

**Appendix B:**  
**New York City Waterfront Revitalization Program**

**Appendix B.1:  
New York City Waterfront Revitalization Program  
Consistency Assessment Form**

## NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the [New York City Waterfront Revitalization Program](#) (WRP) which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

### A. APPLICANT INFORMATION

Name of Applicant: \_\_\_\_\_

Name of Applicant Representative: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

Project site owner (if different than above): \_\_\_\_\_

### B. PROPOSED ACTIVITY

*If more space is needed, include as an attachment.*

#### 1. Brief description of activity

#### 2. Purpose of activity

**C. PROJECT LOCATION**

Borough: \_\_\_\_\_ Tax Block/Lot(s): \_\_\_\_\_

Street Address: \_\_\_\_\_

Name of water body (if located on the waterfront): \_\_\_\_\_

**D. REQUIRED ACTIONS OR APPROVALS**

*Check all that apply.*

**City Actions/Approvals/Funding**

**City Planning Commission**

Yes  No

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> City Map Amendment               | <input type="checkbox"/> Zoning Certification        | <input type="checkbox"/> Concession        |
| <input type="checkbox"/> Zoning Map Amendment             | <input type="checkbox"/> Zoning Authorizations       | <input type="checkbox"/> UDAAP             |
| <input type="checkbox"/> Zoning Text Amendment            | <input type="checkbox"/> Acquisition – Real Property | <input type="checkbox"/> Revocable Consent |
| <input type="checkbox"/> Site Selection – Public Facility | <input type="checkbox"/> Disposition – Real Property | <input type="checkbox"/> Franchise         |
| <input type="checkbox"/> Housing Plan & Project           | <input type="checkbox"/> Other, explain: _____       |  |
| <input type="checkbox"/> Special Permit                   |  |  |
- (if appropriate, specify type:  Modification  Renewal  other) Expiration Date: \_\_\_\_\_

**Board of Standards and Appeals**

Yes  No

- Variance (use)
- Variance (bulk)
- Special Permit
- (if appropriate, specify type:  Modification  Renewal  other) Expiration Date: \_\_\_\_\_

**Other City Approvals**

- |  |   |
|--|---|
| <input type="checkbox"/> Legislation                       | <input type="checkbox"/> Funding for Construction, specify: _____ |
| <input type="checkbox"/> Rulemaking                        | <input type="checkbox"/> Policy or Plan, specify: _____           |
| <input type="checkbox"/> Construction of Public Facilities | <input type="checkbox"/> Funding of Program, specify: _____       |
| <input type="checkbox"/> 384 (b) (4) Approval              | <input type="checkbox"/> Permits, specify: _____                  |
| <input type="checkbox"/> Other, explain: _____             |   |

**State Actions/Approvals/Funding**

- State permit or license, specify Agency: \_\_\_\_\_ Permit type and number: \_\_\_\_\_
- Funding for Construction, specify: \_\_\_\_\_
- Funding of a Program, specify: \_\_\_\_\_
- Other, explain: \_\_\_\_\_

**Federal Actions/Approvals/Funding**

- Federal permit or license, specify Agency: \_\_\_\_\_ Permit type and number: \_\_\_\_\_
- Funding for Construction, specify: \_\_\_\_\_
- Funding of a Program, specify: \_\_\_\_\_
- Other, explain: \_\_\_\_\_

Is this being reviewed in conjunction with a [Joint Application for Permits?](#)  Yes  No

## E. LOCATION QUESTIONS

1. Does the project require a waterfront site?  Yes  No
2. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters?  Yes  No
3. Is the project located on publicly owned land or receiving public assistance?  Yes  No
4. Is the project located within a FEMA 1% annual chance floodplain? (6.2)  Yes  No
5. Is the project located within a FEMA 0.2% annual chance floodplain? (6.2)  Yes  No
6. Is the project located adjacent to or within a special area designation? See [Maps – Part III](#) of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).  Yes  No
  - Significant Maritime and Industrial Area (SMIA) (2.1)
  - Special Natural Waterfront Area (SNWA) (4.1)
  - Priority Maritime Activity Zone (PMAZ) (3.5)
  - Recognized Ecological Complex (REC) (4.4)
  - West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (2.2, 4.2)

## F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder or Not Applicable (N/A). For more information about consistency review process and determination, see **Part I** of the [NYC Waterfront Revitalization Program](#). When assessing each policy, review the full policy language, including all sub-policies, contained within **Part II** of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).

For those policies checked Promote or Hinder, provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.

|          |   | Promote                  | Hinder                   | N/A                      |
|----------|---|--------------------------|--------------------------|--------------------------|
| <b>I</b> | <b>Support and facilitate commercial and residential redevelopment in areas well-suited to such development.</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I.1      | Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I.2      | Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I.3      | Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I.4      | In areas adjacent to SMIA's, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I.5      | Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2. | <input type="checkbox"/> | <input type="checkbox"/> |                          |

|          |   | Promote                  | Hinder                   | N/A                      |
|----------|---|--------------------------|--------------------------|--------------------------|
| <b>2</b> | <b>Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1      | Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.2      | Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3      | Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.4      | Provide infrastructure improvements necessary to support working waterfront uses.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.5      | Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>3</b> | <b>Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.1.     | Support and encourage in-water recreational activities in suitable locations.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.2      | Support and encourage recreational, educational and commercial boating in New York City's maritime centers.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.3      | Minimize conflicts between recreational boating and commercial ship operations.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.4      | Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.5      | In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>4</b> | <b>Protect and restore the quality and function of ecological systems within the New York City coastal area.</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.1      | Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.2      | Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.3      | Protect designated Significant Coastal Fish and Wildlife Habitats.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.4      | Identify, remediate and restore ecological functions within Recognized Ecological Complexes.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.5      | Protect and restore tidal and freshwater wetlands.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.6      | In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.8      | Maintain and protect living aquatic resources.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|          |   | Promote                  | Hinder                   | N/A                      |
|----------|---|--------------------------|--------------------------|--------------------------|
| <b>5</b> | <b>Protect and improve water quality in the New York City coastal area.</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5.1      | Manage direct or indirect discharges to waterbodies.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5.2      | Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5.3      | Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5.4      | Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5.5      | Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>6</b> | <b>Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6.1      | Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6.2      | Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in <i>New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms</i> ) into the planning and design of projects in the city's Coastal Zone. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6.3      | Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6.4      | Protect and preserve non-renewable sources of sand for beach nourishment.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>7</b> | <b>Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7.1      | Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7.2      | Prevent and remediate discharge of petroleum products.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7.3      | Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>8</b> | <b>Provide public access to, from, and along New York City's coastal waters.</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8.1      | Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8.2      | Incorporate public access into new public and private development where compatible with proposed land use and coastal location.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8.3      | Provide visual access to the waterfront where physically practical.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8.4      | Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|           |  | Promote                  | Hinder                   | N/A                      |
|-----------|--|--------------------------|--------------------------|--------------------------|
| 8.5       | Preserve the public interest in and use of lands and waters held in public trust by the State and City.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8.6       | Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>9</b>  | <b>Protect scenic resources that contribute to the visual quality of the New York City coastal area.</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9.1       | Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9.2       | Protect and enhance scenic values associated with natural resources.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>10</b> | <b>Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.</b> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10.1      | Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10.2      | Protect and preserve archaeological resources and artifacts.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## G. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

Applicant/Agent's Signature: 

Date: 10/31/24

## Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the [NYS Department of State Office of Planning and Development](#) and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

### **New York City Department of City Planning**

Waterfront and Open Space Division  
120 Broadway, 31<sup>st</sup> Floor  
New York, New York 10271  
212-720-3696  
[wrp@planning.nyc.gov](mailto:wrp@planning.nyc.gov)  
[www.nyc.gov/wrp](http://www.nyc.gov/wrp)

### **New York State Department of State**

Office of Planning and Development  
Suite 1010  
One Commerce Place, 99 Washington Avenue  
Albany, New York 12231-0001  
518-474-6000  
[www.dos.ny.gov/opd/programs/consistency](http://www.dos.ny.gov/opd/programs/consistency)

## Applicant Checklist

- Copy of original signed NYC Consistency Assessment Form
- Attachment with consistency assessment statements for all relevant policies
- For Joint Applications for Permits, one (1) copy of the complete application package
- Environmental Review documents
- Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.
- Policy 6.2 Flood Elevation worksheet, if applicable. For guidance on applicability, refer to the WRP Policy 6.2 Guidance document available at [www.nyc.gov/wrp](http://www.nyc.gov/wrp)

## **Appendix B.2: NYC Waterfront Revitalization Program Consistency**

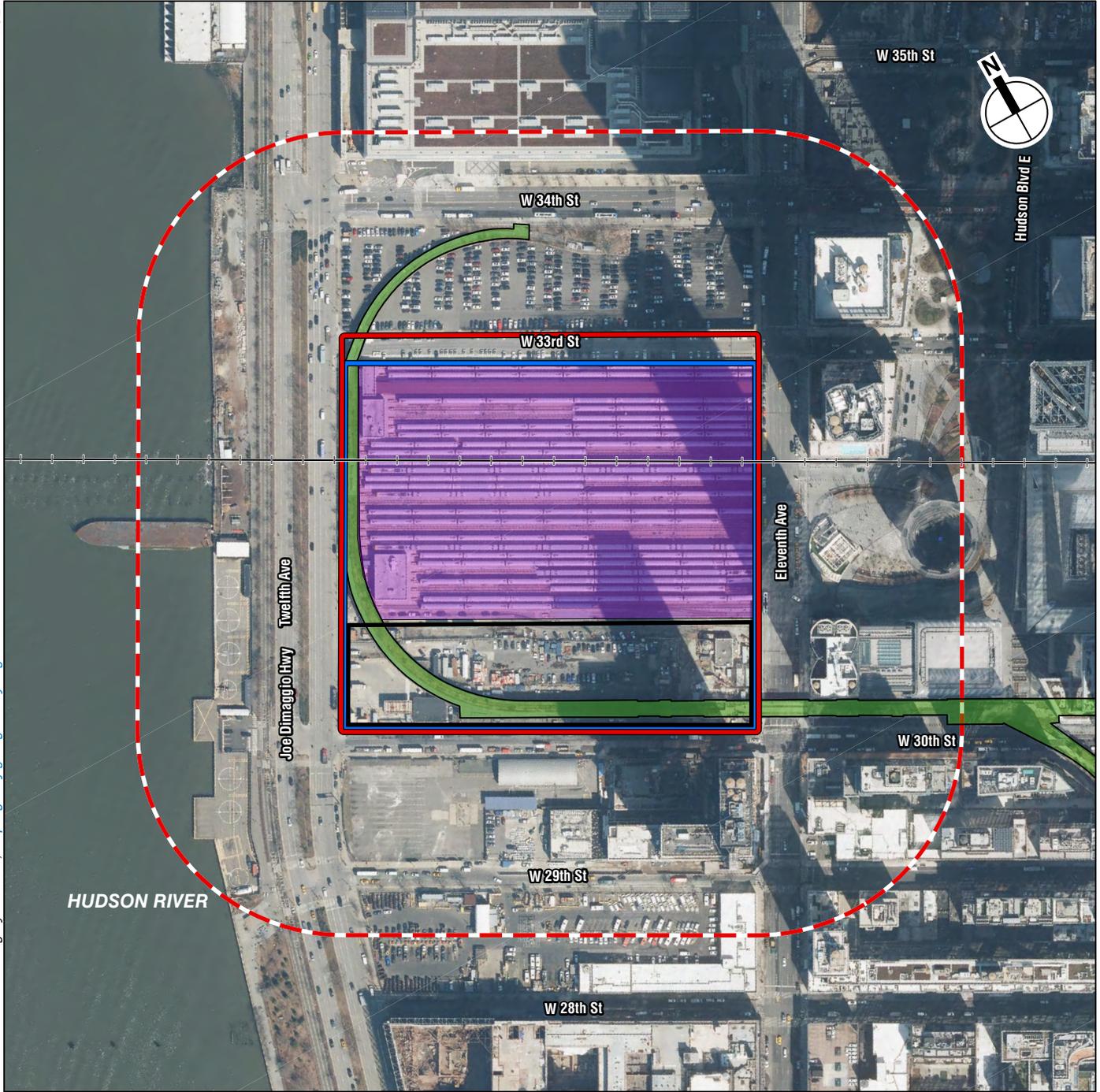
### **A. INTRODUCTION**

The Applicant, WRY Tenant LLC, is seeking discretionary approvals, including a zoning text amendment, special permits, an authorization, and a City Map amendment from the City Planning Commission (CPC) (collectively, the “Proposed Actions”) to allow the development of the Western Rail Yard with new mixed use buildings containing residential, commercial, and community facility space, a hotel resort with gaming, and new public open space (the “Proposed Project”). The Western Rail Yard Site (the “WRY Site” or the “Development Site”) comprises Block 676, Lots 1 and 5 in the Hudson Yards neighborhood of Manhattan, Community District 4. The Development Site occupies the entire area bounded by West 30th and West 33rd Streets and Eleventh and Twelfth Avenues and comprises the western portion of the John D. Caemmerer West Side Yard, an active rail yard where the Long Island Rail Road (LIRR) stores commuter trains. A portion of the High Line, an elevated former rail line transformed into a public park, is located on the northern, western, and southern portions of the Development Site (see **Figure B-1**).

Concurrently with the land use application for the Proposed Actions, the Applicant is seeking a license from the New York State Gaming Facility Location Board to operate a gaming facility on the Development Site. Because the application for the Gaming Facility License is subject to a separate state approval process, the Applicant is also presenting for environmental analysis purposes, an Alternative Scenario that reflects a similar density and the same open space configuration as the Proposed Project, but includes residential and commercial buildings in place of the hotel resort with gaming. The Proposed Project and the Alternative Scenario each constitute a “With Action” scenario, and the analysis provided below considers both “With Action” scenarios.

Both With Action scenarios would require 1) constructing a platform over approximately two-thirds of the Development Site, 2) enclosing the existing LIRR railyard, and 3) adopting a City Map amendment to adjust the grade of West 33rd Street, which currently slopes significantly between Eleventh and Twelfth Avenues, to match the level of the proposed platform and provide access to the Site. The West 33rd Street grade adjustment would occur concurrent with construction of the northern portion of the Development Site. In both With Action scenarios, a new access point to the adjacent High Line would be provided at Twelfth and West 33rd Street by a new staircase and elevator, which would require a revocable consent from the New York City Department of Transportation (DOT).” The Proposed Project and Alternative Scenario are both assumed to be completed and operational by 2031.

The Development Site is within the City’s designated Coastal Zone (see **Figure B-2**). Therefore, in accordance with the guidelines of the 2021 *City Environmental Quality Review (CEQR) Technical Manual*, an evaluation of both the Proposed Project and



-  Development Site
-  Affected Area
-  Study Area (400-foot perimeter)
-  The High Line
-  Approximate Terra Firma Area
-  Proposed Platform
-  Existing Northeast Corridor





- Affected Area*
- Development Site*
- Coastal Zone Boundary*



NYC Coastal Zone Boundary  
**Figure B-2**

Alternative Scenario for consistency with the New York City Waterfront Revitalization Program (WRP) policies is provided below.

