

A. INTRODUCTION

The proposed public art installation would construct a sculpture at the location of the historic Pier 52 in Manhattan (Block 651, Lot 17). The installation would be a skeletal stainless steel sculpture that would occupy the former Pier 52's footprint. The proposed project would require discretionary actions by the Hudson River Park Trust (HRPT), the US Army Corps of Engineers (USACE) and the New York State Department of Environmental Conservation (NYSDEC), as well as concurrence from the NY State Department of State (NYSDOS) in consultation with the New York State Department of City Planning (DCP). This attachment assesses the proposed installation's potential impacts on land use, zoning, and public policy within a 400-foot study area in accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*. The analysis characterizes existing conditions, evaluates changes in land use and zoning that are expected to occur independent of the proposed installation, and identifies and addresses any potential impacts to land use, zoning, and public policy associated with the proposed installation.

PRINCIPAL CONCLUSIONS

Overall, the proposed installation would not have any significant adverse impacts on land use, zoning, or public policy. The proposed installation is limited to the construction of a public sculpture within Hudson River Park. The proposed installation would not result in any change in land use on the installation site, and would be compatible with and complementary to nearby uses, particularly Hudson River Park's amenities and other public art installations. The proposed installation would not affect zoning regulations in the study area and would be consistent with, and supportive of public policies applicable to the installation site, in particular the public policies that govern Hudson River Park's development and promote the revitalization of the waterfront.

B. METHODOLOGY

The installation site is located within Hudson River Park and adjacent to the Meatpacking District and West Village neighborhoods in Manhattan. This analysis of land use, zoning, and public policy examines the area within 400-feet of the installation site, which is generally bounded by the Gansevoort Peninsula to the north; Route 9A and the Hudson River bikeway to the east and the Hudson River to the south and west (see **Figure B-1**).

The analysis begins by documenting existing conditions in the study area in terms of land use, zoning, and public policy. The analysis then projects land uses, zoning, and public policy changes expected to occur in the With Action condition by the analysis year of 2020. The potential impacts of the proposed installation are then assessed by comparing conditions with the No Action condition. The No Action condition anticipates that no change would occur at the location of the former Pier 52.

C. EXISTING CONDITIONS

LAND USE

INSTALLATION SITE

The installation site is at the location of the former Pier 52 footprint. The site includes the Hudson River and a portion of the southern edge of the Gansevoort Peninsula, within Hudson River Park at approximately Gansevoort Street (see **Figure B-1**). Pier 51 is located immediately south of the installation site; to the east of the site are the Hudson River Park waterfront esplanade and the Route 9A bikeway and roadway. The installation site currently contains some submerged footings from the former pier (in the in-water area) and a portion of the riprap that runs along the southern side of the Gansevoort Peninsula. The New York City Department of Sanitation (DSNY), through the New York City Department of Design and Construction (NYC DDC), has removed former Sanitation buildings and is currently placing clean fill and gravel on the Gansevoort Peninsula, and the land site is therefore not accessible to the public. The in-water portion of the installation site, which is within the Park's designated boundaries, is accessible to recreational boating.

STUDY AREA

The study area is characterized by a mix of open space, residential, and commercial uses (see **Figure B-2**). The study area is defined most notably by Hudson River Park, including the Pier 51 playground located to the south of the installation site, which features climbing equipment and children's play areas, and the adjacent Route 9A bikeway and roadway.

Route 9A is a major north-south thoroughfare that runs along the Hudson River waterfront east of the installation site. Hudson River Park occupies the land between Route 9A and the United States Pierhead Line, and is itself a major land use feature in the study area. The majority of the park, which extends continuously from just north of Chambers Street to West 59th Street, features multiple redeveloped piers and improved upland areas along its length. The remainder of the Gansevoort Peninsula immediately to the north of the installation site previously contained DSNY facilities (including a waste transfer station, truck parking, and salt storage); these facilities have been recently demolished. Pier 53, located on the northern end of the Gansevoort Peninsula, contains facilities for the New York Fire Department (FDNY).

East of Route 9A, the upland portion of the study area contains the Whitney Museum of American Art (WMAA), located on the northern side of Gansevoort Street. The museum, previously located on the Upper East Side, opened in a new building at this location in 2015. To the south of the museum, the upland portion of the study area contains commercial and residential uses: this includes a large historic warehouse building (the Manhattan Refrigeration Company building) repurposed for residential and commercial space at 521 West Street, and the Jane Hotel (located in the historic former American Seamen's Friend Society Sailors' Home and Institute building).

ZONING

INSTALLATION SITE

The installation site is located in an M2-3 zoning district, a manufacturing district which is mapped along a large portion of the Hudson River waterfront (see **Figure B-3**). M2-3 manufacturing districts are found mainly in the City's older industrial areas along the waterfront, and allow for activities that are considered light to heavy industries. However, land use and development within Hudson River Park, which includes the installation site, is controlled by the Hudson River Park Act passed in 1998 and amended most recently in 2013 (the "Act"), as well as by special zoning

regulations designated to facilitate the park uses envisioned by the Act. Specifically, a zoning text amendment was approved in October 1998 that allowed parks as a permitted use in the M2 and M3 zoning districts within the waterfront area in Manhattan Community Districts 1, 2 and 4. These areas include the M1-5, M2 and M3 zoning districts south of 59th Street that cover Hudson River Park, including the installation site.

STUDY AREA

The study area includes the M2-3 zoning district as well as other manufacturing and commercial districts. The zoning districts in the study area are summarized in **Table B-1**.

**Table B-1
Study Area Zoning Districts**

Zone	Allowable Floor Area Ratio (FAR)	Use
C1-7A	2.0 Commercial; 6.02 Residential ¹ ; 6.5 Community Facility	Commercial district predominantly residential in character and including local-serving retail
C6-2A	6.0 Commercial; 6.02 Residential ¹ ; 6.5 Community Facility	High-bulk contextual commercial district with maximum building height
M2-3	2.0 Commercial; 2.0 Manufacturing	Medium manufacturing; medium performance standards
M3-2	2.0 Commercial; 2.0 Manufacturing	Heavy manufacturing; low performance standards
Note:	¹ Can be increased with Inclusionary Housing bonus.	
Sources:	New York City Zoning Resolution.	

The upland portion of the study area east of Route 9A was included in the area of the Far West Village rezoning, adopted in 2005. The Far West Village rezoning area is generally bounded by Horatio Street to the north, Washington Street to the east, Morton Street to the south, and West Street to the west. The rezoning partly replaced manufacturing districts and mapped the commercial (C1-7A and C6-2A) districts in this area, which were intended to allow for the continued development of residential buildings and neighborhood-oriented retail, at densities and heights consistent with the existing scale of the neighborhood.

