance to shore. To comply with NYS safe boating regulations, vessels will have to give both sides of the shoreline 100 ft

clearance, leaving around 100ft of channel for multiple vessels to make passing arrangements.

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

Reduced clearance for multiple vessels operating on the Harlem river at the same time.

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

Yes, cutting the navigable channel by 1/3 limits the necessary scope for emergency anchoring and maneuvering around traffic.

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

Yes, vessels regularly operating on the Harlem river can be up to 165 feet. Mixture of commercial vessels, recreational vessels and personal watercraft operating at the same time, may create a funnel while transiting.

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

Riverkeeper will continue operating on the Harlem River, conducting patrols and testing water quality. In addition to boat operations, Riverkeeper is also engaged with shoreline-based community groups, and government agencies, in promoting public access, water quality improvements through reduction in combined sewer overflows, and potential shoreline habitat restoration projects.

b) How would you operate differently if the channel was narrower?

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

More time will need to be allocated to support our operations on the Harlem River.

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

Yes. However, reducing the navigable channel by 1/3 will create operational challenges for all vessels operating on the Harlem River. We would like to see a plan that addresses our concerns.

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

We recommend the Greenway be built on Manhattan, not on a separate over the water structure. We recommend conducting a survey before construction to determine any impact to aquatic life due to construction and partial shading of this Harlem River stretch.

c) Is there anything else we should consider in the navigational risk assessment?

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

Circle Line / Classic Harbor Line / New York Harbor Tours / Boat Ride NYC / NY Water Taxi / Billion Oyster Project / The Harlem River working group / Harlem river / Columbia University / Hudson River Foundation.

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by **31 January 2025**. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant

hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

Harlem River Working Group and Bronx Council for Environmental Quality Joint Response

Stakeholder Input Request: Harlem River Greenway

Chauncy Young <chauncyyoung@gmail.com> Tue, Feb 11, 2025 at 1:31 PM
To: Charlie Townsley <cTownsley@edc.nyc>
Cc: Chauncy Tuthill Young <Harlemriver@bceq.org>, Emily Ruby <eruby@riverkeeper.org>, Lena Ferguson <lferguson@edc.nyc>, Alexis Taylor <ataylor@edc.nyc>, "Henri Levesdque (Guest)" <hlevesque@smsllc.com>, "William Mahoney (Guest)" <wmahoney@smsllc.com>

MANHATTAN WATERFRONT GREENWAY EXTENSION IN NORTH HARLEM RIVER PROJECT

BCEQ and HRWG offer these comments in response to the "Manhattan Waterfront Greenway Extension in North Harlem River Project & Navigational Risk Assessment Overview," December 2024, by NYCEDC, NYCDPR, NYCDOT.

The purpose of this project is to connect the gap in the Manhattan Greenway along the Harlem River on the Manhattan side from 145th Street / 149th Street Bridge to 163rd Street. The proposal is to put a one mile plus greenway in the river.

The City wants to request approval from the Army Corps of Engineers. The Harlem River federal navigation channel is bank-to-bank. Building an outboard greenway requires congressional deauthorization, which could narrow the federally-maintained channel by up to 150 feet from the Manhattan side from 145th-163rd St

BCEQ and Harlem River Coalition (aka Harlem River Working Group) would like to see alternatives to this proposal that accounts for access and greenways on both sides of the river. We feel that this proposed project may be too large for the river's expanse, does not protect water quality, increases imperviousness and stormwater, interferes with an existing Army Corp project, and has not provided alternative scenarios. The proposed project does not demonstrate coordination or connection with greenway plans that BCEC has long supported.

1. Too Large for the Harlem River expanse

The Working Group has advocated for greenways along the Bronx and Manhattan sides of the Harlem River since its inception in 2009 and members of the Bronx Council for Environmental Quality were involved in the 1993 Bronx Greenways Plan with Borough President Fernando Ferrer. This plan was supported by the Bronx Harlem River Waterfront Bicycle and Pedestrian Study in August 2006 (Michael R. Bloomberg, Mayor City of New York Amanda M. Burden, Director NYC Department of City Planning), there have been numerous recommended plans to create the greenway on the Bronx side (see page 47).

While we support the concept of a cantilever greenway for sections on both sides of the Harlem River, we are concerned that the proposed greenway in Manhattan will preclude the development of a similar greenway on the Bronx side of the river as the current proposal makes the Manhattan side of the river unnavigable by boats.

2. Does not protect Water Quality, but increases imperviousness and stormwater

The proposal is the second in the river utility. The plan does not show the large area needed for mitigation in return for covering the river and increasing stormwater. Any area taken from the river must be returned through the development of wetlands

The Harlem River already has the most outfalls of any waterbody in the city; this design seems to create new untreated stormwater and does not protect water quality.

3. **Interferes with the Army Corp existing feasibility study for Living Shorelines**

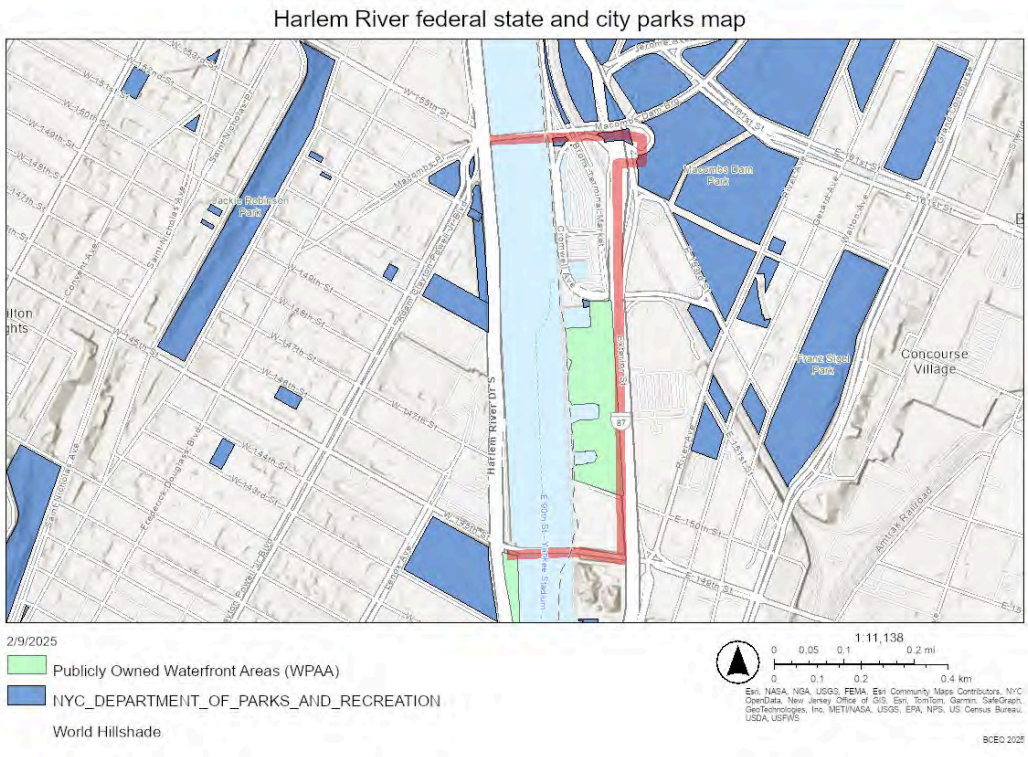
There is a three-year project that has been in the works for several years. It will make the edge of both sides more productive. The present proposal does not do anything to protect the environment {al protection}of the river.

4. **Provide an analysis of the alternatives reviewed**

From BCEQ Board:

Kindly review other alternatives, for cost, environmental impact, and equity. There is no reason to have one looped greenway, when the idea is to protect the watershed for the Harlem River. Closing the Loop is not a greenway objective, interconnections are. This is an inequitable plan.

Below is just one example of something that will cost less, be more environmentally protective, and equitable. Remember that today, Bronx bicyclists have to travel to and through Manhattan to go to the lower Bronx, so it is not unusual. The draft proposed route goes across the 145/149th Street Bridge of the Macombs Dam Bridge to High Bridge through the MTA site which has a large edge on the waterfront. This also affords the city the opportunity to make that waterfront more productive that the regular rip rap that currently exists.



Harlem River Working Group and Bronx Council for Environmental Quality Joint Response

The "new route should be in the Bronx where the blue line shows in Manhattan. Then back over Macombs Dam bridge to the pathway inland around the Polo Grounds houses.

5. Coordinate with regional and citywide greenway plans

BCEQ board members were instrumental in the cleanup of the Bronx River through the creation of the Bronx River Greenway. BCEQ is among the organizations and individuals that formed the Harlem River Working Group with the intention of creating a linear waterfront greenway on the Bronx side of the Harlem River that will likewise improve the water quality of the Harlem River. We are community partners in the NYC DOT "Harlem River Greenway" planning project. We have advocated for the passage of the New York City Council greenway plan. We secured the nomination of the Bronx side of the Harlem River as a Brownfield Opportunity Area for the development of parkland, greenways, and communities. We have been instrumental in the Daylighting of Tibbetts Brook project that has leveraged the construction of the Putnam Greenway and advocate for the extension of the Empire State Trail along the Harlem River.

"Closing the loop" can and should be designed to maximize, not annul, long planned greenway plans for connecting communities and boroughs throughout the city and providing alternative transportation equity. The proposed alternative gives the Manhattan Greenway a crucial connection to the Bronx side of Harlem River and corrects a potential design flaw in the proposed project that will isolate the Manhattan Greenway from citywide plans.