## **B. DESCRIPTION OF PROPOSED PROJECT AND ALTERNATIVE SCENARIO**

### **PROPOSED PROJECT**

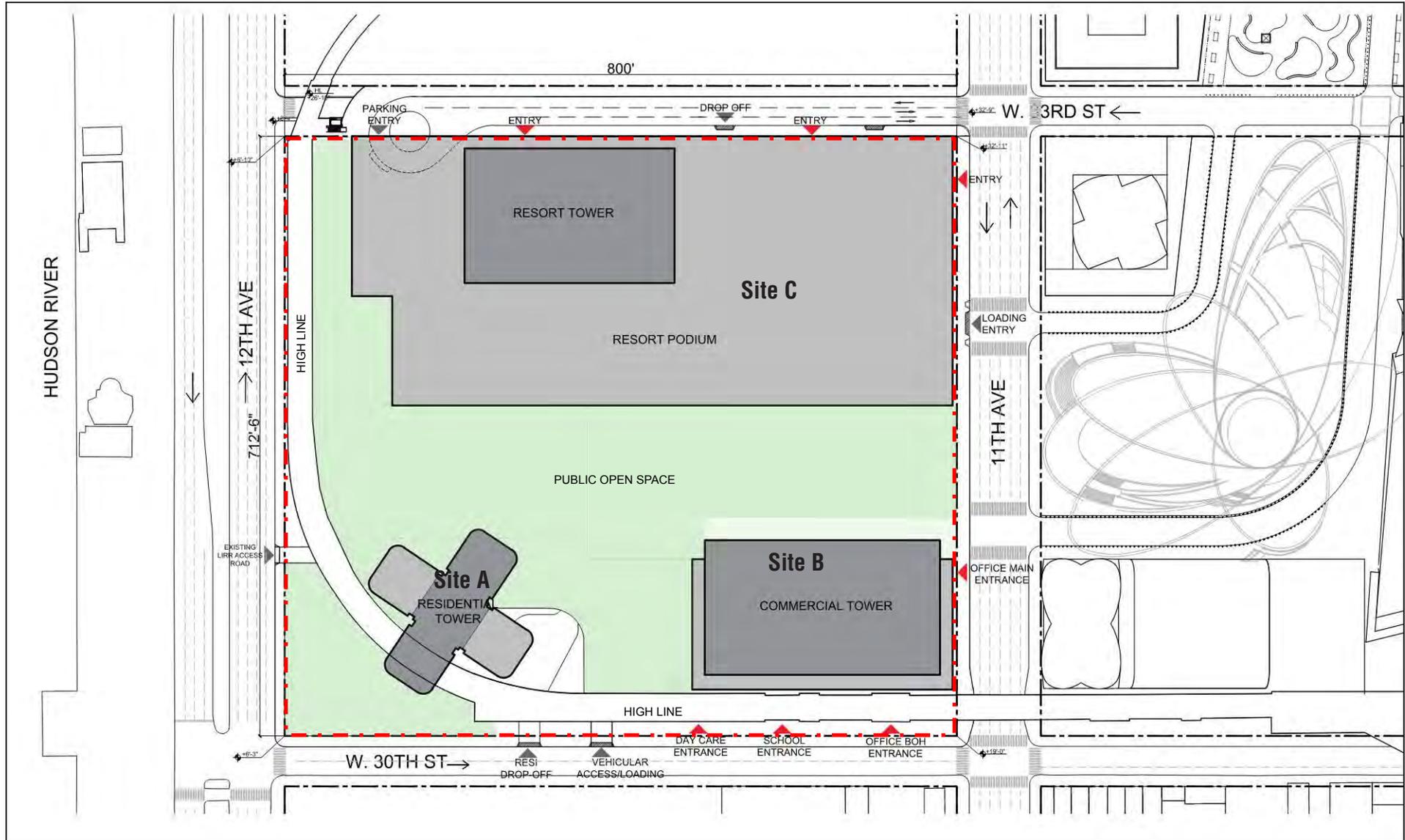
The Proposed Project would consist of approximately 6,226,560 gross square feet (gsf) in three buildings. The northern two-thirds of the site would be covered with a new platform over the existing LIRR railyard, upon which buildings and public space would be constructed. The southern third of the site would be constructed at-grade; this portion of the site is referred to as “terra firma.”

Site A, located in terra firma in the southwestern portion of the Development Site, would be developed with a new, approximately 1.2 million-gsf building containing residential and retail space (Building A). Building A would be approximately 80 stories (up to 1,180 feet tall, including mechanical bulkhead) and would contain approximately 1,507 residential units and 12,250 gsf of ground floor retail. Approximately 324 rental units would be set aside as affordable housing in Building A. The southwest corner of Site A (Twelfth Avenue and West 30th Street) would contain sport courts and open space. Below the sport courts and open space there would be up to four stories of below-grade parking, providing approximately 225 parking spots (see **Figure B-3**).

Site B, also in terra firma at West 30th Street and Eleventh Avenue, would be developed with a 74-story (up to 1,376 feet tall, including mechanical bulkhead) office tower, which height includes a base podium with a height up to 200 feet (Building B). Building B would contain 2,179,899 gsf of office space, 16,000 gsf of space for a local cultural institution, 12,388 gsf of ground floor retail, a 10,000-gsf day care center, and—subject to the requirements of the School Construction Authority (SCA)—a 120,000 gsf public school. There would also be a LIRR parking area with 32 spaces, which would be located adjacent to the existing train tracks (26 spaces for LIRR employee vehicles and 6 spaces for LIRR maintenance trucks); the 32 LIRR spaces currently exist on the Development Site.

Site C, located on the platform, would be developed with a 2,667,400-gsf hotel resort with gaming along West 33rd Street. It would contain a 1,750-key hotel, inclusive of 250 extended stay units, gaming space, 79,400 gsf of ballroom and meeting space, 90,023 gsf of food and beverage facilities (68,550 gsf in the resort podium and 21,473 gsf in the hotel), and 34,250 gsf of retail space, amenity space, and lobbies for the proposed hotel and resort. The proposed complex would contain a 5-story (up to 200-foot-tall) gaming/resort facility podium; development above the podium would reach a maximum height of 80 stories (approximately 1,189 feet, inclusive of the podium and mechanical bulkhead). Approximately 500 accessory parking spaces for commercial uses would be provided on Site C, as well as LIRR infrastructure space, which would include ventilation plenum space, fan plants, fuel oil tanks and pump rooms, diesel hoods, storage, electrical/utility closets, and circulation corridors, an electrical facility, and support space.

Five new curb cuts are proposed under the Proposed Project. Two curb cuts would be located along West 30th Street for parking/drop-off and loading; two curb cuts would be



-  Development Site
-  Proposed Building

Proposed Project Conceptual Site Plan (Illustrative)

located along West 33rd Street for parking and drop-off; and one curb cut is proposed along Eleventh Avenue for loading. In addition, a curb cut for parking would be located within the property line at the proposed grade-adjusted West 33rd Street cul-de-sac. An existing curb cut along Twelfth Avenue that provides LIRR access would remain for exclusive use by LIRR.

The Proposed Project would create approximately 4.58 acres of new publicly accessible open space on the Development Site, which would be in addition to the 1.05 acres of existing open space on-site that is part of the High Line. The new publicly accessible open space would consist of a network of spaces that would vary in character and purpose, including expansive lawns, landscaped areas, walking paths, seating areas, plazas, and a dog run. A central open space would contain a pedestrian pathway to connect residents and visitors from Eleventh Avenue through to the western portion of the WRY Site. This main circulation path would provide access to a variety of diverse landscapes and programmed spaces, which would be closely coordinated with the City.

The new open space would provide a neighborhood and regional destination overlook above the Hudson River; provide direct connections to the High Line; include plaza space to accommodate pedestrian circulation at the base of the office tower at Site B; and include various pathways and connections to draw pedestrians into and through the space. At the southwest corner of the Development Site, at street level, the open space would continue under the High Line on West 30th Street and Twelfth Avenue. Two new connections to the High Line are planned: one at West 30th Street and Twelfth Avenue, and one at West 33rd Street and Twelfth Avenue. The proposed new elevator access at West 33rd Street and Twelfth Avenue would improve the accessibility of the High Line and would enhance accessible connections between the High Line and Hudson River Park.

As described above, the Proposed Project would require constructing a platform over approximately two-thirds of Development Site to cover the existing railyard. As a result, the Proposed Project requires adopting a City Map amendment to adjust the grade of West 33rd Street, which currently slopes significantly between Eleventh and Twelfth Avenues, to match the level of the proposed platform and enhance public access to the Site. This grade adjustment would be constructed by the Applicant concurrent with the northern portion of the Development Site and would maintain public access along West 33rd Street from Eleventh Avenue. The proposed grade adjustment would eliminate vehicular access to Twelfth Avenue from West 33rd Street. A separate at-grade connection would be maintained under the new elevated West 33rd Street at Twelfth Avenue to provide access to the LIRR service gate on the Development Site and to the Javits Marshalling Yard parking lot on the north side of West 33rd Street, across from the Development Site.

Finally, the Proposed Project would require a revocable consent from DOT to construct a staircase and elevator to the High Line. The elevator and staircase would be located in the West 33rd Street sidewalk at Twelfth Avenue.

### **ALTERNATIVE SCENARIO**

Under the Alternative Scenario, the Development Site would be developed with a total of approximately 6,259,170 gsf, including 3,745,932 gsf of office, 34,868 gsf of retail, 1,482,476 gsf of residential, 849,894 gsf of hotel, and 146,000 gsf of community facility

## Western Rail Yard Modifications

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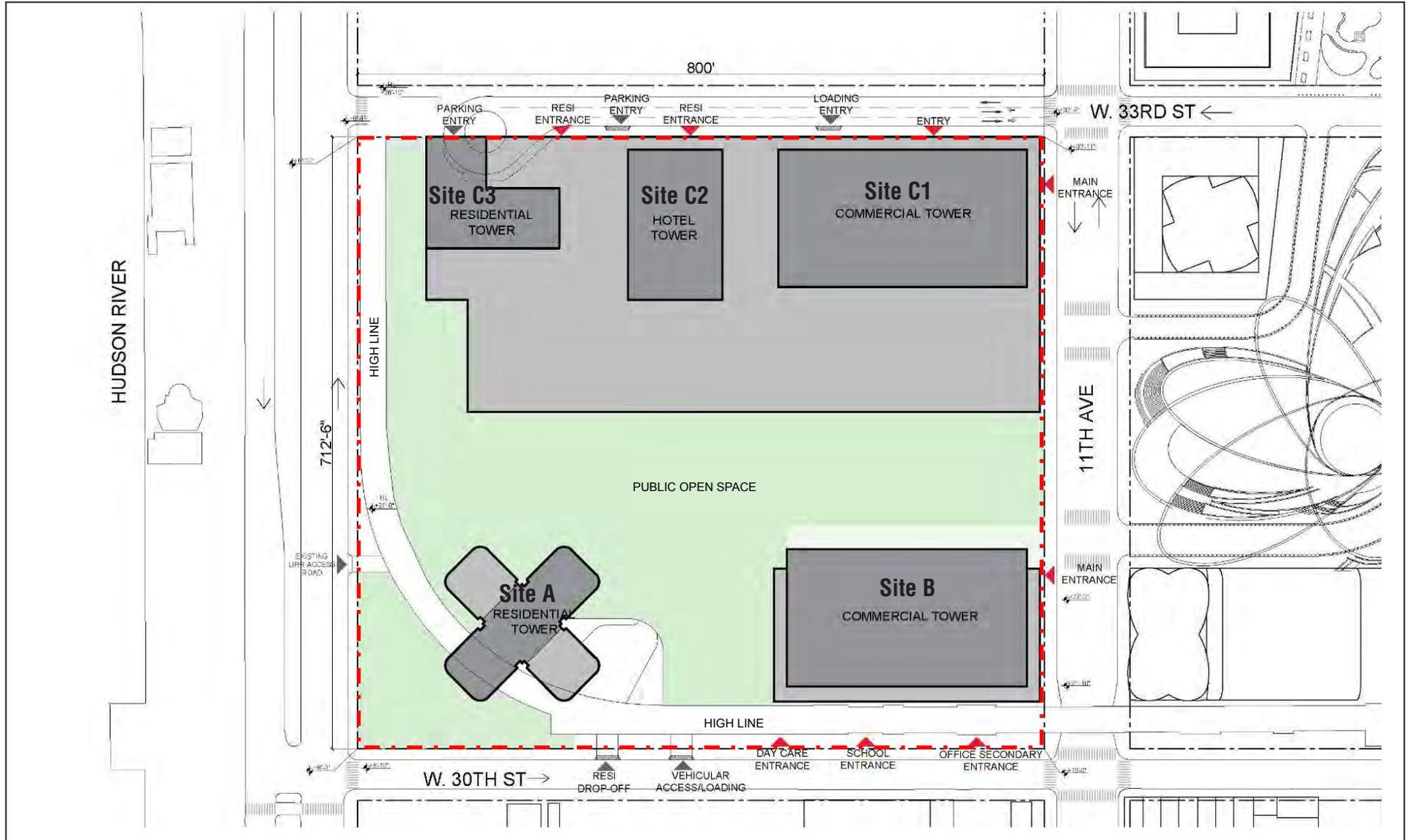
space, consisting of a public school, day care, and cultural facilities, in five buildings. Sites A and B would contain the same mix of uses as the Proposed Project; 1,208,623 gsf of residential, 2,179,899 gsf of office, 24,638 gsf of retail, and 146,000 gsf of community facility space along West 30th Street.

Under the Alternative Scenario, Site C (located in the northern portion of the Site) would be developed with up to three adjacent buildings (Sites C-1, C-2, and C-3). Site C-1 would contain an approximately 53-story office tower (up to 1,194 feet tall, including mechanical bulkhead) on an approximately 200-foot-tall podium at West 33rd Street and Eleventh Avenue. The building on Site C-1 would contain 1,522,457 gsf of office and commercial amenity space and 10,230 gsf of ground floor retail. Sites C-2 and C-3 would be developed on a shared podium of up to 200 feet in height farther west along 33rd Street toward Twelfth Avenue. Site C-2 would contain an approximately 34-story (up to 835 feet tall, including mechanical bulkhead) hotel building with approximately 700 keys, 295,500 gsf of amenity space, and 40,163 gsf of food and beverage space. and Site C-3 would contain an approximately 21-story (up to 835 feet tall, including mechanical bulkhead) residential tower which would contain 273,853 gsf of residential space (approximately 309 units) including amenities, and LIRR infrastructure space, which would include ventilation plenum space, fan plants, fuel oil tanks and pump rooms, diesel hoods, storage, electrical/utility closets, and circulation corridors, an electrical facility, and support space. A 450-space garage providing accessory parking to commercial and hotel uses along West 33rd Street would also be developed on Site C (see **Figure B-4**).

The Alternative Scenario would have the same amount of publicly accessible open space as the Proposed Project and would provide the same amounts of accessory parking on Site A and LIRR parking on Site B. Four new curb cuts would be provided under the Alternative Scenario: two curb cuts would be located along West 30th Street for parking/drop-off and loading, and two curb cuts would be located along West 33rd Street for parking/drop-off and loading. In addition, a curb cut for parking would be located within the property line at the proposed grade-adjusted West 33rd Street cul-de-sac. The existing curb cut on Twelfth Avenue that provides access for the LIRR would remain. Like the Proposed Project, the Alternative Scenario would require the construction of a platform over approximately two-thirds of the railyard, assumes the adoption of a City Map amendment that would adjust the grade of West 33rd Street, and requires a revocable consent from DOT for the construction of a staircase and elevator.

### **C. CONSISTENCY OF PROPOSED PROJECT AND ALTERNATIVE SCENARIO 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 Project's and Alternative Scenario's conformity with the City's WRP policies are provided below for all policy questions answered "Promote" or "Hinder" on the Consistency Assessment Form (see **Appendix B.1**).



-  Development Site
-  Proposed Building

Alternative Scenario Conceptual Site Plan (Illustrative)

**Policy 1: Support and facilitate commercial and residential development in areas well-suited to such development.**

***Policy 1.1: Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.***

Proposed Project

The Proposed Project would facilitate mixed use commercial (including a hotel resort with gaming), residential, and community facility buildings on the Development Site where previously there were none. The Proposed Project would transform the Development Site from what is currently an open-air rail yard and barrier to the connectivity between West Chelsea and Hell's Kitchen into an economic engine for the City. The Proposed Project would address neighborhood and City-wide planning initiatives including stimulating economic development, recovery, and resilience, supporting mixed use development, increasing access to affordable housing, and establishing projects that benefit the neighborhood as well as the City as a whole.

The Proposed Project would be compatible and promote other uses nearby, including conventions at the Javits Center, hotels such as the Equinox Hotel at 35 Hudson Yards, and cultural attractions such as The Shed. The hotel resort with gaming would generate economic activity, including new jobs in construction, tourism and hospitality. A hotel resort with gaming on the Development Site is expected to support the civic and commercial uses in the neighborhood and enhance the area's appeal as a destination for New Yorkers and visitors alike.

The proposed open space would enhance the existing network of open spaces in the area, creating an amenity for residents and visitors. By adding 4.58 acres of new public open space to the existing 1.05 acres of open space on-site (the High Line), and constructing an elevator and staircase (at West 33rd Street and Twelfth Avenue) to more easily access the High Line and Hudson River Park, the Proposed Project would provide a substantial benefit by linking iconic New York City open spaces, including the High Line, Hudson River Park, Bella Abzug Park (Hudson Park and Boulevard), and existing Hudson Yards open space. The new open spaces also complete a "green link" to public transportation including the No. 7 subway station at Eleventh Avenue and West 34th Street and Moynihan Station at Ninth Avenue.

The proposed residential and community facility uses on Sites A and B would be in keeping with and supportive of the residential character found in the blocks south of the Development Site. The new buildings along West 30th Street would provide housing, including much-needed affordable housing, and community facility space including a new public school and a daycare facility. These uses would also be supportive of the residential character that is more prevalent to the south of the Development Site in West Chelsea, including the recently completed mixed use development at 606 West 30th Street as well as the residential buildings at 15 Hudson Yards, the Ohm and Abingdon House. Further, the commercial building on Site B would complement the office uses at 35 Hudson Yards and the newly constructed office building at 55 Hudson Yards, both across Eleventh Avenue.

For these reasons, the Proposed Project would promote this policy.

## **Western Rail Yard Modifications**

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### Alternative Scenario

Like the Proposed Project, the Alternative Scenario would provide housing, including needed affordable housing, along with the provision of a new public school and childcare facility along West 30th Street. In addition, the Alternate Scenario would add commercial and residential spaces along West 33rd Street. These uses would support the residential character of West Chelsea and blocks to the south and the residential and commercial uses on the Eastern Rail Yard to the east, and would be compatible with land use surrounding the Development Site. Similar to the Proposed Project, the Alternative Scenario would provide residential and commercial uses that would complement the neighborhood, albeit without the proposed hotel resort with gaming, and provide the connectivity to existing open spaces and transportation.