PUBLIC POLICY

HUDSON RIVER PARK ACT

The installation site is governed by the Hudson River Park Act of 1998 and as subsequently amended, which identified the boundaries of Hudson River Park, established the water areas as an estuarine sanctuary, and created the Hudson River Park Trust as a public benefit corporation with the mandate to design, construct, and maintain the park. The Act also established the Hudson River Park Plan, which reclaimed the waterfront for public use on a combination of piers and upland areas, and provides for revenue-generating uses within the park to finance the costs of maintaining the park. The Act regulates land use within the park, prohibiting or restricting residential, hotels, manufacturing, warehousing, casino gambling, and certain municipal and commercial office uses throughout the 37 piers, upland property and water area included in the park.

WATERFRONT REVITALIZATION PROGRAM

The installation site is located in the Coastal Zone designated by New York State and City (see **Figure B-4** and is subject to the Coastal Zone management policies of both the City (Waterfront Revitalization Program [WRP]) and the State (Coastal Management Program [CMP]).

For the EAF, Hudson River Park Trust, a state public benefit corporation that is serving as the SEQRA lead agency, must certify that the project is consistent with the New York City WRP. This consistency assessment and the WRP Consistency Assessment Form have been included with

the EAF. Section F of this attachment presents the assessment of the proposed installation's consistency with the WRP.

D. THE FUTURE WITHOUT THE PROPOSED INSTALLATION

LAND USE

INSTALLATION SITE

Absent the proposed installation, in the "No Action condition," there would be no changes or alterations to the installation site, which would remain the same as the existing condition. The riprap along the southern edge of the Gansevoort Peninsula would remain unchanged, and the portion of the installation site in the Hudson River would have no structures within it.

STUDY AREA

As shown in **Figure B-5**, there is only one development under construction or planned within the study area. On Gansevoort Peninsula, the NYC DDC has removed DSNY buildings, and several feet of clean fill and gravel are being installed. Plans for the site call for the majority of the Peninsula to be improved as parkland and incorporated into Hudson River Park; DSNY may retain control over a portion of the Peninsula to maintain the waste transfer station. However, the construction schedule for the park improvements is not currently known, and the site is not expected to be open to the public by 2020.

ZONING AND PUBLIC POLICY

There are no zoning or public policy changes anticipated on the installation site, or within the study area, in the No Action condition.

E. PROBABLE IMPACTS OF THE PROPOSED INSTALLATION

LAND USE AND DISCRETIONARY ACTIONS

The proposed installation is limited to the construction of a sculpture. This sculpture would be a visual enhancement that would complement Hudson River Park's amenities, and would not affect the existing land use of the installation site. The proposed installation would also not result in any changes to land use on other sites within the study area. Therefore, the proposed installation would not result in any significant adverse impacts to land use on or in the vicinity of the installation site.

The proposed installation would require discretionary actions by HRPT, the USACE, and NYSDEC, and consequently, concurrence from the NYSDOS on a determination that the proposed sculpture is consistent with the NY State CMP, and the NYC WRP.

ZONING AND PUBLIC POLICY

The proposed installation would not affect zoning regulations applicable to the study area. The proposed installation would also not include any changes to public policy on the installation site or in the study area, and would be consistent with the public policies that currently govern the site and the surrounding area. In particular, the proposed installation would be consistent with the Hudson River Park Act in that it involves the reuse of the installation site for public park uses. Specifically, public park uses include passive and active public open space uses, which are among the uses permitted on "park use" piers. Other permitted uses are public recreation and entertainment, including the arts and performing arts, on open spaces. Similarly, the proposed uses, as a park, are permitted under zoning (as noted above, land use within the Park is governed

by the Act and special zoning regulations designated to facilitate the park uses envisioned by the Act). The Hudson River Park Act was amended in 2018 to provide for the intended location of the sculpture as a permanent structure in the Park.

As a public attraction and visual enhancement, the sculpture use introduced by the proposed installation would be consistent with and permitted under the Hudson River Park Act. The proposed installation would introduce a framed sculpture that would not obstruct any views of the waterfront (see **Figure A-2**) and would serve as a visual enhancement to the public experience.

Section F of this attachment presents the assessment of the installation's consistency the New York City WRP, concluding that the proposed installation would be consistent with WRP policies. Overall, the proposed installation would not result in any significant adverse impacts to zoning or public policy.

F. NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM CONSISTENCY

The project site is located within the City's designated Coastal Zone Boundary. Therefore, in accordance with the guidelines of the *CEQR Technical Manual*, an evaluation of the proposed project's consistency with the revised WRP policies was undertaken (see **Appendix A** for the WRP Coastal Assessment Form [CAF]).

CONSISTENCY OF PROPOSED PROJECT WITH THE WATERFRONT REVITALIZATION PROGRAM POLICIES

New York City's WRP includes 10 principal policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. Assessments of the proposed installation's conformity with the City's WRP policies are provided below for all policy questions answered "Promote" or "Hinder" on the CAF.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.

Policy 3.5: In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.

The proposed installation is located adjacent to a Priority Marine Activity Zone on the Gansevoort Peninsula. The FDNY Marine Company 1 currently operates from the north side of the Peninsula. The installation would not interfere with operations of the FDNY, nor would it preclude the subsequent use or future adaptation of the shoreline on the Peninsula for vessel docking, berthing, or tie-up, and it would not result in any permanent alterations to the shoreline that would affect boating within or adjacent to the Priority Marine Activity Zone.

Therefore, the proposed installation would promote this policy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York City coastal area.

Policy 4.3: Protect designated Significant Coastal Fish and Wildlife Habitats.

The proposed installation is within a portion of the Hudson River designated as the "Lower Hudson Reach" Significant Coastal Fish and Wildlife Habitat (SCFWH). The Lower Hudson Reach was designated as an SCFWH primarily due to its use as wintering habitat by large numbers

of juvenile striped bass. As discussed in Attachment C "Natural Resources," adult striped bass enter the Hudson River to spawn during spring and summer, but spend most of their time in coastal waters outside the project area. Spawning occurs in fresh water far upstream of the installation site, and as such, the majority of larvae are also located upstream of the installation site. Juvenile abundance is also upstream of the study area in less saline waters. Because striped bass larvae and juveniles are widely distributed throughout the Hudson River with peak abundance upstream, avoidance of the installation site by juveniles or other life stages during construction would not result in adverse impacts to the striped bass population. Pile driving in Hudson River Park is restricted between November 1 and April 30, when juveniles use the area for wintering habitat. Therefore, there is very limited potential for in-water construction activities to result in adverse impacts to striped bass and other species. The minimal occupation of the river bottom by the piles (up to 71.1 square feet or 0.002 acres) and minimal over-mudline coverage by the pile caps (0.011 acres in total), would result in a minimal change in foraging habitat for striped bass and other fish species. Since the installation would not result in significant adverse effects to striped bass, which are the primary reason for the Lower Hudson Reach's designation as SCFWH, the proposed installation would likewise not significantly adversely affect the SCFWH itself.

Therefore, the proposed installation would promote this policy.

Policy 4.7: Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.