Thank you for this opportunity to comment. Please keep us informed of your next steps so we can remain involved.

Chauncy Young, Coordinator, Harlem River Alliance/Harlem River Working Group

Robert Fanuzzi, BCEQ President

Dart Westphal, BCEQ Member (participated in 1993 Greenway Plan)

Karent Argenti, BCEQ Secretary

[Quoted text hidden]

Harlem River Working Group and Bronx Council for Environmental Quality Joint Response

12/11/24
[Recipient's Name]
[Recipient's Position]
[Company/Organization Name] **Champlain Hudson Power Express (CHPE)**
[Address]
[City, State, Zip Code]

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

We do not own any property above or below water in the Harlem River but will have an easement or equivalent land rights on completion of installation for the Champlain Hudson Power Express (CHPE) project.

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

A submarine route for a clean energy HVDC transmission line that will deliver 20% of NYC power and which travels from the northern mouth of the Harlem River at the Hudson River (Spuyten Duyvil) to the Waste Management site just North of the

Willis Avenue Bridge, as approved by New York State and federal regutory authorities.

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

During construction in 2025, we will operate in that area for an approximate duration of 6 to 8 weeks during June and July 2025 installing the power cable bundle. The route under the Macombs Dam Bridge is on the East side of the river well clear of the Greenway extension. At the 145th Street Bridge, the route is under the West side of the River, however from the presentation provided there appears to be no issue at this point. Between the two bridges the cable route trends towards the centre and the East side of the River.

During operation of the Facility, which is scheduled to begin in 2026, the Facility will operate as a transmission utility full time in the Harlem River. However, aside from periodic inspections and necessary maintenance of the utility infrastructure, no regular in-water activities will occur.

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

During construction, a bespoke modular cable installation barge (CSB) approximate dimensions of 200 ft long and 80 ft wide in use for the installation only, supported by a Crane Support Barge (CSB), approximate dimensions of 165 ft long by 43.5 ft wide. Additionally a 180 ft long by 40 ft wide logistic barge with supporting tug/tugs will be used to ferry materials to the Cable Lay Barge.

A small fleet of vessels to support crew transfer and cable handling operations eil also be in use during installation.

Post installation at regular periods (5 yrs) a small survey vessel will run the cable route checking cable and cable protection system integrity. None of these vessels will hamper the installation of the Greenway extension.

e) What is your typical operational schedule in this area?

Installation during June and July 2025

Thereafter, regular surveys for system integrity, with an estimated duration of two (2) days to complete the survey.

f) Are there any specific navigational challenges you currently face in this section of the river?

None

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

We do not believe there will be any impact to our operations, neither the installation nor the subsequent maintenance.

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

None required

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

We do not believe the Greenway will affect our operations.

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

None

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

None that affects our installation or subsequent survey requirements.

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

No.

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

None planned, only the use of small survey vessels as indicated previously.

b) How would you operate differently if the channel was narrower?

No effect to our operations.

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

None required

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

No objection, no impact to our project

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

None

c) Is there anything else we should consider in the navigational risk assessment?

None that affects our project.

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

None

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 31 January 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

01/24/2025
James Van Woert
Director of Operations
WM
98 Lincoln Avenue
Bronx, NY

Dear Harlem River Stakeholder,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

98 Lincoln Avenue Bronx, NY

b) For what purpose(s) do you use the Harlem River or the adjacent property you own or control?

Solid Waste Transfer Station

c) How often do you operate in this section of the Harlem River between 145th and 163rd Streets?

Never

d) What types of vessels do you use in this area, and what are their approximate dimensions and maneuvering characteristics?

Not Applicable

e) What is your typical operational schedule in this area?

Not Applicable

f) Are there any specific navigational challenges you currently face in this section of the river?

No

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations?

N/A

b) What additional buffer, if any, would you require between the proposed project and the navigable channel to safely maintain operations?

N/A

c) If the federal navigation channel was narrowed by 150 feet on the Manhattan side from 145thSt-163rdSt through deauthorization, meaning only the eastern side of the river would be federally maintained, including under the Macombs Dam Bridge, how would you anticipate this to affect your operations? Note: users would still be allowed to traverse the deauthorized area.

N/A

d) Are there any other specific concerns regarding vessel maneuverability or navigational safety if the Greenway were constructed as proposed?

No

e) Would the presence of the Greenway create any new challenges for docking, turning, or anchoring in this section? [If Applicable]

No

f) Do you foresee the proposed Greenway impacting the safety or flow of traffic in this part of the river, particularly during high-traffic periods?

No

3) Future Usage and Operations

a) What are your future operation plans regarding transportation in the channel?

No at this time.

b) How would you operate differently if the channel was narrower?

Unsure

c) Are there any facility/infrastructure changes, operational modifications, or other investments you would need to make to operate in a narrower channel? If so, how likely is it that you will be able to make these investments in the short-term (2 to 5 years)? In the longer term (greater than 5 years)?

Unsure

4) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area, given the potential impact on the navigational channel and/or adjacent property?

Yes

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

No

c) Is there anything else we should consider in the navigational risk assessment?

No

5) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

No

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 21 February 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,
Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

1/6/2025
Attn: Board President
Esplanade Gardens, Inc.
2569 Seventh Avenue
New York, NY
10025

Dear Esplanade Gardens Board President,

Re: Navigational Study for Proposed Manhattan Waterfront Greenway Extension on the Harlem River

We are reaching out to request your input as a valued Harlem River stakeholder.

The New York City Economic Development Corporation (NYCEDC), in collaboration with the New York City Department of Transportation (NYCDOT) and NYC Parks, is undertaking a project to extend the Manhattan Waterfront Greenway in North Harlem between 145th and 163rd Streets. The proposed project would extend from the Manhattan side up to 70 feet into the existing Harlem River federal navigational channel. Specific details about the project are provided in the attached file for your reference.

To support the assessment of potential impacts of this project, NYCEDC has assigned Safety Management Systems, LLC (SMSLLC) to conduct a navigational safety risk assessment study of this river section. Your feedback on current usage and operational needs is essential to ensuring that planning for this project considers the perspectives of all stakeholders.

We would greatly appreciate your time in responding to the following questions, which are designed to gather insights into your current operations and understand any potential impacts this project may have on your activities:

1) Current Usage and Operations

a) Please specify what property or properties you own or control on the Harlem River. Include address as well as block and lot numbers. [If Applicable]

700 & 720 Lenox Avenue NY, NY 10039.

B: 1744, L: 0001

2) Impact of Proposed Greenway

a) Based on the proposed Greenway extension project, how do you anticipate a structure that extends into the Harlem River by up to 70 feet from the Manhattan side from 145th-163rd would affect your operations (see diagram in attached project overview)?

It would not impact Esplanade Gardens' operation of the property located at 700 & 720 Lenox Avenue provided the Waterfront Greenway is beyond the seawall.

3) Support and Feedback on the Project

a) Do you support the creation of the Manhattan Waterfront Greenway extension in this area?

Yes, with the understanding that the applicable governing authority at the City, State and Federal level will take full responsibility for the repair and maintenance of the seawall and provided that the proposed use of the Waterfront Greenway will not adversely impact the adjacent property located 700 & 720 Lenox Avenue.

b) Do you have any recommendations for design or operational mitigations that could reduce potential risks associated with the Greenway's placement?

That there be no means of access or egress to the Waterfront Greenway on any portion of the Waterfront Greenway that is adjacent to the property located at 700 & 720 Lenox Avenue as this is an important safety and security concern for Esplanade Gardens' residents.

c) Is there anything else we should consider?

The above is subject to further comment.

4) Additional Input

a) Are there other stakeholders or river users you recommend we contact for input on the project?

No.

b) Would you be open to further discussions or participation in meetings or workshops as the assessment progresses?

Yes, Esplanade Gardens would be willing to participate in further conversations regarding this project.

Your responses will provide valuable insights that will be integral to the success of this assessment. We kindly request that we receive your feedback by 31 January 2025. If you would prefer discussing your responses with us, we would be happy to arrange a call or meeting at your convenience.

Thank you in advance for your time and consideration. Please feel free to reach out to me directly at hlevesque@smsllc.com with any questions or to provide additional input.