Therefore, the Alternative Scenario would also promote this policy.

***Policy 1.2: Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.***

### Proposed Project and Alternative Scenario

See response to Policy 1.1. The Proposed Project and the Alternative Scenario would both provide a substantial new on-site open space amenity for workers, visitors, and residents of the Development Site and surrounding area, including both active and passive recreational opportunities. The new open space also would provide attractive pedestrian and visual connections between the Development Site, the High Line, Hudson Yards Public Square and Gardens to the east, Hudson River Park to the west, Bella Abzug Park (Hudson Park and Boulevard) to the north, and surrounding neighborhoods. The proposed new elevator at West 33rd Street near Twelfth Avenue would improve the accessibility to the High Line and would enhance accessible connections between the High Line and Hudson River Park. Overall, both development scenarios would complete the accessible “green link” connection of Penn Station to the Hudson River waterfront, attracting residents from the neighborhood as well as from the City in general.

Therefore, the Proposed Project and the Alternative Scenario would both promote this policy.

***Policy 1.3: Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.***

### Proposed Project

The Proposed Project would encourage development in an area where public facilities and infrastructure are adequate or will be developed. The Proposed Project would generate an increase of 1,064,167 gallons of sanitary waste per day (gpd), which would represent approximately 0.2 percent of the average daily flow to the North River Wastewater Resource Recovery Facility (WRRF). This volume would not result in an exceedance of the North River WRRF’s capacity and is not anticipated to create a significant adverse impact on the City’s sanitary sewage treatment system. In addition, in accordance with the New York City Plumbing Code (Local Law 33 of 2007), the Proposed Project would be required to utilize low-flow plumbing fixtures, which would help to minimize sanitary flows from the Development Site to the North River WRRF. The Proposed Project would be required to file a Site Connection Proposal Application (SCP) for approval from the New York City Department of Environmental Protection (DEP) to

## **Appendix B.2: NYC Waterfront Revitalization Program**

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connect to the existing DEP sewer system. Before a building permit can be issued, site connection proposals must be certified for sewer availability by DEP. This analysis and any improvements would be undertaken, as necessary, in coordination with DEP. Due to the proposed grade adjustment for West 33rd Street, the Proposed Project would also require a “private sewer plan” (public sewers to be designed and constructed by private entities) showing the new West 33rd Street storm and sanitary sewers to be submitted to and approved by DEP.

The Proposed Project would not result in an increase in stormwater runoff to the existing DEP combined sewer system, and therefore would not result in potential increase in combined sewer overflows (CSOs) during rain events; rather, all stormwater on the Development Site would be detained and released via controlled flow to the Hudson River by separated storm sewers. In particular, stormwater collected on the platform would be primarily detained on-site for reuse, and any excess stormwater collected on the platform would be conveyed to storm sewers, including potentially the existing LIRR private storm sewer serving the Western Rail Yard, for discharge to the Hudson River. Similarly, stormwater collected on the small “terra firma” portion of the Development Site (along West 30th Street) not covered by the platform or buildings would be conveyed to the existing LIRR storm sewer for discharge to the Hudson River.

The Proposed Project would result in an increase in water demand of 2,050,242 gpd, which represents approximately 0.03 percent increase in demand on the water supply system compared to the City’s average daily water use of approximately 1.1 billion gpd. DEP intends to replace and increase the size of the existing water main in West 33rd Street between Eleventh and Twelfth Avenues. With this improvement, the water mains near the Development Site would be capable of handling the increase in water demand.

The proposed community facility spaces to be created on the Development Site, including a new public school and day care center, would provide added capacity to better serve the future residents on the Development Site and the surrounding neighborhood.

Community services such as hospitals and police and fire services would have capacity to serve the Development Site. Fire and emergency service to the Development Site would be maintained from multiple access points from various directions via the surrounding street network. The parcels on the Development Site would be accessible to emergency vehicles by way of the surrounding street network. The elevated portion of West 33rd Street would terminate in a cul-de-sac, enabling emergency vehicles to turn around and access buildings along West 33rd Street. The rail yard below the platform would be accessible through the maintenance of at-grade connections at Twelfth Avenue to provide access to the LIRR service gate on the Development Site and to the Javits Marshalling Yard parking lot on the north side of West 33rd Street, across from the Development Site.

For these reasons, the Proposed Project would promote this policy.

### **Alternative Scenario**

Based on preliminary estimates, the Alternative Scenario would result in lower water demand, sanitary sewage generation and solid waste generation than the Proposed Project. Stormwater collection, control, and discharge will also be the same as the Proposed Project. Like the Proposed Project, the Alternative Scenario would provide a new public school and space for a new day care center. Access to community and emergency services would also be the same as the Proposed Project.

## **Western Rail Yard Modifications**

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Therefore, the Alternative Scenario would promote this policy.

***Policy 1.5: Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.***

### Proposed Project and Alternative Scenario

See response to Policy 6.2, below. The design of both the Proposed Project and the Alternative Scenario considers climate change and sea level rise and comply with the NYC WRP guidance.

Therefore, both the Proposed Project and Alternative Scenario would promote this policy.

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

***Policy 5.1: Manage direct or indirect discharges to waterbodies.***

### Proposed Project and Alternative Scenario

The Development Site would be served by separated sanitary and storm sewers and would not result in an increase in stormwater runoff to the existing DEP combined sewer system. All stormwater collected on the platform would be primarily detained on-site for reuse, with any excess discharged to storm sewers, including potentially the existing LIRR private storm sewer serving the Western Rail Yard. Similarly, stormwater collected from the small sport courts and open space area on the terra firma portion of the Development Site (i.e., the area not covered by the platform or new buildings) would be conveyed to the existing LIRR storm sewer, as planned for by the DEP Amended Drainage Plan for the area.

Additionally, if connecting to DEP sewers, stormwater detention would be required as part of the DEP SCP application process for new buildings connecting to the City's sewer system. As part of the SCP permit approval processes, developments must comply with the required on-site stormwater volume requirements and stormwater release rate as detailed in the Unified Stormwater Rule. The performance standard is intended to reduce peak discharges to the City's sewer system during rain events by requiring greater onsite storage of stormwater runoff and slower release to the sewer system. The implementation of DEP's stormwater performance standard over time is expected to provide additional capacity to the existing sewer system, thereby improving its performance.

The Applicant would develop a Storm Water Pollution Prevention Plan (SWPPP) for post-construction stormwater management. The SWPPP addresses both quantity (decrease discharge to sewers) and quality (remove solids and some pollutants) of stormwater. Any areas that must discharge to a DEP sewer would need to meet the quantity reduction requirements. All stormwater collected on site will require treatment to improve quality prior to discharge to either private or DEP owned sewers. Stormwater quality is addressed through the use of Best Management Practices (BMP) that filter and otherwise treat collected stormwater. Specific BMP measures for the Proposed Project would be selected in consultation with DEP when specific designs are advanced, but are expected to include use of manufactured treatment devices, detention tanks, roof detention systems, and green roofs (particularly on the public open space).

Stormwater management under the Alternative Scenario would be the same as under the Proposed Project. With these measures in place, the Proposed Project and the Alternative Scenario would promote this policy.

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

Proposed Project and Alternative Scenario

See response to Policy 5.1. The Proposed Project and the Alternative Scenario would be required to comply with the required on-site stormwater volume requirements and stormwater release rate as detailed in the Unified Stormwater Rule. With these measures in place, the Proposed Project and the Alternative Scenario 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.**

For the purposes of this discussion regarding Policy 6, the evaluation of flood resilience applies to both the Proposed Project and the Alternative Scenario, unless otherwise noted. See Policy 6.2 below for detailed discussion on floodplain and sea-level rise background. With the below measures in place, both the Proposed Project and Alternative Scenario would promote this policy.

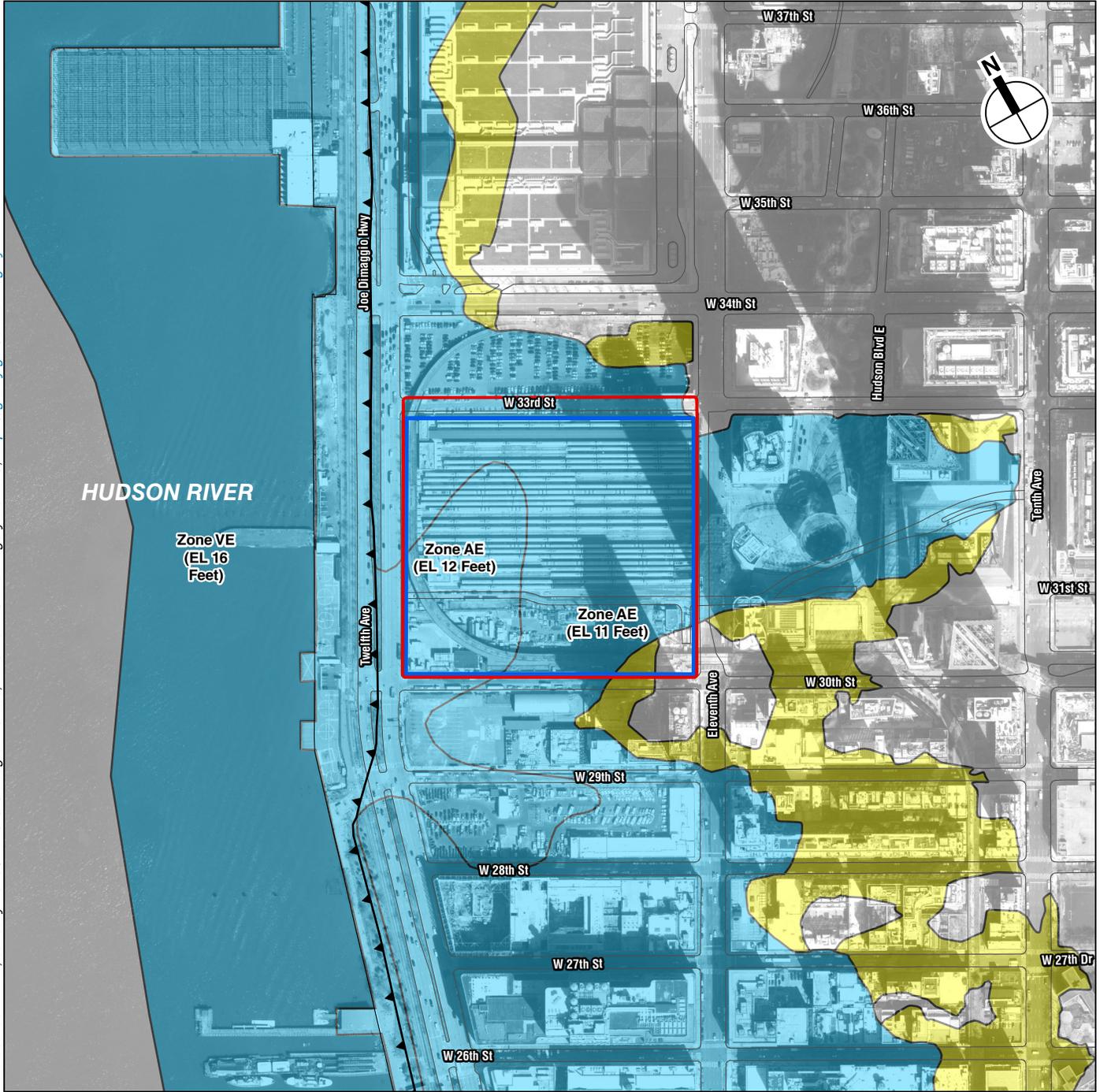
***Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.***

Under Policy 6, the primary goal for projects in coastal areas is to reduce risks posed by current and future coastal hazards, in particular “chronic hazards” (daily tidal inundation as a result of sea level rise) and “extreme events” (major storms that are likely to increase due to climate change and flood elevations that will increase as a result of sea level rise).

The Federal Emergency Management Agency (FEMA) 2015 Preliminary Flood Insurance Rate Map (FIRM) Panel #3604970069G (see **Figure B-5**) shows the Development Site mostly within the 1 percent annual chance floodplain, Zone AE, with a Base Flood Elevation (BFE) of +11 feet North American Vertical Datum of 1988 (NAVD88) at Sites B and C, and +12 feet NAVD88 at Site A. Therefore, most of the site is below the current 1 percent annual chance flood elevation.

The NYC WRP relies on the New York City Panel on Climate Change (NPCC) projections of sea level rise (as published in a 2015 report) to evaluate the effects of climate change and sea level rise. The NPCC projections predict sea level rise for a variety of probabilities (median and about one and two standard deviations above and below) over a number of years (2020, 2050, 2080, and 2100). The design of both the Proposed Project and the Alternative Scenario considers the median (or “Mid scenario”) sea level projection and Year 2100 (i.e., a 70+ year design life for all structures) where a specific scenario is required, and the Year 2100 projections where a range of scenarios are required by the NYC WRP Policies. The Year 2100 sea level rise projections vary from 15 inches (10th percentile) to 36 inches (50th percentile) to 75 inches (90th percentile).

The Year 2100 adjusted 1 percent annual chance base flood elevation (“adjusted BFE”) is projected to increase to elevation +14 feet NAVD88 for Sites B and C, and to elevation



- Affected Area
- Development Site
- 1% Annual Chance of Flooding
- 0.2% Annual Chance of Flooding
- Limit of Moderate Wave Action

0 400 FEET

## Western Rail Yard Modifications

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+15 NAVD88 for Site A under the Mid scenario. The 90th percentile (High scenario) sea level rise adjusted BFE at Building A is +18.25 feet NAVD88 and at Building B is +17.25 feet NAVD88 (see **Figures B-6a through B-6c**).

The vast majority of the Development Site would be covered by buildings or hardscape or elevated on the constructed platform, essentially eliminating the risk of erosion under any scenario or location. As discussed in more detail below under Policy 6.2, the main residential lobby space in Building A would be elevated to an adjusted design flood elevation (DFE) of +17 feet NAVD88. The curb level drop-off area and lower lobby area (including the small portion that runs below the High Line) would be below the DFE but would be protected by deployable flood barriers. Entrances to the proposed daycare, office, and bike storage spaces in Building B would be elevated to an adjusted DFE of +16 feet NAVD88 at Site B to eliminate losses during extreme events. Entrances to the proposed school and loading dock in Building B would be below the DFE and protected by deployable flood barriers. The adjusted DFEs are equal to the projected BFE in 2100 under the Mid scenario of sea level rise, plus 2 feet of freeboard.<sup>1</sup> Emergency egress in Building A would discharge to the open space of the Development Site at 44 feet NAVD88 (see **Figures B-7a and B-7b**). Emergency egress in Building B would discharge to portions of the sidewalk at or above the DFE, as well as to areas of the elevated open space of the Development Site. Site C, atop the platform to be constructed above the LIRR train yard at an elevation of +33.66 feet NAVD88, would remain above the future floodplain elevations even in the High scenario of sea level rise. The sport courts and southwest open space along West 30th Street would be designed higher than the sidewalk to be more resilient to flooding. Accessible ramps and stairs would connect the sidewalk to the raised open space. The raised area would remain subject to flooding under the current and adjusted BFE; however, open space amenities have limited potential for damage from flooding and would not present a risk to adjacent areas during flood conditions. Below-grade enclosed parking below the sport courts and open space would be subject to flooding and wet floodproofed in accordance with Appendix G of the NYC Building Code.

With these measures in place, both the Proposed Project and the Alternative Scenario would promote this policy.