Shortnose and Atlantic sturgeon adults and sub-adults and four species of marine turtle have the potential to occur within the installation area. Sturgeon would most likely occur in the deep channel habitat of the Hudson River during migration to and from upriver foraging, overwintering, and/or spawning grounds, and it is unlikely that individuals of either species would occur in the shallow waters of the study area except as occasional transients. Sea turtles are not likely to occur within the study area except on rare occasions and only as transient individuals, rather than occurring in large numbers or for long-term occupation for breeding, wintering, or growth and development, and would not be adversely affected by the in-water construction activities.

Because the aquatic resource impacts associated with the in-water construction activities, including elevated noise levels and sediment resuspension from pile driving, would be localized, the deep channel habitat typically used by shortnose and Atlantic sturgeon would not be adversely impacted during construction of the proposed installation. Migration of Atlantic sturgeon into the Hudson River during spring and migration from the river during summer and early fall would not be obstructed by pile driving activities, which would not occur between November 1 and April 30, in compliance with pile driving restrictions for Hudson River Park, and would be conducted in shallow waters. Outside the restricted period, noise levels associated with behavioral disturbance (150 dB RMS) would not adversely affect the deep channel habitat where sturgeon would most likely be found. It is expected that underwater noise levels would be below the 150 dB RMS threshold for sturgeon at distances beyond a maximum of approximately 230 feet (70 meters) from the pile being installed, and below the 166 dB re 1 μ PA RMS threshold for sea turtles beyond a maximum of 125 feet (38 meters) from the pile being installed. It is reasonable to assume that sturgeon or sea turtles, upon detecting underwater noise levels above the relevant behavioral threshold, would modify their behavior such that it redirects their course of movement away from the ensonified area and therefore, away from the installation site. In order to minimize exposure of sturgeon to elevated noise levels during pile driving, a vibratory hammer would be used to the extent possible. Should an impact hammer be used to drive the piles to their final depth, it would

be done with a soft start and cushion block to minimize impacts due to underwater noise. The proposed installation would only require short periods of pile driving (20 to 30 minutes per pile), so the daily duration of elevated underwater noise reaching the behavioral threshold would be relatively short. As described in Attachment C, “Natural Resources,” in order to be exposed to potentially injurious levels of noise during installation of the piles, sturgeon would need to be within 44 meters and sea turtles would need to be within 10 meters of the pile being driven. This is extremely unlikely to occur as it is expected that fish would modify their behavior at 230 feet (70 meters) and sea turtles would modify their behavior at 125 feet (38 meters) from the pile being installed, and quickly move away from the area before cumulative injury levels are reached. If present in the area, shortnose and Atlantic sturgeon would likely avoid the area within about 230 feet of vibratory or cushioned impact hammering (where the behavioral threshold could be met), but would be expected to return following completion of pile driving. The temporary loss of potential foraging habitat during pile driving may affect but would not adversely impact shortnose or Atlantic sturgeon.

The minimal occupation of the river bottom by the piles (up to 71.1 square feet or 0.002 acres) and minimal over-mudline coverage by the pile caps (0.011 acres in total), would result in a minimal change in potential foraging habitat for sturgeon. For the reasons presented above, the proposed installation may affect, but would not result in a significant adverse impact to shortnose and Atlantic sturgeon.

Therefore, the proposed installation would promote this policy.

Policy 4.8: Maintain and protect living aquatic resources.

In-water construction activities for the proposed installation have the potential to result in temporary adverse impacts to fish and macroinvertebrates due to: temporary increase in underwater noise from vessel activity and pile driving, temporary increase in suspended sediment, and temporary shading from construction vessels. In-water construction of the foundation (i.e., pile driving and installation of pile caps and concrete columns) would last approximately 4 months. Within this period, pile installation using vibratory and impact hammers would occur over approximately 30 noncontiguous days. Impact hammering to reach the required tip elevation would last approximately 20 to 30 minutes per pile. Pile driving would occur intermittently during typical work hours. Barge-based equipment would remain within the project site for the construction of the sculpture’s framework over the subsequent 8 months. The temporary increase in vessel activity (likely one barge with a crane and one barge with materials) over the approximate 12-month duration of construction would result in an incremental increase in underwater noise levels in the vicinity of the proposed installation, which could lead to habitat avoidance by fish and some macroinvertebrates. This minimal increase in the number of vessels present in the area, and the associated underwater noise, would be well within the typical range of vessel activity in the lower Hudson River, which is an area of heavy commercial vessel traffic. As such, aquatic organisms in the area are likely acclimated to ambient noise levels and would not be adversely affected by the minimal increase in vessel noise.

All piles would be installed using a vibratory hammer to the extent possible, and an impact hammer would be used if necessary to drive the pile to its final elevation. Any impact hammering would be conducted with a soft start and cushion block to minimize the effects of increased underwater noise. As described under Policy 4.7, installation of the piles would result in temporary increased underwater noise levels that would not be expected to exceed the threshold for physiological injury to fishes.

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Given the small distance a fish or sea turtle would need to move to avoid the disturbance levels of noise, the width of the River in the project location (4,400 feet), and the availability of non-ensounded waters, there would be no significant adverse effect to aquatic biota from the temporarily increased noise. Avoidance of the ensounded area by fish and sea turtles would constitute a temporary loss of foraging habitat within the avoided section of the river. The temporary loss of foraging habitat in this location, when compared with the similar suitable habitat that would still be available within the lower Hudson River, would not result in an adverse impact to aquatic biota.

Shading impacts would be minimal from the vessels associated with the proposed installation, as the barge would be small (e.g., construction crane barges can be approximately 30 feet wide by 90 feet long, or 2,700 square feet, or 0.06 acres) in comparison to the area of the river left unshaded at any given time. There is no submerged aquatic vegetation in the vicinity of the installation. The proposed installation would result in temporary increases in suspended sediment concentrations from pile installation and vessel movement. Any temporary increase in suspended sediment associated with pile driving would be localized and would dissipate shortly after the completion of the sediment disturbing activity. Vessels would maintain sufficient distance above the riverbed so that sediment disturbance from their movements would be minimized. Tidal currents would dissipate any resuspended sediments such that re-deposition within or outside the area of the installation would not adversely affect benthic macroinvertebrates or bottom fish. Pile driving is an intermittent activity and would therefore have limited effect on suspended sediment concentrations within any given location during the duration of construction. Fish and macroinvertebrates would be expected to return to the vicinity of the installation following completion of construction.

The minimal occupation of the river bottom by the piles (up to 71.1 square feet or 0.002 acres) and minimal over-mudline coverage by the pile caps (0.011 acres in total), would result in a minimal change in aquatic habitat and would not have a potential to result in significant adverse impacts to aquatic biota of the Hudson River.

Therefore, the proposed installation would promote this policy.

Policy 5: Protect and improve water quality in the New York City coastal area.