Sincerely,

Safety Management Systems, LLC



Henri Levesque, Senior Associate Consultant
hlevesque@smsllc.com • (703) 342-9692

Attachment: Project Details for Proposed Manhattan Waterfront Greenway Extension

Harlem River, 145th – 163rd Street Navigational Study

Appendix 6 – Stakeholder Registry

Stakeholder Engagement Tracker and Register

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
1	**Boating Around NYC - National Powerboat Association**	02/14/25	Association	frenzyyy@optonline.net	
2	**Bronx Council for Environmental Quality**	02/11/25	Association		The Harlem River Working Group (HRWG) and the Bronx Council for Environmental Quality (BCEQ) express concerns about the proposed Manhattan Waterfront Greenway Extension, arguing that it is too large for the Harlem River's expanse, fails to protect water quality, interferes with existing Army Corps of Engineers projects, and lacks consideration of alternative plans. Key Concerns and Recommendations: The Greenway Is Too Large for the Harlem River HRWG and BCEQ support greenway development on both sides of the Harlem River but believe the Manhattan-side extension will make the river unnavigable for boats. They suggest the current proposal may prevent future Bronx-side greenway development. Water Quality and Environmental Impact The Harlem River has the highest number of stormwater outfalls in NYC; adding impervious surfaces over the water could increase untreated stormwater runoff. The project lacks plans for mitigation, such as wetland restoration to offset lost river space. Interference with Army Corps Feasibility Study The Army Corps of Engineers is conducting a three-year study on Living Shorelines for both riverbanks, aiming to enhance ecological productivity. The Greenway proposal does not align with this initiative or provide environmental protections. Lack of Alternative Analysis HRWG and BCEQ oppose a single-loop Greenway concept that prioritizes only one riverbank. They propose an alternative where cyclists cross the 145th/149th Street Bridge to the Bronx, use the MTA waterfront property, and return over the Macombs Dam Bridge. This route enhances Bronx access while avoiding excessive river encroachment. Coordination with Regional Greenway Plans BCEQ has long advocated for Bronx-side greenways, including securing Brownfield Opportunity Area status for park and trail development. They emphasize that the current Greenway design isolates Manhattan rather than integrating into citywide bike and pedestrian plans. Conclusion: HRWG and BCEQ support a Greenway project but insist on a more balanced approach that includes Bronx access, water quality protections, and alignment with existing Army Corps studies. They request continued involvement in discussions and project planning.
3	**East River CREW**	Not Yet Engaged	Association		
4	**Harbor Ops Steering Committee**	10/01/2022 12/12/2024	Association	Tiffany Torrey <ttorrey@nymaritime.org> John Decruz <jdecruz@sandyhookpilots.com>	
5	**Harlem River Community Rowing**	12/12/24	Association	info@harlemrivercr.org ; joy.hecht@harlemrivercr.org	

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
6	**Harlem River Working Group**	02/11/25	Association	harlemriver@bceq.org	The Harlem River Working Group (HRWG) and the Bronx Council for Environmental Quality (BCEQ) express concerns about the proposed Manhattan Waterfront Greenway Extension, arguing that it is too large for the Harlem River's expanse, fails to protect water quality, interferes with existing Army Corps of Engineers projects, and lacks consideration of alternative plans. Key Concerns and Recommendations: The Greenway Is Too Large for the Harlem River HRWG and BCEQ support greenway development on both sides of the Harlem River but believe the Manhattan-side extension will make the river unnavigable for boats. They suggest the current proposal may prevent future Bronx-side greenway development. Water Quality and Environmental Impact The Harlem River has the highest number of stormwater outfalls in NYC; adding impervious surfaces over the water could increase untreated stormwater runoff. The project lacks plans for mitigation, such as wetland restoration to offset lost river space. Interference with Army Corps Feasibility Study The Army Corps of Engineers is conducting a three-year study on Living Shorelines for both riverbanks, aiming to enhance ecological productivity. The Greenway proposal does not align with this initiative or provide environmental protections. Lack of Alternative Analysis HRWG and BCEQ oppose a single-loop Greenway concept that prioritizes only one riverbank. They propose an alternative where cyclists cross the 145th/149th Street Bridge to the Bronx, use the MTA waterfront property, and return over the Macombs Dam Bridge. This route enhances Bronx access while avoiding excessive river encroachment. Coordination with Regional Greenway Plans BCEQ has long advocated for Bronx-side greenways, including securing Brownfield Opportunity Area status for park and trail development. They emphasize that the current Greenway design isolates Manhattan rather than integrating into citywide bike and pedestrian plans. Conclusion: HRWG and BCEQ support a Greenway project but insist on a more balanced approach that includes Bronx access, water quality protections, and alignment with existing Army Corps studies. They request continued involvement in discussions and project planning.
7	**Kayak & Canoe Club of NY**	Not Yet Engaged	Association	https://kccny.org/contact/	
8	**MAPONY**	08/01/22	Association	Stephen Lyman <slyman@nymaritime.org>	The project team attended a passenger vessel subcommittee meeting on 12 February to provide a presentation on the MWG: North Harlem proposal. Additionally, materials were distributed to MAPONY members who wished to comment.
9	**New York HarborLAB**	Not Yet Engaged	Association		
10	**NY Open Water.org**	12/12/24	Association	david@nyopenwater.org rondi@nyopenwater.org	New York Open Water (NYOW) organizes open water swimming events in New York City, including the 20 Bridges Swim, a circumnavigation of Manhattan that passes through the Harlem River between 145th and 163rd Streets. Their operations occur 35 to 40 days per season, from June to October, with swimmers traveling south to north. Each swimmer is accompanied by a kayak escort and a support RHIB (rigid-hulled inflatable boat), with a course marshal boat overseeing the event. NYOW does not anticipate the proposed Greenway extension affecting their on-water operations. In fact, they believe it could enhance spectator viewing of their events. They have no concerns about the narrowing of the federal navigation channel or vessel maneuverability but recommend that the Greenway include designated kayak put-in locations and restrooms along this stretch. NYOW fully supports the Greenway project, citing the benefits of expanded pedestrian and bicycle access to the waterfront. They suggest reaching out to the Inwood Canoe Club for additional input and would like to be kept informed of project developments, though they are only potentially available for further discussions or meetings.
11	**NY Rowing Association**	12/12/24	Association	info@nyrowing.org	
12	**NYC Water Trail Association**	12/12/24	Association	<avironvoile@gmail.com> <manhattancircumnavigation@gmail.com> <billdennison@gmail.com>	

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
13	**Riverkeeper**	12/11/24	Association	Dan Shapley <dshapley@riverkeeper.org>, Luis Melendez <lmelendez@riverkeeper.org>	Riverkeeper operates on the Harlem River primarily for environmental monitoring, conducting monthly water quality sampling and patrols, investigating pollution concerns, and engaging with policymakers and community organizations. They transit the section between 145th and 163rd Streets approximately 35 times per year between April and October using a fleet that includes a 36-foot single-screw vessel, a 25-foot Parker with an outboard motor, and a 20-foot center console with an outboard motor. Their operations occur about five times per month during their active season. Their primary concern with the proposed Greenway extension is the funneling effect it would create by narrowing the navigable channel, leading to delays in operations and potential congestion, particularly when commercial and recreational vessels mix. They note that New York State safe boating regulations require vessels to give 100 feet of clearance to both shorelines, meaning that a narrowed channel would leave only about 100 feet of usable space for multiple vessels to maneuver and pass. This would significantly impact navigation, especially for larger vessels. Riverkeeper also highlights safety concerns, stating that cutting the navigable channel by one-third would reduce necessary space for emergency anchoring and maneuvering. The mixture of large commercial vessels, smaller recreational boats, and personal watercraft could lead to unsafe conditions, particularly during high-traffic periods. While Riverkeeper supports the Greenway project, they emphasize that its design must address these operational challenges. They recommend constructing the Greenway entirely on land rather than extending it over the water. They also suggest conducting an environmental survey to assess the impact of construction and shading on aquatic life in this section of the river. For additional input, Riverkeeper recommends reaching out to Circle Line, Classic Harbor Line, New York Harbor Tours, Boat Ride NYC, NY Water Taxi, Billion Oyster Project, the Harlem River Working Group, Columbia University, and the Hudson River Foundation. They are open to further discussions and stakeholder meetings as the project progresses.
14	**Waterfront Alliance**	12/12/24	Association	fhusani@waterfrontalliance.org info@waterfrontalliance.org	
15	**DOT Bridges**	03/11/25	City Agency	SDiLuccio@dot.nyc.gov	The New York City Department of Transportation (NYC DOT) Bridges Division has acknowledged receipt of the Harlem River Navigational Risk Assessment questionnaire and is reviewing it. While an official response has not yet been submitted, their initial feedback suggests that they do not anticipate any significant conflicts between the proposed federal channel deauthorization, the Greenway project, and the operation of the Macombs Dam and 145th Street bridges. A primary area of inquiry has been the presence of bridge cables running along the Harlem River floor, which support the communications and operations of the DOT's movable bridges. These cables require periodic maintenance and replacement, but DOT Bridges has not identified any direct conflicts between the Greenway project and these cables based on their initial review. However, they have indicated a willingness to provide additional clarification if needed. DOT Bridges is expected to respond to the questionnaire formally, and NYCEDC has followed up to confirm whether their feedback can be expected by March 21, 2025. In the meantime, the existence of bridge cables has been, with potential considerations for future maintenance access. At this stage, DOT Bridges does not foresee significant conflicts but has left open the possibility for further discussion if additional concerns arise during their formal review.
16	**DSNY**	Not Yet Engaged	City Agency		
17	**FDNY Marine Ops**	01/24/25	City Agency	marinediv@fdny.nyc.go	
18	**NYC DCAS**	12/20/24	City Agency	Matt Berk, Acting Assistant Commissioner of Dispositions & Property Management mberk@dcas.nyc.gov	
19	**NYC DEP**	12/13/24	City Agency	Greg Hanchrow (Senior Port Captain) GHanchrow@dep.nyc.gov	The NYCDEP Marine Section conducts periodic water quality sampling in the Harlem River. It operates two primary harbor survey vessels, OSPREY and PIPING PLOVER (each approximately 60 feet long with a 6-foot draft). Their operations occur once weekly from April to November and once monthly from December to March. They do not anticipate any significant impacts from the proposed Greenway extension or the deauthorization of the Manhattan side of the federal navigation channel. However, they recommend installing vertical fendering below the Greenway structure to prevent vessels from becoming encumbered beneath it in case of a loss-of-control incident. If the channel were narrowed, they would likely rely more on the east draw of the Macombs Dam Bridge but do not foresee any significant operational changes. They remain noncommittal regarding support for the Greenway project. Additionally, they suggest analyzing how recreational boaters receive navigation information (such as social media or Electronic Navigation Chart [ENC] publishers) and ensuring that any navigation instructions related to the project are widely distributed. NYCDEP Marine Section is open to further discussions and participation in stakeholder meetings.