*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.*

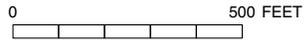
The Development Site is within the Coastal Zone as defined by New York City. As such, both the Proposed Project and the Alternative Scenario must comply with the NYC

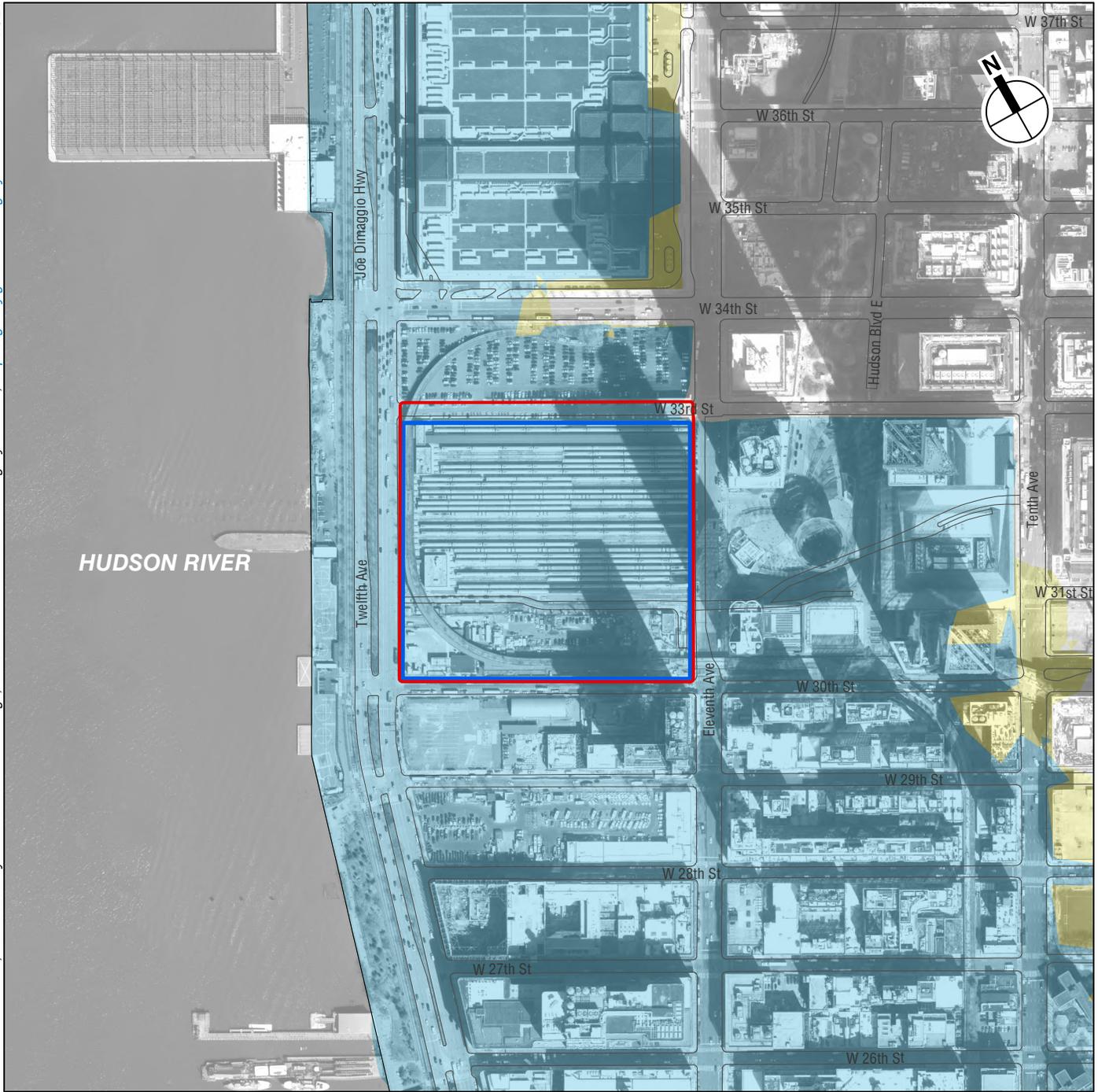
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<sup>1</sup> Freeboard is defined as “the practice of elevating a building’s lowest floor above the Base Flood Elevation (BFE) by a small additional height, typically 1 to 2 feet above FEMA minimum height requirements, depending on building type (2 feet for single and two- family residences and 1 foot for most other buildings). The benefits of freeboard include an additional margin of safety to protect against more severe storms and increased future flood risks from rising sea levels. Additionally, FEMA recognizes that freeboard significantly reduces flood risk and provides substantial reductions in flood insurance premiums.” (<https://www.nyc.gov/site/planning/plans/climate-resiliency-faq.page>)



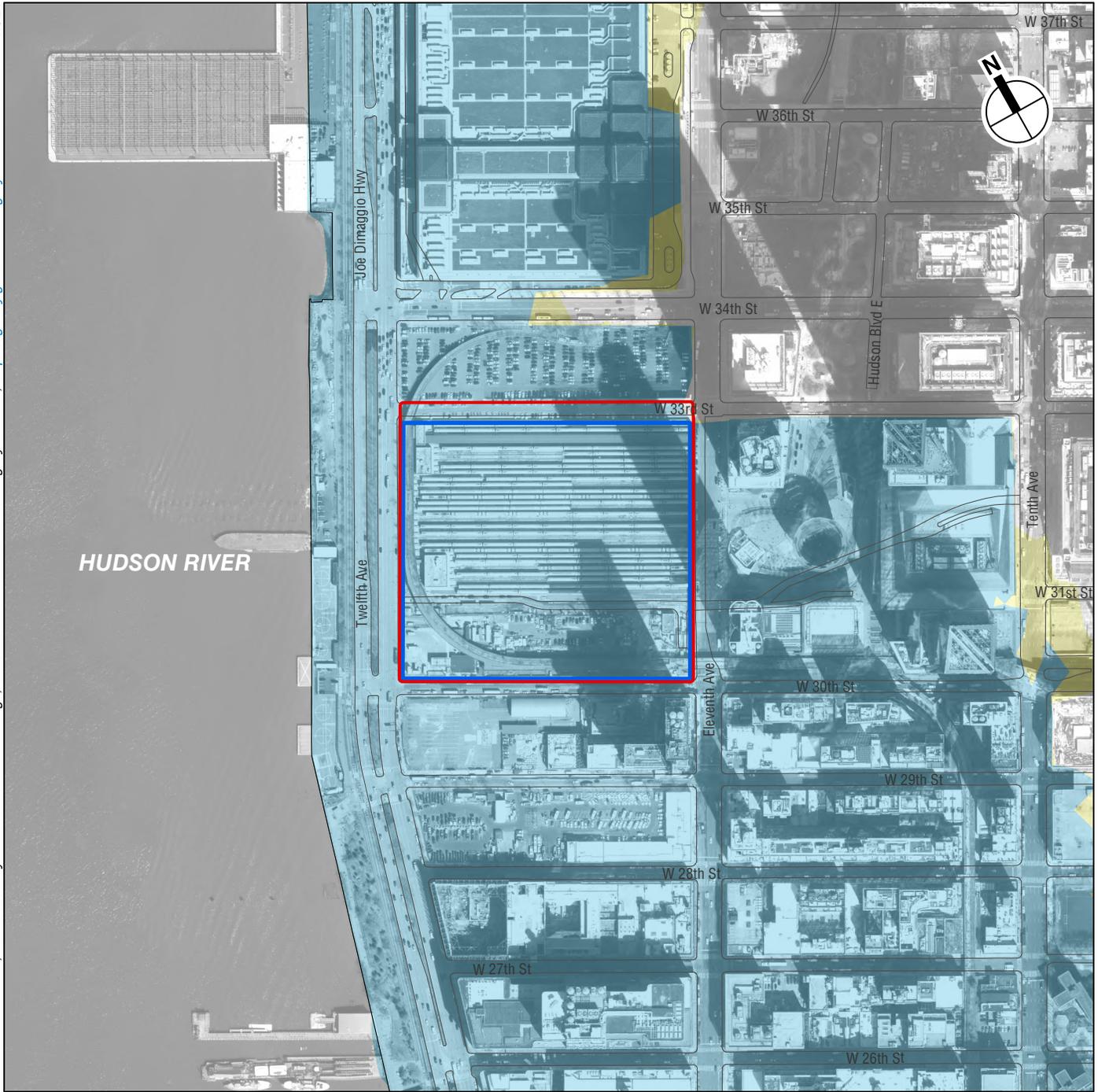
-  Development Site
-  Affected Area
-  1% Annual Chance of Flooding
-  0.2% Annual Chance of Flooding





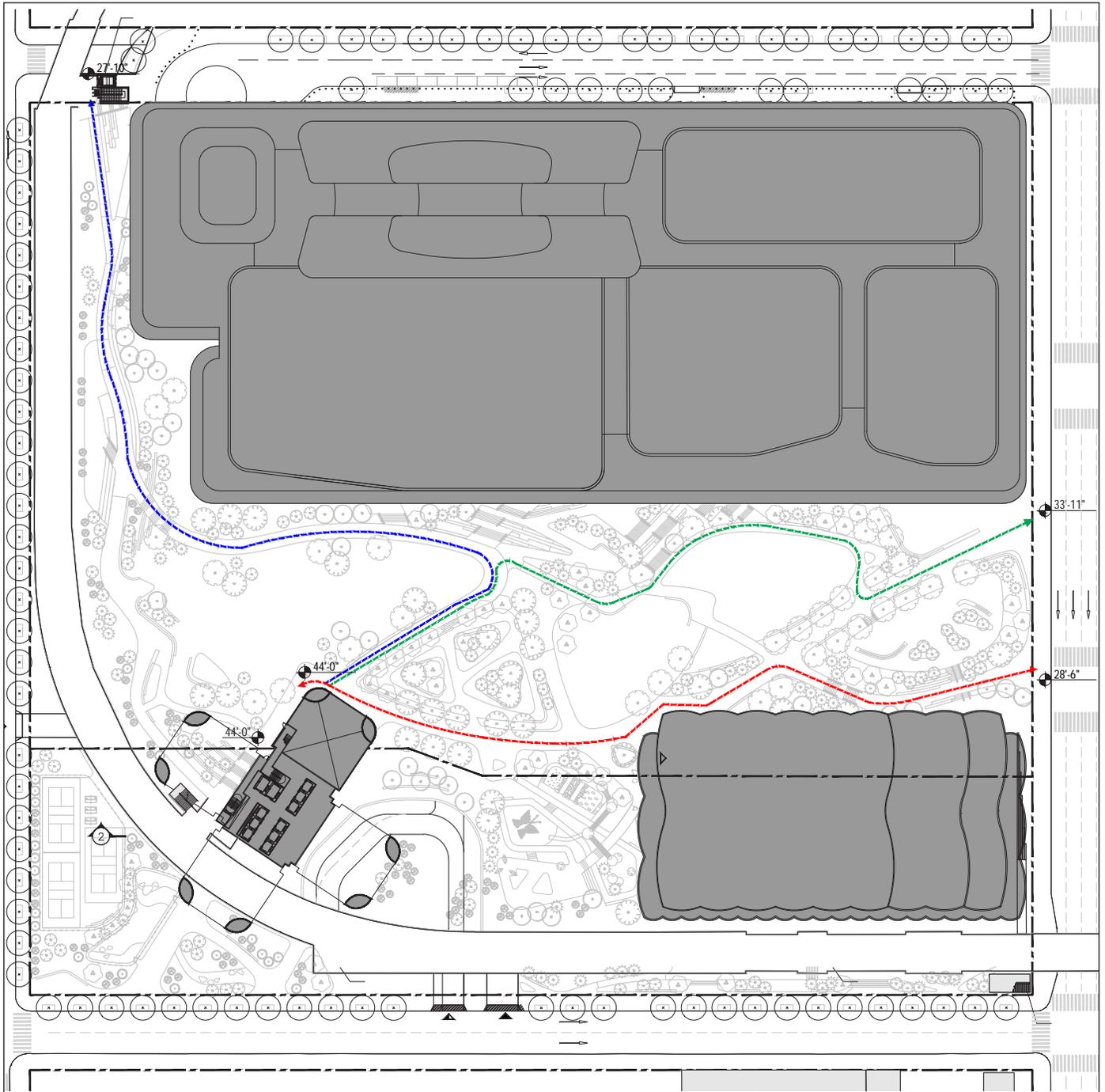
- Development Site
- Affected Area
- 1% Annual Chance of Flooding
- 0.2% Annual Chance of Flooding

0 500 FEET

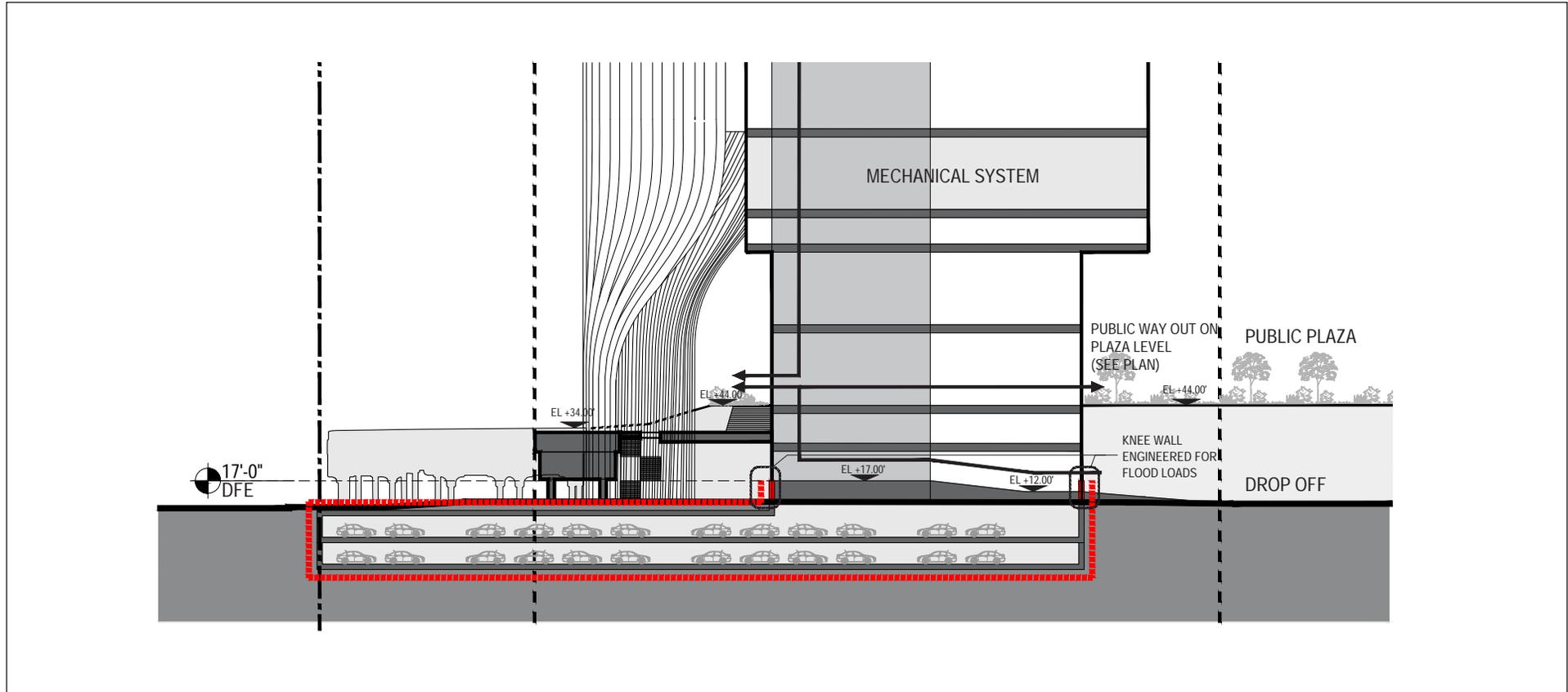


-  Development Site
-  Affected Area
-  1% Annual Chance of Flooding
-  0.2% Annual Chance of Flooding

0 500 FEET



-  R1
-  R2
-  R3



..... DRY FLOODPROOFING

— EGRESS DIRECTION

Waterfront Revitalization Program, as discussed herein. As of 2016, when the most recent version of the NYC WRP was adopted, residential and commercial developments (such as proposed for the Development Site) must include an evaluation of sea level rise on the proposed development. As noted above, the evaluation considers both chronic hazards and extreme events. The vulnerability of the proposed development to chronic hazards and extreme events is dependent on the elevation of sea level and the rise in water height caused by extreme events (storms), respectively.

Guidance documents developed by DCP<sup>2</sup> provide a detailed methodology<sup>3</sup> 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 completed worksheets, which are provided in **Appendix B.3**.

**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.**

### *Existing Data*

The Development Site is currently used as a LIRR train storage yard and paved storage areas. The grades are relatively flat at about elevation +7 feet NAVD88 to elevation +8 feet NAVD88 across the site. Current ground elevations on adjacent sidewalks range from about +6.4 feet NAVD88 along Twelfth Avenue, to +17.5 feet NAVD88 at the corner of Eleventh Avenue and West 30th Street, up to +32.8 feet NAVD88 at the corner of Eleventh Avenue and West 33rd Street (this corner is an elevated viaduct of both Eleventh Avenue and West 33rd Street). As such, the vulnerability of the Development Site to flooding varies depending on the location of a building.

As mentioned above, the FEMA 2015 Preliminary Flood Insurance Rate Map (FIRM) Panel #3604970069G (see **Figure B-5**) shows the Development Site mostly within the 1 percent annual chance floodplain, Zone AE, with a BF) of +11 feet NAVD88 at Sites B and C, and +12 feet NAVD88 at Site A. Therefore, most of the site is below the current 1 percent annual chance flood elevation.

### *Projections*

As discussed above under Policy 6.1, the NYC WRP relies on the NPCC projections of sea level rise to evaluate the effects of climate change and sea level rise. Within the Development Site, the Year 2100 adjusted BFE is projected to increase to elevation +14 feet NAVD88 for Sites B and C, and to elevation +15 feet NAVD88 for Site A under the 50th percentile Mid scenario, and to elevation +17.25 feet NAVD88 and elevation +18.25

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<sup>2</sup> NYC Planning. The New York City Waterfront Revitalization Program: Climate Change Adaptation Guidance. November 2018.

<sup>3</sup> Ibid, pages 14-16

## Western Rail Yard Modifications

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feet NAVD respectively under the 90th percentile High scenario (see **Figures B-6a through B-6c**).