Policy 5.2: Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

In order to minimize resuspension of bottom sediments, vessel movement in areas where water depths would not be sufficient to allow clearance between the propeller(s) and bottom sediment would be limited to the extent possible. During installation of the piles on the shoreline of the Peninsula, including the in-water pile located at the edge of the riprap, erosion and sediment control Best Management Practices (BMPs) (e.g., turbidity curtains, shoring box) would be implemented to minimize discharge of sediments to the river. No other direct or indirect discharges to the Hudson River are anticipated as a result of the proposed installation.

Therefore, the proposed installation would promote this policy.

Policy 5.3: Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.

During construction of the proposed installation, pile driving and vessel movement may result in temporary and localized increases in suspended sediments. To minimize the potential impacts of sediment resuspension and increased turbidity on water quality, vessel movement in areas where

water depths would not be sufficient to allow clearance between the propeller(s) and bottom sediment would be limited to the extent possible. Sediment disturbance associated with the pile driving would be minimal, and would be temporary and localized and would dissipate with tidal currents shortly after the completion of the sediment disturbing activity. These increases in suspended sediment would be intermittent, followed by a period of no sediment disturbing activity while the next pile is being prepared for installation, and all pile driving would be completed over approximately 30 noncontiguous days within the four month in-water construction period. No dredging or in-water excavation would be required. During installation of the upland piles, which would occur concurrently with installation of the in-water piles, erosion and sediment control BMPs would be implemented to minimize the potential for sediment discharge to the river. Upon installation of the piles, riprap would be returned to its previous location on the shoreline such that the elevation of the shoreline is not altered and its existing topography is maintained.

Therefore, the proposed installation would promote this policy.

Policy 6: Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.

Policy 6.2: Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms) into the planning and design of projects in the city's Coastal Zone.

Guidance provided by DCP¹ recommends a detailed methodology to determine a project's consistency with Policy 6.2. A summary of this process is provided below.

1. Identify vulnerabilities and consequences: assess the project's vulnerabilities to future coastal hazards and identify what the potential consequences may be.

a. Complete the Flood Evaluation Worksheet.

The information in the following subsections is based on the results of the completed worksheet, which is provided in **Appendix A**.

b. Identify any project features that may be located below the elevation of the 1% floodplain over the lifespan of the project under any sea level rise scenario.

The lifespan of the proposed installation is 100 years, assuming it is regularly maintained. The New York City Panel on Climate Change (NPCC) projected that sea levels are likely to increase by up to 10 inches by the 2020s, 30 inches by the 2050s, 58 inches by the 2080s, and 75 inches by 2100 under the "High" scenario projections, relative to the 2000–2004 base period (the most recent projections from the NPCC were issued in 2015). Under current conditions, the installation site is located within the 1% Annual Chance floodplain. The location of the in-water pile supports is in Zone VE with a Base Flood Elevation (BFE) (2015 Preliminary FIRM) of 16 feet NAVD88, and the upland pile supports would be located in Zone AE in an area where the BFE is 13 feet NAVD88.² Zone AE indicates an area subject to inundation by the 1% annual chance flood event,

¹ NYC Planning. *The New York City Waterfront Revitalization Program: Climate Change Adaptation Guidance*. March 2017.

² NYC Planning Flood Hazard Mapper, 2017.

and Zone VE indicates an area subject to inundation by the 1% annual chance flood event with additional hazards due to storm-induced velocity wave action.

Based on the NPCC projections, the 1% Annual Chance flood elevation for the location of the in-water concrete columns could increase to 16.83 feet NAVD88 by the 2020s, 18.5 feet by the 2050s, 20.83 feet by the 2080s, and up to 22.25 feet by 2100. The 1% Annual Chance flood elevation for the location of the upland concrete columns could increase to 13.83 feet NAVD88 by the 2020s, 15.5 feet by the 2050s, 17.83 feet by the 2080s, and up to 19.25 feet by 2100. The proposed sculpture has a lifespan of 100 years and is evaluated through 2100.

The concrete columns would be installed on top of the pile caps to support the sculpture at an elevation of 5.75 feet NAVD88 on land and in the river. All of the pile locations are currently within the 1% Annual Chance floodplain and would continue to be located within the floodplain throughout the installation's lifespan. The pile caps would be located at an elevation of -3.54 feet NAVD88, which is below the current mean lower low water (MLLW) elevation of -2.54 feet NAVD88, so as not to be visible at low tide. There are no critical or potentially hazardous features associated with the proposed installation.

c. Identify any vulnerable, critical, or potentially hazardous features that may be located below the elevation of Mean Higher High Water (MHHW) over the lifespan of the project under any sea level rise scenario.

The top of the concrete columns would be located at an elevation of 5.75 feet NAVD88, and would be below the projected MHHW level (5.76 feet NAVD88) under the High-Mid Scenario (75th percentile) sometime in the 2080s. Based on the range of sea level rise predictions described above, MHHW at the installation site could range up to 7.96 feet NAVD88 by the end of the century under the High Scenario (90th percentile) projection. Under this scenario, the columns would be about 2.21 feet below the projected MHHW elevation of 7.96 feet NAVD88 for 2100. There are no critical or potentially hazardous features associated with the proposed installation.

d. Describe how any additional coastal hazards are likely to affect the project, both currently and in the future, such as waves, high winds, or debris.

The upland concrete columns would be located within Zone AE and would be at risk for inundation from the 1% Annual Chance flood events under current and future conditions. The in-water concrete columns would be within Zone VE and would be at risk from 1% Annual Chance flood events, and additional hazards from wave action, including storm impacts due to waves, high winds, and debris under current and future conditions.

2. Identify adaptive strategies: assess how the vulnerabilities and consequences identified in Step 1 are addressed through the project's design and planning.

a. For any features identified in Step 1(b), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?

The concrete columns, pile caps and piles have been designed to be submerged and to take the impact of marine loads, including currents and ice, and the proposed materials to be used would provide durability. The concrete columns would be fully precast with architecturally exposed ultra-high performance concrete jackets designed for durability, along with migrating corrosion inhibitors and waterproofing admixtures. The concrete reinforcing would be galvanized, and all pile cap hardware and bolts would be stainless steel. The piles themselves would be epoxy-coated

stainless steel with self-healing admixtures and passive cathodic protection for durability. These features would be regularly inspected and maintained; currently, maintenance is expected to include regular power washing with water.

b. For any features identified in Step 1(c), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?

The same features that would be within the 1% Annual Chance floodplain would also be below 95th percentile projection for MHHW, and the same measures described under Step 2(a), including being designed to be submerged and regular inspection and maintenance, would apply here. The upland pile foundations would be below MHHW by the 2080s, and the in-water foundations would be below MHHW by the 2020s.

c. Describe any additional measures being taken to protect the project from additional coastal hazards such as waves, high winds, or debris.