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
20	**NYC DEP - Bureau of Water and Sewer Operations (BWOS)**	03/19/25	City Agency		The New York City Department of Environmental Protection (NYCDEP) Bureau of Water and Sewer Operations (BWSO) has provided feedback on the Manhattan Waterfront Greenway – North Harlem Gap project, primarily focusing on infrastructure and maintenance considerations during the project's design phase. Their primary concerns relate to accessibility for maintenance, coordination with existing outfall structures, and potential conflicts with other ongoing projects in the Harlem River. BWSO has requested a closed-circuit television (CCTV) inspection of the existing outfalls along the shoreline and bulkhead up to the nearest manhole or chamber. This inspection must be coordinated with DEP's Construction Support and Inspection (CSI) unit, and any outfalls found to be defective must be repaired or upgraded before construction begins. Additionally, they have asked for clarification on whether bulkhead work will be required as part of the Greenway project, emphasizing that any necessary bulkhead inspections should also be conducted during the design phase. A key operational requirement from BWSO is that landside access must be provided for all existing outfalls. They have requested a vehicle turning analysis to demonstrate that DEP maintenance trucks can access the bulkhead where these outfalls are located. Furthermore, they have asked for clarification on how outfalls can be accessed from the water side and suggested that sections of the Greenway be designed as a drawbridge or other removable structure to allow for barge and vessel access in case of emergency maintenance or repairs. BWSO has also raised concerns about the clearance between outfalls and the Greenway structure, recommending that retractable ladders or similar access supports be installed at each outfall location to facilitate inspections and routine maintenance. They have requested a shoreline survey to confirm whether any existing outfalls extend beyond the bulkhead and emphasized that proposed Greenway piers at connection points must not obstruct any outfalls. Additional concerns include ensuring that the Greenway structure can support HS-20 maintenance vehicles if needed, clarifying whether the project will introduce any new water or sewer service lines, and ensuring that ownership of all outfalls within the project limits is clearly identified. BWSO has also flagged the need to coordinate with the DEP Bureau of Coastal Resiliency (BCR) and has highlighted potential conflicts with ongoing clean energy projects in the Harlem River. While BWSO's feedback is largely technical and tied to the design and engineering phase, their recommendations emphasize the importance of infrastructure accessibility, maintenance feasibility, and interagency coordination as the Greenway project moves forward.
21	**NYC DEP - BWT**	03/12/25	City Agency		The NYC Department of Environmental Protection (NYCDEP) Bureau of Wastewater Treatment (BWT) has no comments on the Harlem River Greenway extension project and does not see a need to submit a separate questionnaire beyond the one already provided by their Marine Section. However, they request to stay informed as the project progresses, particularly regarding scheduling, as they conduct regular water sampling and need to correlate any potential anomalies that might arise due to construction or other activities. Additionally, NYCDEP has been in discussions with the Bureau of Water and Sewer Operations (BWSO) to determine whether they will submit a separate response. They do not anticipate further input from other DEP divisions but will confirm if BWSO intends to provide feedback. NYCEDC's response indicates no major concerns or objections to the project from their wastewater and sewer operations perspective, but they emphasize the importance of continued communication regarding project updates.
22	**NYC DOT**	12/12/24	City Agency	<tleung@dot.nyc.gov> <dbiegel@dot.nyc.gov> <mlenkovskiy@dot.nyc.gov> <sparayev@dot.nyc.gov>	
23	**NYC DOT - SIF**	12/12/24	City Agency	Barry Torrey btorrey@dot.nyc.gov	Project was discussed with Mr. Torrey at the MAPONY subcommittee meeting attended by the project team on 12 February 2025.
24	**NYC EDC - NYC Ferry**	01/01/25	City Agency	nverzosa@edc.nyc ; gloebl@edc.nyc	NYC Ferry does not currently operate in the Harlem River but has potential future plans to establish a landing on either the Manhattan or Bronx side of the channel. If service were to be introduced, they would consider using vessels with a lower freeboard to navigate the already narrow waterway with low bridge clearances, though these adjustments would be made regardless of the Greenway project. They support the Manhattan Waterfront Greenway extension but recommend keeping a gap between the Greenway and the navigational area to mitigate potential risks. Additionally, they suggest installing external or floating fenders along the Greenway to reduce damage in the event of a vessel allision. While they do not anticipate the project hindering their future operational decisions, they remain open to discussions and suggest engaging Harbor Ops for further input.

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
25	**NYC Parks**	12/18/24	City Agency	Seth.Goodwin@parks.nyc.gog Christopher.Ameigh@parks.nyc.gov	NYC Parks manages multiple properties along the Harlem River, including Mill Pond Park, Harlem River Park, Bobby Wagner Walk, Randalls Island Park, and various shoreline parks. They support public recreational use, provide water access, and conduct infrastructure inspections and maintenance. Boat launching regularly occurs at Inwood Hill Park, W 202nd St End Park, and Swindlers Cove Riverfront Park. Their direct vessel operations in the Harlem River are limited to occasional inspections, using a 25-foot Parker powerboat with a 10-foot beam, while contractors utilize barges and workboats for infrastructure repairs. Additionally, recreational paddlers such as rowboats, kayaks, and sculls use the area several times a week. Concerns about the Proposed Greenway: Navigation & Safety: The Greenway would tighten travel lanes, requiring vessels to slow down, particularly near bridges and when passing other vessels. This could lead to increased wake challenges. Recreational Vessel Safety: They highlight the risk of small recreational paddlers, such as kayakers, getting trapped under the structure and raise concerns about reckless Jet Ski operators. Shoreline Maintenance: NYC Parks questions how the Greenway structure might impact future repairs to existing shoreline infrastructure on the west side of the river. Operational Adjustments: They anticipate no major changes to their own operations, but vessels may need to travel more slowly in congested conditions. They do not foresee needing major infrastructure changes to adapt to a narrower channel. Stakeholder & Engagement: NYC Parks did not explicitly state support or opposition to the project. They recommend consulting with Circle Line, Classic Harbor Line, and Weeks Marine for additional input. They are open to continued discussions and participation in stakeholder meetings.
26	**NYC Parks Marine Director**	12/18/24	City Agency	Nate Grove nate.grove@parks.nyc.gov Christopher Ameigh christopher.ameigh@parks.nyc.gov	Response provided above in "NYC Parks"
27	**NYC SBS**	12/12/24	City Agency		
28	**NYPD Harbor**	12/18/24	City Agency	<Luis.Ramirez@nypd.org> <patrick.gallagher@nypd.org> Raul.Maisonet.nypd.org	
29	**Parks Marine Director**	07/16/24	City Agency	Nate Grove <Nate.Grove@parks.nyc.gov> Christopher Ameigh <christopher.ameigh@parks.nyc.gov>	
30	**CHPE**	01/01/22	Commercial User		Champlain Hudson Power Express (CHPE) is developing a high-voltage direct current (HVDC) transmission line that will deliver 20% of NYC's power via a submarine route through the Harlem River. The cable runs from Spuyten Duyvil at the northern end of the Harlem River to the Waste Management site north of the Willis Avenue Bridge. Operational Details: Construction: CHPE will operate in the Harlem River between June and July 2025 for approximately 6 to 8 weeks to install the power cable bundle. Vessel Use: They will employ a 200-foot by 80-foot modular cable installation barge, a 165-foot crane support barge, and a 180-foot logistics barge with tugs for material transport. A small fleet of vessels will also be used for crew transfers and cable handling. Post-Installation: The facility will operate as a transmission utility full-time starting in 2026, but aside from periodic surveys (every 5 years) and maintenance, no regular in-water activities are planned. Impact of the Proposed Greenway: CHPE does not foresee any impacts from the Greenway on their installation, operations, or maintenance. They do not require a buffer zone or additional navigational space for their work. The proposed narrowing of the federal navigation channel will not affect their operations. Support and Feedback: CHPE does not object to the Greenway project and sees no impact on their activities. They do not have recommendations for design modifications or additional navigational considerations. They are open to further discussions if necessary. Conclusion: CHPE's operations are largely unaffected by the Greenway extension due to the location of their cable route and limited in-water activities post-installation. They do not foresee any navigational or safety concerns and have no objections to the project.