### *Impacts on Sites A and B*

Under both the Proposed Project and Alternative Scenario, Site A (new residential and retail building), and Site B (office space, cultural institution, day care center, and public school) would be constructed with access to West 30th Street

Building A would have a curb level residential drop off area at about +14 feet connecting to West 30th Street at about +8.5 feet NAVD88. The drop off area would lead to a lower lobby area, a portion of which would run below the High Line, at this same elevation. This lower lobby area would be within the current 1 percent annual chance floodplain. The lower lobby area would transition up to the main residential ground floor lobby space, which would be elevated to +17 feet NAVD88 and would remain above the projected 2080 Mid scenario 1 percent annual chance floodplain elevation through the lifespan of the building. Only under the 2100 High scenario of sea level rise is the main residential entrance projected to be within the floodplain. Residential units in Building A would begin on the 5th floor at an elevation of about +108 feet NAVD88 and would remain above all future projected floodplain elevations. Emergency egress locations for Building A occupants would be provided at +44 feet NAVD88 (see **Figures B-7a and B-7b**).

Entrances to the proposed daycare, office, and bike storage spaces in Building B would be located at the DFE of +16 feet NAVD88 and would remain above the projected 2080 Mid scenario 1 percent annual chance floodplain elevation through the lifespan of the building. The entrances to the proposed school and loading dock at Building B would be below the DFE at +12 feet NAVD88 and would be below the projected 2050 Mid Scenario 1 percent annual chance floodplain elevation. Emergency egress for the proposed school and loading dock area would be provided via stairway to portions of the sidewalk at or above the DFE, or up to an elevation of at least +28 feet NAVD88 to the open space area of the Development Site.

Most critical mechanical equipment in Buildings A and B would be elevated above future projected floodplain elevations. While not yet fully designed, some mechanical equipment may need to be located below the Building DFEs and below the current and future 1 percent annual chance floodplain elevations.

### *Impacts on Site C*

Under both the Proposed Project and Alternative Scenario, Site C (hotel resort with gaming, or office, hotel, and residential space, respectively) would be located atop a platform to be built over the LIRR train yard. The platform would be built at an elevation of +33.66 feet NAVD88. Therefore, all features at Site C in either scenario would be well above the current 1 percent annual chance flood elevation, and any projected Year 2100 adjusted 1 percent annual chance flood elevation.

### *Impacts on Open Space*

The majority of the new open space would be created on the platform and thus well above the current 1 percent annual chance flood elevation and any projected Year 2100 adjusted 1 percent annual flood elevation. The proposed sport courts and open space at the southwest corner of the Development Site would be designed to be higher than the sidewalk to be more resilient to flooding. However, the raised area would remain below

the current BFE and any sea level rise adjusted BFE and would therefore be subject to flooding during such an event. Given the proposed use, the area would not be substantially damaged as a result of flooding, but the potential for flooding would be considered during design.

***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.***

*Existing Data*

The existing sea-level elevation is based on tide gauge measurements monitored and reported by the National Oceanographic and Atmospheric Administration (NOAA). NOAA maintains a series of tide gauges around the country's coastline. The closest tide gauge is at the Battery in lower Manhattan. The NYC WRP considers the Mean Higher High Water (MHHW) elevation (the average of the daily BFE higher high tide). For the Battery, the current MHHW elevation is +2.61 feet NAVD88.

*Projections*

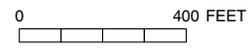
Based on the range of sea level rise predictions (+36 inches for Mid scenario and +75 inches for High scenario), MHHW at the Battery could increase to elevation +5.61 feet NAVD88 by 2100 under the Mid scenario, and to elevation +8.86 feet NAVD88 under the High scenario projections (see **Figures B-8a through B-8c**).

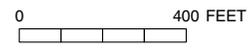
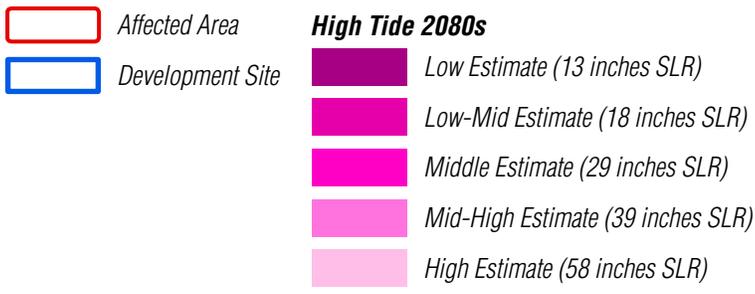
*Impacts on Development*

Residential lobby entrances and most critical mechanical equipment at Building A would remain above the elevation of MHHW through the life of the project (Year 2100) under all scenarios of sea level rise. The curb level drop off area and lower lobby area (including the small portion of the ground floor lobby at Building A that would run below the High Line) would be below the 2100 MHHW elevation under the High scenario only. Exact locations of mechanical equipment at Building A are yet to be determined, but any mechanical equipment that may be located below the DFE would be fully enclosed within a dry floodproofed space and protected from MHHW.

Although shown spatially as being below the Mid scenario sea level rise projected MHHW elevation by the 2080s (see **Figure B-8b**), site grade elevations at Site B are actually higher than the Mid scenario projected future MHHW elevation of +5.86 feet NAVD88. The lowest entrances to the ground floor at Building B along W 30th Street would be +12 feet NAVD88 where the proposed school and loading dock would be located. Further toward 11th Avenue, the proposed daycare, office, and bike storage spaces and entrances would be located at the DFE of +16 feet NAVD88. Therefore, the ground floor of Building B would remain above any future projected MHHW elevation.

The proposed open space and sport courts at the southwest corner of the Development Site will be designed at about elevation +9 feet NAVD88 and would be above the MHHW elevation under any sea level rise scenario through Year 2100. The potential below-grade parking beneath the open space and sport courts would extend below the current MHHW elevation.

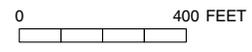






- Affected Area
- Development Site

- High Tide 2100s**
- Low Estimate (15 inches SLR)
  - Low-Mid Estimate (22 inches SLR)
  - Middle Estimate (36 inches SLR)
  - Mid-High Estimate (50 inches SLR)
  - High Estimate (75 inches SLR)



## Western Rail Yard Modifications

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The proposed development on Site C (constructed on the platform above the LIRR train yard at an elevation of +33.66 feet NAVD88) would remain above MHHW through Year 2100 under all scenarios of sea level rise.

***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.***

Wave action hazards (i.e., Zone VE) have not been designated for the Development Site. The Development Site is in FEMA Wind Zone II (up to 160 mph) and construction and materials would follow appropriate building and zoning standards. The buildings and platform would be assessed with respect to wave and impact loading and designed accordingly. Further, the LIRR is currently designing a flood barrier for the railyard that— if constructed—would prevent flood water from entering below the platform.

***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?***

As noted, the design life for the buildings and structures is about 70 years, corresponding to a design year of 2100. Buildings A and B would be constructed in accordance with Appendix G, "Flood Resistant Construction," of the New York City Building Code and designed to resist hydrostatic, hydrodynamic, and other flood-related loads, including the effects of buoyancy. The buildings would be floodproofed to the DFEs of +17 feet NAVD88 (Site A) and +16 feet NAVD88 (Site B). These DFEs would protect the buildings to better than the adjusted BFE for the 75th percentile (mid-high scenario) NPCC sea level rise estimate for Year 2100 (neglecting freeboard). The small portion of the ground floor lobby of Building A that runs below the High Line would be within the floodplain by 2100 under the High scenario and the portions of the ground floor of Building B that would be within the floodplain by the 2050s under the High-Mid scenario. These areas would already be protected by temporarily deployed flood barriers that are included in the design of these buildings. During a flood event, all residents and any occupants within the lower lobby areas within Building A would egress via stairways to the public open space at +44 feet NAVD88. Emergency egress during a flood event for occupants of the school and loading dock area in Building B would be provided via two separate stairways leading to the higher-level open space at +28 feet NAVD88 and +39 feet NAVD88. Critical mechanical equipment in Buildings A and B would either be elevated to or above the DFE or enclosed within a dry floodproofed area and would remain protected from flooding throughout the life of the building.

The proposed development on Site C, to be constructed on the platform above the LIRR train yard at an elevation of +33.66 feet NAVD88, would remain above any sea level rise-adjusted 1 percent annual chance floodplain throughout the life of either the Proposed Project or Alternative Scenario.

Open space at-grade amenities have limited potential for damage from flooding and would not present a risk to adjacent areas during flood conditions. The below-grade parking proposed beneath the sport courts and open space at the southwestern corner of the Development Site would be subject to flooding and wet floodproofed.

***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?***

Under the Mid sea level rise scenario, the proposed buildings on the Development Site would remain entirely above the projected Year 2100 MHHW elevation. Under the Year 2100 High scenario, additional portions of the Development Site (such as the sport courts and open space on terra firma, and the secondary entrance to Building A) may be below the projected MHHW elevation. The secondary entrances would not be used as emergency egress and would be protected by deployable flood barriers throughout the life of the building. As described above, emergency egress during a flood event would be provided via stairways to the more elevated portions of the Development Site. Additionally, neither the Proposed Project nor the Alternative Scenario would preclude the ability to modify the buildings as chronic hazard flood conditions change. Potential site-specific solutions could include raising secondary entrance threshold elevations to even higher elevations above the then-projected MHHW. Other potential solutions may include implementing technological advancements that have not yet been developed, or neighborhood-wide solutions that could be implemented by a government agency in the future (to prevent daily flooding of the entire west side of Manhattan).

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

Wave action hazards (i.e., Zone VE) have not been designated for the Development Site. The Development Site is in FEMA Wind Zone II (up to 160 mph) and construction and materials would follow appropriate building and zoning standards. The buildings and platform would be assessed with respect to wave and impact loading and designed accordingly. Further, the LIRR is currently designing a flood barrier for the railyard that—if constructed—would prevent flood water from entering the train yard below the platform.

***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 astronomical tides combined with meteorological forces (e.g., nor'easters and hurricanes), and not by fluvial flooding, neither the Proposed Project nor Alternative Scenario would have the potential to adversely affect the floodplain or result in increased coastal flooding at adjacent sites or within the Development Site.

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

As described above, the buildings on Sites A and B would be protected from extreme events up to the projected Mid-high sea level rise Year 2100 projection by floodproofing in accordance with Appendix G “Flood Resistant Construction,” of the New York City

## **Western Rail Yard Modifications**

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Building Code. The main residential lobby space for Building A would be elevated to an adjusted DFE of elevation +17 feet NAVD88. The lower curb level drop off lobby area at Building A where it runs under the High Line would be below the DFE but would be protected using deployable flood barriers and the entrance would not be used for emergency egress. Residential units within Building A would begin on the 5th floor at an elevation of +108 feet NAVD88 and would be elevated well above the 1 percent annual chance floodplain under any sea level rise scenario throughout the life of the building. Ground floor entrances to the proposed school and loading dock at Building B would be located below the DFE at +12 feet NAVD88 but protected from flooding with deployable flood barriers. The ground floor entrances to the proposed daycare, office space, and bike storage in Building B would be elevated to the adjusted DFE of +16 feet NAVD88. As described above, emergency egress in both buildings during a flood event would be provided via stairways to the more elevated portions of the Development Site. The emergency egress locations would remain above the 1 percent annual chance floodplain and the MHHW elevation through Year 2100.

Critical mechanical equipment in Buildings A and B would either be elevated to or above the adjusted DFE or enclosed within a dry floodproofed area and would remain protected from flooding throughout the life of the building. The below-grade parking proposed beneath the sport courts and open space at the southwestern corner of the Development Site would be wet floodproofed, designed in accordance with Appendix G of the New York City Building Code. The open space and sport courts at the southwest corner of the Development Site would be subject to flooding; however, open space at-grade amenities have limited potential for damage from flooding and would not present a risk to adjacent areas during flood conditions. Site C would be constructed on a platform and would remain above the 1 percent annual chance floodplain and MHHW through 2100.

For these reasons, both the Proposed Project and the Alternative Scenario would promote this policy.

**Policy 7: Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.**

***Policy 7.1: Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.***

### Proposed Project and Alternative Scenario

A 2004 Phase 1 Environmental Site Assessment (ESA) of the Development Site identified the following recognized environmental conditions (RECs):

- The use of petroleum and chemicals associated with historical uses of the Development Site as a lumber yard, freight yard, and train storage yard;
- The potential use of pesticides, herbicides, and creosote for the management of train tracks;
- Historical off-site uses, including a rail yard with coal storage, iron works, a lumber yard, a coal yard, garages, filling stations, a truck rental company, and a motor freight station; and

## **Appendix B.2: NYC Waterfront Revitalization Program**

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- Two reported petroleum releases were identified with the potential to affect subsurface conditions at the Development Site: Spill No. 04-07107 (on-site) and 04-07411 (off-site within 0.125 mile).

Following the 2004 Phase I ESA, a Phase II Subsurface Investigation was conducted. Soil sampling results, when compared to 6 New York Code of Rules and Regulations (NYCRR) Soil Cleanup Objectives (SCOs), did not reveal any elevated levels of pesticides, herbicides, or PCBs. Also, no above-background levels of methane were detected, and none of the samples exhibited toxicity levels above Resource Conservation and Recovery Act (RCRA) hazardous waste characteristics. Elevated levels of semivolatile organic compounds (SVOCs) known as polycyclic aromatic hydrocarbons (PAHs) were detected in soil; PAHs are compounds typically formed during incomplete burning of coal, oil, gas, wood, garbage, or other organic substances and are commonly present in urban fill materials. Metals were also detected in the samples, in some cases above the SCOs. However, based on the distribution and levels detected, the metals and organic compounds detected at levels above their respective SCOs are attributable to the presence of urban fill.

Analytical results of groundwater samples indicate that groundwater would likely require treatment prior to its discharge to meet DEP groundwater discharge criteria.

Generally, the soil sampling results were consistent with the presence of historic urban fill, which was expected at the Development Site. However, in two instances, potential petroleum impacts were noted during field screening. The New York State Department of Environmental Conservation (DEC) was notified and two spill cases were opened (DEC Spill cases 04-07107 and 04-07411). Laboratory analyses revealed no elevated levels of VOCs or SVOCs in the former case; DEC was therefore requested to close Spill 04-07107. The spill case was closed by DEC on April 6, 2006.

Regarding Spill 04-07411, located on the sidewalk southeast of the intersection of Twelfth Avenue and West 33rd Street, contamination consistent with petroleum was confirmed by laboratory analysis. This spill was subject to a December 2006 Consent Order between LIRR and DEC requiring further testing and remediation as warranted. Spill 04-07411 was closed by DEC in March 2013 after additional soil sampling and groundwater monitoring; based on evidence of coal tar observed in the spill area, the Development Site was enrolled in the DEC State Hazardous Waste Site (SHWS) database as Site No. 231083.

A 2009 Phase I ESA identified additional RECs not provided in the 2004 Phase I ESA:

- On-site Spill 04-07411, which was reported based on contamination noted in the northwestern corner of the Development Site during the 2004 Phase II ESI, and had an active status at the time of the 2009 Phase I ESA (as noted above, the spill was subsequently closed in March 2013);
- On-site Spill 04-07107, for which closure was requested from DEC at the time of the 2009 Phase I ESA. The report noted that no closure documentation was identified; thus, the spill was identified as a REC. However, based on online DEC records, this spill listing was closed in April 2006; and
- Nearby regulatory listings, including four open-status spills, one Comprehensive Environmental Response, Compensation, And Liability Information System

## Western Rail Yard Modifications

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(CERCLIS) listing with a No Further Remedial Action Planned (NFRAP) status, and one New York State Brownfield Cleanup Program (BCP) site.

The Proposed Project would require soil disturbance on-site, and limited soil disturbance within surrounding roadways. As noted above, the potential for subsurface contamination has been identified throughout the Development Site. Existing structures may contain asbestos, lead-based paint (LBP), PCB-containing equipment, and/or petroleum storage tanks. Although the demolition and construction activities associated with either With Action scenario could increase pathways for human exposure, impacts would be avoided by performing development activities in accordance with the following measures:

- Adherence to the requirements of a Restrictive Declaration (R-230) recorded against the Development Site will require that prior to obtaining DOB permits associated with redevelopment, the property owner conduct Phase I ESAs and Phase II subsurface investigations, and prepare and implement site-specific remedial action plans (RAPs) and construction-related health and safety plans (CHASPs), where appropriate, to the satisfaction of the New York City Mayor's Office of Environmental Remediation (OER). These plans would include the proposed development plans and outline any remediation that would be required, including excavation of any identified contaminated soil; environmental monitoring and other health and safety measures to protect workers and the surrounding community during remediation/excavation; endpoint sampling; and post remediation engineering and/or institutional controls, including capping, installation of vapor mitigation systems, and groundwater monitoring, if appropriate.
- Institutional controls required by the Restrictive Declaration and/or RAP will ensure implementation of the above measures and any necessary post-construction measures per OER requirements, e.g., implementation of health and safety procedures during subsurface utility repair. This would include protocols for reporting to DEC if any contamination associated with the SHWS registration of the Development Site were encountered.
- Removal of any encountered tanks would be performed in accordance with applicable regulatory requirements, including DEC requirements relating to spill reporting and tank registration.
- If dewatering is necessary as part of the proposed construction activities, water would be discharged to sewers in accordance with DEP requirements (if discharged to a sanitary or combined sewer), or DEC requirements (if discharged to an outfall leading to surface waters).
- An asbestos survey of buildings built before 1990 to be demolished would be conducted, and any asbestos-containing materials (ACM) that would be disturbed would be removed and disposed of prior to demolition in accordance with local, state, and federal requirements.
- Any activities with the potential to disturb lead-based paint would be performed in accordance with applicable requirements (including federal Occupational Safety and Health Administration [OSHA] regulation 29 CFR 1926.62—Lead Exposure in Construction).
- Unless there is labeling or test data indicating that suspect PCB-containing electrical equipment, hydraulic equipment and fluorescent lighting fixtures do not contain PCBs,

and that fluorescent lighting bulbs do not contain mercury, if disposal is required, it would be conducted in accordance with applicable federal, state and local requirements.