An assessment of dynamic effects of storm wind interaction was applied to the design of the structure. The piles would be properly seated within the sediments both in the Hudson River and on the Peninsula and would not be susceptible to waves, high winds, or debris. The framework of the sculpture would be constructed of stainless steel without any features that could be caught in high winds or waves.

d. Describe how the project would affect the flood protection of adjacent sites, if relevant.

Because the floodplain within New York City is controlled by astronomic tide and meteorological forces (e.g., nor'easters and hurricanes) and not by fluvial flooding, the proposed installation would not have the potential to adversely affect the floodplain or result in increased coastal flooding at adjacent sites or within the study area. The proposed installation would not alter the existing site elevation, would not significantly alter the riprap shoreline of the Peninsula, and would not encroach into adjacent areas. Construction activities at the installation site would be in accordance with applicable stormwater regulations; no activities requiring stormwater planning would occur at the site following construction.

3. Assess policy consistency: conclude whether the project is consistent with Policy 6.2 of the Waterfront Revitalization Program.

The installation site is within the 1% Annual Chance floodplain, and the in-water concrete columns would be within a wave impact zone in the flood hazard area. The concrete columns of the sculpture would be below the 75th percentile projected MHHW elevation of 5.76 feet NAVD88 by the 2080s. The proposed installation has been designed to account for risks associated with flooding and storm impacts, including waves, wind, and debris, to which it may be susceptible sometime within its 100-year lifespan. The concrete columns and pile caps have been designed to be submerged and to prevent damage from storm impacts. The materials used for the concrete column and pile caps and the framework of the sculpture (i.e., stainless steel, galvanized concrete reinforcing, waterproofing admixtures, corrosion inhibitors) would provide durability and resiliency in the marine environment. These features would be regularly inspected and maintained at a maximum of 5-year intervals throughout the lifespan of the sculpture. Regular maintenance of the concrete columns and pile caps and the stainless steel superstructure would ensure the durability and longevity of the materials. The stainless steel structure columns were designed to remain above water level except in extreme flood and storm conditions. There are no

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critical or hazardous features associated with the proposed installation, and no additional floodproofing measures would be required.

Therefore, the proposed installation would promote this policy.

Policy 8: Provide public access to, from, and along New York City's coastal waters.

Policy 8.1: Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.

The proposed installation would not hinder existing recreational uses of the Hudson River or the adjacent shoreline. The water within the installation site would be temporarily unavailable during the 12-month construction period; following that, recreational vessels would be able to access the River, including the areas between the concrete columns. The columns would be evenly spaced about 65 feet apart, and the in-water columns would be about 30 feet from the shoreline of the Peninsula. Pile caps below the surface of the water would extend either approximately 3 feet or 7 feet (single or double pile foundations) outward from the center of each concrete column, leaving either 59 or 53 feet between the columns depending on the type of pile foundation used. The tops of the pile caps would be between approximately 0.7 feet and 3.5 feet below the surface of the water at MLLW and MHHW, respectively. Kayakers would be able to see and avoid the pile caps below the surface at lower tide levels, and would clear the pile caps at higher tide levels; at any tide level, there would be ample room for maneuvering recreational vessels between the columns, limiting any contact with the pile caps. Thus, the proposed installation could affect, but would not have a significant adverse impact on recreational boating activity.

HRPT has confirmed that the sculpture would not impede future construction of the Gansevoort Peninsula as a landscaped public park, nor would it limit construction of the planned beach on the Peninsula's southern edge. The sculpture's design would also allow for future access to and from the water once the Peninsula is fully designed for recreational use.

The sculpture would allow for continued visual access to the River and the existing shoreline. As described under Policy 9, existing views would be maintained through the framework design of the installation. Physical access to the sculpture would be limited, as it would not include a platform. However, the installation would not limit existing public access to the shoreline within Hudson River Park. Furthermore, the proposed installation would enhance the pedestrian experience by creating public art within Hudson River Park that complements the history of the Gansevoort Peninsula.

Therefore, the proposed installation would promote this policy.

Policy 8.3: Provide visual access to the waterfront where physically practical.

The skeletal stainless steel framework of the proposed installation would preserve existing visual access to the waterfront, as there would be no platform, walls, or roof to block existing views of the surrounding area. The scale and design of the sculpture would be consistent with the surrounding structures and would create visual interest for pedestrians along the Hudson River bikeway and Route 9A.

Therefore, the proposed installation would promote this policy.

Policy 8.4: Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

The proposed installation would be consistent with the intended uses of Hudson River Park and would be suitable for placement within the Park, as described below under Policy 8.5. The sculpture would promote the arts and enhance the passive public open space within Hudson River Park with public art that references the cultural and historic aspects of the Hudson River. The proposed installation would not hinder existing recreational boating activity in the river. While the submerged pile caps would add a small underwater obstruction in their immediate proximity, only the area directly surrounding each column would be obstructed, and as described under Policy 8.1, the presence of the pile caps and concrete columns within the Hudson River would not have a significant adverse impact on recreational boating.

Therefore, the proposed installation would promote this policy.

Policy 8.5: Preserve the public interest in and use of lands and waters held in public trust by the State and City.

Hudson River Park Trust is a partnership between New York State and the City charged with the design, construction, and operation of the Hudson River Park, governed by the Hudson River Park Act of 1998. The proposed installation would preserve the public interest of the lands and waters, and would be consistent with the permitted public park uses for the Park defined in the Act, which include public recreation and entertainment, including the arts and performing arts, on open spaces. The proposed installation would be constructed within Hudson River Park in the footprint of the former Pier 52 pier shed, which was first constructed in 1899. In 1975, artist Gordan Matta-Clark created the artwork “Day’s End” on the pier shed, which included openings in the metal pier shed to create light and shadows consistent with the sun setting. The pier shed was demolished between 1975 and 1979. The proposed sculpture derived its inspiration and name from the 1975 artwork, and precisely follows the historical geometry of the original pier shed while using as few structural elements as possible. The stainless steel framework would also play with light and shadows that change with the light of day and atmospheric conditions. The proposed sculpture would complement the history of the shoreline, would be consistent with the appearance of the surrounding structures, and would be in line with the authorized uses of Hudson River Park.

Therefore, the proposed installation would promote this policy.

Policy 8.6: Design waterfront public spaces to encourage the waterfront’s identity and encourage stewardship.

The proposed installation would add artwork to the public realm within Hudson River Park. The sculpture would be in keeping with past infrastructure and art installations on the site, including the original Pier 52 pier shed and the 1975 “Day’s End” installation. The open water of the Hudson River within the boundaries of the installation site would be retained and the sculpture would be evocative of the historic Pier 52 pier shed, which stood in the same place until its demolition between 1975 and 1979. The proposed installation would enhance the pedestrian experience by creating public art within Hudson River Park while maintaining visual access to the Hudson River and complementing the history of the Gansevoort Peninsula. In evoking the previous iterations of the Pier 52 pier shed, the proposed installation would reflect on the urban developments of the neighborhood, as well as historic preservation efforts.