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
31	**Circle Line**	08/01/22	Commercial User	Mike Duffy <mduffy@nycl.com> Bobby Rajkumar <BRajkumar@nycl.com> Gus Markou <gmarkou@nycl.com>	
33	**Classic Harbor Line**	12/12/24	Commercial User	Chris.Seaport@gmail.com sarah@classicharborline.com cait@classicharborline.com	Classic Harbor Line operates boat tours transiting the Harlem River, with two to three daily trips from April through October and five to seven per week from November through March. They currently operate two vessels, Manhattan (80 feet) and Manhattan II (100 feet, 22-foot beam), and will introduce Manhattan III (110 feet, 25-foot beam) in late 2025. They do not foresee a significant impact from the proposed Greenway under normal conditions but express concerns about increased congestion during high-traffic periods, particularly on weekends when they and Circle Line operate simultaneously. The narrowing of the federal navigation channel would force large vessels to exclusively use the eastern side of the Macombs Dam Bridge, potentially causing delays and safety risks. They also highlight the need for communication and outreach to recreational boaters to prevent conflicts in the narrowed space. While they do not anticipate needing a buffer zone, they reference the East River as an example of a shoreline greenway without a buffer. Their primary concern is the risk of multiple vessels converging in the same bridge channel, increasing the potential for navigational conflicts. Classic Harbor Line emphasizes the importance of coordination among commercial operators and effective communication with recreational users. It does not explicitly state support or opposition to the Greenway but expresses concerns about traffic flow and safety. It is open to further discussions on the project.
34	**Clean Path NY**	12/01/22	Commercial User	Calicchio <Emily ecalicchio@related.com>; Luke Falk <Luke.Falk@energyre.com>; Norcross, Frank <Frank.Norcross@related.com>; Elvin Garcia <EGarcia@tonioburgos.com>; Kristen Walsh <kwalsh@tonioburgos.com>	Contact again 12/12/24 and subsequent emails.
35	**CSX Rail**	12/20/24	Commercial User	Feygelson, Arthur Arthur_Feygelson@csx.com; Knaus, Andrea Andrea_Knaus@csx.com "O'Connell, Maurice" <Maurice_O'Connell@csx.com>, "Oglesby, Rodney" <Rodney_Oglesby@csx.com>	CSX Transportation provided input regarding the proposed partial deauthorization of the Harlem River federal navigation channel and the associated Manhattan Waterfront Greenway Extension, with a focus on the Oak Point Link, a critical freight rail corridor located on the Bronx side of the Harlem River. CSX emphasized that this link plays a vital role in transporting time-sensitive freight, including produce and municipal solid waste (notably for the Department of Sanitation of New York, DSNY), to and from New York City. Their primary concern is that narrowing the federal channel and shifting marine traffic closer to the Bronx shoreline would increase the risk of vessel collisions with infrastructure supporting the rail line, potentially disrupting freight service. In particular, CSX is worried that vessel traffic may come into closer proximity to the Oak Point Link, raising the likelihood of collision-related outages. Additionally, CSX identified wake-related impacts as a secondary concern. Increased vessel traffic in closer range to their infrastructure could lead to heightened wave action against the piers and rail track components, which are maintained by NYSDOT. This increased exposure could result in accelerated wear and tear on structural elements, requiring more frequent maintenance and replacement. While CSX did not explicitly oppose the Greenway project, their response underscores the need for marine traffic management and design considerations that would mitigate the risks posed to essential freight infrastructure along the Bronx shoreline.
36	**Donjon Marine**	12/12/24	Commercial User	lou.russo@donjon.com michael.mccabe@donjob.com	
37	**Kirby Offshore Marine**	12/12/24	Commercial User	JYahner@vanebrothers.com	
38	**Master Captain Bulldog**	12/12/24	Commercial User	s.thal@snet.net	

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
39	**Miller's Launch**	08/01/22	Commercial User	Terry DeMeo <terry@millerslaunch.com>; Also cc'd <nick@millerslaunch.com>; <sven@millerslaunch.com> George@millerslaunch.com stephanie@millerslaunch.com	Miller's Launch operates tug and barge services throughout the Harlem River, transporting various types of barges for construction, dredging, and maintenance work. Their operations include crane barges, material barges, scows for dredging, deck barges for debris, and man lift barges for inspections and emergency work. They frequently transit the area and have extensive experience working on projects within the Harlem River over the past 17 years. Regarding the proposed federal navigation channel deauthorization and Greenway extension, Miller's Launch anticipates minimal impacts in this section based on their operational experience. However, they strongly recommend the installation of fendering and tie-up points at either end of the deauthorized section and on both sides of the Macombs Dam Bridge to mitigate potential risks and provide secure mooring locations. One of their primary concerns is the lack of coordinated communication between all Harlem River bridge operators, including the MTA rail bridge and NYC DOT movable bridges. They emphasize that bridge operations are not synchronized, which poses challenges for vessel transits, particularly for larger tug and barge units. They recommend that communication protocols be improved and standardized, especially during construction periods when navigation constraints could further complicate transit planning. While Miller's Launch does not foresee significant operational changes due to the Greenway project, they stress the importance of maintaining functional navigation infrastructure and enhancing coordination among agencies responsible for bridge operations. They are open to further discussions and emphasize the need for better communication standards for vessels transiting the Harlem River.
40	**NY Harbor Jetski**	12/12/24	Commercial User	newyorkharborjetski@gmail.com	
41	**NY Harbor Tours**	12/12/24	Commercial User	david@newyorkharbortours.com	
42	**NY Waterway**	12/12/24	Commercial User	motticola@nywaterway.com warren@nywaterway.com <alan consulting warren>	
43	**Rise Light & Power**	12/01/22	Commercial User	Wil Fisher	
44	**Sea the City LLC**	12/12/24	Commercial User	seathecity@gmail.com	
45	**Towboat & Harbor Carriers**	08/15/22	Commercial User	Eric Johansson <safemariner@mac.com>; <director@tbhca.com> Chair@TBHCA.com	
46	**US Concrete Marine Ops**	12/12/24	Commercial User	DSutton@us-concrete.com	
47	**Walsh Group**	12/12/24	Commercial User	pcumiskey@walshgroup.com pdanyluk@walshgroup.com	
48	**Weeks Marine Dispatch**	12/12/24	Commercial User	tcoman@weeksmarine.com	
49	**MTA - Construction & Development**	01/30/25	Government Agency	philip.swanton@mtacd.org; Patricia Fernandez <patricia.fernandez@mtacd.org>	MTA Construction & Development oversees key infrastructure in the area, including the NYCT Rail Yard, the 2 and 3 subway tunnels, pump rooms, and various structures along the Harlem River between 145th Street and beyond 149th Street. Their operations run 24 hours a day, 365 days a year, and while they do not use the river for vessel traffic, they are responsible for maintaining and operating subway infrastructure that intersects the project area. The MTA's primary concern regarding the Greenway project is potential impacts to existing infrastructure. They request that MTA NYCT design guidelines be followed to ensure the Greenway does not interfere with their assets. Additionally, they emphasize that any narrowing of the federal navigation channel or structural modifications in the area should not affect NYCT properties, structures, or operations. While they did not provide explicit support or opposition to the project, they expect to be informed of potential impacts and suggest further coordination with MTA Planning, Resiliency, and Development teams. They are open to further discussions and request continued engagement as the project progresses.

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
50	**New York Power Authority**	02/14/25	Government Agency	Girish.Behal@nypa.gov	The New York Power Authority (NYPA) does not own property adjacent to the Harlem River but plans to utilize the waterway for the installation, operation, and long-term maintenance of high-voltage power cables. These cables are expected to be installed as close to the Manhattan shoreline as feasible, likely positioned between the land and the first foundation pier of the Macombs Dam Bridge on the Manhattan side. Once installed, the power cables will require ongoing maintenance, with operational schedules depending on maintenance needs. NYPA anticipates that the proposed Greenway extension could impact the available space needed for barge operations and maintenance work, particularly between the Greenway structure and the Macombs Dam and 145th Street Bridge piers. The extent of this impact will depend on the final offset of the Greenway structure from the Manhattan shore. NYPA has not identified specific concerns regarding vessel maneuverability but notes that any modifications to the channel, particularly a 150-foot reduction in federally maintained waters, could affect the feasibility of maintenance operations. The ability of maintenance barges to operate will depend on what is ultimately constructed and whether sufficient clearance is maintained. While NYPA has not provided direct feedback on support or opposition to the project, they highlight that ensuring barge accessibility for future maintenance is a critical consideration. They have not offered additional design recommendations but remain open to further discussions as the project progresses.
51	**NYC DEP - Bureau of Coastal Resiliency**	03/19/25	Government Agency		Hi EDC team-BCR doesn't have any particular needs related to this assessment and potential outboard greenway. I would just point you to the USACE NYNJ HATS tentatively selected plan to understand a potential future condition along this alignment. As many of you know HATS is very tentative and does not have a definitive timeline.
52	**NYS DOT**	03/26/25	Government Agency	Ian.Francis@dot.ny.gov	The New York State Department of Transportation (NYSDOT) maintains ownership and oversight of several key assets along the Harlem River between 145th and 163rd Streets, including segments of Harlem River Drive, the Macombs Dam Bridge, access ramps, and associated stormwater outfalls. Their operations in this area primarily involve bridge inspections, maintenance, and repairs. NYSDOT uses a variety of vessels for their work, including 25-foot dive boats, navigation vessels, and barges. Bridge inspections occur on a five-year cycle, with each bridge requiring 5–10 days of inspection, while emergency inspections and repair operations are carried out as needed. NYSDOT reported that they currently face no significant navigational challenges in this section of the river. Regarding the proposed Greenway extension and partial deauthorization of the federal navigation channel, NYSDOT stated that they do not anticipate any impacts on their operations. However, they recommend maintaining a 12-foot clearance at Mean High Water (MHW) under the proposed Greenway structure to ensure vessel accessibility for their inspection and maintenance needs. NYSDOT did not identify any concerns related to vessel maneuverability, docking, or traffic flow resulting from the Greenway project. They also noted that narrowing the federally maintained channel on the Manhattan side would not affect their current or future operations. They did not offer specific design mitigation recommendations or state a position on project support but expressed willingness to participate in further discussions. Additionally, they recommended reaching out to NYCDOT, NYC Parks (NYCDPR), DCAS, and NYCTA for further stakeholder input.
53	**Palisades Interstate Parkway Police Department**	12/12/24	Government Agency	Lt. Cohen <JCohen@PIPPD.org> Lt. Roman Galloza <RGalloza@PIPPD.org>	
54	**Passenger Vessel Subcomittee**	12/12/24	Government Agency	Genevieve.Clifton@dot.nj.gov	Contacted as part of larger MAPONY engagement.
55	**Port Authority**	Not Yet Engaged	Government Agency		
56	**Port Authority Port Division**	Not Yet Engaged	Government Agency		