- Any stored chemicals would be properly disposed of prior to demolition/construction in accordance with applicable requirements.

In addition to these measures, as noted above, the Development Site was enrolled in the DEC SHWS database as Site No. 231083 with Classification Code: P (Potential) because of the discovery of coal tar during the 2013 spill investigation (DEC Spill 04-07411). This classification is applied to sites where preliminary data indicates the potential presence of contamination that makes it eligible for placement on the Registry of Inactive Hazardous Waste Disposal Sites (commonly referred to as the list of State Superfund Sites). If further information and/or investigation data is obtained suggesting that hazardous waste was disposed on the Development Site and that any resulting contamination presents a significant threat to public health or the environment, the Classification Code would be changed, and environmental management would be supervised by DEC.

The Alternative Scenario would require the same demolition of existing structures followed by construction of new mixed-use buildings as the Proposed Project and would also require soil disturbance. All the same measures described above would be implemented under the Alternative Scenario.

With these measures in place, the Proposed Project and the Alternative Scenario would promote this policy.

***Policy 7.2: Prevent and remediate discharge of petroleum products.***

Proposed Project and Alternative Scenario

See response to Policy 7.1. Any underground storage tanks encountered during construction would be closed and removed, and any associated contaminated soil would be managed, in accordance with the applicable regulations. Any petroleum products found during remediation or used during construction would be disposed of in accordance with all applicable federal, state, and local requirements.

Therefore, both the Proposed Project and the Alternative Scenario would promote this policy.

***Policy 7.3: Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.***

Proposed Project and Alternative Scenario

See responses to Policy 7.1 and Policy 7.2. The RAP for either the Proposed Project or Alternative Scenario would include measures for disposal and transport of materials that would minimize the potential for solid and hazardous wastes to degrade coastal resources. Transport of wastes offsite would be performed by licensed haulers in accordance with appropriate local, state, and federal regulations, including 6 NYCRR Part 360. Materials would be transported to a designated disposal facility approved to receive such materials based on the characterization of the waste.

## **Western Rail Yard Modifications**

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With these measures in place, both the Proposed Project and the Alternative Scenario 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.***

##### Proposed Project and Alternative Scenario

Both the Proposed Project and the Alternative Scenario would create 4.58 acres of new publicly accessible open space on the Development Site. The new open space would provide a neighborhood and regional destination overlook above the Hudson River; provide direct connections to the High Line; include plaza space to accommodate pedestrian circulation at the base of the office tower at Site B; and include various pathways and connections to draw pedestrians into and through the space. Extensive landscaping, seating, planting, and other public amenities would be provided throughout the open area.

At the southwest corner of the Development Site, at street level, the open space would continue under the High Line on West 30th Street and Twelfth Avenue. Two new connections to the High Line are planned: one at West 30th Street and Twelfth Avenue, and one at West 33rd Street and Twelfth Avenue. The proposed new elevator at West 33rd Street near Twelfth Avenue would improve the accessibility of the High Line and would enhance accessible connections between the High Line and Hudson River Park.

Both scenarios would also provide attractive pedestrian and visual connections between the Development Site, the High Line, Hudson Yards Public Square and Gardens to the east, Hudson River Park to the west, Bella Abzug Park to the North, and surrounding neighborhoods and complete the connection to transportation hubs including Penn Station and the 7-line subway.

Therefore, the Proposed Project and the Alternative Scenario would promote this policy.

#### ***Policy 8.2: Incorporate public access into new public and private development where compatible with proposed land use and coastal location.***

##### Proposed Project and Alternative Scenario

Both the Proposed Project and the Alternative Scenario would result in approximately 5.63 acres of publicly accessible open space on the Development Site, including approximately 4.58 acres of new open space and 1.05 acres of existing open space on-site that is part of the High Line. The new public open space would introduce approximately 0.4 acres of active space (anticipated to potentially include a playground and sport courts) and approximately 4.18 acres of passive space (including landscaping, seating, lawns, and walkways). The new open space would provide a substantial open space amenity for workers, visitors, and residents of the Development Site and surrounding area, including both active and passive recreational opportunities. The new open space also would provide attractive pedestrian and visual connections between the Development Site, the High Line, Hudson Yards Public Square and Gardens to the east and Hudson River Park to the west, and surrounding neighborhoods. Therefore, both the Proposed Project and the Alternative Scenario would promote this policy.

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

Proposed Project and Alternative Scenario

Both the Proposed Project and Alternative Scenario would provide new visual access for future residents and non-resident users of the Development Site to the Hudson River and its waterfront, including the creation of open space that would provide a neighborhood and regional destination overlook above the Hudson River.

Therefore, both the Proposed Project and the Alternative Scenario would promote this policy.

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

Proposed Project and Alternative Scenario

Both the Proposed Project and Alternative Scenario would provide a neighborhood and regional destination overlook above the Hudson River and would provide new direct connections to the High Line. The proposed new elevator access at West 33rd Street near Twelfth Avenue would improve the accessibility of the High Line and would enhance accessible connections between the High Line and Hudson River Park along the nearby waterfront. Additionally, the new open space would provide a substantial amenity for workers, visitors, and residents of the Development Site and surrounding area, including both active and passive recreational opportunities near the waterfront.

Therefore, both the Proposed Project and the Alternative Scenario would promote this policy.

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

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

Proposed Project and Alternative Scenario

Neither the Proposed Project nor the Alternative Scenario would result in the isolation of any historic resource from its setting or visual relationship with the streetscape, or otherwise adversely alter a historic property's setting or visual prominence. Neither scenario would introduce incompatible visual elements to the setting of any architectural resource, nor would they result in the elimination or screening of significant publicly accessible views of any architectural resources in the surrounding area. Both the Proposed Project and Alternative Scenario would provide new visual access for future residents and non-resident users of the Development Site to the Hudson River.

Therefore, both the Proposed Project and Alternative Scenario would promote this policy.

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

Proposed Project and Alternative Scenario

Both the Proposed Project and Alternative Scenario would provide new visual access for future residents and non-resident users of the Hudson River from the Development Site.

## **Western Rail Yard Modifications**

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Therefore, both the Proposed Project and Alternative Scenario 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.***

### Proposed Project and Alternative Scenario

Under both the Proposed Project and the Alternative Scenario, a Construction Protection Plan (CPP) would be implemented to avoid inadvertent construction-related impacts (including ground-borne vibration, falling debris, and accidental damage) associated with the construction of the Proposed Project or the Alternative Scenario to the known architectural resource within 90 feet of the Development Site (the High Line, which has been determined eligible for listing on the State and National Registers of Historic Places). The Applicant would coordinate with Amtrak regarding the necessary measures to protect the State and National-eligible North River Tunnel below the Development Site during project construction.

With these measures in place, both the Proposed Project and the Alternative Scenario would promote this policy.

*Policy 10.2: Protect and preserve archaeological resources and artifacts.*

### Proposed Project and Alternative Scenario

In a comment letter dated February 2, 2024, the New York City Landmarks Preservation Commission (LPC) determined that the Development Site (Block 676, Lots 1 and 5) has no archaeological significance.

Therefore, the both the Proposed Project and Alternative Scenario are consistent with this policy. \*

**Appendix B.3-1:  
New York City Waterfront Revitalization Program  
Flood Elevation Worksheet, BFE 11**

**NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Worksheet**

**COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT [www.nyc.gov/wrp](http://www.nyc.gov/wrp)**

Enter information about the project and site in highlighted cells in Tabs 1-3. Tab 4, "Summary Charts" contains primary results. Tab 5, "0.2%+SLR" produces charts to be used for critical infrastructure or facilities. Tab 6, "Calculations" contains background computations. Appendix A contains tide elevations for station across the city to be used for the elevation of MHHW if a site survey is not available. Non-highlighted cells have been locked.

| Background Information    |   |
|---------------------------|---|
| Project Name              | Western Rail Yard (WRY)   |
| Location                  | Block 676, Lots 1 and 5 in the Hudson Yards neighborhood of Manhattan, Community District 4   |
| Type(s)                   | <input checked="" type="checkbox"/> Residential, Commercial, Community Facility <input checked="" type="checkbox"/> Parkland, Open Space, and Natural Areas <input type="checkbox"/> Tidal Wetland Restoration <input type="checkbox"/> Critical Infrastructure or Facility <input type="checkbox"/> Industrial Uses<br><input type="checkbox"/> Over-water Structures <input type="checkbox"/> Shoreline Structures <input type="checkbox"/> Transportation <input type="checkbox"/> Wastewater Treatment/Drainage <input type="checkbox"/> Coastal Protection   |
| Description               | Development of the WRY with new mixed use buildings (residential, commercial, and community facility space and a hotel resort with gaming) and new public open space (the "Proposed Project"). The Applicant is seeking a license from the New York State Gaming Facility Location Board to operate a gaming facility on the Development Site. The application for the Gaming Facility License is subject to a separate state approval process. The Applicant is also presenting for analysis purposes an Alternative Scenario that reflects a similar density and the same open space configuration as the Proposed Project. |
| Planned Completion Date   | 2031  |
| Expected Project Lifespan | 2100  |

The New York City Waterfront Revitalization Program Climate Change Adaptation Guidance document was developed by the NYC Department of City Planning. It is a guidance document only and is not intended to serve as a substitute for actual regulations. The City disclaims any liability for errors that may be contained herein and shall not be responsible for any damages, consequential or actual, arising out of or in connection with the use of this information. The City reserves the right to update or correct information in this guidance document at any time and without notice.

**For technical assistance on using this worksheet, email [wrp@planning.nyc.gov](mailto:wrp@planning.nyc.gov), using the message subject "Policy 6.2 Worksheet."**

Last update: Sept. 7, 2018

**Establish current tidal and flood heights.**

|                        | FT (NAVD88) | Feet         | Datum         | Source                                   |
|------------------------|-------------|--------------|---------------|--|
| MHHW                   | 2.61        | <b>2.61</b>  | <b>NAVD88</b> | <i>Appendix A: The Battery</i>           |
| 1% flood height        | 11.00       | <b>11.00</b> | <b>NAVD88</b> | <i>FEMA 2015 pFIRM Panel 34017C0044E</i> |
| Design flood elevation | 16.00       | <b>16.00</b> | <b>NAVD88</b> |  |
| <i>As relevant:</i>    |             |              |               |  |
| 0.2% flood height      | #N/A        | 14.00        |               | <i>FEMA Preliminary FIS</i>              |

*Data will be converted based on the following datums:*

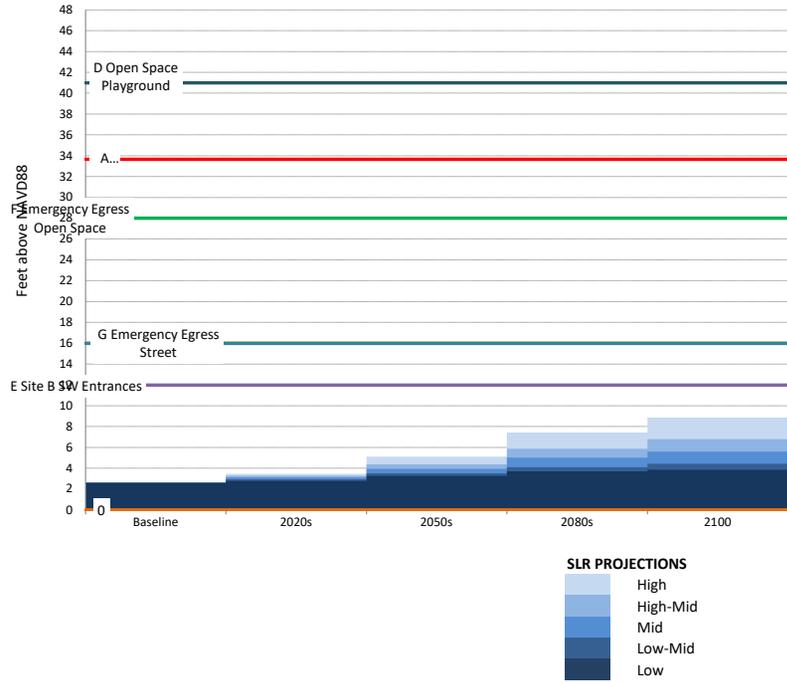
| Datum                    | FT (NAVD88) |
|--------------------------|-------------|
| NAVD88                   | 0.00        |
| NGVD29                   | -1.10       |
| Manhattan Datum          | 1.65        |
| Bronx Datum              | 1.51        |
| Brooklyn Datum (Sewer)   | 0.61        |
| Brooklyn Datum (Highway) | 1.45        |
| Queens Datum             | 1.63        |
| Richmond Datum           | 2.09        |

Describe key physical features of the project.

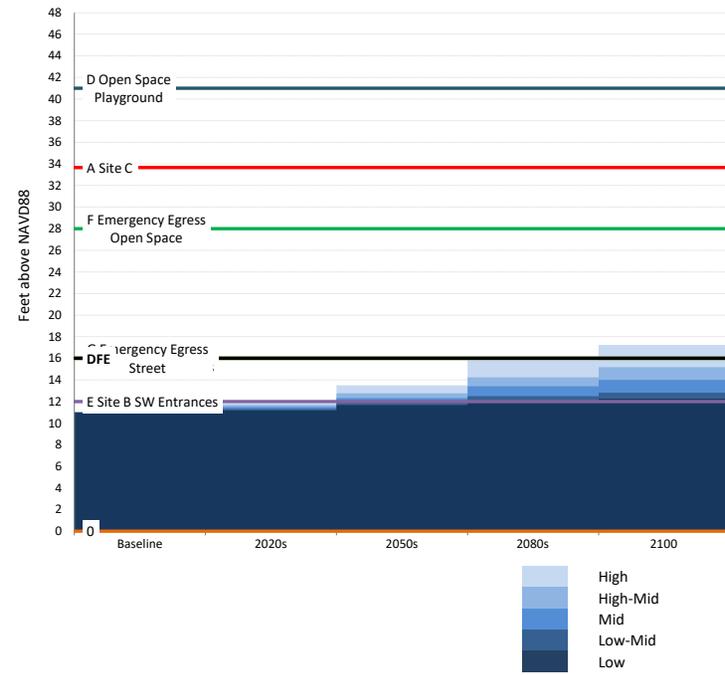
| Feature (enter name)  | Feature Category  | Lifespan | Elevation | Units | Datum  | Ft   | Ft Above NAVD88 | Ft Above MHHW | Ft Above 0.2% flood height |
|---|---|----------|-----------|-------|--------|------|-----------------|---------------|----------------------------|
| <b>A Site C</b>   | <input checked="" type="checkbox"/> Vulnerable <input checked="" type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other | 2100     | 33.7      | Feet  | NAVD88 | 33.7 | 33.7            | 31.1          | #N/A                       |
| Site C would be constructed entirely on a platform over the LIRR train yard. All features would be at this minimum elevation (both Proposed Project and Alternative Scenario).  |   |          |           |       |        |      |                 |               |                            |
| <b>B Site B SE Entrances</b>  | <input checked="" type="checkbox"/> Vulnerable <input type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other            | 2100     | 16.0      | Feet  | NAVD88 | 16.0 | 16.0            | 13.4          | #N/A                       |
| Ground floor entrances along the eastern portion Site B along W. 30th Street containing proposed daycare, office space, and bike storage (both Proposed Project and Alternative Scenario)   |   |          |           |       |        |      |                 |               |                            |
| <b>C Site B Mechanical</b>  | <input type="checkbox"/> Vulnerable <input checked="" type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other            | 2050     | 16.0      | Feet  | NAVD88 | 16.0 | 16.0            | 13.4          | #N/A                       |
| Potential elevation of some mechanical equipment within the building on Site B (both Proposed Project and Alternative Scenario). Most critical life safety equipment will be located on the Mechanical floors located above +100 feet NAVD88. |   |          |           |       |        |      |                 |               |                            |
| <b>D Open Space Playground</b>  | <input checked="" type="checkbox"/> Vulnerable <input type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other            | 2100     | 41.0      | Feet  | NAVD88 | 41.0 | 41.0            | 38.4          | #N/A                       |
| Proposed playground between Site A and Site B located above LIRR space  |   |          |           |       |        |      |                 |               |                            |
| <b>E Site B SW Entrances</b>  | <input checked="" type="checkbox"/> Vulnerable <input type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other            | 2100     | 12.0      | Feet  | NAVD88 | 12.0 | 12.0            | 9.4           | #N/A                       |
| Ground floor entrances along the western portion of Site B along W. 30th Street containing public school and a loading dock. Protected by deployable flood barriers.  |   |          |           |       |        |      |                 |               |                            |
| <b>F Emergency Egress Open Space</b>  | <input type="checkbox"/> Vulnerable <input checked="" type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other            | 2100     | 28.0      | Feet  | NAVD88 | 28.0 | 28.0            | 25.4          | #N/A                       |
| Emergency egress elevation to the open space within the Development Site  |   |          |           |       |        |      |                 |               |                            |
| <b>G Emergency Egress Street</b>  | <input type="checkbox"/> Vulnerable <input checked="" type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other            | 2100     | 16.0      | Feet  | NAVD88 | 16.0 | 16.0            | 13.4          | #N/A                       |
| Lowest elevation of emergency egress to the street level at Site B, at or above the DFE.  |   |          |           |       |        |      |                 |               |                            |
|   | <input type="checkbox"/> Vulnerable <input type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other                       |          |           | Feet  | NAVD88 |      |                 |               |                            |
| Description of Planned Uses and Materials   |   |          |           |       |        |      |                 |               |                            |

Assess project vulnerability over a range of sea level rise projections.