Therefore, the proposed installation would promote this policy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

Day's End Public Art Installation at Gansevoort Peninsula

Policy 9.1: Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The proposed installation would not change any urban design features such that the context of natural or built visual resources is substantially altered. The open frame design of the sculpture would maintain the visual corridor along Gansevoort Street in the upland area and would allow for continued views of the Hudson River and the Gansevoort Peninsula. Views of the Hudson River, New Jersey waterfront, and the Hoboken ferry terminal would be retained from Hudson River Park adjacent to the installation site. The proposed installation would not adversely impact the pedestrian's experience of these characteristics of the built and natural environment, nor would it adversely impact the vitality, walkability, or visual character of the area. Its stainless steel framework would be consistent with surrounding structures, and would create visual interest with the changing sunlight and atmospheric conditions over the course of a day. The sculpture has been designed to represent a site specific event and location in New York and the Hudson River, from the pier sheds used during the peak of the shipping industry to the reclaimed piers used today, and would complement the historic and working waterfront.

Therefore, the proposed installation would promote this policy.

Policy 9.2: Protect and enhance scenic values associated with natural resources.

The proposed installation would not interrupt the natural landscape, nor would it result in changes to the continuity and configuration of the natural shoreline. The stainless steel framework would continue to allow unobstructed views of open waters from public vantage points along the Hudson River bikeway and nearby roads; in particular, it would maintain the visual corridor along Gansevoort Street. The Hudson River vista would remain visible from vantage points in the project area. The safety lighting that would be installed in the Hudson River just beyond the sculpture would be provided by marine lanterns and would not be intrusive. Therefore, the proposed installation would promote this policy.

Policy 10: Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.

Policy 10.1: Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.

Four known architectural resources are located in the study area: the Hudson River Bulkhead (S/NR-Eligible), Manhattan Refrigeration Company (S/NR-Listed), American Seaman's Friend Society Sailor's Home and Institute (S/NR-Eligible, NYCL), and the Gansevoort Market Historic District (S/NR-Listed, NYCHD). West Street (Route 9A) acts as a physical and visual barrier between the installation site and each of these resources. Only the Hudson River Bulkhead is located within 90 feet of the installation site, and thus is the only architectural resource with the potential to be impacted by construction of the proposed installation. A Construction Protection Plan (CPP) would be prepared and implemented in order to avoid inadvertent construction-related impacts on the Hudson River Bulkhead during construction of the proposed installation. The CPP would include measures to ensure that the bulkhead is not affected by ground-borne construction vibration or other activities. Although the proposed installation would add a new visual element to Hudson River Park, it would not isolate any of the architectural resources from or significantly alter their setting or visual relationship with the streetscape. The installation would not introduce incompatible visual, audible, or atmospheric elements to the setting of any architectural resource and would not eliminate any publicly accessible views of any architectural resources. The

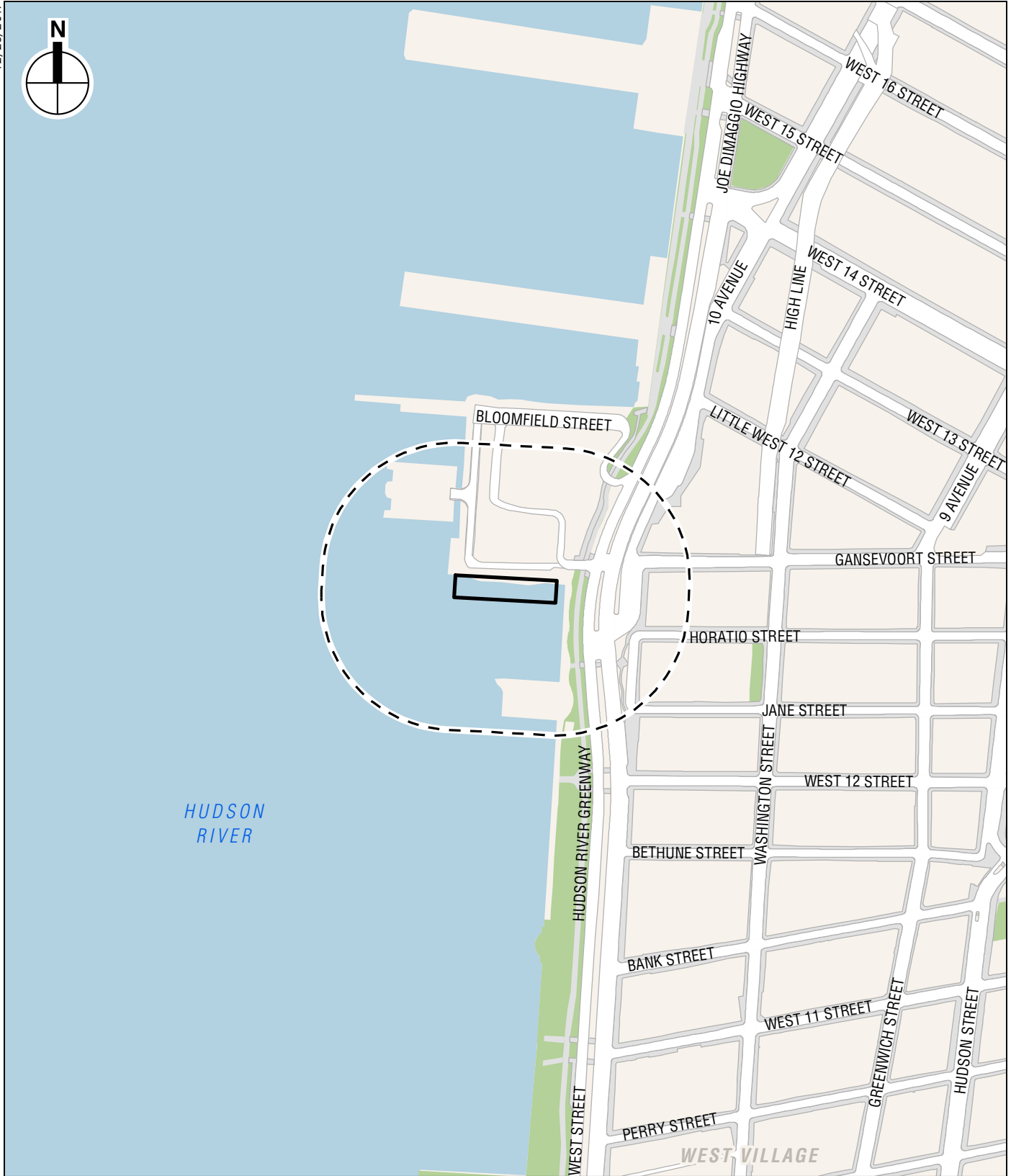
proposed sculpture would not introduce significant new shadows over a historic landscape or on a historic structure with sunlight-dependent features.

Therefore, the proposed installation would promote this policy.

Policy 10.2: Protect and preserve archaeological resources and artifacts.