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
57	**Triborough Bridge & Tunnel Authority**	01/30/25	Government Agency	Philip.Swanton@mtacd.org	The Triborough Bridge and Tunnel Authority (TBTA) operates the RFK Bridge, including its vehicle, pedestrian, and cyclist approach ramps over the Harlem River. The bridge operates 24/7, and while TBTA does not regularly use vessels in the area, barge traffic may be required for future bridge rehabilitation, subject to appropriate permits. TBTA's primary concern regarding the proposed Greenway extension is the potential impact on water flow near the RFK Bridge, specifically whether increased velocity or turbulence could lead to scour at the bridge's substructures. Additionally, they express concerns about vessels holding station near the bridge while waiting for clearance, as a loss of control could result in a collision with their pier protection systems. While they support the Greenway project, they emphasize the need to configure, protect, and position the structure to allow a usable channel on the west side of the Macombs Dam Bridge and to minimize disruptions to water velocity and turbulence. TBTA does not foresee any direct impacts on their operations but remains open to discussions and participation in future stakeholder meetings.
58	**USACE**	12/12/24	Government Agency	Minck, Christopher <Christopher.W.Minck@usace.army.mil> Lisa Baron <Lisa.A.Baron@usace.army.mil> William.F.Lyness@usace.army.mil Michael.J.Oseback@usace.army.miil	USACE indicated that any new structure introduced into the federal navigation channel—such as the proposed greenway—adds operational risk and cost to their ability to maintain the channel. In particular, structures located beneath bridges complicate future dredging operations and would likely require special conditions under a Section 408 permission. USACE expects that, if the greenway is constructed under bridge spans and the channel is not fully deauthorized, NYCEDC will likely be required to assume full responsibility for dredging beneath those bridges. This would be due to the limitations imposed on dredging contractors, such as access restrictions and elevated safety concerns introduced by the new structure. They further noted that minimum dredging buffers are not defined by the Corps, as those vary based on the contractor's equipment and risk tolerance. However, USACE recommends consulting NYC DOT regarding any preferred standoff distance around bridge piers. Importantly, USACE clarified they are not conducting stability analysis for either the bridge structures or the proposed greenway, which should be factored into risk and cost assessments by the project team. While USACE did not formally oppose the project, their input underscores that installation of the greenway within the federal channel—particularly near bridges—may trigger future operational and maintenance obligations for NYCEDC.
67	**USCG**	12/12/24	Government Agency	Jeff Yunker; Greg Hitchen; Michelle	
72	**Canadian Pacific**	12/20/24	Land Owner	Contact for the NY region from their website seems to be Nicholas Smith, Nicholas.Smith@cpkcr.com. They also have a real estate contact for easements, trackage rights, etc. listed: Real_Estate-US@cpr.ca.	CPKC (Canadian Pacific Kansas City) has confirmed that they do not operate within the North Harlem River section and, therefore, do not have direct input regarding the federal navigation channel deauthorization or the proposed Greenway extension. While they appreciate being included in the outreach process, they do not anticipate any operational impacts from the project. In their response, CPKC expressed general willingness to assist with railroad-related inquiries should they arise in the context of this or other transportation projects. They acknowledged that CSX is currently preparing a response, which may offer more direct insights regarding potential impacts on rail operations near the Harlem River. CPKC has no further recommendations or concerns regarding the project and has not requested additional follow-up.
73	**Esplanade Gardens**	12/20/24	Land Owner	donohuep@hpd.nyc.gov	Esplanade Gardens, a residential complex at 700 & 720 Lenox Avenue, does not foresee any direct impact from the proposed Greenway extension, provided that the structure remains beyond the seawall. Their primary concerns relate to the maintenance and security of the waterfront area adjacent to their property. While they support the Greenway project, their support is contingent on government authorities at the city, state, and federal levels assuming full responsibility for seawall repair and maintenance. Additionally, they emphasize that the Greenway should not negatively impact their property in any way. A major concern for Esplanade Gardens is security, and they strongly recommend that no access or egress points be created along the Greenway adjacent to their property. They believe restricting access in this area is critical for ensuring the safety of their residents. Esplanade Gardens has no additional stakeholders to recommend for input but is open to further discussions and participation in future meetings regarding the project. They also reserve the right to provide additional comments as planning progresses.
74	**MTA - METRO NORTH**	02/01/25	Land Owner	philip.swanton@mtacd.org; Patricia Fernandez <patricia.fernandez@mtacd.org>	No further response indicated by Patricia F.

	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
75	**MTA - NYC Transit**	03/06/25	Land Owner	patricia.fernandez@mtacd.org	The MTA and Metro-North Railroad operate and maintain significant transportation infrastructure in the Harlem River corridor, including the 2 and 3 subway tunnels, NYCT Rail Yard, Metro-North's Hudson Line, and associated pump rooms, duct banks, and shoreline properties. Their operations run 24/7, year-round, and while they do not use vessels, they are heavily invested in the stability of infrastructure along the river. Their main concern with the proposed Greenway extension is its potential impact on existing MTA properties and structures. They request that the Greenway design comply with MTA NYCT guidelines and express interest in engaging with project designers to minimize risks to their assets, particularly regarding coastal surge exposure. While they do not anticipate needing immediate modifications to their operations, they see long-term value in integrating their coastal resilience projects with broader flood protection initiatives. They do not explicitly state support or opposition to the Greenway but stress the need for continued engagement to review conceptual designs and assess potential impacts. The MTA does not currently have plans to operate within the Harlem River channel but remains open to discussions as the project evolves. They request to be kept informed of developments and consulted on design considerations that may affect their infrastructure.
76	**MTA - Bridges and Tunnels (TBTA)**	12/12/24	Land Owner	Philip.Swanton@mtacd.org	The Triborough Bridge and Tunnel Authority (TBTA) manages the RFK Bridge, including its vehicle, pedestrian, and cyclist approaches spanning the Harlem River. While TBTA does not operate vessels in this area regularly, barge traffic may be required during major bridge rehabilitation projects. Such vessel use would be conducted under appropriate permits and notifications. TBTA operates in the project area 24 hours a day, year-round, and its primary concern with the proposed Greenway relates to hydrodynamic impacts. They specifically requested confirmation that the Greenway would not increase water velocity or turbulence near the bridge piers, which could elevate the risk of scour and undermine pier protection systems. Additionally, they flagged potential risks if vessels are forced to hold station near the bridge due to congestion, as a loss of propulsion could lead to collisions with critical infrastructure. While TBTA supports the Greenway project in principle, its support is conditional on addressing these concerns. They recommend minimizing the project's impact on water flow and maintaining usable navigational space west of the Macombs Dam Bridge. They did not raise objections regarding vessel maneuverability or the narrowing of the navigation channel but emphasized that design coordination is essential to protect the bridge structure and maintain navigational safety. TBTA stated they were open to further engagement as planning progresses.
77	**Waste Management**	02/18/25	Land Owner	Jim Van Woert jvanwoer@wm.com; Christopher Farley cfarley@wm.com (It's likely they'll want to/will bring their lobbyist/PR retainer, his contact info is: Anthony Constantinople Esq. ajc@candvconsulting.com)	Waste Management (WM) operates a solid waste transfer station at 98 Lincoln Avenue in the Bronx but does not conduct vessel operations in the Harlem River between 145th and 163rd Streets. Since they do not utilize the waterway for transportation or logistics, they do not anticipate any impact from the proposed Greenway extension. WM does not face any navigational challenges in this section of the river and has no specific concerns regarding vessel maneuverability, docking, or anchoring. They also do not foresee the Greenway affecting the flow of traffic or safety in the area. While they are unsure whether a narrower channel would impact future operations, they support the Greenway project and do not have recommendations for design modifications or risk mitigations. They are open to further discussions as the project progresses but do not have additional stakeholder recommendations for input.
78	**Frank Brown**	12/12/24	Other	frankbrown@optionline.net	
79	**LIRO**	12/12/24	Other	Pollackj@liro.com	
80	**South Bronx Unite**	12/12/24	Other	arif@southbroxunite.org mychal@southbronxunite.org	
81	**Community Boat Houses**	Not Yet Engaged	Recreational User		