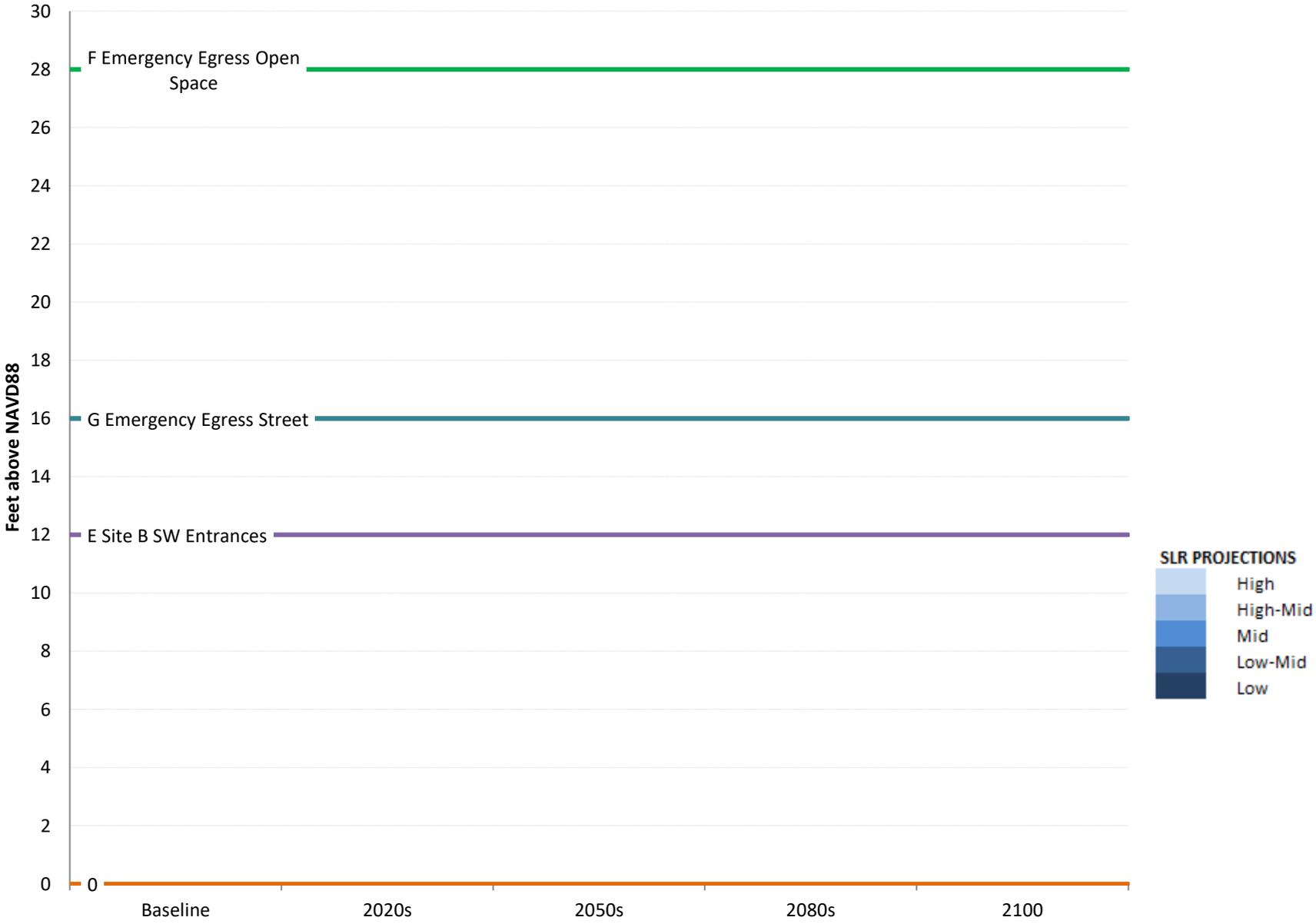
Mean Higher High Water + Sea Level Rise



1% Flood Elevation + Sea Level Rise



# 0.2% Flood Elevation + Sea Level Rise



|                 | SLR (ft) |         |      |          |      |              | SLR (in) |         |     |          |      |
|-----------------|----------|---------|------|----------|------|--------------|----------|---------|-----|----------|------|
|                 | Low      | Low-Mid | Mid  | High-Mid | High |              | Low      | Low-Mid | Mid | High-Mid | High |
| <b>Baseline</b> | 0.00     | 0.00    | 0.00 | 0.00     | 0.00 | <b>2014</b>  | 0        | 0       | 0   | 0        | 0    |
| <b>2020s</b>    | 0.17     | 0.33    | 0.50 | 0.67     | 0.83 | <b>2020s</b> | 2        | 4       | 6   | 8        | 10   |
| <b>2050s</b>    | 0.67     | 0.92    | 1.33 | 1.75     | 2.50 | <b>2050s</b> | 8        | 11      | 16  | 21       | 30   |
| <b>2080s</b>    | 1.08     | 1.50    | 2.42 | 3.25     | 4.83 | <b>2080s</b> | 13       | 18      | 29  | 39       | 58   |
| <b>2100</b>     | 1.25     | 1.83    | 3.00 | 4.17     | 6.25 | <b>2100</b>  | 15       | 22      | 36  | 50       | 75   |

**MHHW+SLR (ft above NAVD88)**

|                 | Low  | Low-Mid | Mid  | High-Mid | High |
|-----------------|------|---------|------|----------|------|
| <b>Baseline</b> | 2.61 | 2.61    | 2.61 | 2.61     | 2.61 |
| <b>2020s</b>    | 2.78 | 2.94    | 3.11 | 3.28     | 3.44 |
| <b>2050s</b>    | 3.28 | 3.53    | 3.94 | 4.36     | 5.11 |
| <b>2080s</b>    | 3.69 | 4.11    | 5.03 | 5.86     | 7.44 |
| <b>2100</b>     | 3.86 | 4.44    | 5.61 | 6.78     | 8.86 |

**1%+SLR (ft above NAVD88)**

|                 | Low   | Low-Mid | Mid   | High-Mid | High  |
|-----------------|-------|---------|-------|----------|-------|
| <b>Baseline</b> | 11.00 | 11.00   | 11.00 | 11.00    | 11.00 |
| <b>2020s</b>    | 11.17 | 11.33   | 11.50 | 11.67    | 11.83 |
| <b>2050s</b>    | 11.67 | 11.92   | 12.33 | 12.75    | 13.50 |
| <b>2080s</b>    | 12.08 | 12.50   | 13.42 | 14.25    | 15.83 |
| <b>2100</b>     | 12.25 | 12.83   | 14.00 | 15.17    | 17.25 |

**0.2%+SLR (ft above NAVD88)**

|                 | Low  | Low-Mid | Mid  | High-Mid | High |
|-----------------|------|---------|------|----------|------|
| <b>Baseline</b> | #N/A | #N/A    | #N/A | #N/A     | #N/A |
| <b>2020s</b>    | #N/A | #N/A    | #N/A | #N/A     | #N/A |
| <b>2050s</b>    | #N/A | #N/A    | #N/A | #N/A     | #N/A |
| <b>2080s</b>    | #N/A | #N/A    | #N/A | #N/A     | #N/A |
| <b>2100</b>     | #N/A | #N/A    | #N/A | #N/A     | #N/A |

|                             |       |       |
|-----------------------------|-------|-------|
|                             | 0     | 1     |
| A Site C                    | 34    | 33.66 |
| B Site B SE Entrances       | 16    | 16    |
| C Site B Mechanical         | 16    | 16    |
| D Open Space Playground     | 41    | 41    |
| E Site B SW Entrances       | 12    | 12    |
| F Emergency Egress Open Spa | 28    | 28    |
| G Emergency Egress Street   | 16    | 16    |
| 0                           | 0     | 0     |
| DFE                         | 16.00 | 16.00 |

**NOAA Tide Station Data**

*(to be used only when a site survey is unavailable)*

| Station ID | Station Name        | Source MHHW (Feet, NAVD88)* | Adjusted MHHW (Feet, NAVD88)* | Source                                  |
|------------|---------------------|-----------------------------|-------------------------------|---|
| 8518687    | Queensboro Bridge   | 2.27                        | 2.60                          | <a href="#">NOAA Tides and Currents</a> |
| 8530095    | Alpine              | 2.11                        | 2.44                          | <a href="#">NOAA Tides and Currents</a> |
| 8516614    | Glen Cove           | 3.72                        | 4.05                          | <a href="#">NOAA Tides and Currents</a> |
| 8516990    | Willetts Point      | 3.72                        | 4.05                          | <a href="#">NOAA Tides and Currents</a> |
| 8518639    | Port Morris         | 3.33                        | 3.66                          | <a href="#">NOAA Tides and Currents</a> |
| 8518699    | Williamsburg Bridge | 2.14                        | 2.47                          | <a href="#">NOAA Tides and Currents</a> |
| 8518750    | The Battery         | 2.28                        | 2.61                          | <a href="#">NOAA Tides and Currents</a> |
| 8531680    | Sandy Hook          | 2.41                        | 2.74                          | <a href="#">NOAA Tides and Currents</a> |
| 8518490    | New Rochelle        | 3.71                        | 4.04                          | <a href="#">NOAA Tides and Currents</a> |
| 8531545    | Keyport             | 2.66                        | 2.99                          | <a href="#">NOAA Tides and Currents</a> |
| 8516891    | Norton Point        | 2.08                        | 2.41                          | <a href="#">NOAA VDATUM</a>             |
| 8517201    | North Channel       | 2.72                        | 3.05                          | <a href="#">NOAA Tides and Currents</a> |
| 8517137    | Beach Channel       | 2.10                        | 2.43                          | <a href="#">NOAA VDATUM</a>             |
| 8517756    | Kingsborough        | 2.13                        | 2.46                          | <a href="#">NOAA VDATUM</a>             |
| 8519436    | Great Kills         | 2.22                        | 2.55                          | <a href="#">NOAA VDATUM</a>             |
| 8531142    | Port Reading        | 2.82                        | 3.15                          | <a href="#">NOAA VDATUM</a>             |
| 8519483    | Bergen Point        | 2.56                        | 2.89                          | <a href="#">NOAA VDATUM</a>             |
| 8519050    | USCG                | 2.28                        | 2.61                          | <a href="#">NOAA Tides and Currents</a> |
| 8518902    | Dyckman St          | 2.01                        | 2.34                          | <a href="#">NOAA Tides and Currents</a> |
| 8517251    | Worlds Fair Marina  | 3.59                        | 3.92                          | <a href="#">NOAA VDATUM</a>             |
| 8518668    | Horns Hook          | 2.54                        | 2.87                          | <a href="#">NOAA VDATUM</a>             |
| 8518643    | Randalls Island     | 2.60                        | 2.93                          | <a href="#">NOAA VDATUM</a>             |
| 8518526    | Throggs Neck        | 3.68                        | 4.01                          | <a href="#">NOAA Tides and Currents</a> |

\* MHHW values include an addition 0.33 feet to account for changes in sea level since the 1983-2001 tidal epoch.



**Appendix B.3-2:  
New York City Waterfront Revitalization Program  
Flood Elevation Worksheet, BFE 12**

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Worksheet

COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT [www.nyc.gov/wrp](http://www.nyc.gov/wrp)

Enter information about the project and site in highlighted cells in Tabs 1-3. Tab 4, "Summary Charts" contains primary results. Tab 5, "0.2%+SLR" produces charts to be used for critical infrastructure or facilities. Tab 6, "Calculations" contains background computations. Appendix A contains tide elevations for station across the city to be used for the elevation of MHHW if a site survey is not available. Non-highlighted cells have been locked.

| Background Information    |   |
|---------------------------|---|
| Project Name              | Western Rail Yard (WRY)   |
| Location                  | WRY Site A - Block 676, Lots 1 and 5 in the Hudson Yards neighborhood of Manhattan, Community District 4  |
| Type(s)                   | <input checked="" type="checkbox"/> Residential, Commercial, Community Facility <input checked="" type="checkbox"/> Parkland, Open Space, and Natural Areas <input type="checkbox"/> Tidal Wetland Restoration <input type="checkbox"/> Critical Infrastructure or Facility <input type="checkbox"/> Industrial Uses<br><input type="checkbox"/> Over-water Structures <input type="checkbox"/> Shoreline Structures <input type="checkbox"/> Transportation <input type="checkbox"/> Wastewater Treatment/Drainage <input type="checkbox"/> Coastal Protection   |
| Description               | Development of the WRY with new mixed use buildings (residential, commercial, and community facility space and a hotel resort with gaming) and new public open space (the "Proposed Project"). The Applicant is seeking a license from the New York State Gaming Facility Location Board to operate a gaming facility on the Development Site. The application for the Gaming Facility License is subject to a separate state approval process. The Applicant is also presenting for analysis purposes an Alternative Scenario that reflects a similar density and the same open space configuration as the Proposed Project. |
| Planned Completion Date   | 2031  |
| Expected Project Lifespan | 2100  |

The New York City Waterfront Revitalization Program Climate Change Adaptation Guidance document was developed by the NYC Department of City Planning. It is a guidance document only and is not intended to serve as a substitute for actual regulations. The City disclaims any liability for errors that may be contained herein and shall not be responsible for any damages, consequential or actual, arising out of or in connection with the use of this information. The City reserves the right to update or correct information in this guidance document at any time and without notice.

For technical assistance on using this worksheet, email [wrp@planning.nyc.gov](mailto:wrp@planning.nyc.gov), using the message subject "Policy 6.2 Worksheet."

Last update: Sept. 7, 2018

**Establish current tidal and flood heights.**

|                        | FT (NAVD88) | Feet         | Datum         | Source                                   |
|------------------------|-------------|--------------|---------------|--|
| MHHW                   | 2.61        | <b>2.61</b>  | <b>NAVD88</b> | <i>Appendix A: The Battery</i>           |
| 1% flood height        | 12.00       | <b>12.00</b> | <b>NAVD88</b> | <i>FEMA 2015 pFIRM Panel 34017C0044E</i> |
| Design flood elevation | 17.00       | <b>17.00</b> | <b>NAVD88</b> |  |
| <i>As relevant:</i>    |             |              |               |  |
| 0.2% flood height      | #N/A        | 14.00        |               | <i>FEMA Preliminary FIS</i>              |

*Data will be converted based on the following datums:*

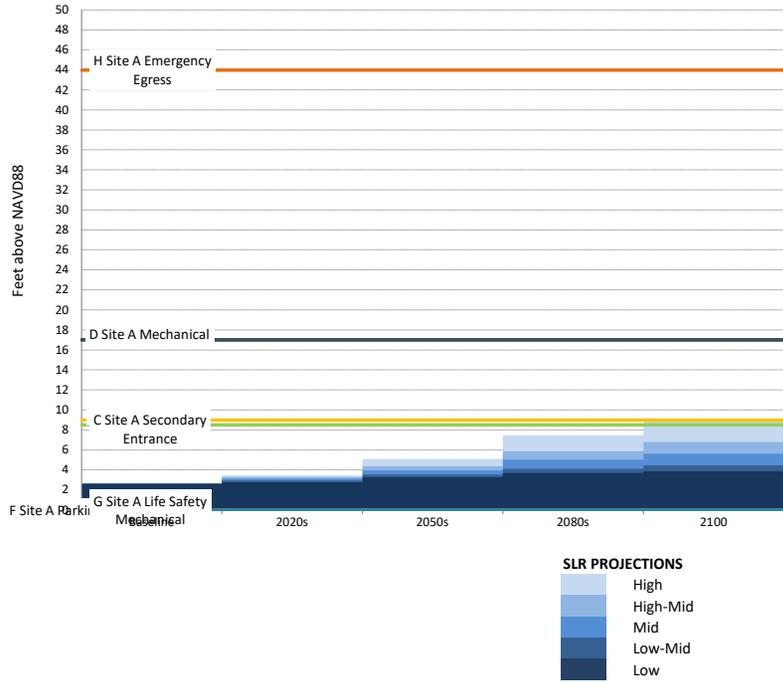
| Datum                    | FT (NAVD88) |
|--------------------------|-------------|
| NAVD88                   | 0.00        |
| NGVD29                   | -1.10       |
| Manhattan Datum          | 1.65        |
| Bronx Datum              | 1.51        |
| Brooklyn Datum (Sewer)   | 0.61        |
| Brooklyn Datum (Highway) | 1.45        |
| Queens Datum             | 1.63        |
| Richmond Datum           | 2.09        |

Describe key physical features of the project.