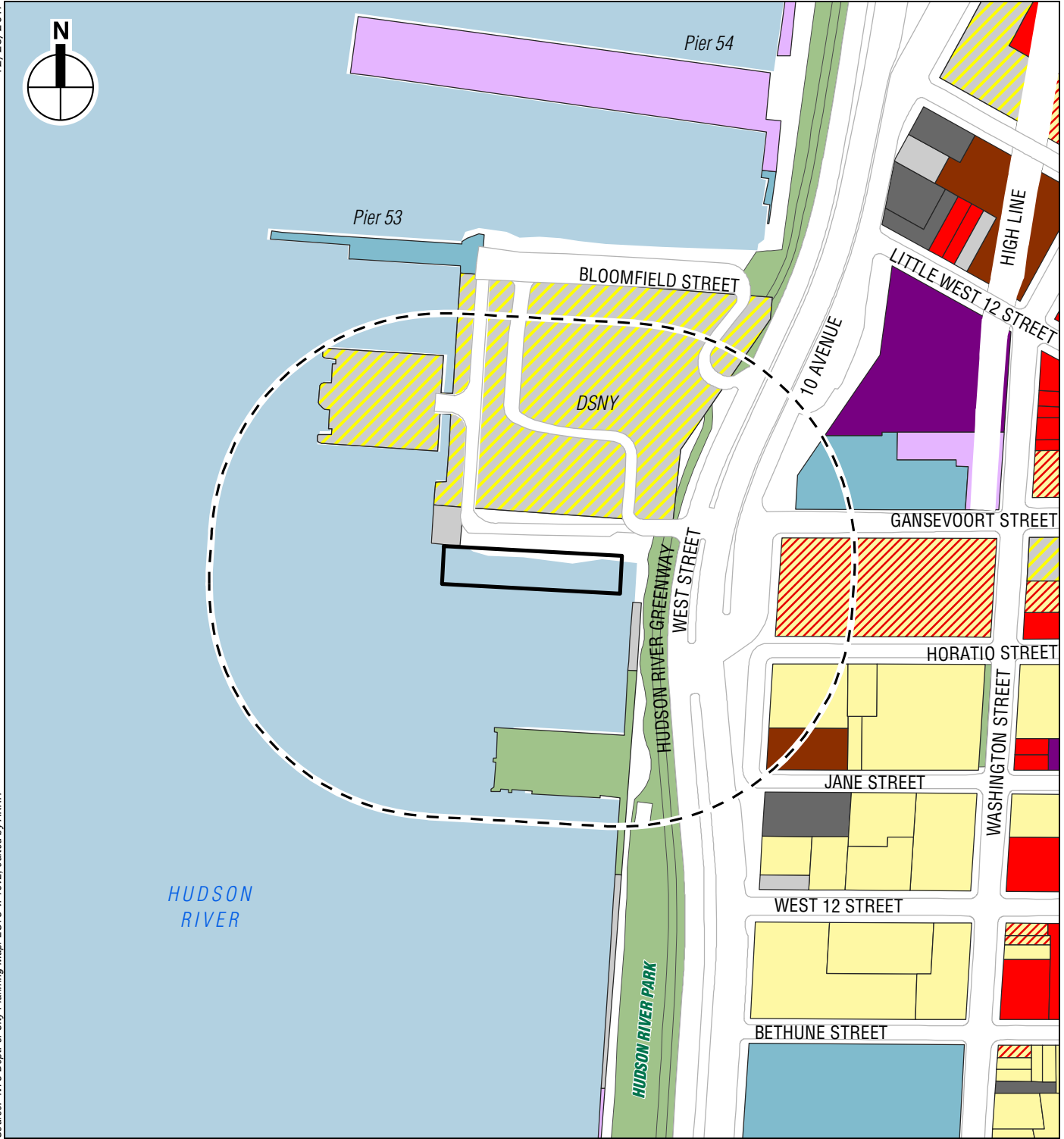
The potential for archaeological resources to be present at the installation site was previously evaluated in an archaeological assessment prepared by Historical Perspectives, Inc. (HPI) in 1997 as part of the Final Environmental Impact Statement (FEIS) completed for development of the Hudson River Park in May 1998. The FEIS concluded that the portion of the Hudson River Park project site extending from Houston Street to Little West 12th Street, which includes the installation site, is not sensitive for archaeological resources. While the location of a possible submerged pre-contact landform was identified west of the existing bulkhead in the vicinity of Clarkson Street, the landscape reconstruction completed as part of the archaeological assessment did not indicate that intact pre-contact archaeological sites would be expected within the outboard area in the vicinity of the installation site. The study area was also determined to have no sensitivity for historic period archaeological resources including the remnants of historic piers, landfill deposits, or historic structures given the age of the fill materials and disturbance associated with the construction and reconstruction of piers along the waterfront. Therefore, the proposed installation would not have the potential to result in the disturbance of archaeological resources, and would promote this policy. *

12/26/2017



-  Installation Site
-  Study Area (400-foot boundary)