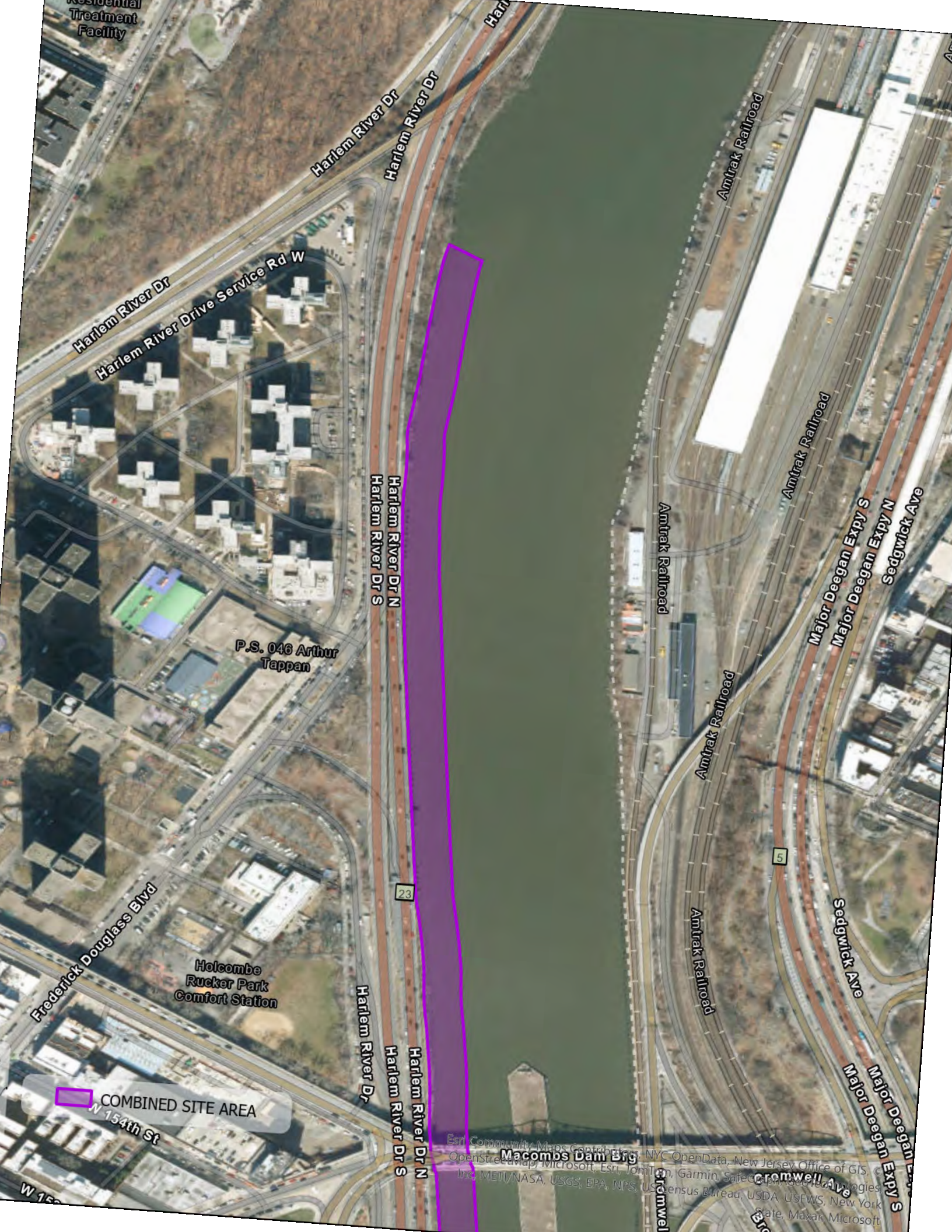
	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
82	**Hudson Canyon Consulting**	12/12/24	Recreational User	ray@hudsoncanyonconsulting.com	Ray Fusco, a recreational boater and consultant with Hudson Canyon Consulting, participates in kayak tours and events in the Harlem River between 145th and 163rd Streets. His operations include the use of single and double kayaks and a 25-foot recreational powerboat, primarily from spring to fall, depending on tides and weather. Fusco expresses significant safety concerns about the proposed Greenway extension. He believes the 70-foot encroachment into the river would force vessel traffic into a narrower space, increasing congestion and raising the likelihood of accidents. He also notes that small vessels like kayaks would be especially vulnerable near bridge abutments, where wakes and turbulence could create dangerous conditions. Furthermore, he highlights that safe boating practices require at least 100 yards of clearance between vessels, which the narrowed passage would not provide. He critiques the Greenway's design as one-dimensional, focusing solely on land users while ignoring opportunities for water-based access. Instead of restricting waterway space, he suggests the Greenway should incorporate boat-friendly infrastructure, such as kayak launches, rowing docks, or educational access points. He points to successful waterfront designs in Portland and Atlanta as models. While Fusco supports the concept of a Greenway, he does not support the current design. He recommends moving the structure closer to shore and conducting hydrodynamic modeling to assess potential impacts on currents and wake conditions. He also stresses the need for alternative designs that benefit both land and water users rather than forcing boats out of the area. He is open to further discussions and suggests reconsidering the approach to better integrate recreational boating opportunities into the Greenway project.
83	**Inwood Canoe Club**	12/12/24	Recreational User	nycmhandy@yahoo.com steveih_2000@yahoo.com	
84	**JT Cleary**	12/12/24	Recreational User	Chris Leykam C.leykam@JTCleary.com	
85	**Manhattan Kayak Circumnavication**	02/04/25	Recreational User	manhattancircumnavigation@gmail.com; phil.giller@gmail.com	See Yonkers Paddle Club as well. The Yonkers Paddling and Rowing Club (YPRC) participates in large-scale recreational paddling events in the Harlem River each summer, particularly in July and August, when up to 100 kayaks may be present on the water at the same time. These events pass through the 145th to 163rd Street section, and operations are dependent on weather and tidal conditions, with no set schedule. YPRC expressed safety concerns regarding the proposed 70-foot greenway extension into the river. They noted that narrowing the navigable channel may increase the risk of collisions between commercial vessels and human-powered boats, especially given that kayaks are difficult to see from ferries and large powerboats. They also warned that increased fishing activity from the greenway could push paddlers further into the main navigation channel, increasing their exposure to vessel traffic. YPRC emphasized the importance of maintaining a safe corridor along both shorelines and requested the inclusion of a low-freeboard emergency takeout dock for small vessels. They noted that in a narrowed waterway, they might need to stagger operations during large events to reduce risk. While YPRC is not opposed to the greenway project in principle, they only support it if the needs of human-powered boaters are explicitly addressed in the design. They reiterated that human-powered boaters already face significant challenges in shared waterways and must not be further marginalized. They are open to further engagement and recommended additional outreach to groups such as RowNY, Harlem River Community Rowing, Long Island City Boathouse, and Manhattan Kayak.
86	**NYC Paddler**	12/12/24	Recreational User	johna@nemertes.com	