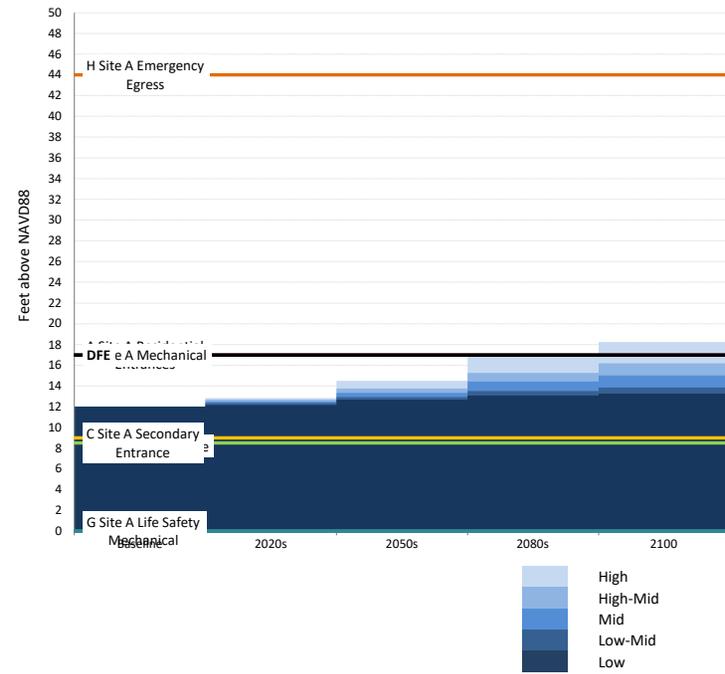
| Feature (enter name)  | Feature Category   | Lifespan | Elevation | Units | Datum  | Ft   | Ft Above NAVD88 | Ft Above MHHW | Ft Above 0.2% flood height |
|---|--|----------|-----------|-------|--------|------|-----------------|---------------|----------------------------|
| <b>A Site A Residential Entrances</b>   | <input checked="" type="checkbox"/> Vulnerable <input type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other | 2100     | 17.0      | Feet  | NAVD88 | 17.0 | 17.0            | 14.4          | #N/A                       |
| Elevation of residential lobby entrance located in the Building on Site A (corner of 30th Street and 12th Avenue).  |  |          |           |       |        |      |                 |               |                            |
| <b>B Site A Open Space</b>  | <input checked="" type="checkbox"/> Vulnerable <input type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other | 2050     | 9.0       | Feet  | NAVD88 | 9.0  | 9.0             | 6.4           | #N/A                       |
| Recreational courts below the High Line in the southwest corner of the Development Site raised slightly above street level.   |  |          |           |       |        |      |                 |               |                            |
| <b>C Site A Secondary Entrance</b>  | <input checked="" type="checkbox"/> Vulnerable <input type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other | 2100     | 8.5       | Feet  | NAVD88 | 8.5  | 8.5             | 5.9           | #N/A                       |
| Elevation of curb level drop off entrance and lower lobby area. Protected by temporary flood barriers.  |  |          |           |       |        |      |                 |               |                            |
| <b>D Site A Mechanical</b>  | <input type="checkbox"/> Vulnerable <input checked="" type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other | 2050     | 17.0      | Feet  | NAVD88 | 17.0 | 17.0            | 14.4          | #N/A                       |
| Some mechanical equipment would be located at or below the DFE and dry floodproofed.  |  |          |           |       |        |      |                 |               |                            |
| <b>E Site A Residential Units</b>   | <input checked="" type="checkbox"/> Vulnerable <input type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other | 2100     |           | Feet  | NAVD88 |      |                 |               |                            |
| Lowest elevation of occupiable residential units is +108 feet NAVD88. Elevation not added in Column H to keep the Summary Charts from becoming unreadable.  |  |          |           |       |        |      |                 |               |                            |
| <b>F Site A Parking</b>   | <input checked="" type="checkbox"/> Vulnerable <input type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other | 2100     |           | Feet  | NAVD88 |      |                 |               |                            |
| Potential below-grade parking, with approximately 225 spaces. Up to 4 stories below, at an elevation of about -38 feet NAVD88. Elevation not added in Column H to keep the Summary Charts from becoming unreadable. |  |          |           |       |        |      |                 |               |                            |
| <b>G Site A Life Safety Mechanical</b>  | <input type="checkbox"/> Vulnerable <input checked="" type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other | 2050     |           | Feet  | NAVD88 |      |                 |               |                            |
| Life safety mechanical will be located on the Mechanical floor level at about +78 feet NAVD88. Elevation not added in Column H to keep the Summary Charts from becoming unreadable.                                 |  |          |           |       |        |      |                 |               |                            |
| <b>H Site A Emergency Egress</b>  | <input type="checkbox"/> Vulnerable <input checked="" type="checkbox"/> Critical <input type="checkbox"/> Potentially Hazardous <input type="checkbox"/> Other | 2100     | 44.0      | Feet  | NAVD88 | 44.0 | 44.0            | 41.4          | #N/A                       |
| Emergency egress would be provided via stairways up to the open space.  |  |          |           |       |        |      |                 |               |                            |

Assess project vulnerability over a range of sea level rise projections.

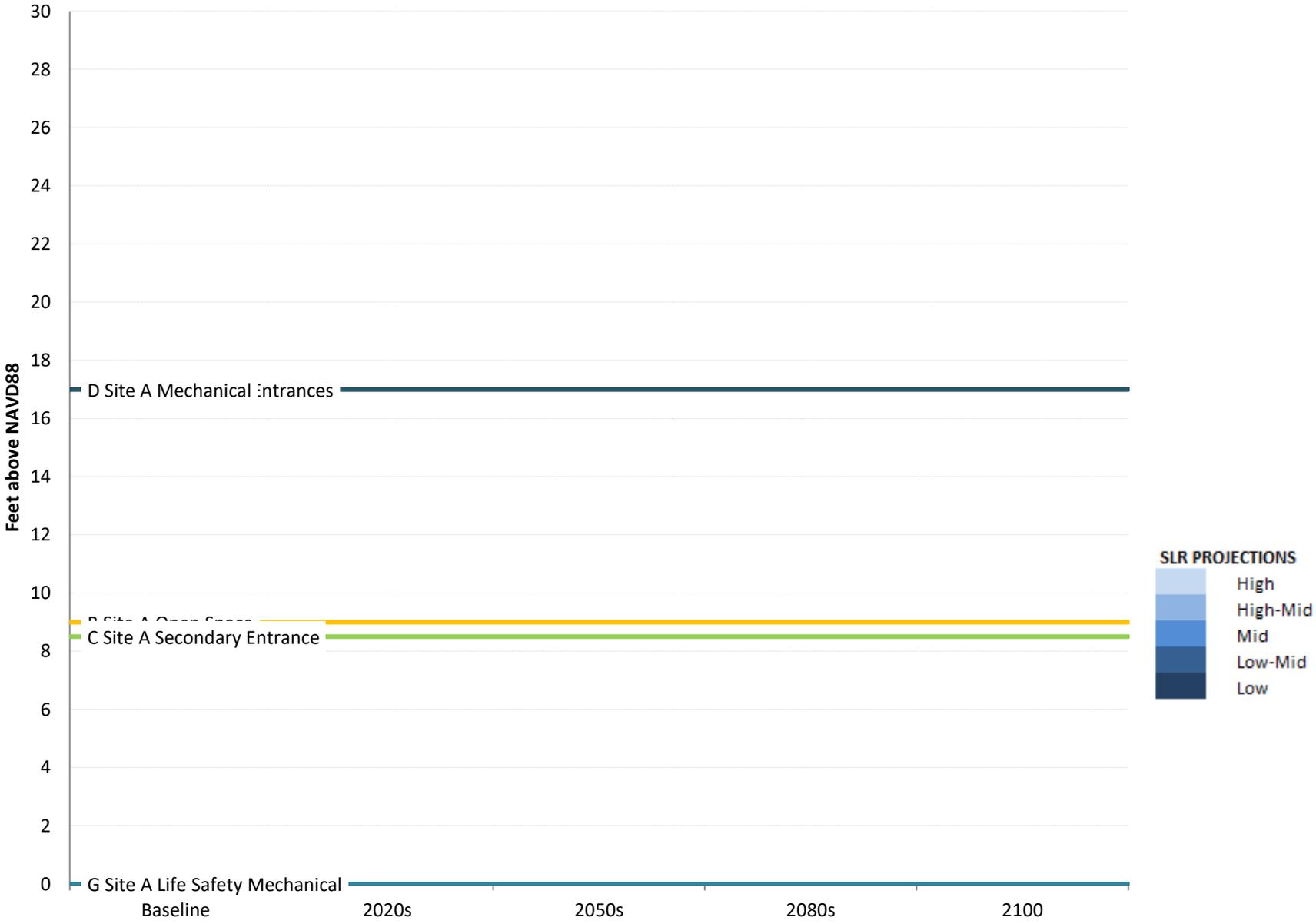
Mean Higher High Water + Sea Level Rise



1% Flood Elevation + Sea Level Rise



# 0.2% Flood Elevation + Sea Level Rise



|                 | SLR (ft) |         |      |          |      |              | SLR (in) |         |     |          |      |
|-----------------|----------|---------|------|----------|------|--------------|----------|---------|-----|----------|------|
|                 | Low      | Low-Mid | Mid  | High-Mid | High |              | Low      | Low-Mid | Mid | High-Mid | High |
| <b>Baseline</b> | 0.00     | 0.00    | 0.00 | 0.00     | 0.00 | <b>2014</b>  | 0        | 0       | 0   | 0        | 0    |
| <b>2020s</b>    | 0.17     | 0.33    | 0.50 | 0.67     | 0.83 | <b>2020s</b> | 2        | 4       | 6   | 8        | 10   |
| <b>2050s</b>    | 0.67     | 0.92    | 1.33 | 1.75     | 2.50 | <b>2050s</b> | 8        | 11      | 16  | 21       | 30   |
| <b>2080s</b>    | 1.08     | 1.50    | 2.42 | 3.25     | 4.83 | <b>2080s</b> | 13       | 18      | 29  | 39       | 58   |
| <b>2100</b>     | 1.25     | 1.83    | 3.00 | 4.17     | 6.25 | <b>2100</b>  | 15       | 22      | 36  | 50       | 75   |



**MHHW+SLR (ft above NAVD88)**

|                 | Low  | Low-Mid | Mid  | High-Mid | High |
|-----------------|------|---------|------|----------|------|
| <b>Baseline</b> | 2.61 | 2.61    | 2.61 | 2.61     | 2.61 |
| <b>2020s</b>    | 2.78 | 2.94    | 3.11 | 3.28     | 3.44 |
| <b>2050s</b>    | 3.28 | 3.53    | 3.94 | 4.36     | 5.11 |
| <b>2080s</b>    | 3.69 | 4.11    | 5.03 | 5.86     | 7.44 |
| <b>2100</b>     | 3.86 | 4.44    | 5.61 | 6.78     | 8.86 |

**1%+SLR (ft above NAVD88)**

|                 | Low   | Low-Mid | Mid   | High-Mid | High  |
|-----------------|-------|---------|-------|----------|-------|
| <b>Baseline</b> | 12.00 | 12.00   | 12.00 | 12.00    | 12.00 |
| <b>2020s</b>    | 12.17 | 12.33   | 12.50 | 12.67    | 12.83 |
| <b>2050s</b>    | 12.67 | 12.92   | 13.33 | 13.75    | 14.50 |
| <b>2080s</b>    | 13.08 | 13.50   | 14.42 | 15.25    | 16.83 |
| <b>2100</b>     | 13.25 | 13.83   | 15.00 | 16.17    | 18.25 |

**0.2%+SLR (ft above NAVD88)**

|                 | Low  | Low-Mid | Mid  | High-Mid | High |
|-----------------|------|---------|------|----------|------|
| <b>Baseline</b> | #N/A | #N/A    | #N/A | #N/A     | #N/A |
| <b>2020s</b>    | #N/A | #N/A    | #N/A | #N/A     | #N/A |
| <b>2050s</b>    | #N/A | #N/A    | #N/A | #N/A     | #N/A |
| <b>2080s</b>    | #N/A | #N/A    | #N/A | #N/A     | #N/A |
| <b>2100</b>     | #N/A | #N/A    | #N/A | #N/A     | #N/A |

|                                 |       |       |
|---------------------------------|-------|-------|
|                                 | 0     | 1     |
| A Site A Residential Entrances  | 17    | 17    |
| B Site A Open Space             | 9     | 9     |
| C Site A Secondary Entrance     | 8.5   | 8.5   |
| D Site A Mechanical             | 17    | 17    |
| E Site A Residential Units      | 0     | 0     |
| F Site A Parking                | 0     | 0     |
| G Site A Life Safety Mechanical | 0     | 0     |
| H Site A Emergency Egress       | 44    | 44    |
| DFE                             | 17.00 | 17.00 |

**NOAA Tide Station Data**

*(to be used only when a site survey is unavailable)*

| Station ID | Station Name        | Source MHHW (Feet, NAVD88)* | Adjusted MHHW (Feet, NAVD88)* | Source                                  |
|------------|---------------------|-----------------------------|-------------------------------|---|
| 8518687    | Queensboro Bridge   | 2.27                        | 2.60                          | <a href="#">NOAA Tides and Currents</a> |
| 8530095    | Alpine              | 2.11                        | 2.44                          | <a href="#">NOAA Tides and Currents</a> |
| 8516614    | Glen Cove           | 3.72                        | 4.05                          | <a href="#">NOAA Tides and Currents</a> |
| 8516990    | Willetts Point      | 3.72                        | 4.05                          | <a href="#">NOAA Tides and Currents</a> |
| 8518639    | Port Morris         | 3.33                        | 3.66                          | <a href="#">NOAA Tides and Currents</a> |
| 8518699    | Williamsburg Bridge | 2.14                        | 2.47                          | <a href="#">NOAA Tides and Currents</a> |
| 8518750    | The Battery         | 2.28                        | 2.61                          | <a href="#">NOAA Tides and Currents</a> |
| 8531680    | Sandy Hook          | 2.41                        | 2.74                          | <a href="#">NOAA Tides and Currents</a> |
| 8518490    | New Rochelle        | 3.71                        | 4.04                          | <a href="#">NOAA Tides and Currents</a> |
| 8531545    | Keyport             | 2.66                        | 2.99                          | <a href="#">NOAA Tides and Currents</a> |
| 8516891    | Norton Point        | 2.08                        | 2.41                          | <a href="#">NOAA VDATUM</a>             |
| 8517201    | North Channel       | 2.72                        | 3.05                          | <a href="#">NOAA Tides and Currents</a> |
| 8517137    | Beach Channel       | 2.10                        | 2.43                          | <a href="#">NOAA VDATUM</a>             |
| 8517756    | Kingsborough        | 2.13                        | 2.46                          | <a href="#">NOAA VDATUM</a>             |
| 8519436    | Great Kills         | 2.22                        | 2.55                          | <a href="#">NOAA VDATUM</a>             |
| 8531142    | Port Reading        | 2.82                        | 3.15                          | <a href="#">NOAA VDATUM</a>             |
| 8519483    | Bergen Point        | 2.56                        | 2.89                          | <a href="#">NOAA VDATUM</a>             |
| 8519050    | USCG                | 2.28                        | 2.61                          | <a href="#">NOAA Tides and Currents</a> |
| 8518902    | Dyckman St          | 2.01                        | 2.34                          | <a href="#">NOAA Tides and Currents</a> |
| 8517251    | Worlds Fair Marina  | 3.59                        | 3.92                          | <a href="#">NOAA VDATUM</a>             |
| 8518668    | Horns Hook          | 2.54                        | 2.87                          | <a href="#">NOAA VDATUM</a>             |
| 8518643    | Randalls Island     | 2.60                        | 2.93                          | <a href="#">NOAA VDATUM</a>             |
| 8518526    | Throggs Neck        | 3.68                        | 4.01                          | <a href="#">NOAA Tides and Currents</a> |

\* MHHW values include an addition 0.33 feet to account for changes in sea level since the 1983-2001 tidal epoch.