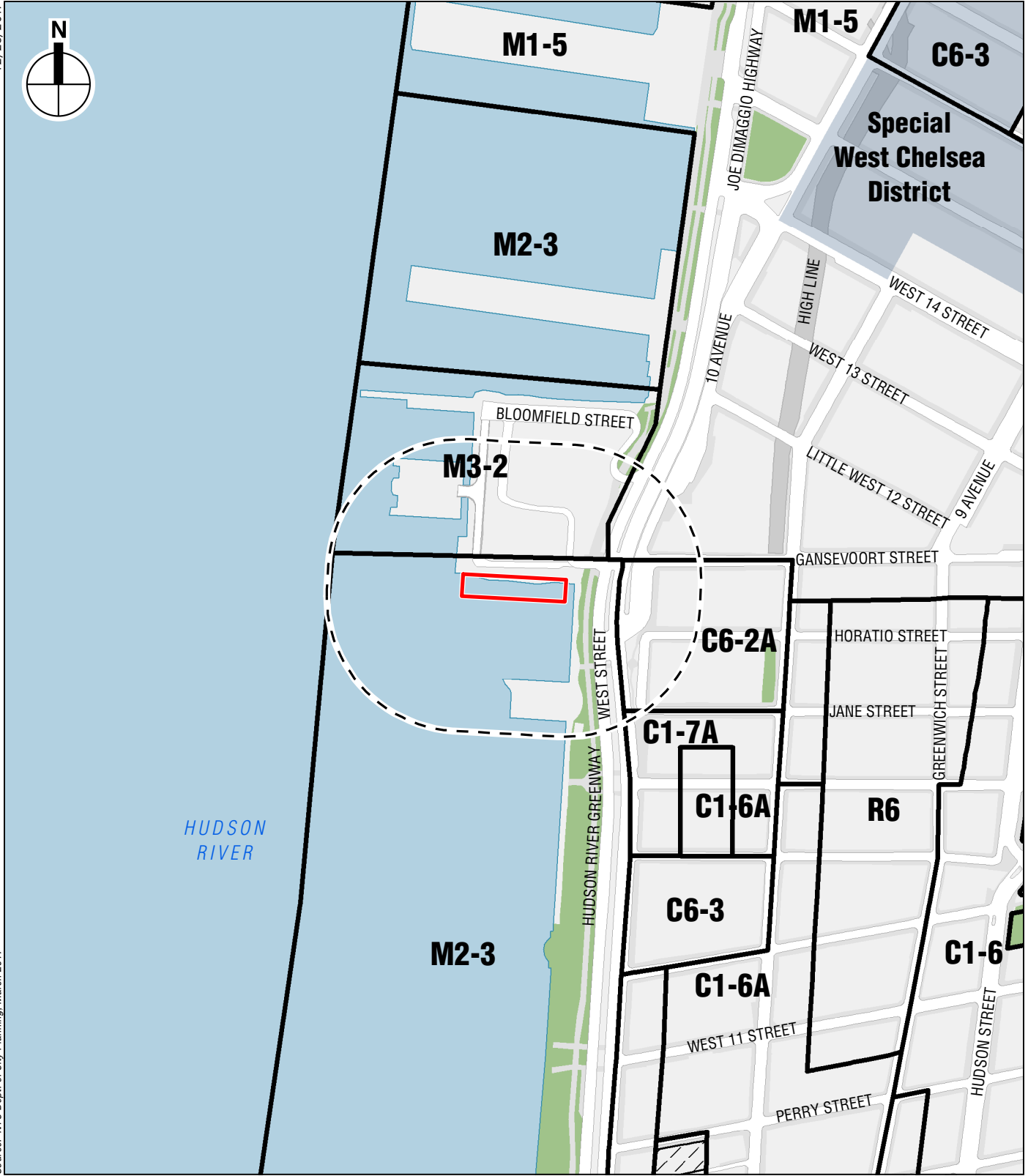


- | | |
|-----------------------------------|------------------------------------|
| Installation Site | Public Facilities and Institutions |
| Study Area (400-foot boundary) | Residential |
| Commercial and Office Buildings | Residential with Commercial Below |
| Hotels | Transportation and Utility |
| Industrial and Manufacturing | Vacant Land |
| Open Space and Outdoor Recreation | Vacant Building |
| Parking Facilities | Demolition/ Construction |

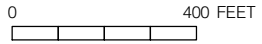
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DAY'S END PUBLIC ART INSTALLATION AT GANSEVOORT PENINSULA

Existing Land Use
Figure B-2



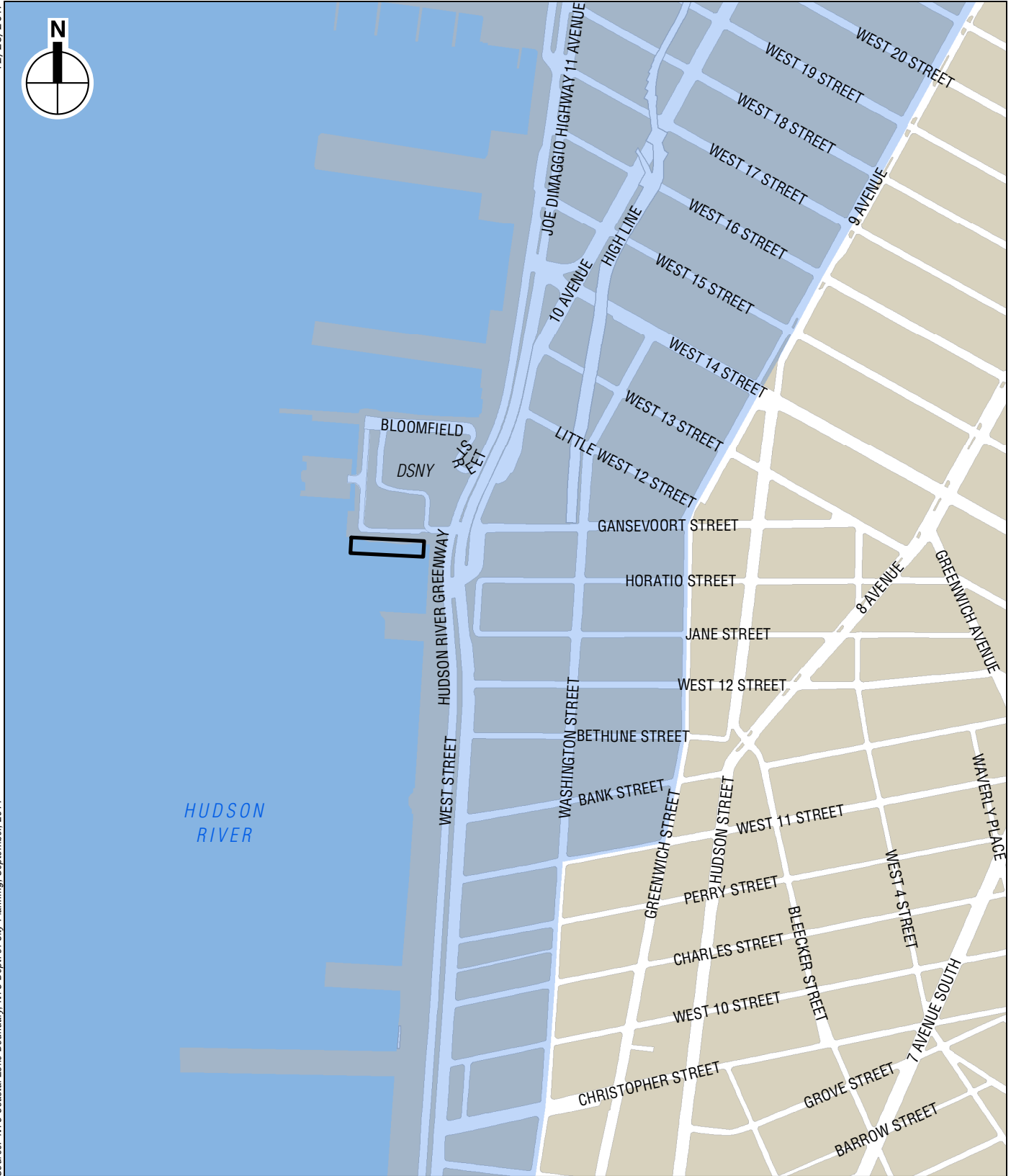
- Installation Site
- Zoning Districts
- Study Area (400-foot boundary)
- Special Purpose District
- C1-5 Commercial Overlay District





12/26/2017

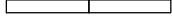


Source: NYC Coastal Zone Boundary, NYC Dept. of City Planning, September, 2011






-  Installation Site
-  Coastal Zone Boundary

0 500 FEET



12/26/2017



-  Installation Site
-  Study Area (400-foot boundary)
-  Demolition Work at Gansevoort Peninsula