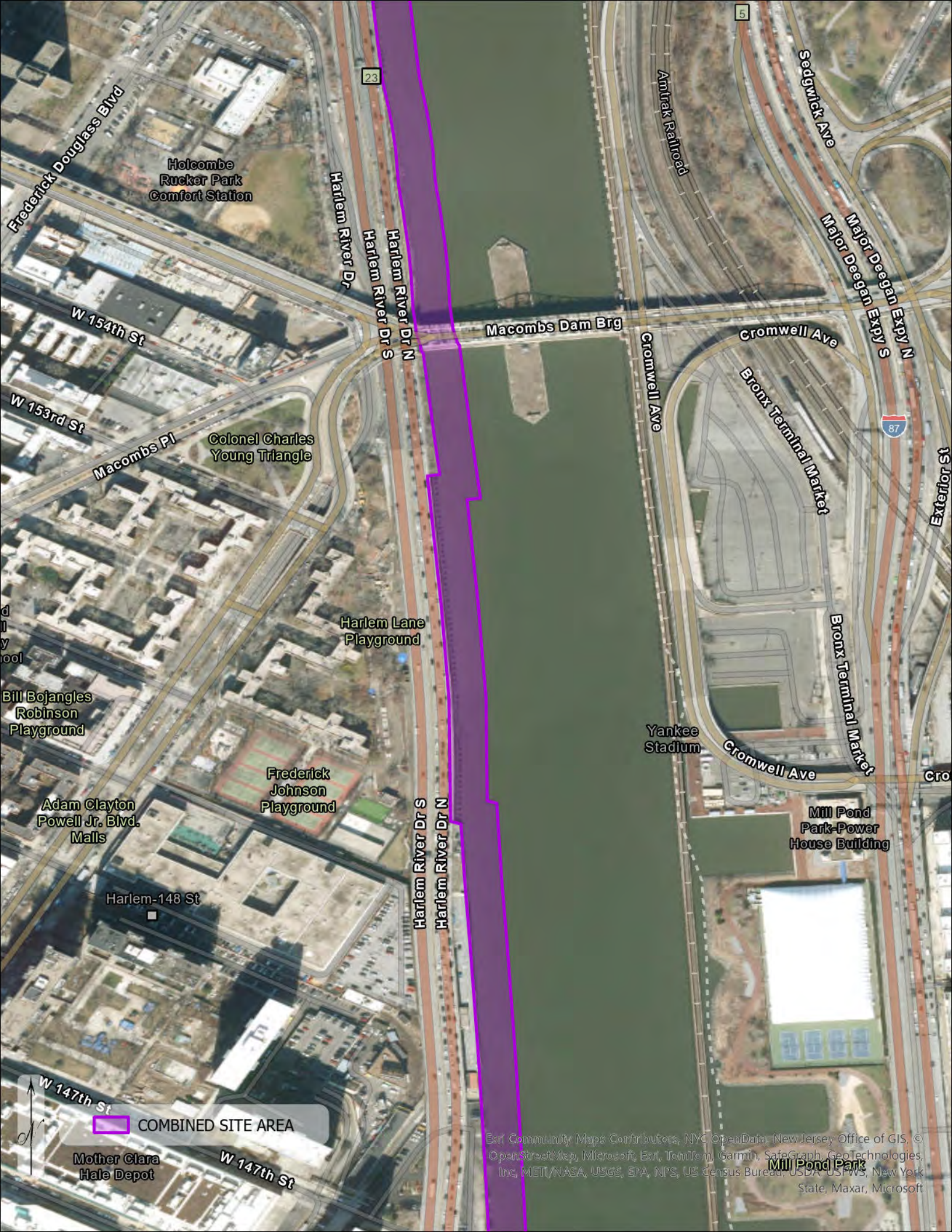
	Stakeholder Name	Date of Engagement	Stakeholder Type	Stakeholder Contact(s)	Summary of Questionnaire Response
87	**Rocking the Boat - Manhattan**	02/14/25	Recreational User	rob@rockingtheboat.org Nick@rockingtheboat.org Adam@rockingtheboat.org	Rocking the Boat, a youth development non-profit based in Hunts Point, primarily conducts rowing and sailing activities on the Bronx River and East River, but they also navigate the Harlem River occasionally, including during an annual round-Manhattan rowing event involving 100 people and 12-15 rowing gigs (longboats), along with safety and spectator boats. They express concerns that narrowing the navigable channel will leave less room for large vessels to pass safely and for smaller boats to maneuver out of their way, increasing the risk of accidents. They recommend enforceable speed and no-wake restrictions, noting that while some no-wake signs exist, there are currently no actual regulations or enforcement in place. Given the increased risk of accidents in a narrower channel, they suggest that the Greenway design incorporate emergency landings or ladders that would allow boaters to exit the water in case of an emergency or simply to rest. Rocking the Boat also questions the long-term impact of narrowing the Harlem River from the Manhattan side, as this might preclude future public waterfront access on the Bronx side. They ask whether Bronx community groups, community boards, and elected officials have been formally consulted about the project and what the city's long-term goals for Bronx-side waterfront access are. They are open to further discussions and welcome direct engagement to explore these concerns further.
88	**Row New York**	02/12/25	Recreational User	info@rownewyork.org	
89	**Urbanswim.org**	02/14/25	Recreational User	deanne@urbanswim.org	
90	**Village Community Boathouse**		Recreational User		
91	**Yonkers Paddling and Rowing Club**	12/11/24	Recreational User	manhattancircumnavigation@gmail.com	The Yonkers Paddling and Rowing Club (YPRC) participates in large-scale recreational paddling events in the Harlem River each summer, particularly in July and August, when up to 100 kayaks may be present on the water at the same time. These events pass through the 145th to 163rd Street section, and operations are dependent on weather and tidal conditions, with no set schedule. YPRC expressed serious safety concerns regarding the Greenway's proposed 70-foot extension into the river. They noted that narrowing the navigable channel would increase the risk of collisions between commercial vessels and human-powered boats, especially given that kayaks are difficult to see from ferries and large powerboats. They also warned that increased fishing activity from the Greenway could push paddlers further into the main navigation channel, increasing their exposure to vessel traffic. YPRC emphasized the importance of maintaining a safe corridor along both shorelines and requested the inclusion of a low-freeboard emergency takeout dock for small vessels. They noted that in a narrowed waterway, they might need to stagger operations during large events to reduce risk. While YPRC is not opposed to the Greenway project in principle, they only support it if the needs of human-powered boaters are explicitly addressed in the design. They reiterated that human-powered boaters already face significant challenges in shared waterways and must not be further marginalized. They are open to further engagement and recommended additional outreach to groups such as RowNY, Harlem River Community Rowing, Long Island City Boathouse, and Manhattan Kayak.
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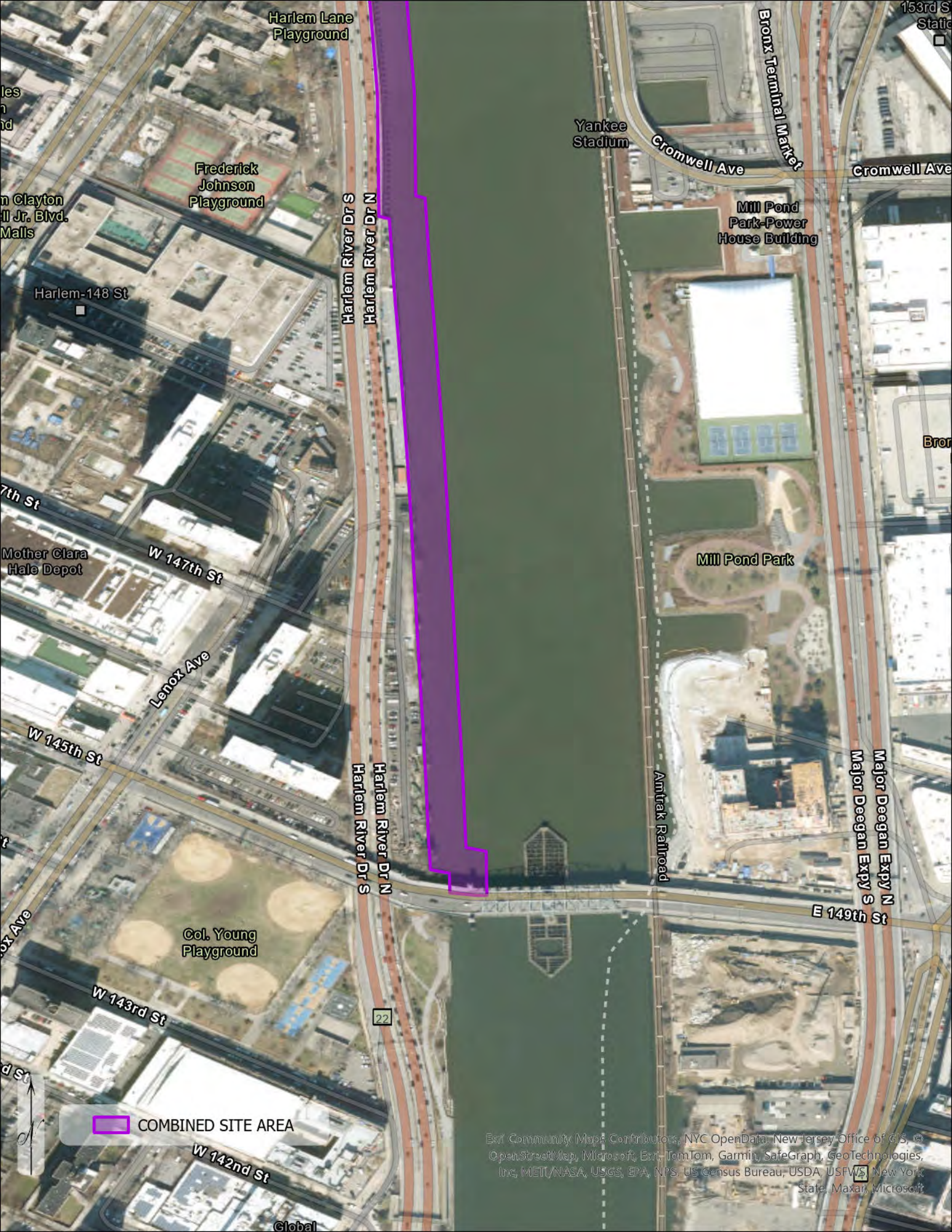
Harlem River, 145th – 163rd Street Navigational Study

Appendix 7 – Study Area Overview


Harlem R
Harlem Ri
Amtrak
Major Deegan
Metropolitan Lighthouse Charter Sch
W 165th St
Ogden Ave
Highbridge Park
P.S. 046 Arthur Tappan
La Isla Garden
Public School 73
5
23
W 155th St
Jerome Ave
Holcombe Rucker Park Comfort Station
E 161st St
Macombs Dam Brg
W 154th St
Bronx Terminal Market
Macombs D Lower Com Station
W 152nd St
Colonel Charles Young Triangle
Cromwell Ave
Major Deegan Expy N
W 151st St
Yankees-E 153rd Street Station
Thurgood Marshall Academy Lower School
Harlem Lane Playground
W 150th St
Yankee Sta Garages/L
W 149th St
Yankee Stadium
W 148th St
Mill Pond Park-Power House Building
Harlem-148 St
47th St
River Ave
Bronx Terminal Market
W 147th St
Mother Clara Hale Depot
Mill Pond Park
W 145th St
Exterior St
River Ave
W 145th St
COMBINED SITE AREA
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Residential Treatment Facility
Harlem River Dr
Harlem River Drive Service Rd W
Harlem River Dr N
Harlem River Dr S
Amtrak Railroad
Major Deegan Expy S
Major Deegan Expy N
Sedgwick Ave
P.S. 046 Arthur Tappan
Frederick Douglass Blvd
Holcombe Rucker Park Comfort Station
23
5
COMBINED SITE AREA
W 154th St
Macombs Dam Brg
Cromwell Ave
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Frederick Douglass Blvd
Holcombe Rucker Park Comfort Station
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W 153rd St
Macombs Pl
Colonel Charles Young Triangle
Macombs Dam Brg
Amtrak Railroad
Sedgwick Ave
Major Deegan Expy N
Major Deegan Expy S
Cromwell Ave
Bronx Terminal Market
Exterior St
Harlem Lane Playground
Bill Bojangles Robinson Playground
Yankee Stadium
Frederick Johnson Playground
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Harlem Lane Playground
Frederick Johnson Playground
Harlem-148 St
Harlem River Dr S
Harlem River Dr N
Yankee Stadium
Cromwell Ave
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Mill Pond Park-Power House Building
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Lenox Ave
W 145th St
Amtrak Railroad
Major Deegan Expy S
Major Deegan Expy N
E 149th St
Col. Young Playground
W 143rd St
W 142nd St
22
COMBINED SITE AREA
Esri Community Maps Contributors, NYC OpenData, New Jersey Office of GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, New York State, Maxar, Microsoft